Save the Children International – Afghanistan Country Office

ECCD Research Report

International Development and Early Learning Assessment(IDELA)

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ACRONYMS

IDELA	International Development and Early Learning Assessment
ECCD	Early Child and Care Development
MoE	Ministry of Education
SCI	Save the Children International
MEAL	Monitoring, Evaluation, Accountability and Learning
ELM	Early Literacy and Math

CONTENTS

EXECUTIVE SUMMARY

This study provides a cross-sectional summary of young children's skills and development in Faryab and Sar-e-pol provinces. Save the Children's International Development and Early Learning Assessment (IDELA) was used to measure children's early development and learning and a caregiver questionnaire was used to interview parents. Across the two provinces Faryab and Saripol. 724 children between 3 and 6 years old and their families were included in this assessment, half of whom were enrolled in an ECCD program and half of whom were living in the same villages but not enrolled in an ECCD program.

Including measures of children's family background is an important way to better understand the home learning environments to which they are exposed. This study found that families who had a child enrolled in an ECCD program were more likely to have child-friendly reading materials and toys, and were more likely to engage in learning activities with their children.

Within the group of children attending ECCD programs, frequency of attendance in home based ECCD and school based ECCD programs was found. Specifically, parents were asked about how long their children had been attending an ECCD program, how often they attended and for how many hours per day they were at the center. Children ranged from being enrolled in an ECCD program for a year to three years, and attending a two times per week to four time per week. Also, parents reported that their children attended ECCD programs for two hours per day while others reported as much as 4 hours per day. According to parents, the average child has been enrolled in ECCD for one year, attends 3 days per week and three hours per day.

Looking at children's early skills, this assessment finds that children attending ECCD centers have significantly stronger skills in all areas (motor, literacy, numeracy, socio-emotional, executive functioning and learning approaches) compared to children who are not enrolled in ECCD centers, even after controlling for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy. This study is cross-sectional so the results cannot be attributed to the ECCD programming these children received but the significantly stronger skills found for children in ECCD centers across all domains do suggest that children are benefitting substantially from attending ECCD programs.

Finally, using the IDELA child and caregiver questionnaires allows for analysis of the relationships between children's development and their home environments. Results of these multivariate analyses find that children with stronger home learning environments (more learning materials and activities) have stronger skills across IDELA domains. Also, there were a significant differences found between boys' and girls' early skills.

OVERALL FINDINGS

1) Children attending ECCD centers have stronger skills in all areas (motor, literacy, numeracy, socio-emotional, executive functioning and learning approaches) compared to children who are not enrolled in ECCD centers, even after controlling for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy.

2) Results of these multivariate analyses find that children with stronger home learning environments (more learning materials and activities) have stronger skills across IDELA domains.

SPECIFIC FINDINGS;

- Parents of children enrolled in ECCD programs were more likely to expect their child to complete primary and secondary school compared to parents whose children were not enrolled in ECCD.
- Parents with children in ECCD programs report engaging in more of some learning activities with their children compared to parents whose children are not enrolled in ECCD (reading to children, and teaching new things, letters and numbers).
- There is no difference between ECCD and non ECCD parents in terms of parenting, both ECCD and non ECCD parents yells, spanks and hits their children.
- Children in ECCD centers have stronger motor development than children who are not in ECD centers.
- Overall, children had the strongest scores on the fine motor task of folding paper and the weakest on the fine motor task of drawing a person.
- On average children in ECCD centers have stronger emergent numeracy skills than children who are not enrolled in ECCD centers. Overall, children had the strongest skills in early measurement and the weakest in number identification.
- Overall, children had the strongest skills in oral comprehension and the weakest in letter identification. There are no significant differences between boys' and girls' skills in this area.
- Children had the strongest skills in empathy and the weakest in social connections/peer relationships
- Children in ECCD centers significantly outperformed children who are not enrolled in ECCD centers and no differences between boys and girls.

BACKGROUND

Save the Children has been providing ECCD to children through sponsorship project in Faryab and Sar-e-pol since 2007. The communities, families, Ministry of Education (MoE), and children have embraced ECCD and have always provided free spaces for the classes and volunteer teachers. In Faryab and Sar-e-pol, the community has always been very committed to ECCD and has set up five school based classes at the request of the MoE officials, 2015.

Save the Children has used various models to provide ECCD to children, two, three and five days a week, from one to four hours per day, center based attached to formal primary government schools. Most regularly there are three volunteers per class in home based ECCD and one volunteer per center based. All teachers are trained in a four phased visually based training program that provides both child development theory, modern child centered pedagogy and methodology, as well as activities that support cognitive, physical, social/emotional, early literacy, early math, and communications skills, using local materials, sturdy wooden blocks and games, and local songs and dance.

