

IDELA & QLE REPORT

(International Development and Early Learning Assessment)

(Quality Learning Environment)

BERMAIN Project

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

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Executive Summary

From 2011 to 2014, Save the Children have developed a tool to measure children development status called International Development and Early Learning Assessment (IDELA). The objective of this tool is to provide feasible and reliable tool for ECCD program measurement. By using this tool, ECCD program will be able to measure child development outcomes based on 4 child development domains; (1) Physic-motoric; (2) Language and Literacy; (3) Socio-emotional; and (4) Cognitive and numeracy. Aside from IDELA, Save the Children also having a tool to measure the quality of children's learning environment, called QLE (Quality Learning Environment) Assessment. The QLE consists of several observation questionnaires, which are grouped into 4 Guiding Principles (GP 1. providing safety and protection for the wellbeing of children; GP 2. fulfilling aspects of early childhood development: physical, social-emotional, cognitive, and language; GP 3. supporting and encouraging the active involvement of children, organizing child centered learning and the improvement of educational outcomes of all children; and GP 4. engaging community involvement).

Save the Children Indonesia is implementing project entitled "Better Education through Emphasizing Right to Play for More Attainment of early childhood Improvement" (BERMAIN). The project is initiated with a believe that play is the best method for young children to make them ready at primary school level. This method promotes fun activities while children still can learn early literacy and numeracy.

In order to improve children's school readiness, BERMAIN project focuses on quality improvement of education in Early Childhood Care and Development Center (ECCD) by equipping it with combination of play and active learning methodologies; and also with educational materials, training teachers, and individual student assessment.

BERMAIN project was commenced on January 2015 with a support from Mattel Children's Foundation. The project is piloted in 1 ECCD center, named Ceria, which is located in one of the most flood prone area, Cilincing, in North Jakarta, Indonesia.

The BERMAIN project now running on the second year of implementation with the intervention to 10 ECCD centers in Cilincing, North Jakarta. This report contains an analysis of IDELA and QLE baseline and end line assessment for BERMAIN second year implementation. The baseline assessment was conducted on May 2016 while end line was on February 2017.

During the studies, totally 88 children were participated on both baseline and end line assessment with 58 (66%) same students and 30 (34%) new replacement students. The process of selecting students during the baseline study was based on voluntary.

It is a common practice in the rural area in North Jakarta that the people is mobile. They are easily move from one place to another. Mostly the reasons why the previous students couldn't participate on the end line was because of their residency which already moved out from the ECCD area following their parents. In relation to the analysis, we do not need to include the new students into the analysis.

In accordance to the guideline, we exclude 34% new students from the analysis. The analysis of 58 old students showed improvements on IDELA assessment. In overall, the IDELA total score is moving up from 59% during baseline to 83% at the end line survey. The total score is resulted from the average score of all 58 old students.

Moreover, under those improvements, in each domain, the Language domain showed the highest improvement from 54% to 82% (28% improvement) from baseline to endline assessments, following by Cognitive from 65% to 88% (23% improvement). While the Socio-emotional and motoric domains, it showed 16% and 15% improvement, respectively.

The topics being learnt by the children during in ECCDs were changes from baseline to end line. Based on the responses from caregiver, they mentioned that their children learnt more on the health and other literacy subjects with the improvement of 36% and 33%, respectively. While the topics on numbers, math, and letters, comparing from baseline to end line, they improved 19%, 14%, and 12%, respectively. The caregivers responded negatively towards the topics on social and other topics being learnt by their children in the school from baseline to end line assessment. They mentioned that the social and other topics (i.e. religion, dancing, drawing, singing, physical exercise, etc) were reduced by 17% and 30%, respectively.

The caregivers responded positively towards the frequency of their children being in ECCD towards the early learning development. The more frequent their children to attend the ECCD, the more developed their kid's early learning. Based on the analysis, it resulted a strong positive correlation ($r=+0.42$, with $r=+1$ is 100% positive correlation and $r=-1$ is 100% negative/opposite correlation). It is also in line the time being spent between children with their parents. During baseline, the mother had more time to spent with their children. While during end line study, the father had more time to spend with their kids.

Based on the QLE assessment, it showed an improvement to all 4 GPs being assessed from baseline to end line. During the baseline assessment, out of 10 ECCD centers being assessed, there was only one ECCD center achieving the measurement. While during the endline, there were 5 out of 11 ECCD centers (35% improvement) already achieving the 4 score (exceeding the expectation) of QLE GPs. Deeper into each GP, the GP 2 (children's early development) and GP 3 (student-centered) gained the biggest improvement from none of school achieving the expectation during baseline, to 91% achievement during end line study. Meanwhile, GP 1 (safe space) and GP 4 (community involvement) gained 55% and 64% improvement, respectively.

BERMAIN project that has been implemented for two years showed evidences of improvement towards IDELA and QLE assessments. Even though, some works still need to be done, especially to maintain and improve the motoric domain of children's early development and the implementation of teacher's code of conduct.

Introduction

Background

BERMAIN (Better Education through emphasizing Right to play for More Attainment of early childhood Improvement) is one of the project in North Jakarta implemented by Save the Children in cooperation with Mattel. Save the Children already has a long and good reputation in implementing a child-related projects worldwide and also in Indonesia. With that good reputation, Mattel as a toys for kid producer company decided to support the BERMAIN project since 2016. After a successful implementation on the first year, BERMAIN gains a continuation to the following years.

