

Getting early grade reading right: A case for investing in quality Early Childhood Education programs



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Definitions

Developmentally appropriate practice

Instruction that promotes children's optimal learning and development across all developmental domains. Teachers understand how children develop and use this knowledge to provide varied learning experiences that are at the developmental stage of each child (individually and as a group). Learning experiences include a mix of adult-initiated and child-initiated activities, build on what children already know and do, emphasize learning by doing and through play, and utilize a variety of teaching and learning materials.

Developmental domains

Refers to the different areas of child development including, among others, physical development (i.e., learning how to use the big and small muscles in the body), social development (i.e., learning how to relate to, play with and talk to others), emotional development (i.e., how the child feels about him/herself and expresses feelings), and cognitive development (i.e., learning how to process and use information, being able to perceive, understand and use language).

Early Childhood Education (ECE) programs

Any center-based program providing early learning opportunities for children in the year or years immediately preceding grade one. Quality ECE programs seek to lay a strong foundation for later learning by: (i) complementing and reinforcing the home learning environment; and (ii) providing a diverse range of learning experiences supportive of children's learning across all developmental domains.

Background

Interventions that Start After Children Enter Grade One are Too Late

This paper builds on the *Landscape Report on Early Grade Literacy*¹, which outlined the evidence base for how children learn to read and understand text. In alignment with the Report, this paper draws attention to the critical importance of developing a strong foundation, in reading and all developmental domains, as a prerequisite to all later reading and learning success. Children's environments and experiences during early childhood shape their developing brains; influence what knowledge, skills and attitudes they bring with them to school; and determine their trajectory for success in school and life. The abilities and attitudes children acquire before grade one form the foundation upon which all later learning will occur. The more all of the developmental domains are developed, the stronger the foundation and the more able children will be to learn, to read and to succeed in the early grades. Many interventions, such as USAID's Early Grade Reading programs, begin once children are in school, missing the window of opportunity to lay a strong foundation. Interventions that reach children before they start school—at home and in ECE programs—set children up for reading success.

A Weak Foundation is Detrimental

Children who start school with a weak foundation begin grade one at a disadvantage. This disadvantage requires investments in remedial support to help children catch up. Remedial support is expensive and puts additional financial strain on low-resource settings. This disadvantage also puts children at risk of developing learning and behavior problems, which, in turn, may affect their education outcomes (e.g., poor academic performance, high absenteeism, drop out) and life outcomes (e.g., increased crime, poor health, unable to keep a job).² We need to ensure that all children start school with the best chance of success.

Children in Developing Countries are at Greater Risk of Starting School with a Weak Foundation

Learning begins with the day-to-day experiences at home. Families vary immensely in the frequency and quality of interactions that will support their children's

development in these foundational years. Parents of children in rich households³ are more likely to engage in early learning activities such as telling stories, reading to their children and singing songs than parents of children in poor households. In developing countries, this means one in four children (aged 3 to 6 years) are losing out on critical early learning opportunities at home (about 15.5 million children in 64 countries).⁴ In all, in developing countries, an estimated 250 million children under age 5 (43%) miss out on opportunities that will ensure they start grade one with a strong foundation.⁵ This means millions of children are entering school ill prepared to learn and to read.

We need to intervene before children start school and put children on the road to success in the early grades.

Environments and Experiences in Early Childhood Lay the Foundation for Reading Success

Early childhood, the period of life between conception to age 8, is a window of opportunity in a child's life. All environments and interactions during this period of life lay the foundation for later learning, health and well-being. Humans are born with an underdeveloped brain. Prior to school entry, the brain develops rapidly—as many as 1 million neurons per second.⁶ Though the brain continues to develop over the life course, its development is at its fastest during this early period of life. The more opportunities children have to develop all parts of their brain (visual, auditory, cognitive processes, etc.), the greater the number and density of neural connections formed, and the stronger the foundation for later learning and reading (see Box 1).

Everyday moments such as a loving smile, being spoken to, hearing a story, looking at books, singing songs, playing with objects in the local environment and eating a nutritious meal alter the child's brain for the better. Conversely, negative environments and experiences such as neglect, abuse, toxic stress, poor nutrition, no one to talk to or nothing to play with undermine brain development. These negative environments and experiences result in weak or poorly formed neural connections, slowing down development and limiting children's potential.⁷ Successful readers draw on a

Box 1. Children need all parts of the brain to work well to read well

Neural connections formed in the early years, when brain development is at its fastest, affect various parts of the brain required later on for reading. For example, the parts of the brain that control...

...the eyes will help children discriminate between a picture, a number, a letter and a word, follow the direction of the text, and see the spaces between words, sentences, and paragraphs.

...hearing will help children to discriminate between /b/ and /p/ and hear the different sounds in words.

...the body will help children use the muscles in their lips and tongue to correctly pronounce speech, communicate orally and say new words.

...that affect cognitive processes will help children recall what they have read, comprehend what they have read and infer meaning.

In sum, children do not use just one part of their brain to read. They use various parts at the same time. Providing young children with developmentally appropriate experiences and interactions, across all developmental domains, helps children develop strong and healthy brains. The stronger and healthier the brain, the more children will be able to learn, to read and to succeed in school and life.

well-developed foundation. Beginning in the home and extending to quality ECE programs, the child is best prepared for success when the environments and experiences emphasize the components described as follows.

Skills Beget Skills

Long before children begin to read words, phrases, sentences or passages of text they must acquire a range of knowledge, skills and attitudes that will ensure they become successful readers. These pre-reading knowledge, skills and attitudes form the first stage of

reading development called emergent literacy. This stage includes oral language and vocabulary (understands and communicates orally, learns new words), alphabet knowledge (recognizes letter names and sounds), phonological awareness (identifies and manipulates sounds in words), book knowledge and print awareness (understands how books work, understands that print carries meaning) and print motivation (shows an interest in books and print material). There is a significant and positive relationship between mastery of the knowledge, skills and attitudes associated with this foundational stage and children's early grade reading outcomes. For example, in one study conducted in the United States of America, children's vocabulary size at age three correlated with their vocabulary size at age nine or ten (grade 3).⁸ Moreover, the more words children understood when they started grade one, the more words they understood in grade three and the better their reading comprehension. Conversely, children who understood fewer words at the start of grade one understood fewer words in grade three and had poor reading comprehension. Studies from India⁹ and Rwanda¹⁰ find similar relationships between abilities upon school entry and reading outcomes in the early grades. Early environments and experiences that support children's mastery of this foundational stage set children on the optimal trajectory for reading success.

All Developmental Domains Matter

Environments and experiences in the early years are multi-faceted, supporting children's cognitive, physical, social and emotional development. All developmental domains are interrelated and all experiences, particularly those that are play-based and experiential in nature, reinforce the neural pathways helping the brain to grow stronger and more resilient. For example, singing songs and rhymes helps children develop phonological awareness.¹¹ In addition, activities that encourage children to use all of their senses and bodies to learn

(known as embodied learning) foster development of a range of skills including comprehension, conceptual understanding and vocabulary development.¹² For example, if the direction of text is from left to right, activities that encourage children to move their bodies from left to right help them understand the concepts "left" and "right," and the movement helps them understand the corresponding direction. Early environments and experiences that nurture all developmental domains make it easier for children to adapt to different learning situations, such as reading and understanding text, when they get older.

Attitudes Matter Too

Studies find a positive relationship between children's attitudes towards reading and reading achievement. For example, in the 2011 results of the Progress in International Reading Literacy Study (PIRLS) in OECD countries, the more fourth grade students thought reading was important, the higher their reading scores. In addition, the more confident they were in their reading abilities, the higher their reading scores.¹³ When children are first introduced to print material, it is essential that these experiences be fun, engaging and enjoyable. The more pleasurable their initial experiences with print, the more likely they will have a positive attitude towards print material and reading. The more positive their attitude towards print, books and reading, the more they will read.

The next section outlines how quality ECE programs, including supports to parents, ensure all children, especially vulnerable and disadvantaged children, have an equal opportunity for success. Particular emphasis is on understanding lessons learned, particularly from developing countries, to guide the design and implementation of effective and efficient ECE programs in low-resource settings.

Early Childhood Education: Paving the Road to Reading Success

Research worldwide consistently finds short and long-term benefits for investing in ECE programs.¹⁴ These benefits (summarized in Box 2) cut across a range of outcomes including education, health and well-being from childhood through to adulthood. These benefits in individuals translate into a more skilled workforce, improved efficiency of the education system, reduced expenditure on healthcare and penal systems, and greater productivity and economic growth.

