



**Save the Children®**

# **Cambodia First Read Baseline Report**

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## Executive Summary

This report highlights the key findings from the Phase 2 baseline study for the First Read program in Cambodia. This baseline study was conducted over a period of one month in August/September 2016.

First Read is a Save the Children UK (SCUK) Signature Program that recognizes the importance of home-based ECCD approaches. Home-based ECCD is the cornerstone of First Read, stemming from an acknowledgment by Save the Children UK that in some parts of the world center-based interventions are simply not feasible.

The main objective of this baseline is to gather information about the parents, children and communities including teachers, authorities, and publishers that are due to receive interventions from Phase 2 of the First Read project and to establish a baseline against which to measure future growth and change.

There are four sections to this study:

Section	Sample Size	Methodology
Child IDELA and CREDI testing with a caregiver quantitative survey and a qualitative behaviours survey	400 treatment/400 control for child learning outcomes. 120 parent qualitative interviews, 57 child interviews	Mixed methods approach: Quantitative assessment of children using CREDI or IDELA and a caregiver quantitative survey. A follow-up parent and child qualitative survey.
Survey with Book Publishers	9	Largely qualitative, online survey
Survey with ECCD Teachers and Classroom Observation	12 teachers, 67 student interviews	Largely quantitative survey and classroom observation. Qualitative interviews with children.
Survey with Authority Figures and Key Stakeholders	8 authority figures (POE, DOE, MOE, CCWC)	Largely qualitative survey.

The key findings from each section are presented below:

### Child IDELA and CREDI testing with a caregiver quantitative survey and a qualitative behaviours survey

- Comparison and intervention children and caregivers have comparable characteristics and skills, and this sample will serve as an appropriate baseline against which to measure change over time.
- Caregivers of **younger children (0-42months)** engage in **fewer learning and play activities** with their children than caregivers of older children. The most common being playing with children and the **least common being telling stories**.
  - Qualitative research found that demonstrating fewer basic behaviours is more typical for a first time parent; displaying more basic behaviours was typical for a parent that reads with the same frequency to both children, not differentiating by age.
- The majority of parents reported praising or rewarding their children for good behaviour, but also **engaging in inconsistent discipline and corporal punishment**.
- Children showed the **strongest skills in motor development and lowest in emergent literacy**.
- Taken together information from the caregiver questionnaire and child development assessments can provide information on important predictors of child development for children in the First Read intervention area.

- For both younger and older children father's education, having diarrhea in the past two weeks, and home learning activities significantly predicted development and learning.
- For younger children, parents' discipline behaviours and the variety of food they received were significant predictors of development.
- For older children, being enrolled in an ECCD center was a strong significant predictor of learning and development.
- In the qualitative research 45 parents (38%) thought that their child was too young to warrant them doing some of the 'five finger' basic behaviours with the child (in a modified way). Interestingly there was no relationship to the age of the child.
  - Parents that own a First Read book are less likely to hold the opinion that a child could be too young to learn.

### Survey with Book Publishers

- Publishers that hadn't worked with Save the Children were the *only* publishers that reported getting negative feedback about their books. Whilst this doesn't imply attribution to Save the Children this warrants further research in regards to the impact of the STC training.
- Some areas are consistently not addressed in training e.g. font size for different age groups.
- Only three of the participants sold their books in locations that had been chosen as 'easy access locations for their target market'.

### Survey with ECCD Teachers and Classroom Observation

- Teachers are using storybooks with their classes on average 2-3 times per week and only a quarter of the teachers we interviewed are conducting reading exercises with their classes everyday.
  - Teachers with higher levels of education read with their students more frequently
- During the classroom observation teachers were more likely to demonstrate praising the child, doing a reading exercise, and talking about the alphabet.
- When assessing the classroom environment the areas with the lowest scores were: having books in local languages, having books that are accessible for children, and having a book library.

### Survey with Authority Figures and Key Stakeholders

- Individuals had clearly been influenced by First Read phase 1 and were able to reference the program. Individuals demonstrated a clear preference for home-based ECCD and referenced knowledge about cognitive development more frequently than any other domain.
- Negative attitudes were centred around three points: not having an inclusive model that can support illiterate parents, parents not attending parenting sessions regularly and dropping out, the lack of evidence base around First Read.
- There is a concern that authorities wouldn't be able to continue this program without the support of STC because of other funding obligations. Advocacy activities highlighting the cost-effectiveness of First Read and the evidence base for First Read are needed as we enter Phase 2.

These findings will inform Save the Children in how they adapt their syllabus to deliver quality parenting sessions for Phase 2 and how to actively involve different stakeholders and deliver results that 'talk to' their strategic interests.

## **I. Introduction**

Early childhood care and development (ECCD) in this report refers to the physical, cognitive, linguistic and socio-emotional development of a child from conception up to the age of under six years old. In this period, over 85 per cent of the human brain develops.<sup>1</sup> ECCD encompasses a wide range of activities, ranging from prenatal care to nutrition and from early childhood stimulation to pre-school education. Research shows that the environment in which a child grows up substantially affects the development of the brain and the intelligence level of the child.<sup>2</sup> This environment is influenced by a wide range of early childhood settings that all impact the development of the child, including the home and the school.

Crucial foundations are laid in the first years of a child's life which, if weak, can have a permanent and detrimental impact on the child's long term development. Quality guidance, care, love and protection from harm impact a child's future choices, attainment, wellbeing, happiness and resilience. A lack of ECCD services disproportionately affects vulnerable children around the world. As a result, these children often lag behind in terms of their physical, cognitive and socio-emotional development. As children grow older, the development gap increases and gets ever harder to overcome. Children who participate in quality ECCD programs are generally better prepared for primary school, perform better at school, and are less likely to repeat grades or drop-out of school, all reducing the costs of the education system.<sup>3</sup> Therefore, it is crucial to focus investment on children in their early years.

The Royal Government of Cambodia (RGC) has shown its commitment to improve ECCD services across the country by adopting the first ECCD National Policy in 2010, bringing together eleven line ministries. Recently, this commitment was followed up by launching the ECCD National Action Plan 2014 – 2018<sup>4</sup>. This action plan “seeks to increase enrolment and enhance protection for children aged 0 to under 6 years, especially children from poor families, indigenous minorities and children with disabilities and prioritize community-based pre-schools and home-based early childhood education programs”<sup>5</sup>. The RGC plans to spend more than US\$ 56 million, of which the majority will go towards expanding ECCD services provision, including state, community, private and home-based services. Other strategies include preparing legal frameworks, monitoring and evaluation, capacity building, nutrition and health service delivery and information provision and communication about ECCD. Leveraging this growing momentum for ECCD, First Read intends to continue to engage authority figures in the work that we are doing, providing them with consultative opportunities to input on the programme, keeping them informed, and highlighting the evidence to them that home-based ECCD is an effective approach<sup>6</sup>.

### **I.1 First Read project**

First Read is a Save the Children UK (SCUK) Signature Program that recognizes the importance of home-based ECCD approaches. Whilst SCUK recognize that the ideal intervention is a complementary approach of home-based and centre-based interventions, First Read recognizes that

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<sup>1</sup> UNICEF (2014) Building Better Brains: New Frontiers in Early Childhood Development. Key messages generated from a Neuroscience Symposium organized by UNICEF on April 16, 2014

<sup>2</sup> Deray, Ian J (2000). Looking Down on Human Intelligence: from Psychometrics to the Human brain. Oxford: Oxford University Press.

<sup>3</sup> Heckman, J.J. (2008). Schools, Skills and Synapses. IZA Discussion Paper No. 3515

<sup>4</sup> [http://planipolis.iiep.unesco.org/upload/Cambodia/Cambodia\\_Early\\_childhood\\_national\\_action\\_plan\\_2014-2018.pdf](http://planipolis.iiep.unesco.org/upload/Cambodia/Cambodia_Early_childhood_national_action_plan_2014-2018.pdf)

<sup>5</sup> Ibid.

<sup>6</sup> This isn't to say that home-based ECCD should be an alternative to center-based ECCD and we continue to promote a 'blended' approach as an ideal state.

in some parts of the world center-based interventions may not be feasible to establish in the near future due to running costs or dispersed settlements meaning that a centralized ECCD center may still not be convenient for *everyone*, for this reason First Read promotes a community-based parenting approach.

Since launching First Read in 2013, the program has worked to develop an evidence base that can demonstrate that working through parents and caregivers in the home environment is not only cost and resource effective but it can result in more equitable gains for children irrespective of background (e.g. socio-economic status, literacy of parents), can lead to increased emergent literacy and numeracy scores, and more confident children and parents.

The project goal for First Read Cambodia is:

*“By the end of First Read Phase 2, improvements in cognitive development and emergent literacy and numeracy (for children aged 0 - 3) and school readiness (for children aged 4 - 6) will be apparent in Save the Children’s targeted communities and households.”*

And the outcomes for the project are:

**ACCESS TO RESOURCES:** Children aged 0-6 y.o in the targeted communities have increased access to high-quality, age-appropriate, local/national language books.

**PARENTS CHANGE THEIR BEHAVIOUR:** Parents/caregivers use books and apply positive parenting approaches to engage with children aged 0-6 y.o, resulting in improvements to cognitive development and emergent literacy and numeracy.

**MOBILIZE THE COMMUNITY AND AUTHORITIES:** Increased commitment of resources, support or programming for home-based ECCD activities from community groups, agencies, and local authorities.

Although the key research questions for this project are still working titles, the research questions identified by the CO and SCUUK MEAL are:

1. Who are the 'early adopters' what is the parent/caregiver profile that is most likely to change their behaviour?
2. What combination of activities/sessions with parents/caregivers results in the greatest impact for children?
3. Can First Read demonstrate that it is a sustainable model due to its community-based elements?

Cambodia is currently in Phase 2 of its First Read implementation, having reached 36,000 children in phase 1. In order to achieve the three main outcomes, the project has four key intervention pillars:: Book development, book gifting, family learning, and community action. The following section provides a high level overview of these pillars.

**Book Development:** To develop high-quality, age-appropriate children’s books the project works together with a private sector partner (Sipar). These activities have helped to strengthen the capacity of local publishers, illustrators, writers and editors committed to children’s book development, whilst also trying to stimulate demand for children’s books amongst parents, ECCD service providers and children’s book suppliers.

**Book Gifting:** As well as distributing the books published by Sipar, the project works together with the NGO (Wathnakpheap), government partners at sub-national level and local authorities to maximize the use of available reading materials, and play-based materials to promote early stimulation and interaction between young children and caregivers, and between young children and their siblings.

**Family Learning:** Development of young children’s motor skills, language and cognitive, social and emotional skills as well as emergent literacy is largely dependent upon daily interactions and stimulation between parents/caregivers and their children according to various topics educated to target families. For this reason First Read supports caregivers through regular parenting sessions led by parent group leaders and core parents, and managed by commune committee for women and children (CCWC) in collaboration with primary and pre-school teachers in the school catchment area.

**Community Action:** The project supports local structures, like communes and primary schools, engaging key community actors and helping to strengthen capacity by providing technical support and links with education authorities at district and provincial levels. Advocacy for budgetary increases for ECCD are also conducted from the national level to the sub-national and community level.

## **2. Rationale: scope and purpose of the evaluation**

The main objective of this baseline is to gather information about the parents, children and communities including teachers, authorities, and publishers that are due to receive interventions from Phase 2 of the First Read project and to establish a baseline against which to measure future growth and change.

1. What are the common learning materials and practices in homes in the First Read intervention area?
2. What are average child development levels for children in the First Read intervention area?
3. Are children and parents in the intervention and comparison groups statistically similar in terms of learning materials and practices, and child development levels?

A First Read intervention is structured around four key elements: Book development, book gifting, parenting sessions, and community mobilization. This baseline has researched each of these elements, conducting surveys with a range of First Read actors

This evaluation is structured in to four sections:

1. **SECTION 1: Parent and Child Survey and Child Assessment**
  - a. Child IDELA and CREDI testing with a caregiver quantitative survey and a qualitative behaviours survey
2. **SECTION 2: Survey with Book Publishers**
3. **SECTION 3: Survey with ECCD Teachers and Classroom Observation**
4. **SECTION 4: Survey with Authority Figures and Key Stakeholders**

# **SECTION I: Parent and Child Survey and Child Assessment**

## **3. Methodology**

This evaluation employed both quantitative and qualitative tools to collect data on the project indicators and to answer the evaluation questions.

### **3.1 Evaluation tools**

#### **Quantitative**

The International Development and Early Learning Assessment (IDELA) and the Caregiver Reported Early Development Index (CREDI) tools were used to measure child development and learning. IDELA is an international assessment tool developed by Save the Children which had been used in 32 countries to measure child development and learning at the time of this study.<sup>7,8</sup> CREDI is a child development instrument developed by Harvard University and was in its final development stage at the time of this study.<sup>9</sup>

IDELA was used for children aged 3.5-5 years, and CREDI for children 0-3.5 years. The IDELA Caregiver Questionnaire was used to interview parents/caregivers. The IDELA child assessment contains 22 questions in four domains: motor development, emergent literacy, emergent numeracy and socio-emotional development. An additional question related to children's cultural competence was also added to improvement alignment of IDELA with the Cambodian ELDS. The CREDI tool contains 149 questions in three domains: motor, cognitive and social-emotional development. All children only receive a subset of the total items that are most appropriate for their age group: 0-12 months, 13-24 months or 25-42 months. The CREDI tool asks parents to report milestones that they have observed in their children, and is complemented by the interviewer observing the child to witness the development of the child.

The IDELA Caregiver Questionnaire contains questions about children's family and household environments. Specifically caregivers are asked about their educational background, daily play and learning interactions with children, feeding and health practices, and disciplinary behaviours. They are also asked about their expectations and attitudes regarding their children's development and the importance of education for their future.

#### **Qualitative**

The qualitative research questions centered around the logframe domains; the same survey will be used at endline, but will be expanded to provide more opportunities to discuss attribution of behaviours. The qualitative study has not used a control group, meaning that all of the interviews have been conducted with individuals that we expect will attend the parenting sessions. However, the data from the qualitative survey is intended to be triangulated with the quantitative surveys and the monitoring data over time.

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<sup>7</sup> <http://resourcecentre.savethechildren.se/library/assessing-construct-validity-save-childrens-international-development-and-early-learning>

<sup>8</sup> <http://resourcecentre.savethechildren.se/library/international-development-and-early-learning-assessment-technical-paper>

<sup>9</sup> <https://sites.sph.harvard.edu/credi/>

## 3.2 Sample

### Quantitative

The sample for the quantitative study was taken in the 46 villages in Kampong Cham, Kratie, and Prey Veng Province. The Phase II First Read intervention areas had been identified prior to the research design so assignment to treatment and comparison groups was not random. However, intervention and comparison areas are located within the same provinces and within these areas, villages and families were randomly chosen for both study groups. All villages in the sampling frame received Phase I First Read support. In the case of the comparison group, First Read programming has been phased out and in the case of the intervention group, Phase II funding is beginning as a continuation of Phase I work.

Children 6 months and older were randomly sampled from household list in the project villages, with a goal of assessing 200 children age 0-42 months from intervention and comparison villages (400 total) and 200 children aged 42 – 60 months from intervention and comparison villages (400 total) for a study total of 800 children and their caregivers. The sample size calculations assumed attrition at 10%.

Table 4. Quantitative baseline sample, by child age group and study group

HH with child aged	Comparison	Intervention	Total
0 – 42 months	162	205	367
42 – 60 months	132	151	283
Both 0 – 42 and 42 – 60 months	123	126	249
Total	417	482	899

### Qualitative

The qualitative research for the First Read baseline in Cambodia was conducted over a one month period in August 2016. This research interviewed 120 parents and 57 children randomly sampled using a stratified sampling approach. Each parent had an interview that lasted for 1hr and each child had an interview that lasted about 5minutes. Qualitative data was collected from the same villages as the quantitative data to support triangulation of information from the two data sets.

## 3.3 Data collection training and pilot test

Prior to the quantitative and qualitative data collection enumerators attended a five day training on how to administer the CREDI and IDELA child and caregiver tools as well as the qualitative surveys. The training consisted of three days of reviewing the tools in an office and two days practicing with the tools in the field. The field testing of the CREDI, IDELA, and qualitative tools with children and caregivers served to increase assessor's comfort with the instruments and also to finalize any contextual or translation modifications that were needed to the tools.

During the formal data collection for the quantitative three teams of 20 assessors were supervised by three team leaders. Each data collector used a tablet or mobile device with access to the KoBo software and surveys. The use of tablets facilitated timely data collection and uploading, and improved the accuracy of data collection. Data collection took 20 days to complete including travel time, time spent searching for the correct households and travel challenges. Data entry was overseen by Save the Children's MEAL Officer.

In-field data collection for the qualitative research lasted for 12 days. A small team of 6 enumerators were assigned to use the caregiver qualitative survey. Spot-checking of the data was conducted throughout the data collection period, including the request of translated transcripts on day one for quality checking and feedback purposes from program and MEAL team in head office

### 3.4 Data analysis

#### Quantitative

The main purpose of the quantitative analysis is to investigate the current status of caregiver knowledge and behaviours related to early development, care and learning, as well as the status of children's development. Summary statistics will be presented to display performance on all areas of the parent and child questionnaires. In addition, this report will look to multivariate regression models to explore relationships between early learning and development and parental knowledge, attitudes and home environments. Throughout the report statistical significance is defined in line with social science research standards at the probability of rejecting the null hypothesis due to random sampling error less than 5 percent.

