Active-Learning Pedagogies as a Reform Initiative: Synthesis of Case Studies

Produced by:
American Institutes for Research (AIR)
under the EQUIP1 LWA

With:
Dr. Mark Ginsburg
Academy for Educational Development (AED)

August 2009

USAID
FROM THE AMERICAN PEOPLE

EQUIP1
Educational Quality Improvement Program
Classrooms ▪ Schools ▪ Communities

USAID
FROM THE AMERICAN PEOPLE

AMERICAN
INSTITUTES
FOR RESEARCH®

Educational Quality Improvement Program 1 (EQUIP1).

With support from the United States Agency for International Development (USAID) and the American Institutes for Research (AIR).

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the American Institutes for Research and do not necessarily reflect the views of USAID or the United States Government.

Educational Quality Improvement Program
Classrooms ▪ Schools ▪ Communities

Active-Learning Pedagogies as a Reform Initiative: Synthesis of Case Studies

by
Dr. Mark Ginsburg
Academy for Educational Development (AED)

August 2009

Table of Contents

Active-Learning Pedagogies as a Reform Initiative: Synthesis of Case Studies

Executive Summary

This document first describes the call for active-learning pedagogies arising from a range of international organizations during the last 25 years. Then it outlines the key philosophical and theoretical foundations of active-learning pedagogies, which explicitly or, more often, implicitly informed this demand. Next the document discusses the focus and methods of case studies focusing on Cambodia, Egypt, Jordan, Kyrgyzstan, and Malawi, which were designed to address the following questions:

1. How and to what extent do key (government and USAID) education strategy and policy reform documents address the issues of active-learning pedagogies (e.g., in relation to behavioral and cognitive dimensions)?

2. What are the structure, content, and processes of professional development activities designed to promote active-learning pedagogies, and in what ways, if at all, have school leaders and (extra-school) supervisors and teachers participated in such professional development activities?

3. How do teachers and other educators understand active-learning pedagogies, and how and to what extent does teachers' classroom behavior exhibit active-learning methods?

4. What factors (e.g., in-service program content/processes, supervisory guidance/support, classroom physical and material conditions, curriculum/examination policies, and cultural beliefs/values) are perceived to have constrained or enabled teachers to implement active-learning pedagogies?

The document then provides summaries of the findings from the five case studies:

- **Cambodia:** Bunlay, N., Wright, W., Sophea, H., Bredenburg, K., & Singh, M. (2009). Active-learning pedagogies as a reform initiative: The case of Cambodia. EQUIP1 Research Report. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/e1-ALStudyCambodiaCase.pdf.

- **Egypt:** Megahed, N., Ginsburg, M., Abdellah, A., & Zohry, A. (2008). Active-learning pedagogies as a reform initiative: The case of Egypt. EQUIP1 Research Report. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/e1-ALStudyEgyptCase.pdf.

- **Jordan:** Roggemann, K., & Shukri, M. (2009). Active-learning pedagogies as a reform initiative: The case of Jordan. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/e1-ALStudyJordanCase.pdf.

- **Kyrgyzstan:** Price-Rom, A., & Sainazarov, K. (2009). Active-learning pedagogies as a reform initiative: The case of Kyrgyzstan. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/e1-ALStudyKyrgyzstanCase.pdf.

- **Malawi:** Mizrachi, A., Padilla, O., & Susuwele-Banda, W. (2008). Active-learning pedagogies as a reform initiative: The case of Malawi. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/e1-ALStudyMalawiCase.pdf.

Finally, similarities and differences across the five case studies are presented in relation to the key issues referenced in the previously identified research questions:

Reform Documents and Active-Learning Pedagogies: In all five cases examined, we witnessed an explosion of policy document rhetoric as well as host-government-USAID initiatives to promote active-learning pedagogies in the 21st century. While attention to active-learning pedagogies was documented in Egypt and Kyrgyzstan as early as the 1970s and 1990s, respectively, in Cambodia, Jordan, and Malawi, we were only able to identify an explicit focus on active-learning pedagogies in government and related international agency documents in the new millennium. Generally, the documents do not make explicit whether they are stressing the behavioral and/or the cognitive dimension of active-learning pedagogies. However, Cambodia and Jordan discuss such pedagogies in relation to preparing workers for the global economy, Malawi gives more attention to how such pedagogies can foster democratic citizens, and Egypt and Kyrgyzstan reference active-learning pedagogies as contributing to educating both citizens and workers.

Professional Development and Active-Learning Pedagogies: In all five countries government initiatives and/or international-organization-funded projects organized professional development activities to enhance teachers' knowledge, skills, and commitment to implement active-learning pedagogies. One dimension of such professional development common to all countries was the intent to employ such pedagogies in the workshops and other professional development activities. In addition, with the possible exception of Cambodia, reform efforts included parallel or joint capacity development programs for school administrators and supervisors as well as some form of supervised guidance of and support for teachers provided by other teachers, trainers, administrators, and/or supervisors. Moreover, in Egypt, Jordan, and (to a lesser extent) Kyrgyzstan, projects focused on institutional and individual capacity building designed to enable the in-service training system to organize such professional development programs in the future.

Teachers' Understandings and Behaviors Related to Active-Learning Pedagogies: In all five countries, teachers (as well as supervisors and administrators) involved in these project-facilitated professional development activities could articulate – with varying degrees of depth – the rationales and strategies of active-learning pedagogies. In all five countries, teachers (and administrators, supervisors, and/or school-level steering committee members) reported that teachers involved in projects had made progress in implementing at least some aspects of active-learning pedagogies. Moreover, in the one case study that included systematic classroom observation, Egypt, project-supported teachers' classroom interaction reflected modest movement over time toward implementing active-learning pedagogies, while this was less the case for teachers who were not involved in project activities.

Factors Enabling/Constraining Implementation of Active-Learning Pedagogies: Focus group interviewees in all five countries also mentioned how such training activities and/or supervisory support helped them to begin using active-learning methods. And non-project-involved teachers often pointed to the absence of such professional development initiatives in explaining why they knew little about and did not use such pedagogical approaches. Three policy domains also constrained implementation of active-learning pedagogies, even among those who benefited from project-supported professional development activities: a) existence of high-stakes examinations (mentioned as a factor in Egypt, Kygyzstan, and Malawi); b) poor conditions for teaching – e.g., size of classrooms, number of students, and availability of instructional materials (noted as a factor in Egypt, Jordan, Kyrgyzstan, and Malawi, though some Kygyzstan interviewees viewed limited instructional materials as an encouraging factor); and limited incentives – e.g., increased salary, promotion prospects, or recognition for engaging in reform teaching methods (highlighted as a factor in all five countries).

While the details of what constitutes excellent teaching are subject to debate, there seems to be a growing consensus that it involves some notion of active-learning pedagogies. Nevertheless, efforts to get more teachers to more routinely use such instructional methods have faced many challenges. In the five case studies summarized above, though, we see evidence that professional development initiatives, mainly in-service programs, can promote among teachers not only different ways of talking but also different ways of behaving and interacting in classrooms. While it would be an overstatement to say that teachers involved in projects radically transformed their instructional practices, it seems appropriate to conclude that real changes occurred as a result of sustained training and supervisory support. Moreover, such professional development activities and the attendant shifts in teacher pedagogical approach were observed mainly in international organization project-supported contexts. Thus, in order to deepen, diffuse, and sustain such successes over time, projects need to build the capacity and activate the system to develop, motivate, and support teachers, and not just transmit knowledge and skills to teachers.

Active-Learning Pedagogies as a Reform Initiative: Synthesis of Case Studies

Introduction

In this paper we first describe the call for active-learning pedagogies arising from a range of international organizations. Then we outline the key philosophical and theoretical foundations of active-learning pedagogies, which explicitly or, more often, implicitly informed this demand. Next we introduce the purpose and methods of the comparative case studies, prior to summarizing the findings from five countries (Cambodia, Egypt, Jordan, Kyrgyzstan, and Malawi) that served as case studies. The findings focus on the national and related international policy discussions, the professional development and other approaches employed to promote active-learning pedagogies, and the outcomes of such efforts. The paper ends with a comparative analysis of the cases and a conclusion that situates these findings in the context of other studies and draws out some lessons learned for policy and practice.