Box 2. Short- and long-term benefits of ECE programs

- ▶ Improved school readiness
- ▶ Increased timely enrolment in primary
- ▶ Reduced drop out rates, learning difficulties and behavior problems
- ▶ Increased retention and completion (primary and secondary)
- ▶ Improved likelihood of completing tertiary education
- ▶ Improved academic achievement in reading and other subject areas
- ▶ Better physical and mental health
- ▶ Lower incidences of misconduct or behavior problems in teenage years and adulthood
- ▶ Increased wage earnings as adults (as high as 25% more)

Cost-benefit analyses demonstrate that investing in programs that support children's early development can yield a rate of return ranging from 7 to 13%.¹⁵ Individuals and nations benefit when children receive the right kinds of supports in the early years. It must be noted that studies of the long-term benefits are mostly from developed countries (i.e., United States¹⁶, United Kingdom¹⁷, Northern Ireland¹⁸ and New Zealand¹⁹). Nevertheless, a growing body of evidence

from developing countries corroborates these findings, particularly with respect to retention, school completion and wage earnings (i.e., Argentina²⁰, Brazil²¹, Ethiopia²² and Uruguay²³).

Inclusion of ECE in the Sustainable Development Goals (Target 4.2) has highlighted the urgency of ensuring access to quality ECE programs globally. In 2014, the gross enrolment rate was 44%, only 11 percentage points higher than in 1999.²⁴ Enrolment rates vary considerably worldwide. Developing countries are much further behind than developed countries (39% versus 87%).²⁵ The regions with the lowest enrolment are Southern Asia (18.5%), sub-Saharan Africa (21.5%) and Northern Africa and Western Asia (29%).²⁶ Enrolment trends within and between countries suggest that access is uneven, leaving behind those who need it most. Children from the richest households are almost six times more likely to attend an ECE program than children from the poorest households. For example, in Tunisia 81% of 3- to 4-year-olds from the richest households attended an ECE program versus 13% from the poorest households.²⁷ Moreover, implementation has been plagued with limited or no budget and a poor understanding of how to design and implement quality ECE programs. This is extremely concerning because low-quality ECE programs can set children up to fail, rather than succeed, in the early grades. If done correctly, ECE can alleviate the stressors on fragile education systems and lead to greater numbers of children going to school, staying in school and becoming successful readers. What follows is a review of the evidence from studies of ECE programs conducted in low-resource settings to inform effective and efficient utilization of available resources.

The studies reviewed here focus on ECE programs that provide early learning opportunities for children in the preschool age group (ages 3 to 6). Many of these programs also include supports to parents to improve the home learning environment (see Annex 1 for the list of studies reviewed). The studies compare outcomes for children (during the ECE program and in primary) who

attended an ECE program versus those who did not. They explore how different factors such as duration and quality influence children's outcomes. The outcomes most often assessed are school readiness, language development (emergent literacy) and numeracy, though the items and measures used vary. Overall, the findings are consistent with trends observed in developed countries. However, there appears to be a variation in the degree to which gains attained in ECE programs endure in the early grades. This raises questions about the important role of early grade classrooms in ensuring the next level of education builds and extends on children's strong foundation.

Vulnerable and Disadvantaged Children Gain the Most

While ECE programs are beneficial for all children, research consistently shows the benefits are greater and more enduring for vulnerable and disadvantaged children. Children from language and ethnic minority groups, from poor households or with illiterate/low literate parents have greater gains in school readiness and academic achievement in primary, increased timely enrolment in primary, and reduced repetition and drop out.²⁸ ECE programs have an "equalizing" effect. They close the gap by helping vulnerable and disadvantaged children catch up with their peers and enter grade one with an equal chance of success. ECE programs also help children who do not speak the language of the school become proficient in their language and gradually develop familiarity and competencies in the language they will need for later learning.²⁹ Unfortunately, access rates repeatedly find that vulnerable and disadvantaged children are the least likely to have access to an ECE program.³⁰ In contexts where it is difficult to provide access for all children, access for vulnerable and disadvantaged children should be the priority.

Some is Better than None. More is (Sometimes) Better than Some

Globally and within countries, ECE programs vary in terms of age of entry, intensity and duration. Almost all of the programs reviewed for this paper operated three to five hours per day, for five or six days a week, over a period of one to three years. The age of entry, influenced heavily by the duration of the program and

age corresponding with the start of grade one, was much more diverse. Age three or four was the most common, but there were several cases where children were younger or older. Increasingly, studies seek to determine the optimal age of entry, intensity and duration. Though "optimal" will vary by context, the common finding is that something is better than nothing, particularly for vulnerable and disadvantaged children. For greater and longer-lasting results, lower intensity (3 to 5 hours/day) over a longer duration (2 or 3 years) is best when the program is of high quality. If the program is of poor quality and/or if the curriculum expectations and learning experiences do not take children to the next level in the additional year(s) then there is no added benefit.

What matters most is how available time is used. A three- to five-hour day that provides a range of learning experiences enhancing all developmental domains and opportunities to interact with a variety of materials (including books) is much richer (and cheaper) than a longer day that mostly involves children taking naps, staring at a screen or sitting in desks. In contexts where space is limited and the numbers of eligible children are high, the "shift model"³¹ where one group attends in the morning and another in the afternoon could be a solution for ensuring greater numbers of children have access.

The Higher the Quality in the ECE Program, the More Children Will be Ready to Read in the Early Grades

It is quite common to find multiple ECE types and providers within the same context. Types include playgroup, nursery, kindergarten, preschool, grade 0 or R, prep class and preprimary. ECE programs may be operating in people's homes, places of worship, primary schools or a dedicated space in the community. Providers include government, for-profit, faith-based, and local and international organizations. In developing countries, private provision (anything other than government provision) accounts for one-third of all ECE provision.³² Across all these different types and providers, there are considerable variations in quality exacerbated by an absence of government-regulated standards of quality or measures to enforce those standards that do exist. Achieving quality across contexts and types will require the collection and use of data to inform action and fill the evidence gaps.

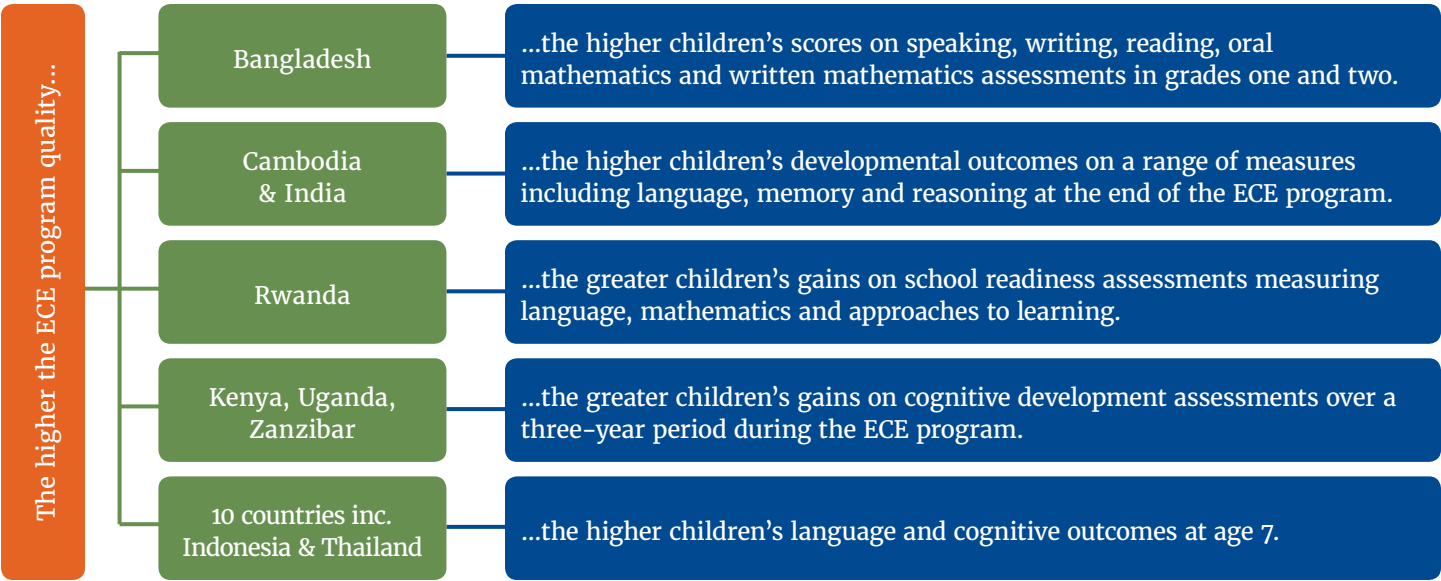
Quality is complex and context-dependent. It comprises structural elements such as group size, length of teacher training program, number of hours in the program and process elements such as instructional approaches and the characteristics of adult-child interactions. Quality

must be achieved at multiple levels from policy and curricula to teacher training, the learning environment, classroom practice and parental engagement. Box 3 provides a summary of the common features found in high-quality ECE programs globally.

