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Active-Learning Pedagogies as a Reform Initiative: The Case of Cambodia



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INTRODUCTION

Research provides evidence that traditional, teacher-centered instruction is less effective than student-centered instruction that makes ample use of active-learning pedagogies (Wink, 2000). Teachers and educational leaders have also found that active-learning pedagogies and student-centered techniques enhance learning, and play an important role in improving educational outcomes, such as decreased dropout rates and increased student achievement. Thus, there are efforts around the world to move away from instruction in which students are passive recipients of knowledge—what Freire (1993) deemed as the banking education model, in which teachers deposit sanctioned knowledge into the heads of students—to models of teaching and learning in which students actively engage in discovering and constructing new knowledge through a wide range of meaningful projects and activities; participate in collaborative work with their teachers, fellow students, and the community; and benefit from other strategies and techniques which help students develop higher order thinking skills and understandings of real-life applications for things learned. Despite these efforts, relatively little is known about variations in how active-learning pedagogies and student-centered instruction are framed by reform policies, how professional development activities are organized to promote them, how teachers implement them, and what constraints are faced in the implementation process.

To address these issues, this report provides a case study of progress in Cambodia toward the promotion of active-learning pedagogies within the context of national educational reform efforts aimed at providing equitable education and effective teaching and learning for all of the nation's students. The data presented here draw primarily from existing documentary and statistical data, supplemented with data from teacher focus groups, interviews with key education officials involved in active-learning pedagogy reform efforts, and observations in educational institutions.

The purpose of this report is to promote national and international dialogue among policymakers, teachers, teacher educators, and other educational leaders regarding these issues as well as inform the planning and implementing of sustainable reforms which include active-learning pedagogies. In particular, this case study is designed to contribute by examining how different aspects of the reform process may reinforce or contradict each other.

GEOGRAPHICAL, POLITICAL, ECONOMIC AND CULTURAL OVERVIEW

Cambodia is situated in the center of Southeast Asia and shares borders with Vietnam, Laos, and Thailand. Shaped by its recent history as well as its ancient past, Cambodia has been influenced by the French Colonial era and years of American involvement in Indochina, but retains its distinctive Khmer cultural heritage. Cambodia is nearly 90% Khmer, with minority groups of predominantly Muslim Cham, ethnic Chinese, Vietnamese, and small animist hill tribes (e.g., Tampuan, Kreung, Jarai, Brou, Kavet, Phnong). In recent years there has been a small but growing Korean population.

The Cambodian economy is largely agrarian, and workers in agricultural and fishery occupations constitute the majority of the population in rural Cambodia. The manufacturing sector is not very extensive and is mostly conducted on a small-scale and informal basis. The service sector is concentrated in wholesale and retail trading activities, catering-related services, and tourism. The 2006 World Bank Poverty Assessment Report estimates that out of the population of 13.8

million, 35% live below the poverty line of less than US\$ 0.45/day. Of the total number of poor, 91% live in rural areas, 1% in Phnom Penh, and 8% in other urban areas, making poverty in Cambodia largely a rural phenomenon (see Table 1 for additional indicators of the Cambodian economy).

Table 1: Statistics Related to the Economy of Cambodia (2006 Estimates)

Item	Percent
GDP – real growth rate	5.8%
Population below poverty line	35%
Inflation rate (consumer price)	5%
Labor force participation in agriculture	71%

Source: World Bank (2006)

Khmer culture developed and spread during the Khmer Kingdom and the Angkorian period (beginning around 800 AD), which had distinctive styles of dance, architecture, and sculpture. Upon its political decline, Cambodia accepted French protection in 1863, and was incorporated into French Indochina. While the French provided welcomed administrative and development assistance, along with protection from traditional enemies seeking to take Cambodian land, there was growing opposition to increasing French influence and colonial control. Cambodia eventually peacefully obtained independence from France in 1953; Cambodia then entered a short period of peace and prosperity until the late 1960s, when it was drawn inexorably into what Americans refer to as the “Vietnam War.”

In 1975, the Khmer Rouge overthrew the pro-American regime that had seized power five years before. The Khmer Rouge shut down all institutions, evacuated the cities, and forced the entire population into the rural areas to conduct agricultural labor under slave-like conditions. Former government officials and members of the educated classes were systematically targeted for execution. Many others died of starvation or disease. Estimates are that between 1 and 3 million died during the Khmer Rouge Genocide—up to about one-third of the population (Chandler, 1993).

The Khmer Rouge was driven out of Cambodia in 1979 by Vietnamese forces, and the Vietnamese-backed People's Republic of Kampuchea ruled until 1989. In this year the Vietnamese pulled out their military forces and political administrators, and the country was renamed the State of Cambodia. In 1991, Cambodia's four warring factions, the United Nations (UN), and 18 interested foreign nations signed an agreement in Paris to end the conflict in Cambodia (see http://www.cambodia.org/facts/Paris_Peace_Agreement_10231991.php). By 1993 UN-sponsored elections led to the creation of a new government, the ratification of a new constitution, and the restoration of the monarchy and the establishment of the Kingdom of Cambodia. Today, the Royal Government of the Kingdom of Cambodia is a parliamentary and representative democratic constitutional monarchy.

Cambodia, with its past struggles of foreign occupation, genocide, and civil war, and an imposed foreign education system, remains one of the world's least developed nations. Although there has been a great deal of attention and resources devoted to Cambodia by donor countries, international organizations, and NGOs beginning in the 1990s, there remain persistent problems in realizing significant educational and social change.

EDUCATION SYSTEM IN CAMBODIA – AN OVERVIEW

Early forms of education in Cambodia took place at *wats* (Buddhist temples), with students, almost entirely young boys, focused mainly on memorizing Buddhist chants (Ayres, 2003). In 1917, the French colonial administration introduced a basic primary and secondary education system. However, this new system was designed to reach only a small percentage of the population and functioned mainly as a means of training a small cadre of civil servants for colonial service throughout French Indochina (Ayres, 2003; Weinberg, 1997). After independence, efforts to create a universal education system began, complemented by the development of a network of vocational colleges (Ayres, 2003). The largest university, the University of Phnom Penh, had eight departments, and included teacher training.¹ When the Khmer Rouge came to power in 1975, they abolished formal education, destroying teaching materials, textbooks, and publishing houses, which were viewed as representing the monarchy and capitalist social order that their revolution was designed to transform. Schools and universities were shut down, with several buildings being put to other uses. During this period, thousands of administrators, teachers, professors, researchers, and skilled technicians were executed, or died of disease or starvation. Many of the educators and other members of the educated classes who survived fled the country during the chaos following the expulsion of the Khmer Rouge by Vietnam.

When the new Cambodian government came to power in 1979, it had to reconstruct the entire education system. Cambodia had to resort to employing teachers who had low levels of education based on the principle of “those who have more education will teach those with less.” Thus, teachers who had completed only up to third grade could teach students in grades 1-2, teachers who had completed junior high school could teach students in the upper grades of primary school, and those who had completed at least some high school grades could teach in the junior high schools. While current policy requires new teacher training candidates to have a high school diploma, Table 2 shows the legacy of the earlier system, wherein over 75% of primary school teachers in 2003 had a lower secondary level or less of formal schooling.

Table 2: Education Levels of Primary School Teachers, 2003

Location	Primary	Lower Secondary	Upper Secondary	Graduate	Without Pedagogical Training
Urban	445	6,723	3,226	89	229
Rural	2,495	27,188	8,051	12	1,394
Remote	581	651	142	0	95
Total	3,521	34,562	11,419	101	1,718

(Source: EMIS, 2003-04)

¹ By 1969 “the year before the country was thrust into the throes of a protracted civil war, 1,160,456 students were enrolled in some form of formal education throughout Cambodia’s schools, colleges, and universities,” compared to just 432,649 students in 1956 (Ayres, 2003, p. 62). Nonetheless, even at the height of Cambodia’s rapid expansion of its education system, many children in the country remained without access to education and there remained substantial problems related to the quality of the education provided (Ayres, 2003).

Given that Cambodia was cut off from nearly all sources of Western aid throughout the 1980s and early 1990s, the effort to rebuild the school system was undertaken with aid and assistance from Vietnam, the Soviet Union, East Germany, and Cuba (Clayton, 2000). The rebuilding of the education system also took place within the context of continuing civil war between the Cambodian government and a loose coalition of the Khmer Rouge and two non-communist factions opposed to the Vietnamese-installed Cambodian government. As a result of a U.N.-sponsored peace process in the early 1990s, Cambodia obtained an improved level of peace and security. Western aid returned to Cambodia, including a large number of NGOs, which provided financial and technical assistance for the education sector.