The Call for Active-Learning Pedagogies

Active-learning or student-centered approaches to instruction have increasingly been promoted worldwide by national governments as well as international organizations. Indeed, the range of support for active-learning pedagogies is much greater today than it was when Beeby (1966) published his volume, *The Quality of Education in Developing Countries*. Although Guthrie (1990, pp. 220-21) claims that the book was "widely influential" internationally "in the late 1960s and early 1970s" in efforts "to improve the quality of teaching by changing teaching styles … toward liberal, student-centered methods," Beeby's voice was less often echoed then than it has been in recent years. This can also be said when comparing the discussions among international organizations today with those circulating in the mid-1980s when Beeby again sounded the call for active-learning pedagogies at a World Bank Symposium entitled *The Quality of Education and Economic Development*. Beeby (1986, p. 39) argued that as education systems (particularly primary schools) progress toward higher stages of development, "teaching becomes less rigid, narrow, and stereotyped and less dependent on mass methods of instruction and rote memorization."[1]

1 In the introduction to this volume, based on a symposium organized by the World Bank in May 1983, Heyneman (1986, p. 3) explains: "Previously most educational loans from the World Bank were directed at expanding educational systems by building more schools, hiring more teachers, and providing access for more students. … [Now the focus is on quality. And,] although classroom pedagogical style may be locally determined, the ingredients required to make classrooms function properly are not.

The late 1980s, the 1990s, and the 2000s witnessed an explosion of international research reports and policy documents focusing on reforming teachers' attitudes toward active-learning pedagogies. Perhaps one of the most internationally visible policy statements was the document ratified by the "World Conference on Education for All (EFA): Meeting Basic Learning Needs," jointly organized by UNDP, UNESCO, UNICEF, and the World Bank, in Jomtien, Thailand, March 1990. The *World Declaration on Education for All* states that "active and participatory [instructional] approaches are particularly valuable in assuring learning acquisition and allowing learners to reach their fullest potential" (Interagency Commission, 1990, Article 4).

In the following year the World Bank published a research-based policy report in which the editors (Lockheed and Levin, 1991, pp. 15-16) conclude "by summarizing the areas of accord [across cases in book] as a basis for considering generic approaches to developing schools that will become more effective … The emphasis on student learning is to shift from a more traditional passive approach in which all knowledge is imparted from teachers and textbooks to an active approach in which the student is responsible for learning."

Ten years after the World Conference on Education for All, UNDP, UNESCO, UNICEF, and the World Bank cosponsored a meeting in Dakar, Senegal, attended by representatives from most governments and many international NGOs from around the world. The "Dakar Framework" from this 2000 meeting reiterates an international policy commitment to active-learning pedagogies: "Governments and all other EFA partners must work together to ensure basic education of quality for all, regardless of gender, wealth, location, language or ethnic origin. Successful education programmes require [among other things:] … well-trained teachers and active-learning techniques" (UNESCO, 2000, p. 17).[2] More recently, USAID (2005, p. 9) in its global *Education Strategy* argues that "[i]mproving instruction is a complex task that entails a wide range of interventions. … supporting improved teacher training … [toward] adoption of teaching methods that involve students in the learning process," and UNESCO (2008, p. 131), in its *EFA Global Monitoring Report*, highlights that "country case studies … indicate a trend to revise curricula to make classroom interactions more responsive and centred on the child. There is a move away from traditional 'chalk and talk' teaching to more discovery-based learning and a greater emphasis on outcomes that are broader than basic recall of facts and information."[3]

2 Despite growing attention to active-learning and other pedagogical issues in international discourses on educational quality, Alexander (2008, p. 9) observes that "the 2005 EFA report [*Education for All: The Quality Imperative* (UNESCO, 2004, pp. 386-93)] sticks to relatively conventional indicators, culminating in detailed statistics on international 'trends in basic or proxy indicators to measure Dakar EFA Goal 6' [Quality of Education], using: a) school life expectancy (expected number of years of formal schooling), b) survival rate to Grade 5, c) pupil/teacher ratio, d) female teachers as percent of total, e) trained teachers as percent of total, f) public current expenditure on primary education as percent of GDP, and g) public current expenditure on primary education per pupil. He continues, however, by noting that "[t]he best discussion of quality in the UNESCO report [2004: 146-158] comes when the authors escape from the constraints of indicators and range more freely across six areas which seem to have rather greater potency in the quality debate …: 1) appropriate, relevant and inclusive educational aims; 2) relevance and breadth in curriculum content; 3) actual time available for learning, and its use; 4) *effective teaching styles*; 5) appropriate language(s) of instruction; and regular, reliable and timely assessment, both summative and formative" (Alexander, 2008, p. 9; emphasis added).

3 The *EFA Global Monitoring Report* (UNESCO, 2008, p. 131) mentions that the People's Republic of China "introduced a new curriculum in 1999, focusing on active learning ... It was in place across the country in primary and junior middle schools by 2005." Interestingly, China adopted such progressive pedagogies as government policy in 1999, apparently as a result of World Bank (as well as UNDP, UNICEF, and UNESCO) discourses, but in the 1920s, before rise and fall of the Mao-led, communist revolution, Spring (2006, p. 7) notes that "John Dewey introduce[ed] progressive education ideas that had a major impact on Chinese educational theory."

Philosophical and Theoretical Foundations of Active-Learning Methods

Active-learning pedagogies are celebrated by national governments and international organizations in part because they are believed to enhance learning and to lead directly to improved educational outcomes (e.g., cognitive achievement, retention, attainment) as well as indirectly to enhanced economic development (resulting from more capable workers and consumers). Additionally, active-learning pedagogies are valued because they are perceived to better prepare future citizens to effectively participate in democratic politics at local, national, and global levels (see Torney-Purta, 1999). For instance, de Baessa et al. (2002, p. 205) state that in Latin America and other regions of the world "[e]ducational reformers are turning increasingly to active learning methodologies in the hope of improving quality." However, as Alexander (2008, p. 1) explains, "there is [only limited] consensus on what 'quality' actually entails, especially when we move from the conditions for quality (infrastructure, resources, teacher supply and of course access, enrolment and retention) to the pedagogy through which educational quality is most directly mediated." Moreover, he indicates that claims about the impact of different pedagogical approaches, such as "'teacher-centred' vs. 'student-centred,' are rarely discussed, let alone evaluated against hard evidence, with the result that they rapidly acquire the status of unarguable pedagogical truth and become transmuted into policy" (Alexander, 2008, p. 2; see also Guthrie, 1990, p. 219). While Alexander's claim is overstated, in that there is some, albeit contradictory research evidence on the impact of active-learning versus rote memory-oriented pedagogies (see discussion below), it seems that many of the arguments for active-learning, student-centered pedagogy are grounded more in philosophy and educational theory than they are warranted by empirical evidence. Thus, it is important to briefly review here the long history of philosophical and theoretical debates about the "best" way to approach instruction.

"Active-learning" (or "student-centered") pedagogies represent a model of teaching that highlights "minimal teacher lecturing or direct transmission of factual knowledge, multiple small group activities that engage students in discovery learning or problem solving, and frequent student questions and discussion" (Leu and Price-Rom 2006, p. 19; on student-centered instruction, see Cuban, 1984, pp. 3-4). "Active-learning" pedagogies can be contrasted with "formal" or "direct instruction" approaches emphasizing teacher lecturing or direct transmission of factual knowledge, coupled with "recitation and drill" (Spring, 2006, p. 6).[4] In this regard, we can identify both behavioral and cognitive dimensions on which active-learning, student-centered pedagogies can be contrasted with formal or direct instruction (see Barrow et al., 2007; Ginsburg, 2006; Mayer, 2004). The behavioral dimension of active-learning pedagogies focuses on the degree to which instructional practices enable students to engage in verbal or physical behavior, while the cognitive dimension highlights the degree to which teaching strategies enable students to engage in various forms/levels of thinking. Thus, we can identify different philosophical and theoretical notions that have contributed to how the differences between these pedagogies are framed.

4 Guthrie (1990) notes that "the schools of lesser-developed countries are littered with remnants of attempts to change the quality of teaching. … [based on] Western philosophies of education that denigrate the formalistic teaching" (p. 219); "while many modern educationalists do not approve of formalism, it is desirable and effective in many educational and cultural contexts" (p. 228). Furthermore, noting the paradox that rote learning tends to be more dominant in Asian than Western schools, but students in Asian countries tend to outperform their Western country peers on international achievement tests, Watkins (2007, p. 309) calls our attention to "cultural differences in the perception of the relationship between memorizing and understanding," commenting that Asian students "frequently learn repetitively, both to ensure retention *and* to enhance understanding."

The *behavioral dimension* is perhaps most frequently traced to American philosopher/educator John Dewey (1859-1952), who developed a pragmatist philosophy, popularized "progressive" or "experiential" education, and promoted learning by experimentation and practice – learning by doing (e.g., Dewey, 1938). However, one can also trace a concern for (especially verbal) behavior in learning to: a) Confucius (551-479 BC), who argued for "individualized instruction through discussion"; b) Socrates (470-399 BC), who emphasized involving individual learners "in a philosophic dialogues"; c) Johann Heinrich Pestalozzi (1746-1827), who encouraged "firsthand experience in learning environments"; and d) Friedrich Froebel (1782-1852), who argued for learning via "free self-activity … [which] allows for active creativity and social participation" (Treat et al., 2008). Furthermore, we should note the more recent theoretical contribution of scholars and educators associated with the humanist movement – for example, Carl Rogers (1969, p. 162), who argued that "much significant learning is acquired by doing" and that "learning is facilitated when the student is a responsible participant."

