

The International Early Learning and Development Assessment

A report for

BERMAIN Year 3 Project

**(Better Education through Emphasizing Right to Play for More
Attainment of early childhood Improvement)**

Save the Children Indonesia

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Executive Summary

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Overview

Background

BERMAIN is one of EECD project run by Save the Children Indonesia. It has been implemented for three years in a row, and being assessed on yearly basis. It has been implemented since 2014. BERMAIN (Better Education through Emphasizing Right to Play for More Attainment of Early Childhood Improvement) is being implemented with a belief that play is the best method for early age children to learn and to prepare them entering the schools.

In order to improve children's school readiness, BERMAIN project focusing on quality improvement of education in early childhood care and development centers (ECCD) by equipping it with combination of play and active learning methodologies, educational materials, capacity building for teachers, and parenting sessions.

BERMAIN project was initially started the implementation in 2015 with PAUD Ceria 03 as the pilot ECCD center. During one year of project implementation in 2015, PAUD Ceria 03 received full assistance from the project to improve its quality of early childhood education. Following the successfulness of project intervention in PAUD Ceria 03, with the approval from North Jakarta Office of Education, the BERMAIN project expanded the implementation to the additional 10 other ECCD centers, making it as 11 intervened ECCD centers all in North Jakarta district.

Table 1. List of BERMAIN Year 2 (2016) Intervened ECCD Centers

No.	ECCD Center Year 1	ECCD Center Year 2
1	PAUD Ceria 03	PAUD Ceria 03
2		PAUD Anggrek
3		PAUD Dahlia
4		PAUD Darunnajah
5		PAUD Green Cempaka
6		PAUD Hiu
7		PAUD JIC
8		PAUD Melati 04
9		PAUD Pelangi
10		PAUD Teratai
11		PAUD Tunas Indonesia

Purpose of Study

The study will create evidence for project implementation about the right intervention and specific subject to be improved in regards of early childhood education programs. Based on the analysis and findings, it could lead to the data-driven decision making at project and management level for the project improvement. In other side, the findings will also meaningful for informing and improving the ECCD center program by designing and implementing appropriate treatment for children with the outcomes to the betterment of young children learning in the center.

Methodology

Study design

This study is a comparative assessment to the intervened ECCD for BERMAIN project during 8 months of Year 3 intervention. The baseline assessment was conducted on March 2017 and the follow up end line assessment was on November 2017. The academic calendar is started on August and end on July following year with the break session on December each year. Therefore, the study was undertaken in between of school calendar.

The International Development and Early Learning Assessment (IDELA) was used to measure children's learning and development across four domains (Motor, Literacy, Numeracy, and Socio-emotional). There are several items under each domain to measure children's developments. In total there are 24 items being assessed.

Sampling selection

The ECCD services in Indonesia is regulated based on the Country Law No. 20/2003. It is stated that the types of early learning education comprise of TK (kindergarten), KB (playgroup), TPA (daycare center, DCC), SPS (Other type of Early Childhood Education, OECE), family-based ECCD. TK is one of ECCD center with government funding, while the others are mostly self-funded or community-based ECCD center.

During the Year 3 program, BERMAIN is being implemented to 22 ECCD centers in North Jakarta with 7 TK, 11 KB, and 4 SPS. For the purpose of the study, the observation to all 22 intervened ECCD centers was conducted during the baseline assessment on March 2017 and endline assessment on November 2017. To understand the improvement being made during the program implementation, an observation to 11 comparison ECCD centers without program intervention was being conducted at the same time of the study. All children participated to the study was assessed using IDELA tool.

BERMAIN project is being implemented on the sub-urban context. All 22 ECCD centers for intervention were selected based on the criteria that has been discussed and agreed with the District Office of Education. One of the criteria was the location of ECCD centers that is on the slump sub-urban area. The number of children in each ECCD center was varied from one to another, with the minimum number of 23 and the largest was 103 children. Concerning the availability of the budget to cover an ideal sampling methodology, the baseline assessment on March 2017 for IDELA was decided to have 8 children from each ECCD center. The purposive sampling method was used with enumerators and teacher to select the children to participate on the study. Total of 176 children from all intervened ECCD centers was achieved which involving the two available grades on the ECCD center. There was no specific sampling method being applied to accommodate the representativeness of each grade. The children participatory was based on their volunteerism.

The same number of sample was applied for the comparison group. Eleven ECCD centers were participated during the baseline assessment on March 2017. With 8 children from each ECCD center

participated, total of 88 children were involved during the baseline assessment. The study also concerned about the equality participation of boys and girls during the assessment, particularly on the baseline assessment. Based on the discussion between enumerators and teacher, they asked the equal number of boys and girls to participate.

Table 2. List of BERMAIN ECCD centers Year 3

No.	Name of ECCD	Type	No.	Name of ECCD	Type
1	BKB PAUD Anggrek 06 Sukapura	SPS	12	PAUD Puspa Cindra Kana Tj. Priok	SPS
2	PAUD Teratai Koja	KB	13	TK An-Najmul Ilmu Pademangan	TK
3	PAUD Ceria 03 Cilincing	KB	14	TK Al-Hidayah Koja	TK
4	PAUD Tunas Indonesia Marunda	KB	15	TK. Daarul Gufron Penjaringan	TK
5	PKBM Melati 04 Pademangan	KB	16	TK Islam Arundina Klp. Gading	TK
6	BKB PAUD Pelangi Penjaringan	KB	17	TK Negeri Rorotan	TK
7	PAUD JIC Koja	KB	18	TK Negeri Sunter Agung	TK
8	KB Bunnaya Tj. Priok	KB	19	BKB Pribadi Cerdas Klp. Gading	SPS
9	PAUD Barokah Al-Hidayah Cilincing	KB	20	KB Haniya Marunda	KB
10	KB Hikmatul Barokah Pademangan	KB	21	BKB Anggrek 05 Rorotan	SPS
11	PAUD Merah Putih Cilincing	KB	22	TK Mawar 2 Sukapura	TK