Since then, many efforts have been made to reconstruct and develop the Cambodian education system. Some of these efforts include the following:

- The Constitution of Cambodia mandates free compulsory education for nine years, ensuring the universal right to basic quality education.
- The Ministry of Education, Youth and Sport (MoEYS) is responsible for establishing national education policies and guidelines, which are adapted/augmented/ implemented by the other two levels (provincial and district) of a nominally decentralized system.
- Cambodia has expanded education from a 10-year system to a 12-year system:
 - 1979-1986 – 10-year system (4+3+3)
 - 1986-1996 – 11-year system (5+3+3)
 - 1996 to present – 12-year system (6+3+3)
- Comprehensive planning, involving a series of five-year Educational Strategic Plans accompanied by operational Education Sector Strategic Plans, has been undertaken.
- Eighteen provincial teacher training colleges for preparing primary school teachers, six regional teacher training colleges for preparing junior high school teachers, and the National Institute of Education for preparing high school teachers have been established. Together these institutions have helped to improve the number and capacity of teacher trainees.
- Development of innovative strategies to address the chronic shortage of qualified teachers (e.g., use of contract teachers, fast-track training programs for teachers recruited from ethnic minority communities).
- A cluster school system, food-for-education program, and scholarship program (among other programs) have been developed to increase enrolment and retention rates of students.
- The government has increased the share of government expenditure devoted to education from 9% in 1994 to 17.3% in 2004-05.

Despite substantial improvements, the Cambodian education system still faces enormous challenges. First, not all children have access to schools, and not all of those who do, attend. Second, pupil-to-teacher ratios are high and increasing, with an average class size of 54 students in primary schools (see Table 3). Third, there are high dropout rates, with many students leaving after only a few years of primary school. Fourth, teachers are not paid a living wage and most current teachers have less than a high school education. Fifth, there are shortages of teaching materials, the physical facilities of many schools are very poor, and the quality of basic education is generally low (Benveniste, Marshall, & Araujo, 2008; Jago, 2008).

Table 3: Pupil Teacher Ratio by Year and Level of Education

Pupil teacher ratio at	Academic Year	
	2000-01	2004-05
Primary	53.3	53.5
Lower secondary	18.3	27.7
Upper secondary	25.3	29.4

(Source: MoEYS, 2006)

The MoEYS fully acknowledges these and other issues. In a recent publication the Ministry identified the following major challenges to the education system:

- Only 10 percent of children aged three to five years have access to early childhood development services.
- Late enrollment in school is common, with an average age of 10.8 years in primary and 15.8 years in lower secondary school.
- Primary school retention and completion rates are low, with only 43 percent of children completing primary education.
- Children who enter secondary school represent just 26 percent of those of eligible age.
- About one-third of children in Cambodia aged 5 to 14 work, leaving them with less time to concentrate on school.
- While gender disparity in primary school enrollment is diminishing, it exists at the secondary school level, with only 12 percent of girls of eligible age attending, compared to 20 percent of boys.
- One-third of primary schools do not offer the full six grades.
- Only 57 percent of primary schools have access to safe drinking water and only two-thirds have appropriate toilet facilities.
- While there are no standardized measures of overall quality yet, there is a general perception that pupil achievement is low. (Ministry of Education, Youth, and Sport, 2006, p. 2)

EDUCATIONAL REFORM DISCOURSES

Cambodia—with the assistance of multilateral agencies, bilateral organizations, and NGOs—is working aggressively to address these challenges. Below we will discuss the rhetoric associated with some of these current reform efforts, particularly those aligned with the government’s policy for establishing “Child Friendly Schools,” which include a focus on providing effective teaching and learning through the emphasis of active-learning and student-centered instruction.

Perspective of the Royal Government of Cambodia

The Ministry of Education, Youth and Sport (MoEYS) is spearheading the government’s efforts in the education reform process. Current reform efforts are driven by the country’s commitment

to providing basic education for all students in Cambodia from grades 1-9, with strategies and goals as outlined in *Education for All: National Plan 2003-2015* (Royal Government of Cambodia, 2003). Included in this important policy document is a forward written by Prime Minister Hun Sen that makes clear the government's perspective on the education reform process:

The Royal Government of Cambodia (RGoC) accords the highest priority to sustainable education reform and development. We recognize that strengthening the education and training systems is critical for improving the human resources base as part of enhancing Cambodia's economic competitiveness in an increasingly global and regional economy. Developing a high quality and flexible work force will be pivotal in encouraging inward foreign investment as Cambodia positions itself for entry in World Trade Organization.

We are also acutely aware that improved education and training systems are a key bridge between economic growth and broad and balanced social development. Increasing equitable access to education and training opportunities, especially for the first nine years of basic education, is a key enabling factor that will help Cambodia's poorest families to move out of poverty and improve their social well being. (p. 5)

Cambodia's Education for All (EFA) commitment and policy were developed in conjunction with other developing nations in the region and the world through participation in the World Conference on Education for All (1990, Jomtien, Thailand), the Asia-Pacific Conference on Education for All (2000, Bangkok, Thailand), and the World Education Forum (2000, Dakar, Senegal). Cambodia has also committed to the Millennium Development Goals (MDG), developed through participation in the MDG Summit in New York City in 2002. Many of the MDG goals are consistent with EFA, including the goal to provide universal access to primary education by 2015.

To achieve these longer-term goals, Cambodia incorporates them into its medium-term education policy, strategy, and program priorities set out in its Education Strategic Plan (ESP) and the Education Sector Support Program (ESSP). These are based on a program of rolling implementation of reforms through annual strategy and program adjustment driven by a joint annual sector performance review by government and donor and NGO partners. Cambodia's educational reform efforts, as spearheaded by MoEYS, involve increased consultation with other government ministries, donors, and NGOs to introduce a sector-wide approach to education, a goal commonly expressed as a move *from donorship to partnership*. In 2001, MoEYS adopted the ESP and ESSP, which outlined its operational plan and which set out how the government would work in partnership with donors and NGOs to achieve the ESP's stated aims. In December 2005, MoEYS announced its 2006-2010 plans, with the following priorities: (i) equitable access to education, (ii) quality and efficiency of education services, and (iii) institutional development and capacity building for decentralization. Reform plans for priority number 2 include promoting the quality of education through improving curriculum, educational materials, teaching and learning methodology, and the structure of the formal education system.

Current education reform efforts are also driven by Cambodia's policy and commitment to establishing "Child Friendly Schools," defined in the official policy document as follows:

A Child Friendly School is a school that recognizes and nurtures the achievement of children's basic rights. Child Friendly Schools work with all commitment-holders, especially parents/guardians of students, and values the many kinds of contributions they can make in seeking all children to go to school, in the development of a learning environment for children and effective learning quality according to the children's current and future needs. The learning environments of Child Friendly Schools are characterized by equity, balance, freedom, solidarity, non-violence and a concern for physical, mental and emotional health. These lead to the development of knowledge, skills, attitudes, values, morals so that children can live together in a harmonious way. A Child Friendly School nurtures a school-friendly child,... children's development and a school-friendly community. (Ministry of Education, Youth, and Sport, 2007, p. 4).

The Ministry makes it clear that the Child Friendly School (CFS) policy is aligned with (and designed to help Cambodia achieve) its other goals as outlined in the other policy documents described above. As stated in the CFS policy document:

The objectives for developing the National Child Friendly School Policy are

- To achieve the national education goals
- To respond to the Millennium Development Goals
- To achieve the goals and target of the National Plan of Education for All
- To achieve the [current] strategic plan for education (ESP) and Education Sector Support Program ... (Ministry of Education, Youth, and Sport, 2007, p. 4)

The two officials² from MoEYS interviewed for this study in 2009 were both very enthusiastic in their support of CFS, particularly its focus on active-learning and child-centered instruction (to be discussed further in the section on reform strategies). One of the officials viewed implementing CFS as directly related to the development of the country, but also noted that successful implementation requires peace:

Child Friendly Schools are really important. Effective implementation will lead to the full building of students' capacity. Through Child Friendly Schools, students will also be fully engaged, and they will be able to successfully reach the four pillars of learning [remembering, knowing, reflecting, and applying]. If students learn, the country also develops. However, what is really important is peace. If we have peace, we can focus on it. The younger generation today is very lucky since they have been born in the country during a time when there is a peaceful environment.

Perspective of USAID

In 1996-1997, USAID support under the Cambodia Assistance to Primary Education Project contributed significantly to reorienting primary education to a more community-based structure and establishing a model for pre-service and in-service teacher training. The premature closure of this project, due to the unstable political situation in Cambodia, led to a hiatus in direct US government support to the education sector for a period of over five years. NGOs and other

² The names of these officials and others interviewed for this case study will not be used to maintain confidentiality.

donors nevertheless continued to build on the foundation established by that project.

In 2003, USAID renewed its assistance to basic education for children in grades 1 to 9, this time through helping to develop a competency-based, student-centered, life skills curriculum and to undertake related teacher training efforts. USAID's Strategic Objective for basic education calls for the increased relevance and quality of basic education, including the increased capacity of the school system to deliver competency-based education using student-centered teaching methodologies. In theory, competency-based education activities impact all 24 provinces, 18 provincial teacher training colleges, and six regional training colleges. The program emphasizes reform and positive change within the MoEYS, supports the recruitment and training of teachers from minority groups, and is integrated into key government education initiatives, including the five-year strategic and operational plans.