Save the Children Afghanistan has intentionally folded the Save the Children US Early Literacy and Math (ELM) program in the general training of the ECCD volunteers. SC Afghanistan wanted to assure that all ECCD teachers were trained that early literacy and math skills are a part of a solid ECCD program and that the physical, social/emotional and communication portions of early learning were also included. In an effort to assure that students are reading and doing math, often teachers will take a class one program and give it to preschoolers. SC Afghanistan wants to be sure that the whole child is grown and supported in play based ECCD programming.

PURPOSE OF STUDY

The main purpose of this study was to assess the conditions of children who are attending an ECCD program, and to establish a reference point for our future assessments of child learning and development in Faryab and Sar-e-pol provinces.

METHODOLOGY

This study provides a cross-sectional summary of young children's skills and development in Faryab and Saripol provinces. Based on geographical divisions (districts) that Save the Children was supporting in these two provinces, a sample size of 724 children in and out of ECCD centers were randomly selected to be interviewed. The distribution of the sample per province was based on the number of centers and children in that province. The sample size was calculated using the standard calculator taking into account the following statistical considerations for both study groups (ECCD and non-ECCD children): 95% confidence level and 5% margin of error.

For the intervention group, ECCD centers supported by Save the Children were randomly sampled. Within those centers, child were randomly sampled and included in the study if they were reported to be between 3 and 6 years old. The comparison group was comprised of children

who were living in villages with ECCD centers that had been chosen for the intervention group but who were not attending the ECCD centers. The primary reason for children not to be enrolled in ECCD centers is lack of availability. The final sample is displayed in Table 1.

Table 1. Study sample

		Age 3	Age 4	Age 5	Age 6	Total
Faryab	Comparison	1	73	95	71	240
	Intervention	2	53	87	98	**240**
Saripol	Comparison	10	44	46	22	**122**
	Intervention	9	32	51	30	**122**
Total		**22**	**202**	**279**	**221**	**724**

INSTRUMENTS

The International Development and Early Learning Assessment (IDELA) tool was used to measure children development and learning, and 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. It also contains two questions related to executive functioning (short-term memory and inhibitory control), as well as assessor-rated questions related to children's approaches to learning. The IDELA caregiver questionnaire contains questions about children's family and household environments.

Table 2. IDELA Domains and Skills

Gross and Fine Motor Development	Emergent Literacy and Language	Emergent Numeracy	Socio-emotional Development	Executive control
Hopping on one foot	Print awareness	Measurement and comparison	Peer relations	Short-term memory
Copying a shape	Expressive vocabulary	Classification/ Sorting	Emotional awareness	Inhibitory control
Drawing a human figure	Letter identification	Number identification	Empathy	
Folding Paper	Emergent writing	Shape identification	Conflict resolution	
	Initial sound discrimination	One-to-one correspondence	Self-awareness	
	Listening comprehension	Simple operations		
		Problem solving		
Learning Approaches				

Table 3. IDELA Caregiver questionnaire

Section	Description
1. **General family information**	Sex of child, child age, number of children at home, parental literacy, parental education, languages spoken at home
2. **ECCD experience and educational expectations**	Child participation in ECCD programs, details of participation, parental expectation and aspirations of child's educational attainment
3. **Access to early learning materials and resources at home**	Types of reading materials at home, types of toys at home
4. **Parenting practices and support for learning and development**	Adults in the home engaging with children to promote learning and development
5. **Inadequate care**	Children left alone or in the care of another young child
6. **Caregiver self-efficacy**	Attitudes about parent's role in child's development
7. **Socioeconomic status**	Housing materials, objects/appliances owned, land/animals owned

DATA COLLECTION PROCEDURES

The IDELA items were translated by Save the Children's education and MEAL staffs. This tools had been used last year for the first IDELA assessment as well. So therefore, for this assessment field test were held prior to the actual data collection in order to make sure that the data collection team is fully understood the data collection tools and producers. Validity and reliability of the questionnaires were tested last year. The data collection process was regularly be monitored by the relevant staff (supervisors) in order to accurate data collection. Enumerators collected data in August 2016, and data was entered and cleaned in September 2016.

LIMITATIONS

Given to the nature of the study design, the results of this assessment do not provide causal evidence of the impact of ECCD programming on child development. However, the comparison group contains children living in the same villages as children receiving ECCD services, which is an appropriate available comparison group. Given that there may be bias introduced by the fact that children were already enrolled (or not) into ECCD centers before the study was designed, this report will detail household and family differences between children in the two study groups

and all testing of children's skills differences controls for important possible differences between groups (children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy) in order to provide less bias estimates of the skill differences between children with and without access to ECCD services.

STUDY RESULTS

FAMILY CHARACTERSTICS

Looking at parent and household characteristics between children who are enrolled and not enrolled in ECCD programs, data display a range of household environments in which children are developing. On average, children who were enrolled in ECCD centers were significantly older than children who were not enrolled. In addition, mothers of children who were enrolled in ECCD were significantly older than mothers of children who were not enrolled in an ECCD program. Interestingly, the only other difference seen between groups was that parents of children enrolled in ECCD programs were significantly more likely to expect their child to complete primary and secondary school compared to parents whose children were not enrolled in ECCD.