Table 3. List of comparison group ECCD center Year 3

No.	Name of ECCD	Type
1	PAUD Bina Nelayan	KB
2	PAUD Ar-Ridwaniyah	KB
3	PAUD Pakis	KB
4	PAUD Ramadhan	KB
5	PKBM Berseri	KB
6	PAUD Mawar 04	SPS
7	RA Al-Ikhwan	SPS
8	PAUD Cempaka	KB
9	PAUD Laouhan	KB
10	PAUD Bougenville	KB
11	TK Zamzami	TK

The endline study used similar approach for sampling strategy, but due to high number of drop-out children 88 of the same children in intervention group and only 29 children from comparison group participated in the assessment. The drop-out caused by high mobility of parents, and/or children already graduated from ECCD center. Proper planning and schedule of assessment should be taken into account in the future assessment. Detail number of children and schools in baseline and endline can be found in Annex.

Instruments

Save the Children has developed tools to measure the progress and achievements of its intervention to the targeted children and schools. IDELA (International Early Learning and Development) is one tool to

assess the children’s growth on four aspects/domains: (1) physical development, (2) early language and literacy, (3) early numeracy/problem solving, (4) and socio-emotional skills. Below is the chart of measurements for each domain.

Table 4. IDELA domains and skills

Gross and Fine Motor Development	Emergent Literacy and Language	Emergent Numeracy	Socio-Emotional Development
Copying a shape (Item 21)	Expressive vocabulary (Item 15)	Measurement and comparison (Item 2)	Peer relations (Item 9)
Drawing a human figure (Item 22)	Print awareness (Item 16)	Classification/Sorting (Item 3)	Emotional awareness (Item 10)
Folding Paper (Item 23)	Letter identification (Item 17)	Shape identification (Item 4)	Empathy (Item 11)
Hopping on one foot (Item 24)	Initial sound discrimination (Item 18)	Number identification (Item 5)	Conflict resolution (Item 12)
	Emergent writing (Item 19)	One-to-one correspondence (Item 6)	Self-awareness (Item 1)
	Listening comprehension (Item 20)	Addition and subtraction (Item 7)	
		Puzzle completion (Item 8)	
Approaches to Learning: Persistence, motivation and engagement			

Note: Adapted from "International Development and Early Learning Assessment Technical Working Paper, August 2015" by Pisani, et al., 2015.

Data collection procedures

To conduct the assessments, two groups of enumerator being hired and trained. One group to conduct the baseline and the other for the endline assessment. During the endline IDELA assessment, a total of 8 enumerators were hired, comprised of 5 females and 3 males. The enumerators underwent three days of IDELA training including the use of the IDELA data collection tools in actual setting, interview techniques especially with young children, getting consent from children and adults, Child Safeguarding Policy, and data entry. The training was facilitated by BERMAIN and MEAL team of North Jakarta Field Office. The manual, adaptation and administration guide were used to facilitate the training.

All enumerators were qualified with previous data collection experiences with Save the Children, thus the training was designed in such way to discuss the practical use of the tools and previous experiences or lessons learned. During the last day of training, on the day three, the tools were pilot tested in two ECCD centers in North Jakarta. All of the ECCD centers for pilot test were not belongs to intervened ECCD nor the comparison groups.

Field operations

The enumerators conducted data collection to all 22 intervened ECCD centers and 11 comparison ECCD centers. The baseline and endline data collection took approximately three weeks to complete, with covering two to three ECCD centers for each day. The process of data collection also adjusted to school hour, since some ECCD centers were conducted in the morning while the others were in the afternoon session. The baseline data collection was conducted on January 24th – March 16th, 2017. While, the endline assessment was conducted on November 9th – 27th, 2017.

Right after visiting the ECCD centers each day, the enumerators gathered in the office. Led by the team leader, they discussed the process of data collection on that day. Since the paper work will be collected, they have to ensure the clarity of their data writing on the assessment tools. All of the paper work from the field was collected and stored in Save the Children North Jakarta field office. The paper work will be useful for clarification and accountability of the study. There was also an agreement with the enumerators that they can be reached for clarification, if needed.

Working in their group, the enumerators entered the data onto the Microsoft Excel worksheet. The enumerators entering the data on the same day they collected the data. On end of each day, the enumerators sent the data entry to project staff and MEAL team. Project staff and MEAL team then compiled the data for cleaning and analysis.

Limitations

There were some limitations being encountered during this assessment. Budgeting was among one of these limitations. It was informed that the budget was not sufficient to conduct the assessment with proper sampling methodology. Concerning the available budget, the IDELA baseline assessment was conducted with 8 children for each ECCD center. Ideally with the number of population as many as 1,193 children in all 22 ECCD centers, the sample size should be 291 children or 13 - 15 children per each ECCD center (95% level of confidence, 5% margin of error, and normal distribution).

Concerning to the small sample size during the baseline, drop-out in endline study, and were voluntary based, it is said that the findings of this study cannot represent the population. The analysis and interpretation of the data is solely applicable to the respected participants of the study. Programmatically, the findings are not representing the performance of the project intervention.

