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**Abridged version**



# CAMBODIA

Early Reading and Writing

CASE STUDY

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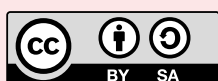
CASE STUDY

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# Acronyms

<b>ECE</b>	Early childhood education
<b>EFA</b>	Education for All
<b>EGRA</b>	Early Grade Reading Assessment
<b>GEM</b>	Global EFA Meeting
<b>JFIT</b>	Japanese Funds-in-Trust
<b>MoEYS</b>	Ministry of Education, Youth and Sport
<b>NGO</b>	Non-governmental organization
<b>RUPP</b>	Royal University of Phnom Penh
<b>TVET</b>	Technical and Vocational Education and Training
<b>UIS</b>	UNESCO Institute for Statistics
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization

# Preface

There has been significant progress towards the six EFA goals, however, all available indicators are pointing to a bitter reality that EFA will be an “unfinished business”. The 2013/4 EFA Global Monitoring Report has concluded that with less than two years until the 2015 deadline, the world is not on track. Amidst the many challenges, many countries have demonstrated how achievements can be made with the commitment from government, expanded partnerships, innovative thinking and efficient use of resources. There are lessons to be learned.

At the Global EFA Meeting (GEM) in Paris in November 2012, Ministers, heads of delegations, leading officials of multilateral and bilateral organizations, and senior representatives of civil society and private sector organizations, including those from Asia-Pacific, committed to the “Big Push”. The GEM participants called upon governments and EFA partners to identify successful initiatives and innovative practices and to adapt, replicate, or scale-up such initiatives to speed up EFA progress.

Subsequently, the 13th Regional Meeting of National EFA Coordinators: The Big Push, which was organized in Bangkok, Thailand on 26-27 February 2013 as a follow up to the GEM, underscored the need for increased knowledge on innovative and creative ways of addressing EFA challenges so as to inform policy-making and programme development on EFA. To this end, the meeting requested UNESCO Bangkok to document innovative approaches and effective practices from countries that have succeeded in transforming EFA goals into concrete realities and to disseminate this knowledge for the benefit of all countries.

The Asia-Pacific region is full of successful initiatives, with stories of good practices in almost every country. Over the years, UNESCO has documented these practices to share them with a wider audience. These five country case studies provide in-depth understanding of promising initiatives that are critical in EFA acceleration in Asia-Pacific. While this research attempts to gather evidence on successful initiatives that have helped countries to accelerate EFA progress, it should be noted that these case studies are some examples selected from a vast pool of equally promising EFA practices in this region.

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# 1

# Introduction

## 1.1 Background

The Kingdom of Cambodia, with a land area of over 181,000 square kilometres, is located in South-East Asia. In 2012, the country's population was almost 15 million, of which 31 per cent were aged under 15 (UNdata, 2013).

Cambodia has a strong tradition of education. The education system in Cambodia has suffered a number of setbacks over its history, however. In particular, it was deeply impacted by the devastation that resulted from the Khmer Rouge regime (1975–1979). Under that regime, 75 per cent of teachers, 96 per cent of tertiary students and 67 per cent of all elementary and secondary students in Cambodia were killed, and 90 per cent of the schools were demolished (cited in UNESCO, 2008a).

Cambodia undertook great efforts after the fall of the Khmer Rouge to rebuild the country in all aspects. In the education sector, anyone identified as being able to read and write was recruited as a teacher, even when they had no teacher training. Any place was used as a classroom, even just the shade of a tree. Concerted efforts in early 1980s, with technical and financial support from Viet Nam and other partners, led to the gradual reconstruction of the education sector.

Beginning in the 1980s, school buildings were constructed across the country, and today primary schools are available in almost every village. In the 1990s and 2000s, while continuing to develop infrastructure, the Ministry of Education, Youth and Sport (MoEYS) also developed policies and guidelines to support efforts to provide education for all children, in line with Cambodia's strong commitment to the Education for All Goals (EFA) and in accordance with the Dakar Framework for Action (UNESCO, 2000).

Cambodia's education system has four levels: pre-school education, primary education, secondary education (lower and upper), and higher education. The country's compulsory basic education provision includes six years of primary education and three years of lower secondary. After the completion of lower secondary education, students can either continue to upper secondary education or enter secondary-level vocational training programmes offered by the Ministry of Labour and Vocational Training (UNESCO, 2008b).

## 1.2 Progress towards the EFA goals

Improvements in education in Cambodia have been remarkable over the past decade, especially in terms of access. This achievement is a result of continued commitment by the government, development partners and donor countries to reaching Cambodia's development goals, including those in the education sector. This section presents a summary of the achievements relating to each of the EFA goals.



## 1.2.1 Early childhood care and education

Goal 1: Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.

The MoEYS has produced guidelines on the establishment of community pre-schools; an action plan for implementing a national policy on early child care and development; an action plan for increasing early childhood education (ECE) classes in primary schools; an action plan for expanding community, home-based pre-schools and home-based groups; and guidelines on the management of private pre-schools; and has implemented pilot programmes on inclusive and bilingual early childhood education.

The Department of Early Childhood Education of the MoEYS provides formal pre-school education for children aged 3–5. ECE services are also provided by community pre-schools and private pre-schools. In big cities such as Phnom Penh, private pre-schools are increasingly popular.