An interview with an official from USAID/Cambodia, who has been involved in national education reform efforts, provided additional information regarding the agency's perspectives and efforts related to policies on active-learning pedagogies. This official explained that while USAID does not have any official agency strategy for active-learning pedagogies, USAID/Cambodia fully supports the policy of the Ministry of Education, Youth and Sport on Child Friendly Schools and requires NGOs to include this strategy in implementing projects funded by the USAID Mission in Cambodia.

REFORM STRATEGIES

In this section we describe the reform strategies pursued by government and other national stakeholders, the strategies supported by USAID and other international organizations, and the pre-service and in-service professional development initiatives pursued.

Strategies Pursued by Government or Other National Stakeholders

One important reform strategy pursued by the Royal Government of Cambodia and the Ministry of Education, Youth, and Sport began in 1993 with the adoption of the "cluster school" model, in which six to nine primary schools were grouped for administrative and educational purposes to share available resources, such as teaching and learning materials, facilities, and staff. The cluster school model also facilitated the provision of in-service teacher training through monthly meetings at the cluster level. With an overall objective of benefitting "disadvantaged" schools, the cluster school model implied a degree of decentralization and allowed for increased local participation and decision-making. Each school cluster had a "core" school (the school considered to have the best staff and most resources), and a series of "satellite" schools within the same geographical area. Each cluster has its own "head" (elected by the principals and teachers of the schools in the cluster), a cluster school committee, and a cluster technical committee (heads of the cluster committees from each school in the cluster).

The cluster school model was developed to mobilize the active participation of NGOs, communities, parents and guardians, and local authorities in support of basic education initiatives. A MoEYS official explained that the pilot of the cluster schools began in seven provinces with support from UNICEF and several NGOs. After 1996 it was expanded to 10 provinces, continuing to focus mainly on primary schools. By 2007 there were 1,044 school clusters in Cambodia.

According to the evaluations conducted as part of donor projects (e.g., Wheeler, 1998; Geeves, 2000; Bredenberg, 2002), the cluster school model has been most successful in facilitating school improvement planning. It has been less successful generally in mobilizing communities and impacting classroom practice, although there have been examples of remarkable success in this respect as well. The main problem with the cluster school model is that the government promulgated the use of clusters as an important development strategy but never uniformly resourced them, leading to the emergence of a two-tiered evolution of donor-supported and unsupported clusters.

During the early and middle 1990s, the Cambodian government and its major donors invested millions of dollars into supply-side interventions such as textbooks, infrastructure, and teacher training, only to see participation and flow rates at the primary level continue to stagnate. A number of studies highlighted this failure and provided empirical evidence relating to the inhibiting role of demand-side factors (e.g., Bredenberg, 2000). A new wave of educational reforms inaugurated in 2000 shifted the character of interventions to better address these demand-side factors. Such interventions have included community teacher boards, home-based remediation programs, school breakfast programs in poor areas, and scholarships for needy children. These approaches, involving both government and NGO partners—e.g., World Education, Kampuchean Action for Primary Education (KAPE), and CARE—have begun to have a major impact on quality and access issues in the areas where they have been tried.

The MoEYS has also initiated complementary strategies and programs to improve the quality of teaching and learning methods. The objective of such pedagogical improvement is to boost student “promotion” rates and decrease mid-term dropouts. Strategies adopted include revitalizing summer programs for students who have below-average test scores, providing additional support for slow learners during lessons, and increasing instructional hours by having teachers teach three additional days per month. In addition, the MoEYS, in collaboration with NGOs, developed innovative strategies to address the chronic shortage of qualified teachers, including hiring contract teachers, paying relocation allowances, organizing double-shift schools, and granting teacher allowances for those working in difficult and remote areas. And under a Fast Track Teacher Education program, the MoEYS is seeking to locally recruit and train teachers to work in underserved areas. The participants, mainly women and ethnic minorities from these areas who are viewed as most likely to return and stay in the target areas after graduation, are selected for this special program and enter the teacher training colleges in grade 9. It is for this reason that the program is sometimes known as 9+2, referring to a pre-service education regime that requires 9 years of basic education (as opposed to 12 years previously required) plus 2 years of specific teacher preparation.

In 2000, the MoEYS also began to assign importance to the concept of “Child Friendly Schools” and adopted new “student-centered” teaching and learning methods as a means to improve enrolment of children in grade 1 and for continued performance and retention in the subsequent primary school grades. One MoEYS official described CFS as fitting easily within the cluster school system. He explained that one or more classrooms at the core school would be targeted to become “child friendly,” and then once successfully implemented, the child-friendly model could be expanded to other classrooms at the core school and eventually in the satellite schools within the cluster.

For this, the Ministry worked in collaboration with UNICEF, Kampuchean Action for Primary Education (KAPE), and Save the Children Norway (SCN) to disseminate information about child-friendly learning environments, and organized pilot programs in a number of provinces. The early pilots were focused in nine school clusters encompassing about 50 schools in Kampong Cham and Kampong Thom provinces. The technical approach by the Child Friendly Schools program at the primary level, applied most often in the context of NGO-supported programs, employs the use of a school grant (usually about \$4,500 per school), and an activity menu to facilitate objective-based planning that is locally driven, for a “holistic approach to educational development.”

In 2002, the Ministry expanded the Child Friendly School program to school clusters in three other provinces and established a Child Friendly Schools Steering Committee, comprising representatives from NGOs (e.g., UNICEF, KAPE, SCN) and key MoEYS departments (e.g., Primary Education, Teacher Training Department, Pedagogical Research Department) to oversee the program and ensure consistency with the broader education system.

In 2004-05, the Ministry initiated a pilot program to expand the Child Friendly Schools approach into the lower secondary (i.e., junior high) school sector so that children who studied in child-friendly primary schools could continue such experiences. An official from MoEYS explained that a delegation from the Ministry conducted a study tour of Child Friendly Schools in Kompong Cham and Kompong Chhang, and were greatly impressed with these pilot projects. As a result, the Ministry requested that UNICEF fund an expansion. Currently, there are six lower secondary schools supported by UNICEF (with a proposal that the World Bank take over funding) and another 14 supported by USAID under the Educational Support to Children in Underserved Populations Program (ESCUP). One of the priority targets in the Education Sector Plan for 2006-2010 is to initiate Child Friendly School programs in all 24 provinces by the start of the 2007-08 school year. However, when interviewed in 2009, MoEYS officials indicated that the target was to establish 70% of the schools as Child Friendly Schools and acknowledged that they were not sure of the current level of implementation of CFS across schools in all provinces.

Given that the strategy for improving the quality of teaching and learning through nationwide implementation of child-friendly schools aimed at the holistic development of schools, including inclusive education, child-centered teaching and learning, and conducive and gender-responsive learning, it is imperative that there be a flexible and responsive pre-service and in-service teacher development system in place. The Ministry’s 2006-2010 plan includes the introduction of the principles of child-friendly schooling into the pre-service teacher preparation curriculum in all teacher training colleges (see below). The plan also calls for providing in-service training on the concept and practices of child-friendly schooling to all current teachers as one of the main activities for their “continuous teacher development.” The MoEYS officials described the technical meetings, held monthly at the cluster level, as the key vehicle for providing this in-service training.

As part of the Ministry’s Child Friendly Schools Initiative, the School Readiness Program (SRP) was piloted in 2004. The pilot program was initiated in a context of high national repetition rates at grade 1—between 17% and 23% from 2000 to 2003 (Nonoyama-Tarumi & Bredenberg, 2009). Because of the observation that many children enroll in grade 1 without having acquired basic readiness skills that are necessary for satisfactory academic achievement in the official

curriculum, the program creates a curriculum bridge lasting eight weeks at the beginning of the school year to build readiness skills before starting the grade 1 curriculum. Since most children do not attend preschool, it is assumed that they have not yet acquired basic skills such as sitting in a classroom, following instructions, and recognizing letters and numbers. Researchers have found that children who participated in school readiness programs attained higher levels of achievement compared to children who did not participate (Nonoyama-Tarumi & Bredenberg, 2009). Given the success of the pilot program, the MoEYS decided to cooperate with donors, such as UNICEF and to a lesser extent USAID, to expand SRP so that it had about a 30% national coverage of grade 1 classes.

At the beginning of the 2005-06 academic year, the Educational Support to Children in Underserved Populations Program (ESCUP), funded by USAID (and implemented by NGOs such as World Education, CARE, and KAPE), was evaluated to measure its progress (American Institutes for Research, 2008). Overall, ESCUP sought to promote the government’s adoption of Child Friendly Schools as a front-line strategy to improve quality in the basic education sector in Kampong Cham, Kratie, and Mondolkiri provinces. The evaluation revealed that the program was successful in terms of improved care of students in classrooms and schools, increased enrolment of students and grade improvement, and decreased dropout and class absence rates. With the apparent success of the Child Friendly Schools program, MoEYS established a National Child Friendly School Policy in December of 2007. This policy contains a framework consisting of six dimensions and objectives (see Table 4). Dimension 2 specifically addresses effective learning, with a focus on active-learning and child-centered instructional approaches.