Box 3. Common features of high-quality ECE programs worldwide

1. ECE programs prioritize children’s oral mastery of the language they speak at home and gradually scaffold additional language learning.
2. The teachers provide frequent and varied opportunities for children to use and hear language, intentionally supporting children’s acquisition of pre-reading competencies and attitudes.
3. The teachers emphasize meaningful and developmentally appropriate practices such as a mix of child-initiated and teacher-initiated learning experiences and learning through play.
4. The curriculum specifies age-appropriate competencies and gives equal attention to all developmental domains.
5. The learning environment has a variety of learning materials such as age-appropriate and contextually relevant children’s books and objects that mimic children’s home and local environment.
6. The teachers employ developmentally appropriate practices such as asking questions, describing what children are doing, supporting children’s efforts to use language and using play-based approaches to learning.
7. The staff work closely with parents, ensuring they value the ECE program, understand how children learn best at this age and have the resources, confidence and skills to support their children’s learning at home.
8. ECE programs have knowledgeable and well-qualified teachers who receive continuous support to develop their knowledge and skills. Training includes opportunities to practice the required skills and receive on-site mentoring and feedback.

Figure 1. Relationship between ECE program quality and children’s school readiness and early grade learning outcomes³³



There is a significant and positive relationship between ECE program quality and children's outcomes. The studies listed in Figure 1 all agree: the single most important predictor of children's short and long-term outcomes (including reading) is access to a quality ECE program.

The higher the quality, the more ready children will be to read and succeed in the early grades. Achieving quality does not have to be costly. Annex 2 provides an illustrative example of how an East African program has attained quality for over 30 years and is helping others to do the same. Annex 3 provides an illustrative example of a holistic ECE program that uses developmentally appropriate practices to enhance language and mathematics instruction. Both programs have demonstrated improved learning outcomes.

The Higher the Quality of the School, the More Likely Children are to Learn, Read and Succeed in the Early Grades

Quality ECE programs ensure children have a strong foundation for reading before they start school. Early grade classrooms build on children's prior learning, providing environments and experiences that support children's further learning and reading. In developing countries, an emerging body of evidence raises concerns about the ability of early grade classrooms to provide quality learning environments and experiences supportive of all children's abilities and needs. There is growing concern that low quality in primary schools may undermine the progress children made in the ECE programs.

For example, in Afghanistan³⁴, the Kyrgyz Republic³⁵ and Rwanda³⁶ children who had participated in an ECE program were more prepared for school than children who did not participate in an ECE program. However, by the end of grade one, the difference in outcomes between those who went to an ECE program and those who did not was much less pronounced. Children who went to an ECE program maintained their advantage, but their gains were smaller during grade one. Even more concerning was that the overall scores for all children were considerably below grade level expectations. The authors hypothesize grade one teachers spend a lot of time helping everyone get on the same page, resulting in

no new learning for children who started grade one more advanced. They also hypothesize grade one teachers may not know how to support more advanced children. Ensuring primary school teachers are able to take all children further in their learning and development and meet grade level expectations is essential. Children who enter schools that are not ready to teach them may plateau or regress in their learning. Worse still, they may drop out of school or develop behavior problems out of boredom or frustration. There is need for a continuum of high-quality environments and experiences from ECE and throughout the early grades.

Supports to Parents Gives Children an Additional Boost

Given the limited available funds for ECE programs and the urgency of reaching as many children as possible (particularly the poorest and most vulnerable), it is important to explore additional entry points with proven results. Programs that reach children via television and other technologies are starting to show promise with emerging research from developing countries (see Annex 4 for a summary). Programs that provide supports to parents, either as standalone programs or as a complement to ECE programs, give children an additional boost. These programs improve the home learning environment, increase parental literacy and/or the increase the frequency and quality of parent-child interactions supportive of children's development. These programs recognize parents as children's first teachers and value the important role parents play in providing the environment and experiences that will equip children with a range of abilities and attitudes preparing them to be successful readers. Less expensive and intensive than ECE programs, they are the perfect entry point in contexts where funding or distance makes it difficult to provide universal access to quality ECE programs (see Annex 5 for an example of one program). As standalone programs, they can achieve improved child outcomes, sometimes to the same degree as quality ECE programs. However, when these programs work in combination with a quality ECE program, children's outcomes are even greater (see Box 4).

Box 4. Support to parents improves children's early grade reading outcomes

Save the Children's Ready to Learn program, operating in over 20 countries, equips teachers and parents with play-based strategies to support children's development, especially emergent literacy and numeracy skills.³⁷ The program is delivered in ECE programs (ELMI Center) and/or at home (ELMI Parenting). In Rwanda, by grade one, children in the ELMI Parenting group were on par with children in the ELMI Center group.³⁸

These findings are consistent with the Reading for Children program supported by the Aga Khan Foundation in over 15 countries.³⁹ This program creates access to age-appropriate books and builds the confidence and skills of parents (even illiterate and low literate parents) to engage in enjoyable interactions with their children.

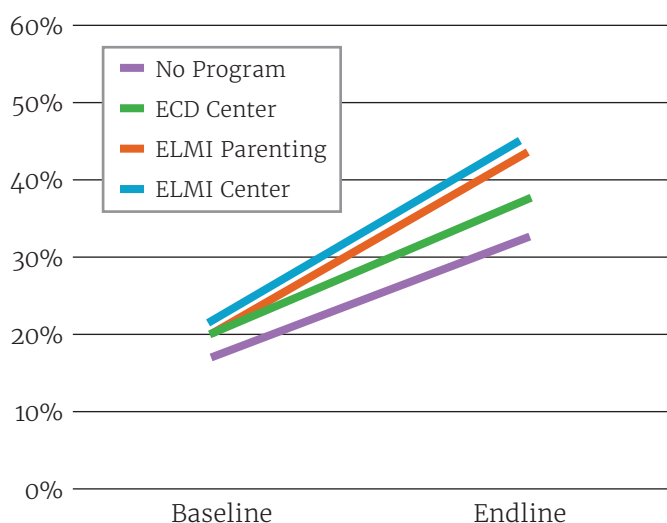
In Kenya, preschool children whose parents participated in the program had greater gains across five language tasks than children who attended centers where teachers had received intensive training.⁴⁰

In the Kyrgyz Republic, grades 1, 2 and 4 students whose parents participated in the program and continued using the Parent Resource Center (access to books and ongoing support) had significantly higher reading scores than children whose parents had not participated in the program.⁴¹

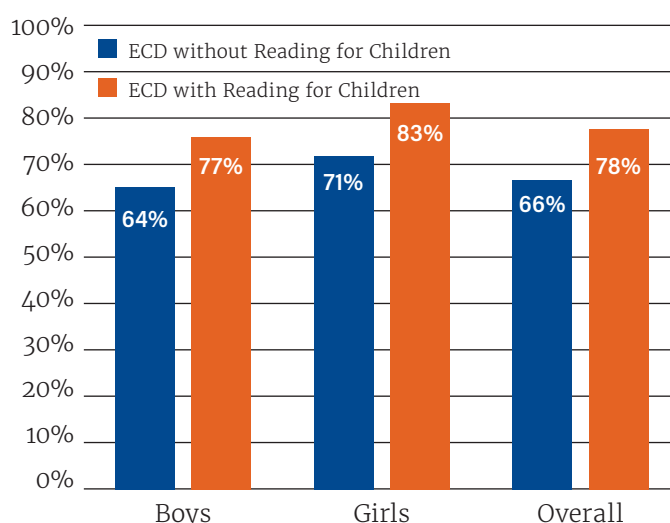
Interestingly, in the Kyrgyz Republic study and in another study conducted in Pakistan,⁴² there was an additive effect for children who attended an ECE program and had a parent trained to provide supports at home. In the Kyrgyz Republic, these children had the highest reading scores overall in the early grades. In Pakistan, these children made the greatest gains across multiple language tasks during the ECE program (i.e., letter recognition, vocabulary). On some tasks, these children outperformed those who only benefited from the classroom intervention by 19 percentage points. The parenting and classroom interventions were different, but the results were the same: even greater outcomes for children when they received support at home and in the quality ECE program.

These findings demonstrate that increased access to age-appropriate and contextually relevant storybooks and supporting parents to engage in rich and stimulating interactions at home (looking at books, reading to children, telling stories) improve children's school readiness outcomes and early grade reading outcomes. Moreover, when children have increased support at home and attend a high-quality ECE program there is an additive effect resulting in even greater outcomes.

Early learning gains in Rwanda: baseline to endline



Reading abilities of Grades 1, 2 and 4 students in the Kyrgyz Republic



Access to Age-appropriate and Culturally Relevant Books in ECE Programs and at Home is Key

Being read to as a young child is one of the strongest predictors of later reading outcomes.⁴³ Children who look at books with their parents and are read to from an early age tend to know more words, have higher cognitive abilities, are more interested in books and become better readers in the future.⁴⁴ The benefits extend to parents too. In contexts where parents are illiterate or low literate, the pleasure of looking at books with their children helps them see value in being able to read and motivates them to improve their own literacy skills. This positively benefits children, as the more literate the parents, the more confident and able they will be to read to their children. Moreover, when parents read at home for themselves or with their children, their children are more likely to pick up a book and want to read.