ECE services have expanded significantly in Cambodia since 2000. The numbers of schools, enrolments, teachers and modalities have all increased. In academic year 2000/01, about 6 per cent of children aged 3–5 were enrolled in pre-schools. The percentage increased to 11.4 per cent in 2005/06 and to 14.2 per cent in 2011/12 (UIS, 2014).

Despite progress made in ECE, EFA Goal 1 will not be reached by 2015. Access to pre-school remains limited to only a small fraction of the children in the 3–5 age group (Rao et. al., 2007). Thus, early childhood education in Cambodia is far from meeting the needs of pre-school age children in the country. In 2012 Cambodia was ranked the lowest in the region in terms of ECE provision (UNESCO, 2012). Despite the commitment by the MoEYS to ECE, insufficient resources are allocated to pre-school education.

## 1.2.2 Universal primary education

Goal 2: Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to, and complete, free and compulsory primary education of good quality.

The most remarkable achievement in Cambodia's EFA journey has been the increase of enrolment in primary schools, with the country achieving a 97.4 per cent net enrolment rate in 2012 (MoEYS, 2012).

The Constitution of Cambodia and the Education Law underpin efforts to provide basic education to all children regardless of their social or physical status, not only in terms of enrolling them but also in terms of retaining them in schools and ensuring good learning outcomes.

Progress came about as a result of various measures, including building more schools and classrooms at the primary school level; the elimination of registration fees; increasing the number of teachers, with systematic support for those teachers deployed to schools in disadvantaged areas; expanding education services to children with disabilities and children from minority groups; implementing curriculum reforms to improve the relevancy of education; providing teaching and learning materials; strengthening teacher training; promoting new and more effective teaching; ensuring systematic and regular inspection of school administration methods; establishing effective assessment systems and finance and educational quality assurance; and supporting institutional development and capacity building through the development of legislative instruments and the training of education officers at the national and sub-national levels. Another factor that

contributed towards increased enrolments was the change in the attitude of parents towards educating children, especially daughters.

The measures were implemented by the government, international agencies and NGOs with the support of development partners and communities. Efforts have focused both on expansions in the number of schools and of teachers and on improvements in the quality of education. Consequently, completion rates have increased for all grades, including those of children living in rural and remote areas (MoEYS, 2010, 2011, 2012, 2013).

One project that was implemented nationwide and had significant impact on enrolment, infrastructure and quality was the Child Friendly School project, which was supported by the Fast Track Initiative. Cambodia was one of the countries that received the Fast Track Initiative funds to support its efforts to achieve the EFA Goals. Other interventions included school construction projects, scholarship programmes, the school feeding programme and programmes for children with visual and hearing impairments.

In line with the increase in the enrolment rate, the primary school completion rate has increased dramatically since 2004/05 in both urban and rural areas, with the urban rate rising from 54.38 per cent in 2004/05 to 79.11 per cent in 2012/13, and the rural rate more than doubling; rising from 41.72 per cent in 2004/05 to 93.99 per cent in 2012/13. The increased completion rates are a result of improvements in schools in terms of infrastructure and child-friendliness.

There has been some fluctuation in the figures, however, as a result of the reclassification of some schools, with schools that were once classified as being in remote areas being categorized as being in rural areas, and some schools in rural areas being reclassified as urban schools. Since 2010, no schools have been classified as being located in 'remote' areas.

The government has several plans and strategies in place to guide future efforts towards achieving universal enrolment, higher completion rates and better quality basic education. These include the Education Strategic Plan (2009–2013), the Education Sector Support Programme and the Education for All National Plan (2003). The government's Education Strategic Plan focuses on equitable access, quality and efficiency, and institutional development and capacity building. With the implementation of further education reforms, it is expected that by 2015 all children in Cambodia will have access to free primary education.

### **1.2.3 Youth and adult skills**

Goal 3: Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes.

Goal 3 encompasses various modes of learning, including formal, non-formal and informal, and various types of education, including literacy education and technical and vocational education. In Cambodia, efforts towards achieving Goal 3 have included initiatives aimed at improving learning at secondary school level, from grades 7 to 12, and vocational education.

Secondary education in Cambodia consists of lower secondary school (grades 7–9) and upper secondary school (grades 10–12). 'Basic education' covers primary school (grades 1–6) and lower secondary school. The MoEYS has committed to make basic education accessible to all children. Despite significant efforts, however, enrolment rates for lower and upper secondary remain low. In 2012/13 the enrolment rate for lower secondary was only 53.6 per cent and the enrolment rate for upper secondary school was only 18.1 per cent (MoEYS, 2013b). Completion rates for secondary education are also low. In 2012/13 only 40.35 per cent of students completed lower secondary

school while only 27 per cent completed upper secondary school (MoEYS, 2013a). The transition rate to lower secondary has remained stagnant since 2002. There has been greater progress with regard to upper secondary school, however, with the transition rate rising from 59.2 per cent in 2002/03 to 74 per cent in 2012/13.

The MoEYS considers secondary education to be a particular concern and one that needs to be addressed in the next strategic plan. The ministry aims to not only increase access to secondary education but also to bring about equity of access in urban and rural areas.