Table # 4. Family characteristics by intervention

	No ECCD	ECCD	Significant difference
Child is Female	50%	85%	*
Child age	4.2	5.2	*
Mother age	31.8	32.9	*
Mother is literate	19%	26%	
Father age	39.1	39.5	
Father is literate	30%	42%	
# children at home	4.3	4.6	
Expects child to complete primary school	92%	100%	**
Expects child to complete secondary school	76%	89%	**
# Home possessions (out of 12)	7.8	8.6	

Robust standard errors in parentheses; ** $p<0.01$, * $p<0.05$

HOME LEARNING EVIRONMENTS

Since, having materials at home to stimulate play and development is an important component of children's early learning environments. Therefore, all parents were asked about the books and toys their children have access to and also the activities they engaged in with their children at home in the past week. Looking at the reading materials and toys that children have access to,
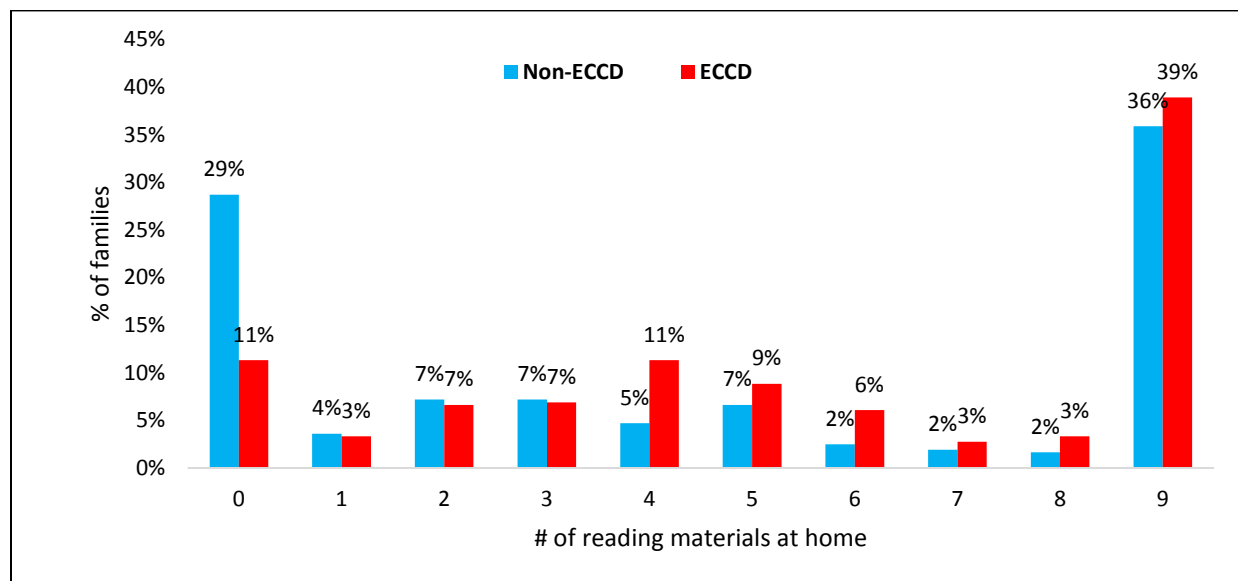
analyses find significant differences between children with and without access to ECCD programs. Children enrolled in ECCD centers had significantly more reading materials and toys compared to children not enrolled in ECCD centers. These differences are likely due to the focus SC's ECCD programs have on providing locally sourced play and learning materials in local language for children and families enrolled in their centers.

Table # 5. Reading materials and toys available in homes

	No ECD	ECD	Significant difference
Storybook	68%	89%	**
Textbook	73%	92%	**
Magazine	8%	20%	*
Religious book	74%	98%	
Coloring book	29%	58%	***
Comic book	15%	26%	**
Homemade	54%	64%	*
Household objects	73%	86%	*
Outside objects	74%	75%	
Drawing	24%	63%	***
Puzzle	11%	33%	***

