BEYOND ACCESS: EXPLORING EQUITY IN EARLY CHILDHOOD LEARNING AND DEVELOPMENT

Save the Children

IDELA

Cover photo:
5-year-old Marina reads stories at her ECCD center in Assuit, Egypt.
Victoria Zegler

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School director Gloria helps Camila, 5, with a puzzle in Cochabamba, Bolivia.

Susan Warner

FOREWORD

Habibata, a teacher, introduces children to colors though storybook learning in an Early Childhood Care and Development (ECCD) Program in the Sikasso district of Mali.

A child's most important steps happen before she sets foot in primary school. By her fifth birthday, her brain is 90 percent developed and the foundations for success at school and later in life are in place. Evidence is clear that quality early childhood education sets in motion a virtuous cycle of learning and development that continues well beyond children's early years, with wide-reaching benefits for children and for education systems.

Despite the evidence, more than 50 percent of preschool-aged children are missing out on pre-primary opportunities. In low-income countries, only two in 10 children are enrolled in early education, and the least likely to attend early learning programs are children from disadvantaged families. While momentum is steadily growing for investment in pre-primary education, especially as countries design plans for reaching SDG 4 target 4.2, progress in this area requires a stronger push and meaningful efforts to address key determinants that shape both access to services and development and learning outcomes for children.

Informed by the use of the International Development and Early Learning Assessment (IDELA) across 38 sites reaching over 20,000 children ages 3 to 6 living in diverse contexts around the world, this report highlights that less than one-third of children are transitioning into primary school at age 6 with the necessary foundational early literacy, numeracy and social-emotional skills needed to succeed. Further, the report highlights the significant association between poverty, among other factors, and development of school readiness skills of young children, underscoring that equity should be at the heart of pre-primary education scale up efforts.

In light of the global learning crisis, these findings signal notable challenges and opportunities for how to strengthen a child's learning journey – starting with quality early learning opportunities.

The report provides three essential recommendations to give every child an opportunity to go to school and learn:

- **Education systems need to be aware of and responsive to children's diverse needs and skill levels as they enter formal schooling.** Addressing the diverse skill levels of children requires well-trained teachers across the pre-primary and primary sub-sectors and appropriate curricula that can support and scaffold children no matter their background or skill level.

- **Decision makers must apply an equity lens when planning for the expansion and implementation of pre-primary programs.** Not only is equity an issue in accessing services but when quality of services is not uniform, it is often the poorest children who attend poor quality programs, further compromising development and learning. Closing the equity gap in both access and quality requires data and evidence on who is left behind as well as mechanisms to safeguard high quality of programming for disadvantaged populations.

- **Children don't develop in a vacuum and thus require education systems to connect with the support system of children outside of school.** As the report highlights, family support for learning at home can greatly contribute to children's outcomes and can complement the efforts of early childhood education programs, multiplying the effects for children. Therefore, pre-primary plans should include systematic efforts to engage with families and communities.

Failing to invest sustainably and equitably in quality early learning opportunities for every child endangers her right to fulfil her developmental and educational potential. As a global community, we must take care not to define success only in terms of the numbers of children in early education programs. Focusing only on access, at the expense of quality, may translate into young children being crowded in unstimulating classrooms lacking opportunities to play, with poorly trained educators delivering curricula that are not appropriate for preschoolers. Success should instead be measured by how much young children, especially those who are most disadvantaged, are learning and developing the critical skills they need to succeed in primary school and beyond in the context of enriching, playful and supportive early learning environments.

Jo Bourne
Global Chief of Education
UNICEF

Save the Children

Upon arrival at school, a child washes his hands with the help of a preschool classroom teacher in Mozambique.

Colin Crowley

INTRODUCTION

Justine, 4, constructs a tower with building blocks as part of an Early Literacy and Maths Initiative (ELMI) project at an ECCD center in rural Rwanda.

Early childhood is the most critical period for brain development. A growing body of research details the neurological pathways that operate during this time, and evidence from interventions in the early years proves the effectiveness of acting early when optimal brain development is at risk.[1,2] However, progress on how to design programs and systems that best support early brain development in low resource contexts lags behind. Which strategies work best in which contexts? Which tactics are most beneficial for children from deprived backgrounds? Which approaches are the most sustainable in low- and middle-income countries?

Efforts to create scalable child development support structures – be they early childhood care, development and/or education efforts – rely on existing government institutions. For example, children aged 0-2 have many touch points with heath systems for recommended screenings, vaccinations and other health care appointments, so the majority of initiatives directed at improving cognitive functioning for this age group are integrated into these same systems. Similarly, primary education services aim to reach all children at the target age of entry (often 6 years old, but 5 or 7 in some places[3]) so interventions aimed at improving learning for this age group are targeted toward education systems. While logical, these efforts have created a service gap for 3-5 year olds. This gap is particularly problematic because it occurs during a critical period of brain development.
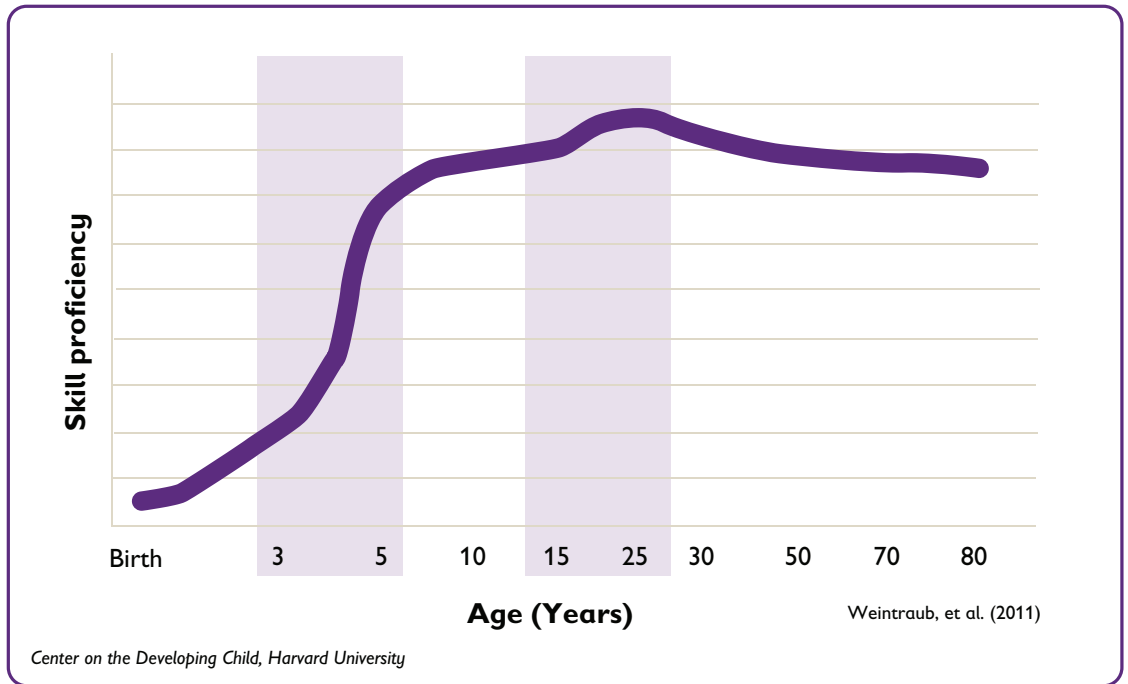
Figure 1. *Development of executive functioning skills in early childhood*[4]

Skill proficiency

Birth 3 5 10 15 25 30 50 70 80

Age (Years)

Weintraub, et al. (2011)

Center on the Developing Child, Harvard University

This inconsistency in services often results in a learning gap for children aged 3-5 years, which is felt particularly acutely at the beginning of primary school. Children arrive at school without the skills they need to thrive in the classroom, and early primary teachers are typically unfamiliar with the learning needs of these young children. Taken together with issues of early and late enrollment, children and teachers' lack of preparation mean that primary school systems have become inefficient systems for enrichment and learning.[5]

With the adoption of Sustainable Development Goal (SDG) 4.2, many countries are placing increased emphasis on reaching 3-5 year olds with early learning services. Currently, the pre-primary education coverage rate in low- and middle-income countries is 45 percent, and substantial inequities exist within and across countries, inequities that are largely defined by wealth.[6] Children who do not have access to early childhood education (ECE) services are more likely to be from poorer families, and those living in rural areas.[7] For many reasons, access to services, as well as the quality of those services, tends to roll out from easiest to hardest to reach. As a result, children who need high quality ECE

services the most, will likely be the last to receive them. Therefore, in order to reach even the most deprived children by 2030, we must develop and rigorously test creative new solutions to improve both the access and quality of ECE.