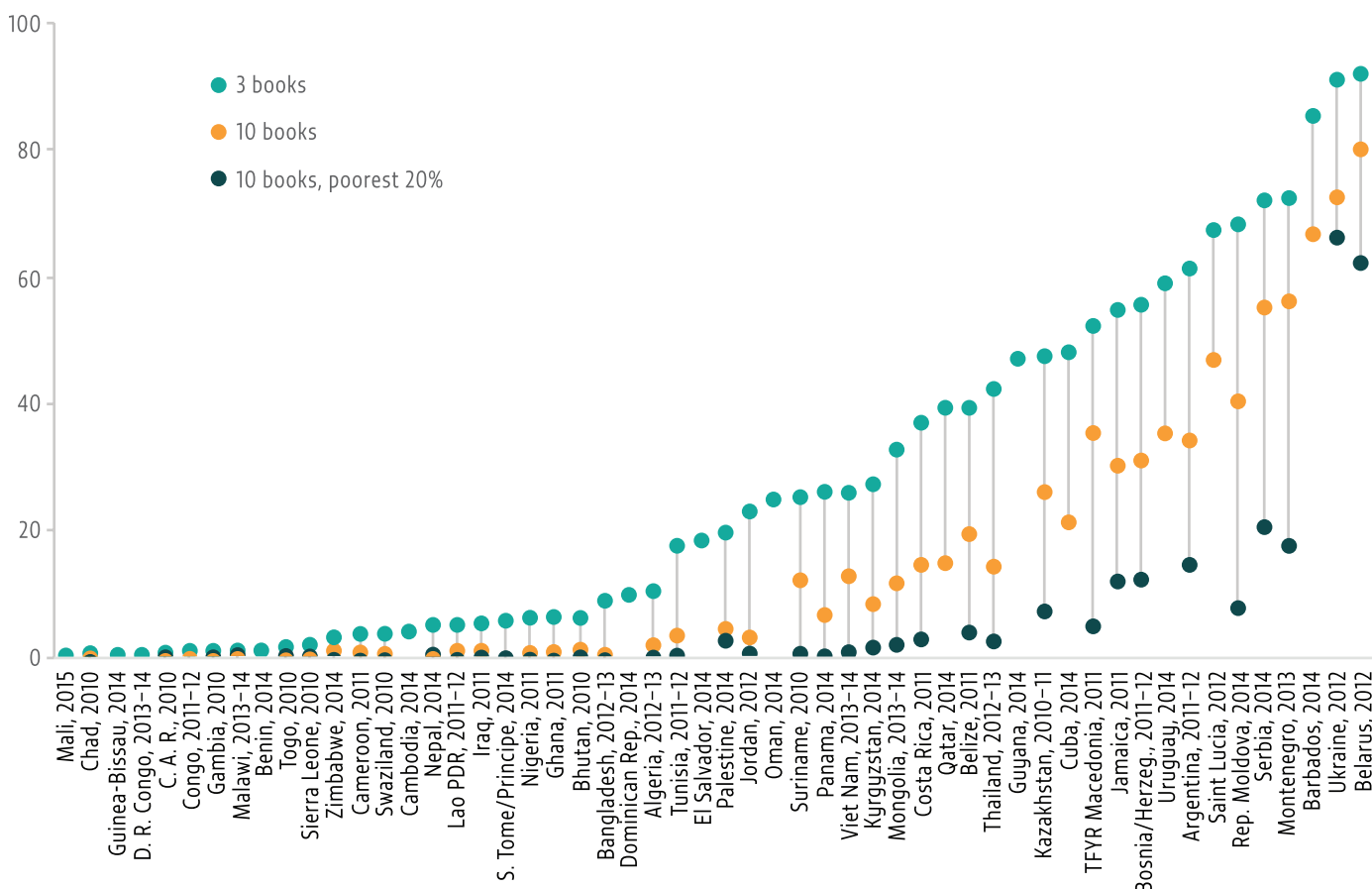
Access to age-appropriate and culturally relevant books is a huge barrier in developing countries. Available books

tend to be for children who can already read or written in a language children do not yet understand or parents cannot read. In addition, books are more accessible to families living in urban areas or who can afford them. Children in rich households are more likely to have access to books than children in poor households⁴⁵ (see Figure 2⁴⁶). In 76 developing countries with available data, only 15% of children under age 5 have three or more children's books at home.⁴⁷ When books are available, parents in poor households are the least likely to use them with their children.⁴⁸ Addressing the book shortage needs to happen in tandem with efforts to increase utilization of these books by families in an age-appropriate and enjoyable manner.

Gaps in the Evidence Base

The evidence is clear: investments in children's early learning will translate into improved school readiness and later learning. More research can address how participation in an ECE program supports

Figure 2. Percentage of children under age 5 who live in homes where children's book are present (2010–2015)



Source: MICS final reports.

all developmental domains and how development of these other domains influences reading development. In developing countries, our knowledge of how these investments translate into longer-term outcomes is almost nonexistent. Longitudinal or retrospective studies can help us understand the degree to which ECE programs influence children's future educational, health and life outcomes. The evidence base makes a strong case for investing in quality ECE programs and supports to parents. We know these have individual benefits and additive benefits for children. However, what might be the short- and long-term implications if children enter schools of poor quality? We need more studies that can explore how the three environments—the ECE program, home environment and school reinforce and complement each other.

Summary

Investments in children's early learning will put children on the trajectory for reading success in the early grades. Children's readiness to learn, read and succeed in school and life are greatest when:

- ▶ **High-quality ECE programs prioritize vulnerable and disadvantaged children.** Universal access reduces the need for grade one teachers to help children who did not attend ECE programs catch up, thereby holding back children who did attend an ECE program from making additional progress. However, vulnerable and disadvantaged children lag the furthest behind in development and gain the most from ECE programs. Access to ECE should be prioritized for this group.
- ▶ **ECE programs are of low intensity (3 to 5 hours/day), longer duration (two to three years) and high quality.** The higher the quality, the greater children's outcomes during the ECE program, in the early grades and beyond.
- ▶ **Schools are ready to receive children.** Schools need to build on children's prior knowledge, skills and attitudes in a manner that is developmentally appropriate. This means adopting the same learning environments and instructional strategies employed in high-quality ECE programs. A continuum of environments and learning experiences from ECE through the early grades will yield the greatest outcomes for long-term success.



Photo credit: Aga Khan Development Network/Zahur Ramji

- ▶ **Parents are supported to engage in early learning activities at home with their children.** The more parents understand how children develop and learn and the more engaged they are in their own child's learning and development, the more likely they are to send their children to an ECE program, demand quality in the ECE program and the school and be involved in their children's learning throughout their schooling.
- ▶ **Children receive support at the ECE program and at home.** The combination of supports in the ECE program and at home yields the greatest possible outcomes for children.

The winning combination: Universal access to ECE programs + lower intensity over a longer duration + supports to parents + high-quality environments and instruction in ECE programs, the home and early grades.

The Way Forward: Efficient and Effective Investments in the Early Years for Improved Early Grade Reading Outcomes

Expanding ECE enrolment to 50% in low-income countries would produce benefits of US\$33billion, with benefit-cost ratios ranging between 8 and 18 depending on assumptions.⁴⁹ Unfortunately, on average, governments are allocating less than two per cent of their education budget on ECE programs.⁵⁰ These limited resources, used inappropriately, are producing some concerning trends in ECE programs worldwide. There is a tendency to:

1. “Push down” grade one curricula and practice into ECE programs, making ECE programs the new grade one. (imagine 3-year-olds sitting in desks facing blackboards and engaged in rote learning),
2. Think that if children are in classrooms they should be taught to read even though they are not developmentally ready to do so (imagine a child who has not yet learned how to talk being told to read),
3. Focus exclusively on the teaching and assessment of children’s cognitive skills (e.g., reading and math), overlooking the inter-dependency of the developmental domains (imagine how difficult it would be to read if your eyes could not focus on the text or every time you saw a book you were overcome with fear), and
4. Spend available resources on construction without due attention to ECE teacher training and other essential quality inputs (imagine a teacher in a beautiful building who has no idea how to use the resources provided or support children’s learning).

A growing line of research inquiry raises concerns for the long-term consequences of developmentally inappropriate practices in the early years (birth to the end of the early grades).⁵¹ These studies suggest that using developmentally inappropriate practices backfires as soon as children are required to think independently and take more responsibility for their own learning.

Even with limited resources, it is possible to achieve optimal results. The five recommendations provided below ensure

investments in the early years support (rather than inhibit) children’s development and lifelong outcomes. Not only will these recommendations prepare children for reading success, they will also foster a positive attitude in children towards school and learning and equip children with a variety of competencies that can be applied to different learning situations in school and life (e.g., confidence, memory, problem-solving, self-esteem, mathematics, science). Success in school and life is not measured by how many words a child can read and understand, but rather, what a child can do with those words. Supporting children’s reading development within a broader learning agenda that develops children’s cognitive and non-cognitive skills will position children for lifelong success.