BERMAIN is designed to help teachers and parents understand the importance of “play” as the medium for learning for their young children, especially to be integrated to the learning process in the childhood care and development (ECCD) centers. Playing is one of the children’s rights which adult should aware and provide. Beside raising the awareness to teachers and parents, the project also aiming to advocate to government and other relevant stakeholders to encourage developmentally appropriate practices that promote play as a way of learning for young children.

In North Jakarta, BERMAIN project is being implemented in 20 ECCD centers in Cilincing sub-district particularly targeted to the children aged 3-5 years old.

Objective of the assessments

As being planned during the beginning of project implementation, the IDELA (International Development and Early Learning Assessment) and QLE (Quality Learning Environment) Assessments is the approaches to measure the achievements of the project during monitoring. According to the project plan, the monitoring system implement IDELA and QLE twice in every academic year, one as the baseline during the beginning of academic year and the other by the end of academic year as the end line assessment. The aim of the assessments is to measure the progress of the project particularly on children’s literacy.

Methods

Sampling and Questionnaire Development

The sample for IDELA assessment was selected from 10 out of 20 target school/ECCDs that currently on the BERMAIN project. The 10 schools were consisting of state kindergarten (Taman Kanak-Kanak/ TK), play group (Kelompok Bermain/ KB), and BKB (Bina Keluarga Balita) where there is various levelling in each school. For kindergarten, there are two levels which are TK A for 4-5 years old children and TK B for 5-6 years old. While for KB and BKB, there are usually 2-3 levels of classroom depends on the number of students in the school. To those all 10 assessed schools, the range of number of students is between 8 in the smallest classroom to 20 students in a classroom. As the continuation from previous assessment, the students as the respondents for end line study were to be approximately the same as the baseline study.

IDELA consists 24 items of measurements grouped into 4 core domains to measure children’s development and emergent skills. The four core domains are: 1) Gross and fine motor development; 2) Emergent literacy and language; 3) Emergent numeracy; and 4) Socio-emotional development. Each question of the measurement is constructed based on the correct responses to a particular skill-based question that is labelled as item in the following table. Each item corresponds to an activity that is described in the IDELA for child’s assessment. Trained assessors conduct each activity with a child to assess early childhood development per child and observe how he/she is engaged with an activity. Each IDELA domain is designed to calculate the average percentage of those correct responses among participating children.

Core 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 a 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)
Playing head & toe (Item 14)	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

Total of 88 students were chosen as the respondents during baseline study with voluntary based selection. Each school contribute 8 of their students considered as the sample of the population.

“Selecting a random sample of children is necessary for insuring the generalizability of the information collected. If we rely on children to volunteer, we may only get the most confident children.” (Getting Started with IDELA, Save the Children US, page 26)

Out of 88 students who participated during baseline study, there were 58 students who were still available to participate during the end line study. The other 30 students were recorded as missing students since

they were not available during the end line study. Most of the reason for this absent was because they were following their parents to move their residency out from the area of study in Cilincing, North Jakarta. To this condition, the end line study was using 66% of the baseline respondents, with the composition of 24 boys and 34 girls.

“Keeping detailed documentation of the children assessed is crucial for finding the same children again for follow-up assessments” (Getting Started with IDELA, Save the Children US, page 26)

By maintaining these respondents to be consistent, we can measure the progress of the development during the length of study between baseline and end line from the same students. The baseline study was conducted on May 2016, while the end line was on February 2017.

QLE is a classroom observation tool which is used by Save the Children to measure the improvement of student’s learning environment. It consists of several classroom observation measurements which are grouped into four Guiding Principles. There are four scores for each measurement from 1 to 4 which represent of not observed, almost achieved, achieved, and exceeding the expectation. The 4 Guiding Principles for Quality Learning Environment in Early Childhood Care and Development (ECCD) are as follow:

- Guiding Principle 1: Save the Children-supported ECCD programs are safe and protective of children’s wellbeing.
- Guiding Principle 2: Save the Children-supported ECCD programs meet the physical, social emotional, linguistic, and cognitive developmental needs of young children.
- Guiding Principle 3: Save the Children-supported ECCD programs encourage and support active engagement for children, child centered teaching, and improved learning outcomes of all children.
- Guiding Principle 4: In Save the Children-supported education programs, parents and local communities are actively involved in planning, decision-making and action to improve early education.

The ECCD center including in-class learning process was observed by two trained enumerators. The ECCD center’s tutors were interviewed to get clarification over observation’s results. The enumerators gave their scores for all QLE items of each Guiding Principle by themselves and discussed all different scores until they decided final judgment in order to assure data validity. The given score was ranged between 1 as the lowest score and 4 as the highest one. Score 1 meant that the ECCD center did not achieve on the assessed item/indicator, score 2 meant that the center almost achieved the indicator, score 3 showed that the center achieved the indicator, and score 4 implied that the center exceeded the indicator.

Study Limitation

Data analysis was done after all data from baseline and end line study has been inputted to the spreadsheet. The analysis has some limitations among others, especially related to the data consistency and lack of references. The person who was in-charge during both assessments (baseline and end line) has been resigned from the position and replaced by a new personnel who has limited knowledge on the background of the assessment, i.e. but not limited to the methodology being chosen, sampling, training to enumerators, prior data analysis and interpretation.

The result from the analysis is merely based on the data available on the spreadsheet with limited access to data verification or cross-checking.

Results

After being populated and coded, the raw data was ready to be analyzed. Data cleaning was done by reviewing the raw data being inputted with the paper work and on its consistency. Few mistakes could be happened as a human error when inputting the data. Data consistency meaning of the consistency of scoring, to be consistent in term of time and in term of scoring interpretation based on the questions being asked.