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Preschool children in an early childhood care and development program in Bhutan.

CASE STUDY: ADDRESSING LEARNING GAPS IN INDIA'S AFFORDABLE PRIVATE SCHOOLS

India has made remarkable progress towards universalizing primary education, but learning outcomes are still poor. [8] While current attempts to address this issue mostly focus on improving primary education in government schools, they fail to address two important elements: (1) affordable private schools[9] (APS), and (2) early childhood education (ECE).

Low-income households constitute 70 percent of urban India. 86 percent of children from low-income urban households attend APS. This is an active choice made by parents based on their belief that APS are of a superior quality to free Government schools. Parents make a huge investment to do so, spending an average of 6 percent of household income on preschool education in APS. However, APS predominantly use a rote memorization approach and learning outcomes are almost as poor as in Government schools.

To further investigate learning in APS, FSG used the IDELA to conduct a baseline study[10] of 402 children in kindergarten and grade one in four cities[11]. The study found that learning outcomes in APS and government schools were quite poor. 54 percent of children entering first grade in urban APS could not pick out the correct number of objects corresponding to numbers from 10-20 (e.g. picking 13 pencils from a stack of 20).

76 percent could not identify starting sounds of words. The children struggled with tasks requiring cognitive flexibility such as sorting two ways and puzzles.

In 2014, FSG launched the *Program to Improve Private Early Education* (PIPE) – a multi-year initiative that aims to improve learning outcomes for over 200,000 children from low-income households in urban India and to set the urban APS market on the path to transformation. FSG's approach is to bring proven preschool solutions including curriculum, teacher training, and teaching and learning materials to improve teaching and learning in APS.

The learning gaps identified during the IDELA baseline helped the program identify and select high-quality activity based solutions. Activity based solutions are those that help children learn through play, learning activities and experiences.

FSG and PIPE believe bringing these solutions into APS and educating parents, teachers and APS administrators on the benefits of activity-based learning (ABL) could prove transformational for learning outcomes. At scale, these changes could mean a transformative move from traditional rote learning to a positive impact on children from low-income households seeking a quality early education.

LEVERAGING DATA TO ANSWER KEY QUESTIONS

Pre-schoolers play with visual learning tools in an ECCD center in Assuit, Egypt.

The goal of this report are to gain a better understanding of factors influencing children's learning and development to inform advocacy and programming, using the unique perspective of a direct child assessment. Other than the Early Childhood Development Index (ECDI) within UNICEF's Multiple Indicator Cluster Survey (MICS),[12] global databases of information about learning and development do not exist for children before they reach primary school. The ECDI includes national level data from 60+ countries and has been foundational to the field as the first global early child development measure. However, due to the practical constraints on a national survey tool, the ECDI is a 10-question parent-reported module. This limits options for digging deeper into the data to learn more about what children around the world know and can do.

In contrast to the ECDI, IDELA is more often used at the subnational level and offers more detailed information about children's learning and development. IDELA has been used in over 50 countries, primarily to inform or evaluate ECE interventions aimed at achieving SDG 4.2. The core assessment includes 22 items across four domains (literacy, motor, numeracy and social-emotional), and all questions are administered one-on-one with children. We hope that the growing IDELA database can be the next stepping stone toward creating programs and policies that respond to the specific needs of children in communities around the world.

THE IDELA NETWORK

The IDELA website hosts the growing body of IDELA ECE evidence from around the world. It includes reports, data analysis and case studies from Save the Children and global partners as well as an online forum for questions and discussion around use of the IDELA. These resources and the open-source IDELA tool are free and available to the public.

Please visit www.idela-network.org and join the global conversation around IDELA and ECE.

RESEARCH QUESTIONS

In order to inform our understanding of child development and trends in early learning we ask three central research questions:

1. How does the relationship between age and IDELA scores inform our understanding of the pace of development and readiness for primary school across different contexts?

2. What skills do children display in the areas of literacy, motor, numeracy and social-emotional development as they enter primary school?

3. How is children's early learning and development related to gender, socio-economic status, and home learning environment (learning materials, learning/play activities, and harsh discipline in the home)?

DATA

The analyses in this report represent the learning and development of children living in diverse contexts around the world. We include data from 38 sites and over 20,000 children around the world. This is not an exhaustive collection of IDELA data, but rather is focused on the datasets that have been shared with Save the Children for use on the IDELA website that was launched in September 2017. Although this is a convenience sample, there is strong geographic representation across the sites (Figure 2 and Table 1). Many datasets come from programs that target vulnerable or marginalized children, and four include children who are living in conflict settings or who are displaced from their homes. In addition, 12 IDELA datasets were complemented by information from caregivers which allows us to dive deeper into further equity analyses.

IDELA DATA AROUND THE WORLD

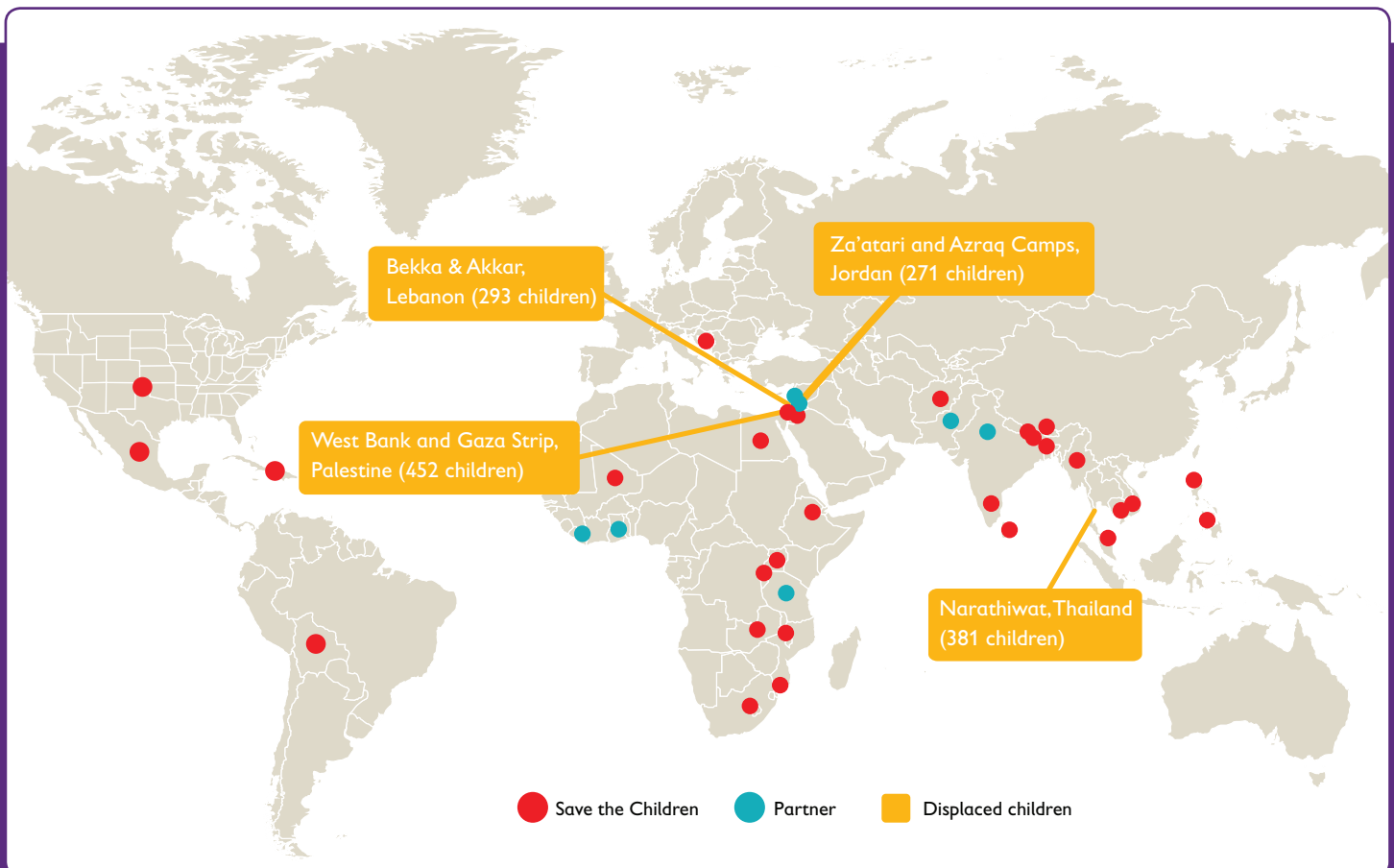Bekka & Akkar, Lebanon (293 children)