Technical and Vocational Education and Training (TVET) does not attract many students. In 2010 there were only 6,035 TVET graduates (MoLVT, 2010). The purpose of TVET, which is to provide participants with practical knowledge and skills required to enter the workforce, is not effectively communicated to students. Many students view TVET as simply providing labour-intensive skills for jobs in machine repair, construction and agriculture.

The division of education and training under different ministries, and subsequent poor coordination and overlap, has led to serious problems. The MoEYS recently established a Department of Vocational Orientation, which orients students on vocational training and governs a number of secondary schools that provide vocational programmes.

Many secondary schools have life skills programmes, but, these programmes are not attractive to students and do not meet market needs (MoEYS, 2013). As of 2013, Cambodia had 134 TVET institutions, of which 63 were public, 188 were private and 53 were run by NGOs.

#### **1.2.4 Improvement in adult literacy**

Goal 4: Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.

Cambodia uses the standard EFA definition of literacy, which is the ability to read and write with understanding a simple statement related to one's daily life. The Government of Cambodia recognizes that literacy encompasses a continuum of reading and writing skills, and often includes also basic arithmetic skills. In 2011, Cambodia's adult (aged 15–74) literacy rate was 79 per cent and its youth (15–24) literacy rate was 91.5 per cent (Hang, 2014). Given the importance of literacy, especially functional literacy, and lifelong learning, the MoEYS has paid particular attention to providing opportunities for literacy education as part of non-formal education programmes.

Cambodia has about 2 million children aged 12–17, the official age for lower secondary and upper secondary school, but only about 40 per cent of these have completed lower secondary school. It can be concluded that about 60 per cent (1.2 million) of Cambodian teenagers drop out of formal education. To provide further learning opportunities, the MoEYS has diversified the non-formal education sector to offer several kinds of programmes through community learning. These centres offer the chance to acquire literacy skills, income generation skills and life skills including family life skills, basic health care skills, knowledge about sexually transmitted diseases, knowledge to prevent road accidents, disaster risk reduction skills and civic consciousness.

#### **1.2.5 Gender equality in access to basic education**

Goal 5: Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

Cambodia has made good progress towards closing the gender gap in general education. This progress is a result of the government's commitment to gender equality, as stated in various policy documents, including the Cambodian Gender Education Policy (2003), Gender Mainstreaming Strategy in Education (2006–2010) and the Quality Standards and Indicators for Gender Mainstreaming in Education (2006).

While the reduction of the gender gap in terms of enrolment and retention rates is impressive, there is room for improvement. In 2014, the Minister of Education, H.E. Hang Chuon Naron, identified concrete steps to promote gender parity and equality, including strengthening gender-based and multicultural approaches to primary education, extending curricular change to all levels of education, measuring and tracking disparities between boys and girls, and developing programmes that will help rural girls and women access literacy, technical training and schooling (Hang, 2014).

### **1.2.6 Improving the quality of education**

Goal 6: Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

While access to education has increased significantly in Cambodia, the quality of education remains a challenge. Poor learning outcomes are common.

Using the EFA Development Index to provide a composite measure of progress, the EFA Global Monitoring Report of 2010 found that Cambodia was ranked 119 among 129 countries in terms of the quality of education. This ranking prompted recent government and civil society efforts with regard to improving the quality of education.

## **1.3 Challenges**

While great progress has been made towards achieving the EFA goals, Cambodia's achievements in the field of education have not been uniform. Efforts to improve access have paid off, but the quality of education is still questionable.

It is well known that learning to read in the early grades is critical as it forms the foundation for children's future learning in all subjects. There is a significant relationship between reading competence and competence in other subjects. When reading skills are poor, learning in other subjects is poor. Although there are other factors involved, poor learning leads many children to dropping out of school.

By learning how to read in the early grades, children can achieve basic literacy that is essential to enabling them to stay in school. Completion of basic education by all children has implications for the progress of the country and for poverty reduction.

Children who do not learn to read in the first few grades are more likely to repeat grades and eventually drop out. A gap forms between early readers and non-readers, and this gap increases over time (Gove and Cvelich, 2010). Children who read very slowly are also less likely to complete school. The speed of reading is important because people have a limited working memory span, with the ability to retain only about seven words for 12 seconds. To be able to understand what they are reading, children must be able to read accurately at an adequate speed (Abadzi, 2006).

Recognizing the necessity of good reading development in early grades, the government began to pay greater attention to improving reading and writing. A test in 2006 of grade 3 students' reading and writing competences found that reading abilities were alarmingly low. Less than 50 per cent of the students were able to perform reading tasks to the standard required. In addition, there was large variation by region (rural vs urban).

Reading levels in Cambodian primary schools were assessed again in 2010 through the Early Grade Reading Assessment (EGRA) method. EGRA is an oral assessment method that measures basic reading skills of young children in early grades. By documenting student performance on early grade reading skills, this assessment method informed the MoEYS of the level of reading and the needs of early grade learners. A total of 2,400 primary school students from 140 schools in 18 provinces of Cambodia were tested. The assessment found that students had very poor reading abilities.

These test results led to a review of the methods used for teaching of reading and writing. The findings of that review in turn led to the development of the Early Reading and Writing Initiative, which is the subject of this case study.