#### Qualitative

Analysis for the qualitative research used the software package NVivo. Starting by using a situational mapping approach<sup>10</sup> to identify the parameters of the research and establish a 'coding tree', the data was coded using a combination of inductive and deductive coding approaches. Analysis techniques included pattern analysis (using conditional matrices and proximity matrix analysis), identification of participant typologies, inter-rater reliability, and frequency and sentiment analysis. In total 6,500 references were coded for.

### 3.5 Limitations

For the quantitative study sample, communes, villages and families were randomly selected. However, province and study group selection was not random because program implementation areas had already been chosen. Therefore, findings cannot be extrapolated beyond the provinces included in the study. In addition, both the intervention and comparison communities participated in Phase I of the First Read program which introduces the possibility that they could be more receptive to continued programming and messaging during Phase 2.

Qualitative results are not statistically significant and any 'findings' need to be considered in this light. The findings communicated in this document should be explored further using a larger sample size. This analysis also uses the term 'parent' as a 'catch-all' term and it is not intended to be interpreted as 'parent' but rather as any caregiver to that child. A limitation of this analysis is that the data has been translated, meaning that interpretation of meaning may vary slightly across cultures.

## 4. Caregiver questionnaire

### 4.1 Household and caregiver characteristics

Parents were asked about their age and level of education, as well as the number of children they were caring for. The majority of mothers and fathers were 25-35 years old and none were reported to be under 18. The most common highest level of education for both mothers and fathers was completion of primary education. On average, 76 percent of mothers and 82 percent of fathers could read. Finally, parents reported having 2.5 children and 63 percent had a child under 3 years. This finding is consistent with the national consensus. **There were no statistically significant differences between the characteristics of parents in the comparison and intervention groups.**

Table. Parent characteristics

	Comparison	Intervention	Significant difference
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<sup>10</sup> Clarke, A.E (2005). Situational Analysis: Grounded Theory Mapping After the Post-Modern Turn. Thousand Oaks, CA: SAGE.

Mother age			
Under 18 years	0%	0%	
18-24 years	14%	10%	
25-35 years	65%	63%	
36+ years	21%	27%	
Father age			
Under 18 years	0%	0%	
18-24 years	5%	4%	
25-35 years	62%	60%	
36+ years	32%	36%	
Mother education			
None	16%	9%	
Adult education	1%	1%	
Primary	54%	52%	
Lower Secondary	24%	31%	
Upper Secondary	5%	7%	
Higher education	0%	1%	
Father education			
None	13%	10%	
Adult education	2%	1%	
Primary	48%	37%	
Lower Secondary	25%	34%	
Upper Secondary	11%	17%	
Higher education	1%	1%	
Mother can read	72%	80%	
Father can read	80%	84%	
No. children at home	2.4	2.5	
Has child under 3 years	60%	66%	

Note: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Parents were also asked about common household items that they possessed in order to gather information on the relative wealth of the family. On average caregivers reported owning 3 of 10 common possessions. Families in the comparison group reported owning significantly more sewing machines and DVD players but **overall there were no significant differences between the possessions of families in the comparison and intervention groups.**

Table. Average home possessions

	Comparison	Intervention	Significant difference
No. home possessions (of 10)	3.1	3.0	
Electricity	66%	66%	
Radio	28%	22%	
Television	60%	71%	
Mobile phone	79%	83%	
Non-mobile phone	1%	0%	
Refrigerator	2%	2%	

Wardrobe	39%	35%	
Sewing machine	9%	4%	*
DVD player	27%	17%	*
Generator	38%	38%	

Note: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

#### 4.2 Participation in First Read

Parents were also asked about their participation in Phase I of the First Read project. **On average, 73 percent of parents responded that they had participated in Phase I of the First Read project and there was no significant difference in participation between comparison and intervention families.** When asked how they participated in the project, the majority of caregivers reported attending parenting education sessions, followed by participation in the book initiative and finally a small proportion of parents reported participating in other activities. **Significantly more caregivers in the intervention group reported receiving books from First Read than comparison caregivers.**

Table. Phase I First Read participation

	Comparison	Intervention	Significant difference
Participated in First Read Phase I	70%	75%	
Book initiative	62%	76%	*
Parenting education	82%	83%	
Other	5%	4%	

Note: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

#### 4.3 Home learning environment

Caregivers were also asked about the materials available in their homes for children's early learning as well as the activities they participated in with their children. On average, caregivers reported owning 1.5 out of 8 types of reading materials and only 33 percent owned a storybook. **There were no significant differences between the reading materials owned by families in the comparison and intervention groups. Parents also reported owning 4 out of 10 types of toys and there were no significant differences between the variety of toys owned by families in the comparison and intervention groups.**

Table. Average reading materials

	Comparison	Intervention	Significant difference
No. reading materials (out of 8)	1.4	1.6	
Storybook	29%	36%	
Textbook	59%	63%	
Magazine	4%	4%	
Newspaper	2%	2%	
Religious	30%	32%	
Coloring book	13%	14%	
Comic	6%	5%	
Other reading material	1%	3%	

Table. Average toys

	Comparison	Intervention	Significant difference
No. toys (out of 10)	4.1	4.2	
Homemade	65%	67%	
Store-bought	63%	66%	
Household objects	46%	50%	
Outside objects	90%	88%	
Drawing	62%	59%	
Puzzle	10%	8%	
Hand-eye coordination	26%	23%	
Colors/shapes	14%	22%	*
Numbers	34%	40%	
Other toys	1%	2%	

In relation to home learning activities parents were asked about the types of early learning behaviours they participate in with their children as well as the types of discipline practices they use. On average, caregivers of younger children (0-42 months) reported engaging in 4 out of 7 learning and play activities with their children in the past week. The most common being playing with children and the least common being telling stories. **Overall there were no significant differences between the activities reported by parents in the comparison and intervention groups at this age.**

Caregivers of older children reported engaging in 5 out of 9 learning and play activities with their children in the past week, and **parents in the intervention group reported engaging in significantly more types of activities than parents in the comparison group.** Similar to the younger children, the most common activity reported was playing with children and the least common was telling stories.

Table. Home learning activities

	0-42 months			43 - 60 months		
	Comparison	Intervention	Significant difference	Comparison	Intervention	Significant difference
No. home learning activities	4.0	4.2		4.9	5.6	*
Read books	28%	32%		33%	36%	
Tell stories	16%	15%		16%	23%	
Sing songs	74%	82%	*	44%	57%	*
Take outside	79%	83%		72%	81%	
Play games	97%	98%		88%	96%	**
Name objects	42%	49%		46%	57%	
Show or teach	61%	66%		55%	61%	
Teach letters	-	-		66%	70%	
Teach numbers	-	-		68%	75%	

Parents in intervention and comparison groups reported engaging in similar discipline activities for both younger and older children. The majority of parents reported praising or rewarding their children for good behaviour, but also engaging in inconsistent discipline and corporal punishment.

Table. Discipline behaviours

	0-42 months			43 - 60 months		
	Comparison	Intervention	Significant difference	Comparison	Intervention	Significant difference
Have friendly talk	96%	99%		90%	96%	*
Explained why behaviour was wrong	75%	75%		89%	94%	
Praise	83%	89%		92%	95%	
Reward	62%	63%		77%	81%	
Let child know when they're behaving well	96%	96%		83%	91%	
Hug or kiss	61%	62%		90%	92%	
Took away privileges	-	-		61%	57%	
Threaten to punish and then do not follow through	-	-		75%	79%	
Let child out of punishment early	-	-		62%	68%	
Child is not punished	58%	47%		53%	54%	
Shook	21%	15%		34%	24%	
Shouted, yelled or screamed	64%	62%		86%	80%	
Spanked, hit or slapped	48%	43%		68%	64%	

#### 4.4 Access to ECCD

Parents were also asked about their children's participation in ECCD centers. On average 36 percent of children were enrolled in an ECCD program, predominantly state pre-schools (74 percent) or government run community preschools (16 percent). **There were no differences between enrollment rates for intervention and comparison children, and older children were significantly more likely to be enrolled than younger children.**

#### 4.5 Health and nutrition

Finally, parents were asked about their children's recent health and nutrition. For both and young and older children, those in the comparison communities were more likely to have received vitamin A supplementation and deworming tablets than children in intervention communities. Also, children in comparison communities were more likely to have had diarrhea in the past two weeks.

Table. Health for 0 – 5 year olds

	0-42 months			43 - 60 months		
	Comparison	Intervention	Significant difference	Comparison	Intervention	Significant difference
Cough	-	-		33%	27%	
Fever	50%	53%		50%	43%	
Diarrhea	29%	19%	*	20%	18%	
Yellow fever vaccine	99%	96%		96%	93%	
Vitamin A capsule	77%	64%	*	83%	63%	**
Deworming tablets	64%	51%	*	83%	69%	*

Parents of younger children were also asked about things their child ate and drank over the past day. The table below displays results for children over 6 months of age and displays that on average children are achieving the recommended food variety intake of 4 types of foods per day. Overall, there were no significant differences in nutrition between intervention and comparison children.

Table. Nutrition for 6 – 42 month olds

Variable	Comparison	Intervention	Significant difference
No. drink variety (out of 8)	1.9	1.9	
Plain water	73%	78%	
Infant formula	5%	8%	
Milk such as tinned, powdered or fresh animal milk	22%	22%	
Juice or juice drinks	33%	31%	
Clear broth	37%	31%	
Yogurt	12%	8%	
Porridge Powder liquid	4%	1%	
Any other liquids	9%	15%	
No. food variety	6.2	6.1	
Porridge, bread, rice, noodles (grains)	95%	93%	
Pumpkin, carrots, squash (vitamin A rich vegetables)	43%	36%	
Root vegetables	7%	11%	
Dark green leafy vegetables	67%	57%	*
Mangoes, papayas (vitamin A-rich fruits)	8%	10%	
Other fruits or vegetables	47%	46%	
Liver, kidney, heart, or other organ meats	12%	15%	
Beef, pork, lamb, goat, chicken (meat)	65%	61%	
Eggs	38%	41%	
Fresh or dried fish, shellfish, or seafood	55%	60%	

Beans, peas, lentils, nuts, or seeds (pulses)	13%	16%	
Cheese, yogurt, or other milk products	27%	21%	
Oil fats, or butter	47%	49%	
Sugary foods (candy, sweets, soda, etc.)	68%	73%	
Condiments for flavor	30%	26%	
Grubs, snails, or insects	3%	3%	

## 5. Child development: CREDI and IDELA

### 5.1 0 – 42 month olds (CREDI)

The CREDI tool was used to assess young children’s learning and development across three domains: motor, cognitive and social-emotional development. Three different forms of the tool were given to children depending on their age: 0-12 months, 13-24 months and 25-42 months. Percentage scores were calculated for the motor and cognition domains by dividing the total number of actions that a parent reported a child could accomplish on their own by the total items in the domain. Two sections in the social-emotional domain focused on maladaptive behaviours (adjustment distress and antisocial behaviours) and phrased negatively so for this domain, those items were subtracted from the total of the other positively framed items and then the total was divided by the total possible positive points. The Save the Children team also categorized items into subdomain categories based on the main skill targeted in the items.

Results of the CREDI analysis find that within all domains, children’s skills strengthen with age, as would be expected. **On average, children had the strongest skills in the area of motor development and the weakest in social-emotional development. There were no significant differences between the development for children in the intervention and comparison groups in any domain.**

Table. Average motor development scores, CREDI

	0-12		13-24		25-42	
	Comparison	Intervention	Comparison	Intervention	Comparison	Intervention
Fine motor	26%	28%	50%	49%	71%	68%
Gross motor	34%	39%	43%	46%	60%	60%
Total motor	46%	51%	67%	69%	90%	88%

Table. Average cognitive development scores, CREDI

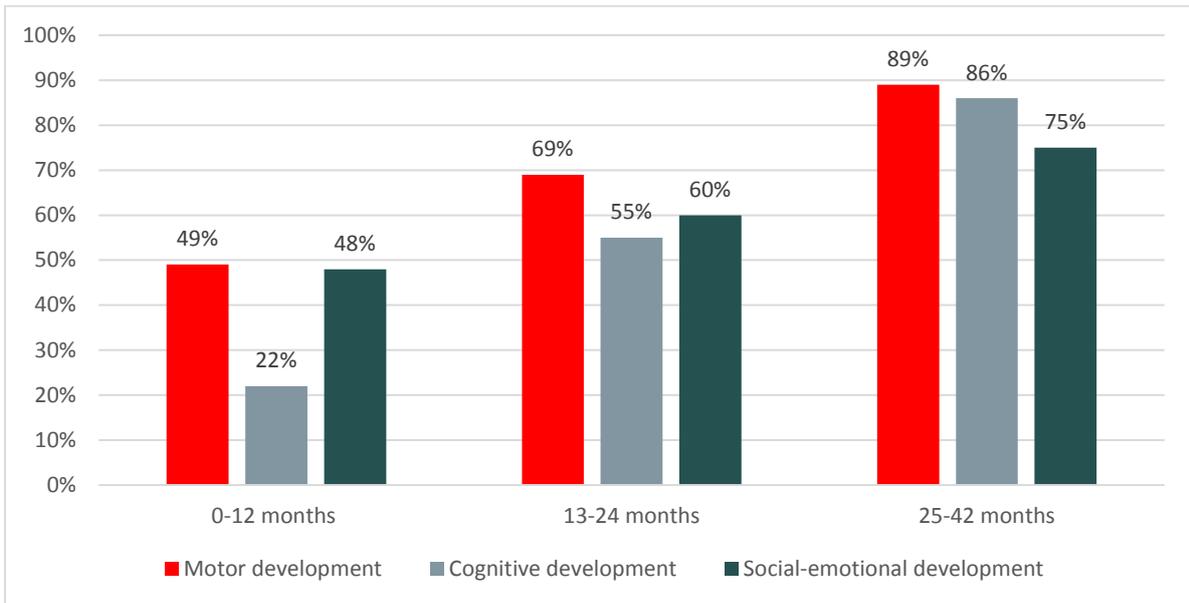
	0-12		13-24		25-42	
	Comparison	Intervention	Comparison	Intervention	Comparison	Intervention
Cognition/ problem solving	32%	36%	57%	61%	84%	83%
Receptive language	22%	30%	75%	79%	92%	93%

Expressive language	11%	13%	41%	46%	86%	86%
Total cognition	20%	23%	52%	57%	86%	86%

Table. Average social-emotional development scores, CREDI

	0-12		13-24		25-42	
	Comparison	Intervention	Comparison	Intervention	Comparison	Intervention
Engagement/communication	43%	44%	67%	74%	84%	85%
Adjustment distress	22%	25%	42%	45%	47%	48%
Prosocial	4%	4%	34%	36%	67%	65%
Attention/impulse control	2%	1%	31%	31%	65%	64%
Antisocial	NA	NA	24%	24%	42%	41%
Total social-emotional	48%	48%	60%	60%	75%	75%

Figure. Average CREDI scores, by age group



### 5.243 – 72 month olds (IDELA)

This section describes children’s performance on the IDELA assessment. Total domain scores are calculated by adding the weighted score of each item in the domain so that all items contribute equally to the domain score. The total direct child assessment score is calculated by adding the weighted total scores from the core domains (motor, literacy, numeracy and social-emotional) so that all domains contribute equally to the total score. Due to the difference in administration style between the direct child assessment items and the enumerator reported learning approaches items, the learning approaches items are not included in the total IDELA score. The analyses presented below display the frequency with which children correctly respond to IDELA items.