Za'atari and Azraq Camps, Jordan (271 children)

West Bank and Gaza Strip, Palestine (452 children)

Narathiwat, Thailand (381 children)

● Save the Children ● Partner ▮ Displaced children

Figure 2. *Sample data sets*

Region	Data sets	Children	Data sets with caregiver information
Africa	12	6,872	3
Asia	15	9,289	8
Middle East & Europe	7	3,220	1
Americas & Caribbean	4	1,132	0
Total	**38**	**20,513**	**12**

Table 1. *Study sample*

ANALYSES

This report summarizes two sets of analyses. First, we detail how age and gender are related to IDELA scores using all 38 data sets containing the data of 20,513 children. Second, we investigate the relationships between a broader set of equity variables and IDELA scores. We examine how socio-economic status, learning materials in the home, learning/play activities in the home, and harsh discipline in the home are related to children's IDELA scores. This richer analysis comprises a subset of 12 data sets and 8,172 children.

In order to investigate these relationships we use multivariate regression analysis. This allows us to isolate the effects of each equity variable by controlling for effects of other variables. For example, we report on the relationship between harsh discipline and children's learning and development, after controlling for the effects of the child's age, gender, socio-economic status, learning materials, and learning/play activities.

Rather than pool all of the data into a single dataset, we choose to run analyses separately for each of the 38 data sets. We run analyses separately because the samples are predominantly sub-national

and we do not have evidence that IDELA scores are comparable across countries and datasets. We then aggregate the results from each data set to report on trends across the samples. Specifically, we average the effect sizes found in each individual analysis to speak to patterns across data sets.[13]

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Students rotate through different learning activities in various corners of their community preschool classroom in Mozambique.

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RESULTS

Preschool children in Bhutan laugh while reading a book with their teacher.

AGE AND ITS RELATIONSHIP WITH IDELA SCORES

The data were collected as part of monitoring or research initiatives led by organizations or governments supporting either ECE services or children's transition into primary school. Given the wide range of services included under the umbrella of ECE and primary school entry, a large age range exists in the data (Figure 3).
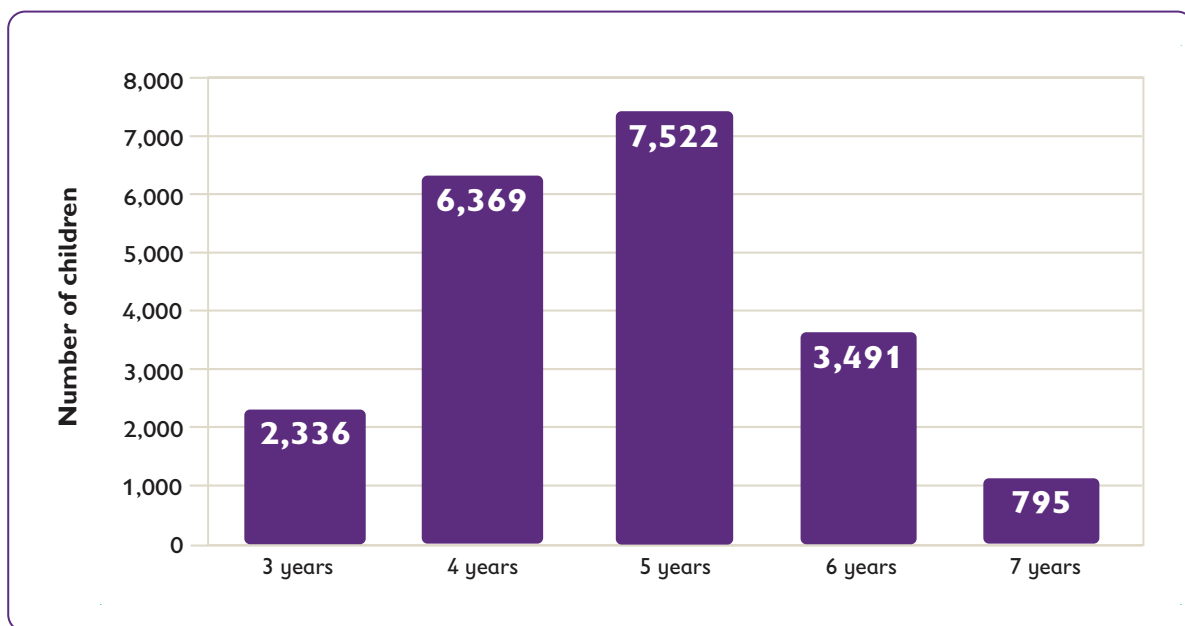

Figure 3. Age range in data samples

With the broad spectrum of ECE programming and child ages, we find a large range in the skills that children bring to these learning environments. On average, Figure 4 demonstrates that all domains display a positive association with age. For all domains, we find a small to medium effect size gain per year of age (Motor = .51, Literacy = .48, Numeracy = .45, Social-emotional = .39), with motor skills displaying the steepest developmental trajectory and social-emotional development the shallowest.
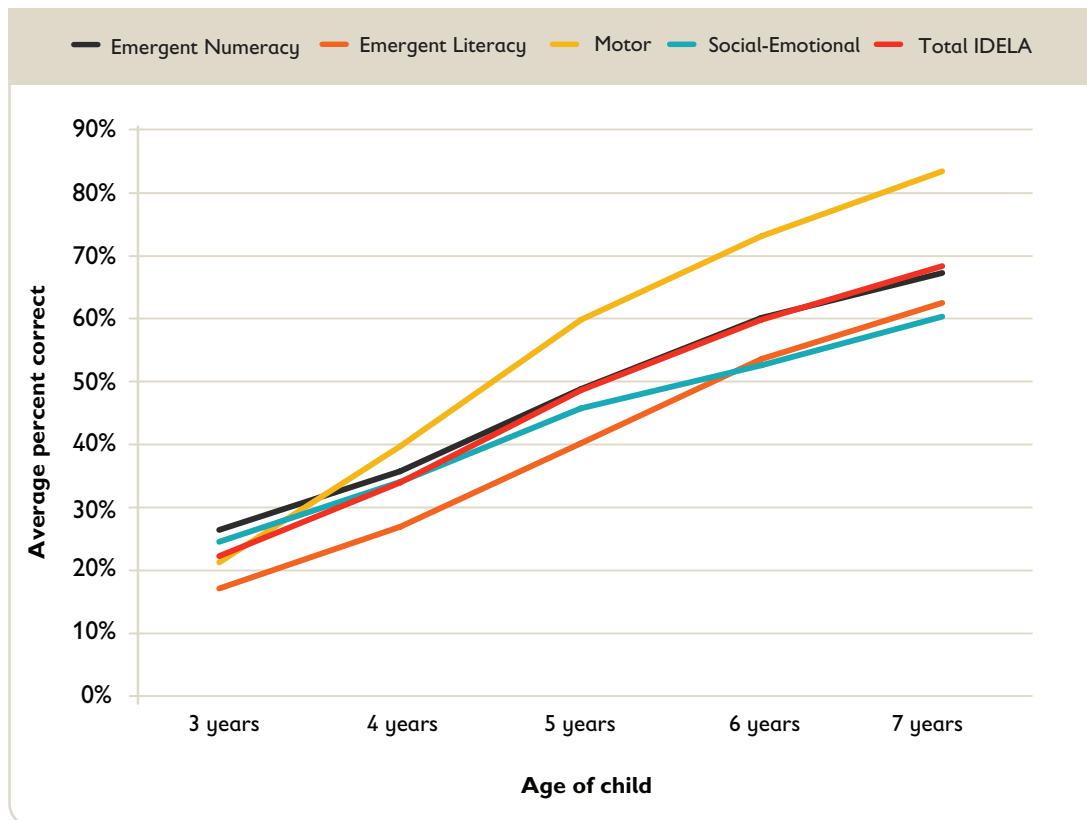