## 1.4 Government programmes

Recognizing the need to improve the quality of education, the Government of Cambodia, with financial and technical support from partners, has focused particular attention in recent years on education quality. In this regard, the government developed several legal and administrative instruments, including the Education Law, the Education for All Plan and the Education Strategic Plan, along with several policies that promote education quality and seek to ensure curricula are relevant to learners' needs.

With regard to improving the quality of teaching and learning of reading and writing skills, one of the key schemes undertaken by the ministry was the Early Reading and Writing Initiative, which involved the development of new Khmer-language textbooks for teaching reading and writing to grades 1 to 3.

## 1.5 Purpose and methods of the case study

This study examined the steps taken under the Early Reading and Writing Initiative to develop new textbooks. This study also assessed the value of the textbooks and the associated teaching-learning methods from the perspective of the users of the books.

The case study team interviewed 52 participants, including three principals, nine teachers, 18 students and 18 parents from three primary schools; as well as two department directors and two representatives of two NGOs (Room to Read and Save the Children) that are involved in improving the reading and writing skills of primary school children in Cambodia.

Semi-structured, face-to-face interviews were used to obtain information about the perceptions of the users of the textbooks (teachers) and related stakeholders (principals and parents). The information that was gathered helped the study team to better understand why the textbooks and the new teaching-learning methods have been successful.

The interview questions were prepared by the study team on the basis of the types of questions asked in similar studies, which were obtained from a review of related books and articles on language and literacy teaching and learning. The research team then prepared a draft of the interview questions in English and consulted an expert on EGRA regarding the appropriateness and clarity of the questions. Finally, the researchers translated the interview questions from English into Khmer, as the participants were all Khmer speakers. The interview protocol is provided in the Annex.

The research team tested the children's reading and writing skills and undertook a short dictation exercise with them. This enabled the team to get first-hand information about the ability of the students in reading and writing.

# 2

## Promising EFA practice

Cambodia's Early Reading and Writing Initiative involved the development and introduction into primary schools of new textbooks for teaching and learning of reading and writing.

### 2.1 Context

The official language of instruction in Cambodian schools is Khmer. How the language should be taught has been a controversial topic among educators. The first official text for teaching reading and writing in Khmer was written in 1946. This textbook was based on a phonics approach called Chet Chhem. This method uses a chant that puts each consonant through the 24 vowels of the Khmer language. The rhythm of the chant 'helps consolidate the sequences and the visual letter changes that go with it' (Abadzi, 2013). Thus, the Chet Chhem method involves reciting the chant and memorizing it. When the patterns become automatic, children can begin learning to read meaningful text. This method was used in Cambodia until the Khmer Rouge regime took power.

In 1979, when Cambodia resumed its education system after the fall of the Khmer Rouge regime, schools utilized the Chet Chhem method once more, but gradually new Khmer textbooks were developed and educators in Cambodia became influenced by the 'whole language' approach to literacy. Accordingly, changes were introduced in the 1990s, with a shift towards 'whole word recognition' rather than a phonics-based approach. These changes came about as a result of advice from external experts who were not always familiar with the Khmer language.

The change in the teaching approach led to a decline in the level of reading and writing abilities over the following two decades. Although there is no empirical evidence, it is generally observed that the generations that began primary school in the mid-1980s, before the changes were put in place, have better literacy skills than the generations thereafter.

It was later concluded that the Khmer language cannot be taught effectively using the whole word recognition method. In recent years, educators have returned to the phonics approach to teaching and learning of the Khmer language, recognizing that such an approach is more appropriate for this type of language.

According to Seymour et al. as cited in Gove and Wetterberg, (2011, p. 10), there are three phases of reading skill development: letter-sound knowledge; full understanding of spelling; and attribution of meaning. In Cambodia, however, the complex Khmer script adds challenges to this process of learning to read.

The Khmer script has 26 vowels and 33 consonants. When presented in a matrix, the consistent patterns of the vowel changes allow readers to recite and retain the essential script. Combinations of the letters and the pronunciation of these are based on complex rules, however, and there are over 900 combinations that must be memorized. To learn to read Khmer, children must engage in much practice in order to link the written language's complex shapes into bigger chains and recognize them automatically and instantly. Children must therefore learn the combinations of

consonants and vowels in a systematic way. This necessity for memorization of combinations is the reason why the Chet Chhem method is effective (Abadzi, 2013).

When teaching Khmer reading and writing skills it is essential to:

- Enable students to learn the vowels, consonants, consonants combined with vowels, consonant clusters, and syllabic clusters.
- Instil in students the ability to read words, short phrases and paragraphs and to be able to write them correctly.
- Assist students to strengthen, between grades 1 and 3, their abilities in reading and writing the Khmer language (MoEYS, 2011).

## 2.2 Aims and evolution of the Early Reading and Writing Initiative

Recognizing that the Chet Chhem method was the most effective method for teaching and learning of reading and writing in the Cambodia context, the Government of Cambodia decided to develop new reading and writing textbooks for grades 1–3, using a modified Chet Chhem method.

The textbooks were the product of a joint effort by the MoEYS and two NGOs: Room to Read and Save the Children International. These NGOs had, in the past, developed and tried several methods to help teachers teach the Khmer vowels and consonants in more effective ways.