Children showed the strongest skills in motor development and lowest in emergent literacy. Similar to the CREDI results, children displayed stronger skills with age and **there were no significant differences between skills displayed by children in the intervention and comparison groups in any domain.**

Table. Average literacy skills, IDELA

	Comparison	Intervention	Significant difference
Expressive vocabulary	42%	41%	
Print awareness	55%	57%	
Letter ID	10%	10%	
First letter sounds	8%	12%	
Writing	45%	44%	
Oral comprehension	45%	45%	
Total Emergent Literacy	34%	35%	

Table. Average numeracy skills, IDELA

	Comparison	Intervention	Significant difference
Measurement	89%	88%	
Sorting	35%	35%	
Shape ID	39%	39%	
Number ID	10%	12%	
One-to-one correspondence	30%	34%	
Simple operations	47%	49%	
Puzzle	23%	25%	
Total Early Numeracy	39%	40%	

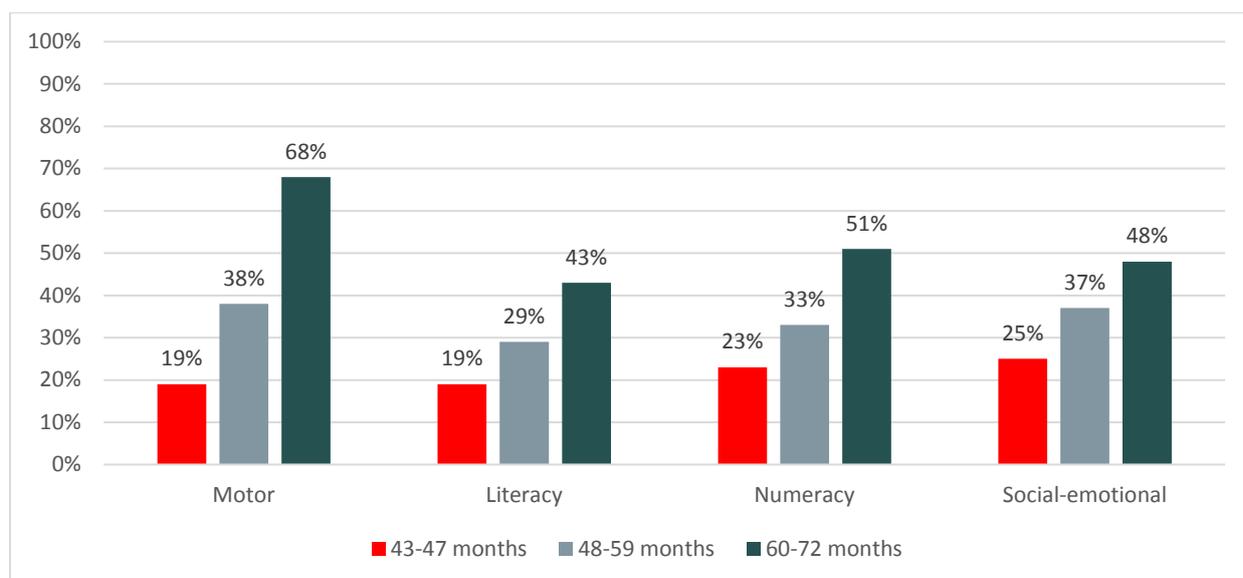
Table. Average social-emotional skills, IDELA

	Comparison	Intervention	Significant difference
Cultural competence	54%	53%	
Self-awareness	54%	52%	
Social connections	42%	39%	
Emotional awareness	41%	42%	
Empathy	28%	27%	
Conflict resolution	38%	38%	
Total Social-emotional Development	41%	40%	

Table Average motor skills, IDELA

	Comparison	Intervention	Significant difference
Copy a shape	53%	50%	
Drawing a person	35%	34%	
Folding	43%	42%	
Hopping on one foot	72%	67%	
Total Motor Development	51%	48%	

Figure Child development (IDELA), by age



### 5.3 Predictors of child development

Taken together information from the caregiver questionnaire and child development assessments can provide information on important predictors of child development for children in the First Read intervention area. **For both younger and older children father's education, having diarrhea in the past two weeks, home learning activities (HLA), and home discipline behaviors significantly predicted development and learning. Paternal education and HLA have a positive relationship with child outcomes (higher education/more activities are related to stronger child development), whereas diarrhea has a negative relationship (having diarrhea recently is related to weaker child development) and discipline is on a continuum such that more positive behaviors and less negative behaviors is positively related to child development. This finding suggests that children ages 0 – 6 who experience more stimulation and play at home, and more positive care and reinforcement (less negative discipline) have stronger development and early learning skills than their peers who do not have these experiences at home.** For younger children, the variety of food they received was a significant positive predictor of development. For older children, being enrolled in an ECCD center was a strong significant positive predictor of learning and development. **These findings highlight the importance of holistic development support for young children's development. In order for children to develop to their full potential they require appropriate health, care and stimulation from their caregivers.**

Figure. Predicted relationship between home learning activities and child development (CREDI and IDELA)

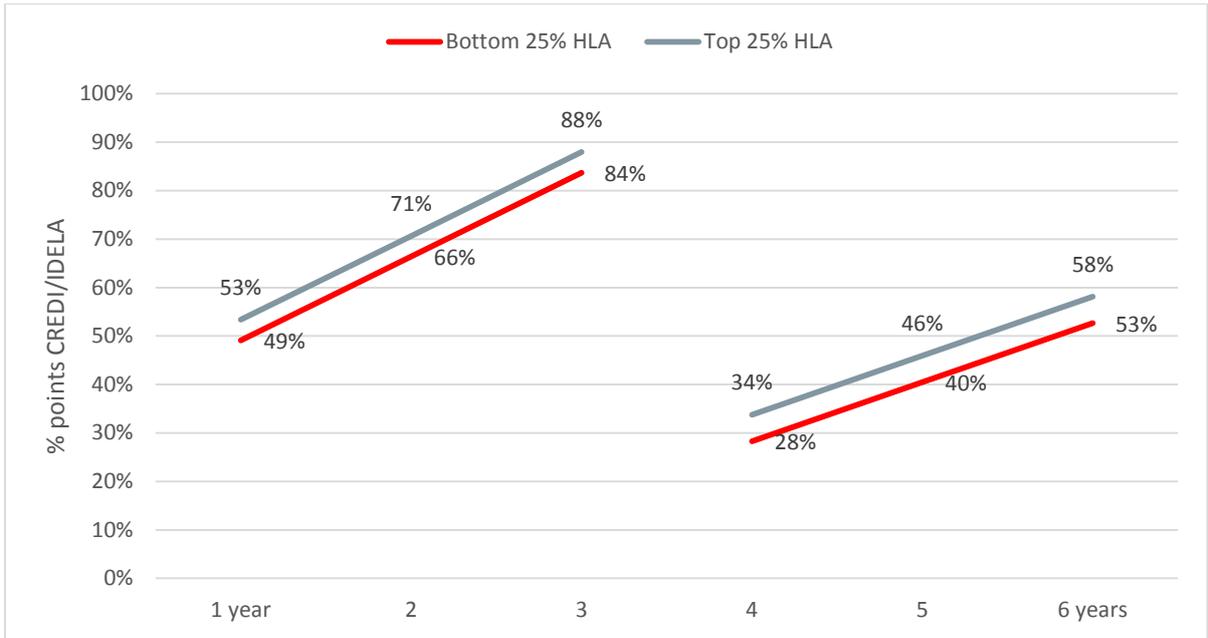


Figure. Predicted relationship between care and discipline behaviours and child development (CREDI)

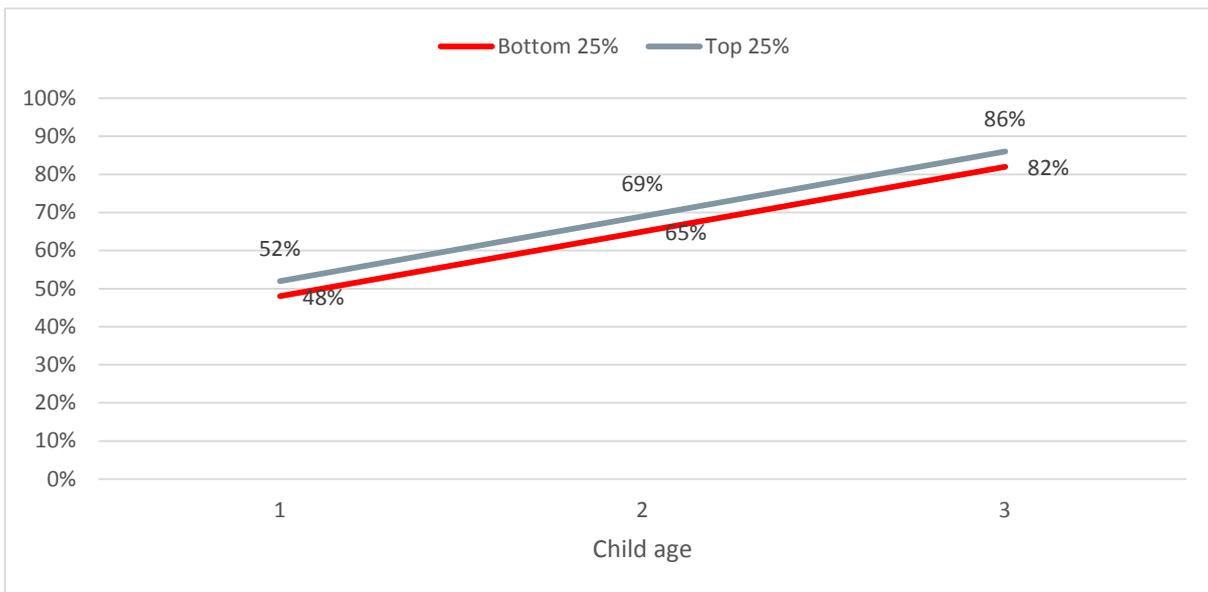
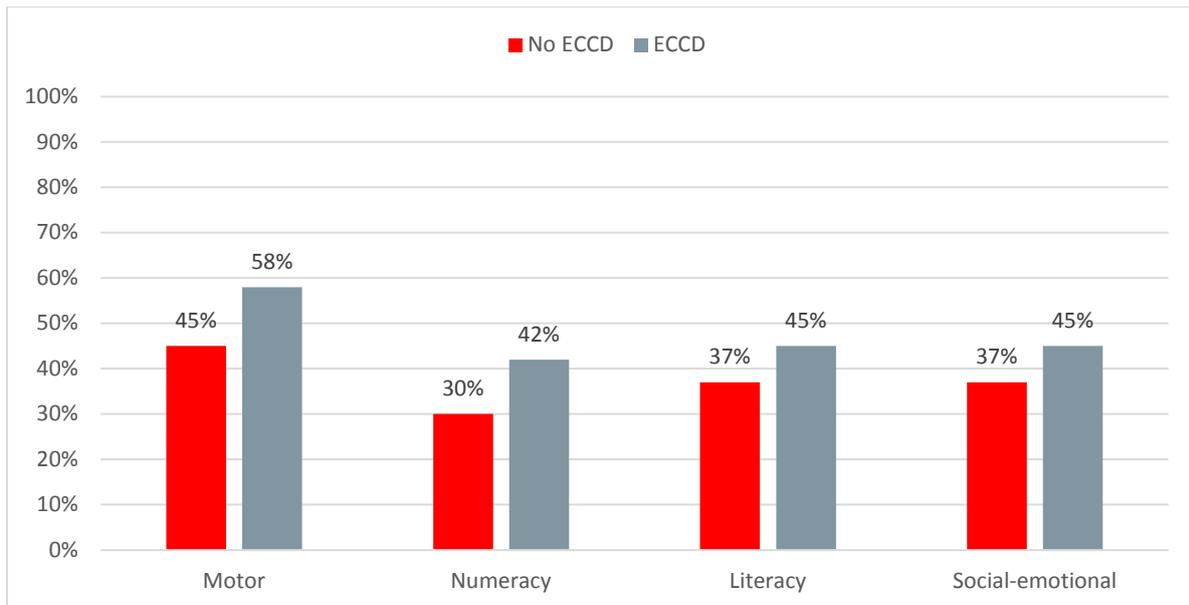


Figure. Predicted relationship between ECCD enrollment and child learning and development (IDELA)



## 6. Qualitative results

### 6.1 Parent characteristics

Parents were asked about their typical behaviours and to describe and explain how they interact with their child. Nearly all of the qualitative respondents (119 out of 120) for this baseline analysis were female. The average age was 37 with an age range from 22 to 68. Most of the respondents cohabitated with a spouse (92%), and the average number of children was 2.5 per household (of which the average number of children under the age of six per household was 1.5).

Three-quarters of the participants worked in an agriculture related profession. Working in agriculture requires long and unpredictable hours, this was one of the reasons that in 1/4 of the households the parent was not the primary caregiver, instead a relative like a grandparent took primary responsibility. This analysis is structured in terms of the key themes that emerged around **parenting behaviours, how parents learn with their child, reading behaviours, barriers to behaviours.**

### 6.2 Parenting Behaviours

Key findings relating to parenting behaviours include:

- 1) *Parents have a fair understanding of children's physical development milestones, but a poor understanding of cognitive or socio-emotional milestones*
- 2) *Parents associate 'preparing their child for learning at school' with the provision of materials e.g. chalk, school uniform, rather than imparting foundational cognitive skills*
- 3) *15% of parents have learning activities consciously incorporated into their normal routine*

### Awareness of developmental milestones

65% of parents had some knowledge of developmental milestones, demonstrating some knowledge of developmental milestones did not have a relationship with whether or not the parent had attended parenting classes. Coding for 'knowledge' was interpreted in the broadest sense of the term and the coding cannot show the extent to which the parent had knowledge of developmental milestones. For

example, a parent that could describe the age at which a child could sit, scoot, and walk was judged to have the same awareness as an individual that mentioned the age at which the child began talking.

The most common milestones that parents were aware of, listed in order of descending frequency were:

- 1) Walking
- 2) Talking
- 3) Speaking
- 4) Sitting
- 5) Running
- 6) Rolling from their back to their stomach

Overwhelmingly most parents spoke about physical milestones (except 3. speaking): “Yes, I have observed that she could roll from her belly to back at two months old, could sit up at seven months, and walk at nine months. When I compare her to other children, I think she has developed more quickly than others.” This demonstrates that parents are more likely to be aware of physical development than cognitive development, and that parents are not conceptualizing ‘developmental milestones’ in a holistic sense.

Some parents mentioned that they had been taught about developmental milestones at ECCD classes. All parents were required to describe their experience of ECCD classes. It was apparent that these classes typically have a very strong focus on health, domestic-skills, and teaching the child manners. These are simple skills that can be taught quickly, leading parents to use these sessions in a ‘drop-in’ format rather than regular attendance: “The class was held at the pagoda which is quite far from my home. The class was boring because it took 1-2 hours and I couldn’t follow it or catch up from the sessions that I had missed.” It is important that this project educates parents on the cognitive, motor, and socio-emotional elements of child development and teaches them a broader set of skills. In addition, the qualitative research has shown that parents have differing levels of education and different understandings of child development milestones. It is, therefore, useful for parenting facilitators to use more pictures, posters, and demonstrations during the session, moving beyond a teaching style that favours discussion and written handouts. Moreover, they may benefit in reducing the duration of parenting sessions and varying the session venues.

Parents also reported low attendance or no attendance for the ECCD classes because of a lack of formal structure e.g. no invitation to the class, unclear communication about the start time of the class, and a lack of information about the focus of the class. Parents also felt they were being judged by other parents or village elders, and felt that their lack of invitation to the class was an attempt to ostracize them.

One parent said: “They never invited me to participate in ECCD classes, maybe they judge parents that work away from the village”. Another parent mentioned that their mother, the child’s grandmother, who looks after the child while the parent works away is not invited to ECCD classes: “She is old and no one invites her to join because she doesn’t have a small child of her own. The grandchildren stay with her because I have to go away to work in the garment factory.”

### **Preparing the child for school**

Nearly all of the parents that were interviewed talked about preparing their child for school (94%). However, only three parents (2.5%) talked about preparing them for school through learning. This means that parents are not associating learning basic literacy and maths skills with being prepared for school. Whilst many parents are teaching their child basic skills, there is a lack of awareness that these skills can help a child to feel more ‘settled’ when they start school.

Typically parents associated preparing the child for school with purchasing materials for the child and enrolling the child in school – a more practical or material approach to the topic. Parents’ said “I have prepared my child by giving them stationery, for example a bag, chalk, whiteboard, and uniform. I have prepared a motorbike so that I can bring my child to school.....And I have thought about taking them to enroll their names at the school”. This indicates that a shift in messaging for the ‘School Readiness’ lessons might be necessary, changing from a prioritization on materials to skill readiness.

### **Having a Routine**

Most parents report having some sort of a routine with their child (60%). When asked about their routine with their child most parents focused on minor behaviours like hand washing before dinner, or teaching the child to scrub their face before bed. Few parents talked about an overarching structure that they had for their day. Only 15% of parents had learning exercises with their child as part of their normal routine. Of this 15% most parents cited after dinner or before bed as being the time of the day when they spend time learning with their child.

There are no differences in parent attributes (e.g. number of books owned, age, location, education level etc.) between parents that have a routine and those that don’t have a routine. Although parents that have a routine with their child are more likely to demonstrate more positive parenting behaviours more frequently.

### **Undesirable behaviour**

Excluding the prevalence of physical punishment, other undesirable behaviour was minimal. To code for these behaviours an inductive approach was used. For example, when an undesirable behaviour was observed a new code was created. In this sense the codes have not been ‘retro-fitted’. This approach to coding substantiates the idea that there is a low prevalence of undesirable behaviour. Of the undesirable behaviours mentioned 4% of parents mentioned that they had lost books given by First Read (phase 1), 3% mentioned that they did not care for books and had damaged them or torn them, and 1% mentioned an extreme gender bias in how they treated their children.

From discussions with the Country Office this may not be reflective of these behaviours not occurring, but may reflect a cultural attitude that is overtly positive or ‘rose-tinted’ in the responses given.

## **6.3 Praise and Punishment When Parenting**

Three core issues emerged in relation to praise and punishment when parenting:

- 1) *Parents feel confident to give praise to their child*
- 2) *20% of parents feel confident to admit that they hit their child*
- 3) *Most parents do not understanding how to talk to their child about emotions*

### **Giving Praise**

A positive finding from the parenting interviews is that parents feel confident in praising their child. 102 parents out of 120 (85%) cited that they give their child praise (following a direct question: ‘Do you praise the child when they are good and correct the child when they misbehave’). Typically the praise centered around intelligence rather than behaviour or beauty which is a great foundation for helping the child grow in confidence in their abilities as their prepare for school. Typically the words (or sentiment due to translation) that parents used were:

- Clever
- Never blame
- Buy (the association with purchasing ‘incentives, distractions, bribes’ for the child is explored later)
- Respect
- Smart

## Physical Punishment

Whilst we expect the true figure to be higher, 20% of parents felt comfortable to admit that they hit their child when the child misbehaves. One parent said: *“When they cry, I warn them that I will beat them or won’t love them anymore if they don’t stop crying.”* The parents that admitted hitting their child typically talked about it 3 times during the interview, leading us to believe that this is normalized behaviour for them. Typically the parents that hit their child were also the parents that focused on their own emotions more rather than the child’s emotions, discussing their anger and frustration at their child.