Figure 4. *Average learning and development by age and domain*

On average across the datasets, one year of age is associated with a .53 standard deviation difference in total IDELA score, with a range of .19 – 1.04 (figure 5).[14] The data are not longitudinal so this finding does not represent the expected growth from one year to the next, but provides us with a rough approximation of what a typical year of learning and development as measured by IDELA.

Effect sizes are often used as a simple measure of the magnitude of an effect. We will use the average effect size of a year of age on IDELA score as a data-driven reference point in the equity analysis results discussed later in this report. For example, if one year of age is associated with a .50 standard deviation difference in IDELA score, we can consider an equity gap of .25 standard deviations as similar to the difference we would expect with 6 months of age. While converting effect sizes to months of development comes with limitations, this technique can be leveraged by IDELA users to better understand the relative magnitude of impact their intervention had or the importance of other factors of interest on children's learning and development.

EFFECT SIZE OF ONE YEAR ON TOTAL IDELA SCORE

Figure 5. *Effect size of one year on total IDELA score, by data set*

In addition, although we see a significant and consistent relationship between age and children's development there is a large range of skills displayed by children within each age group. Figure 6 displays the distribution of IDELA scores for children at each year of age. This speaks to the different sets of skills that children bring with them to pre-primary and primary school classrooms. Children's skills could vary for a multitude of reasons but the most commonly cited predictors are quality of the learning environments children are exposed to at home, access and quality of ECE services, health and nutrition status, and safety and security conditions.[15]

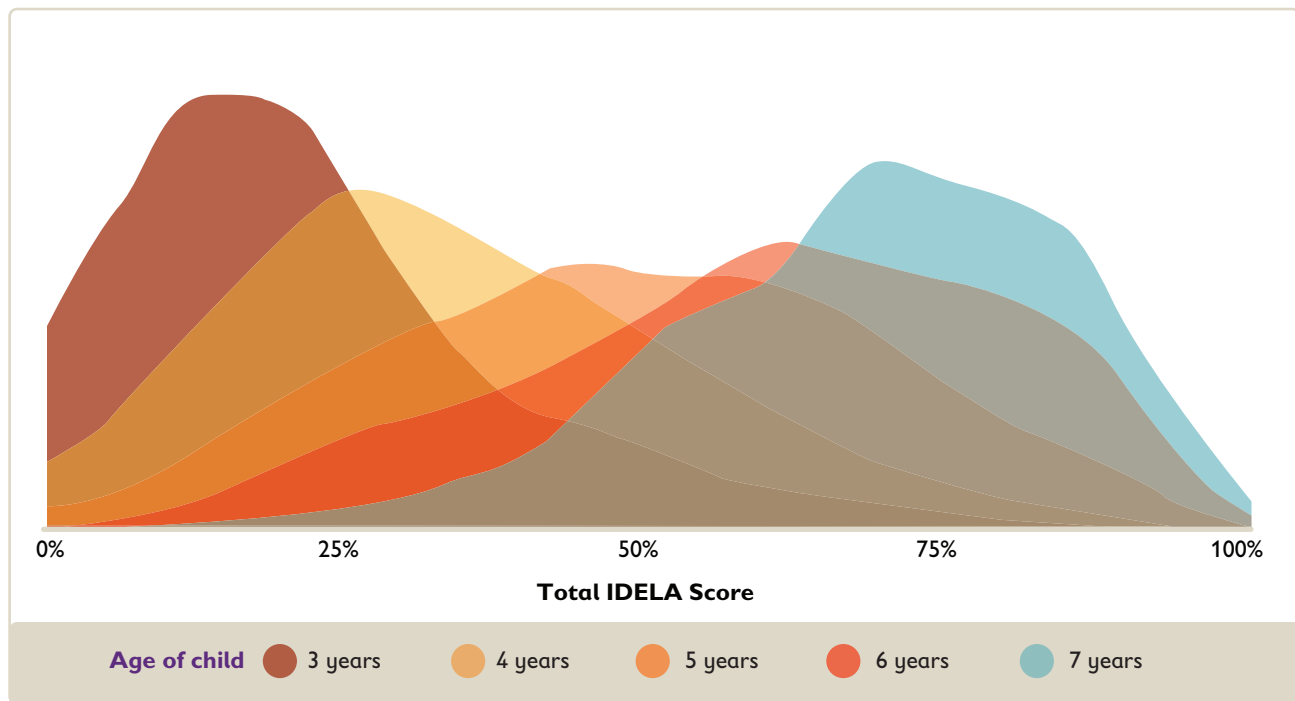## DISTRIBUTION OF TOTAL IDELA SCORES BY AGE (n=20,361)

Figure 6. *Distribution of average IDELA scores by age*

In addition, this finding highlights the need for flexible measurement tools that serve a range of ages for use within early learning initiatives. Many tools designed to measure child development were developed in high income countries and target narrow age ranges and skills. However, evidence from IDELA suggests that these tools are inappropriate in low- and middle-income contexts where children are exposed to more heterogeneous early life experiences. Using tools that do not capture the appropriate range of skills for a group of children increases the risk of finding null results in an intervention where impact actually exists. It also limits the utility of the data for informing changes to programming and practice.

TRANSITION INTO PRIMARY SCHOOL

The IDELA tool was designed to measure skills that help children successfully transition into primary school classrooms, based on existing curricula and standards found around the world. With this framework in mind, we analyzed learning outcomes for 6-year-old children who are at the cusp of entering grade one to estimate where children fall on the continuum of development at this critical point. We define 'mastering' as scoring 75 percent correct or better on the overall assessment or within a particular skill area; 'struggling' is defined as scoring under 25 percent correct, and 'emerging'