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05

Figure 1. Reading materials in children's homes, by study group

Data collected also find that parents with children in ECCD programs report engaging in significantly more of some learning activities with their children compared to parents whose
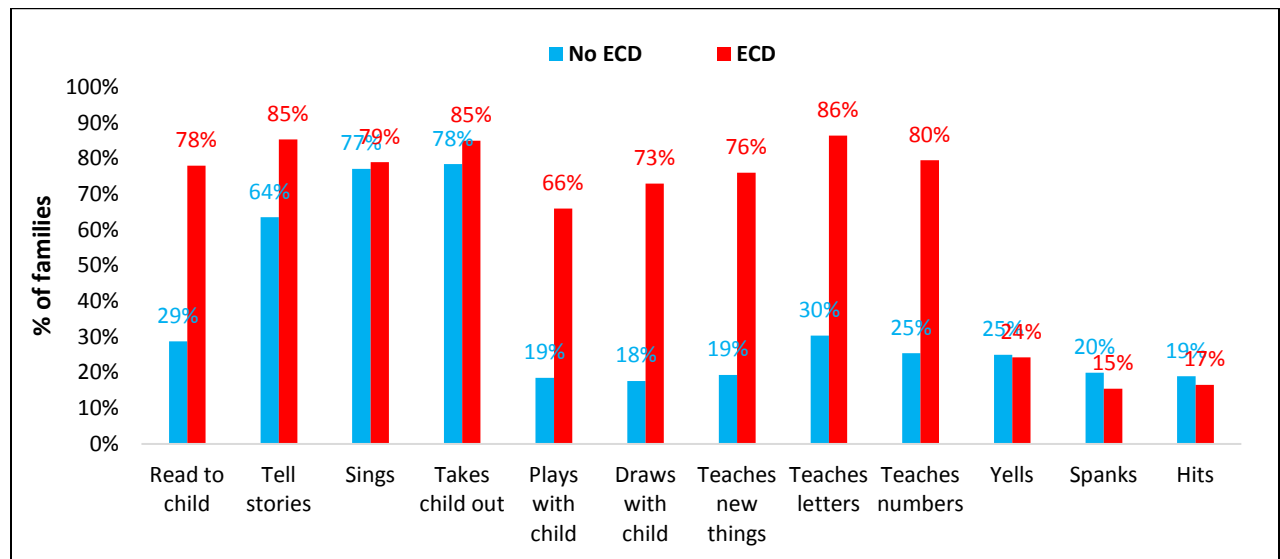
children are not enrolled in ECCD (reading to children, and teaching new things, letters and numbers).

Table 6. Home learning activities in the past week, by study group

	No ECD	ECD	Significant difference
Read to child	29%	78%	*
Tell stories	64%	85%	
Takes child out	78%	85%	
Plays with child	19%	66%	*
Draws with child	18%	73%	*
Teaches new things	19%	76%	*
Teaches letters	30%	86%	*
Teaches numbers	25%	80%	*
Yells	25%	24%	
Spanks	20%	15%	
Hits	19%	17%	

Robust standard errors in parentheses, * p<0.05

Figure 2. Home learning activities, by study group

ATTITUDES ABOUT PARENTING

Finally, parents were asked for their attitudes about their roles in their children's development. The questions were rated on a scale 1-4 (Almost never=1, Almost always=4). In general, parents reported feeling like they were important contributors to their children's development and there

were no huge differences between the attitudes of parents who were and were not enrolled in an ECCD program, both ECCD and non ECCD parents yells, spanks and hits their children.

ECCD PARTICIPATION AND EXPECTATIONS

Parents of children who were enrolled in ECCD were asked several questions about why and how often they send their children to ECCD centers. On average, a child learning and being prepared for primary school were the two most reported response for why parents send their children to ECCD, and a child being fed was the least common response.

Table 7. Reasons for enrolling in ECCD

	Average
Child gets food	10%
Keeps child busy	75%
Child learns	99%
Child learns to sit and listen	80%
Preparation for primary school	86%
Other children go	57%
Child likes it	52%
Other	9%

Parents were also asked about what they thought their children were learning from ECCD. On average the majority of parents felt that their children were learning language and math skills, as well as hygiene and social skills.

Table 8. Parents report of what children learn in ECCD centers

	Average
Hygiene	72%
Letters	97%
Other literacy skills	77%
Numbers	93%
Other math skills	75%
Social skills	54%
Other	2%
Do not know	34%

Finally, within the group of children attending ECCD, there was a range in the amount of time children had been enrolled and the frequency with which they attended classes. Children ranged from being enrolled in an ECCD program for one year to three years. Also, some parents reported that their children attended ECCD programs for two hours per day while others reported as much as 4 hours per day.