Table 4: Dimensions and Objectives of the Child Friendly School Policy

Dimension 1	<p style="text-align: center;"><i>All children have access to schooling (schools are inclusive)</i></p> <p>Objective: To ensure and support all children, especially children in difficult circumstances (children of poor families, girls, orphan children, child victims of domestic violence, disabled children, ethnic minority children, children affected by drugs, children affected by HIV/AIDS and other diseases), have access to schooling with equity.</p>
Dimension 2	<p style="text-align: center;"><i>Effective learning</i></p> <p>Objective: To develop teacher proficiencies so that teachers have theoretical and practical knowledge with a specific focus on learning/teaching activities and materials which promote active, creative and child-centered approaches to learning in a joyful classroom environment. To nurture teacher attitudes, behavior and moral values, which will lead to learning together in a harmonious way.</p>
Dimension 3	<p style="text-align: center;"><i>Health, safety and protection of children</i></p> <p>Objective: To ensure that all children participate in education [and] are cared for and supported by all concerned people and institutions to keep them healthy and safe and protect them from violence at school, in the family, and in society.</p>
Dimension 4	<p style="text-align: center;"><i>Gender responsiveness</i></p> <p>Objective: To promote awareness in schools, families and communities of their</p>

	roles and responsibilities for providing equal and equitable education and educational opportunity for both girls and boys so that they can participate equally in all activities in school, family, and society.
Dimension 5	<p style="text-align: center;"><i>The participation of children, families, and communities in the running of their local school</i></p> <p>Objective: To enhance the dynamic relationship and two-way participation between schools and communities so that schools become community-supported resources centers, families and communities become resources for school improvement and play an active role in management.</p>
Dimension 6	<p style="text-align: center;"><i>The National Educational System supports and encourages schools to become more child friendly</i></p> <p>Objective: To ensure the effective and sustainable implementation of the Child Friendly Schools Policy in all schools with a high spirit of responsibility, all mechanisms and levels of the national educational system must work together to support schools in improving the quality of education.</p>

Source: Ministry of Education Youth and Sport (2007, pp. 5-6)

To guide its efforts, MoEYS in December 2007 established a comprehensive Child Friendly Schools Master Plan for 2007 to 2011, focusing on basic education in primary and lower secondary schools (Ministry of Education, Youth, and Sport, 2007b). A primary goal of the master plan is to reach 70% of schools by 2010. The plan states that CFS will be the Ministry's main program for building quality in basic education, and thus will be given the highest priority when allocating internal and external funding. A national CFS Steering Committee was established to review, approve, coordinate, and provide oversight for individual department plans from within the Ministry, and to provide annual reviews of the implementation of CFS across the nation. At the local levels, provincial and district education offices are identified as being responsible for developing and/or implementing and monitoring CFS activities and trainings. The district education offices are to be responsible for establishing two District Training and Monitoring Teams (DTMTs), one which focuses on teaching and learning and the other on school management. The plan also makes clear that the school clusters will provide the vehicle for in-service training of school manager and teachers. Furthermore, it outlines the following main outputs for the period from 2007 to 2011:

- Development of 25 CFS core activity modules in all six dimensions that are widely applicable to primary schools in Cambodia.
- Development of 5-10 CFS special activity modules that are applicable to schools with particular problems (e.g., remote location or ethnic minority enrolment).
- Development of a number of core activities in all six dimensions that are widely applicable to lower secondary schools in Cambodia.
- Opportunities for all MoEYS staff in primary schools and in all provinces to complete at least half of the menu of 25 CFS core activities during the four years covered by the Master Plan.

- Opportunities for all lower secondary schools staff to participate in the initial CFS activities at their level.
- Through the application of the School Self-Assessment (SSA) Modules, all schools will be able to assess their progress against a national set of CFS criteria, with the participation of all staff, parents, and community members in the process; schools will be classified as either basic, medium, or advanced according to their demonstration of child-friendly characteristics.
- Participation of all primary school teachers in at least the first cycle of a national program of in-service teacher training for primary teachers (Effective Teaching and Learning, or ETL) delivered during school vacations and followed up in monthly technical meetings during the academic year.
- Capacity building at the national level in developing training curricula and facilitating in-service programs using participatory learning approaches.
- Capacity building at the district, cluster, and school levels in training/facilitation, follow-up and monitoring, self-assessment, and classroom research. (MoEYS, 2007b, p. 5)

The initial child-friendly experimental or model classrooms were classrooms where the resident teacher “volunteered” to radically change both the physical environment of his or her classroom and teaching practices. Those teachers who volunteered were provided with material assistance to change the classroom environment and technical support to learn about new child-friendly teaching methodologies. Physical learning conditions were changed to make the classroom environment less formal and more comfortable. Some teachers, for example, used program funds to refurbish classrooms to allow children to sit on the floor around low tables as they do at home. Teachers also used portfolios of children’s work not only as a means to make student evaluation less threatening but to actually involve children in their own assessment. But the main change in classroom learning came from modifications in teaching practice—especially from a shift to a heavy reliance on cooperative learning principles in which children work together and help each other as teams.

This initial use of teacher volunteers reflects a strategic decision early on in the Child Friendly Schools program design to operate on a principle of *stakeholder engagement*. The program tried to internalize lessons of the past, when millions of dollars of donor money allocated to mandatory, school-wide in-service training for teachers led to little change in classroom practice (e.g., Wheeler, 1998). These well-intentioned but unsuccessful past initiatives to improve classroom practice reflected decision-making at the upper central government level only, which was then imposed on schools from above.

Given the poor and irregular nature of teacher payment as well as low levels of professionalism and accountability in much of the school system, such decisions were based on the weak assumption that change through mass in-service training was possible. Therefore the Child Friendly Schools program in Cambodia, at least initially, focused on building up the reform effort consensually from the bottom. Although this approach requires more time than top-down initiatives, program resource personnel have so far found the results to be both inspiring and more sustained. More change in classroom practice has been detected, resulting from peer pressure, internalized values of professionalism, and an emerging local culture of quality in target schools,

than was true of previous projects that used externally imposed mass in-service teacher training as a means to change teaching methodology.

Unfortunately, volunteer approaches to teacher training have recently become a growing flashpoint in the education sector as the MoEYS is now moving into the implementation of a mandatory, nationwide child-friendly school policy, as outlined above.

Strategies Supported by USAID and Other International Organizations

Many of the government initiatives described were accomplished with substantial support from one or more international organizations. As noted above, in the mid-1990s USAID's strategies focused on reorienting primary education to a more community-based structure, and reforming teaching training models. During a five-year hiatus of direct education support, many NGOs continued to build on the foundation of USAID's earlier work. In the case of one provincial project site, the project evolved into a large local NGO known as Kampuchean Action for Primary Education (KAPE), which subsequently entered into a very close six-year relationship with UNICEF to pilot the Child Friendly Schools approach to education. USAID also contributed to curriculum development and teacher-training efforts focused on environmentally sound agricultural practices and human rights through the Integrated Pest Management project, which featured active learning and student-centered instruction. According to an official from MoEYS, this included a variety of hands-on problem solving experiences outside of the classroom in agricultural settings that required the use of higher-order thinking skills. He gave one example he personally observed where students experimented with the use and placement of multiple fishing poles in a pond to increase the number of fish they caught. The official was greatly impressed, and he described how he wanted to see such active learning in all schools across the country.

Since its resumption of large-scale assistance to the education sector in 2003, all USAID programs are being implemented by private and nongovernmental organizations (NGOs) through grants and contracts; no initiatives provided direct assistance to the central government. Even though restrictions on engagement with the Royal Government of Cambodia have been lifted for assistance for basic education, funds may still not be provided directly to government officials—except in the case of training, technical assistance, and related costs—and its usage must be adequately monitored and controlled by the implementing partner organization.

In 2005, USAID/Cambodia launched its second basic education initiative, the Educational Support for Children of Underserved Populations (ESCUP) program, focused on inclusion for Cambodia's under-served populations (the rural poor, minorities, the disabled, and members of Cham and tribal communities). The implementation of the ESCUP Program is guided by USAID's Strategic Objective for basic education, Intermediate Result 3, "Increased access to quality and basic education by underserved groups." Activities initially focused on three provinces—Kampong Cham, Kratie and Mondulhiri—with emphasis placed on both access to and quality of education, with the intention of increasing enrolment, reducing dropout rates, and decreasing absenteeism. ESCUP works to attract and retain qualified teachers in underserved areas with a number of innovative interventions, such as fast-track teacher trainings, community teachers, professional support to working teachers, and support for national workshops relating to school readiness programs.

At the request of the MoEYS, Phase II of ESCUP (which was expanded to include a fourth province—Ratanakiri) places a high priority on the development of what are known as “child friendly experimental classrooms.” In this case, technical support activities include intensive training of teachers and refurbishing classrooms to create learning corners, group work stations, and increased access to learning materials. Teachers are trained in methods that promote cooperative learning techniques, critical and creative thinking, and more child-friendly modes of student assessment (e.g., the use of student portfolios).