Some of the parents that made a point of saying that they don’t hit their child, noted that they learnt the importance of this through ECCD classes, where it is assumed that they learned some of their reported parenting strategies (e.g. removing themselves from the situation or asking another adult to talk to the child if they feel they are getting angry).

## Talking About Emotions

When discussing emotions with the child parents were typically stating the emotional state their child was in rather than trying to rationalise with the child why they are crying, why they might be feeling that way, how they can understand their emotions etc. Some of the most common concepts mentioned when discussing emotions were ‘sad’, ‘crying’, ‘upset’, ‘cry’. With responses from parents typically being ‘angry’, ‘stop’ and ‘console’. Methods for soothing the child typically related to the word ‘buy’, with the parent giving the child money if they stopped crying or tempting them with sugary snacks. This practice of bribing the child to stop crying was present in the transcripts of 50% of the parents that mentioned that they talk to their child about emotions.

### 6.4 Parents Learning With Their Children

The core findings relating to parents’ approaches to learning with their children:

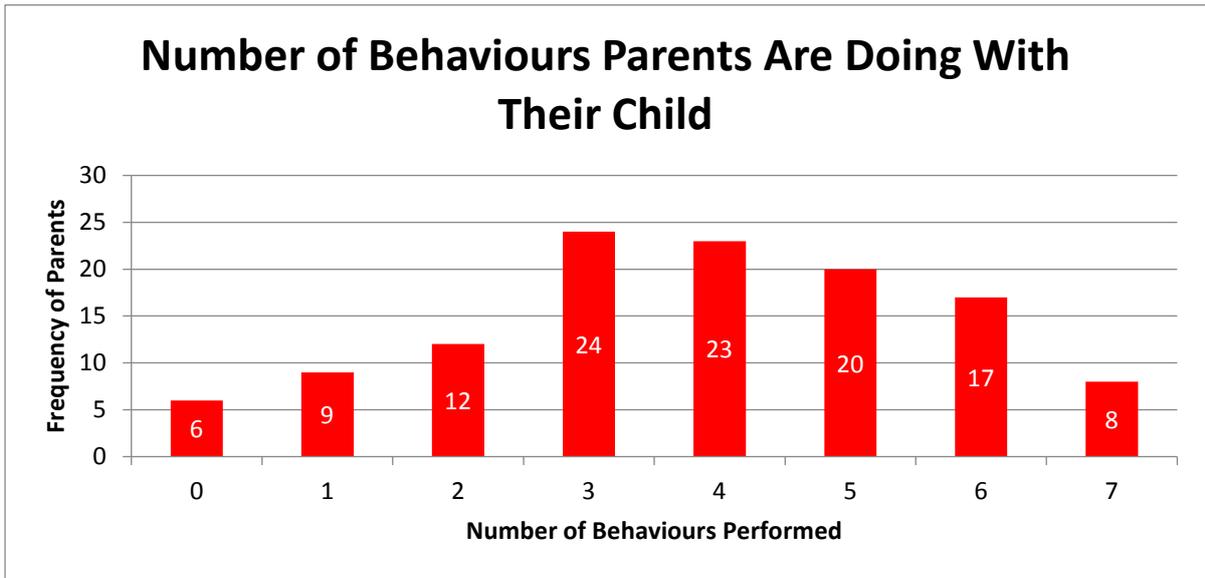
- 1) *Most (95%) parents are practicing at least one of basic behaviours that STC advocates with their child (outlined below)*
- 2) *Demonstrating fewer basic behaviours is more typical for a first time paren; displaying more basic behaviours was typical for a parent that reads with the same frequency to both children, not differentiating by age.*
- 3) *Of the basic behaviours advocated parents were most likely to ‘describe things’ with their child or to ‘practice counting’ with their child.*
- 4) *Parents are already practicing creative behaviours that could be adapted for activities such as ‘book making’. For example, many parents (50 parents) are drawing pictures and labelling them for children to colour in but wouldn’t refer to this as ‘book making’.*

## Basic Behaviours

Save the Children advocates seven simple behaviours for parents to practice with their child (sometimes these behaviours are clustered together and termed broadly the ‘five fingers’). These are:

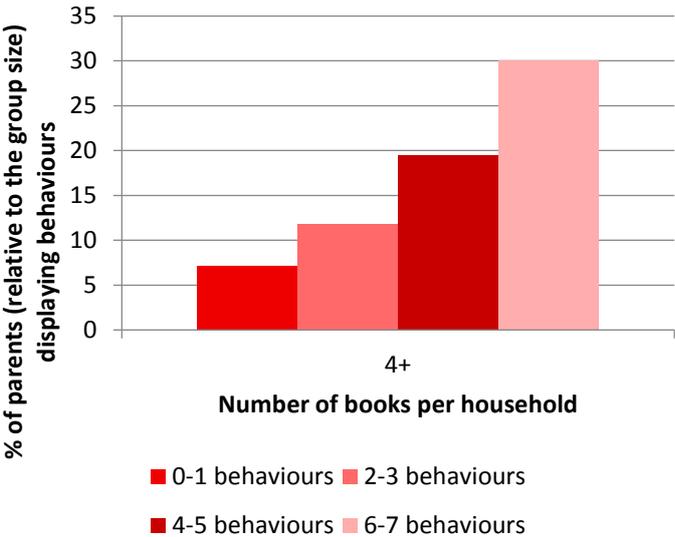
- 1) Talking
- 2) Counting
- 3) Singing
- 4) Playing
- 5) Drawing
- 6) Reading
- 7) Resource development (making books and toys)

Typically parents are doing at least one of the behaviours outlined, with 95% (114 parents) reporting doing at least one behaviour. However few parents were doing all of the behaviours, with only 8 parents (7%) practicing all of them.



**Who Is Most Likely to Report More Behaviours?**

If we are to assume that owning a First Read book is an indication that an individual participated in phase I First Read then it is disappointing to find that there is no difference in the number of behaviours performed between those that have the books and those that don't have First Read books. However, when we look at the number of books in the household more generally, parents that had 4 or more books were more likely to report a greater number behaviours. This is shown in the table below, where parents were grouped according to the number of behaviours they reported.



The graph above shows that people reporting fewer behaviour changes were much more likely to be a first time mother with a child under the age of 3y.o and a smaller family size. Those displaying more

behaviours (6-7 behaviours) were likely to have a similar familial structure<sup>11</sup> to the parents that reported 2-3 or 4-5 behaviours but the key difference between these groups was that the parents reporting more behaviour changes were less likely to treat children of different ages 'differently'.

What we mean by the term 'differently' is parents that saw a difference in capability of their children or changed the frequency of their behaviours based on the age of the child; 'difference' however should not be confused with leveling of activities, our understanding is that these parents still conducted age-appropriate activities. For example parents that displayed 6-7 behaviours were more likely to read to children 0-3 and 4-6 using the same techniques, at the same time, with the same frequency, and didn't report that younger children were 'too young to learn'. Other factors like education level or age didn't affect the number of behaviours reported. This finding requires further investigation with a larger sample size.

### **Which of the five finger behaviours were most common?**

Of the behaviours that parents are doing with their child there are some that are more common than others. For example 89% of parents practice counting with their child and 88% of parents say that they engage their child and describe things to their child. Other behaviours such as making books, sorting and storytelling (without a book) are less commonly reported activities.

### **Describing Things To Your Child**

Whilst 88% of parents talk and describe things to their child, this was typically done in a rudimentary way with parents telling the child 'look this is 'x' or this is 'y''. Three levels of description were found in the behaviours of parents:

- **Level 1:** Parent simply named or labelled an object. For example: "So far, I have taught them what animals are called, but I haven't taught them to distinguish the colour yet."
- **Level 2:** The parent named the object and then described its attributes, typically the colour of the object or thing: "When we are cooking together I make him take note of things in the kitchen, for example look at the orange orange juice, look at the red label on the Coca-Cola".
- **Level 3:** The parent discusses the name, the attributions, and the action or use of that item e.g. red cup for drinking, black cow eating grass: "I tell my child look at the red cow grazing in the rice field it is eating grass, look at the brown chicken it is eating rice, look at the white pig".

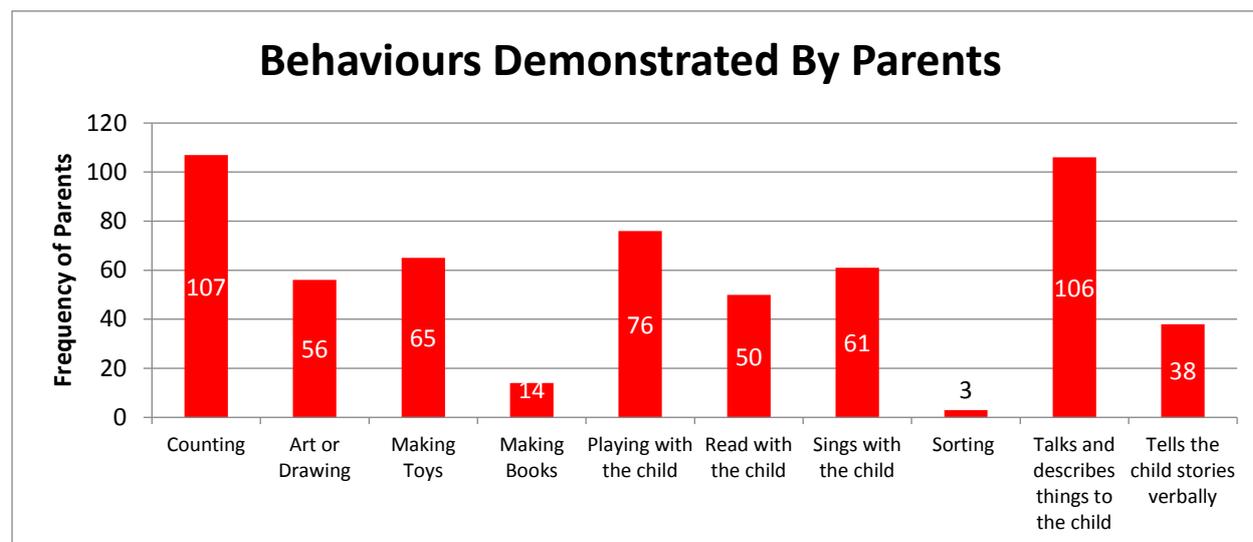
Parents that appeared more at ease talking to their child at this 'third level' of description, talked about things that they were familiar with. For example, some parents talked to the child about all the things they saw and witnessed at their roadside trading stand, another parent talked to the child about all the different things that they grow in their farm, another parent did a running commentary for the child as they walked around the market place. Engaging the child in an activity that is routine or relates to the parent's livelihood will also help to strengthen the bond between parent and child. With most parents that took part in the qualitative interviews having a livelihood in agriculture we should be considering their daily routines and educating them on the 'triggers' or 'prompts' that they can use to begin discussions with their child. For example, we can encourage parent facilitators to plot a typical day for the parent and ask them to think of points in their day that provide things for them to talk to their child about e.g. the walk to the farm in the morning, preparing dinner.

Parents also noted that they normally talk to the child outside of the house rather than inside the house e.g. as they are walking down the street. It is important that the parenting session facilitators

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<sup>11</sup> 2.6 children with c.l.5 children under the age of 6

are aware of this and help parents to realise this behaviour and guide them to look for opportunities to talk to their child inside the house as well.



### Creative Play

Surprisingly behaviours like singing (51%) or storytelling (32%) were not practiced by as many parents as anticipated, potentially indicating that these are ‘unfamiliar’ behaviours in this context and further support or training needs to be provided in these areas. But activities like ‘making toys’ which require more practical and creative skills were practiced by 54% of parents. The most common materials used to make toys, in descending order of frequency were:

- 1) Banana leaves, Palm leaves
- 2) Paper
- 3) Stalks of plants
- 4) Bamboo
- 5) Milk cans
- 6) Clay

Of the parents that made toys with their children, 77% of parents went on to use these toys as part of a make-believe game, demonstrating their willingness to play with the child. Some parents discussed these make-believe games, saying “I invented some games to play with my child. We ride on a banana stem and pretend it is a horse. We also build houses and pig cages using paper and chopsticks. We mostly play at home on the ground, maybe once every two to three days.” Other parents used make-believe games to mimic their jobs when they take their child to work with them. One parent who works selling vegetables at the roadside, recounted that she takes her young daughter to work with her and while they wait for trade they play games together, “I play games with her like storing vegetables in coconut shell, and we cut the papaya leaf stalk into small pieces and pretend they are vegetables and we pretend to cook them. We play like this pretending we are sellers selling things at the market.”

### 6.5 Parents Reading With Children

The key findings relating to reading behaviours are:

- 1) Teaching children the alphabet is the most common behaviour reported when reading with a child under the age of 6
- 2) Some parents are teaching the alphabet to their children without books, but other parents have books but fail to teach the alphabet to at least one of their children (24%).

- 3) Some parents are using rote learning techniques to teach basic words to children without teaching them the alphabet

### Reading and Counting

There was a strong relationship between reading and counting with 1/5 of all instances of either 'reading' or 'counting' occurring together<sup>12</sup>. Parents are linking these two behaviours and are aware that these are important concepts to teach children. However, despite parents talking about these concepts at the same time, they were still treated as very distinct activities, with only five instances (not separate sources/parents: 1.2% of occurrences when 'counting' and 'reading' appear together) of parents incorporating counting activities *whilst* reading. Where this did occur parents were typically talking about counting when talking to the child about illustrations in the book.

Where parents are teaching counting skills, 31% of parents are using basic techniques such as counting on fingers to help children learn these skills. Other parents mentioned counting trees, chickens or cutlery, "I tell my children to practice counting using the mango trees or the chickens". Parents also used repetition as a way to help their child learn with 31% of parents using this approach "I count out loud as I hold my fingers up to my children, my children then repeat the numbers after I have said them. We practice our counting every day before going to bed. When I have been teaching them, I have observed that my children enjoy learning and they are improving cognitively".

### Teaching the Alphabet

Some reading behaviours that parents reported were more common than others, for example, teaching the child to recognise the Khmer alphabet was very common but teaching the child phonetics and blending sounds to form words was less common.

Despite lots of parents teaching their child the alphabet, there was little consistency in how parents taught the alphabet in Cambodia. Some parents reported teaching them vowels first, others reported consonants, some reported teaching them through songs, and others reported using a high-frequency approach teaching the letters of common household objects first. A uniform approach for teaching the alphabet could be useful in providing more guidance for parents. Once a clear understanding of the sequencing necessary for teaching the alphabet is in place, parents can then be supported to learn other approaches that may help to support the individual learning style of their child.

### Reading Skills

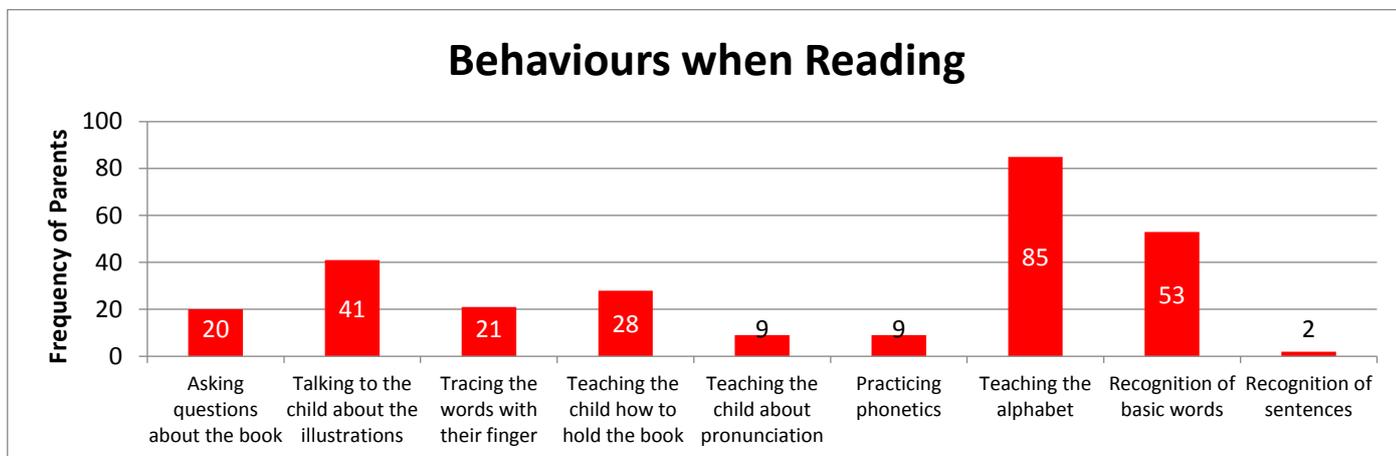
Other parents are demonstrating that they have strong skills in conducting reading exercises with their children. For example, one parent recounted that "as I read from the book I tell them about the pictures and concepts such as 'opposite', 'antonym' and 'similarities' e.g. duck is shorter than swan, snake is longer than worm", and others said "As I read I have my child sit next to me. We open the book and I read and the child mimics me. While reading, I point my finger at words and the pictures and I let the child open and hold the book by themselves. I ask the child about the story e.g. how many frogs are there, and I help them answer by counting the frogs one by one. My youngest child always wants to learn, her enthusiasm for learning makes me so happy." This evidence of good parenting is promising and could lend itself to a 'buddy' system between parents for this project.