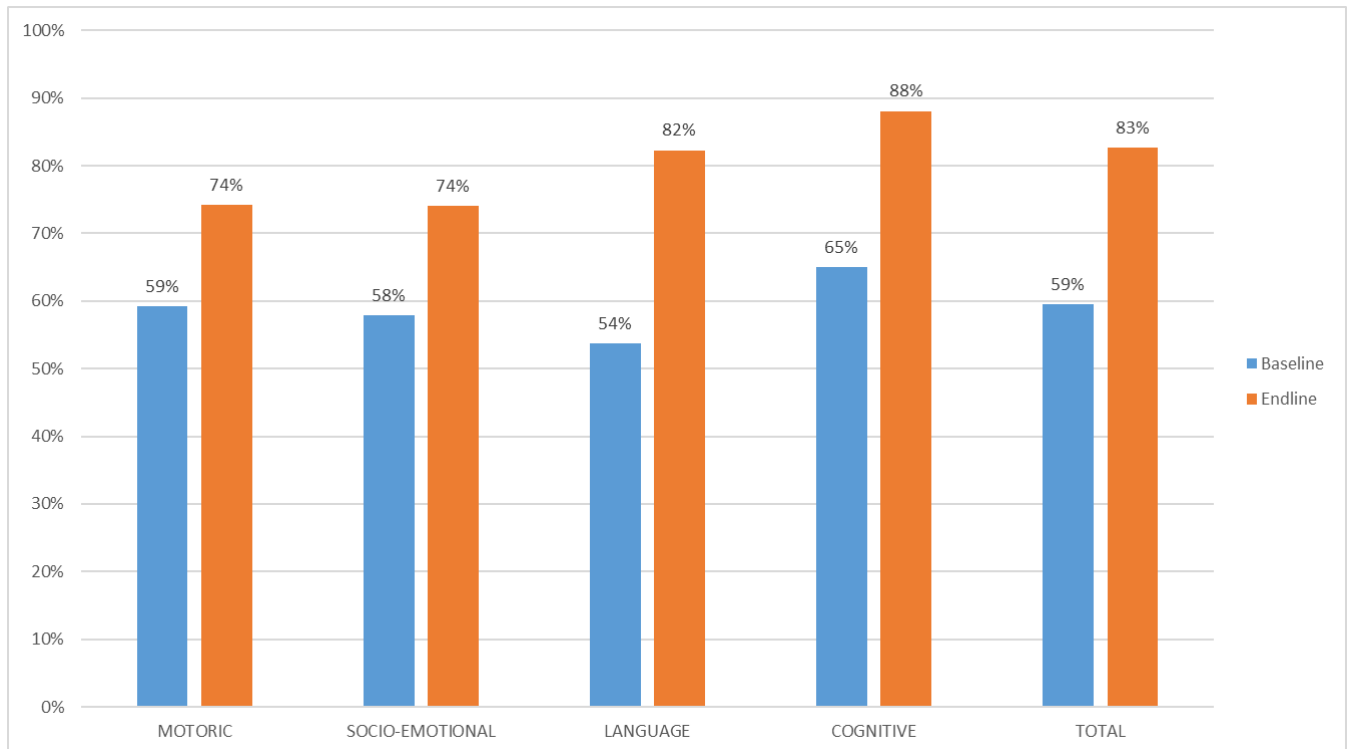
IDELA

After being agreed that we will use 8 children from each school as the sample students, there were totally 88 children participated on both baseline and end line. From all 88 participating students, 58 (66%) students were participated during the end line were the same students who were also participating during the baseline 9 months before and 30 students (34%) were newly participated during the end line study. The process of selecting students during the baseline study was based on voluntary.

It is a common practice in the rural area in North Jakarta that the people is mobile. They are easily move from one place to another. Mostly the reasons why the previous students couldn't participate on the end line was because of their residency which already moved out from the ECCD area following their parents. In relation to the analysis, we do not need to include the new students into the analysis.

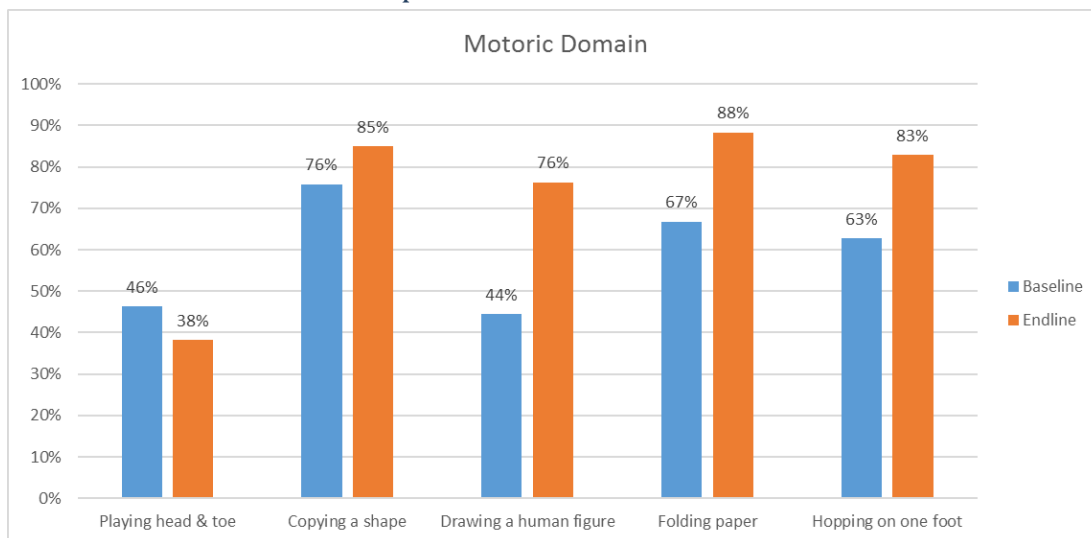
In accordance to the guideline, we exclude 34% new students from the analysis. The analysis of the same 58 students (24 boys and 34 girls) showed improvements on IDELA assessment. In overall, the IDELA total score is moving up from 59% during baseline to 83% on the end line survey. The total score is resulted from the average score of all 58 old students.