Findings

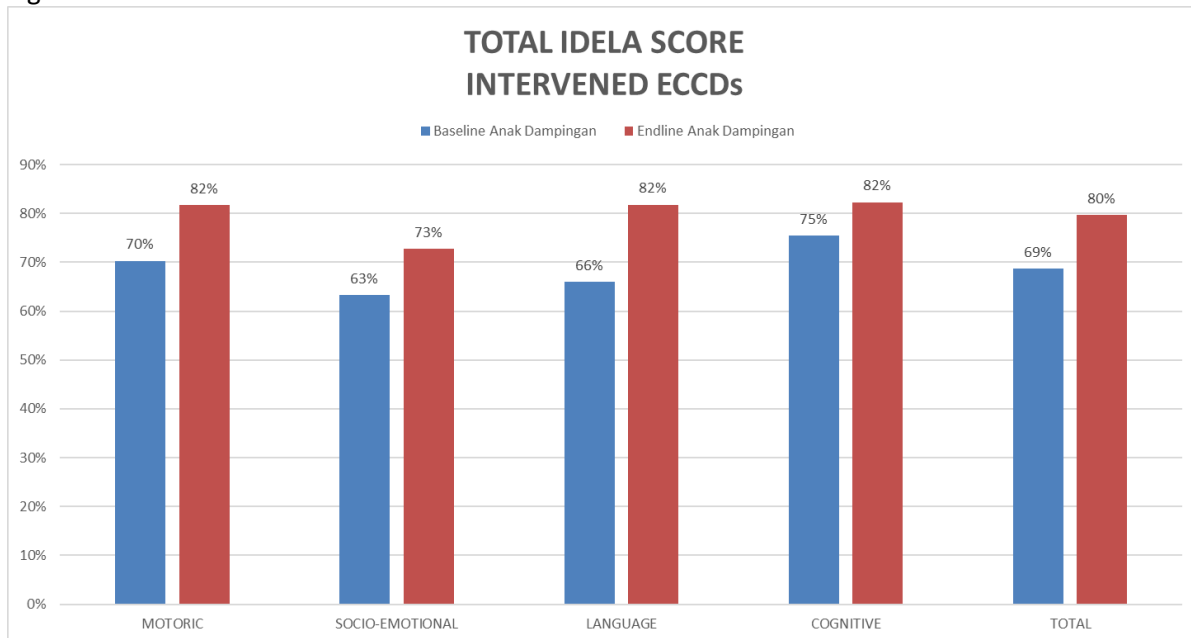
This section describes the analysis and findings of the study. It will analyze the result of the project intervention during 8 months using the International Early Learning and Development Assessment (IDELA) tool. Mainly comparative descriptive analysis employed to see the progress between the baseline and endline as well as to compare with the comparison group.

On March 2017, there were three IDELA assessments occurred simultaneously between BERSAHABAT endline assessment, BERMAIN Year 2 endline assessment, and BERMAIN Year 3 baseline assessment. With regards to the budget efficiency, there was an agreement to conduct a joint assessment and to use the same data for multiple purposes. Hence, the BERMAIN Year 3 baseline data was the compilation from those three assessment. The 22 ECCD centers for BERMAIN Year 3 data were comprising the data from 4 BERSAHABAT centers, 7 BERMAIN Year 2 centers, and 11 new BERMAIN Year 3 centers.

Table 5. List of BERSAHABAT and BERMAIN ECCD Centers

No.	ECCD Centers	Project
1	TK Negeri Rorotan	BERSAHABAT endline
2	PAUD Haniya	BERSAHABAT endline
3	PAUD Anggrek 05	BERSAHABAT endline
4	PAUD Mawar 2	BERSAHABAT endline
5	BKB PAUD Anggrek 06	BERMAIN Year 2 endline
6	PAUD Teratai	BERMAIN Year 2 endline
7	PAUD Ceria 03	BERMAIN Year 2 endline
8	PAUD Tunas Indonesia	BERMAIN Year 2 endline
9	PAUD Melati 04	BERMAIN Year 2 endline
10	PAUD Pelangi	BERMAIN Year 2 endline
11	PAUD PIC	BERMAIN Year 2 endline
12	KB Bunayya	BERMAIN Year 3 baseline
13	PAUD Barokah Al-Hidayah	BERMAIN Year 3 baseline
14	KB Hikmatul Barokah	BERMAIN Year 3 baseline
15	PAUD Merah Putih	BERMAIN Year 3 baseline
16	BKB Puspa Cindra Kana	BERMAIN Year 3 baseline
17	TK An-Najmul Ilmu	BERMAIN Year 3 baseline
18	TK Al-Hidayah	BERMAIN Year 3 baseline
19	TK Daarul Ghufroon	BERMAIN Year 3 baseline
20	TK Islam Arundina	BERMAIN Year 3 baseline
21	TK Sunter Agung	BERMAIN Year 3 baseline
22	PAUD Pribadi Cerdas	BERMAIN Year 3 baseline

Figure 1. Total IDELA scores of Intervened ECCD centers



The endline assessment showed an improvement in all domains of IDELA. The highest improvement was on the Language and Emergent Literacy with 16% improvement over 8 months project intervention. Comprehensively, in total there was 11% improvement for all IDELA domains (motor development, socio-emotional development, language and emergent literacy, and emergent math/numeracy).

In Figure 2, it showed the IDELA baseline result between the intervened ECCD centers and the comparison group. The IDELA score for all domains in intervened ECCD centers were lower than the comparison group. Total IDELA score for those 22 intervened ECCD centers was 4% lower than the non-intervened ECCD centers. The Language and Emergent Literacy domain was the lowest comparing to the others. It was 6% lower.

Furthermore, if we only analyze the 11 ECCD centers which have participated BERSAHABAT or BERMAIN Year 2 projects, the IDELA scores all higher comparing to the non-intervened ECCD centers, unless for the Cognitive domain (Figure 3). The Cognitive of Emergent Math/ Numeracy domain was the only domain among the other IDELA domains that was lower than the comparison group. It was 1% lower.