That contemporary discourse on active-learning pedagogies is informed by the ideas of John Dewey has meant that the behavioral dimension has been linked with interests in developing democratic citizens (see Dewey, 1916). For instance, Spring (2006, pp. 6-7) has argued that "[f]ormalistic forms of education are often used to prepare students to accept and fit into existing … systems … [while p]rogressive forms of education [i.e., active-learning methods] are considered a means for preparing students to actively influence the direction of … political and social systems." Thus, at least at a rhetorical level, there may be a link between promoting active-learning pedagogies and supporting political democratization." Additionally, de Baessa and colleagues (2002, p. 216) report, based on a study of classrooms attended by children during their first three years of schooling in rural Guatemala:

> The use of student-directed small groups is related to the occurrence of democratic behaviors [i.e., taking turns, helping others, expressing opinions] among children of different cultures and genders. Similar patterns were found when comparisons were made between students in NEU [Nueva Escuela Unitaria]5 and traditional schools in indigenous and non-indigenous regions. Likewise, consistent trends were found favoring NEU students of both sexes over children of comparison schools in terms of number of democratic behaviors observed. When gender comparisons were made within the NEU sample, [though,] no significant differences were found between girls and boys in the frequency of individual democratic behaviors.6

The *cognitive dimension* is generally traced to the work of the French psychologist Jean Piaget (1896-1980), who "suggested that, through processes of accommodation and assimilation, individuals construct new knowledge from their experiences" (Wikipedia, 2008; see also Piaget, 1969). Another source of influence is the work of Lev Vygotsky (1896-1934), whose writings focused on "the relationship between language and thinking" (as well as "the roles of historical, cultural, and social factors in cognition" (Wikipedia, 2008; e.g., see Vygotsky, 1962). Moreover, although qur'anic schools have tended to emphasize rote learning and memorization (Boyle, 2006; Spring, 2006), alternative pedagogical traditions associated with Islamic scholars stress students' active cognitive role in learning.

---

5 The NEU schools were those that were involved in a USAID-funded project promoting active-learning methodologies, community participation, and other features based on the active-school model originally developed in Columbia.

6 The authors note, however, that "[s]everal of the hypothesized behaviors as *participation in student government* and *choosing among viable alternatives*) were observed infrequently" in any of the classrooms (de Baessa et al., 2002, p. 219).

For example, al-Jahiz (776-868) promoted using "deductive reasoning" as well as "memorization," and Abu Nasr al-Farabi (870-950) encouraged "instruction … that … ensures that both teacher and student participate actively in the process …, allow[ing] the instruction to be student-centered" (Günther, 2006, pp. 375-76). Finally, a more contemporary cognitive psychologist of education, Merl Wittrock (1979, p. 10), explains that "learners have active roles in … learning. They are not passive consumers of information ... Even when learners are given the information they are to learn, they still must discover meaning."

The cognitive dimension of active-learning pedagogies is reflected in the distinctions that Alexander (2008, pp. 33-34) makes among the following kinds of "teaching talk", moving from talk that promotes lower to higher levels of cognition:

- ***rote***, or the drilling of facts, ideas and routines through constant repetition;
- ***recitation***, or the accumulation of knowledge and understanding through questions designed to test or stimulate recall of what has previously been encountered, or to cue students to work out answers from clues provided in the question;
- ***expository instruction***, or imparting information and/or explaining facts, principles or procedures; …
- ***discussion***, or open exchanges between teacher and student, or student and student, with a view to sharing information, exploring ideas or solving problems;
- ***dialogue***, or using authentic questioning, discussion and exposition to guide and prompt, minimise risk and error, and expedite the 'uptake' or 'handover' of concepts and principles.

Furthermore, Alexander (2008, pp. 33-34) references several studies (e.g., Alexander, 2001; Edwards and Westgate, 1994; Moyles et al., 2003; Nystrand et al., 1997; Smith et al., 2004) that document the first three kinds of teaching talk as most "recurrent" among teachers internationally, while citing various investigations (e.g., Alexander, 2006; Barnes and Todd, 1995; Mercer, 2000) to claim that the latter "forms of pedagogical interaction … have greater power to provoke cognitive engagement and understanding."

Focus of the Comparative Case Studies

Although reform initiatives in many countries, including those supported by Education Quality Improvement Project[7] (EQUIP1[8] and EQUIP2[9]) associate awards, promote active-learning pedagogies, relatively little is known about variations in how this pedagogical approach is framed by reform policies, how professional development activities are organized to promote it, how teachers implement it, and what constraints are faced in implementation efforts. Government officials, international organization personnel, nongovernmental organization staff, and local school administrators and teachers can benefit from understanding how these different aspects of the reform process reinforce or contradict each other in different contexts and over time. Such understanding can aid in planning and implementing sustainable reforms, including active-learning pedagogies.

Therefore, as part of the USAID-funded EQUIP Leader Award activities, a team of researchers conducted five case studies of countries in which EQUIP1 or EQUIP2 associate awards (or other USAID projects) have provided support to ministries of education in promoting teachers' use of active-learning pedagogies. The case studies (Cambodia, Egypt, Jordan, Kyrgyzstan, and Malawi) draw primarily on existing documentary and statistical data, supplemented by individual and focus group interviews, and, in some cases, classroom observations (see Megahed et al., 2008; Mizrachi et al., 2008; Price-Rom and Sainazarov, 2009; Roggemann and Shukri, 2009).[10] The research teams sought to address the following research questions in their country case studies:

- How and to what extent do key (government and USAID) *education strategy and policy reform* documents address the issues of active-learning pedagogies (e.g., in relation to behavioral and cognitive dimensions)?

- What are the *structure*, *content*, and *processes* of *professional development* activities designed to promote active-learning pedagogies, and in what ways, if at all, have *school leaders* and (extra-school) supervisors and teachers participated in such professional development activities?

7 In 2003 USAID (in Washington, DC) funded three EQUIP Leader with Associates Awards. In negotiation with USAID missions in a range of "developing" countries, each EQUIP was to address a related set of concerns. "EQUIP1:" focuses on classroom- and school-level educational interventions that improve student learning and closely involve the local community; "EQUIP2: Developing Quality Education Systems at Local, Regional and Central Levels" targets policy and systems development, management, and education finance at the cross-community, district and national levels; and EQUIP3 highlights school-to-work transitions and the experiences of out-of-school youth.

8 The *EQUIP1 consortium* is headed by the American Institute for Research and includes the Academy for Educational Development (AED), Aga Khan Foundation, Cooperative for Assistance and Relief Everywhere (CARE), Discovery Channel Global Education Fund, Educational Development Center (EDC), Howard University, International Reading Association, The Joseph P. Kennedy, Jr., Foundation, Juarez & Associates, Inc., Michigan State University, Save the Children Fund, Sesame Workshop, University of Pittsburgh's Institute for International Studies in Education, and World Education, Inc.

9 The *EQUIP2 consortium* is headed by the Academy for Educational Development (AED) and includes the Aga Khan Foundation, American Institutes for Research (AIR), Cooperative for Assistance and Relief Everywhere (CARE), East-West Center, Education Development Center, International Rescue Committee, Joseph P. Kennedy Jr. Foundation, Learning Communities Network, ORC Macro, Mississippi Consortium for International Development, Michigan State University, Research Triangle Institute, University of Minnesota, University of Pittsburgh's Institute for International Studies in Education, and Women's Commission for Refugee Women and Children.

10 Initially, we planned to include case studies in other countries but budget constraints and, in one case, disinterest on the part of the USAID Mission, meant that we could not complete case studies in the following countries: Cambodia, Djibouti, Honduras, Macedonia, and Nicaragua.

- How do teachers and other *educators understand* active-learning pedagogies, and how and to what extent does teachers' *classroom behavior* exhibit active-learning methods?[11]

- What *factors* (e.g., in-service program content/processes, supervisory guidance/support, classroom physical and material conditions, curriculum/examination policies, and cultural beliefs/values) are perceived to have *constrained or enabled* teachers to implement active-learning pedagogies?

The remainder of this report will summarize the findings from the five case studies, then compare the answers to the above questions across cases, and finally discuss some of the lessons learned and implications for policy and practice in promoting active-learning pedagogies as a reform initiative.

Summary of Country Case Studies

This section provides a summary of the five country case studies, focusing on how they answer the above-noted research questions.