The different techniques that parents are using when reading with their child are outlined in the graph below. This graph is not mutually exclusive and some parents may have demonstrated multiple

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<sup>12</sup> In a typical narrative an indication of a potential relationship may be 3-5% of terms occurring simultaneously and explicitly (not inferred), where there is no direct questioning linking those two concepts (the individual is linking them themselves). In this instance 20% of the time the terms occurred together, indicating a strong relationship.

behaviours. Each behaviour is displayed as the number of parents that demonstrated that behaviour out of the total sample size (120).



### Teaching the Alphabet without a book

Some parents reported teaching the alphabet without access to books. They either did this by writing the alphabet down on paper or a blackboard, or noting the letters to their child from household objects. Of the 120 parents 85 taught their child the alphabet, some of these had access to books and some didn't, the table below illustrates the breakdown:

	Number of parents	Number of parents that teach the alphabet	% of parents that teach the alphabet	Number of parents that don't teach the alphabet	% of parents that don't teach the alphabet
Total Number of Parents that:	120	85	71%	35	29%
Have books	78	59	76%	19	24%
Don't have any books	42	26	62%	16	38%

This shows that having access to books may increase the chance that parents will teach their child the alphabet, but that 62% of individuals that don't have access to books are still teaching their child the alphabet using other means. What is more surprising is that 19 parents (24%) had the tools to teach the alphabet (books or their own initiative) but they failed to use them on at least one of their children.

### Teaching Basic Words

Some parents are teaching basic words without having taught the alphabet to their child. It was typically found that where this was occurring it was often for 'novelty' value. For example, one parent noted that she was teaching her children to "write the sentence 'Uncle Sok buys orange at Kratie'" or other parents reported teaching the child to recognize long words like 'grandparent'. However there are a small number of parents that are not aware of the natural progression of skills when teaching a child basic literacy skills. Some parents were getting their child to recognise words without teaching them the letters that comprise the words (7 parents), for example, "When I open the books I teach the child about the sounds that the animal makes, like the sound of the chicken. I ask them what the animal is and they reply with the animal name, I then read some pages and get them to repeat the words." This is a rote learning approach that some parents may have been used to experiencing

themselves (although there is not a relationship with age). It is important that the parenting sessions chart a progression or a sequencing of skills to teach your child.

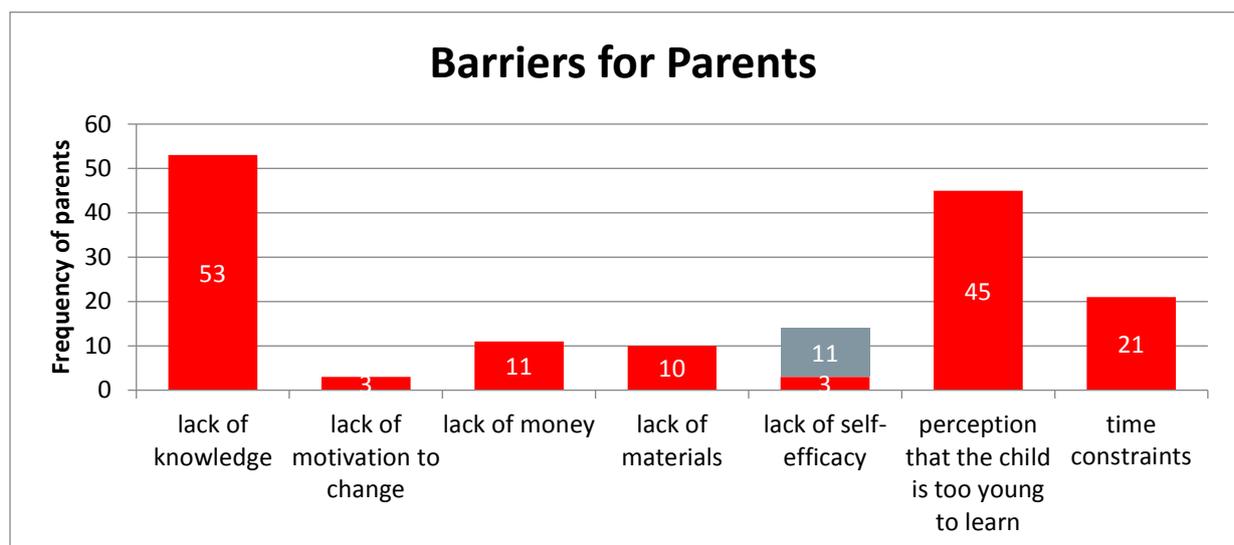
## 6.6 Perceptions of Barriers

Three key findings in relation to the barriers that parents perceived are:

- 1) *Parents with lower levels of education are more likely to perceive a lack of knowledge as being a barrier to their parenting abilities.*
- 2) *45 parents (38%) thought that their child was too young to warrant them doing some of the 'five finger' behaviours with the child (in a modified way). Interestingly there was no relationship to the age of the child.*
- 3) *Parents that own a First Read book are less likely to hold the opinion that a child could be too young to learn.*

### Why are parents choosing not to do the five fingers?

Parents are citing multiple barriers for not doing the 'five finger' behaviours. These barriers were identified using a deductive approach to coding, so may not be exhaustive. For example, lack of self-efficacy (13 parents) also includes parents reporting that their illiteracy makes them believe that they don't have the skills required to teach their children (11 of the 13 parents). These barriers are not mutually exclusive and one parent may have commented on multiple barriers.



### A Lack of Knowledge

Interestingly in this culture parents often provide answers to questions without having knowledge of the topic. For example, the 'lack of knowledge' node was typically associated with development milestones and having a routine. Parents provided generic answers to both questions and their responses typically indicated that they did not know what a 'development milestone' was, despite replying affirmatively to the question. With further investigation this might have a relationship with the low attendance of ECCD classes, with parents being under the impression that they are informed about the topics, despite having incorrect or incomplete knowledge. Exposing that knowledge is incomplete or incorrect will be an important first stage for the facilitator in the parenting sessions as well as an important component of advertising the parenting sessions.

There were no differences between parents that didn't have 'knowledge' in terms of age, profession, number of books owned, or number of children. However, those with a lower level of education or no education were more likely to report not having the 'knowledge' to do the 'five finger' behaviours, this highlights a need to strengthen parents' self-efficacy that they do have the knowledge to parent in

this way. We assume that parents just need a support system, reinforcement of knowledge, and self-efficacy that they can do these approaches and they will be able to implement the First Read approach.

### **The Barrier That Their Child Is ‘Too Young’**

Other nodes that scored highly included the perception that the child was too young to learn, “No, I haven’t started teaching my child because I think my child is too young to learn and they haven’t learnt to speak yet [the child was three years old], maybe I can start teaching her when she is 6 years old and has started school”. This perceived barrier did not have a relationship with whether the parent had a child under the age of 3 or over the age of 3. During Phase 2 of First Read we need to explain to parents that factors such as age of the child and whether or not the child has started to speak shouldn’t have a bearing on whether or not you do the ‘five finger’ behaviours with your child; we need to prioritise educating parents on how to modify the ‘five finger’ activities for different age groups.

There was no difference in whether parents perceived their child to be too young to learn based on whether they had had children before or how often they self-reported attending an ECCD class. However, parents that had a secondary education level were 14% more likely to not report that a child was ‘too young to learn’. In addition people who owned a First Read book were more 24% more likely to not express that younger children can’t learn. This is interesting if we are to consider ownership of a First Read book as a proxy for attendance of a First Read class.

### **6.7 Child Interview**

As well as interviewing parents, this survey also conducted a very short interview with children over the age of 3. The responses that we received were articulate and thoughtful and typically expressed an enthusiasm for reading: “Yes, I read Khmer books with my parents, we learn alphabets and some words like bee, dog, chicken and heron. I like reading the animal books and as we read I sit next to my mother and we read the names of the animals together.”

We interviewed 57 children (whose parents had also been interviewed). Of these children 18% said that their parents didn’t read with them; the remainder reported reading with their parent or in 12% of cases reading with their grandparent or another relative. In 26% of instances the child response contradicted the adult’s response, or the adult’s response contradicted the child’s response.

Interviewing children enabled us to better contextualise our findings and hear some thoughtful responses from children about their experiences of reading. In turn this data also help us to validate some of the parent responses.

## SECTION 2: Survey with Book Publishers

### 7. Methodology

First Read works with book publishers to deliver high-quality age-appropriate books for children. Ensuring that the book publishers share our understanding of 'quality' is essential. In addition, this project wants to ensure the sustainability of this approach and is also interested in changes in supply and demand of mothertongue reading books for 0-6y.o.

#### 7.1 Evaluation tools

The book publishing survey was issued online using SurveyMonkey and invites for the survey were sent to the key stakeholders in the industry. Some of these key stakeholders were individuals that Save the Children has worked with previously, current partners for First Read, or organisations that Save the Children hasn't worked with but produce books for children.

#### 7.2 Sample

This survey had a small sample size of nine participants.

#### 7.3 Data analysis

Using Excel the data has been analyzed using descriptive statistical approaches, but lacks statistical significance due to the small sample size. Basic qualitative analysis was performed looking at key trends and narrative sequencing but this analysis did not use the support of a software package like NVivo.

#### 7.4 Limitations

The spread of respondents is not representative of the market, as such it can present interesting case studies and we can see how these individuals change their views over time but the data is limited in its use. These findings are also not statistically significant and 'findings' must be considered in this light.

## 8. Publisher Survey

### 8.1 Publisher characteristics

The average age of respondents was 37.5 with a range of 31-61. Of the 9 participants, 2 were male and (the youngest individuals) and 7 were female. On average these individuals in the publishing field had 2 children with on average one of their children being between 0-6y.o. Only one individual was a first time parent with a child age 0-3y.o, the frequency of the node 'discussion of age-appropriateness' was three times more likely to be in her transcripts than the other participants, despite the fact that this woman had not taken place in any previous training for book developers.

Of the 9 participants Save the Children have worked with six of the organisations before. Two of the participants in this survey are from the organisation Sipar, the book development partner for this project.

Individuals identified their role in the following way:

	Illustrator	Distributor	Sales/Marketing	Editor	Writer	Publisher
Participant 1		x	x	x	x	x
Participant 2					x	
Participant 3	x				x	x
Participant 4		x	x			

Participant 5	x					
Participant 6						x
Participant 7	x				x	x
Participant 8	x				x	x
Participant 9				x	x	x

This shows that most individuals see their role comprising multiple aspects of the publishing process and that most individuals have a writing element to their role.

Of the individuals that participated six had written books for 0-3y.o and seven had written books for 4-6y.o (this number includes all of the individuals who had also written books for 0-3). All but one of the participants had written more books for 4-6 y.o than they had for 0-3y.o; on average participants had written 4 books for 0-3y.o and 8 books for 4-6y.o. Two participants hadn't written any books and had a more 'sales' focus to their role, unfortunately both of these participants were from the organisation that is the First Read partner for Phase 1 and 2 (Sipar).

All but one of the participants had had prior training from different NGOs about developing books for children.

The following analysis focuses on the individuals that produce books (e.g. aren't in sales). For the questions relating to 'demand' all individuals have been included in the analysis.

## 8.2 Perceptions of Training

### Previous Training

Participants were asked if they had received training on eight different areas of book development, shown in the table below (individuals that do not produce books have been removed from the table). We consider all of these to be aspects of 'quality' book development; however, these items are **not** exhaustive. Further explanation of the range of 'quality' criteria can be found in the Book Quality Criteria Assessment Tool that has been built collaboratively across different Save the Children UK departments and Country Offices.

Have Individuals Received Training in the Following Areas?								
Font size for different age groups	Text and picture placement	Book length for different age groups	Word length for different age groups	Using words that are engaging and familiar for different age groups	Plot selection	Being gender sensitive	Producing age appropriate illustrations	TOTAL
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8
No	No	No	No	Yes	Yes	Yes	No	3
No	Yes	No	Yes	Yes	Yes	Yes	Yes	6
Yes	Yes	Yes	Yes	No	Yes	No	Yes	6
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8
No	Yes	Yes	Yes	No	No	Yes	Yes	5
No	No	No	Yes	Yes	No	No	Yes	3
TOTAL								
3	5	4	6	5	5	5	6	

The lines in light red in the table indicate the individuals that Save the Children has not worked with before. These individuals have received the same amount of training on average as the individuals that Save the Children has worked with before. However, each of these areas also had a follow up question of whether or not they had **applied** the behaviour that they had learned in the training. The negative answers **only** came from the individuals that Save the Children hadn't worked with before. This may reflect the merit of the training received or an individual's preference for applying the lessons learned in the training. Further exploration relating to the publisher training and resultant behaviour change would be beneficial for this project.

This table shows that some areas are consistently not being covered in training sessions. For example, we would expect that font size would be addressed in training about word length, and producing age appropriate illustrations. The fact that it was not demonstrates gaps in the content of the training provided. This suggests that training needs to be more closely mapped to quality criteria.

Despite 5 out of 7 individuals reporting that they have received gender training, the qualitative transcripts indicated that individuals had a very poor understanding of what 'gender' is. None of the responses asking participants to explain what they learned or how they applied the gender training, understood or engaged with the basic tenets of what it means to be gender sensitive.

### **Valuable Learning**

Of the participants we interviewed, the majority of participants cited that the thing that they found most valuable about their previous training experiences was the emphasis on simplicity: "For children aged under 3, the books should have big pictures and big letters." When participants used the term 'simplicity' this was most often connected to the concepts of simplifying the text in terms of using shorter words and sentences, using more simple images comprised of one shape and primary colours, and positioning the text and images in a more simplistic way on the page. For example, one participant reported that "placing the text and pictures in children's books is very significant because it relates to the age and the development milestone of the children". Another participant reported that "I have learnt that the size of the font changes according to how old the children are; the length of the article (the number of words and pages); sizes of the books and pictures, and input languages." Awareness of different mnemonic techniques was also cited by a few respondents e.g. repetition of words.

### **8.3 Understanding what Makes a Book a 'Quality Book'**

We asked participants what their understanding of a 'quality' book was. Whilst the dominant 'node' or criteria that participants responded with related to the physical materials of the book, the second most common criteria was that the book needed to be 'visually engaging' to be 'quality'. The third most common reason was that the content had to be engaging. Most individuals provided responses that discussed a range of criteria as contributing to whether a book is 'quality' or not, demonstrating a holistic understanding of 'quality' and an appreciation that it is more than just materials. In other dialog, where the term quality was not explicitly raised, the dominant node was the 'visual attractiveness' of the book. The terms most frequently associated with the node 'visual attractiveness' were:

- That the book is colourful
- That the children can identify the pictures and with the pictures e.g. "When drawing we have to make the characters look and do things that are suitable for children that age. When we do this children will feel that those pictures are like them."
- That the illustrations are age appropriate and simple

### **8.4 Behaviours Demonstrated by Publishers**

### **Impetus for Behaviour**

Participant dialogs were coded into three areas, with different areas being present within one transcript:

- Being focused on improving learning outcomes for children
- Being focused on having efficient processes and standards.
- Being focused on improving book sales for the company

Overwhelmingly seven out of nine individuals had dialogs that were predominantly focused on learning outcomes. When we look at the overall distribution of concepts across all the transcripts, only 21% of relevant dialog focused on book sales, 29% of relevant dialog focused on processes and standards, and 50% of dialog focused on learning outcomes for children. This identifies the method, tone and associations the trainers need to use to get the publishers to identify with our objectives.

### **Soliciting Feedback**

Seven of the nine individuals are soliciting feedback on their work from those that have purchased the books in an effort to improve the quality of the books they are producing. Two individuals went further and discussed a more participatory method of writing books, inviting children to participate in their creation.

Feedback was positive for 5 out of the 7 companies/individuals. The positive feedback focused on font clarity, size of the book, and the opportunity for bonding with their child, and the negative feedback focused on the dark colours used and the high price of the books. Only the individuals that Save the Children hadn't worked with previously gained negative feedback, however, with such a small sample size we cannot draw any conclusions from this, only correlation.

In this sample there was no relationship found between the behaviours, attitudes and knowledge discussed and the number of children the individual had, the number of children under 6y.o that that individual had, or the number of books they have written for age 0-3 or 4-6y.o.

### **8.5 Market Demand**

The concept of 'demand' was addressed several times in the course of the survey. Two-thirds of the participants thought that demand for books was increasing, one participant said that demand had always been high, one said that demand had always been limited, and the other remained on the fence. Promisingly the partner for phase 1 and 2 First Read, noted that they believed that demand was increasing for children's books.

The dominant ideas associated with demand were:

- That the practice of reading is becoming more common place as parents are increasing in awareness that they should be reading with their child
- This is leading to companies looking to exploit a gap in this emerging market. However, one source said that this should be caveated: there is limited supply of books available for parents to access, but there is still low (albeit increasing) demand; however supply is still lower than demand.
- And that supply (as opposed to demand) is also increasing due to a sector wide drive for more and better quality children's books, driven by NGOs and other organisations.

There was also a correlation of 'demand' with the concept of 'exhibitions' and trade fairs. Identifying what sort of 'buyer' attends a trade fair would be useful information for Save the Children to identify if this is a viable distribution method to reach *our* target market. One participant did mention that distribution through schools or ECCD centres could at times be difficult if the owner or highest authority was needed to make a purchasing decision, reporting that it was often difficult to identify in

a timely way the individual with decision making power: “I used to bring the books and sell at some primary schools but every Head teacher always claimed that official administrative permission from the most senior level was necessary before purchase. If they didn’t have this then they wouldn’t allow us to sell books to them. But asking permission from the most senior level was not easy because there are many steps to get to meet them. Even now I don’t know how to contact them and ask permission!”