Figure 2. Baseline IDELA Score between Intervened ECCD centers with Comparison Group

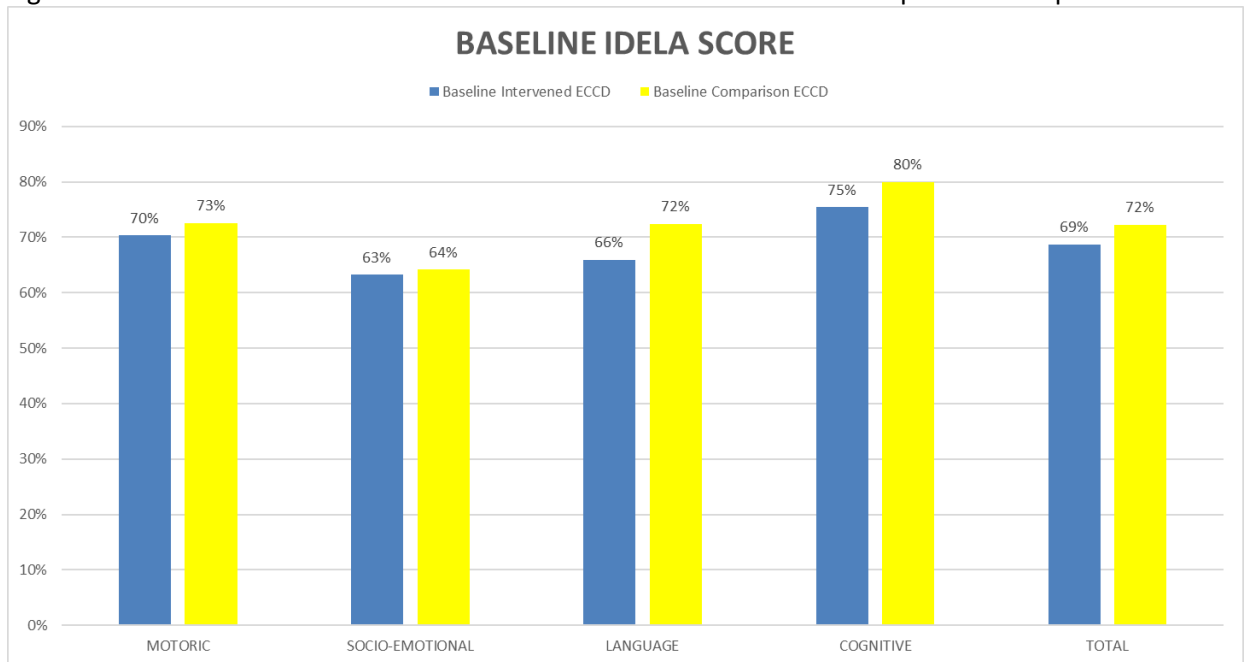
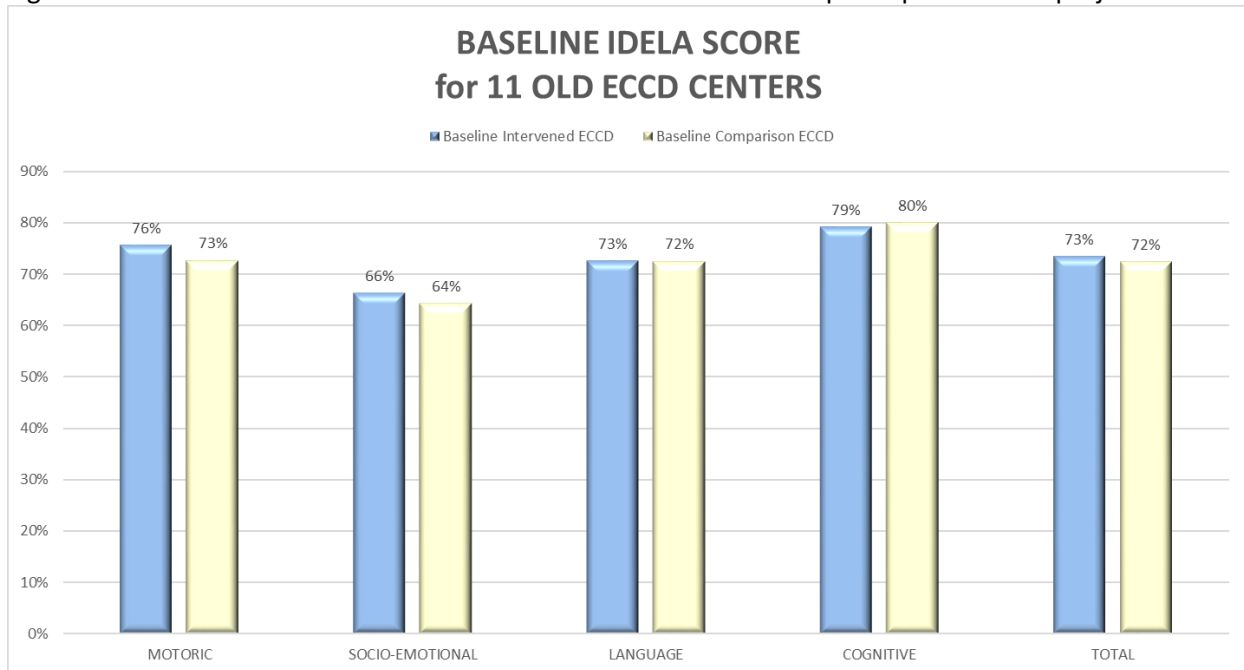


Figure 3. IDELA Baseline Score for 11 ECCD Centers which have been participated to the project



Similar findings found in the endline assessment where the IDELA score for intervened ECCD centers was lower than the comparison group. In total, it was 1% lower, as shown in Figure 4. The Language domain was the only domain that was higher than the comparison group. It was 3% higher. Interestingly, the Cognitive domain of Emergent Math/Numeracy showed a high difference between the intervened ECCD centers and the comparison group. The Emergent Math/Numeracy domain showed 6% lower than the

comparison group, while the Motoric and Socio-emotional domains showed 3% and 2% lower, respectively.