CHILD RESULTS

This section describes children's performance on the direct child assessment, with a focus on differences between the skills of children in the two study groups. 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 IDELA score is calculated by adding the weighted score of each item and dividing by the total number of items so that all items 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. Therefore the analyses presented below display the proportion of IDELA questions answered correctly out of the all possible correct answers. Skill scores presented control for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.
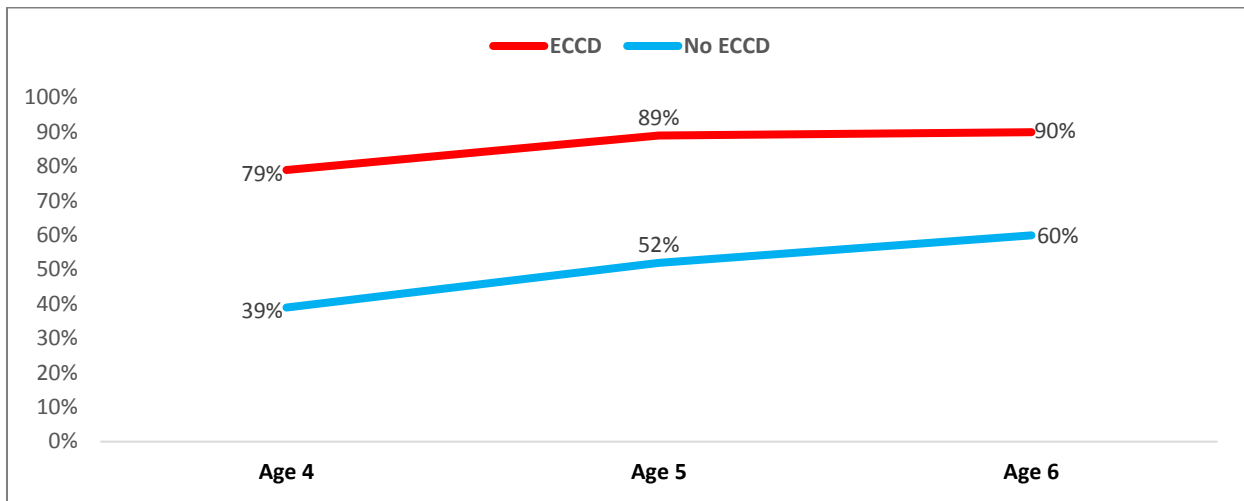
MOTOR SKILLS

Looking at children's motor development skills analyses find that controlling for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy children in ECCD centers have stronger motor development than children who are not in ECD centers. There were no differences between boys' and girls' motor skills. Overall, children had the strongest scores on the fine motor task of folding paper and the weakest on the fine motor task of drawing a person.

Table 9. IDELA motor skills, by group and gender

	ECD		No ECD	
	Boys	Girls	Boys	Girls
Copy a shape	85%	88%	36%	37%
Draw a person	75%	77%	27%	29%
Fold paper	97%	96%	60%	62%
Hop on 1 foot	94%	93%	62%	59%
Total Motor Score (% Correct)	88%	89%	48%	49%

Figure 3. IDELA motor skills, by study group and age

Note: Figure controls for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.
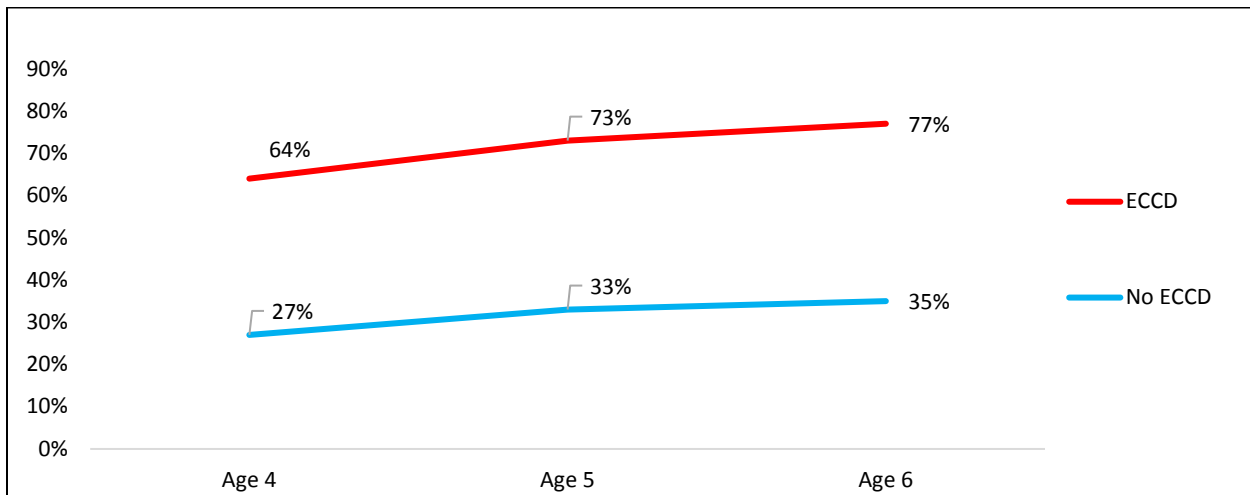
EMERGENT NUMERACY

Within emergent numeracy skills for children in this study analysis find that on average children in ECCD centers have stronger emergent numeracy skills than children who are not enrolled in ECCD centers. Overall, children had the strongest skills in early measurement and the weakest in number identification. There are no significant differences between boys' and girls' skills in this area.