Three government departments: the Department of Primary Education, the Department of Training and Pedagogy and the Department of Curriculum Development worked with Room to Read and Save the Children to develop the material needed for the new textbooks.

After receiving approval from the MoEYS, they held a workshop to design the textbooks in cooperation with stakeholders from the target provinces. The new textbooks were piloted in seven provinces of Cambodia.

In the process of developing the new textbooks, the technical committee referred to five earlier textbooks and also used the Samdach Choun Nath dictionary as a reference (MoEYS, 2011). The five earlier textbooks were:

- The original Chet Chhem textbook (1946)
- Reading and writing textbook by Sar Chenda (1969)
- ‘My reading’ textbook by Room To Read
- ‘Our reading and writing’ book by Save the Children International
- Principal textbook (2007)

The new textbook was designed such that reading is learned through repetition after teachers, through songs, and through games that compare the shapes and sounds of the vowels and the consonants.

In Khmer, many vowels are shaped like familiar household objects; likewise, groups of vowels also resemble things in daily life. For example, one group of vowels resembles tree leaves while another group looks like a walking stick. Pointing out these similarities to children assists them in memorizing them.



The teaching methods are flexible and allow students to move around the classroom and loudly repeat after their friends. These methods make a significant impact on students' ability to memorize and recall the vowels and consonants.

The textbooks present short and simple words in connection to the vowels and consonants that have been learned. Words are presented in two ways. First, words that are well known to the children are presented along with colour pictures. The meanings of the words are reinforced by pointing to objects in real life, parts of the body, etc. Words learned from the textbook are recalled with the aid of flash cards and mobile vowels and consonants. Second, the consonants and vowels are presented in combinations to make words. These are not intended for learning the words and meanings as the old textbook emphasized. This is an easy and systematic manner for students to recall the vowels and consonants they have learned.

In 2010, the MoEYS implemented a pilot study to test the effectiveness of the new textbooks and the associated modified Chet Chhem teaching-learning method. The pilot study was initially implemented only in grade 1 of primary school in seven provinces: Phnom Penh, Battambang, Prey Veng, Kratie, Stung Treng, Siem Reap and Kampong Cham.

The new grade 1 textbook was introduced to around 140 schools in 2010, with 11,000 grade 1 students receiving the books. To support teachers in their use of the new textbooks, and to facilitate learning, schools were also provided teaching-learning materials such as mobile letters and flash cards (MoEYS, 2011). The reading and writing skills of these students were monitored, along with the progress of grade 1 students in around 140 control schools.

In 2011, an assessment found that 74.04 per cent of the students in the target schools could read and understand more than 50 per cent of the text taught. In the control schools, only 46.80 per cent of the students could do so. Similarly, 70.07 per cent of the students in the target schools could write, while only 42.26 per cent of the students of the control schools could do so (MoEYS 2011).

A second EGRA test was carried out in 2012. There was a significant improvement in reading test scores between 2010 and 2012. The overall test score rose from 39.40 in 2010 to 65.42 in 2012.

Similar textbooks were then introduced in pilot schools in grades 2 and 3. Following the introduction of the textbooks, reading skills began improving dramatically in these grades too. In 2010, prior to the introduction of the books using the modified Chet Chhem method, 30 per cent of grade 3 children could not read five familiar words. In 2012 only 15.2 per cent of grade 3 children could not perform this task (Abadzi, 2013).

Following the release of these test results, the pilot textbooks were accepted as official textbooks for all schools and were introduced to all formal schools in the country in 2012 and 2013.

# 3

## Findings and conclusions

### 3.1 Findings of the assessment of the textbooks and teaching methods

#### 3.1.1 Description of the new textbooks

The new textbooks are very attractive compared to previous textbooks produced by the ministry. The text is printed in large, clear letters and the book has colour pictures on almost every page. The pictures reflect the lives of children, families and communities.

The textbooks include instructions on their use, making them easy to use by teachers, and also by any parents who would like to help their children learn to read and write. The instructions enable teachers and parents to use the book without supplementary books such as teacher guides or exercise books. The textbooks include many activities that allow teachers and parents to help children practice what they have learned. The new books also have a dictionary section to assist teachers and learners (MoEYS, 2011).

#### 3.1.2 Comparison of the old and new textbooks and the teaching-learning methods

Both the original Chet Chhem textbook and the new one enable students to learn to read and write vowels, consonants, syllables, words, phrases and short texts.

The new textbooks emphasize the memorization of vowels and consonants, along the lines of the Chet Chhem method. Using the new textbook, students first learn how to read and write all vowels and 33 consonants, accompanied by an alphabet song, and then they learn combinations of consonants and vowels, followed by consonant clusters, syllabic clusters and compound words.

A key factor that makes the new textbooks different from the old Chet Chhem version is how the teachers introduce the text and encourage learning. The teaching-learning method used with the new textbooks builds students' confidence in reading so that they are gradually able to read entire phrases and sentences. Thus, the new textbooks promote an enjoyable approach to memorization.

The new textbooks also provide activities by which children can make sense of what they memorize, so that what they learn is consolidated in their long-term memories and can be easily and instantaneously retrieved when needed.