represents children with scores from 25 – 74 percent correct. We drew these distinctions based on the reasoning that children scoring 25 percent correct or less at age 6 (less than 1 in 4 questions answered correctly) are not meaningfully engaging with the content of the assessment, whereas those scoring 75 percent or higher (3 out of 4 questions correct or better) display mastery of the content. Developing mastery of a skill takes time and repetition so children in the 25 – 74 percent correct category are those who are actively engaging with the content and are moving along the continuum of skill growth. This is not to say that all children need to be at a certain level in order to do well in primary school; a 75 percent score only represents mastery of content included in the IDELA. Further predictive validity studies that investigate whether there are IDELA score ranges associated with better primary school outcomes are needed before performance benchmarks can be established.
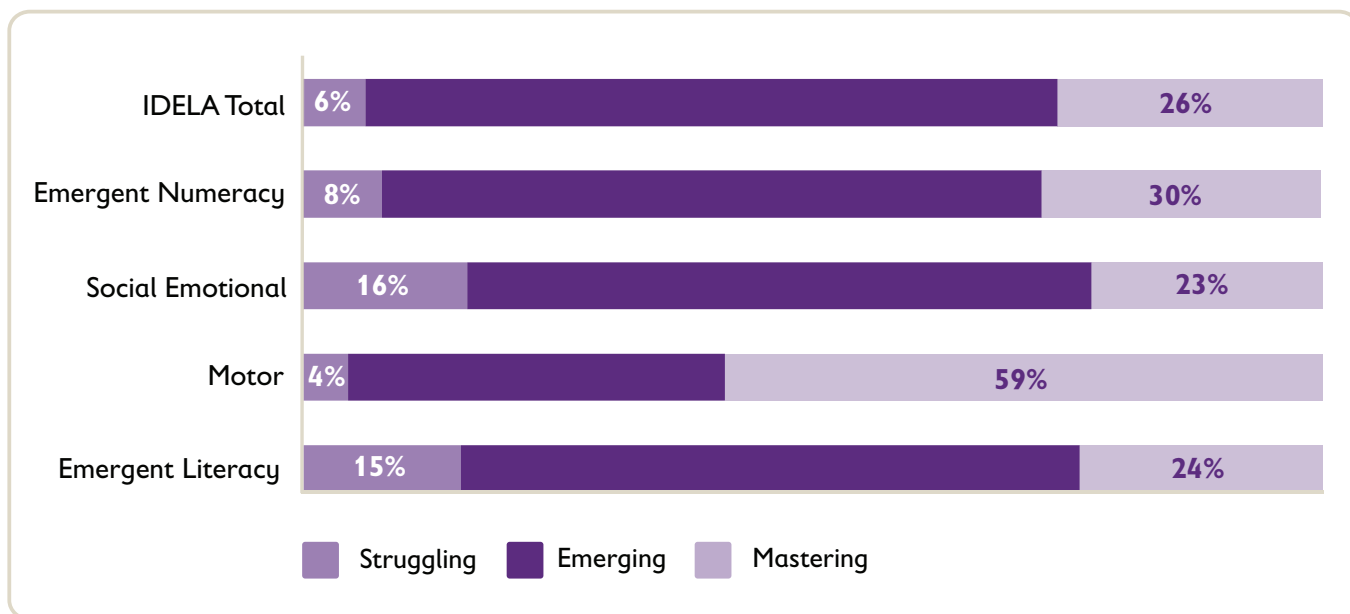

Figure 7. *Proportion of 6-year-olds by domain and performance level (n=3,491)*

Over half of these 6-year-old children are mastering skills in the motor domain, followed by 28 percent in emergent numeracy, and then fewer than one in four in the social-emotional and emergent literacy domains (Figure 7). Theoretically, the IDELA domains are all capturing skills needed to succeed at entry into primary school, but the domains are not equated quantitatively. So we cannot definitively conclude that, on average, children are struggling most in literacy and social-emotional development because it could be that skills in these areas are "harder" to attain than motor or numeracy skills. However, all of the domains encompass the skills that children need for successful transition into grade one so these findings could suggest that children need stronger, more purposeful literacy and social-emotional inputs to develop the knowledge and skills expected of them in primary school.

This finding aligns with research suggesting that literacy skills must be purposefully taught in order to improve children's knowledge and skill development.[16] Less is known about best practices for helping children develop social-emotional skills, especially across cultures, but research is clear that these skills are important predictors of success in school.[17,18] Overall, the finding that less than one-third of children are mastering foundational early literacy, numeracy and social-emotional skills by age 6 when they are transitioning into primary school highlights the need for stronger early learning environments. In addition, we must also ask whether schools are prepared to support all children's skill levels when they enter grade one. How do curricula align with children's actual skills? Are teachers prepared to teach classrooms with this skills profile?

Task	Median score (Age 6)	Description "A typical child can…"
Emergent Numeracy		
Comparison by Size and Length	100%	Correctly compare objects by size and length.
Sorting and Classification	50%	Sort by one criterion but not two.
Shape Identification	60%	Identify 3 out of 5 shapes.
Number Identification	40%	Identify 8 out of 20 numbers.
One-to-One Correspondence	67%	Count less than 10 objects, but not quantities more than 10.
Addition and Subtraction	67%	Answer 2 out of 3 simple arithmetic questions.
Puzzle Completion	33%	Fit 2 puzzle pieces together.

Task	Median score	Description
Social-Emotional		
Self-Awareness	67%	Knows basic information about themselves and their family but not the country or village they live in.
Friends	40%	Name 4 friends.
Emotional Awareness/ Regulation	50%	Identify simple emotions but not identify methods for dealing with negative emotions.
Solving Conflict	50%	Identify at least one way to solve a common social problem.
Empathy/Perspective Taking	60%	Understand the emotions of another and identify one way to help them.

Task	Median score	Description
Emergent Literacy		
Expressive Vocabulary	45%	Name 4-5 types of common food or animals.
Print Awareness	67%	Open a book and point to print on a page but does not know the direction of text.
Letter Identification	30%	Identify 6 out of 20 letters.
First Letter Sounds	33%	Identify 1 letter sound.
Oral Comprehension	80%	Answer 4 out of 5 questions asked after a short story is read to them.
Emergent Writing	75%	Write letters but not their name.

Task	Median score	Description
Motor		
Copying a Shape	100%	Copy a simple shape.
Drawing a Person	75%	Draw a person with multiple details (body parts).
Folding Paper	75%	Follow instructions to fold paper 3 out of 4 times.
Hopping	100%	Hop 10 steps on one foot.

Table 2. *Median IDELA item scores for 6-year-olds*

CASE STUDY: THE IMPACTS OF TEACHER TRAINING AND PARENTAL EDUCATION ON KINDERGARTEN QUALITY IN GHANA

In 2007, the Government of Ghana expanded two years of preprimary education to be included in the country's universal basic education, and Ghana now has one of the highest enrollment rates for preprimary education in the region. However, the quality of preprimary education in Ghana is low. A large share of kindergarten teachers are untrained, and many only have a primary education.

Early childhood years represent a crucial window for development, as it is during these early years that children form the basis for future learning. There is growing evidence that investments in early childhood have high returns, and that missed opportunities to promote early childhood development can lead to lasting deficits in children's educational attainment and future wellbeing.

With high enrollment rates across Ghana, equipping teachers with skills and training has the potential to improve the quality of early childhood education, leading to large-scale improvements in child learning and development.

The Quality Preschool for Ghana (QP4G) program was designed to build capacity and support for the implementation of the 2004 kindergarten curriculum and to enhance the quality of early childhood education through an in-service training and coaching program for kindergarten teachers as well as parental awareness meetings. It was implemented by Ghana Education Service, Ghana's Ministry of Education, and the National Nursery Teacher Training Center in partnership with Innovations

for Poverty Action, New York University and the University of Pennsylvania.

From 2015-2017, researchers worked with Innovations for Poverty Action to rigorously evaluate the impact of the QP4G programs on teacher well-being, classroom quality, child learning, and other outcomes. Students were assessed using IDELA during implementation year and one year later, to assess if program impacts on child outcomes were sustained as the younger cohort of children attended their second year of kindergarten, and the older cohort of children entered primary school.

The study found that the in-service teacher training and coaching improved teachers' use of the play-based kindergarten-specific pedagogy specified in Ghana's national curriculum. These positive effects persisted one year later. In addition, the teacher-training and coaching improved children's school readiness, including their early literacy, early numeracy, and social-emotional skills in the first year. One year later, when children moved to their next year of schooling, the impacts on social-emotional development persisted. The parental awareness meetings did not enhance these impacts, as was originally hypothesized.

Overall, the results of the in-service teacher training hold promise for scaling the program in urban and peri-urban areas of Ghana and improving the quality of education delivered in Ghana's kindergarten educational system.