Table 10. IDELA numeracy skills, by study group and gender

	ECD		No ECD	
	Boys	Girls	Boys	Girls
Measurement	99%	99%	62%	58%
Sorting	93%	94%	31%	39%
Shape ID	85%	88%	36%	36%
Number ID	57%	55%	14%	15%
One-to-one correspondence	83%	79%	35%	40%
Simple operations	93%	92%	37%	38%
Puzzle completion	75%	75%	24%	27%
Total Emergent Numeracy (% Correct)	73%	73%	30%	33%

Figure 4. IDELA numeracy skills, by study group and age

Note: Figure controls for children's age, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.
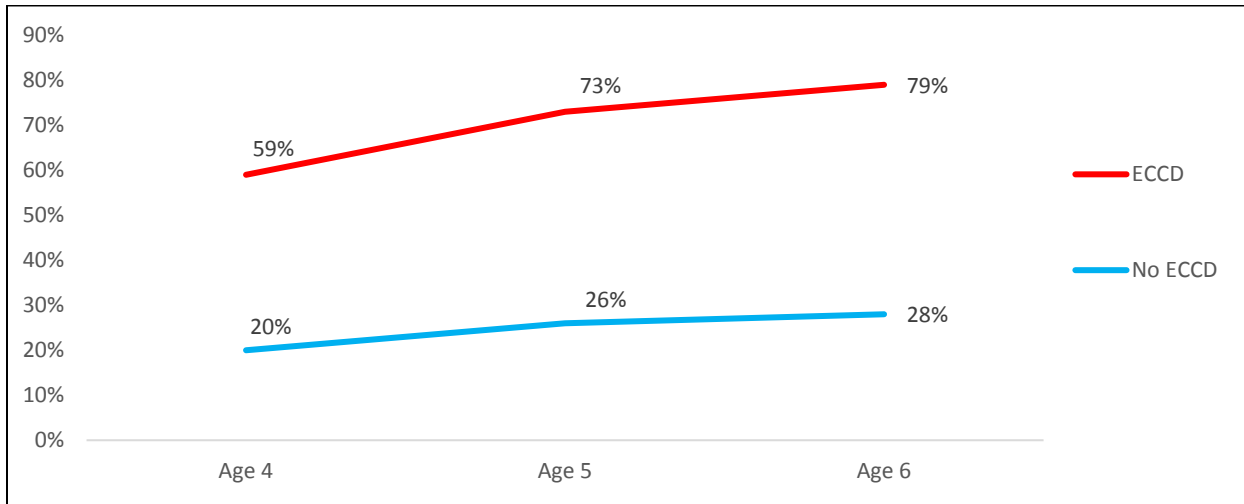

EMERGENT LITERACY

Within emergent literacy, analysis find that on average children in ECCD centers have stronger emergent literacy skills than children who are not enrolled in ECCD centers. Overall, children had the strongest skills in oral comprehension and the weakest in letter identification. There are no significant differences between boys' and girls' skills in this area.

Table 11. IDELA literacy skills, by group and gender

	ECD		No ECD	
	Boys	Girls	Boys	Girls
Expressive vocabulary	68%	67%	35%	33%
Print awareness	86%	81%	23%	22%
Letter ID	59%	56%	13%	15%
Phonemic awareness	68%	67%	8%	8%
Writing	60%	59%	16%	17%
Oral comprehension	92%	90%	43%	42%
Total Emergent Literacy (% Correct)	73%	71%	24%	24%

Figure 4. IDELA literacy skills, by group and age

Note: Figure controls for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.
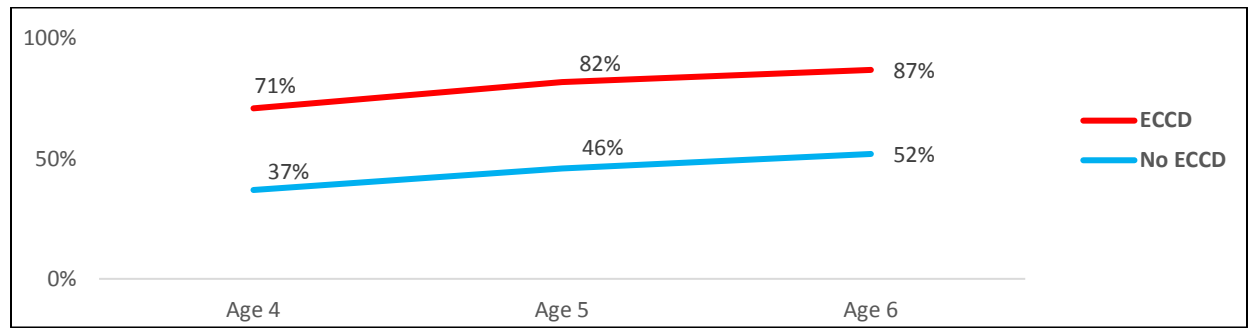

SOCIO-EMOTIONAL DEVELOPMENT

Looking at socio-emotional development skills for children in this study, analysis find that on average children in ECCD centers have stronger socio-emotional development than children without access to ECCD centers. Overall, children had the strongest skills in empathy and the weakest in social connections/peer relationships. There are no significant differences between boys' and girls' skills in this area.