Table 1 compares the old Chet Chhem (grade 2) textbook with the new grade 2 textbook and highlights the improvements.

**Table 1:** Comparison of the old and new Grade 2 textbooks

Old version	New version	Improved feature	Explanation
128 pages Size B5	216 pages Size B5	Increased number of pages Larger word sizes and introduction of colours.	Maximum use of teaching hours (494 hours per year) Easy to read because of large word size.
Black and white	Colourful	From black and white to colour.	Colours attract children's attention.
Need a separate teacher's book	The books include the teaching style method and determine teaching hours for each lesson.	No need to have a teacher's book.	When there is only one book it is easier for both teachers and students. The instructions make it possible for parents to use the book to teach their children.
10 lessons (listening, speaking, reading and writing)	154 lessons (listening 3, speaking 7, reading 54 and writing 62)	The content is divided into small units.	This makes it easy for teachers to prepare lesson plans. The short lessons ensure students do not become bored.
No dictionary	Dictionary	Added dictionary	Explains the meaning of words that might be unfamiliar.
Emphasis on all four skills (listening, speaking, reading and writing).	Put more emphasis on only two skills: reading and writing	Less emphasis on listening and speaking, more emphasis on reading and writing.	Strengthen students' capacity in reading and writing.
Focused only on grade 2 (10 topics)	Lessons for grade 1 (12 lessons). Links grade 1 lessons to grade 2 lessons (12 lessons) and other lessons (126 lessons)	Links the grade 1 contents to grade 2 contents.	Equips students with foundation knowledge in dependent vowels, independent vowels, consonants, compound words, spelling, consonant clusters, and syllable clusters before they learn to read short sentences.
Dictation and carved letters	Dictation, carved letters and vocabulary study	Includes vocabulary study (explanation of words, antonyms, synonyms and questions)	Strengthens students' ability to read and write. Students can study by themselves and parents can help their children to learn.

Source: MoEYS, 2012

### 3.1.3 Teaching-learning methods for using the textbooks

As noted above, the new textbooks not only present information in a different way from previous reading and writing textbooks, but they also require teachers to use different teaching-learning methods.

Phonemic awareness lessons are conducted as a whole class, and then the material is practiced in small groups. Teachers begin the lessons in phonemic awareness by accessing students' prior knowledge via questioning. Students are asked relevant questions about what they already know about the topic, and are asked to predict what will happen in the text. New words that are going to be in the text are explained. Teachers then articulate the objectives for the lessons. Teachers utilize rhymes, chants, poems and songs to help children memorize the vowels, consonants and combinations. Teachers support students' acquisition of reading and writing skills by explaining, modelling, and making connections to independent practice.

Observations of classes found that in the area of phonics for beginning readers, teachers point out letters that represent sounds, teachers make the sounds, and students mimic the teachers. Teachers point to the letters on the board or in print and pronounce them, then ask students to repeat the sound. Also, teachers introduce letters and sounds in groups and words are created from the letters. Students are then encouraged to write the letters that represent certain sounds.

Teachers model reading aloud to students. Some teachers engage in choral and echo reading. During such reading sessions, the teachers stop periodically to engage students in aspects of the text about a character, event, main idea or problem, or to make connections. Teachers also ask students interpretive questions about the stories. Throughout the reading, students are asked to wonder, notice, make connections to self, text and the world, and figure things out.

After the reading, the teachers and students engage in further discussion, returning to the objective for the reading. Children are asked to use evidence from the text to support their answers. Teachers discuss such things as repetitive patterns in the text, unique words and phrases, figures of speech and punctuation.

Students are guided to practice the skills and are afforded opportunities to practice skills via games and via the practice activities provided in the textbooks. It was observed, however, that many schools do not have sufficient reading material to encourage children to read for pleasure and thereby increase their literacy skills rapidly. While some reading material is available, it is not always age-appropriate and does not reflect the range of interests and tastes of the students, so does not entice them to read.

Students use timers in paired reading to practice fluency. Activities (e.g. word walls, games, puzzles, word charts and word building) enable students to practice identifying high-frequency words. The schools aim to have students memorize all of the vowels and consonants as early as possible in the academic year.

### **3.1.4 Procedural routines**

To utilize the textbooks and the teaching-learning methods effectively, teachers must follow certain management routines and procedures. For example, teachers have folders for each child and they plan student activities that suit student needs. Teachers also organize students' materials in colour-coded boxes that match the instructional levels. When dividing the class into small groups for activities, teachers use cues such as timers, bells, and commands to indicate to students when it is time to transition to a new activity. This system facilitates small group instruction.

## **3.2 Findings of the interviews**

Interviews were conducted to gather information about the stakeholders' perceptions of the new textbooks and teaching-learning methods, and stakeholders' suggestions for ways to improve teaching and learning of reading and writing skills. The researchers sought to better understand the reasons why the textbooks were successful in increasing reading and writing skills and to identify what steps needed to be taken to bring about further progress. The key stakeholders' (principals, teachers and parents) perceptions are summarized below.