Moreover, under those improvements, in each domain, the Language domain showed the highest improvement from 54% to 82% (28% improvement) from baseline to endline assessments, following by Cognitive from 65% to 88% (23% improvement). While the Socio-emotional and motoric domains, it showed 16% and 15% improvement, respectively.



The analysis of each domain was explained on the following paragraphs which include some figures.

Gross and Fine Motor Development



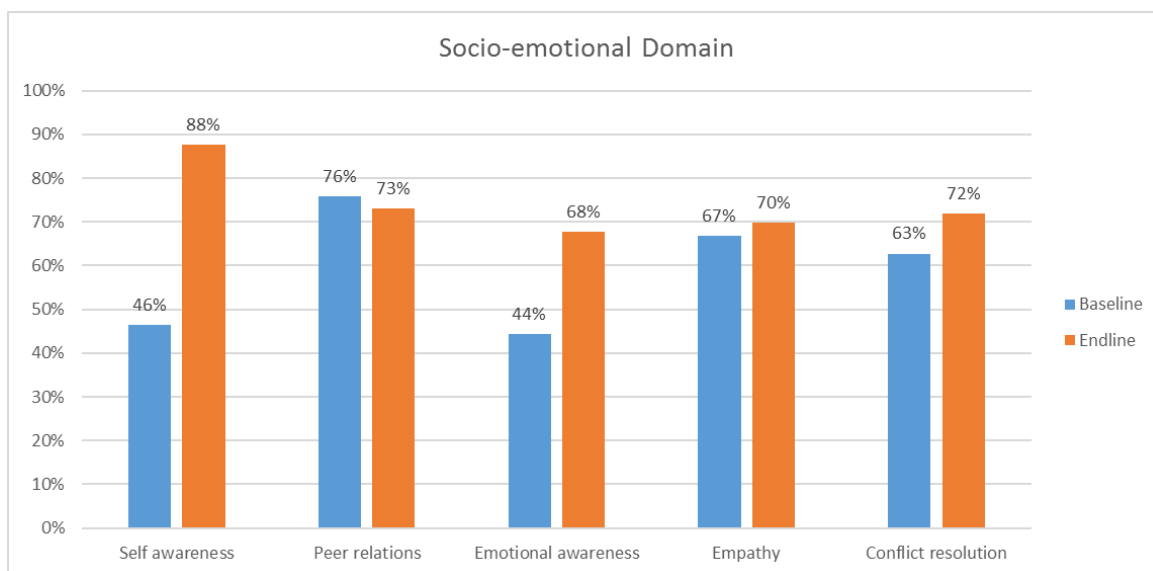
Under the motoric domain, there are 5 items being measured which are playing head & toe, copying a shape, drawing a human figure, folding a paper, and hopping on one foot. It is quite interesting that during playing head & toe, it showed a decreasing result from baseline to end line assessment. During baseline,

the score was 46% while during end line it was 38%, decreasing by 8%. It is all because most of the children received high scores during baseline, meaning that they were able to follow the instruction correctly. Meanwhile, during the end line assessment, most of children they did self-correction (lower score) when doing the instruction. There are three scoring under the playing head and toe, first the children are being measured whether they understood or not with the instruction. The game will be continued if the enumerator think that the kid is understand with the instruction. First attempt for the kids who is understand with the instruction, is to play head and toe accordingly. And then the second attempt is doing it in reverse. There are three scoring, 0 for kids who are wrongly doing the instruction, 1 for self-correction, and 2 for the correct response.

The other measurements which showed improvements were copying a shape, drawing a human figure, folding a paper, and hopping on one foot. Drawing a human figure, where the enumerator asked the kid to draw a human figure and analyze whether the drawing was appropriately representing a human figure, gained the highest improvement from 44% to 76% (32% improvement). Following with folding a paper and hopping on one foot, which gained 21% and 20% improvement, respectively. The copying a shape gained the lowest improvement 9% improvement (from 76% during baseline and 85% during end line) because of the already-high score during the baseline study.