Table 13. IDELA socio-emotional skills, by group and gender

	ECCD		No ECCD	
	Boys	Girls	Boys	Girls
Social connections	69%	65%	35%	32%
Emotional awareness	86%	83%	44%	40%
Empathy	87%	85%	46%	43%
Conflict resolution	87%	83%	39%	41%
Total Socio-emotional (% Correct)	82%	80%	45%	43%

Figure 5. IDELA socio-emotional skills, by group and age

Note: Figure controls for children's age, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.
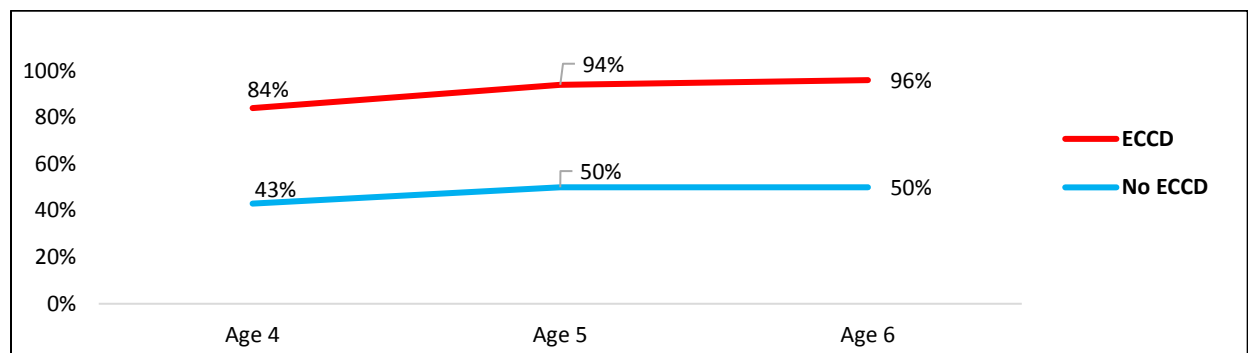

EXECUTIVE FUNCTIONING

In addition to the core domains, the child assessment also included items related to executive functioning. These items focuses on how children process information as opposed to learned skills like letter or number identification, and underlie children's ability to learn new information. Similar to the other domains, children in ECCD centers significantly outperformed children who are not enrolled in ECCD centers and no differences between boys and girls.

Table 14. IDELA executive functioning skills, by group and gender

	ECCD		No ECCD	
	Boys	Girls	Boys	Girls
Short-term memory	80%	75%	42%	45%
Inhibitory Control	93%	90%	52%	49%
Total Executive Function (% Correct)	89%	87%	45%	43%

Figure 11. IDELA executive functioning skills, by group and age

Note: Figure controls for children's age, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.

APPRACHES TO LEARNING

In order to measure children's learning approaches (i.e., the way they approach complicated problems) assessors were asked to rate children on a number of dimensions immediately after the assessment was completed. Children were rated on a scale from 1=Almost never; 4=Almost always. Analysis of children's learning approaches are in line with findings in other domains with children in ECCD centers have significantly stronger skills than children not in ECCD centers, and there are no significant differences between boys' and girls' skills.
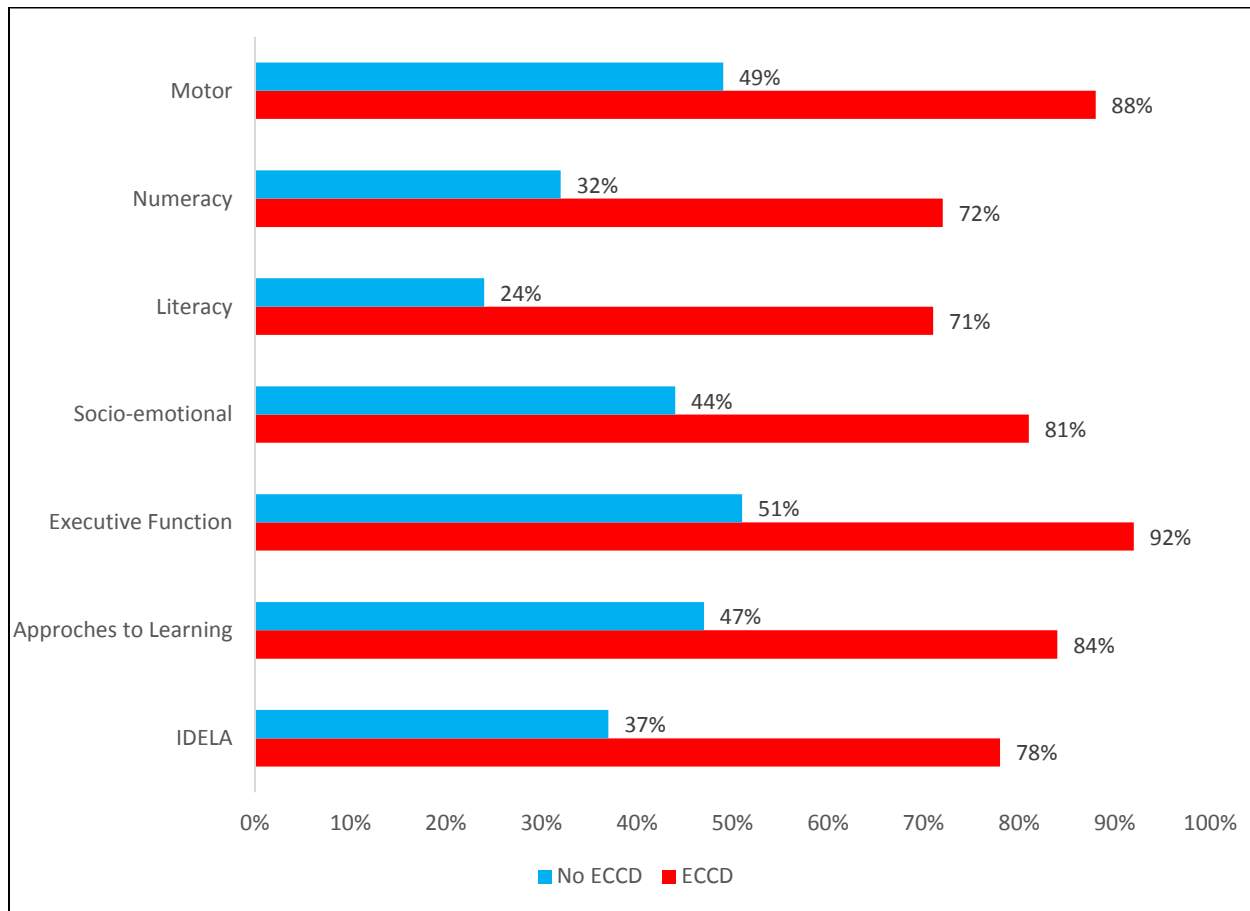
Table 15. IDELA Approaches to learning skills, by study group and gender