### 3.2.1 Principals' perceptions

The principals interviewed for the study were generally very supportive of the new textbooks as these books were viewed as necessary tools for improving reading skills in early grades. Several of the principals noted that many schools have launched professional development initiatives and adopted new strategies to help teachers learn how to meet the needs of learners, who are diverse in terms of abilities and backgrounds, and they found that the approach used in the new textbooks reflected the new teaching-learning methods the teachers were being exposed to in their training. One principal noted:

*This textbook utilizes the educational practices that have shown to be effective through rigorous scientific research.*

Several principals suggested that because teachers are the most important factor for success in the schools, more training focusing on utilizing new teaching and learning strategies needs to be provided for teachers. A number of principals also stated that many teachers need extended time to learn and apply the knowledge and skills necessary to integrate new teaching and learning strategies into their reading classes. Some stated that redesigning the current system of professional development of teachers may help reduce some of the barriers experienced during the implementation of new teaching-learning methods. One principal commented:

*If classroom teachers are to use new teaching-learning methods effectively for increasing reading skills, these educators must be provided with adequate training.*

Another principal also called for more training, saying it was necessary because:

*The teacher is the most important ingredient for success in schools and student achievement.*

### 3.2.2 Teachers' perceptions

All of the teachers interviewed as part of this study were satisfied with the new textbooks. Teachers found the textbooks easy to use and many teachers were able to develop their own supplementary materials by reading the instructions in the textbook and using visual and audio materials available in the school or community. Several teachers noted in the interviews that using the textbooks created classroom environments that were conducive to learning.

The teaching-learning methods specified in the textbooks meant that children can work in groups or can read with partners, and students are able to ask questions and discuss what they have learned with classmates. Teachers said this led to a positive atmosphere in the classroom and friendly interactions between teachers and students and among students.

When asked if they had experienced any barriers to using the textbooks effectively in the classroom, teachers indicated several issues, including: time out of the classroom for training one day per month and feeling overwhelmed by the extent of the changes in teaching methods. The teachers also expressed that they did not receive an adequate amount of time to process and apply the information they gained at professional development trainings. As one teacher said:

*I do not have time to process the information and relate it to the curriculum. As soon as I begin to make the connection, it is time for another module.*

Teachers pointed to the lack of sufficient time as being an impediment to the successful functioning of their teams.

Another issue was with the training. Many teachers found that the training facilitators did not provide real-world examples of how to apply the teaching methods and did not provide teachers with sufficient time to practice and reflect.

### **3.2.4 Parents' perceptions and involvement in children's learning**

The parents interviewed for the study were generally very positive about the textbook and many were interested in being involved in helping their children to learn to read. The reasons why some parents want to be involved in children's learning are listed below along with the reasons given by some parents for not participating in children's learning.

When asked their reasons for choosing to become involved in their child's school homework, particularly reading, some parents noted that children watch them and that parents serve as role models. Most parents responded that they felt strongly that by working closely with the school they were setting a good example and reinforcing the importance of going to school and learning to read. Below is a comment from a parent:

*The teachers can only do so much. The learning doesn't stop when (the children) walk out of school. The parent plays a big role. If you don't make the kids do it at home, you can't expect them to do it at school.*

Several parents thought that being involved in the school would allow them to help their children with their schoolwork and understand any social issues they might be having, which would ultimately benefit their child. Some of the comments were as follows:

*I think it helps us recognize his needs, so that the type of help we give him at home reflects the help he gets at school.*

*I like to know who their peers are so that I can better understand their emotional traumas.*

While most parents were conscious that involvement in school and in using the reading and writing textbook was important for their children's education, many parents had competing activities and responsibilities. Factors that often prevent parents from helping their children with their homework were time constraints and inflexible work schedules. One father of four small children felt overwhelmed with the responsibility of accomplishing the reading textbook homework. His comment was as follows:

*It's usually the last thing we do at night. Literally, between the time I get home and the time they go to bed, I am getting the baby from daycare, making dinner, getting them ready for bed and getting stuff out for tomorrow. Homework is the last thing we do. So, it's usually a very stressful time, because they all want attention.*

Other parents said that they did their best to put other tasks aside and focus on helping their children with their homework.

*You know, I think it really has to do with setting priorities. I'm getting to be more organized and setting priorities. So maybe that's why I'm involved. It's what a mother does. It's what my mother did.*

Most of the families interviewed were two-parent families. Completing the nightly homework assignment was reported to be a formable task for some because both parents were working full time. One couple commented as follows:

*We both work full time, so it's a challenge.*

The family structure appeared to affect the degree to which parents were able to be involved. Some of the parents interviewed for the study were single parents who were working full time while also trying to meet their children's basic needs.

One single parent's comment was as follows:

*I don't think my work is very supportive. It is a sacrifice to be both a parent and have a job.*

One young mother of three noted that she works at night, from 11 p.m. until 7 a.m. so that she can be there when her children are home. This mother stated that she was often too tired to help with homework and also they sometimes had trouble finding space to do the homework because she and her children were sharing a house with her sister and their grandmother.

The parents who were working part time or not at all were able to be more supportive of the nightly homework routine.

Parents who were interviewed generally felt more confident about helping their child at home if they had already had an opportunity to observe a lesson at school using the reading and writing textbooks.

In sum, the parents' decisions about whether or not to be involved in their children's learning were influenced by their perceptions of the importance of the homework, their work commitments, their family circumstances, their understanding of their roles as learning facilitators and their level of confidence in being able to help their children learn.