Cambodia

Although teaching in Cambodia has traditionally been and remains today mainly teacher centered, there are signs that active-learning and child-centered pedagogies are starting to catch on. Indeed, only in the most recent decade have educational reform efforts explicitly focused on issues of quality, rather than on quantitative concerns of increasing access. In 1917 the French colonial administration introduced a system for a small proportion of Cambodians, and after achieving independence in 1954 the Cambodian government made some progress at increasing enrollment rates. When the Khmer Rouge came to power in 1975, succeeding in their "socialist" revolution against the US-backed royal government, they not only shut down the formal education system but also were responsible (directly or indirectly) for the deaths of many teachers and other professionals. Thus, after the Vietnamese military helped to oust the Khmer Rouge in 1979 and establish the People's Republic of Kampuchea, the Cambodian government (with technical assistance and support also from Cuba, the German Democratic Republic, and the USSR as well as Vietnam) devoted efforts to reconstructing the system, recruiting teachers, and providing access to schools. As Vietnam withdrew its military and administrative personnel in 1989, civil war raged and school enrolments (among other things) suffered. Following the UN-brokered peace in 1991 and elections in 1993, the Kingdom of Cambodia was (re) established and, with the aid of western intergovernmental (bilateral, multilateral) organizations and NGOs, concentrated on increasing access to schooling.

11 We focused on what teachers think/say as well as what they do because, following Alexander (2008, p. 29), we believe that "to equate pedagogy with the observable acts of teaching alone is unacceptably restrictive" and, thus, we conceive of pedagogy as "the observable act of teaching together with its attendant discourse of educational theories, values, evidence and justifications. … This [conception] requires two subsidiary and complementary frameworks, one dealing with the 'observable act' of teaching, and the other with the 'knowledge, values, beliefs and justifications' which inform it." Similarly, Spillane et al. (2002) highlight the importance of teachers' understanding as well as commitment as major factors influencing how instructional reform ideas are put into practice in the classroom.

During the 1990s, in the wake of the World Conference on Education for All in Jomtien, Thailand (Interagency Commission, 1990), initiatives in Cambodia focused mainly on increasing access and retention. In line with the international EFA movement's highlighting more issues of quality, reflected in the Dakar Framework for Action (UNESCO, 2000), the Cambodian Ministry of Education, Youth and Sports began to promote the concept of "Child Friendly Schools" (CFS).[12] This reform initiative involved promoting "student-centered" and "active-learning" pedagogies, with the intent to improve enrolment but also to enhance achievement of students (the latter being a key indicator of quality).[13] Initially, with financial assistance from SAVE Norway, UNICEF, and USAID, as well as technical assistance from the Kampuchean Action for Primary Education (KAPE), the Ministry developed an initial group of "child-friendly" primary schools. CFS was expanded to all primary schools in 2002 and then introduced (on a pilot basis) to lower secondary schools in 2004 – with assistance from UNICEF and USAID/Cambodia, which had recommenced its activities in 2003 after a 5-year hiatus.[14]

The Cambodian government and its international partners sought to build capacity for and commitment to the pedagogical reforms associated with the CFS concept via both pre-service teacher preparation programs (in provincial teacher training colleges, established in the early 1990s)[15] and in-service teacher development activities (organized through the school cluster structure, which was initiated in 1993). In-service professional developmental activities followed a national-provincial-district-cluster-school trainer-of-trainers approach. At the school and cluster levels these activities sometimes involved: a) stand-alone teacher trainings, b) on-the-job support, c) biannual refresher trainings, d) monthly teacher meetings to discuss successes and challenges/solutions, and e) annual evaluations of teacher classroom instruction along with feedback and follow-up. And, at least for USAID-sponsored in-service activities, workshop facilitators were encouraged to use active-learning pedagogies. Furthermore, the Cambodian government, with international donor assistance, revised some of the primary and lower secondary curriculum to emphasize active learning, and developed a *Handbook* to guide pre-service and in-service programs that emphasizes the CFS conception of effective teaching and learning (i.e., employing active-learning and child-centered approaches).

Research indicates that pre-service program instructors did not routinely model active-learning pedagogies, student teachers sometimes employed such approaches during micro-teaching lessons, and the quality and intensity of school-cluster-based in-service programs varied significantly (depending in part on where international project assistance was available). Nevertheless, interviews with at least the teachers involved in USAID/Cambodia-supported activities report that they had increased their knowledge and use of active-learning and cooperative learning methods and that their students had become friendlier and more confident to express selves and participate in class discussion. Less clear, however, is whether teachers understood and were promoting critical thinking or problem solving in

12 In 2003, the Cambodian government indicated its rationale for expanding quantitatively and improving qualitatively education: a) to build human capital (in relation to becoming a member of the World Trade Organization and b) to help people escape from poverty.

13 According to the Ministry of Education, Youth, and Sport (2007, p. 4), a "Child Friendly School" should actively engage students in quality learning experiences "according to the children's current and future needs" so that "they will be able to successfully reach the four pillars of learning [remembering, knowing, reflecting, and applying]."

14 For instance, beginning in 2005, USAID/Cambodia initiated its Educational Support to Children in Underserved Populations Program (ESCUP), which implemented by NGOs such as World Education, CARE, and KAPE and designed to support the Cambodian government's CFS reform.

15 In addition to the 18 provincial teacher training colleges that were established to prepare primary teachers, the Cambodian government also created 6 regional teacher training colleges for preparing junior high school teachers as well as the National Institute of Education for preparing high school teachers.

their lessons.[16] Interviews with local community members of the CFS steering committees noted that teachers had started to use more games and group work in their classes, and that students could now cooperate and work in groups better and had more confidence in speaking and participating in class.

Interviewees indicated that some of the in-service professional activities were particularly helpful in facilitating teachers' implementation of active-learning pedagogies. These included lesson planning, making materials, classroom management, questioning strategies, using games, and setting up corner study. At the same time, they signaled the need for expansion and improvement in such activities. For example, they suggested additional training on the new teaching methodologies and on producing and using related instructional materials. They also called for longer workshops and for more resources to be devoted to follow-up activities. The need for more systematic and extensive follow-up guidance and support is significant because there are questions regarding whether school administrators have the capacity (and time) to perform instructional leadership and supervision roles. In addition, interviewees stressed the need for annual recognitions, honors, and awards for teachers who are particularly successful in implementing active-learning pedagogies, particularly given the low salaries being paid. Such incentives may be more critical as implementation efforts move from working with initial groups of volunteer teachers to teachers in general.

Egypt

Government, international organization, and project documents reveal increasing attention to improving quality of education, often framed as changing teaching and learning processes from a teacher-centered/transmission and memorization-oriented approach to a student-centered and active-learning approach (sometimes explicitly referencing behavioral and/or cognitive dimensions). Although a few Egyptian educators criticized the predominance of memorization-oriented, rote learning in schools even before the Revolution of 1952, such discourse did not appear in Egyptian government documents until the late 1970s. This is also when USAID/Egypt documents began to mention these issues. While the Egyptian government and USAID/Egypt devoted some attention to improving educational quality through reforming pedagogy during the 1980s, the real shift from a focus on quantitative to qualitative improvements in education occurs in the early 1990s. This shift was coincident with the *World Declaration on Education for All* (Interagency Commission, 1990) and was reflected in the reform initiatives undertaken by the Egyptian government (with support from UNICEF, the World Bank, and USAID/Egypt). Rhetoric and action promoting active-learning pedagogies was even stronger in the new millennium, illustrated in more detail by professional development activities undertaken in context of the USAID/Egypt-supported Education Reform Program (ERP, 2004-2009).

In terms of professional development strategies for promoting active-learning pedagogies for primary, preparatory, and secondary school teachers, ERP initially followed a *cascade model*, in which experts organized a TOT workshop, designed to develop the knowledge and skills of a group of trainers, each of whom afterwards had responsibility for training one or more groups of teachers. Subsequently, ERP employed a *refined cascade model*, in which project staff organized workshops with expert

16 This finding from 2008 is similar to what was reported in the 2004 "Student Readiness Program" evaluation, which indicated relatively lower scores on the "student engagement" measure; a predominance of teacher-directed, though child-centered instructional activities; and teachers seeming to focus on activities for keeping students busy versus facilitating cognitive learning.

consultants to train staff of school-based training and evaluation units (SBTEUs), who would then deliver such training to their colleagues in their own schools or in a cluster of schools. By July 2006 ERP had further refined its approach to professional development (*TOT with supervised practice*), adding a step in which ERP staff/consultants supervised the initial practice of the school-based professional developers as they planned and implemented workshops for teachers in their schools or school clusters and sought to insure that all training provided for teachers was also provided for school administrators and supervisors. At times ERP also used a *direct training model*, in which staff and consultants conducted workshops directly for the teachers, but eventually ERP pursued another approach to teacher professional development – *collaboration with multiple levels of the training system*. In this latter approach ERP staff and consultants collaborated with MOE personnel to design a cascade TOT program, redesign workshop and classroom instructional materials, and implement professional development activities.