Figure 4. Endline IDELA Score between Intervened ECCD centers with Comparison Group

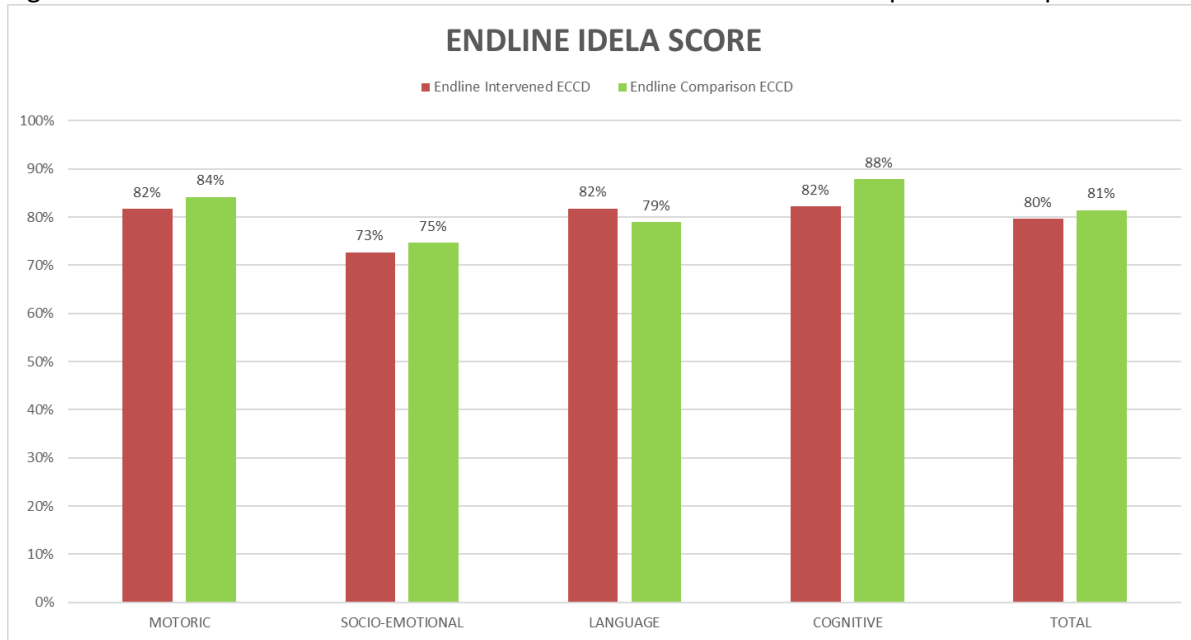
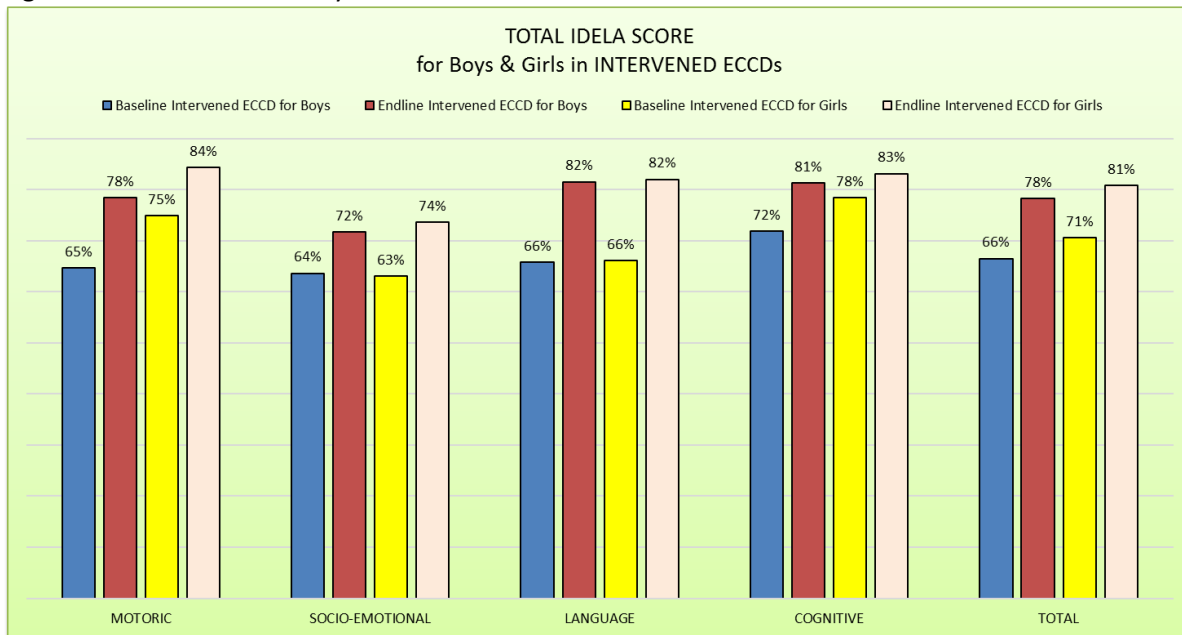


Figure 5. IDELA Score for Boys and Girls in Intervened ECCD centers between Baseline and Endline Study



Moreover, Figure 5 shows the differences of IDELA score between boys and girls. During the baseline study, the girls in overall had a higher total score than the boys (5% higher). This situation continuous during the endline study, that the girls showed 3% higher total score than the boys. The boys had only better score on the Socio-emotional domain (1%) during the baseline study. But, they could not maintain the situation during the endline study. The Language development was equal between boys and girls.