Choosing a location for book sales also has a connection with customers access to book retailers. Only three individuals sold their books in locations that had been specifically chosen as ‘easy access locations for their target market. Further exploration regarding the *location* of these markets is necessary to understand whether these books are accessible for our beneficiaries.

### **The Cost of Books**

Pricing did not seem to be a dominant issue in the transcripts. Pricing was only mentioned by two sources. One source said: “*In our countries the readers (adults) always want the text a bit long, because that is suitable for the price that they spend on the books*”. This is an interesting concept indicating that parents aren’t aware of what sort of content is most suitable for children of different ages. However, generally it was felt by the participants that pricing is appropriately targeted for the majority of customers. Understanding if this is still a feasible cost for the Save the Children beneficiaries will require further investigation.

### **Languages**

There is a strong preference for children’s books in Khmer rather than English amongst the participants interviewed. Those that preferred producing in Khmer reported that they felt that children should learn in their mothertongue, and that there was a gap in the market in terms of the provision of Khmer children’s books. Those that cited that they use English in some of their books, often reported that it was because they wanted to export their books to a wider global market.

# SECTION 3: Survey with ECCD Teachers and Classroom Observation

## 9. Methodology

First Read Cambodia works through existing structures in the community, by collaborating with pre-school teachers/ECCD teachers and commune committee for women and children to support parenting sessions and mobilize the community. Understanding the current practices of ECCD teachers is essential in understanding how we can best engage them in the project.

In this report we will be using the term 'teacher'. We use this to mean someone who organises educational activities with the children. However, this is typically not a formally trained teacher in this context. This is because the classes we will be discussing in this report are ECCD classes for children aged 4-5y.o. Some studies may prefer to use the term 'ECCD staff' rather than teacher for this reason.

### 9.1 Evaluation tools

The classroom observation took place over 10 days in July 2016. One individual issued the tool to all participants across a wide range of locations. There are four parts to this survey:

- Profiling of the teacher and class
- Observation of the teacher doing a reading activity, if they do one.
- Classroom environment observation
- Interviews with 5 pupils in the class to attempt to validate some of the teacher responses

The teacher gains a score across five domains: (1) frequency of use of storybooks, 2) teacher behaviour observation, 3) classroom environment observation, 4) number of books in the classroom, 5) variety of print in the classroom) as well as a total score based on the average responses of the students. This will then be their classroom observation total score.

This research has been conducted by one individual following a week of training to ensure consistency in approach. The data has been analysed in Excel.

### 9.2 Sample

This survey was issued in twelve classrooms to twelve teachers and 64 students aged between 4 and 5 years of age.

### 9.3 Data analysis

Using Excel the data has been analyzed using descriptive statistical approaches, but lacks statistical significance due to the small sample size. Basic qualitative analysis was performed looking at key trends and narrative sequencing but this analysis did not use the support of a software package like NVivo.

### 9.4 Limitations

The spread of respondents is not representative of ECCD teachers across our target area, as such it can present interesting case studies and we can see how these individuals change their views over time but the data is limited in its use. Working through and with ECCD teachers is a new area of work that the Cambodia First Read team are piloting on a small scale, as such these findings will be useful for refining the scope of the monitoring tools. **These findings are not statistically significant and 'findings' must be considered in this light.**

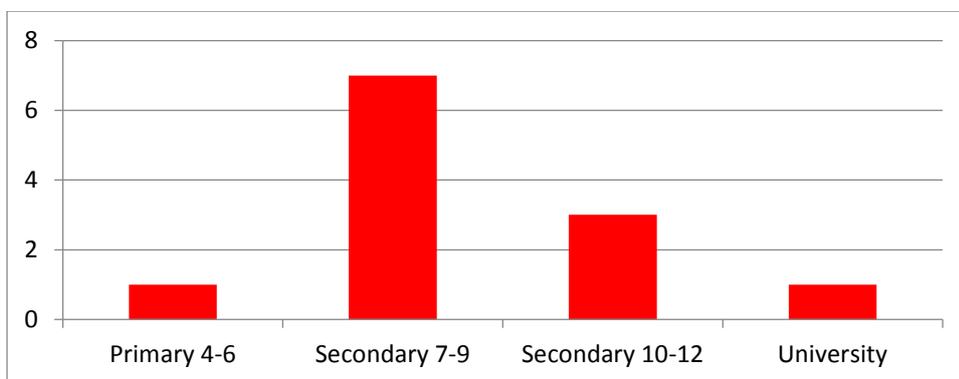
## 10. Classroom Observation

### 10.1 Teacher and Class characteristics

For this survey we interviewed 12 teachers, all of the teachers were female (not by selection). The average age of the teachers was 38 although the range was from 21 to 55. Class sizes consisted of 33 students on average, with the largest class being 55 and the smallest 20. However, there have been few correlations with class size and other behaviours or the learning environment within this survey sample.

The sex distribution within the class was very comparable, although there were slightly more girls than boys on average (16.75 girls per class on average, and 15.75 boys per class on average).

The education levels for this sample are presented in the table below. Most of the teachers have received education for the first 3 years of secondary school.



### 10.2 Teaching Practices

#### Frequency of Reading

Teachers are using storybooks with their classes on average 2-3 times per week, only three teachers are reading with their class every day and one teacher is reading with their class once a fortnight. The individuals with higher levels of education read with their students more frequently, and the individual that read with their class once a fortnight was the same individual that had a primary level education. The responses from the students corroborated with the teacher responses, with students typically saying that their teacher reads with them a few times every week.

#### Observation of a Reading Exercise

Typically teachers demonstrated most of the practices during a reading exercise. Prior to the enumerator attending the school, warning that we wanted to observe a reading exercise was not given, demonstrating that the teachers performed this exercise of their own initiative. Instead we gave forewarning that we wanted to observe a Khmer language class. Only one teacher didn't perform a reading exercise with the students (either getting the child to read independently or reading with the students).

The 'teaching practices' section of the survey typically scored higher than the classroom environment section. Understanding whether this is because the teachers were being observed and had time to prepare is unclear.

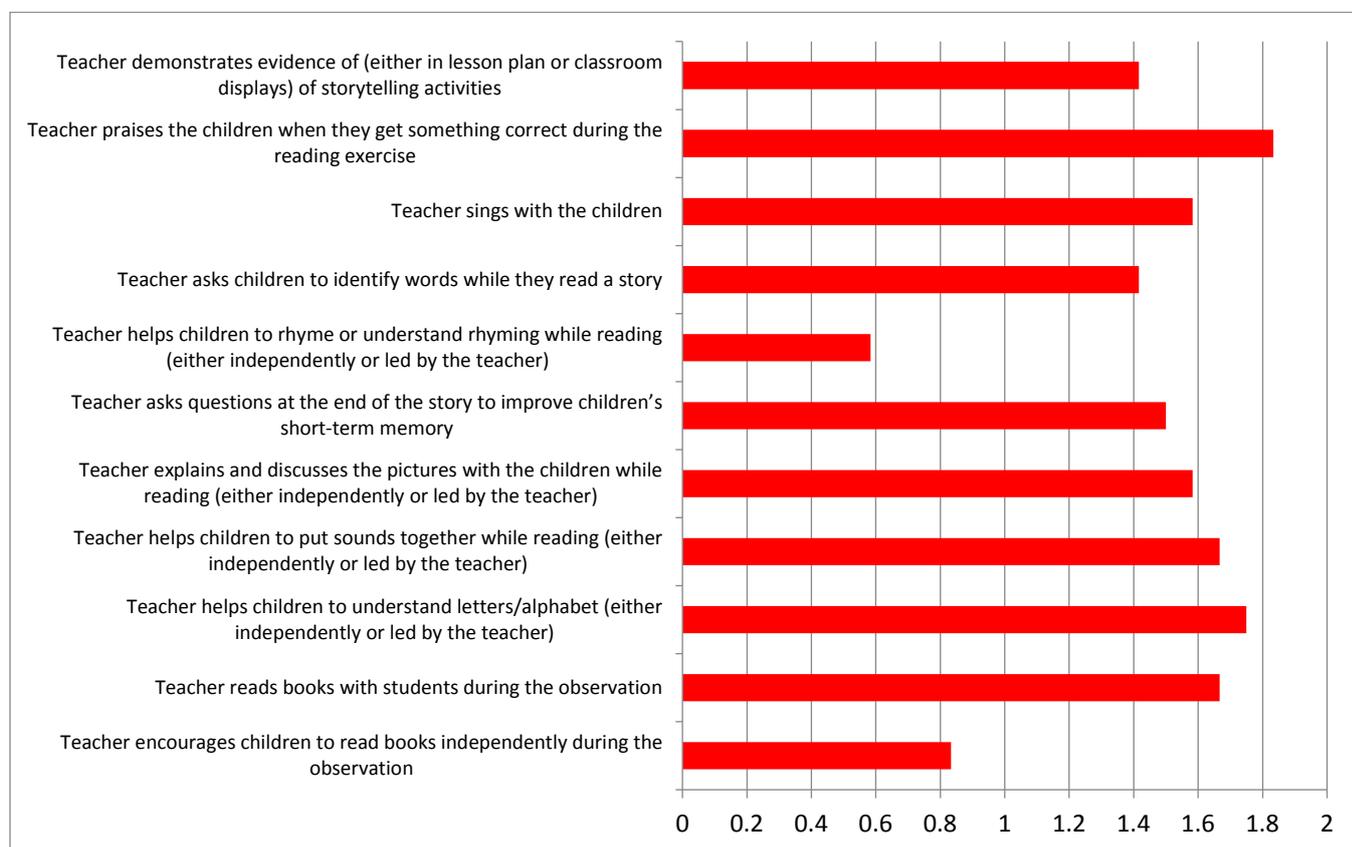
The table below highlights the average frequency of behaviours on a three point scale. Teachers gained a score between 0-3 based on the frequency and the quality of the activities that they performed. The scoring was:

- Not present (0)
- Present but in small quantities (1)
- Present sufficient (2)
- Present excellent (3)

The table shows that the activities that teachers scored higher on included giving the children praise in the reading exercise, doing a reading exercise, and talking to students about the letters and alphabet during the reading exercise. These findings match very closely to the behaviours most frequently performed by parents as found in Section 6.

The behaviours that scored the lowest were:

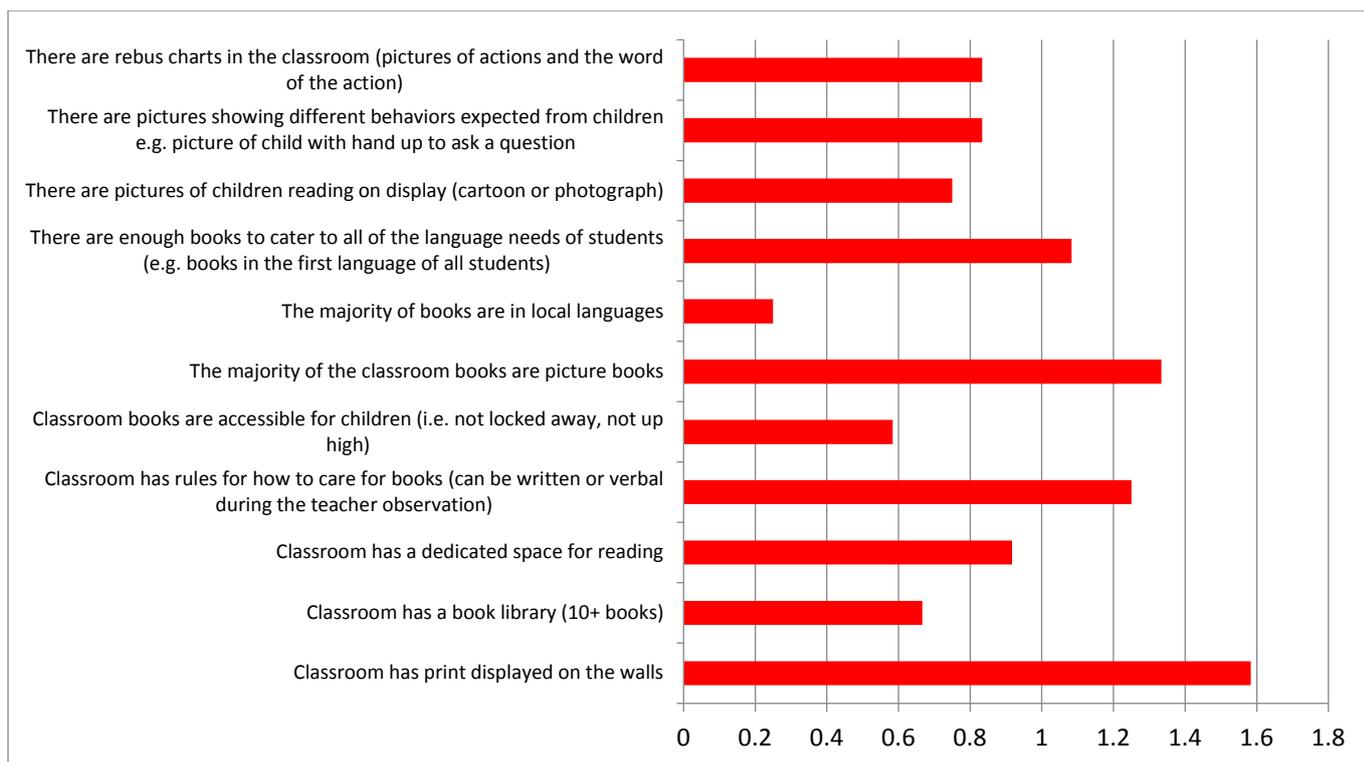
- Encouraging children to read independently
- And talking or stressing rhyme when reading



Teachers that performed highly in the teacher practices section of the survey were more likely to be the teachers that read every day with their students or have a higher level of education.

### 10.3 Classroom Environment

Typically teachers had a lower classroom environment score than their teacher practices score. However, both of these survey sections asked the same number of questions and used the same scoring system.



The behaviours that scored highest on the classroom environment score included having print on the walls, having rules about how to care for books and resources, and that the majority of classroom books were picture books. The areas that had the lowest scores were:

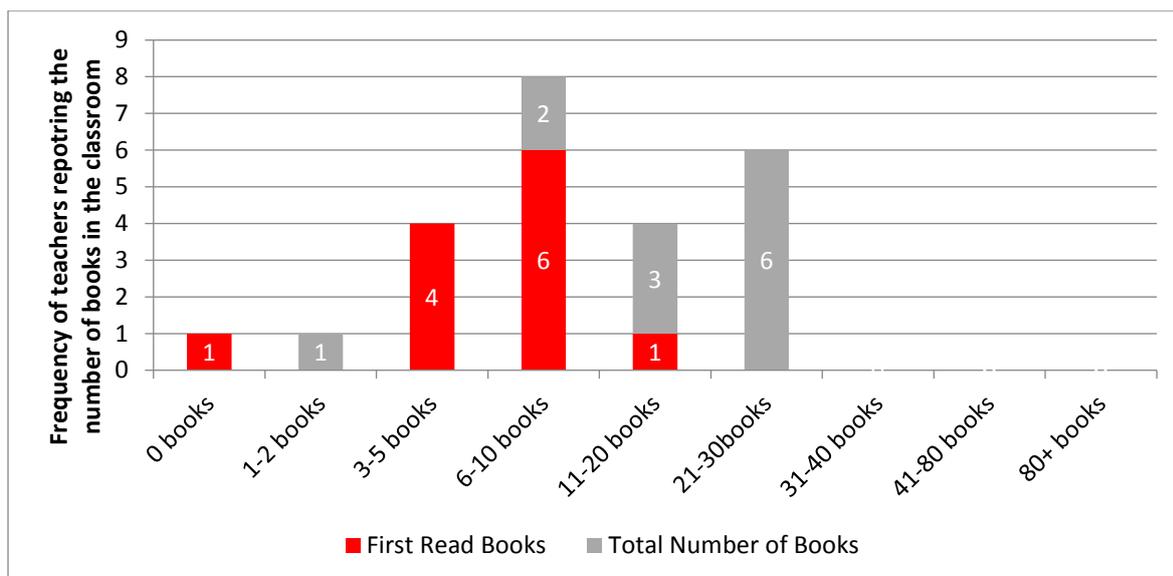
- The majority of books are in local languages
- Classroom books are accessible for children (i.e. not locked away, not up too high)
- Classroom has a book library

These low scoring areas complement the objectives of the Save the Children First Read project, indicating that there is a need to change these aspects of the classroom environment.

Remembering that this is a small sample size so we can only identify correlations, some relationships were observed. There was a relationship between having a small class size and scoring a lower total classroom environment score. Those with a class size of between 20-25 pupils scored a classroom environment score of 4.25 on average (out of a potential score of 33), those with class sizes between 26-55 achieved an average score of 13. Understanding why some class sizes are smaller would be an important next step for the monitoring activities, perhaps these schools are more remote or maybe the community does not value the ECCD centre education so the school staff feel demotivated in their role leading to a lack of consideration for the classroom environment. This will require further exploration.