1. **Increase access to quality ECE programs, particularly for vulnerable and disadvantaged children.** A strong body of research worldwide identifies the short- and long-term benefits of children’s participation in ECE programs on a range of outcomes, including early grade reading. While access to ECE programs is on the rise globally, the children who need and gain the most from ECE programs—vulnerable and disadvantaged children—are the least likely to have access. These children, in particular, are at great risk of entering grade one with underdeveloped or poorly developed brains and fewer competencies in language and other areas. The evidence is clear: children who start behind, stay behind. Interventions in the early grades will not be able to reverse the effects of a weak foundation. Ensuring greater numbers of children have access to quality ECE programs, particularly vulnerable and disadvantaged children, ensures all children have an equal opportunity to succeed in the early grades and beyond.
2. **Ensure quality by investing in teacher development (initial and ongoing).** If we have learned anything from the Education for All era, it is that access does not equate to learning. Quality matters too. Teachers are at the heart of ensuring quality. A meta-analysis of 48 studies found

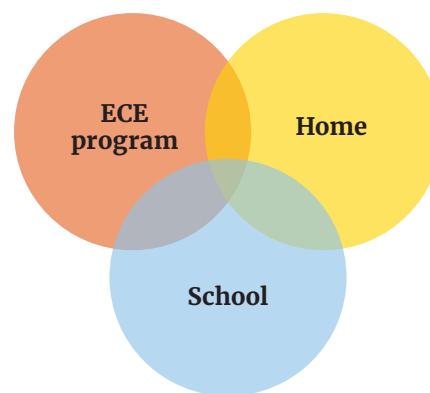
a positive statistically significant relationship between teacher qualifications and quality of the teaching and learning environment, regardless of culture or context.⁵² Higher quality of the teaching and learning environment positively correlates with children's development, including emergent literacy abilities such as book knowledge, receptive and expressive language, and print awareness.⁵³ High-quality teacher development incorporates adult learning principles such as modelling and practicing, as well as on-site mentoring and feedback.⁵⁴ In other words, there is a linear relationship between the level and type of teacher training, the teaching and learning environment, and children's development. The more we invest in high-quality teacher development, the more prepared children will be to become successful readers in the early grades.

3. **Develop age-appropriate and contextually relevant children's books.** Being read to from a young age is perhaps the strongest predictor of later reading outcomes.⁵⁵ Books introduce children to the world of print, new vocabulary and how books work, and they also invite children to hear and use language in various ways. But, if there are no books, how does a parent or teacher read to a child? There is a dearth of age-appropriate and contextually appropriate books in developing countries, especially in languages children use and understand (e.g., picture books, big books, alphabet books, word books, books with short sentences). Increasing the quantity and variety of children's books is essential. Book development initiatives at multiple levels (national, regional, provincial, local) involving local authors, illustrators, printing houses, teachers, parents, librarians, community members and even children can help address this gap. The greater the number of age-appropriate and contextually relevant books and the more opportunities that are made available to interact with these books (in ECE programs and at home), the stronger children's foundation for reading in the early grades. However, simply focusing on the provision of books will not solve the problem. Simultaneous efforts to encourage utilization of these books at home and in ECE programs will be equally important.
4. **Increase children's exposure to oral language, interactions with books and development of a positive outlook towards reading.** Supporting parents to engage in enjoyable and developmentally

supportive early learning experiences at home (e.g., telling stories, reading books) and making available educational television shows are affordable, scalable and effective entry points. Both increase children's opportunities to hear and use language in meaningful ways and foster a positive attitude towards learning, books and reading. In contexts where funding or distance create obstacles to providing quality ECE programs, these low intensive and less costly models can achieve comparable results. However, to the extent possible, they should be offered in conjunction with an ECE program. When combined with a high-quality ECE program, there is an additive effect resulting in even higher child outcomes. The more language children hear, the more words they will know. The more words they understand, the more words they will be able to read. The more enjoyable their early experiences with language and print, the more motivated children will be to read and learn when they get to school and for the rest of their life.

5. **Ensure a continuum of quality from the home to the ECE program to the early grade classroom.** Right from birth, children need frequent and varied opportunities to develop the abilities and attitudes that will prepare them for success in the early grades and beyond. These opportunities begin in the home, continue in the ECE program and extend into the early grade classroom. When the three environments are of high quality (offer frequent, varied and developmentally appropriate experiences), children are in the best position to succeed. The more these environments work together, reinforcing and complementing each other, the more able children will be to learn, to read and to succeed in the early grades and beyond (see Figure 3).

Figure 3. Three environments influence early grade reading outcomes



Endnotes

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Annex 1: List of Studies from Developing Countries Reviewed for this Paper

Country	References
Afghanistan	Aga Khan Development Network (AKDN). The impact of investing in early childhood development in Afghanistan: A case study by the Aga Khan Foundation. Geneva: AKDN, 2016 [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/akf-impact-of-investing-early-childhood-development-afghanistan/ .
Argentina	Berlinski, S, S. Galiani, and P. Gertler. P. The effect of pre-primary education on primary school performance. <i>Journal of Public Economics</i> 93, no. 1–2. (Feb. 2009): 219–234. doi:10.1016/j.jpubeco.2008.09.002.
Bangladesh	<p>About, F.E. and K. Hossain. The impact of preprimary school on primary achievement in Bangladesh. <i>Early Childhood Research Quarterly</i> 26, no. 2 (2011): 237–246. doi:10.1016/j.ecresq.2010.07.001.</p> <p>About, F .E., K. Hossain, and C. O’Gara. The succeed project: Challenging early school failure in Bangladesh. <i>Research in Comparative and International Education</i> 3, no. 3 (2008): 295–307. doi:10.2304/rcie.2008.3.3.295.</p> <p>Ahmed, T., and T. Mahmud. Reading for Children: Action research for a post-literacy intervention. Save the Children USA, Bangladesh Field Office, 2001. [accessed 2018 Feb 15]. Available from: https://www.gov.uk/dfid-research-outputs/reading-for-children-action-research-for-a-post-literacy-intervention</p> <p>Bartlett, S. Bangladesh: ECD support programme. In: <i>Learning about learning: Reflections on studies from 10 countries</i>. Geneva: Aga Khan Development Network, 2013, pp .8–9. [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/learning-about-learning/.</p>
Brazil	World Bank. Brazil. Early child development: A focus on the impact of preschools [Internet]. Washington: World Bank, 2001. [accessed 2017 Nov 15]. Available from: https://openknowledge.worldbank.org/handle/10986/15483/ .
Cambodia	Rao, N., J. Sun, V. Pearson, E. Pearson, H. Liu, M.A. Conostas, and P.L. Engle. MA, Is something better than nothing? An evaluation of early childhood programs in Cambodia. <i>Child Development</i> 83, no. 3 (2012): 864–876.

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Ethiopia	<p>Borisova, I. L. Pisani, A.-J. Dowd, and H. C. Lin. Effective interventions to strengthen early language and literacy skills in low-income countries: Comparison of a family-focused approach and a pre-primary programme in Ethiopia, <i>Early Child Development and Care</i> 187, no. 3-4 (2017):. 655-671. doi: 10.1080/03004430.2016.1255607.</p> <p>Dowd, A-J., I. Borisova, A. Amente, and A. Yenew. Realizing capabilities in Ethiopia: Maximizing early childhood investment for impact and equity. <i>Journal of Human Development and Capabilities</i> 17, no. 4. (2016):. 477-493. doi: 10.1080/19452829.2016.1225702.</p> <p>Woldehanna, T., and M. W. Araya. Early investment in preschool and completion of secondary education in Ethiopia: Lessons from Young Lives [Working Paper 168]. Oxford, UK: Young Lives, 2017 [accessed 2017 Nov 20]. Available from: https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-WP168-Woldehanna.pdf.</p> <p>Woldehanna, T., and L. Gebremedhin. The effects of pre-school attendance on the cognitive development of urban children aged 5 and 8 years: Evidence from Ethiopia [working paper 89]. Oxford, UK: Young Lives, 2012 Dec [accessed 2017 Nov 20]. Available from: https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-WP89_Woldehanna-Gebremedhin.pdf.</p>
India	<p>Rao, N. Preschool quality and the development of children from economically disadvantaged families in India. <i>Early Education and Development</i> 21, no. 2 (2010): 167-185. doi:10.1080/10409281003635770.</p> <p>Singh, R., and P. Mukherjee. Education trajectories: From early childhood to adulthood in India. Oxford, UK: Young Lives, 2016 [accessed 2017 Nov 20]. Available from: https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-CountryReport-India.pdf.</p>
Indonesia	<p>Brinkman, S. A., A. Hasan, H. Jung, A. Kinnel, N. Nakajima, and M. Pradhan. The role of preschool quality in promoting child development: Evidence from rural Indonesia [working paper 7259]. Washington: The World Bank, 2016 [accessed 2017 Nov 30]. Available from: https://openknowledge.worldbank.org/handle/10986/23629/.</p> <p>Hasan, A., M. Hyson, and M. C. Chang, eds. Early childhood education and development in poor villages in Indonesia; Strong foundations, later success. Washington: International Bank for Reconstruction and Development/The World Bank; 2013.</p>
Kenya	<p>Madrassa Early Childhood Program (MECP). Endline report for early years' literacy in MRC-K community supported preschools. Kenya: MECP; 2015.</p>
Kyrgyz Republic	<p>Aga Khan Development Network (AKDN). Improving reading achievement in the Kyrgyz Republic. Geneva: AKDN, 2016 [accessed 2017 Nov 30]. Available from: http://www.akdn.org/publication/improving-reading-achievement-kyrgyz-republic/.</p> <p>Bartlett, S. Kyrgyzstan: ECE programme in Osh and Naryn. Geneva: Aga Khan Development Network; 2013. p.14-15. [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/learning-about-learning/.</p> <p>Johnson, D. The social outcomes of the Television Game show on children and families in Kyrgyzstan. [Unpublished paper].</p>