The qualitative data (collected via focus group interviews with key personnel) and quantitative data (obtained via standards-based classroom observation of teacher behavior) indicate that at least some of the professional development activities organized through ERP during the period from late 2004 through early 2007 helped to inform educators about the theory and practice of active-learning pedagogies. They articulated – with varying degrees of depth – the rationales and strategies of this pedagogical reform. Moreover, teachers in ERP-supported schools reported that their classroom behaviors had changed toward employing such pedagogies – a view that was reinforced by supervisors and school-based professional development staff. Such change was not generally reported by teachers working in other schools in the 7 of 27 governorates on which ERP focused. Importantly, moreover, these interview findings are supported by quantitative data based on classroom observations, in that teachers in ERP-supported schools increased in their performance of active-learning pedagogies (with respect to both behavioral and cognitive dimensions) more so than other teachers.

Note, however, that on average teachers in ERP-supported schools exhibited only relatively modest movement toward using active-learning pedagogies. Moreover, the fact that even such limited pedagogical change was not evident among teachers in other schools in the focal governorates suggests that the reform was projectized (i.e., organized through a pilot project in a sample of settings) rather than implemented on a broader scale as part of an overall system reform. While focus group interviews revealed that teachers, school administrators, and supervisors, who were not part of ERP-supported activities, were open to change, based on what they had heard about the reform pedagogies through formal and informal channels. However, it seems that they were unable or reluctant to even begin implementing active-learning methods without formally organized professional development activities and they were not likely to deepen and sustain such reform pedagogies without ongoing guidance and support – at both interpersonal and policy/system levels. With regard to policies, the Egyptian government (perhaps with support from international organizations) would need to create stronger incentives for teachers to reform their instructional methods and would need to go beyond introducing continuous assessment of students and restructure the examination system, so that teachers, students, and parents would be less oriented toward valuing styles of teaching involving transmission and valuing styles of learning involving memorization.

Jordan

Government, international organization, and project documents reveal increasing attention to improving quality of education in Jordan, both for basic education and for early childhood education. This was especially true after the ascendancy of King Abdullah to the throne in 1999. While basic education was a strategic focus of the country from independence (1946) onward, the new millennium has seen a growing awareness of the importance of providing early childhood education (ECE), particularly programs in which teaching and learning processes involved child-centered, active-learning approaches rather than teacher-centered, transmission and memorization-oriented approaches. Both government ministries and international organizations seemed to increasingly support this approach throughout the late 1990s and early 2000s as Jordan's quality of basic and secondary education improved, and the relatively underdeveloped state of ECE became even more evident. Queen Rania became a passionate advocate for improvement of government-provided early childhood education, and academics at the University of Jordan stepped up to the challenge to quickly and successfully enhance educational services in this sector.

As greater attention was directed to ECE, it became clear that there were both quantitative and qualitative problems that had to be addressed. In this context, the World Bank-supported Education Reform for the Knowledge Economy (ERfKE, 2003-2007) reform in Jordan included ECE as one of the major components of the program. USAID/Jordan also saw a need for technical and financial assistance to support this reform and focused a significant portion of the financial commitment in its ERfKE Support Project (ESP, 2003-2007) to improving ECE in the country, with particular attention given to increasing access and quality (i.e., enhancing classroom environments and reforming teaching practices), especially in underserved rural areas. In terms of professional development strategies for promoting active-learning pedagogies, ESP followed a variety of models, including direct training, training of trainers, and collaboration with multiple levels of the training system.

Focus group interviews revealed that teachers, school administrators, and Ministry officials were open to change, based on what they had heard about the reform pedagogies through formal and informal channels. The teachers were excited by the idea of child-centered, active-learning pedagogies, and had a good grasp of strategies they could use to foster such. It is important to note that the Arabic translation of the term for active learning was not understood or recognized by teachers; instead, they responded to the notions of 'learning by doing' or 'learning through play,' which were employed in policy documents and during professional development workshops. MoE administrators and supervisors – as well as ESP staff – were familiar with the technical language, but they routinely substituted more casual phrasings once focus group discussions started. However, despite their enthusiasm for active-learning pedagogies, kindergarten teachers were frustrated by the intense hours of training that had no subsequent recognition in terms of salary. Given that just a few years ago there were just 150 teachers in government-provided kindergartens in Jordan, the large number of teachers (and supervisors and school administrators) who now instruct or interact with kindergarten levels and have come to value active-learning pedagogies speaks to the success of the Ministry personnel and project staff in implementing and publicizing reform efforts.

The sustainability of the reform is a looming question. As toys and playgrounds break down and as new teachers enter the system, there is a question about whether the Jordanian government can sustain its quantitative expansion and qualitative improvement in ECE while also dedicating efforts to improving other

services provision for young children (such as health and nutrition). There is a distinct need to create stronger incentives (e.g., salary increases) for teachers to reform their instructional methods and to develop a more comprehensive, ongoing professional development system that helps teachers to obtain the requisite capacity building, guidance, and support.

Kyrgyzstan

Since the collapse of the Soviet Union in 1991, the rhetoric of the Kyrgyz Republic (or Kyrgyzstan) has increasingly acknowledged the importance of active-learning pedagogies for improving the quality of education. Kygrysztan's participation in the Education for All (EFA) movement, launched in 1990 just before its emergence as a separate nation state, helped align Kyrgyz education policy with international trends that called for educating all children in using child-friendly, individualized, and active-learning approaches, thereby mirroring the International Convention of the Rights of the Child (United Nations, 1989).

In 2005 and 2006, government policy shifted in the wake of the results of UNICEF's (2006) Monitoring Learning Achievement (MLA) study and the Program for International Student Assessment (PISA, 2007). The MLA study cited outdated teaching methodologies as one of the factors contributing to declining math and reading scores among primary-level students, while dramatically low scores on the PISA exam demonstrated the need for better application of knowledge and critical-thinking skills among secondary-level students. Government policy shifted to give more emphasis to active-learning pedagogies for developing basic competencies as well as the critical-thinking and problem-solving skills required in daily life. Practical application of knowledge was seen as key to preparing young people for active, participatory citizenship and for participation in a national and global market economy.

International intergovernmental organizations and international NGOs supported and often influenced teacher professional development policies and practices. International donor-funded projects were frequently designed to spread active-learning pedagogies to teachers through school-based training that was meant to supplement and even replace the government's limited teacher in-service training programs. Illustrative are professional development strategies supported by the USAID-funded Participation, Education and Knowledge Strengthening (PEAKS, 2003-2007) project. The project used a somewhat traditional cascade model in which teachers at high-capacity "professional development schools" were trained in interactive methods, and these master trainers subsequently trained teachers at 10-20 nearby cluster schools. Training was reinforced through mentoring, whereby master trainers visited cluster schools to observe teachers in practice and provide feedback, as well as guidance and support, on their implementation of the new teaching methods. The workshops themselves were highly interactive, and involved teachers seated in groups working cooperatively to develop concepts, respond to questions posed, and identify ways to apply new instructional practices to their own classrooms.

According to the survey findings, teachers in the project's 13 professional development schools or the 127 associated suburban and rural cluster schools were more likely than regular (non-project) suburban and rural schools to report that they "knew perfectly" or "knew well" active-learning instructional

methods, though both groups of teachers exhibited some level of understanding of the concepts and techniques. Moreover, individual and focus group interviews indicated that active-learning methods were being used in project schools and non-project schools alike, with teachers in other schools being influenced by other donor-supported projects that also emphasized active-learning pedagogies. The research also revealed, however, that teachers varied in their interpretations of the rationale behind active-learning pedagogies, with some saying that active-learning methods were used to get students interested in studying (with implications for achievement in the cognitive dimension), while other teachers emphasized helping students learn to express their views and to listen to each other (relevant to behavioral dimension and democratic citizen participation).

These same data demonstrate, however, that a variety of factors have prevented a larger-scale adoption of active-learning pedagogies. For instance, teachers may be reluctant to use active-learning methodologies if they do not appear to foster learning of the knowledge and skills in their particular subject area (particularly the case for math and science teachers) that are required for students to pass exams. Interestingly, the reality of scarce instructional materials encourages some teachers and discourages others from using active-learning pedagogies. One set of informants commented that small group work allowed students to share scarce materials, and draw upon other sources of knowledge, such as the internet. Other teachers, however, said that the limited number of textbooks and other instructional materials prevented them from organizing their lessons in more interactive ways.

Other factors constraining teachers' use of the reform pedagogies include the fact that school inspectors and directors, who have not been trained to evaluate active-learning pedagogies at the regional level, may prevent their implementation. For instance, some administrator respondents indicated that they were at least initially shocked at the idea of integrating academic disciplines and allowing students to work in groups or move freely around the classroom. Although the Kyrgyz government and international donors have made great strides in introducing active-learning pedagogies on the policy level, and many teachers use active-learning approaches in their daily practice, there is still much work to be done in the training of teachers and administrators in active-learning pedagogy and its theoretical underpinnings and rationale, as well as techniques for mentoring and evaluating teachers when they implement the pedagogy in practice.