In an interview, an official from USAID/Cambodia involved in national education reform efforts explained that USAID provided support to the MoEYS Pedagogical Research Department, the Teacher Training Department, the Primary Schools Department, and the Inspectorate Department to revise the National Basic Education Curriculum following child-friendly school guidelines. The official also noted that USAID provides funding for training in active learning strategies and implementation of the new National Basic Education Curriculum for school teachers, directors, and staff from district and provincial offices of education. In addition, the official noted that all partner NGOs are trained to use active-learning pedagogies while implementing capacity development activities under USAID-funded educational projects. At the national policy level, USAID partners are active in the MoEYS steering committee for Child Friendly Schools and thus are in a position to actively influence and provide feedback on national policy formation.

At the school level, the USAID official described how agency partners strive to include active-learning methodologies in their strategy to improve student access and performance in the learning process. Specifically, professional developmental activities at the school level include the following:

- Stand-alone teacher trainings
- On-the-job support
- Periodic refresher trainings (twice a year)
- Embedding active-learning methodology into curriculum and learning materials
- Ongoing support for trained staff at any time throughout the year
- Holding teacher meetings and other group discussions on the success and challenges of implementing these pedagogies
- Annual evaluations of teacher classroom instruction to assess their success and effectiveness of the use of these pedagogies
- Feedback and follow-up with teachers and school officials

At the conclusion of the interview, when asked what changes and improvements in Cambodia’s educational sector have so far been achieved with USAID-supported initiatives promoting active learning pedagogies, the official replied as follows:

In USAID projects, it’s difficult to isolate improvements made that are direct results of using just these pedagogies at the school level; multiple interventions are taking place and work in concert to produce good results. However, CFS pedagogy is a major strategy employed to improve quality of learning. To date, 67% of target schools are reporting decreased dropout rate and about the same for repetition rate. Transition rate from grade 6 to grade 7 is about 83% among target students. Children at the target schools seem to be happy learners who enjoy going to school. Teachers are generally

active and involved. Interestingly, only about 34% of teachers evaluated at the end of last school year, rated as satisfactory against project-generated criteria for CFS competency. The project has not to date evaluated student academic achievement to see if the children are learning more as a result of the use of this pedagogy.

Description of Professional Development Activities

Here we describe in more detail the pre-service and in-service professional development activities that were undertaken by the Cambodian government, international organizations, and NGOs in the context of reform initiatives.

Pre-Service Teacher Training

The main vehicle for professional development for teachers to use active-learning pedagogies and child-centered instructional techniques is through the pre-service training provided at the country's 18 provincial teacher training colleges (for primary school teachers), the six regional teacher training colleges (for junior high school teachers), and the National Institute of Education (for high school teachers). As noted above, the MoEYS 2006-2010 plan called for the introduction of principles and practices of child-friendly schooling into the pre-service teacher preparation curriculum. This has been accomplished through collaboration among different departments at the Ministry, with assistance from organizations such as UNICEF and Save the Children Norway, to create a series of materials particularly focused on CFS, and also on the integration of student-centered instruction into other training materials.

In 2007, the Ministry published a 62-page handbook specifically addressing Child Friendly School Dimension #2, Effective Teaching and Learning, which includes a heavy emphasis on promoting critical and creative thinking (other handbooks have been or will be developed addressing other dimensions of CFS for training purposes). This handbook also places a heavy emphasis on *reflective teaching* so that teachers internalize target methodologies. One of the interesting techniques used in this regard is a teacher logbook that provides a record of teacher reflections and helps form the basis for in-service training discussions. The Ministry officials indicated that this book has been distributed for use at the teacher training colleges and is generally used in most in-service programs, such as those support supported by USAID. Currently, this handbook and others are programmed as separate components, with the goal of having these concepts fully integrated into the teaching of all subjects by 2011. The contents of the effective teaching and learning handbook are as follows:

- Topic #1 – Classroom Management – 5 activities
- Topic #2 – Using Questions – 6 activities
- Topic #3 – Creating Educational Games – 7 activities
- Topic #4 – Using Several Different Types of Materials During Lessons – 5 activities
- Topic #5 – Developing Reading – 4 activities
- Topic #6 – Developing Writing – 3 activities
- Topic #7 – Evaluating Student Work – 3 activities
- Topic #8 – Self Reflection/Evaluation – 4 activities

As of this writing, there is no research to show how many of the teacher training colleges are systematically and extensively using this handbook or other Child Friendly Schools teacher training materials.

A team of researchers from the Royal University of Phnom Penh conducted a review of selected teaching training materials as part of a study for UNESCO on inclusive education (Zimmerman et al., 2009). While they found some limitations in terms of certain aspects of inclusive education, they reported that “All reviewed curricula stressed the importance of student-centered methods. The main features in this context are cooperative and collaborative learning as well as problem-oriented teaching and individual educational planning and support” (p. 2).

Observations of teacher training at the Kandal Regional Teaching Training Center in 2009 provided evidence that some active-learning and student-centered instruction takes place within the center, but more work needs to be done. The director of the center reported during a formal presentation to education delegates from other countries in the region that “the practice of the learner-centered approach in learning and teaching has not been efficient enough yet” (Nuon, 2009). When asked later to elaborate, she said that there is a shortage of materials they can use to train the students in learner-centered instruction and thus is it not as emphasized as much as it should be. She said, however, that about 80% of her trainers are skilled in learner-centered instruction and use it and model it in their own classrooms. Brief classroom observations at the college revealed some very traditional teaching techniques, particularly in mathematics and geography classrooms, where teachers stood at the front of the classroom lecturing and/or modeling problem solutions on the board. However, more hands-on teaching was observed in the computer lab, where students sat at individual computers to learn a software program, and in the home economics classroom, where students were making sandals. Also, in a class for training English language teachers, the instructor utilized active-learning techniques by having students engage in micro-teaching demonstrations; one student would play the role of the teacher providing basic vocabulary instruction while other students joyfully played the role of lower-secondary-level students of beginning English language proficiency.

In a visit with the director and assistant directors of the Primary Teacher Training Center in Kompong Som in 2009, they reported that active-learning and child-centered instruction has been integrated into the teacher training curriculum provided by the Ministry. The directors stressed the importance of these changes and expressed confidence that their teachers received good training in these areas. A brief observation of a class at this institution provided some evidence of the use of these techniques. The lesson observed was within the area of human rights, on the sensitive topic of appropriate and inappropriate touching between adults and children. While it was a teacher-dominated lesson, she had the students draw a boy and girl on the board and indicate areas that are OK and not OK for another person to touch, and she had students work in pairs to look at illustrations of scenes and discuss whether they showed appropriate or inappropriate touching. While the topic appeared basic, the teacher nonetheless used a variety of questioning techniques to get students to think and articulate their answers. If students did not give a satisfactory answer, the teacher skillfully probed them to think deeper. At one point there was disagreement about one illustration, and the teacher encouraged the students to share their different views and make their case.

In-Service Teacher Professional Development

As described above, during the pilot of CFS, much of the training and financial support for teachers was provided by NGOs working in partnership with the Ministry. Therefore, during the rapid expansion of CFS throughout the country, the level of teacher professional development varied greatly. Those schools without NGO support typically provided fewer and less effective professional development opportunities.

The Ministry's Master Plan, however, lays out a clear structure for in-service training from the national to the school level:

National level

- CFS training content
- Provide Training of Trainers (TOT) for District Training and Monitoring Teams (DTMT)
- Organize an annual national seminar to share good practices and innovations
- Review policy and develop curriculum in response to reports from the field

Provincial level

- Arrange TOTs for District Training and Monitoring Teams
- Select provisional members for each of the District Training Teams
- Receive reports from district teams on CFS activities and their impact
- Identify provincial good practice/innovation from reports received from district teams and report to national level

District level

- Select members of District Training and Monitoring Teams
- Present intensive training inputs to school staff in clusters (or district education offices)
- Support and monitor CFS activities at cluster (or school) level
- Observe and receive information on CFS
- Identify provincial good practice/innovation in clusters and schools and report to provincial level

Cluster level

- Organize cluster workshops and monthly meetings
- Arrange meetings for local facilitators
- Collect data and identify good practices/innovations at schools in the cluster and pass to District Training and Monitoring Teams
- Provide assistance to schools in the cluster that are struggling to apply CFS approaches

School level

- Apply CFS ideas in each of the six dimensions of the framework
- Encourage and support formation of teacher networks for sharing ideas and experiences
- Report on problems and successes to the cluster (Ministry of Education, Youth, and Sport, 2007b)

The effective teaching and learning handbook and other CFS-related handbooks used in the teacher training colleges are also distributed for use in in-service teacher training, though it is unclear at the time of this writing how many have received the materials and are using them. The

officials from the MoEYS explained that in-service teacher training can take place during school vacations, with follow-up trainings at the monthly technical meetings. Workshops and meetings are also sometimes held for in-service teachers at the teacher training colleges. They noted that the duration of trainings can vary from three days to one week, depending on the focus of the training program. In addition, the officials noted that various other departments also have their own responsibilities in helping to promote active-learning methods. As one Ministry official stressed, “We are very much focused on building the capacity of active learning for teacher trainers.”