Socio-Emotional Development

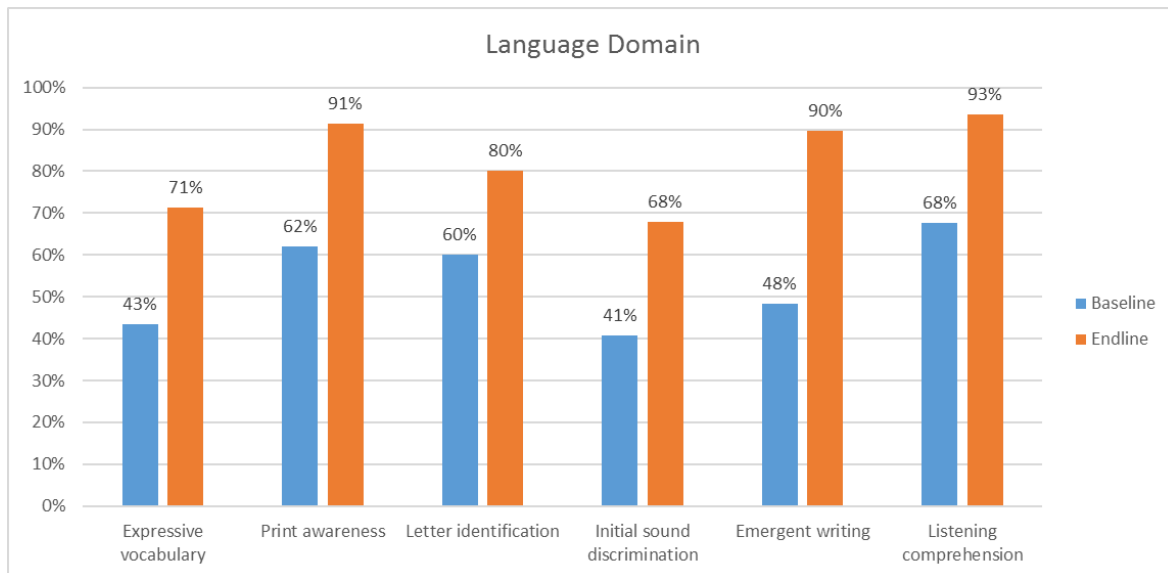
There are 5 items of children developments under the socio-emotional domain, they are the peer relations, emotional awareness, empathy, conflict resolution, and self-awareness.



Almost all development measurement items showed improvement, unless peer relations which showed slight reduction (3% decrease from baseline). Under the peer relations, the participating children are being asked to mention 10 of their friend's name. The highest improvement under this domain is children's self-awareness which showed 42% improvement, following with emotional awareness (24% improvement), conflict resolution (9%), and empathy (3%). Self-awareness is related to their identity regarding to their name, age, sex, caregiver, and domicile. Emotional awareness related to control their emotions regarding to sad and happiness. Under the conflict resolution, the enumerator asked the kid to imagine a conflict situation when he/she has a friend and want to play with his/her toy. How he/she resolve the situation. On the empathy, the kids being asked to response when her/his friend is sad.

Emergent Literacy and Language

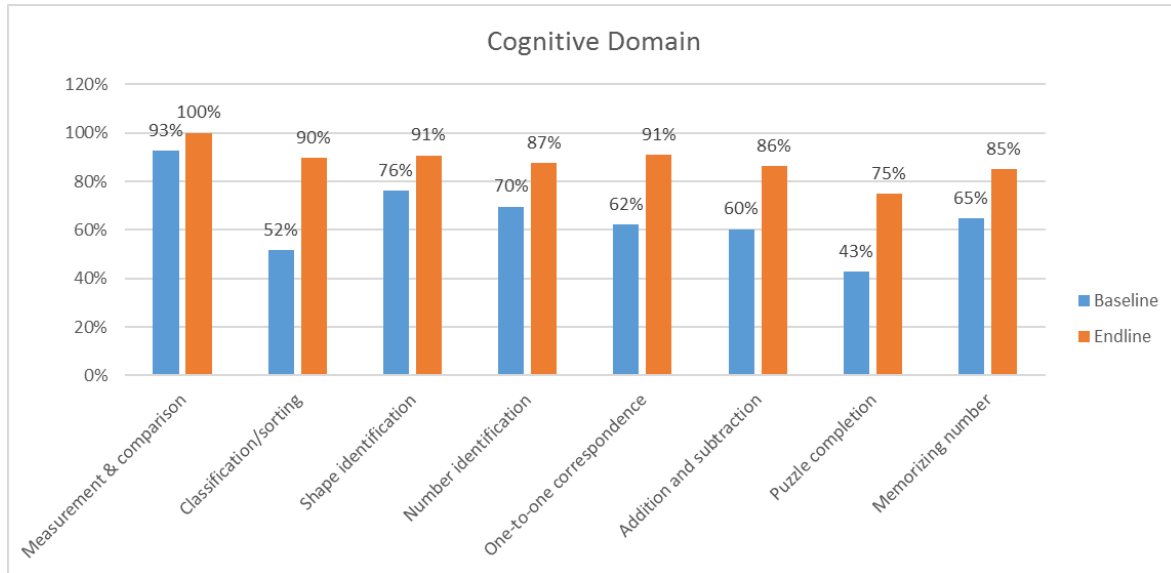
There are 6 children's development measurements under the emergent literacy and language development, which are the expressive vocabulary, print awareness, letter identification, initial sound discrimination, emergent writing, and listening comprehension.



All items showed great improvement with the average of 28.5% improvement from baseline on May 2016 to end line on February 2017 (9 months interval). The highest score of the assessment was on the emergent writing, where the participating children are being asked to write down his/her name. It achieved 42% improvement after 9 months period of time. While, the lowest improvement score was on the score identification (20% improvement) where the participating children were being asked to mention the letter being showed by the enumerator on a random order.