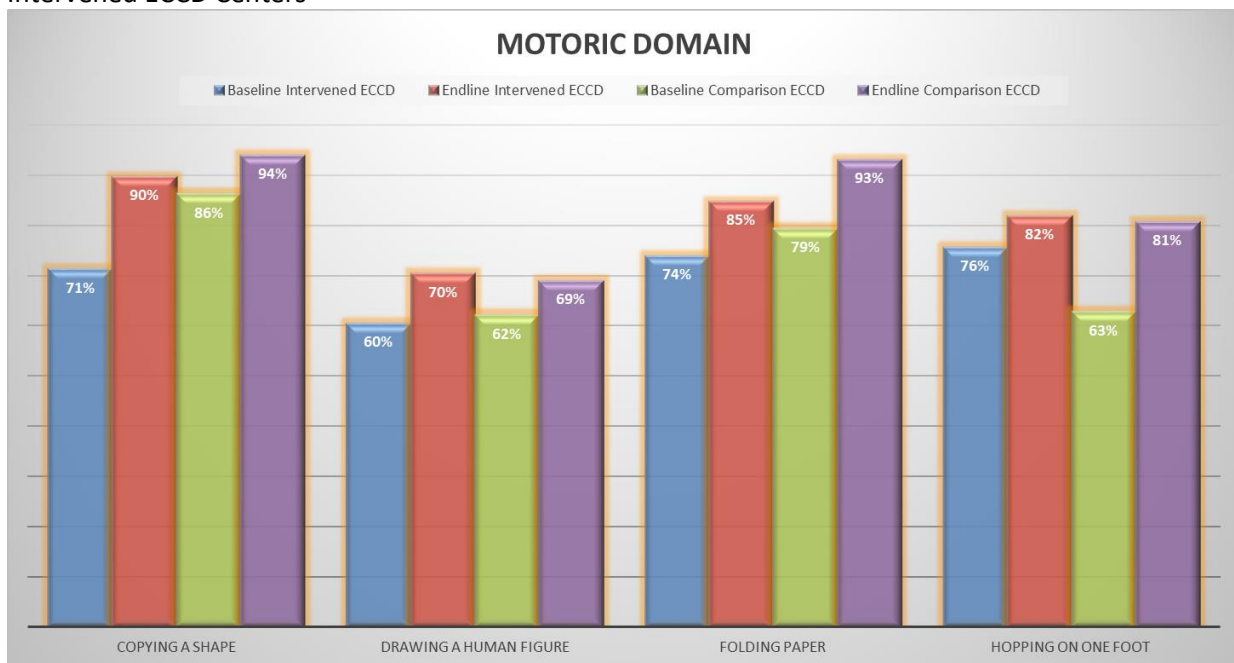
The analysis of each domain will be discussed in the following details.

Gross and Fine Motor Development Domain

Under the Gross and Fine Motor development domain of the IDELA assessment, there are four items of measurements. The four items comprise of the measurement on the children’s ability to hop on one foot, copying a shape, drawing a human figure, and folding a paper. The objective of hopping on one foot is to test child’s ability to balance on one foot and coordinate gross body motion. Looking at this specific item, the children in the intervened ECCD centers showed high scores during the baseline and endline comparing to the non-intervened ECCD centers. During the baseline survey on March 2017, the children of intervened ECCD centers showed 13% higher score than the children in non-intervened ECCD centers. The situation continued during the endline survey with 1% higher. But, the gained scores from the non-intervened centers from baseline to endline was higher than the intervened centers. The gain from the intervened and non-intervened centers were 6% and 18%, respectively.

Among the four items, the highest gain from baseline to endline survey was on the copying a shape for the children on the intervened ECCD centers, which is 19%. Copying a shape and folding a paper items were the two items which were lower than the comparison group during the baseline and endline survey.

Figure 6. Baseline to Endline Children’s Motor Development between Intervened ECCD Centers and Non-Intervened ECCD Centers