Malawi

According to official documents, the Government of Malawi is committed to introducing and sustaining active-learning pedagogies because they are aligned with democratic principles and because they foster critical-thinking and decision-making skills. While the government's 2001 Policy Implementation Framework document mentions "effective teaching/learning," we see a more explicit reference to active-learning pedagogies in the 2007 primary school and primary teacher education curricula. International intergovernmental organizations and international NGOs have also promoted active-learning pedagogies in various documents and through technical assistance and training projects. Such projects included two complementary USAID-funded and Ministry-coordinated reform initiatives focused on enhancing teachers' pedagogical practices: the Malawi Education Support Activity (MESA, 2003-2006) and the Malawi Teacher Training Activity (MTTA, 2004-2008).

The MESA project, which was reported to yield increased enrollment, decreased dropout, and improved pupil performance, employed interactive and participatory approaches in teacher professional development. By engaging teachers in participatory methods of dialogue and in reflective practice about their own teaching behavior, and by establishing personal codes of professional conduct, MESA provided teachers opportunities to learn ways of practicing and exhibiting good citizenship behavior themselves as well as methods to instill such behavior in their students. MESA also supported the Malawi Institute of Education in creating a guide, "Participatory Teaching and Learning: A Guide to Methods and Techniques," that was to be used as part of pre-service and/or in-service training programs in teachers' colleges in Malawi.

While MESA trained teachers in pedagogies, MTTA initially stressed content knowledge training for teachers in the subjects of math, science, and English. However, when the MESA project ended in 2006,[17] the MTTA project added some attention to pedagogy in its training activities. Following a modified TOT approach, project-supported MTTA professional development activities began with consultants training MTTA staff, who then trained primary education advisors at the district level, who subsequently organized large training events for teachers in their districts. Afterwards, the teachers developed their own school-based training activities to supplement the larger trainings. MTTA also developed Mobile Teacher Training Troupes, a group of retired teachers or teaching experts that aimed to assist in teacher training activities by visiting a school for a week-long period to conduct classroom observations, demonstrate model lessons in classrooms, and organize after-school meetings for discussions with teachers.

Focus group participants from several MESA and/or MTTA-supported schools report that the MESA and MTTA projects have created a system that provides continuous support to teachers and supervisors in their efforts to employ active-learning methods in the classrooms. These teachers not only can articulate the concepts and rationales for employing this approach, but also claim to have made progress in implementing such active-learning pedagogical strategies in their classrooms. Teachers and supervisors involved in the projects mentioned that using these methods helped their students to remember and master the subject matter better, because they were engaged in discovery of knowledge (the cognitive dimension), as well as to feel less shy when working in small groups (the behavioral dimension). However, for teachers who are not involved in these projects, this is much less the case. While key personnel in the Malawi government and the teacher training colleges promote the use of active-learning pedagogies, until now they have not provided enough in-service guidance and support to teachers, who tend to revert to using teacher-centered methods.

In fact, the government has put its primary focus on fostering active-learning at the pre-service level. The impact of pre-service teacher education is weakened because college tutors, who were not exposed generally to active-learning pedagogies during their training, may teach (often through lectures) about active-learning methods but do not model such pedagogies in their classrooms. Moreover, when teacher college students or graduates arrive at a school for practice teaching or to take up their first

17 Although the MESA projected reported substantial improvement in teachers' understanding of pedagogies and an increase in student learning outcomes, funding issues caused the project to end and the government did not choose to scale-up the intervention to all schools in Malawi.

post, they typically encounter teachers using teacher-centered, transmission-oriented methods, making it challenging to try out and refine active-learning, student-centered methods.

Focus group participants also noted another obstacle to their using active-learning methods: the high-stakes examination system (e.g., at the end of Standard 8) that demands memorization of subject matter content rather than critical-thinking or problem-solving skills. Another factor inhibiting implementation of active-learning pedagogies, according to informants, is the limited availability of teaching and learning resources.

Finally, teachers reported that salaries, accommodations, and other incentives do encourage them to devote the time and effort to implementing active-learning pedagogies.

Comparing Country Case Studies

This section discusses the similarities and differences across the five case studies presented above. The discussion is organized around the key issues referenced in the previously identified research questions:

- Reform Documents and Active-Learning Pedagogies
- Professional Development Initiatives and Active-Learning Pedagogies
- Teachers' Understandings and Behaviors Related to Active-Learning Pedagogies
- Factors that Constrain/Enable Implementation of Active-Learning Pedagogies

Reform Documents and Active-Learning Pedagogies

In the five cases examined we witnessed an explosion of policy document rhetoric as well as host-government-USAID initiatives to promote active-learning pedagogies in the 21st century. We discovered attention to active-learning pedagogies in Egyptian government and USAID/Egypt documents beginning in the late 1970s and some initial pilot project efforts in the 1990s in the wake of the Jomtien World Conference on Education for All (EFA), but it was after the Dakar EFA gathering in 2000 that we observed increased rhetoric and action. Similarly, we noted some attention to active-learning pedagogies in the 1990s in Kygyzstan, but government, USAID, and project documents highlight such issues after 2000. In the cases of Cambodia, Jordan, and Malawi, we were only able to identify an explicit focus on active-learning pedagogies in government and related international agency documents in the new millennium.

Generally, the documents do not make explicit whether they are stressing the behavioral and/or the cognitive dimension of active-learning pedagogies. However, Cambodia and Jordan discuss such pedagogies in relation to preparing workers for the global economy, Malawi gives more attention to how such pedagogies can foster democratic citizens, and Egypt and Kyrgyzstan reference active-learning pedagogies as contributing to educating both citizens and workers.

Professional Development and Active-Learning Pedagogies

In all five cases, government initiatives and/or international-organization-funded projects organized professional development activities to enhance teachers' knowledge, skills, and commitment to implementing active-learning pedagogies.[18] One dimension of such professional development common to all cases was the intent to employ such pedagogies in workshops and other professional development activities. Also, in some of the approaches used in Cambodia, Egypt, and Jordan, as well as most or all of the programs organized in Kygyzstan and Malawi, a refined cascade/TOT model was adopted. This involved an initial training of trainers, who subsequently trained others, culminating in a school-based or school-cluster-based set of trainings. In addition, with the possible exception of Cambodia, this refined cascade/TOT model at times included some degree of parallel or joint capacity development programs for school administrators and supervisors as well as some form of supervised guidance of and support for teachers provided by other teachers, trainers, administrators, and/or supervisors.[19]

Despite the consensus in the literature that such strategies for in-service professional development are preferred (see Leu, 2004; Schwille et al., 2007), at least in Egypt and Jordan government and project trainers at times resorted to direct training or simple TOT approaches. Interestingly, in Egypt and Jordan projects focused on institutional and individual capacity building at various levels of the in-service training system, while the PEAKS project in Kyrgyzstan built the capacity of government teacher trainers at the Kyrgyz Academy of Education and organized a few trainings for school inspectors. Such efforts were intended not only to develop teachers' capacity to employ active-learning pedagogies but also to enable the system to deliver such professional development programs in the future.

Teachers' Understandings and Behaviors Related to Active-Learning Pedagogies

Qualitative data from focus group interviews in all five countries reveal that teachers (as well as supervisors and administrators) involved in the above-referenced, project-facilitated professional development activities could articulate – with varying degrees of depth – the rationales and strategies of active-learning pedagogies. Teachers in Egypt, Kyrgyzstan, and Malawi emphasized the behavioral dimension (e.g., learning to take turns, express oneself, and listen during group work) and cognitive dimension (e.g., discovering knowledge, going beyond rote learning and memorization) of such methods.[20] However, in Cambodia and Jordan, the focus was mainly on the behavioral dimension, expressed in terms of "working in groups" or "playing games" in Cambodia and in terms of promoting learning "by doing" or "through play" in Jordan.

18 In Cambodia and Malawi reform efforts also focused on pre-service teacher education, and a Handbook was developed to guide both pre- and in-service programs.

19 In Malawi, however, they were not able to effectively implement the interesting initiative in developing Mobile Teacher Training Troupes, composed of retired teachers and teaching experts.

20 Similarly, based on her research in Namibia, Ralaingita (2008, p.269) reports that "teachers struggled with the balance between 'facilitating' and 'giving knowledge' to the learners … [and] some teachers clearly stated that learner-centred education isn't group work, but then some of the same teachers seemed to collapse group work and learner-centred education..."