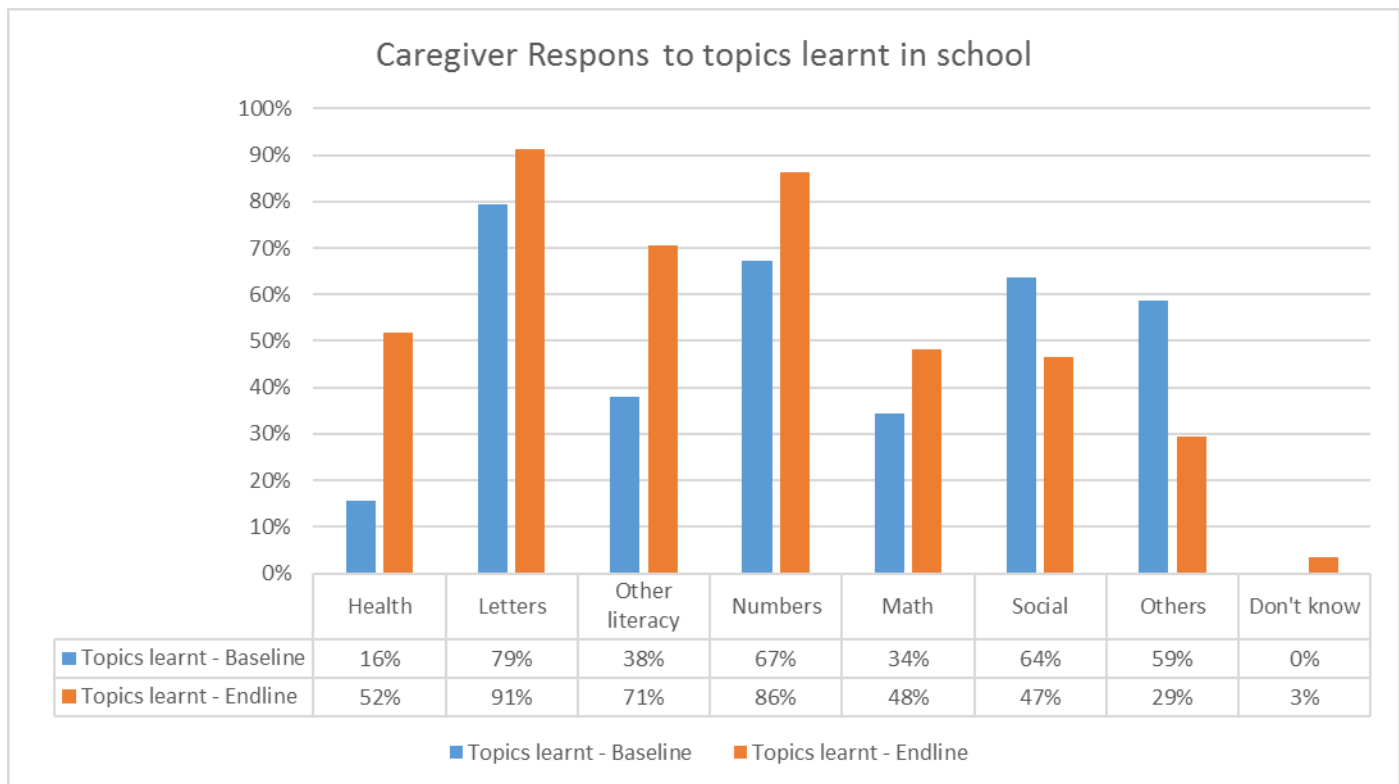
Emergent Numeracy

There are 8 children's development measurements under the emergent numeracy, which are the measurement and comparison, classification/sorting, shape identification, number identification, one-to-one correspondence, addition and subtraction, puzzle completion, and memorization.



To all 8 development items under the emergent numeracy domain, it showed an improvement. Even though that the measurement and comparison item showed the lowest improvement, but it achieved 100% score during the end line study. It means that during the end line assessment, all 58 participating children were able to correctly pointing and comparing the biggest/smallest and longest/shortest of the circles and branches drawing. The classification/sorting item showed highest improvement from baseline to end line assessment with 38% improvement (from 52% during baseline to 90% during end line). Under the classification/sorting item, the enumerator showed several shapes with different colors to participating children, and asked him/her to classify it. The children might to classify it based on shape or based on color. Ninety percent of respondents could response it correctly.

From the caregivers survey, it showed similar results. The caregivers responded positively towards the activities and their kid's attendance in the ECCD. The more frequent their kids to attend the school, the more developed their kid's early learning. From the correlation analysis, it resulted a coefficient correlation of 0.42, meaning that it showed a strong positive relationship between frequency of attending the ECCD and their kid's early learning development.