Colin Crowley

Children at an ECCD center in Rwanda listen as a caregiver reads aloud to them.

EQUITY

GENDER

All 38 datasets included information about children's gender, which allowed us to investigate the differences between boys' and girls' early learning skills and development. Girls and boys in the majority of sites do not display any significant skill differences. However, for the sites where differences do exist, we find an interesting pattern across domains (Figure 8). We find that girls more often outperformed boys in literacy, social-emotional, and motor development. Boys and girls were equally likely to display a skill advantage in numeracy development. The most consistent advantage for girls was in the motor domain which is largely focused on fine motor skills.

While little has been published on skill differences by gender for young children around the world, these results reflect similar gender dynamics found international research with older children. Results from the 2018 World Development Report (WDR) which uses data from the Programme for International Student Assessment (PISA) data finds that girls consistently outperform boys in literacy, whereas boys marginally outperform girls in mathematics.[19] The 2018 WDR also shows evidence that despite strong performance on learning assessments while in school, girls from poor families in low-income countries are substantially less likely to complete primary school compared to their peers who are wealthier and male. Further research on trends in educational gender differences related to both access and learning as children progress through schooling is warranted.
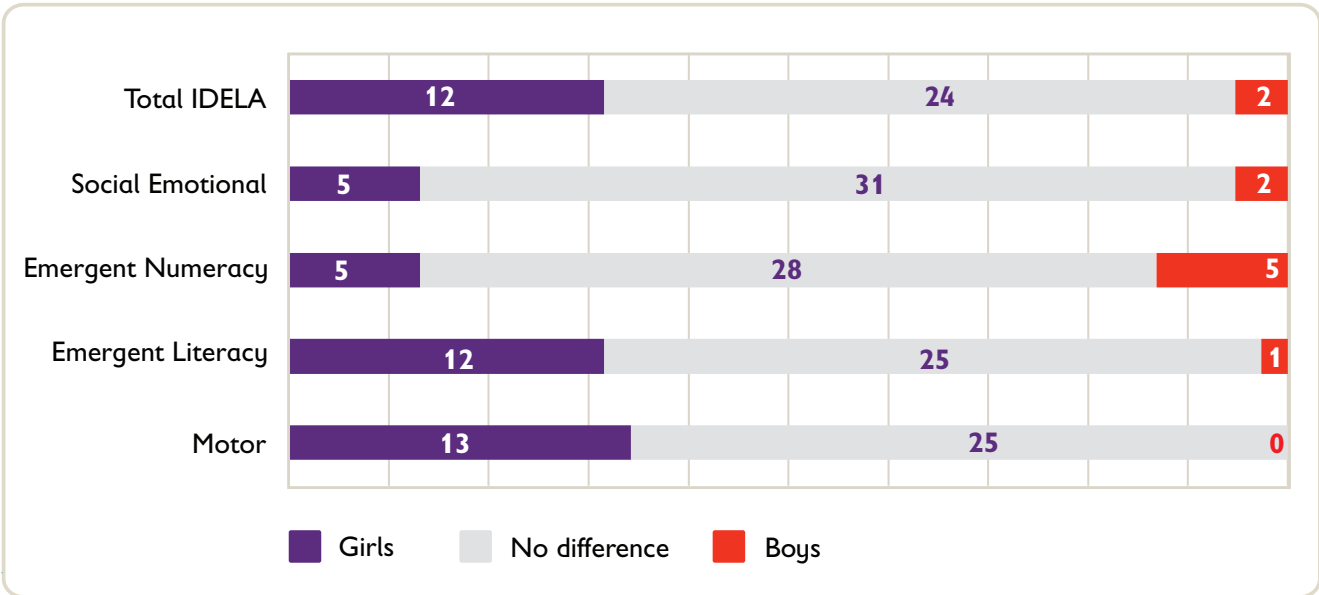
	Girls	No difference	Boys
Total IDELA	12	24	2
Social Emotional	5	31	2
Emergent Numeracy	5	28	5
Emergent Literacy	12	25	1
Motor	13	25	0

Girls   No difference   **Boys**

Figure 8. Number of data sets displaying gender differences by skill area

Lurdes Matavel is a preschool classroom teacher known as an "animadora," in a community-based preschool in Mozambique.

CASE STUDY: RISING ACADEMIES WORKS TO CLOSE THE GENDER GAP FOR GIRLS IN LIBERIA

The Rising Academy Network (RAN) is a low- and no-fee schools network. In Liberia, RAN operates 29 no-fee government schools across seven counties as part of Partnership Schools for Liberia (PSL), a public-private partnership with the Liberian Ministry of Education. RAN is responsible for the day to day management of PSL schools including teacher training and ongoing coaching, provision of curriculum and student workbooks, and school performance oversight.

David, 5, takes part in an IDELA assessment in Grand Bassa County, Liberia.

During the first year of PSL (2016-2017 academic year), RAN piloted IDELA in five schools to test the tool in the Liberian context and gain initial insight into the early childhood population. In the second year of PSL (2017-2018 academic year), the Ministry of Education allocated an additional 24 schools to RAN, taking the total to 29. RAN has since rolled out IDELA assessments across the network of 29 schools with baseline, interim and endline collection points. 25 percent of eligible students (aged 3-6 years), with an even split of girls and boys, were sampled across the school network.

In Liberia, the gender gap in learning outcomes is pronounced. Girls consistently score lower than boys, with the gender gap widening over time. For adults in rural areas, the literacy rate is 26 percent for women and 60 percent for men. [20] By the time they reach adulthood, 95 percent of women in the region with a primary level education cannot read a simple sentence.[21] To change the status quo for all children, and address the gender gap in education, RAN emphasizes quality teaching and regular monitoring and support in the classrooms. By assessing the progression of learning across key developmental areas from the nursery level by using IDELA, RAN aims to ensure that girls in the PSL network are making sufficient gains and are equally as prepared for primary school learning as boys.

Early findings from the 2017-2018 academic year reveal that girls' performance in IDELA assessment tasks was poorer when compared to boys. However, girls are making good progress in closing the gap with boys. For example, girls' progress in IDELA sub-tasks including letter identification, oral comprehension and shape identification was greater than boys. A second interim assessment point is underway. A key focus during analysis of this data will be to examine whether girls continue to close the gap on boys, as RAN aims to ensure that students are equally prepared for primary school learning.

LOOKING FURTHER INTO EQUITY

The second step in our analysis focuses on datasets that include more extensive equity variables, which allow for more detailed analyses of how children's environments influence their early learning skills. Twelve of the 38 IDELA data sets examined here include information from caregivers about family resources and home environments.

SOCIO-ECONOMIC STATUS AND HOME LEARNING MATERIALS

We first consider two factors related to a family's access to resources. Socio-economic status is measured by the number of possessions/assets that caregivers report owning, and home learning materials refer to the different types of reading materials and toys present in the home.

Across the 12 datasets with full equity information, we find four with a significant association between socio-economic status and overall development, after controlling for age, gender, and the other equity factors. The relationship between IDELA score and socioeconomic status was always positive, but the magnitude varied. In the Burera and Gicumbi districts of Rwanda, an additional possession was associated with one additional month of learning, whereas a study in the southern border region of Thailand found a much larger association of nearly three additional months per possession.