### Having Books in the classroom

All of the classrooms that we visited had First Read books except one. Classrooms had more books than they had First Read books, and none of the classrooms only had First Read books. This indicates that school staff are purchasing or being gifted other books. Furthermore, all teachers replied that their school had a budget for purchasing books. The frequency of books and First Read books is shown in the table below:



Whilst we can see from the table that most classrooms have between 6-10 books, when we observed where the books were kept only seven classrooms have a book library, and only five classrooms have books in a place that are accessible for children (e.g. not too high up, not locked away, not in another room).

### Classroom Print

We observed the classrooms for the frequency of different types of print in the classroom. We were looking for seven different types of print ranging from signs, to calendars, to storybooks and textbooks. We then graded the frequency that each type of print appeared in the classroom:

- Not present (0)
- Present but in small quantities (1)
- Present sufficient (2)
- Present excellent (3)

Whilst these headings are somewhat subjective in the distinction between small quantities and sufficient, the same individual completed the all of the classroom observation surveys ensuring that the classrooms are objectively graded based on the performance of the other classrooms. We also conducted training prior to the classroom observation survey where we visited and looked at pictures of different classrooms and graded them together, considering aspects like the size of classroom, the number of students etc. in how we graded each print frequency.

The maximum score achievable was 21. The modal score for this section of the survey was 5 and the average score was 5.5, the lowest score was 1 and the highest score was 9. These scores are incredibly low and highlight that the First Read program should focus on training teachers about the importance of having visible print in the classroom.

Most of the classrooms had a small number of print items and had a lack of diversity of print as well. However, the type of print that was observed the most was storybooks.

There was no relationship with the class size for this question, although having a low overall classroom environment score meant that participants were more likely to have a lower 'print frequency and range' score.

## 10.4 Interviews with Students

In total we interviewed 64 students. The children that we interviewed were all five years of age. The students gave both quantitative and qualitative responses that we then analyzed and cross-referenced with the teacher information. The responses from the children were overwhelmingly positive about their experiences in an ECCD center, focusing on the opportunities for play: “I am happy, I don’t want to go back home, I want to study here forever. I have many friends here so I can play a lot with them. When I stay at home I can’t play.” and their enthusiasm for learning: “When I read in class I’m not bored. I’m happy and want to read more, because I can learn.” Only two students expressed that they didn’t enjoy learning or that they wanted to go home.

One question that we would need to refine for endline was ‘how often does your teacher read with you, with a selection of closed responses’. Children found it easy to answer ‘never’, ‘often’ or ‘everyday’ but other responses were harder for the children to provide and thinking about the concept of time or ‘the last time’ was difficult for the children.

In general there was a link between higher child scores for the teacher and overall satisfaction and the ‘Teaching Practice’ observation score, this was true for both the qualitative and quantitative research: “I am happy to study, I am not bored. I like it when my teacher reads, she has a good voice. She draws things, like a home and an apple and she holds my hand while I draw. I want my teacher to read for me every day. Learning is not hard.” Typically higher student scores were linked to higher teacher scores for teaching practice. Although, there was one anomaly where the lowest performing teacher was rated very highly by the students. Further investigation into why this might be is necessary.

There was no relationship between and children talking about the need to get a good job and earn money and any teacher attributes (although it was linked to specific teachers). Repeatedly we saw comments like “I’m happy, I do want to study. It’s not difficult to study. I want to be a doctor and earn money to feed my mother.” These type of comments were linked to a handful of teachers, indicating that teachers have attempted to inspire and motivate children, but maybe not in the best way for the child. Associating a pressure to learn with concepts like family and poverty may cause stress and anxiety for the child, especially when they are only five years old. We anticipate that this may be a common problem so we would suggest that this is reflected in the Save the Children teacher training syllabus.

### **10.5 Classroom Observation Score**

The score from the classroom observation can be found in Annex B. There are no clear trends when the data is explored at this level. These scores are based on a five point Likert scale or a three point scale for the frequency, quality of presence of the activity or behaviour.

This breakdown will be a useful starting point for Save the Children’s engagement with teachers and will help us to prioritise our syllabus to reflect the activities that teachers are currently having trouble implementing.

# SECTION 4: Survey with Authority Figures and Key Stakeholders

## 11. Methodology

First Read Cambodia has established in Phase I a strong base of authority figures from the WCCC, POE, DOE and MOYES to be engaged with the training and coordination of the First Read project. Understanding authority figures perceptions of First Read and how it influences their wider behaviour, knowledge and attitudes will be important in understanding whether this project is sustainable.

### 11.1 Evaluation tools

The 'Authority Figure Survey' took place over 10 days in July 2016. One individual issued the tool to all participants across a wide range of districts. This tool is mapped very closely to the logframe indicators relating to authority figures (Outcome 3). The coding tree maps to the logframe outcomes and output areas that rely on authority figures being engaged and committed to the First Read project. These include:

- Increased budget for home-based ECCD activities
- Designing program with a home-based ECCD element due to the influence of First Read
- Demonstrating increased support and advocacy for First Read and a home-based ECCD approach
- Producing legislation
- Increasing their use of First Read resources like the parenting session guide or First Read books

We then mapped these areas to knowledge, attitudes and practices across these areas.

### 11.2 Sample

We have interviewed eight authority figures that are key stakeholders for First Read. These individuals are from either the Women and Children's Consultative Committees (WCCC), Provincial of Education (POE), District Office of Education (DOE), or Ministry of Education Youth Sports (MoEYS).

### 11.3 Data analysis

Using NVivo this data has been analysed using qualitative techniques. We have used sentiment analysis, frequency analysis and pattern analysis (using conditional matrices and proximity matrix analysis).

### 11.4 Limitations

The spread of respondents is not representative of all the authority figures involved in First Read. However, it gives us a sense of how attitudes, understanding and practices may vary between the MOYES and WCCC. These individuals will form interesting case studies as we follow up with them over the course of the project, understanding how First Read is influencing them. **These findings are not statistically significant and 'findings' must be considered in this light.**

## 12. Authority Figures Survey

### 12.1 Participant Characteristics

The individuals interviewed for this survey were identified as being of key importance to First Read. The individuals interviewed had the following roles:

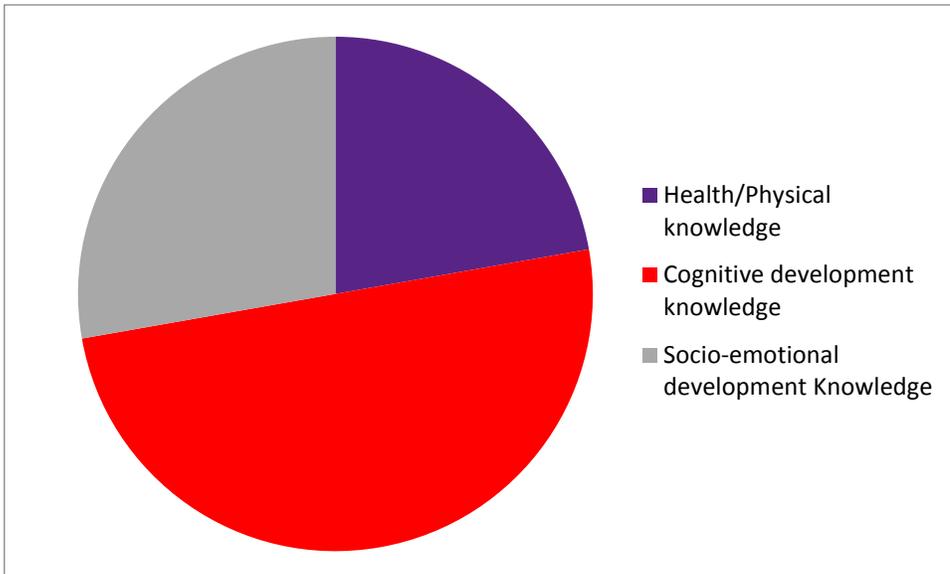
- **WCCC:** Preah Sdach
- **WCCC:** Kampong Sien
- **WCCC:** Preak Prasob
- **POE:** Prey Veng
- **POE:** of ECCD of Kompong Cham
- **DOE:** Preah Sdach
- **DOE:** ECCD Kampong Siem
- **MOEYS:** department of ECCD

All of the participants interviewed were female apart from the individual at the MOEYS. Their average age was 44 which is higher than the average age for any of the other baseline surveys. Individuals had on average 2 children, which is a smaller number than those that participated in the 'parent survey' and 'teacher survey'. Only three individuals interviewed had a child aged 0-6y.o.

Most of the individuals interviewed had worked in their respective districts or provinces for 25+ years, typically most of their adult life. This indicates that most of the participants have innate knowledge of the area.

### 12.2 Knowledge

The individuals that were interviewed are very experienced individuals with strong knowledge of ECCD and a familiarity with the First Read program, many had participated in phase I of First Read and operated in the intervention areas. The way that they conceptualize ECCD is typically in an integrated way, understanding the interconnected importance of health and physical, socio-emotional, and cognitive development. We coded all of the participants' language that demonstrated knowledge or incorrect information. This was then coded into three domains of health/physical, cognitive, and socio-emotional knowledge about ECCD. The individuals that we spoke to often had a role that covered all domains of ECCD. However, there was a clear preference for demonstrating knowledge of cognitive development (despite questioning not being targeted by domain or asking them to evidence knowledge). In most countries it is typical to see more of a preference towards discussing health/physical knowledge.



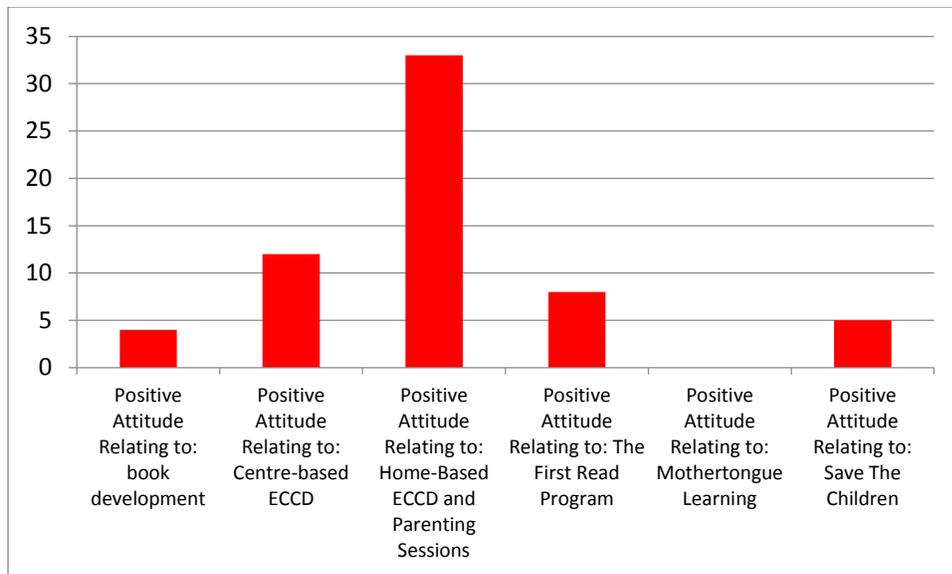
Unsurprisingly those with a training element to their role were more likely to have more technical knowledge of ECCD. The DOE and WCCC were more likely to have weaker technical knowledge (albeit still strong) than the POE or MOEYS. This may be because the DoE role is more focused on leadership and management of schools, while the POE role requires more technical knowledge and skills to build the capacities of schools and commune councils.

Three individuals provided information about the First Read program that was incorrect. However, this information related to specifics of the First Read parent training, when it concerned the general principles and approach of First Read the participants had very strong knowledge of the program. This is a testament to the First Read Cambodia team and the extent to which they have tried to keep authorities informed and engaged during Phase I.

Participants were most likely to have technical knowledge about the First Read books as opposed to any other resource from Save the Children e.g. evidence documents, position papers, training guides, syllabuses etc. If we are to achieve awareness and support for the *approach* of First Read rather than the material outputs then we must socialize a wider range of documents and resources during phase 2.

### 12.3 Attitudes

Attitudes relating to home-based ECCD were broadly positive (78%), commenting that they perceived home-based education as a better way to reach poorer communities, more value for money, and a good way for children to start learning from birth. Positive attitudes were coded across six areas using a deductive approach. The breakdown of concepts that were associated with a positive attitude are as follows:



Promisingly attitudes were very positive about home-based ECCD. Whilst the nodes in the table could be co-occurring this analysis found that the node of ‘positive attitude’, ‘positive attitude home-based ECCD’ and ‘positive attitude: First Read’ were related in 1/5 of all occurrences.

Negative attitudes were centered around three points:

- Not having an inclusive model that can support illiterate parents
- Parents not attending sessions regularly and dropping out of the program or losing the books
- Lack of evidence around First Read

Individuals felt that home-based ECCD often didn’t have a solution for how to train or include illiterate parents: “some parents are illiterate, it’s hard for them to read books. Those that are the poorest in society or those that are migrants don’t have time to teach children”. This could cause some of the high dropout rates from the parenting sessions. Some departments mentioned that they are trying to devise their own training plan for illiterate parents to address the training gap in First Read, as well as designing books that are easier for parents to use with their children if they are illiterate.

Participants mentioned the benefits of a home-based approach being that it is more inclusive and more equitable but that it leaves behind a section of society that are illiterate. Whilst their observation may have merit it is important to also be aware that when participants were asked about their objectives for ECCD they described an integrated and holistic approach, often citing the five fingers, but when participants talked about the difficulties of illiterate individuals not being included in the program their focus was just on reading. This First Read five finger package promotes 5 behaviours for parents to do with their child, only one of which would be a barrier for an illiterate parent. This could suggest that the facilitation of parenting sessions may stress the reading dimension of the First Read approach, that authorities have been educated about the reading element of First Read more than other aspects, or that this highlights a limitation of First Read and we need to design a distinct training approach for when working with illiterate parents.

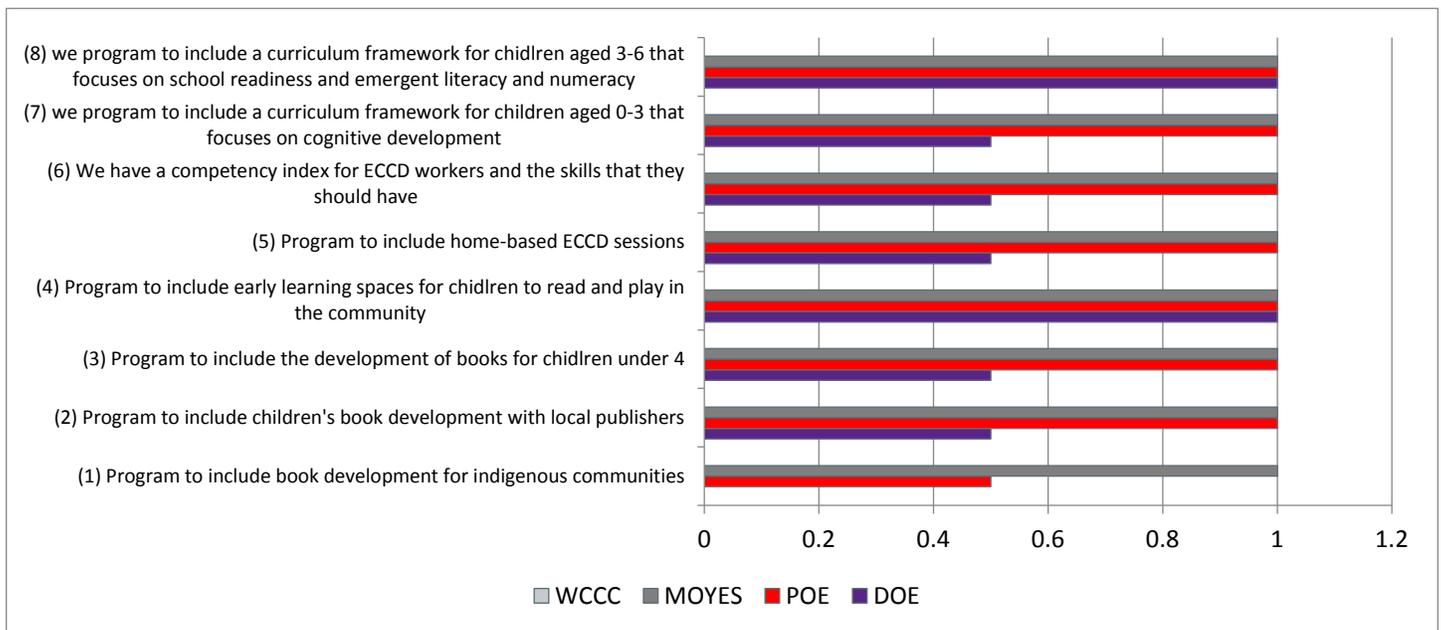
Secondly, negative attitudes were associated with parents not attending the sessions, the MOYES said, “**Its negative that the Ministry has trained and given materials to parents, but they didn’t use them, they didn’t teach their children, and they lost the materials**”. Words associated with the low attendance rates included: ‘hard to keep’ ‘discouraged’ and ‘depressed’ about people leaving the home-based programs. Many also linked this concept to the idea that there are gaps in the evidence bases for home-based approaches due to low attendance rates. This means that lobbying for budget increases for home-based ECCD can be difficult due to this gap in evidence.

The lack of evidence and awareness that some areas did not have high attendance rates during phase I has led to the roll-back of First Read in some areas: “**Some communes have stopped the program. It made core teachers depressed to give training to mother group when the number of participants was decreasing. However, community pre-schools have been supported by commune budget.**”. Without addressing the reasons why parents might not attend the parenting sessions regularly, moving the First Read program to different areas may simply result in a repetition of phase I attendance rates.