Country	References
Mozambique	Martinez, S., S. Naudeau, and V. Pereira. The promise of preschool in Africa: A randomized impact evaluation of early childhood development in rural Mozambique. Washington: The World Bank, 2012 [accessed 2017 Nov 15]. Available from: http://siteresources.worldbank.org/INTAFRICA/Resources/The_Promise_of_Preschool_in_Africa_ECD_REPORT.pdf/ .
Nepal	Save the Children. What's the difference? An ECD impact study from Nepal [Summary]. Kathmandu, Nepal: Save the Children (Norway), 2003 [accessed 2017 Nov 20]. Available from: https://www.unicef.org/media/files/Nepal_2003_ECD_Impact_Study.pdf/ .
Pakistan	Aga Khan Foundation. Linking home and school for improved literacy in Pakistan. Ottawa, Canada: Aga Khan Foundation Canada, 2016. Bartlett, S. Pakistan: Releasing confidence and creativity. In: Learning about learning: Reflections on studies from 10 countries. Geneva: Aga Khan Development Network; 2013. p.24-25. [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/learning-about-learning/ .
Rwanda	Save the Children. Early literacy and maths initiative (ELMI) Rwanda: Endline report. UK and Rwanda: Save the Children, UKAid, MinEduc, Innovation for Education, 2015 Jun [accessed 2017 Nov 10]. Available from: https://resourcecentre.savethechildren.net/node/9137/pdf/rwanda_elmi_endline_report_final.pdf/ .
Tajikistan	Bartlett, S. Tajikistan: Community-based ECE programme. In: Learning about learning: Reflections on studies from 10 countries. Geneva: Aga Khan Development Network, 2013. pp.10-13. [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/learning-about-learning/ . Institute for Professional Development in Gorno Badakshan Oblast of Tajikistan (IPD-GBAO). Reading for children Tajikistan: End-line survey report. Tajikistan: Aga Khan Foundation, 2015.
Tanzania	Borzekowski, D. L. G. A quasi-experiment examining the impact of educational cartoons on Tanzanian children. <i>Journal of Applied Developmental Psychology</i> 54 (2018): 53-59. https://doi.org/10.1016/j.appdev.2017.11.007
Uruguay	Berlinski, S., S. Galiani, and M. Manacoda. Giving children a better start: Pre-school attendance and school-age profiles. <i>Journal of Public Economics</i> 92, no. 5-6 (2008): 1416-1440. doi:10.1016/j.jpubeco.2007.10.007.
Multi Country	Bartlett, S. Learning about learning: Reflections on studies from 10 countries. Geneva: Aga Khan Development Network; 2013. [accessed 2017 Nov 10]. Available from: http://www.akdn.org/publication/learning-about-learning/ . Malmberg, L. E., P. Mwaura, and K. Sylva. Effects of a preschool intervention on cognitive development among East-African preschool children: A flexibly time-coded growth model. <i>Early Childhood Research Quarterly</i> 26 (2011): 124-133. Montie, J .E., Z. Xiang, and L. J. Schweinhart. Preschool experience in 10 countries:Cognitive and language performance at age 7. <i>Early Childhood Research Quarterly</i> 21, no. 3 (2006): 313-331.

Annex 2: Achieving High-Quality ECE in Low-Resource Settings: The Madrasa Early Childhood Program (MECP) Model in Kenya, Uganda and Zanzibar

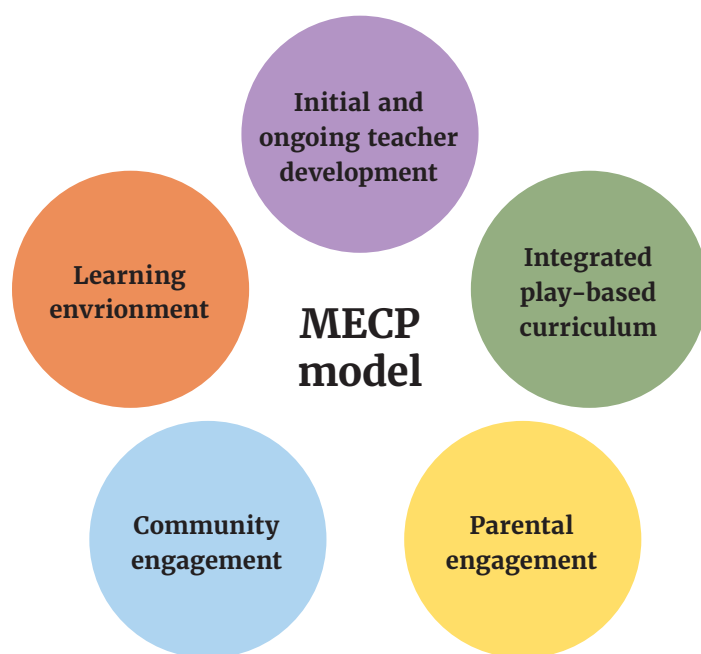
The Problem

Children in Africa are the least likely to access an ECE program, let alone one of quality. Gross enrolment rates are a mere 20% in Sub Saharan Africa compared with 74% in Latin America and the Caribbean and 68% in East Asia and the Pacific.¹ The region, along with the rest of the developing world, is showing some promise as increasingly countries are including at least one year of ECE in basic education policies. However, a limited understanding of what constitutes quality ECE and funding constraints mean the children who need it most are least likely to benefit, and available ECE programs are of variable quality.

In the 1980s, leaders in under-privileged Muslim communities expressed concern their children were falling behind in school. Without an education, they feared their children would remain in poverty. After much consultation, the Madrasa Early Childhood Program (MECP) was established with the objective of helping communities establish and run their own ECE programs, thereby improving the chances for these children to go to school, stay in school and learn. The program began in Mombasa, Kenya and later expanded to Zanzibar and Uganda. Since inception, MECP has supported over 200 communities to establish and sustain ECE programs serving a combined total of 10,000 children each year.²

The MECP model has five components:

- ▶ Initial and ongoing teacher development includes a combination of training, on-site support and learning circles. Initial training is over a two-year period. Emphasis is on experiential learning and frequent opportunities to practice and receive feedback from MECP staff and fellow teachers.



- ▶ An integrated play-based curriculum that places equal emphasis on all four developmental domains (cognitive, physical, social, and emotional) and varied teaching and learning experiences.
- ▶ A learning environment filled with a variety of materials sourced locally (i.e., shells, sticks, leaves, stones, soda cans, bottle caps, empty containers) or made using local materials (i.e., dolls, toy cars, puppets, building blocks, books) and multiple and varied opportunities for children to interact with these materials every day.
- ▶ Community engagement ensures the ECE program and its teachers are valued and supported. Communities also acquire training to manage the day-to-day operations of the center.
- ▶ Parental engagement ensures children enroll and parents understand and support the teaching and learning approach. Parents also acquire strategies to support their children's development and learning at home.

Low Cost, High Quality = More Children Ready for School

An impact study, measuring cognitive outcomes of over 300 children across East Africa, found that children in MECP-supported ECE programs had greater cognitive gains than children who attended non-MECP-supported ECE programs.³ Why? The MECP-supported ECE programs were of higher quality. ECE program quality correlated significantly with children's cognitive outcomes. Children in MECP-supported ECE programs had greater access to a variety of learning materials as well as varied opportunities to use the materials on their own or with the support of their teacher. In addition, teachers in the MECP-supported ECE programs exhibited warmer and stimulating interactions with the children. The authors hypothesize that the quality of MECP's teacher development (which includes initial training, mentoring and ongoing development) was the reason for the observed differences in ECE program quality. Teacher development is the largest share of the MECP program budget.

Scaling up the MECP Model

A lot has changed since MECP started over 30 years ago. Today there are enabling policy environments in each of the three countries complete with national ECE policies, curricula and standards. However, there is limited budget and capacity to ensure effective implementation. In response to the changes, MECP has shifted its focus from supporting individual communities to building the capacity of government and other providers to ensure greater access to quality ECE programs across the three countries and beyond (i.e., Afghanistan, Mozambique). Through these partnerships, the MECP has trained nearly 80,000 teachers and reached over 100,000 children.

MECP has also established registered teacher-training institutes in each country providing government-accredited courses including initial training, upgrading courses, specialization courses and ongoing professional development. All of the courses include on-site mentoring support enabling teachers to receive individualized support and encouragement. The upgrading courses target individuals who have prior experience working in ECE programs but do not have the government qualification. The specialization

courses target individuals who are qualified to teach children in primary school but lack an understanding of child development and appropriate teaching and learning strategies for this age group. The upgrading and specialization courses have created a meaningful and low-cost solution to increase the number of qualified teachers in the region.