In all five countries we obtained self reports that teachers involved in projects had made progress in implementing at least some aspects of active learning pedagogies. Moreover, in all five countries, reports by administrators, supervisors, and/or school-level steering committee members, based on their observations of teachers, reinforce the picture of pedagogical reform taking place. With the exceptions of Cambodia and Kygyzstan (where "non-focal project" informants were likely to be involved in other projects), there was less evidence of educators having enhanced their understandings and behaviors associated with active-learning pedagogies. Moreover, in the one case study that includes systematic classroom observation, Egypt, project-supported teachers' classroom interaction reflected modest movement over time toward implementing behavioral and cognitive dimensions of active-learning pedagogies, while this was less the case for teachers who were not involved in project activities.[21]

Factors Enabling/Constraining Implementation of Active-Learning Pedagogies

From the above discussion, it should be clear that professional development activities – particularly those organized with project support and that included training workshops as well as various forms of supervisory guidance and support – contributed to developing educators' understandings and behaviors related to active-learning pedagogies.[22] The differences between educators involved in project activities (whether in the USAID-funded projects on which we focused or other projects) and those not participating speaks volumes in this respect. Focus group interviewees in all five countries also mentioned how such training activities and/or supervisory support helped them to begin using these methods. And non-project-involved teachers often pointed to the absence of such professional development initiatives in explaining why they knew little about and did not use such pedagogical approaches. In all cases, teachers mentioned that uninitiated or uncommitted administrators, supervisors, and – in the case of Malawi – college tutors might impede experimenting with such practices.[23]

Three policy domains also constrained implementation of active-learning pedagogies, even among those who benefited from project-supported professional development activities. First, interviewees in Egypt, Kygyzstan, and Malawi highlighted the challenge of employing these reform pedagogies in the context of high-stakes exams that prioritized memorization over critical thinking and problem solving.[24] The fact that this was not a big issue in Jordan is likely because of the focus on kindergarten teachers, whose pupils do not face such exams in their immediate futures. Second, in Egypt, Jordan,

21 Ralaingita (2008, pp. 272) states that "conclusions reached by classroom researchers in Namibia … [vary] from pessimistic declarations that teachers are stuck in traditional modes and failing to implement learner-centred education (Mutwa and Reines, 2002; Shaalukeni, 2002) to those who stress … [that they] have seen … some combination of apparently traditional modes of teaching and more learner-centred modes (Luecke, 2004; Storeng, 2001; van Graan et al., 2006)." Based on her own field work in Namibia, Ralaingita (2008, p. 273) concludes that "there were a number of elements of more traditional teaching that appeared somewhat common among the lessons, such as an apparent lack of emphasis on conceptual understanding and higher-order thinking skills, significant reliance on whole-class instruction, and a very routinized structure in the mathematics classes. At the same time, there were a number of differences and examples of creative and innovative approaches, such as encouraging learners to explain their work to the class, teacher-made materials that encouraged participation, and attempts to connect to real life in activities and presentations."

22 Schwille et al. (2007, pp. 104-105) emphasize that "the cascade model … lead[s] to little change in teachers' classroom approaches, in part because [it usually] depends on exhortation rather than modeling, process, and structured practice in which teachers play an active role' [Leu, 2004, p. 2]. … [T]hese weaknesses are particularly detrimental in those challenging innovations that emphasize student-centered active learning, critical thinking and/or problem solving."

23 Similarly, Ralaingita (2008, p. 275) notes that "a number of previous studies in Namibia … [report] a lack of support for new teaching techniques at the school level (Murangi and Anderson, 1997; Mutwa and Reines, 2002), where other teachers or the principal were negative about teachers' attempts to try new methods, [although she] ... did not see or hear about this challenge ..."

24 Similarly, Guthrie (1990, p. 226) observes: "Where syllabus reforms promote open-ended activities or heuristic teaching styles to develop enquiry skills and attitudinal change, but *examinations* emphasize recall of lower-level cognitive knowledge, teachers face a dilemma."

Kyrgyzstan, and Malawi both teachers involved in projects and those not involved mentioned that conditions for teaching (e.g., size of classrooms, number of students, and availability of instructional materials) affected their ability to implement active-learning pedagogies.[25] Interestingly, in Kygyzstan teachers were divided between those for whom limited instructional materials were an encouragement and those for whom they were a discouragement to employing active-learning pedagogies. Third, educators in all five countries emphasized that, given the major commitment of time and energy to learn about active-learning pedagogies and then implement them on a regular basis, a major constraint was the limited incentives (e.g., increased salary, promotion prospects, or recognition) for engaging in reform teaching methods.

Conclusion

Schwille and colleagues (2007, p. 25) observe that "evidence accumulated since the 1970s … suggest[s] that teaching is arguably the strongest school-level determinant of student achievement … However, there is still much debate on what it takes to produce excellence among teachers at large." While the details of what constitutes excellent teaching are subject to debate, there seems to be a growing consensus that it involves some notion of active-learning pedagogies. Certainly, as we have discussed above, the scholarly literature as well as the policy documents of international organizations and national governments have been increasingly championed student-centered, active-learning pedagogies as a key element in improving the quality of education.

Nevertheless, efforts to get more teachers to more routinely use such instructional methods have faced many challenges. In part, this reflects the reality of attempt to change a pattern of human behavior; teachers are not blank slates on whom reformers can inscribe the new pedagogical approaches:

> In fact, many teachers are more influenced in teaching by how they themselves were taught in elementary and secondary school than by their formal [pre-service and in-service] teacher education. In other words, a teacher who has been taught throughout elementary and secondary school by respected teachers who used a direct transition mode of delivery and very little student-centred inquiry is likely to identify with that mode of teaching and be deeply resistant to superficial attempts to change.[26] (Schwille et al., 2007, p. 30)

In the five case studies summarized, though, we see evidence that professional development initiatives, mainly in-service programs, can promote among teachers not only different ways of talking but also different ways of behaving and interacting in classrooms. While it would be an overstatement to say that teachers involved in projects radically transformed their instructional practices, it seems appropriate to conclude that real changes occurred as a result of sustained training and supervisory support.[27]

25 Guthrie (1990, p. 226) also concludes that "[a]ttempts to upgrade teacher quality by requiring change in teaching style … may not be practicable because of lack of space, inadequate classroom furniture, absence of equipment" (see also Ralaingita, 2008, p. 277).

26 Based on research on a study of teachers in the context of reform in South Africa and Russia, Schweisfurth (2002, p. 127) demonstrates that teachers' response to pedagogical reforms cannot be understood simply as "resistance" or "conservatism;" rather it is worthwhile to frame our analysis in terms of the ways in which teachers make sense of "incompatible forces" during the reform process, which "pull teachers in different directions" (see also Ralaingita, 2008).

27 Other researchers have emphasized the importance of continuing professional development (Luecke, 2004; O'Sullivan, 2002, Pomuti et al., 2004; Ralaingita, 2008; van Graan et al., 2006).

This is the good news. However, we need to remember that such professional development activities and the attendant shifts in teacher pedagogical approach were observed mainly in international organization project-supported contexts. That trainers, supervisors, and teachers from these countries could effect pedagogical change with technical assistance and financial support is promising, but raises the question of how such successes can be deepened, diffused, and sustained over time (especially given teachers' desire for incentives to attend workshops). An affirmative answer to this question seems to depend at least in part on the extent to which projects build the capacity and activate the system to develop, motivate, and support teachers and not just transmit knowledge and skills to teachers. While financial resources are certainly not insignificant, the ways such resources are mobilized and distributed are also important.

References

Alexander, R. (2001). *Culture and pedagogy: International comparisons in primary education*. Oxford: Blackwell.

Alexander, R. (2006). *Towards dialogic teaching: Rethinking classroom talk,* 3rd edition. York: Dialogos.

Alexander, R. (2008). *Education for all, the quality imperative, and the problem of pedagogy*. Create Pathways to Access [Monograph No. 20]. London: University of London Institute of Education.

de Baessa, Y., Chesterfield, R., & Ramos, T. (2002). Active learning and democratic behavior in Guatemalan rural schools. *Compare 32*(2): 205–18.

Barnes, D., & Todd, F. (1995). *Communication and learning revisited*. London: Heinemann.

Barrow, K., Boyle, H., Ginsburg, M., Leu, E., Pier, D., & Price-Rom, A. (2007). *Cross-national synthesis of educational quality report number 3: Professional development and implementing active-learning, student-centered pedagogies*. Washington, DC: EQUIP1 Research Report. Retrieved January 28, 2010, from http://www.equip123/EQUIP1/publications.

Beeby, C. (1966). *The quality of education in developing countries*. Cambridge, MA: Harvard University Press.

Beeby, C. (1986). The stages of growth in educational systems. In S. Heyneman and D. White (Eds.) *The Quality of Education and Economic Development: A World Bank Symposium* (pp. 37–44). Washington, DC: World Bank.