REFORMED CLASSROOMS INTERACTION PATTERNS (AND STUDENT LEARNING OUTCOMES)

To understand the successes, challenges, and impacts of the implementation of active learning pedagogies in the classroom, focus groups were conducted with teachers from ESCUP-supported schools in the Kompong Cham province. For three years prior to the focus group discussions, these teachers had participated in professional development workshops and had received other support in the use of active-learning pedagogies. In this section we will discuss perceived changes in classroom interaction patterns and will review data on student exam performance, attendance, and dropout/promotion.

Classroom Interaction Change

The teachers were asked to describe changes they have made to their teaching and classroom behaviors compared to three years prior to their training. While the teachers reported that they had some knowledge of “reformed teaching methods” or active-learning pedagogies before their training through ESCUP, they said they now make much greater use of them as a result of their training. They described a number of positive changes, including: (1) greater knowledge of active-learning strategies and techniques, (2) greater access to appropriate curricular materials, (3) greater understanding of how to make effective use of curricular materials, (4) use of questionnaires to identify students’ knowledge and interests to inform instruction, (5) increased use of active-learning techniques, (6) increased use of cooperative learning, (7) better communication and interaction with students, (8) increased knowledge of techniques for encouraging students, and (9) greater knowledge of how to link classroom academic content to real-life applications. A few teachers gave specific examples, such as using more group work. For instance, they would organize the class into small groups of students who would conduct experiments, the findings from which a group representative would present to the class.

The teachers also described some positive changes in their students’ behaviors, compared to three years earlier. They reported that students now seem to be more polite, friendly, cooperative, and helpful with each other. They noted additionally that their students are more courageous in sharing ideas in class, and that they have obtained skills in coordinating and facilitating collaborative work with other students. One other important change, according to these teachers, was a decrease in ethnic discrimination by students. For example, they noted that there were previously problems with Cham (ethnic minority Muslims) students discriminating against non-Muslim Khmer students because they eat pork (which is forbidden for Muslims). They attributed

this change to strategies the teachers had learned during ESCUP trainings, after which they worked with their Cham students to help them develop greater tolerance.³

When asked if students in their classrooms engage more often in critical thinking and problem solving compared to three years ago, the teachers struggled to answer this question. Rather than directly answer the question, they instead described how students are more actively engaged in the learning than before, provide help to each other in their groups, have greater discipline, and are less bored because of the greater use of game-like activities. Their answers suggest that these teachers do not yet fully understand the meaning of “critical thinking” and “problem solving.” Thus, they are probably not actively promoting these important strategies and techniques in their classes, and may be emphasizing the behavioral more than the cognitive dimension of active-learning pedagogies.⁴

Interviews were also conducted with members of Child Friendly School steering committees in Kompong Cham. The committee members were asked to describe the differences they had observed in classroom interactions since the teachers had started their training in active-learning pedagogy as part of the effort to become a child-friendly school. One change they noted immediately was a change in the demeanor of the teachers, who became much more supportive and friendlier towards their students. They reported that teachers no longer discriminate against ethnic minorities and disabled students, and that they have greater patience with their students who are slow learners. They also observed improvements in the classroom environment, with teachers maintaining cleaner classrooms that are much more inviting to their students. They noted that before, teachers lacked teaching materials that would make it easier for students to understand the lessons, and also that teachers had relied on more traditional teaching methods. Now, however, they see that teachers know how to use and prepare questionnaires correctly, they incorporate game-like activities into their lessons, and they have students work together in small groups. They feel that teachers now take a much higher level of responsibility for their work. One committee member described the overall change as follows: “The students like the teachers because the ways the teachers teach is easy to understand, the classroom environment is good, the teachers know ... how to teach, such as using games in class, and they know how to encourage students.”

The committee members were also asked to describe how the teachers who had not been trained in active-learning pedagogies compared to the teachers who had been trained. They reported that these non-trained teachers were less responsible, and did not make use of any new teaching methods and strategies. They said that while some of the non-trained teachers have tried to follow the example of the trained teachers (e.g., in trying to maintain a good school environment), these teachers really have not been able to do so. They also noted, furthermore, that higher-level students are less likely to help lower-level students in the classrooms of the non-trained teachers.

³ Notice however that these teachers, from the dominant Khmer (and Buddhist) group, did not address issues of discrimination from Khmer/Buddhist towards Cham students.

⁴ 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 (see Barrow et al., 2007; Ginsburg, 2006; Mayer, 2004).

Members of the Child Friendly School steering committees were also asked to describe the changes they had observed among the students since the transition to becoming a Child Friendly School. Committee members reported that there has been an increase in student *enrolment*. They attribute this success to several components of CFS, such as providing student scholarships, serving breakfast at school, improving the school and classroom environments, creating school area maps showing where students live, using committees to follow up with students after school, and assisting students with disabilities. The committee members also view these factors as contributing to an overall decrease in school *dropout* rates, from 7% before the transition to CFS to only 3-4%.

The committee members also observed improvements in the students' *attitudes* and *behavior*. Before, the committee members felt many students did not care about their studies. Now, however, they perceive students being happier to come to school. They also know better how to work with and cooperate with each other when working in small groups, and have more courage and self-confidence to participate in class discussions. In terms of *achievement*, the committee members noted that there have been improvements in both the process and the results of the examination of students. Before, teachers would prepare examinations and administer them on their own. Now, however, examinations are created by a group of teachers, teachers exchange classrooms of students for exam administration, and students are given more time (three days) to complete exams. In addition, they reported that the school now provides extra assistance and support to struggling students at home and in the village. The schools also make use of student tutors from higher grade levels, such as having sixth grade students tutor first grade students. As a result of some of these changes, the committee reports that the number of students who pass the exams is "very high," and higher than before the transition to CFS.

Research findings reported by Student Readiness Program assessments (KAPE, 2004) have suggested a reasonable degree of impact over a majority of the 13 proficiency areas studied.⁵ Overall, teacher proficiency increased between the first and second observations, but with a range of improvements from 7% to 33%.⁶ Specifically, teachers registered the most improvement in performance in "Classroom Organization" and the least improvement in the measure labeled "Development of Key Learning Skills" among children. Teachers scored the lowest on the measure of "Pupil Engagement," which teachers explained in terms of challenges they faced because of students' hyperactivity due to their unrestricted access to candy and gum on school grounds.

In three of the four provinces where SRP implementation was studied, researchers found teachers to have improved significantly in their performance. Researchers explained the one exception, Kratie Province, to be a result of the fact that Kratie had had no previous experience with Child Friendly School activities, whereas the other three provinces had previously benefited from such initiatives.

Analyses of qualitative data from Student Readiness Program implementation reinforce the quantitative data findings—that teachers progressed most in the area of Classroom Organization

⁵ KAPE was contracted by UNICEF in 2004 to evaluate the SRP Pilot, leading to a general evaluation report submitted to the Swedish International Development Agency (SIDA).

⁶ Improvements were statistically significant for all parameters except one, where the threshold for significance was set at a very high level.

and least in that Development of Key Skills. However, other qualitative research findings diverged somewhat from the quantitative results, most notably in the area of Teaching & Learning. In this respect, researchers found that teachers preferred to focus on the acquisition of basic skills in literacy and numeracy where right/wrong questions and uni-dimensional task work tended to predominate. This limited the scope for children to engage in activities that emphasized inquiry or task work where more than one possible “correct” answer was possible. In addition, the qualitative data indicated that although teachers had made great progress in increasing the amount of overall child-centered activity in the classroom (as indicated by the quantitative data), much of this activity was teacher directed. There were few opportunities for children to engage in task work where the outcomes were not already predetermined or where children, as opposed to the teacher, were making decisions about the direction of an activity.

Finally, Student Readiness Program evaluators found that although teachers had accepted and acted upon the need to boost the number and kind of activities that children did during class, they had not fully internalized why this was necessary other than the fact that doing so kept children engaged in the lesson. That is, they had not fully realized that learning is already implicit in such activities and that the purpose of these activities is not simply to keep children happy until they can get through the “real” learning tasks. This often affected their ability to make what they considered to be real learning tasks stimulating and contextually meaningful (e.g., avoiding the use of nonsense syllables to teach reading skills).

Students’ Exam Performance, Attendance, and Dropout/Promotion

Data from the Ministry of Education, Youth, and Sport provides some evidence of overall improvements since the Ministry’s focus on Child Friendly Schools. Despite notable progress, Cambodia is still a long way from achieving its goal of universal basic education to grade 9. As indicated in the tables below, concerted efforts are needed for the overall improvement of education, with special regard to increasing the education levels of teaching staff, decreasing the pupil-to-teacher ratio, and creating a comprehensive system of standardized learning assessment to measure actual achievement in quality and outcomes of teaching and learning. Table 5, for example, shows changes across a four-year period (from 2000-01 through 2004-05), over which increasing emphasis was placed on developing Child Friendly Schools. During this period, enrollment ratios increased substantially for both primary and lower secondary levels, and a greater percentage of students made the transition to lower secondary education. There was a slight increase in the number of students passing grade 12 examinations. Also, there was an increase in the percentage of teachers who had completed grade 10 or higher.