Recognizing the MECP model is affordable, high quality, culturally appropriate and scalable in low-resource settings, MECP is working in partnership with government to support ECE expansion with quality in each country. For example, in Kenya, where ECE provision is decentralized, MECP has entered into partnership with several county governments. The government provides the funds and MECP provides technical assistance in the form of teacher training, parental engagement and capacity building of government officials.

A report commissioned by the Ministry of Education and Vocational Training in Zanzibar provides a roadmap for scaling up the MECP model.⁴ It includes two possible financial models for consideration. In the first scenario, the government takes full responsibility for the costs, and in the second the government and communities share the costs. The report cautions against separating the five components of the MECP model into individual elements, stating that the effectiveness of the model is in the five components working together as a whole.

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Annex 3: Ready to Learn: Developing Children’s Foundational Literacy and Numeracy Skills for Success in School And Life

The Problem

Globally, there is a tendency to “push down” the grade one curriculum into ECE programs. The result is developmentally inappropriate practices in ECE programs and a focus on teaching children to read words, phrases and passages of text before they have mastered the prerequisite knowledge, skills and attitudes. There are several reasons why ECE programs may rush children to read or adopt inappropriate practices:

1. Parents and primary schools may exert pressure on ECE programs to get children reading quickly, believing that the sooner a child can read, the more ready she or he is for primary school.
2. The ECE curricula may include age and ability inappropriate expectations.
3. Staff and parents may not understand the importance of learning through play.
4. Staff and parents may not be aware of the importance of supporting children’s development across all developmental domains.
5. Staff and parents may not be aware that children need to develop certain knowledge, skills and attitudes before they begin reading words, phrases and passages of text.
6. Teachers may not have the adequate training and support to employ developmentally appropriate practices supportive of children’s overall development, including reading abilities.

The Solution

The Ready to Learn¹ program is an initiative of Save the Children. The program is implemented in over 20 countries. Developed in response to the above challenges, the program equips teachers and parents with play-based strategies to support children’s development in ECE programs and/or at home. The

program focuses on 10 age-appropriate emergent literacy and numeracy skills.

Emergent Literacy Skills	Emergent Numeracy Skills
Talking and listening	Numbers and counting
Understanding print	Patterns
Knowing what books are	Sorting and classification
Knowing about the alphabet	Comparison and measurement
Understanding sounds and words	Geometry

Results

The efficacy of the program has been measured in Bangladesh, Ethiopia, Malawi and Rwanda. Additional studies are underway in Bhutan, Bolivia, Mali, Nepal and Vietnam. The results consistently find improvements in children’s development in language, mathematics and approaches to learning.

In Bangladesh, children who had attended an ECE center with the Ready to Learn program were three times more likely to be in the right grade for their age in grade 2 compared to their peers who attended the comparison ECE centers.²

In Ethiopia, after just five months of implementation, children attending an ECE program where the Ready to Learn program was active demonstrated almost a threefold improvement in early literacy compared with children attending the comparison ECE centers. Children in these centers also outperformed their peers in mathematics and socio-personal skills.³

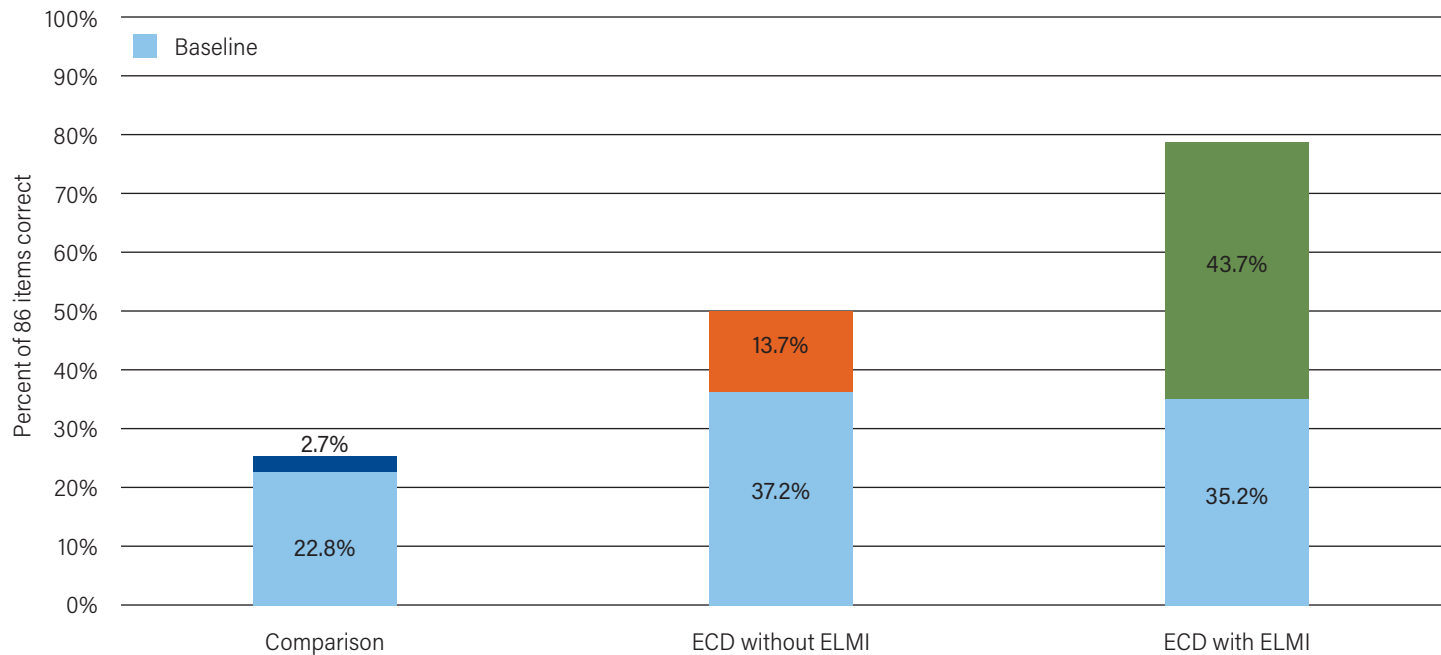
In Rwanda, children attending an ECE program where the Ready to Learn program was active outperformed children attending the comparison ECE program on

language, mathematics and approaches to learning.⁴ This advantage was still visible in grade one, though the gains were smaller than when the children were in the ECE program. In addition, overall scores were low, raising questions about the quality of instruction in the primary school.

These examples suggest that an explicit focus on improving teachers' practice to employ developmentally appropriate practices can yield better outcomes (including reading outcomes) for children well into the early grades. The example from Rwanda highlights the importance of pushing up these practices into grade one and beyond to ensure that the primary school builds on the foundation laid in the ECE program.

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Ethiopia: Average Baseline and Gain in Language Domain by Group



Annex 4: Television and Other Technologies: Enriching Children's Exposure to Language

For children who do not have access to an ECE program or whose parents do not provide rich and stimulating home environments, television is the main input. Millions of children, even in the poorest of communities, have access to a television. A growing body of evidence finds a positive association between viewing educational television programs and children's learning outcomes, including literacy. For example, in the United States, children in low- and middle-income households who viewed educational programs (primarily Sesame Street) at ages 2 and 3 had higher reading, math, receptive vocabulary and school readiness scores during the period they viewed the program and when they reached 5 years of age.¹ Recent research finds similar benefits for children in developing countries on a range of learning outcomes. Below are a few examples.

Sesame Street

Sesame Street is a television show that targets preschool-aged children. It first aired over 40 years ago in the United States. Today, the show reaches millions of children in more than 150 countries. Some countries dub the original version in the local language. Others co-produce tailored versions for the local country such as *Sisimpur* (Bangladesh), *Jalan Sesama* (Indonesia), *Alam Sim Sim* (Egypt) and *Galli Galli Sim Sim* (India). Weekly viewership in these countries ranges from 2 to 20 million children ranging from 2 to 8 years of age. A meta-analysis examining the effects of children's exposure to Sesame Street in 15 developed and developing countries found consistent positive and significant effects on children's cognitive outcomes (including literacy concepts such as letter recognition, naming, writing and vocabulary) learning about the world (including health and safety knowledge) and social reasoning and attitudes (including moral reasoning).²

Reading Together (a television game show produced in the Kyrgyz Republic)

Reading Together is a television game show for parents and school-aged children in the Kyrgyz Republic. The program seeks to promote a national culture of reading. Children qualify for the TV game show by responding to reading comprehension questions via SMS. Each episode includes six parent-child dyads. The dyads complete a series of challenges called *Let's Read!* These include acting out stories, developing alternative story lines and applying lessons from stories to real-life situations. Each episode also includes a different celebrity who reads a story. The show has 1.1 million weekly viewers and is among the top five most viewed shows in the country. Though intended for primary school students, the show benefits younger children too. When families sit together to watch the television show, children's exposure to language increases both through the television show and through the conversations they have with their parents about the show.³ The more language a child hears, the more language s/he will know and understand when s/he starts grade one. Moreover, the excitement generated by the show cultivates an interest in books and a positive attitude towards reading. Future research will explore whether watching the show influences how often families read together.