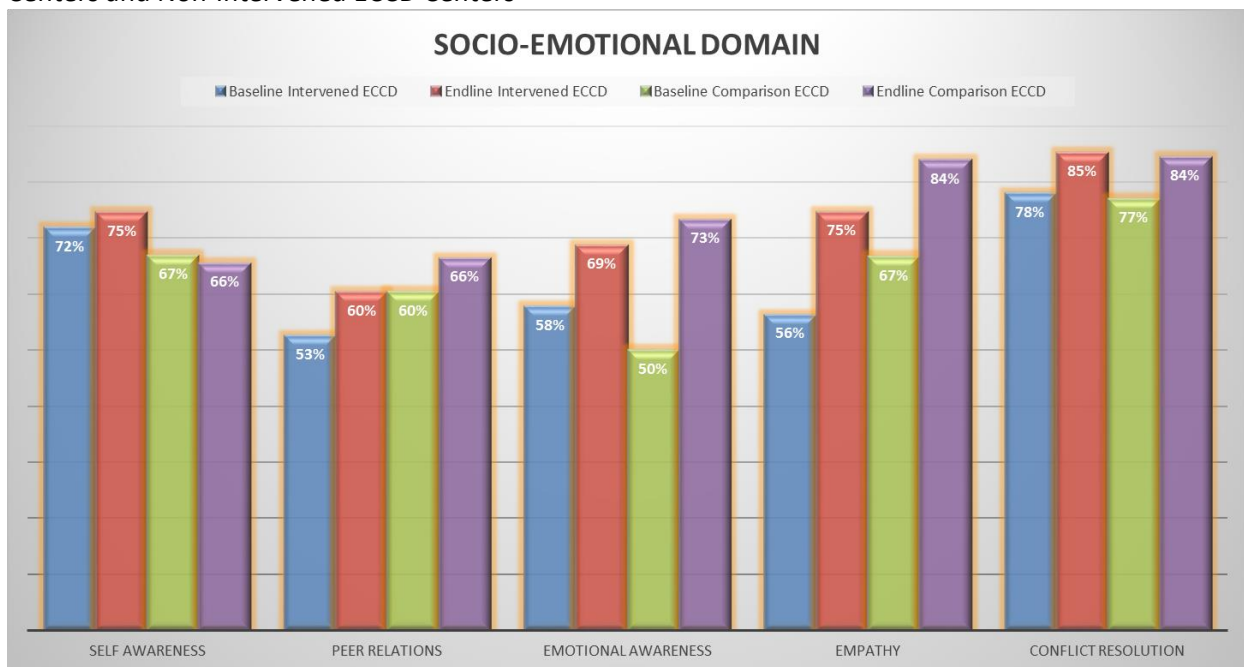
Socio-Emotional Development Domain

There are five items of measurement under the Socio-emotional development domain, which are the child's self-awareness, peer relations, emotional awareness, empathy, and conflict resolution. Among those five items, the children from the intervened ECCD centers showed higher scores comparing to the children from non-intervened centers on the self-awareness and conflict resolution items. These high scores were happened during the baseline and endline surveys.

Even though that the self-awareness item showed high score, but in term of score gained from baseline to endline, it was the lowest improvement. The children from intervened ECCD centers gained only 3% improvement, while the non-intervened centers even showed -1% improvement.

The emotional awareness was the item that showed high improvement from baseline to endline survey. Both the intervened and non-intervened ECCD centers gained big improvement, comparing to other items. The improvements were 11% for the children in the intervened ECCD centers, and 23% for non-intervened centers.

Figure 7. Baseline to Endline Children's Social-Emotional Development between Intervened ECCD Centers and Non-Intervened ECCD Centers

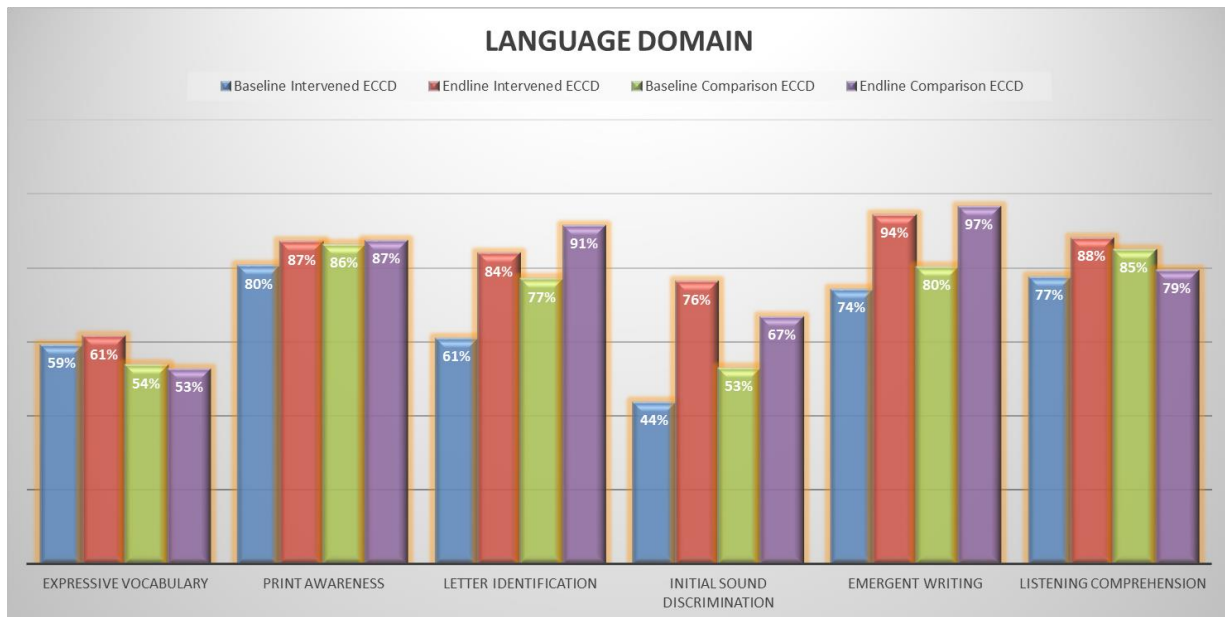


Emergent Literacy and Language Domain

The emergent literacy and language domain consist of 6 items, which are the expressive vocabulary, print awareness, letter identification, initial sound discrimination, emergent writing, and listening comprehension. The main objectives of this domain is to test child's ability to produce and comprehend the facts and make simple inferences. On the name writing test, the objective is to test child ability to produce their name in a way that someone else can recognize it; this item also integrates fine motor ability. Although the item is focused on the name of the child, the focus is the knowledge of letter printing and writing more than the name itself.

The emergent writing item achieved the highest score during the endline studies both for the intervened and non-intervened children groups, which are 94% and 97% respectively. Aside from the highest score during the endline study, it also achieved high gain from baseline to endline study. The children from the intervened ECCD centers showed 20% gain from baseline to endline study, which was higher than the control group.