Looking at learning materials in the home, we find that eight out of 12 data sets display a significant relationship between diversity of toys and books in the home and children's IDELA scores. The magnitude of this relationship ranged from one additional month of learning per additional home learning material in Quang Nam and Yen Bai, Vietnam as well as in the East Amman area of Jordan to four additional months of learning per learning material in the Kabul, Kandahar, Faryab, and Sar-e-pol regions of Afghanistan.
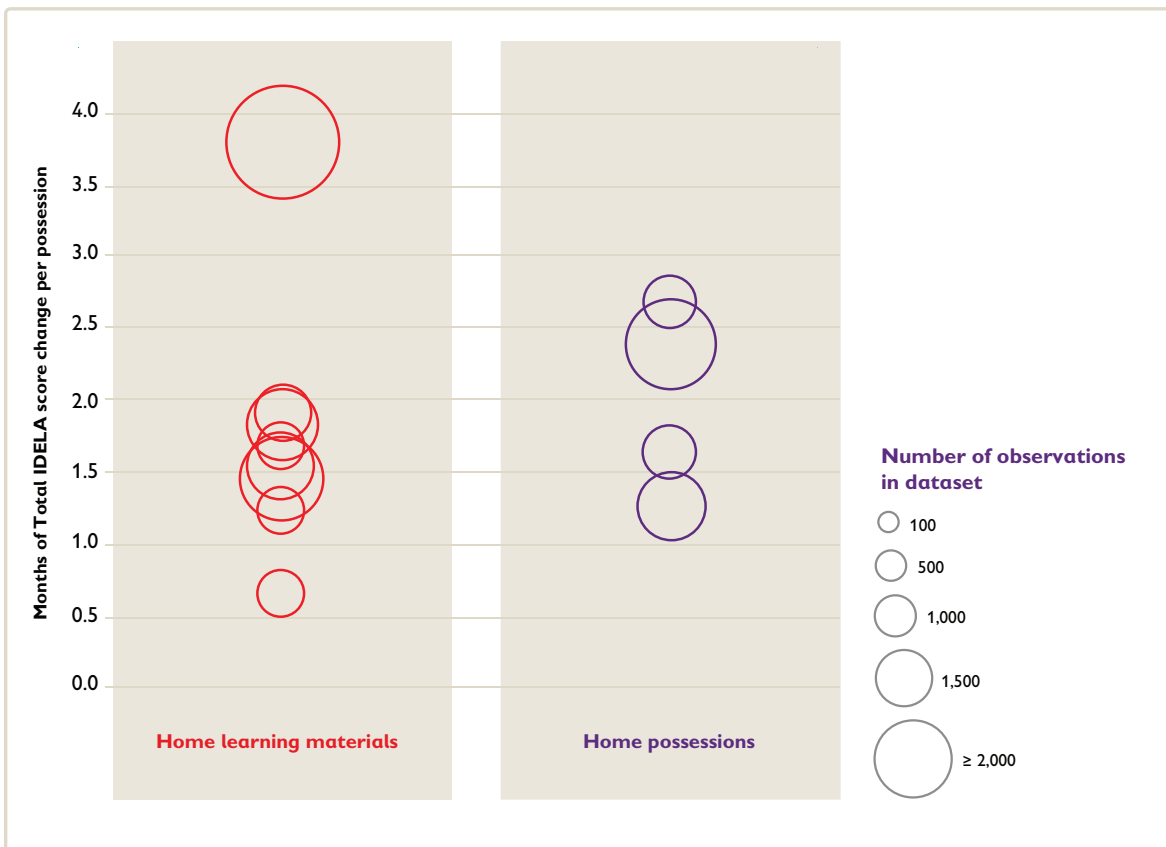

Figure 9. Change in total IDELA score by home learning materials and socio-economic status (significant results only)

HOME LEARNING ACTIVITIES AND DISCIPLINE

In addition to material supports available in children's homes, their day-to-day experiences with caregivers are also critical components of their developmental environments. In six out of 12 sites we find a significant positive relationship between the diversity of learning and play activities at home and child development (e.g., playing, singing, reading with children, etc.). The magnitude of this relationship ranged from one month of additional learning in Burera and Gicumbi, Rwanda as well as in Bhutan to four additional months of learning per additional learning or play activity per week in the Saptari district of Nepal.

In contrast, three out of 12 sites show a significant negative relationship between harsh discipline (hitting, spanking and yelling) and child outcomes. The impact ranged from negative two months of development per additional harsh discipline interaction in datasets from Kampong Cham, Prey Veng, and Kratie districts in Cambodia and Meherpur, Bangladesh to nearly negative four months of development in data from Gaza, Nampula, and Tete provinces in Mozambique.

Figure 10. *Change in total IDELA score by home learning activities and harsh discipline (significant results only)*

Results across these diverse contexts align with previous research and reinforce that children growing up in more enriched environments have an advantage in their learning and development.[22] Having a diversity of learning materials (books and toys) appears to be particularly influential on development as measured by IDELA scores. The majority of data included in our analysis are from impoverished areas in low and middle income countries, and these findings highlight the potential for poor families to substantially improve their children's learning and development by introducing toys and books into their daily lives. These need not be expensive, store-bought toys; homemade toys and common household objects can easily be turned into novel manipulatives for young children.

Another important take-away is the importance of caregiver-child relationships for early learning and development. Activities focused on learning and play enhance development as much as harsh discipline stifles it. These findings suggest that a child who consistently experiences a diversity of learning and play activities at home could potentially be years ahead of a peer who regularly experiences harsh discipline. What these caregiver-child interactions look like may differ across cultures, but the importance of fostering positive home environments for young children is critical everywhere. This finding echoes calls from the recent Lancet series publication on early childhood development as well as the recently released Nurturing Care Framework developed by the World Health Organization.[23, 24]

Caregiver Yvonne benefited from teacher training to learn how to instruct children under the age of five and guide them in early literacy activities. She works in the Burera District of Rwanda.

CASE STUDY: STRONG FROM THE START WITH RESULTS FOR DEVELOPMENT IN SERBIA

In Serbia, the CIP-Centre for Interactive Pedagogy and Romanipen, in partnership with the Open Society Foundation (OSF), implemented the Program for children and families – *Strong from the Start – Dam Len Phaka* ("Give Them Wings"). The program seeks to facilitate the development of enabling and safe family settings for Roma children aged 0 to 7 living in Roma settlements by building parents' skills and competencies.

Too many children are not afforded positive early experiences and children from marginalized communities, such as the Roma in Eastern Europe, tend to be at a greater disadvantage. According to the 2011 Serbian census, 2.1 percent of the population is Roma, although the true population is believed to be 2-4 times higher (UNDP, 2006). The Roma have been historically marginalized, living in higher rates of poverty and with poorer access to health, sanitation, infrastructure, and educational opportunities.

Results for Development (R4D) is leading a two-year impact evaluation of the effectiveness of the program. The evaluation considers parent attitudes and behaviors and direct child outcomes, but the principle indicator agreed to by the study team and the implementing partners is

child's socioemotional development, as observed on IDELA's direct child assessment. At midline, children 3.5-6.5 years of age who participated in the program demonstrated significantly higher levels of socioemotional development than children in comparison communities that did not participate in this program, even when controlling for things like parent education levels and socio-economic status. Importantly, differences between program and comparison children disappear for program group children participating in ten or fewer workshops, suggesting that participation in the workshops could be causing improved socioemotional development.

These results should be encouraging to partners considering parenting programs, particularly given that positive results on child development are already appearing after just 8 months of program implementation. CIP-Centre, Romanipen, OSF and R4D are committed to continuing to improve the program implementation as well as parent and child attendance in order to enable further improvements in the home environment for young children.