Akili and Me (animated series produced in Tanzania)

Akili and Me is an animated series for children in Tanzania. The program teaches school readiness skills in Kiswahili and English. Each 30-minute episode includes two parts. The first shows East African characters (a young African girl and her animal friends) encountering challenges and solving problems. The second part focuses on distinct skills (e.g., Kiswahili letters, numeracy in English) and is taught through songs and stories. A study of 568 children in Morogoro,

Tanzania (mean age = 4.8 years), found that children who watched *Akili and Me* had higher scores on a variety of educational outcomes than children in the control group who watched other age-appropriate shows.⁴ It is hypothesized that the reason children in the treatment group performed better is because *Akili and Me*, unlike the other shows, portrays characters from the local context engaged in activities familiar to the children who are viewing the show. Educational content that is culturally relevant is key when developing media for the youngest age group.

Other technologies (radio and mobile applications)

Other technologies such as radio and mobile applications offer additional platforms for scalable and affordable interventions that can set children on a trajectory for reading success. For example, FUN KITEP and FUN KITEP 2, available free on Google Play, are the first mobile reading applications in the Kyrgyz Republic. Books previously developed by local authors and illustrators supported by the Aga Khan Foundation have been transposed into interactive digital books accompanied by interactive reading and comprehension games in three languages (Kyrgyz, Russian and English). Providing the books in digital format enables greater numbers of children to access engaging and interesting print material. Research is needed to understand the degree to which access to digital books improves children's early reading development.

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Annex 5: Reading for Children: Creating Access to Books and a Love of Reading from a Young Age

The Problem

Being read to from a young age is a significant predictor of later reading outcomes.¹ Unfortunately, in developing countries, the first book most children will see is the grade one textbook. Why is this?

1. Families may lack access to affordable and age-appropriate books, particularly books that are culturally relevant, in the local language and intended for young children who are not yet able to read independently,
2. Parents may not understand how important their role is in developing children's early reading skills and attitudes, and
3. Parents may lack the confidence, knowledge and skills to support their children's development.

These challenges are particularly prevalent among developing countries and low-educated or low-literate parents who often believe they cannot read or teach their children.

The Solution

The Reading for Children (RfC) program began in the 1990s as an initiative of Save the Children in collaboration with local partners in Bangladesh.² In 2007, it was adopted by the Aga Khan Foundation.³ Today, the program operates worldwide with the leadership of communities, partners and governments. Developed in response to the above challenges, the program seeks to:

1. Increase access to age-appropriate and culturally relevant storybooks in local languages,
2. Foster opportunities for young children to be introduced to storybooks and have enjoyable interactions with their families, and
3. Build the confidence and skills of parents and other family members to support their children's early language development and instill a love of books and reading.

How it works

1. **Establish mini-libraries.** In consultation with the communities, decide where the books will be placed (leverage existing spaces), who will be the librarian (i.e., criteria) and how the library will operate (i.e., operating hours).
2. **Provide age-appropriate and culturally relevant storybooks in local languages.** Where possible, books are purchased from local or regional publishers and book shops and distributed to the mini-libraries. However, as there is such a dearth of appropriate books, many countries develop their own books in collaboration with local authors, illustrators, printing houses, teachers, parents, community members and even children.
3. **Train and mentor parents.** Trained librarians organize group sessions for parents and other family members to build their skills and confidence in interacting with their children, using language throughout the day, telling stories and making reading with their children an enjoyable experience. Librarians also provide individual support to struggling families.

Ingredients for Success

Reading for Children has higher outcomes for parents and children when:

- ▶ **The mini-library is a place that is agreed upon by the community and easily accessible to all.** The best places are ones that parents with young children already use—a place of worship, a shop at the local market, a place where local groups meet whose members are also parents (i.e., an adult literacy class, a community-based savings group), a classroom or school that has an open-door policy for parents, a community member's home or an existing library.

► **The librarian is passionate about books and reading.**

A trained, inspired and motivated librarian will ensure the books are used long after project funding ends. S/he will use multiple strategies to support families to regularly use the library, to overcome challenges, to enjoy spending time together and to make visiting the library and reading a regular part of family life.

► **Parents receive training and ongoing support to use the books with their children.** Shifting attitudes, building confidence and transforming behavior takes time. Without the accompanying support to parents, it is quite likely that the books will sit locked away never to be touched or read. Initial and ongoing support helps parents become more comfortable, confident, skilled and motivated to use the library and spend time looking at the books with their children at home.

► **The RfC program complements a high-quality, center-based ECE program.** When children are supported at home and in the ECE program, their mastery of pre-reading skills and attitudes is greater than if they only attend an ECE program or only receive support at home.

Spotlights from the Aga Khan Foundation

Adult literacy classes as mini-libraries

In Mali, the mini-library is located in the adult literacy class. Most of the students are also parents. Every class, the librarian (a student in the class) brings a selection of books from her home (where the books are stored in between classes). There is time before and after the class for students to sign out books.

In India, the Reading for Children program generated demand for adult literacy classes. The mothers wanted to be able to read the books with their children. Adult literacy classes were established and the mini-library moved to the adult literacy class.

Situating the library within an adult literacy class has multiple benefits: (1) the parents are more motivated to come to class, (2) when parents use the books they are strengthening their own literacy skills, and (3) the parents are more confident and motivated to look at the books with their children, creating a culture of reading in the home.

Revitalizing existing libraries

In the Kyrgyz Republic and Tajikistan, local community and provincial libraries established during Soviet times are severely underutilized and lacking age-appropriate books for young children. The RfC program brings these libraries back to life, creating children's sections in the libraries and supporting government-paid staff (librarians and school teachers) to conduct enjoyable reading-related activities for families (e.g., making puppets, drama, storytelling sessions). Re-energized librarians plan a variety of community events to stimulate visits to the library and further reading (i.e., book festivals, puppet shows, dramatization of stories), and the librarians compete (and win) in local and national competitions organized by the Ministry of Culture.

Revitalizing existing libraries and drawing on existing staff has multiple benefits: (1) lower start up and operating costs free up funds for more books and activities that support families' utilization of the library, (2) the entire family, including grandparents and older siblings, can access the library, resulting in a greater number of opportunities for children to visit the library and/or be read to by a variety of family members, and (3) the library has space to continue adding books in the future.

Studies conducted in both countries demonstrated that children in communities supported by the RfC program had greater access to books and more opportunities to interact with books, and were more frequently read to at home than children in communities without the RfC program. These changes translated into higher reading outcomes in grade 1 (Kyrgyz Republic and Tajikistan)⁴ and sustained benefits through to the end of grade 4 (Kyrgyz Republic)⁵. Access to books, enjoyable experiences interacting with books and being read to from a young age prepares children for greater success in school.

Increasing access to print material and fostering a culture of reading in the Kyrgyz Republic

In 2007, there were almost no appropriate books when the RfC program started. The Aga Khan Foundation worked closely with local authors and illustrators to address this gap. Over the next 10 years, they developed over 60 storybooks including information books (i.e., encyclopedias), folktales, stories capturing local oral traditions and books promoting specific messages

such as protecting the environment, valuing diversity and pluralism. The books are produced in single and dual language format (English, Kyrgyz, Russian) and distributed to schools, ECE programs and libraries supported by the Aga Khan Foundation.

A Revolving Fund, established by the Foundation, enables the books to be sold within and outside the country, reaching children outside the Foundation's target geographic areas. The Ministry of Education and Sciences and USAID have purchased 250,000 copies of select Kyrgyz-language titles and distributed these to all 2,200 primary schools nationwide. Funds generated from book sales are used to provide books to children in disadvantaged communities, organize reading-related events and campaigns, and develop new titles.

In the communities directly supported by the Aga Khan Foundation (AKF), visiting the library and reading at home are a regular part of family life. In an effort to foster this reading culture across the country, the AKF expanded the RfC program to include two mobile applications in three languages (Kyrgyz, Russian and English) and a television game show.

Mobile applications

FUN KITEP and FUN KITEP 2 enable children to access digitized versions of the books developed by local authors and illustrators supported by AKF. Each book has accompanying interactive activities fostering reading and comprehension. When children successfully complete the activities, they can advance to the next level—a new book. The free applications have been downloaded nearly 10,000 times on Google Play and have received a 75% “5 star” rating.

Television show

Reading Together is a family television game show bringing parents and children together to engage in reading-related challenges. Children qualify for the show by responding to reading comprehension questions via SMA. The show has 1.1 million weekly viewers and is among the top five most viewed shows in the country. *Reading Together* is creating a culture of reading nationwide and has sparked numerous offline versions in schools across the country.⁶ In 2016, Results for Development, through its global Center for Education Innovations recognized *Reading Together* as a “model innovation.”

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