Table 5: Primary Education by Academic Year

Indicator	Period	
	2000-01	2004-05
Net enrollment ratio in primary education	83.8%	91.9%
Net enrolment ratio in lower secondary education	16.6%	26.1%
Transition rate to lower secondary education	77.3%	81.9%
Number of students passing grade 12 examination	17,713	18,883
% of teachers attending grade 10-12 or above	26%	36%
Education share of total government budget	13.9%	17.3%

(Source: MoEYS, 2006)

Since the new pro-poor focus on educational development under the government's Reform Program in 2000, enrolment has increased dramatically, especially among the lowest income quintiles of the population. For example, the Education Sector Support Plan Secretariat reported that the enrolment share from the poorest communes in the country had risen somewhat from 14.4% in 1999 to 16.7% in 2001. In contrast, enrolment share in the richest communes had declined somewhat from 22% to 20.2% during the same time period. A similar picture was found for enrolment at the lower secondary school level, where grade 7 new intake was 32.0% for the poorest communes in 2001 but only 12.3% for the richest communes (MoEYS, 2002).

In order to assess changes in student learning as a result of technical inputs in experimental classrooms, the pilot Child Friendly School program, supported by UNICEF and others, has been conducting periodic testing of children with a focus on cross-cutting skills in *critical* and *creative* thinking.⁷ Historically, the Child Friendly School program has been designed to avoid a "minimalist" approach to student learning and has instead focused on building learning competencies in the higher order thinking skills. While there have been calls from some quarters for the program to refocus on basic minimum learning competencies, program planners have so far resisted the temptation to do so. This is not only due to the fact that other projects focusing on competency-based education have already undertaken complementary activities to monitor minimum learning standards but also because of the Ministry's plan to develop a program whose approach to quality is "maximalist" in nature, not minimalist.

Analyses of test performance in the Child Friendly Schools Program tentatively suggest that expectations for program interventions to have a positive impact on higher-order thinking skills among children in CFS classrooms are being fulfilled (e.g., Bredenberg, 2004). In most test administrations, total mean scores among experimental group children have been higher (from a moderate to higher degree) than those for control groups of comparable composition, and these differences have been statistically significant. The mean differences were greatest among children at grade 1 with respect to critical thinking and among children at grades 5 and 6 with respect to creative thinking. With few exceptions, experimental group students outperformed those in control groups across most of the 18 cognitive domains included in test batteries. Among the critical thinking domains that were tested, *classification* skills tended to emerge as an area where children in experimental groups performed best. Other cognitive domains where children in experimental groups performed well included *concept analysis*, *analogies*, and *mazes and puzzles*. Domains where children in experimental conditions did most poorly included interpreting *logical sequences*, *application of principles*, and *textual analysis*.

Factors Affecting Implementation of Active-Learning Pedagogies

The NGO Education Partnership conducted an extensive research review on teachers in

⁷ There are questions as to whether conventional testing can measure changes in "creativity" or even whether creative thinking can be defined at all, nevertheless, program designers have tried to use the latest research to map out a set of domains that approximate what many commonly understand to mean creative and critical thinking.

Cambodia in 2008 (Jago, 2008). The report indicated that, although there is a lack of quantitative research on classroom teaching and learning processes in Cambodia, qualitative research studies have found that teachers in Cambodia “primarily focus on frontal teaching and rote learning” (p. 72).

The report acknowledged the government’s new emphasis on Child Friendly Schools, but expressed concern that these “new expectations in terms of teacher classroom performance remain at present largely unmatched with regards to the modernization of the pre-service teacher training curriculum to adequately prepare teachers to live up to these standards” (p. 72). Similarly, as noted above, the director of the largest Regional Teaching Training Center (Kandal), in a formal presentation to international visitors, mentioned that “the practice of the learner-centered approach in learning and teaching has not been efficient enough yet” in teacher training programs (Nuon, 2009). The director blamed, in part, the lack of adequate training materials that emphasize the learner-centered approach.

Another constraint in promoting active-learning, student-centered instruction during the student-teaching phase of pre-service training is the government’s five-step teaching/lesson plan mandated for all content areas. Students are expected to follow this plan once they become teachers; evaluations of their teaching may include their adherence to this lesson plan format. Unfortunately, this mandated lesson plan structure is organized around a very teacher-centered structure for classroom instruction, although there is still space within this lesson plan format to incorporate learner-centered strategies. However, training teachers to make use of this space to incorporate these learner-centered strategies requires capacity on the part of the instructor teaching the course. As noted by one teacher training college director, teacher training centers find it difficult to hire and/or retain high-quality instructors, because the salary is low and they can more easily supplement a (half-day) regular school teaching job by giving private tutorial lessons and/or working a second job.

While the challenges for pre-service teachers may be great, the challenges may be even greater in bringing about changes in instruction for in-service teachers. One research study conducted by Tek (2008) focused on the implementation of the Child Friendly School Policy in the Svay Rieng province. Tek conducted interviews with teachers, observed classroom instruction, and observed the monthly meetings for teachers and administrators within a school cluster for in-service training. Tek reported:

Through my observation, I found that that the teachers came regularly to the class to teach pupils. Unfortunately the learning atmosphere was not friendly. The teaching process was rote learning, activities were not relevant, the main content of the lesson was not clear, and there was no application or no link made with real life. The pupils were bored and spent time without doing anything by themselves. ... The teachers did not support pupil’s experiences or what they need. ... The teachers did not motivate and encourage the pupils. ... Teachers did not provide opportunities for students to think. (pp. 11-12)

Tek identified the following factors that limited the teachers’ effectiveness in implementing CFS: teachers’ lack of preparation, lack of instructional materials, and lack of capacity to implement ideas acquired during trainings:

Generally, in the classroom some teachers taught without any preparation. They had no materials and lesson plans to support their teaching. ... The majority of teachers use the old lesson plans and some of them did not prepare lessons plans. They used traditional methodology and just followed the textbooks provided by the Ministry of Education. ... The methodology that these teachers used is to copy content and everything from the textbook on the blackboard without explanation, discussion, group work, or activities for the students to learn. (p. 12-13)

Another barrier Tek identified was the monthly meetings, which, ironically, are supposed to help teachers improve their teaching through professional development. Part of this training involves the use of the Effective Teaching and Learning (ETL) materials provided by the MoEYS. The idea is that teachers are trained to implement ETL tasks from the package; they try them out in the classrooms, discuss them with their peers, and then have follow-up training at the next monthly meeting to share and discuss their experiences. To facilitate this process the teachers are expected to keep a record of their experiences in a logbook, which they are to bring to each meeting. Unfortunately, Tek found that the facilitators of these monthly meetings were generally unprepared and unclear about the tasks to be completed. The logbooks were “not very helpful for discussion or exchange of experiences with other teachers in the work groups” (p. 16). Tek observed that many did not understand the purpose of the logbooks, and most did not fill them out. Most of those who tried did not complete them properly. Tek even observed some teachers filling out the logbooks during the meeting by copying from their colleagues’ logbooks. The meetings tended to be very formal, thus creating an atmosphere that made “teachers a bit nervous to ask questions, make suggestions or have comments” (p. 16). As Tek reported:

The facilitators lacked facilitation skills such as managing time appropriately, speaking publicly and providing explanations, eliciting question, and monitoring group work. Some facilitators had trouble starting the meeting if teachers did not bring forward issues to discuss. ... Facilitators also seemed to not have a clear understanding of all the ETL [effective teaching and learning] concepts and activities, and/or were not confident in their understanding. ... Facilitators accepted all ideas, even when they were not valid or correct. For example, one teacher asked to provide examples of “critical thinking questions” actually gave examples of memory or understanding questions, and the facilitator did not correct her. The local facilitators and the technical grade leaders said they were new to the ETL concept, and thus turned over the meeting to school directors or DOE staff making it a traditional meeting with a high ranking official speaking and everyone else listening. (p. 17)

A final barrier Tek identified was the lack of capacity of the District Training and Monitoring Team (DTMT), which is supposed to visit schools and classrooms and provide training and assistance to the principal and classroom teachers in dimensions of the CFS policy. Tek found that the DTMTs do not provide sufficient support. Their visits to schools are sporadic – particularly to schools located far away from the district office. Sometimes the DTMT members visit the schools but do not observe any classrooms, and often when they do, they only stay a few minutes and do not give any feedback to the teacher. Feedback given to the principals is typically too broad and general to be of any use in making improvements at the school.