NEXT STEPS

While detailed information about early learning from multiple low and middle income countries is a step forward for the field, more information is needed to understand the developmental needs of children in the most vulnerable contexts. Four of the 38 data sets in this report come from children living in communities experiencing frequent conflict or displacement. Data from these sites display a similar diversity in children's skills across ages as seen with children in more stable environments (Figure 11). However, while use of IDELA and similar tools make an important contribution by allowing for better monitoring of learning progress and program quality in these areas, average scores do not go far enough to identify the specific needs of children who experience this kind of adversity in their early lives. Complementary measurement efforts, especially qualitative data is needed to fully understand children's development in these and other vulnerable contexts.
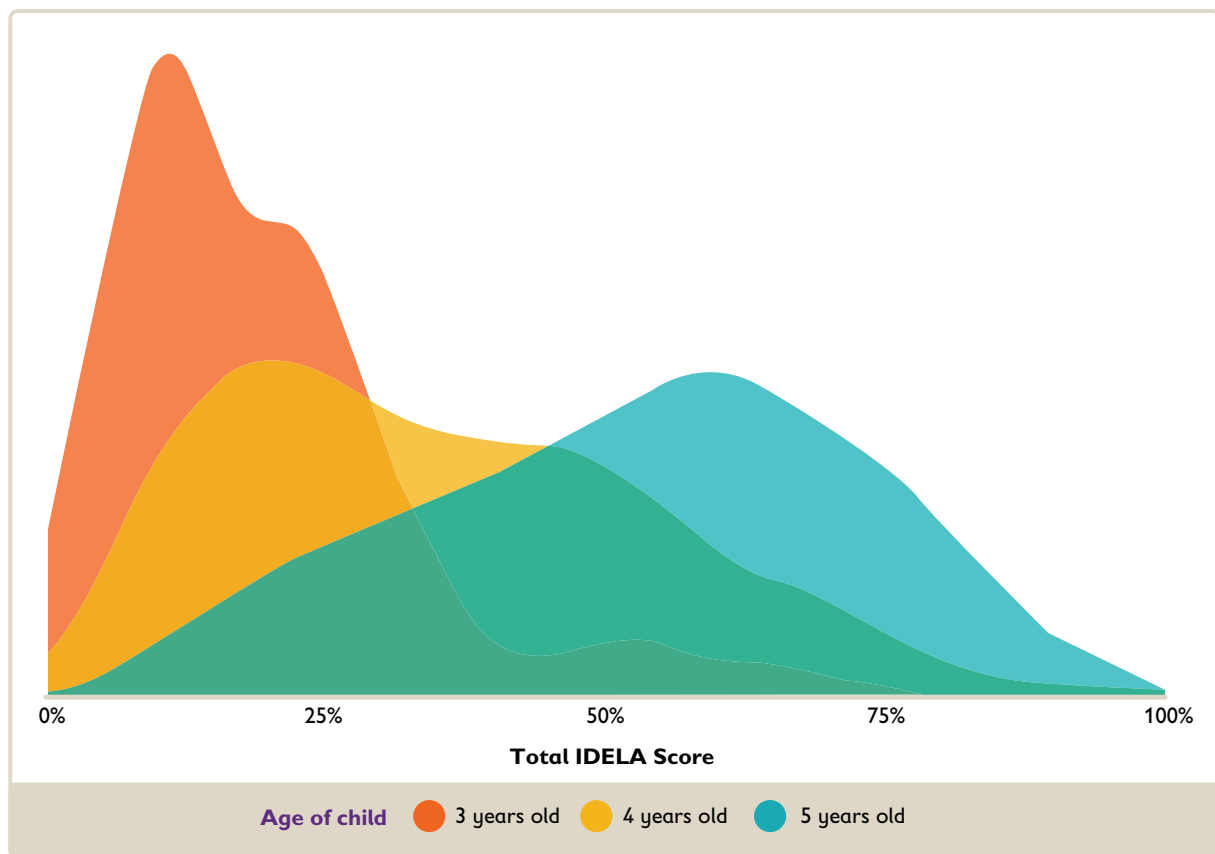

Figure 11. *Distribution of total IDELA scores by age of children in displaced contexts (n=1,389)*

CASE STUDY: SAVE THE CHILDREN LEBANON USES ECCD TO REACH REFUGEE CHILDREN AND FAMILIES

In Lebanon, Save the Children is responding to a growing refugee population. Refugees, primarily from Syria and Palestine, are dealing with stress as a result of violent conflict, migration and the loss of community and family support systems. The influx of refugees has also put pressure on the stretched Lebanese education system. Consequently, highly vulnerable refugee and host community children are deprived of early learning opportunities critical to their physical and cognitive development and readiness for school.

Since 2015, Save the Children has implemented ECCD-focused programming including Emergent Literacy and Math (ELM) to address the unique needs of more than 3,000 young refugee children and families from Syria and Palestine. ELM programming in Lebanon particularly focuses on rural populations with limited access to ECCD programs. Caregiver needs are also addressed.

In parenting programs, caregivers are informed about the importance of education and their children's early learning and development. Parents build their capacity to liaise with formal schools and understand requirements of the Lebanese education system. Both children and parents have shown interest in and engagement with the programming. Afternoon parenting sessions, in particular, have been popular amongst both mothers and fathers.

IDELA plays a key role in Save the Children's response. IDELA is used to gather baseline and

Save the Children

Mamoud is a student at an ECCD center in the Bekaa Valley of eastern Lebanon.

endline data about the children in its programs, to capture progress that children have made and the overall impact of the intervention. Using the IDELA Home Environment Tool, Save the Children staff gather additional information about caregivers to better understand their needs and develop appropriate programmatic responses for the future.

Save the Children's ECCD programming has now expanded across multiple areas of Lebanon into the North, South, Bekka, Mount Lebanon and Beirut regions. Save the Children Lebanon will continue to adapt to the needs of refugee children and families who need critical access to early childhood and family support programs.

Eli Murray

CONCLUSIONS AND RECOMMENDATIONS

*Max, Michael and Ryan dig into a book in their
Early Head Start classroom in the United States.*

Analyzing IDELA data from around the world allows us to begin creating a deeper understanding of children's learning and development during the preschool years. This information sheds light on the skills children display as they are transitioning into primary school, which can bring ECE as well as primary school leaders, teachers, and advocates to the table to discuss how best to support children during this critical time. We also find important relationships between children's environments and their development which can help ECE funders and implementers design more successful programs.

Specifically, results of the present analysis suggest that children receiving ECE services display a wide range of skills in all domains, which has important implications for teachers and teacher training. Whether in early primary school or ECE, professionals tasked with

educating groups of children with diverse skill sets need to be given concrete strategies for structuring their lessons and managing their classrooms. Without this training, teachers will struggle to meet the needs of many of the children in their classrooms. This consideration will be especially important for children who have been displaced by conflict or disaster as their experiences and skills may vary even more widely than children in more stable settings.

We also find that only a small proportion of children display mastery of early skills as they make the transition into primary school. In order to improve the efficiency and quality of primary school systems, Ministries of Education and primary school leaders need to be aware of children's skills as they are entering formal schooling. Ensuring curricula are appropriately

aligned and teachers in lower primary grades are adequately prepared for incoming students is crucial to success of the whole system. A focus on developmentally appropriate teaching practices is especially important in the early primary grades.

Further, six percent of children display little or no familiarity with the content in IDELA items. More research is needed to understand who these children are and what specifically is preventing them from acquiring early learning skills similar to those of their peers, but it's clear that there are groups of children who will need more intensive support in order to succeed in primary school. Information about children with developmental delays or disabilities and how they are integrated into and benefit from early learning opportunities is still very limited and must be expanded.

Finally, our analyses demonstrate that supportive home learning environments, which include toys and books for young children, as well as a diversity of learning and play activities and freedom from harsh discipline, are the most conducive to optimal learning and development. It is clear that parenting practices and home environments play critical roles in young children's development and efforts to improve early learning, even those focused on classroom-based programs, should not neglect these importance of home environments.

The IDELA community has been steadily growing since the public release of the tool in 2014, and the launch of the IDELA website has opened a new chapter. Having a public forum to share experiences and lessons from IDELA allows partners all over the world to collaborate in a way that was not possible before, and gives groups big and small the opportunity to influence the conversation about how to improve early learning experiences for all children. We are thankful for all of those who are working towards these goals with us, and look forward to continuing to deepen our partnerships and learn together for years to come.

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10 Mean age (APS sample): UKG: 5.07 years | Grade 1: 5.83 years. Boys and girls entering Grade 1 in APS were at similar levels in terms of development outcomes.

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for this sampling strategy and avoid drawing spurious conclusions, we report robust clustered standard errors in our analyses. In cases where a different sampling strategy was used, we report robust standard errors.

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