Boyle, H. (2006). *Memorization and learning in Islamic schools. Comparative Education Review 50*(3): 478–95.

Cuban, L. (1984). *How teachers taught: Constancy and change in American classrooms, 1898–1980*. New York: Longman.

Dewey, J. (1916). *Democracy and education*. New York: Free Press.

Dewey, J. (1938). *Experience and education*. New York: Macmillan.

Edwards, A., & Westgate, D. (1994). *Investigating classroom talk*. London: Falmer.

Ginsburg, M. (2006). *Challenges to promoting active-learning, student-centered pedagogies* (EQUIP1 Issue Paper). Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs/E1-IP-ChallengesPromotingActiveLearning.pdf.

Günther, S. (2006). Be masters in that you teach and continue to learn: Medieval Muslim thinkers on educational theory. *Comparative Education Review. 50*(3): 367–88.

Guthrie, G. (1990). To the defense of traditional teaching in lesser-developed countries. In V. Rust and P. Dalin (Eds.) *Teachers and teaching in the developing world* (pp. 219–32). New York: Garland Publishing.

Heyneman, S. (1986). Overview. In S. Heyneman and D. White (Eds.) *The quality of education and economic development: A World Bank symposium* (pp. 3–4). Washington, DC: World Bank.

Inter-Agency Commission. (1990). *World declaration on education for all.* (Document adopted by the World Conference on Education for All: Meeting Basic Learning Needs, Jomtien, Thailand, March 5–9, 1990). New York: Inter-Agency Commission.

Lockheed, M., & Levin, H. (1991). Creating effective schools. In H. Levin and M. Lockheed (Eds.) *Effective schools in developing countries* (pp. 1–20). Washington, DC: The World Bank, Education and Employment Division, Population and Human Resources Department.

Leu, E. (2004). *The patterns and purposes of school-based and cluster teacher professional development programs* (EQUIP1 Working Paper No. 2). Washington, DC: USAID.

Leu, E., & Price-Rom, A. (2006). *Quality of education and teacher learning: A review of the literature.* Washington, DC: USAID Educational Quality Improvement Project 1.

Luecke, J. (2004). *Tapestries of teaching practice: A case study of Namibian educators in an era of "post-independence" reform.* Unpublished PhD dissertation, University of Wisconsin–Madison.

Mayer, R. (2004). Should there be a three-strikes rule against pure discovery learning? The case for guided methods of instruction. *American Psychologist 59*(1): 14–19.

Megahed, N., Ginsburg, M., Abdellah, A., & Zohry, A. (2008). *Active-learning pedagogies as a reform initiative: The case of Egypt.* EQUIP1 research report. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs.

Mercer, N. (2000). *Words and minds: How we use language to think together.* London: Routledge.

Mizrachi, A., Olivia P., & Susuwele-Banda, W. (2008). *Active-learning pedagogies as a reform initiative: The case of Malawi.* Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs.

Moyles, J., Hargeaves, L., Merry, R., Paterson, F., and Esarte-Sarries, V. (2003). *Interactive teaching in the primary school.* Maidenhead: Open University Press.

Murangi, V. K., & Andersson, S. B. (1997). Implementing educational reform in Namibia: A challenge for the first graduates of the Basic Education Teacher Diploma (BETD). In R. Avenstrup (Ed.), *Shaping Africa's future through innovative curricula: Proceedings of the first sub-regional conference on curriculum development in southern Africa* (pp. 209–232). Windhoek, Namibia: Gamsberg Macmillan.

Mutwa, R. S., & Reines, T. (2002). In-service education and classroom practice: Geography teaching in Namibia. In S. G. Lewis (Ed.), *Informing reform: Namibian research to inform education policy and practice* (Vol. 2). Windhoek, Namibia: Namibian Educational Research Association.

Nystrand, M., Gamoran, A., Kachur, R, & Prendergast, C. (1997). *Opening dialogue: Understanding the dynamics of language and learning in the English classroom.* New York: Teachers College Press.

O'Sullivan, M. (2002). Action research and the transfer of reflective approaches to in-service education and training (INSET) for unqualified and underqualified primary teachers in Namibia. *Teaching & Teacher Education* 18: 523–539.

Piaget, J. (1969). *Science of education and the psychology of the child.* London: Longman.

Pomuti, H., LeCzel, D., Liman, M., Swarts, P., & Graan, M. V. (2004). *Practicing critical reflection in pre-service and in-service teacher education in Namibia.* Paris: Association for the Development of Education in Africa.

Price-Rom, A., & Sainazarov, K. (2009). *Active-learning pedagogies as a reform initiative: The case of Kyrgyzstan*. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs.

Program for International Student Assessment (PISA), 2006. (2007). *Science competency for tomorrow's world.* Paris: OECD. (http://www.pisa.no/pdf/Chapter1and11PISA2006.pdf).

Ralaingita, W. (2008). *Re-making the Namibian teacher: A study of teacher reflection in an era of social transition and policy reform.* Unpublished doctoral dissertation, School of Education, University of Maryland.

Rogers, C. (1969). *Freedom to learn.* Columbus, OH: Charles Merrill.

Roggemann, K., & Shukri, M. (2009). *Active-learning pedagogies as a reform initiative: The case of Jordan*. Washington, DC: American Institutes for Research. Retrieved January 28, 2010, from http://www.equip123.net/docs.

Schweisfurth, M. (2002). *Teachers, democratisation and educational reform in Russia and South Africa*. Oxford: Symposium Books.

Schwille, J., & Dembélé, M., with Schubert, J. (2007). *Global perspectives on teacher learning: Improving policy and practice.* Paris: UNESCO, International Institute for Educational Planning.

Shaalukeni, L. N. (2002). Learner-centeredness and group work in second language teaching: A shattered dream. In S. G. Lewis (Ed.), *Informing reform: Namibian research to inform education policy and practice* (Vol. 1). Windhoek, Namibia: Namibian Educational Research Association.

Smith, F., Hardman, F., Wall, K., & Mroz, M. (2004). Interactive whole class teaching in the national literacy and numeracy strategies. *British Educational Research Journal 30*(3): 395–412.

Spillane, J., Reiser, B., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research 72*(3): 387–431.

Spring, J. (2006). *Pedagogies of globalization: The rise of the educational security state*. Mahwah, NJ: Lawrence Erlbaum Associates.

Storeng, M. (2001). *Giving learners a chance: Learner-centeredness in the reform of Namibian teaching.* Stockholm: Institute of International Education, Stockholm University.

Torney-Purta, J. (1999). *Civic knowledge and engagement among 14-year-olds in 23 European countries, 2 Latin American countries, Hong Kong, Australia and the United States*. Hamburg, Germany: IEA Data Processing and Research Center.

United Nations. (1989). *Convention on the rights of the child*. Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of November 20, 1989. Geneva: Office of the High Commissioner for Human Rights.

UNESCO. (2000). *The Dakar framework for action: Education for all: meeting our collective commitments*. Text adopted by the World Education Forum Dakar, Senegal, April 26–28, 2000.

UNESCO. (2004). *Education for all: The quality imperative*. (EFA Global Monitoring Report 2005). Geneva: UNESCO.

UNESCO. (2008). *EFA global monitoring report, 2008: Education for all by 2015. Will we make it?* Oxford: Oxford University Press and UNESCO Publishing.

UNICEF. (2006). *Monitoring learning achievements (4th grade)*. Bishkek: Ministry of Education, Science and Youth Policy of the Kyrgyz Republic.

USAID. (2005, April). *Education strategy: improving lives through learning*. Washington, DC: USAID.

van Graan, M., Leu, E., Price-Rom, A., and Barrow, K. (2006). *Namibia pilot study of teacher professional development: Quality in education, teaching, and learning: Perceptions and practice*. Washington, DC: USAID Educational Quality Improvement Project 1.

Vygotsky, L. (1962). *Mind and society*. Cambridge, MA: MIT Press.

Watkins, D. (2007). *Comparing ways of learning* in Mark Bray, Bob Adamson, and Mark Mason (Eds.) *Comparative education research: Approaches and methods* (pp. 299–313). Hong Kong: Comparative Education Research Centre and Springer.

Wikipedia. (2008). Constructivism (learning theory). Retrieved April 4, 2009, from http://en.wikipedia.org/wiki/Constructivism_(learning_theory).

Wittrock, M. (1979). The cognitive movement in instruction. *Educational Researcher 8*(2): 5–11.

USAID
FROM THE AMERICAN PEOPLE

EQUIP1
Educational Quality Improvement Program
Classrooms ▪ Schools ▪ Communities

American Institutes for Research • Academy for Educational Development • Aga Khan Foundation
CARE • Discovery Channel Global Education Fund • Education Development Center
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

U.S. Agency for International Development Cooperative Agreement
No. GDG-A-00-03-00006-00

August 2009