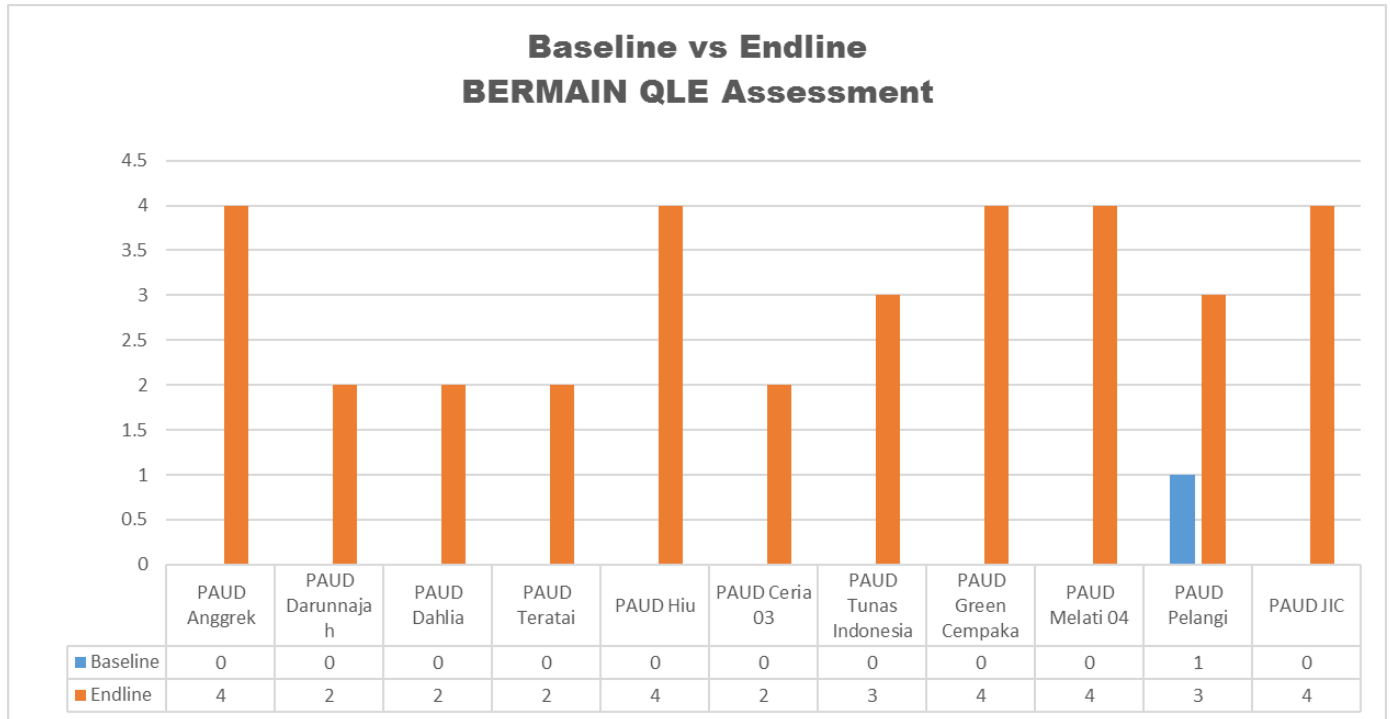
Regarding to the topics being learnt by their children during in ECCD, the caregivers responded variously. The big improvements from baseline to endline study were on the topics of health and other literacy with the improvements of 36% and 33%, respectively. While the numbers, math, and letter, they improved by 19%, 14%, and 12%, respectively. Since the social and other topics were already high during the baseline, it showed reduction during the endline study, each by 17% and 30%.

Mother and father are the main caregiver for the kids, actually. They need to spend some quality time with their children to support their early learning development. Based on the analysis of the caregivers assessment, it resulted a positive correlation between the time being spent by parents to be with their kids with the early learning development. During the baseline study, the mother had spent more time with the children to support their early learning development. It showed by the coefficient correlation of 0.10 ($r = 0.10$). More interestingly, that during the end line study, fathers spent more time, comparing during the baseline, to be with their kids. The analysis resulted the correlation coefficient of 0.04 ($r = 0.04$).

QLE

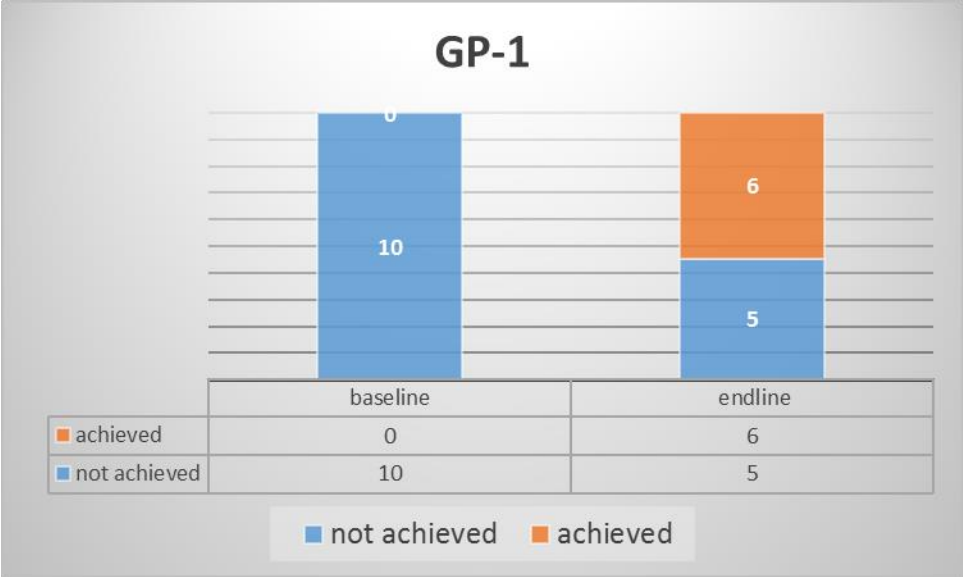
The QLE assessment is based on the observation conducted by two enumerators for each classroom. The two enumerators then need to agree on the final score for each measurement under each Guiding Principles of QLE. There are four scores for each classroom environment observation which are 1 for not

meeting the indicator, 2 for almost meeting the indicator, 3 for meeting the indicator, and 4 for exceeding the expectation.



Based on the analysis, all schools showed big improvements from baseline to end line study which was 9 months interval towards all QLE measurements. During the baseline study on May 2016, almost none of the ECCD center meeting the measurement. Only one ECCD was almost meeting the measurement. Then, during the end line study, all 11 ECCD centers being assessed were achieving the score for at least almost meeting the indicators.

Deeper into each GP, the achievements were presented on the following paragraphs.