Figure 8. Baseline to Endline Children's Emergent Literacy and Language Development between Intervened ECCD Centers and Non-Intervened ECCD Centers



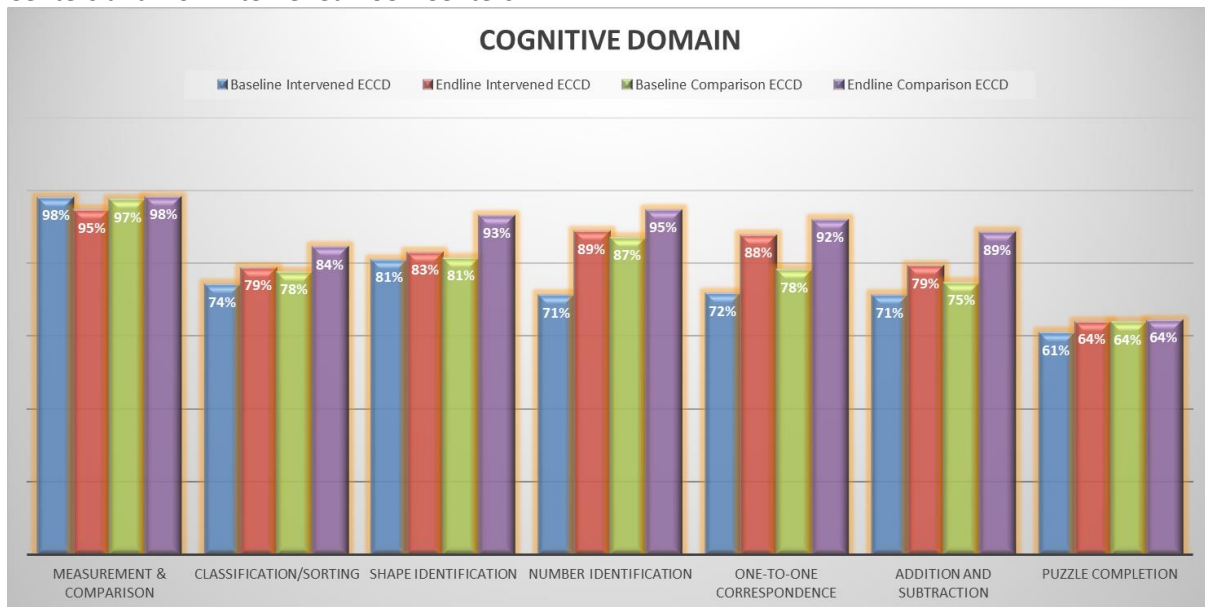
Emergent Numeracy Domain

The emergent numeracy domain is the domain with the most item to measure. It comprises of seven items, which are the measurement and comparison, classification/ sorting, shape identification, number identification, one-to-one correspondence, simple operations, and simple problem solving. The main objectives of this domain is to assess children ability to identify and conduct simple mathematical operations to solve spatial problems.

The measurement and comparison by size and length item achieved the highest scores during the endline study for both the intervened and non-intervened group comparing to the other items. Interestingly that even with the high score, but the children from the intervened ECCD centers showed a declining score for 3% from baseline to endline study. Since the baseline score was already high, the gain was the lowest. The highest gain for the intervened children group was on the number identification item with 18% improvement from baseline to endline study. It was 10% different with the control group children which they gained only 8% improvement.

The puzzle completion test for simple problem solving and spatial visualization achieved the lowest score comparing to the other items. The score during the baseline study was the lowest and also during the endline study. The gain also among the lowest.

Figure 9. Baseline to Endline Children’s Emergent Numeracy Development between Intervened ECCD Centers and Non-Intervened ECCD Centers



Conclusions and Recommendations

Appendix A. Assessment Participants

Baseline study sample size (children) for intervened ECCD centers, by sex

Sex	TK	KB	SPS	TOTAL
Boys	28	33	12	73
Girls	28	55	20	103
Total	56	88	32	176

Endline study sample size (children) for Intervened ECCD centers, by sex

Sex	TK	KB	SPS	TOTAL
Boys	21	14	1	36
Girls	20	25	6	51
Total	41	39	7	87

Baseline study sample size (children) for comparison ECCD centers, by sex

Sex	TK	KB	SPS	TOTAL
Boys	4	28	8	40
Girls	4	36	8	48
Total	8	64	16	88

Endline study sample size (children) for comparison ECCD centers, by sex

Sex	TK	KB	SPS	TOTAL
Boys	0	12	4	16
Girls	0	9	4	13
Total	0	21	8	29

Number of baseline and endline participants from each intervened ECCD centers

No.	ECCD Name	Baseline	Endline
1	BKB PAUD ANGGREK 06	8	0
2	PAUD Teratai	8	1
3	PAUD Ceria 03	8	1
4	PAUD Tunas Indonesia	8	5
5	Melati 04	8	0
6	PAUD PELANGI	8	6
7	PAUD JIC	8	1
8	KB. Bunayya	8	4
9	PAUD Barokah Al-Hidayah	8	6
10	KB HIKMATUL BAROKAH	8	7
11	PAUD Merah Putih	8	3
12	BKB Puspa Cindra Kana	8	1
13	TK An-Najmul Ilmu	8	8
14	TK Al-Hidayah	8	3

15	TK Daarul Ghufron	8	4
16	Tk Islam Arundina	8	6
17	TK Negeri Rorotan	8	7
18	TK Sunter Agung	8	7
19	PAUD Pribadi Cerdas	8	4
20	Haniya	8	5
21	Anggrek 05	8	2
22	Mawar 2	8	6
	Total	176	87

Number of baseline and endline participants from comparison ECCD centers

No.	ECCD Name	Baseline	Endline
1	PAUD BINA NELAYAN	8	1
2	PAUD AR-RIDWANIYAH	8	6
3	PAUD Pakis	8	2
4	PAUD Ramadhan	8	5
5	PAUD Berseri	8	7
6	Mawar 04	8	3
7	RA Al-Ikhwan	8	5
8	PAUD Cempaka	8	0
9	Laouhan	8	0
10	PAUD Bougenville	8	0
11	TK. Zamzami	8	0
	Total	88	29