	ECCD		No ECCD	
	Boys	Girls	Boys	Girls
1) Did the child pay attention to the instructions and demonstrations throughout the assessment?	3.5	3.5	2.1	2.2
2) Did child show confidence when completing activities; did not show hesitation.	3.2	3.0	1.9	1.9
3) Did the child stay concentrated and on task during the activities and was not easily distracted?	3.2	3.0	2.0	2.0
d) Was child careful and diligent on tasks? Was child interested in accuracy?	3.5	3.4	2.0	2.1
e) Did child show pleasure in accomplishing specific tasks?	3.4	3.3	2.0	2.1
f) Was child motivated to complete tasks? Did not give up quickly and did not want to stop the task?	3.3	3.1	1.9	1.9
g) Was the child interested and curious about the tasks throughout the assessment?	3.5	3.4	1.9	1.9
Total Approaches to Learning (% Total)	85%	82%	50%	52%

TOTAL IDELA

To calculate a total IDELA proportion correct for each direct child assessment item was added together and divided by the total number of items. Given that the learning approaches score was obtained through assessor observation, it is not included in the total IDELA score. As seen in the domain scores, overall, children in ECCD centers had significantly stronger early learning skills compared to children without access to ECCD, controlling for relevant background characteristics. Also, there were no gender differences in children's baseline skills.

Figure 13. Average total IDELA scores, by study group

Note: Figure controls for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy, and standard errors are clustered by community.

CONNECTION BETWEEN HOME ENVIRONMENTS AND CHILDREN'S DEVELOPMENT

Using both children's early skills and caregiver questionnaires allows for analysis of the relationships between children's development and their home environments. When looking at family characteristics that research from the international community has shown to be commonly related to child development, we find similar relationships in communities in Afghanistan. For example, older children and children of parents with more education (especially fathers) tend to have higher IDELA scores. Similarly, analyses find that children with stronger home learning environments (more learning materials and activities) have stronger skills across IDELA domains.

RECOMMENDATIONS

ECCD programming clearly makes a difference in the lives of children, showing stronger pre-primary skills. Children attending ECCD centers have stronger skills in all areas (motor, literacy, numeracy, socio-emotional, executive functioning and learning approaches) compared to children who are not enrolled in ECCD centers, even after controlling for children's age, gender, home learning environment, family possessions, reading materials at home and father's literacy.

To understand if programming two days versus four days a week made a difference in skill development for ECCD children, as well as the difference of home based ECCD or School based ECCD, an operation research is needed to look more deeply into this as a way to suggest to stakeholders interested in expanding ECCD within Afghanistan. For the suggested operation research quasi-experimental design should be used, besides comparing of ECCD and Non ECCD; home based ECCD and school based ECCD should be compared. This study will also look at parenting programing under the Sponsorship project, because current study shows no difference between ECCD and non ECCD parents in terms of parenting, both ECCD and non ECCD parents yells, spanks and hits their children.

ANNEX I: IDELA TOOLS

IDELA Tool.docx

ANNEX II: IDELA TOOLS SCORING SHEET

IDELA score sheet.docx

ANNEX III: CAREGIVER QUESTIONNAIRE

Questionnaire for Caregivers.docx