On the first Guideline Principle 1, we measured the achievements of ECCD towards the provision of safe and secure place for children to learn. There were five items to be measured, including the availability of space for children to play, drinking water for tutor and children, water and sanitation in the center, distance to children’s residency, positive discipline and do no harm to the children. Previously during the baseline, none of the 10 ECCDs being assessed was able to achieve the measurement. Meaning that the safe and secure place for children to learn was still lacking. Then, 9 months later, 6 out of 11 ECCD centers being assessed already improved by the provision of safe and secure place for children to learn. The other 5 schools did not mean that they were failed, but the improvements were still not meeting the expectation.



Under the GP 2, we measure the achievement of the ECCD to support the children’s early learning development which include the physical, socio-emotional cognitive, and language. There were 10 items

being observed, including the space for motoric exercise, health and sanitation, provision of play kit, counseling, communication on children’s level, and books. During the baseline assessment, none of the ECCD was meeting the indicators. And, it improved during the end line, that 91% of the observed ECCDs were meeting the expectation. The other one ECCD was on the progress of improvement towards the measurements.



Under the GP 3, QLE measure the improvement of student-centered learning, children participation, and all children’s learning outcomes. There were five items being observed, including the teacher’s attendance, variety and accessibility of play kits, fair assessment methods, school supervision, and teachers’ code of conduct. During the baseline assessment, none of the school being observed was meeting the expectation of the QLE measurement GP3. While, during the endline assessment, 10 out of 11 centers were meeting the expectation. Only one center was still on the progress of improvement to meet the expectation.



Guiding Principle 4 intent to measure the community and parents involvement on planning, decision making, and implementation of the children’s early learning development. There were 3 items being measured under the GP 4, which include the regular communication between teachers and parents, parenting sessions, and the establishment and functioning of school committee. During the baseline study on May 2016, there was only one center achieving the measurement, and the other 9 were still not able to meet the indicators. While during the endline study 9 month later, 8 centers were improved by meeting the indicators, and the other three were still on the progress of improvements.

Discussion and Recommendations

Key findings and discussions

The results presented a descriptive overview of IDELA and QLE assessments being conducted during baseline on May 2016 and end line assessment on February 2017 in 10 intervened ECCD in Cilincing sub-district of North Jakarta district in DKI Jakarta province. Using IDELA assessment, it showed children’s early learning development and learning outcomes at the beginning and end of academic year 2016 – 2017. Based on the analysis, it revealed that some factors suggested associations with those children’s literacy and learning outcomes. This section provides a summary of key findings.

- In overall, all development domains under the IDELA assessment tool showed improvement with the average of 20.5% improvement from base line to end line study. Nevertheless, the motoric domain showed the lowest improvement for the study duration of 7 months, with 15% improvement. It needs further discussion to solve this issue regarding to the project intervention.
- Under the Socio-emotional domain, the peer relations among participating children showed a slight decreasing score (3%) from base line to end line study. Peer relation is related with children’s friendship. It should improve over time.

- Under the Emergent numeracy/cognitive domain, we achieved 100% score for the measurement and comparison. It means that we should have strategy to maintain a full achievement. All measurement showed high score, above 85%, which should be maintained.
- There are some room for improvement for Language domain, since the highest score was 93% specifically for listening comprehension. Moreover, the initial sound discrimination still showed the lowest score during the baseline and end line assessment with the score of 68% and 41%, respectively.
- Comparing to other domains, the Emergent numeracy/cognitive domain showed highest score either during base line and end line assessment. We need to discuss how to improve other domains score, especially for Gross and Fine Motor Development.
- From caregivers survey, they responded that the social and other topics (i.e. sport, religion, art, etc) being learnt in the ECCD were reduced during the end line comparing to the baseline. It needs more clarification regarding to the social topics, whether the caregiver understood with the social topics being learnt in the ECCD, and to have the same understanding.
- On the QLE measurement, we need to have a clear and consistent grading. There were four scale of scoring, but with no clear rules of the decision on the achieving or not achieving the indicators. The QLE analysis tool based on the macro in Excel was not always work to help the analysis.

Recommendations

After two years of implementation and intervention, and based on the analysis and findings during base line and end line study using IDELA assessment tool to measure children's early learning development, some recommendations were drawn. These recommendations could be used to improve the next assessment and project implementation.

- Almost all of the participating children received a lower score specifically on the playing head & toe item during the end line assessment comparing to the end line assessment. It is recommended to develop a consistent scoring guideline which can be used over time, regardless who is using the IDELA tools to avoid inconsistency of scoring interpretation.
- It is recommended to have a complete SOP/guidance to implement, score, data input, analysis and interpretation of IDELA and QLE tools. Both parties, between the MEAL and project team need to understand the use of the tools.
- Regarding to the high staff turnover, it is recommended to develop the IDELA and QLE assessment tools guideline and reference sheet to avoid inconsistency and data miss-interpretation. It was quite hard for the writer to analyze and interpret the data without adequate knowledge on the study/ assessment background.
- Moreover, regarding to the specific BERMAIN intervention, project team should pay more attention to improve the Gross and Fine Motor Development domain. There are still room for improvement under this domain to improve the scoring domain in the future.
- The project team should put effort to maintain good scoring under the Emergent numeracy/cognitive domain, since it already on high scores, even already 100% achievement.

- Under the QLE measurements, it is recommended for the project team to maintain and improve the good quality learning environment's achievements.
- It is recommended to have a control group to measure the gain achieved by the project. By having a control group, we may to claim the gain achieved by project intervention, to be compared with the un-intervened children studying in the un-intervened ECCDs.
- For the following study, it is recommended to conduct an early baseline assessment, specifically before or early in the beginning of academic year. And also to involve all 20 intervened ECCD, to have a better and more representative data.