### 12.4 Practices

Practices/behaviours were not coded in a positive or negative way. For key stakeholders their journey to adopting the behaviours that STC advocates may be a varied and complicated process, for this reason we code behaviours as simply ‘present’ or an ‘unintended spillover’ if negative and detrimental. Absence of a behaviour is not coded for.

We asked individuals if they program considering the following things:



The table shows that the WCCC state that they do not do programming or are able to influence the programming in this way. This view was consistent across three WCCC individuals across three different

areas. The DOE do not program to include book development for indigenous communities<sup>13</sup>. Programming for the other areas depends on the location of the DOE. The POE and MOYES claim to consider all or nearly all of the programming areas that we asked about.

The main behaviour that key stakeholders are incorporating in their programming or strategies are an adaptation of the five fingers (to also include dancing, science, and social studies). This was echoed by 100% of participants and clarified by the MOEYS. Only one individual was confused about whether trends were towards an adaptation of the five fingers or implementing the five fingers as prescribed by Save the Children, this individual was from the WCCC. This highlights that there is a growing movement towards taking the Five Fingers principles and using them as a foundation to incorporate other issues into to develop an ECCD framework.

The other dominant programming trend was ‘school readiness’ or ‘getting children ready for school’. Getting children ready for school is typically associated with the older age bracket of First Read (4-6y.o), however, the dialogs around programming spoke very inclusively of both age brackets (0-3 and 4-6y.o).

At the moment attribution to First Read is not present in dialogs, although positivity for First Read is.

### **Publishing Documents Advocating Home-Based ECCD**

ECCD is part of the national policy on Early Childhood Care and Development and is part of the National action plan on ECCD 2014-2018. Now is an ideal time for Save the Children to be acting as influencers, demonstrating the evidence for a home-based ECCD approach. Seven of the eight participants mentioned that they have contributed towards documents that advocate home-based ECCD.

### **Budget Changes**

We asked all the individuals interviewed if they knew of any budget changes and to explain the difficulties or successes they have had in lobbying for changes in ECCD budgets. Most individuals expected an increase in the budget for ECCD activities, with the focus being on book development for ECCD (be in center-based or home-based).

	<b>Increase</b>	<b>Decrease</b>
<b>Budget change has occurred</b>	2	0
<b>Budget change is highly likely to occur</b>	3	0
<b>Budget change may occur</b>	2	1

Despite this optimism that change is occurring, it is not known the extent to which these are pivotal budget changes or minor incremental changes. The node ‘unintended effects’ found that budget changes are unlikely because the government perceives NGOs to already be committing sufficient budget to home-based ECCD (MOYES): **“National budget is increased from year to year, but only for public pre-schools.**

<sup>13</sup> <http://www.iwgia.org/regions/asia/cambodia> and <http://www.icso.org.kh>

For community pre-schools and home-based approaches it is based on NGOs partners such as Save the Children and other NGOs and their funding/annual budget”. Indicating that unless there is a gap in investment in this area then it is unlikely that authorities will commit funding to an area that is already being funded by other organizations. In addition, a lack of evidence of the merit of home-based approaches makes budget changes in this area difficult: “It’s hard to get data and statistics, it’s also hard to lobby commune, national, and development partners for support on the budget because you have to educate them of the benefits first”.

## Unintended Effects

We coded for any unintended effects that might have occurred using an deductive approach. We set up codes for:

- Risk of unsustainability
- Hurtful or offensive comment
- Racism
- Sexism
- Concerns for child safeguarding
- Incorrect knowledge promoted
- Risk of reputational damage for Save the Children

But the only area that was coded against was ‘risk of unsustainability’, 5 of the 8 participants mentioned this due to their reliance on Save the Children and other NGOs operating in the area. One individual said: “If there had not been any support from NGOs, we would not have been able to have training for core teachers, parents groups - the ministry budget just could not support with that. We would need costs to cover training of core teachers, home visits to mother group members, interviews - the commune doesn’t have money for that. If we don’t have NGO partners, this program has only the name.”

## 13. Recommendations

### Baseline: Recommendations

The recommendations following this baseline study are categorized into three sections: Parenting session syllabus changes, engaging beneficiaries and stakeholders, and areas for innovation. These recommendations will be further discussed in an online learning workshop to ensure that the SCUK and CO team develops clear next steps for First Read.

#### Parenting Session Syllabus Changes

- There is a misunderstanding in the community that parenting is simple and you couldn't learn anything new at a parenting class, and that children can be too young to learn. **Door to door activities, flyers, posters, community engagement with champions are all activities that need to occur to encourage parents to take interest and attend parenting sessions** – potentially even showing them the evidence that attendance of parenting sessions leads to better parenting practices and improved child development. Parents need to be aware of the added benefit of parenting classes before they will commit to attend them as well as seeing how the sessions relate to their needs (following a needs assessment).
- There are evident problems in children's nutritional intake with a lot of sugary foods being consumed. **More nutritional information in the parenting sessions could be useful.**
- Understanding *what* method of training and content provision is most effective in **reducing instances of corporal punishment when parenting** and whether parents can *attribute* the reduction to our program (i.e. is it due to our positive discipline topic, or improved parenting generally?). Providing parents with **alternative coping mechanisms or discipline approaches** is necessary if we want parents to change their behavior and providing the space for parents to practice and model these behaviors as much as possible. For example, we could spend more time focusing on providing parents with alternative discipline methods (module 'Positive discipline-based child development'), for example encouraging parents to remove themselves from the situation, or talking about emotions with the child e.g. 'why did you do that, how did that make you feel, it made Mummy feel very sad, how could you have behaved differently in a way that would have made Mummy happy?' and encouraging parents to model, practice, and create 'triggers' for using these other methods.
- Parents were less likely to tell stories to their younger versus their older children. **Demonstrating this behaviour and providing examples of storytelling content that parents can replicate should be included in the parenting syllabus.** Role playing this unfamiliar parenting approach in the sessions with other parents would be useful as getting parents to critique each other would be useful.
- Clear explanations of the **order** in which you teach children basic literacy skills e.g. starting with the alphabet, then phonetics, then simple, short, high-sight words.
- Explanations of both the socio-emotional and cognitive milestones for children, not just the physical milestones.

- Associating ‘preparing the child for learning at school’ with skill development rather than material provision.
- Referencing parents’ current creative behaviours (drawing pictures and labeling them for children), we need to build on this to evolve the behaviour into ‘making books’. **Trialing and practicing this behaviour during the parenting sessions would be useful for parents.**

## Engaging Beneficiaries and Stakeholders

### Parents

- Parents reported low attendance or no attendance for the ECCD classes because of a lack of formal structure e.g. no invitation to the class, unclear communication about the start time of the class, and a lack of information about the focus of the class. **Ensuring that communication is clear about the purpose, timing, content, as well as motivational – encouraging parents to attend will be a priority to maintain attendance. Soliciting feedback about session and tailoring them and adapting them to meet parent needs e.g. adding content, changing delivery styles to meet learner needs, varying the venue, varying the duration of the sessions etc.**
- Only 36% of parents are enrolling their children in ECCD centers, we want children to receive the benefits from home-based ECCD and center-based ECCD. **A parenting session trip to an ECCD center, play session for the children, and a question and answer session with the teacher** would be useful to broaden parents understanding of the importance of ECCD.
- There is a need to draw on behavior change theory to motivate parents to use First Read books and not lose these materials. **For example, when we distribute books through parenting sessions we should get parents to sign a contract saying they will look after them. Other approaches can include parents needing to keep book usage logs with stickers, if they don’t use the books regularly we will allocate the books to another parent instead.** This has been very effective in behavior change, even when program staff don’t follow through on this, this is based on the idea that once something is in your possession you will try harder to hold on to it as you place a higher value on it.
- **Specifically target first time parents with a more bespoke syllabus** as we have identified that there is a difference in the behaviour between first time parents and parents that engage their children, irrespective of age, in the same way. Most people find it easier to change a behavior if they have a **role model** that they can model their behavior from, this person should be someone that they look up to. Once we can see which parents are expressing positive behavior we can assign parent buddy groups (groups of parents that organize their own meeting outside of the First Read sessions, where children can play and adults can discuss parenting). This will help first time parents to practice modeling their behavior on their ‘buddy’ who is already demonstrating good behavior.

### Publishers

- Identifying the most **appropriate areas to sell the First Read** books so that they are in locations that are accessible for our beneficiaries is essential.

### Teachers

- Educating teachers and school leadership about the **importance of print in the classroom** and helping teachers to create print displays in their classrooms. For example showing teachers our evidence that more print in the classroom helps children’s learning as well as hosting sessions with teachers about using print in the classroom, for example having a card with the word ‘door’ stuck on the door, and the teacher sounding it out phonetically to the children every day before they exit the door to go to lunch.
- Helping to **change teacher and school leadership attitudes relating to children being able to easily access books** and managing expectations that some books may get damaged or lost in doing so, but that it will be beneficial for children’s learning outcomes. The purpose of this is to encourage school leadership to have books in accessible locations for the children and for children to borrow books and continue their learning beyond the classroom. If school leadership were to make this behavior change but weren’t prepared for books to get damaged then this shock could trigger them to undo their change or to have a negative perception of the program. This activity helps us to change behaviours whilst managing expectations.

### Authority Figures

- Authority figures commented that they were adapting the First Read syllabus to also include dancing, science and social studies. **First Read staff should continue advocacy efforts by providing support to this syllabus adaptation.**
- There is a risk that following Phase 2 authority figures may not be able to take on responsibility for running the First Read program. This is for two reasons: 1) not prioritizing budget allocation to home-based ECCD, 2) wanting to delegate responsibility for non-center based ECCD to NGOs. **Advocacy efforts need to demonstrate that home-based ECCD is a cost-effective, value-for-money approach and that there is a clear evidence base for First Read.** Continuing to include and engage authority figures is essential.
- Authority figures mainly demonstrated knowledge of First Read books, there is a need to **share the other resources** with them including the syllabus, evidence documents, training guides, position papers etc. to keep them engaged.

### Areas for Innovation

- Delivering meaningful gender training to publishers that moves beyond ‘gender tokenism’ and ‘disability tokenism’ in children’s books, to more **gender transformative** illustrations, themes, and dialog.
- Interviewing teachers more regularly as part of our monitoring to understand how best to assist and support them.
- Understanding how to manage competing interests with publishers wanting to produce in English to meet global demand and Khmer to meet local demand. Then getting school leadership and publishers to communicate with each other to begin to **understand the importance of having books in local languages in the classroom**
- Authority figures expressed concern that illiterate parents weren’t engaging with the program. **It may be necessary to have two sets of resources that meet the different needs of illiterate and literate parents. In addition, illiterate parents might need more motivation** as the qualitative research showed that illiterate parents have more self-doubt about their parenting abilities than

literate parents. In addition we should be strengthening our messaging that most activities do not require literacy.

## 14. Appendix A. Multivariate regression results

Table A1. Multivariate equity analysis with CREDI outcomes

VARIABLES	(1) Motor	(2) Cognitive	(3) Social- emotional	(4) CREDI Total
Child age (mo)	0.0125*** (0.000648)	0.0214*** (0.000520)	0.00891*** (0.000422)	0.0143*** (0.000423)
No. HLE activities	0.0106** (0.00394)	0.0105** (0.00353)	0.00544 (0.00347)	0.00886*** (0.00236)
Home possessions	-0.00284 (0.00445)	0.00130 (0.00418)	0.00615 (0.00424)	0.00154 (0.00293)
Father education	0.0104* (0.00488)	0.0123** (0.00374)	0.00763* (0.00378)	0.0101*** (0.00286)
Discipline	0.0243*** (0.00688)	0.0165** (0.00564)	0.0104* (0.00430)	0.0171*** (0.00422)
Food variety	0.0147*** (0.00319)	0.00914*** (0.00200)	0.00354* (0.00145)	0.00913*** (0.00183)
Diarrhea in past 2 weeks	0.00659 (0.0146)	-0.0198* (0.00965)	-0.0292** (0.0103)	-0.0141 (0.00810)
Constant	0.287*** (0.0246)	-0.00204 (0.0185)	0.384*** (0.0153)	0.223*** (0.0136)
Observations	434	434	434	434
R-squared	0.788	0.900	0.677	0.901
Adjusted R-squared	0.785	0.898	0.671	0.899

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table A2. Multivariate equity analysis with IDELA outcomes

VARIABLES	(1) Motor	(2) Literacy	(3) Numeracy	(4) Social- emotional	(5) IDELA Total
Child age (mo.)	0.0174*** (0.00154)	0.00726*** (0.000996)	0.00982*** (0.000877)	0.00646*** (0.00126)	0.0102*** (0.000995)
Enrolled in ECD	0.133*** (0.0279)	0.116*** (0.0186)	0.0742*** (0.0183)	0.0752* (0.0305)	0.0996*** (0.0190)
No. HLE activities	0.0105 (0.00562)	0.00517 (0.00354)	0.0128** (0.00401)	0.00606 (0.00647)	0.00861* (0.00404)
Home possessions	0.0255* (0.0105)	0.00682 (0.00832)	-2.31e-05 (0.00867)	0.00923 (0.0120)	0.0104 (0.00731)
No. reading materials	-0.00180 (0.0112)	0.0142* (0.00692)	0.00951 (0.00798)	0.00154 (0.0115)	0.00586 (0.00763)
Father education	0.0164 (0.0130)	0.0173* (0.00775)	0.0204** (0.00700)	0.0195 (0.0109)	0.0184* (0.00704)
Diarrhea in past 2 weeks	-0.0356 (0.0297)	-0.0341 (0.0220)	-0.0366* (0.0181)	-0.0586* (0.0289)	-0.0413* (0.0186)
Constant	-0.667*** (0.112)	-0.212** (0.0731)	-0.337*** (0.0600)	-0.0789 (0.103)	-0.324*** (0.0734)
Observations	367	367	367	367	367
R-squared	0.468	0.397	0.421	0.150	0.474
Adjusted R-squared	0.457	0.386	0.410	0.133	0.463

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table A3. Multivariate equity analysis with IDELA outcomes (negative discipline)

VARIABLES	(1) Motor	(2) Literacy	(3) Numeracy	(4) Social-emotional	(5) IDELA Total
Child age (mo.)	0.0174*** (0.00150)	0.00722*** (0.000989)	0.00980*** (0.000862)	0.00644*** (0.00121)	0.0102*** (0.000961)
Enrolled in ECD	0.134*** (0.0276)	0.117*** (0.0188)	0.0754*** (0.0182)	0.0761* (0.0303)	0.101*** (0.0190)
No. HLE activities	0.0176 (0.0113)	0.00726 (0.00711)	0.0226** (0.00813)	0.00731 (0.0119)	0.0137 (0.00776)
No. negative discipline activities	-0.0188 (0.0100)	-0.00646 (0.00718)	-0.0105 (0.00635)	-0.0200 (0.0108)	-0.0140* (0.00677)
Home possessions	0.0267* (0.0105)	0.00733 (0.00835)	0.000804 (0.00864)	0.0105 (0.0119)	0.0113 (0.00726)
No. reading materials	-0.00254 (0.0111)	0.0143* (0.00694)	0.00905 (0.00810)	0.00120 (0.0116)	0.00550 (0.00765)
Father education	0.0149 (0.0132)	0.0169* (0.00788)	0.0195** (0.00704)	0.0181 (0.0109)	0.0173* (0.00719)
Diarrhea in past 2 weeks	-0.0286 (0.0294)	-0.0317 (0.0216)	-0.0333 (0.0173)	-0.0505 (0.0286)	-0.0360* (0.0178)
Constant	-0.602*** (0.115)	-0.183* (0.0733)	-0.292*** (0.0629)	-0.0107 (0.101)	-0.272*** (0.0728)
Observations	367	367	367	367	367
R-squared	0.471	0.397	0.422	0.156	0.477
Adjusted R-squared	0.459	0.384	0.410	0.137	0.466

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

## 15. Appendix B. Classroom Observation Scores

Name	Score how often do you use storybooks with your students	Score teacher behaviour (observation)	Score classroom environment (observation)	Score number of books in the classroom	Score variety of print	Mean Child Score	Total Classroom Observation score
Teacher 1	3	15	11	4	4	6	124.6
Teacher 2	3	22	16	3	5	6.75	147.55
Teacher 3	5	21	3	4	6	7.2	144.12
Teacher 4	3	12	6	4	6	7.2	136.12
Teacher 5	3	16	10	4	5	7.6	148.96
Teacher 6	2	18	13	4	8	7.6	155.96
Teacher 7	5	20	6	3	3	8	153.8
Teacher 8	2	14	8	2	3	7	131.2
Teacher 9	1	12	22	3	6	5	117
Teacher 10	5	22	13	2	9	6	138.6
Teacher 11	2	9	11	4	9	7.75	148.15
Teacher 12	3	9	2	1	2	no child score	
<b>AVERAGE SCORE</b>	<b>3.08333333</b>	<b>15.83333333</b>	<b>10.08333333</b>	<b>3.16666666</b>	<b>5.5</b>	<b>6.9181818</b>	<b>140.55091</b>
<b>MAXIMUM POSSIBLE SCORE</b>	<b>5</b>	<b>33</b>	<b>33</b>	<b>5</b>	<b>33</b>	<b>8</b>	