While the above observations from Tek come from a single province (Svay Rieng), the MoEYS officials interviewed for this case study acknowledged and are concerned that similar barriers

occur throughout the country. One of the officials noted that “in some provinces, such as Takeo, Kandal, and Kampot, we took the trainers to the schools and convened the [monthly] meetings ... and the teachers were very active in exchanging ideas and making teaching materials.” However, he noted, without these trainers, there is no monitoring mechanism for these meetings, and thus no guarantee they will be conducted effectively. The other official also stated that the monthly meetings can be effective if carried out properly. However, this official noted that effectiveness also lies in the hands of the individual teachers. He explained: “The success depends on teacher’s motivation and conscience. Sometimes they attend the workshop only to get the per diem, and they are not much committed to learning. When they are back, they throw away the documents and never apply what they learn.”

While noting many indicators of success and personal observations of substantial improvements in teaching and learning (as described above), the MoEYS officials openly shared a wide range of barriers to the effective implementation of active-learning pedagogies and child-centered instruction. First, they noted that a major technical constraint is the fact that CFS is a new concept, and teachers have not yet received sufficient training in it. One of the officials added that the teachers do not do much studying on their own about it, and thus do not fully understand the concept. Another substantial limiting factor is the lack of an adequate monitoring system to ensure proper implementation (as shown in the example above). Both officials noted that recent changes in the Ministry have created problems of overlap and confusion regarding which department(s) are responsible for monitoring; another concern is the capacity of inspectors themselves. As one of the officials explained:

In the past, the Department of Primary Schools had its own inspectors, but since the creation of the Department of Inspectorate, this responsibility seems to overlap. We need to develop guidelines detailing specific responsibility of each relevant department. Also, in the past, the inspectors were properly trained. However, those competent inspectors have been attracted to other position and there have not been any new trainings for the new generation of inspectors. ... The inspectors go to the schools, but we are not confident with their ability to inspect them.

The other official noted that “It’s more effective to create the inspection team within the District Office of Education, so that they can better and more regularly perform their inspection work, since they are closer to the school and better understand the general and local context of the school.” Nonetheless, as the example from Svay Rieng shows, district monitors without the capacity and proper training are equally ineffective for ensuring proper implementation.

Another factor limiting implementation of CFS noted by the officials is the capacity of each school’s principal. One of the officials has observed that a strong principal is the key in promoting improved teaching and learning, noting that in some schools “there are lots of potential resources, but there is not much progress because of the inability of the principal.”

Both officials noted that a major policy barrier is the fact that teacher are not paid a livable wage. They acknowledged that many teachers work second or third jobs in order to survive, and thus do not have the time and motivation they need to adequately focus on their teaching. One of the officials described how some school teachers view the CFS or the active-learning approach as another burden added to their already existing problems, so they don’t take it seriously or they just pretend to be doing it whenever observed. He expressed his fear about a cycle of poor

teaching—many students who are poorly taught learn less and become teachers who know little and teach poorly. He also noted that in the past, prior to the Khmer Rouge period, high-achieving students were attracted into the teaching profession due to adequate salaries and high social status, whereas today the most talented students are attracted into other fields and professions. Nonetheless, he reported “that some teachers, despite their poor living condition, are working hard to teach their students. Thus, it is important for teachers to have teaching conscience.”

Both officials identified as a limiting factor the lack of appropriate textbooks, documents, equipment, and other learning and teaching materials that emphasize active-learning and student-centered instruction and/or that facilitate using this approach. One of the officials also expressed concern about what he perceived as a decline in the student’s morality (e.g., their behavior in class, respect towards teachers and others, manner of dress and hair styles, etc.), and felt that this created a cultural barrier to the provision of active-learning and student-centered instruction.

Perceptions of Teachers, Supervisors, Administrators, and Parents

The findings from the focus group discussions conducted with Kompong Cham teachers trained through the ESCUP program reveals that these teachers were making efforts to change their instruction, but faced some of the barriers as described above. These teachers were asked to describe things that have helped them begin to implement active learning pedagogies, and things that have hampered their efforts to implement them. They described that learning how to “decorate” their classrooms to make them more attractive to students (and thus create a more conducive learning environment), and having some additional materials have been helpful. They also described the importance of learning to be fully prepared for class and having visual aids and models to show to students in the classroom.

However, they identified a wide range of issues that hamper their efforts to fully implement active learning pedagogies in their classroom. The first issue they identified was that of large class sizes, often from 60 to 70 students. They noted that it was very difficult to implement these pedagogies even in a class of 45 students. Another issue is a continuing lack of textbooks for teachers and students. As one teacher said, “the books that we use every day are not enough.” Another problem the teachers identified is the amount of teaching they have to do. They mentioned that especially for teachers who teach both the morning and the afternoon shifts, there is no time to adequately prepare lessons. Finally, they reported that a major obstacle in implementing these pedagogies is the low level of teacher capacity. They described how many teachers do not know how to prepare or use guidebooks properly, particularly in terms of developing and using questions to help students brainstorm with each other, and questions that help students think and analyze.

Technical Dimension: Quality and Quantity of In-Service Training and Supervisory Guidance and Support

The focus group teachers from Kompong Cham were asked about the professional development they had received. The teachers reported that the following content from their professional development was the most helpful:

- How to include game-like activities to increase student interest within Child Friendly Schools

- Questioning strategies based on Bloom’s Taxonomy
- Setting up and maintaining classrooms that are clean and attractive, and which create a conducive learning environment
- Classroom management techniques
- Lesson planning and preparations for activities and assignments
- Methods for preparing effective guidebooks for students
- Methods for producing materials for the classroom
- How to set up “learning corners” in the classroom for students to engage in independent learning activities to strengthen their knowledge in different subject areas

When asked if there was anything in the professional development activities that was not helpful, the teachers did not identify anything. Instead they revealed their enthusiasm for these activities and the great need they felt to learn all that they had learned. However, they did report a number of other in-service professional development and other activities that they feel would help them to better implement active-learning pedagogies:

- Learn new teaching methodologies
- Learn how to produce and use new materials
- Support textbooks for grade 4–6 teachers and students
- Longer training sessions of at least 10 days; trainings of 3 to 4 days are not sufficient to develop full understanding of the content, and there is no time for follow-up
- Organize site visits to model schools for teachers to observe effective teachers, exchange ideas, and get new teaching methods and ideas
- Provide annual recognitions, honors, and awards for teachers who are particularly successful in implementing active-learning pedagogies

SUMMARY AND CONCLUSION

The Cambodian education system has come a long way since having to be completely reconstructed beginning in 1979 with severe shortages of human and material resources. Teaching in Cambodia has traditionally been and remains today mainly teacher-centered; however, there are positive signs that some active-learning and child-centered teaching approaches 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 enrolment rates. When the Khmer Rouge came to power in 1975, succeeding in their “socialist” revolution against the US-backed republican 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 a 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. 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). 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). Initially, with assistance from UNICEF, SAVE Norway, & the Kampuchean Action for Primary Education (KAPE), the Ministry sought to establish 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.

The Cambodian government and its international partners sought to build capacity and commitment for 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) 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 TOT approach. At the school and cluster levels these activities sometimes involved: a) stand-alone teacher trainings, b) on-the-job support, c) bi-annual 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 do not routinely model active-learning pedagogies, student teachers only sometimes employ such approaches during micro-teaching lessons, and the quality and intensity of school-cluster-based in-service programs varies significantly (depending in part on where international project assistance was available). Nevertheless, interviews with at least the teachers involved in USAID/Cambodia-supported activities reported they had increased their knowledge and use of active-learning and cooperative learning methods and that their students had become friendlier and more confident in expressing themselves and participating in class discussion – though it is not clear whether teachers understood and were promoting critical thinking or problem solving in their lessons. Interviews with local community members of the CFS steering committees noted that teachers 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 in 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/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 greater 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 currently being paid. Such incentives may be more critical as implementation efforts move from working with initial groups of volunteer teachers to teachers in general.

The government's and educational NGOs' current focus on Child Friendly Schools is establishing a unifying framework for both pre-service and in-service teacher training that emphasizes effective teaching and learning through active learning and child-centered instruction. The pilot experiments with CFS schools, which received substantial support from NGOs (many of which were funded by USAID), had very positive results, motivating the government to expand the model to all schools in Cambodia and to make CFS the main vehicle for accomplishing national educational goals related to providing quality basic education to all students in the country. The danger, however, is that the CFS movement in Cambodia may become a victim of its own success, and there are concerns that moving so quickly from a pilot to a national program without any phasing will oversimplify and undercut the successes achieved earlier. The move from externally funded and supported pilot projects where teachers "volunteered" to transform their classrooms and schools, to the new national policy mandating that all schools become "child friendly" only began around two years ago. As suggested above, some education experts have rightly asked whether this change to mandated top-down reform can succeed or if it is even appropriate, especially given substantial problems such as the lack of an accountability system and the fact that teachers are not paid a livable wage. Implementation at the national level is too recent to tell. Nevertheless, the MoEYS has developed a clear master plan and has succeeded in getting the necessary structures in place to support the expansion, training, and monitoring of CFS throughout the country. One major key to the success of this plan is the development of capacity among teacher trainers at the teacher training colleges, those who provide in-service training for teachers and local school leaders, the monitoring teams, and, most important of all, the classroom teachers.

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