### 3.3 Conclusions

This study examined the contribution to improving learning outcomes made by the Early Reading and Writing Initiative. In particular, the study examined the format of the new textbooks and the associated teaching-learning methods and practices that were put in place. This study also looked at the perspectives of the key stakeholders (principals, teachers, parents and students) regarding the textbooks and the new teaching-learning methods and their views on what further changes are necessary to improve early grade reading and writing skills.

Data and information were gathered through a review of documents on the subject and through interviews with department directors and representatives of the non-governmental organizations (NGOs) that took the leading role in developing the textbooks, and with principals, teachers and parents. The study team also tested the reading and writing skills of children in grades 1 to 3 at the schools included in the study.

A review of the documentation observed that the teaching-learning methods used in association with the new textbooks were a combination of the traditional approach of memorization of content (vowels and consonants) and a new approach of child-friendly, flexible and interactive teaching-learning similar to approaches prescribed in the Child-Friendly School guidelines.

The study found that the textbooks positively impacted teachers' delivery of instruction in early reading and writing. Interviews with teachers found that the textbooks were highly appreciated by them and that teachers perceived the approach and methods used in the books to be very effective. The textbooks gave teachers confidence and enabled them to utilize interactive methods, such as shared reading in small groups and modelling of fluency via read-aloud sessions in small groups.

The case study team found that the teachers' appreciation of the textbooks, their confidence in using them, the interactive features of the textbooks and the better teaching-learning methods (such as read-aloud exercises and guided reading in small groups) used in association with the new textbooks have led to improvements in early grade reading and writing skills. Thus, this study concluded that the introduction of the new textbooks has contributed to improving the quality of education in Grades 1 to 3.

The case study team noted that it is necessary to provide the teachers in all grades with good-quality training in the use of the new textbooks, so as to give them an opportunity to become familiar with the textbooks and to enable them to develop competence in the new teaching methods that are required by the textbooks. The study also found that teachers would benefit from seeing real-life application of the teaching-learning methods, and parents would also benefit from observing reading and writing classes so as to learn the methods and apply them with their children at home, thereby reinforcing what the children learn at school.

The team also observed that the benefits of the textbooks for improving literacy skills were limited by the lack of reading materials to encourage additional reading practice within and outside the classroom. This absence of additional materials significantly reduced reading opportunities that would reinforce the knowledge and skills gained through using the textbooks. In addition, the team concluded that any new reforms put in place should be tested, as per the Early Reading and Writing Initiative textbooks, to avoid negative consequences for the quality of education in Cambodia.

This study found that while most teachers are satisfied with the new textbooks, all teachers need training and they need more effective training, as well as time and support to incorporate their new skills into classroom lessons. Just as classroom teachers greatly influence student learning, the trainers who train teachers to use the textbooks greatly influence the ability of the teachers to utilize the textbooks effectively. Therefore, training of teachers needs to be conducted by trainers and facilitators who are experienced in the use of the textbooks and in the teaching-learning methods that are required. Furthermore, teachers need to be taught how to transfer their new knowledge and skills into classroom practice and need support and time to do this.

To support the effective utilization of the textbooks and to improve learning outcomes, it is necessary that all schools have reading materials to facilitate practice of the reading and writing skills gained at school. Reading materials should be available for all age levels and should suit a range of different tastes and interests, so as to attract readers and foster reading skills.

This study found that parents are often willing to become involved in assisting their children to learn to read and write, but they often need encouragement to do so, and they would benefit from demonstrations by the teachers of the use of the textbooks.

This study observed that mistakes were made in the past, particularly with the introduction of the 'whole word' method for teaching reading and writing. There is a saying that 'fish living in a well know the water better than do those outside the well'. In other words, Cambodians know a great deal more about their language and context than most external experts. Cambodia's education system would benefit from making use of local knowledge and skills, while also continuing to draw on valuable external assistance and expertise.

It is expected that improvements in the teaching and learning of reading and writing brought about by the new textbooks and methods will contribute to the improvement of learning outcomes overall and increase the quality of education in Cambodia.



## 3.4 Lessons learned

The findings of the study highlighted a number of lessons learned for schools and for the government, as detailed below.

At the school level, it was noted that it is important for school principals and teachers to identify, via class observations and discussions with students and teachers, teachers who use the textbooks and the teaching and learning methods correctly and effectively. These ‘model teachers’ should be asked to serve as speakers in training workshops for other teachers, so as to share their knowledge and skills. In addition, newly-trained teachers (after completing their training in the use of the textbooks) should visit the classrooms of the selected model teachers so that the newly-trained teachers can see real-life applications of the textbook contents and methods. Parents should also be invited to observe classes by model teachers, if possible, or at least observe a class that their children participate in, so that parents can learn how to use the textbooks appropriately.

At the government level, there were two lessons learned regarding how to ensure the success of the new textbooks. First, ensure all teachers are trained in how to use the new textbooks and any supplementary materials. Second, ensure all schools have supplementary reading materials to support early language learners.

It was also noted that any proposed changes in education methods should first be studied to ensure they are appropriate for Cambodia’s language and culture, and they should be tested at the local level, as the Early Reading and Writing Initiative textbooks were, before being introduced on a wide scale.

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