

The Indonesia Early Childhood Education and Development (ECED) Project: Findings and Policy Recommendations

Policy Brief

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Photo: Hafid I. Alatas

1. Introduction

The Government of Indonesia is pursuing a number of initiatives related to Early Childhood Education and Development (ECED). These include increasing access to early childhood education centers and developing and formalizing Holistic Integrated ECED. This policy brief provides an overview of the ECED sector and uses findings from an ongoing World Bank-supported ECED project to make preliminary policy recommendations to guide these initiatives.

This brief shows that the ECED project has had several positive effects, including increased enrollment rates and higher developmental outcomes for children. But it also suggests that these outcomes might have been higher if home environments were more supportive of child development. The analysis supports several policy recommendations – ranging from the need to raise community awareness on the importance of early childhood development to the need for communities to raise funds in order to maintain financial viability of project centers.

2. Overview of the ECED sector

A number of different ministries in Indonesia are responsible for providing early childhood education services. This, coupled with the fact that several strategic policy documents address ECED, suggests the opportunity for greater coordination within the sector. This section reviews the variety of formats in which ECED is provided, highlights key policies governing the sector, and presents details of the structure of the ongoing World Bank-supported ECED project.

2.1. How is ECED provided in Indonesia?

The Ministry of Education and Culture (MoEC), the Ministry of Religious Affairs (MoRA), the Ministry of Home Affairs (MoHA), and the National Family Planning Board (BKKBN) all provide some form of early childhood education and development

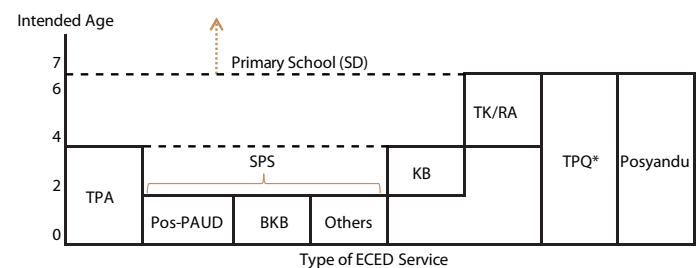
services. There are at least eight different forms of service provision that have historically been categorized as either part of the formal or the non-formal system:

Table 1: ECED services are provided in different formats by different ministries

	Ministry of Education and Culture (MoEC)	Ministry of Religious Affairs (MoRA)	Ministry of Home Affairs with Ministry of Health Staff	National Family Planning Board
Formal	Kindergartens (Taman Kanak-kanak, TK)	Islamic Kindergartens (Raudhotul Atfal, RA)		
Non-formal	Playgroups (Kelompok Bermain, KB)	Islamic Kindergartens (Taman Pendidikan Quran, TPQ)	Integrated Health Service Units (Posyandu)	Toddler Family Groups (Bina Keluarga Balita, BKB)
	ECED Posts (Pos PAUD)			
	Childcare centers (Taman Penitipan Anak, TPA)			
	Other early childhood units (Satuan PAUD Sejenis, SPS)			

These different ECED services are intended to cater to specific age-groups; however, in practice these age-groups are hard to enforce. For example, children between the ages of 4 and 6 are supposed to be in Kindergartens (TK/RA). However, it is not uncommon for some 4-5 year old children to still be in playgroups (KB) and for some 6 year old children to have already started first grade of primary school.

Figure 1: ECED services are intended to cater to specific ages though this is often hard to enforce



* also included in SPS

Not all ECED services are equally intensive. For example, childcare centers (TPA) are day-long and tend to operate from 8 a.m. to 4 p.m. In contrast, kindergartens (TK), playgroups (KB) and ECED posts (Pos-PAUD) typically operate from 8 to 11 a.m. Islamic kindergartens

(TPQ) operate from 2 – 4 p.m. and thus many children are able to attend these after having attended another ECED service in the morning. Most of these services are available daily (5-6 times per week). Toddler family groups (BKB) are less frequent and typically children attend one session a month.

Different types of services are subject to different standards.

The Government has established national standards on ECED leading to a series of regulations on aspects such as class size that vary depending on whether the service is formal or non-formal. For instance, these regulations stipulate that there should be one teacher for every 20 students in formal kindergartens (a student to teacher ratio of 20:1 in TK/RA). In the non-formal institutions the student-teacher ratio varies depending on age, ranging from 4:1 for children 0-1 years of age up to 15:1 for 5-6 year olds in a non-formal ECED center.

2.2. ECED policies in Indonesia

The variety of formats by which ECED is provided underscores the importance the Government has historically placed on early childhood. Over the years, several different policies have addressed ECED. In mid-2009, the government with support from the World Bank issued a set of national standards for formal and non-formal ECED covering developmental achievement, educators, content, facilities and financing.

These standards are a response to the challenges the sector has historically faced:

1. low participation rates among the poor,
2. lack of government investment,
3. few options for teacher training,
4. low enrollment rates among children 0-3 years of age.

While it is too soon to see how these standards are influencing children's outcomes, the figures below show some striking facts about disparities in enrollment in ECED services by age and wealth:

1. Children 0-3 years of age are typically not enrolled irrespective of whether they are rich or poor.
2. Enrollment among children 4-6 years of age has increased but disparities persist.

Figure 2: Very young children do not enroll in ECED centers and disparities in enrollment by wealth still persist



SUSENAS 2004, 2007 and 2010

2.3. The Early Childhood Education and Development (ECED) Project

This section focuses on World Bank support to the ECED project – a community-driven project in almost 3,000 villages run by the government of Indonesia since 2007. This support has ranged



Photo: Hafid I. Alatas

from capacity building at the district level to sensitization on the importance of ECED at the community level. The Bank is supporting the monitoring and evaluation of project activities as well as policy development at the central level (see Table 2).

This project harnesses Bank experience working on ECED. Past experience in Indonesia and other countries suggested that in order to ensure ownership and sustainability, local participation (both by the community and by local government) was critical.

The government initiated this community-driven project in 50 districts. The fifty districts that participated in the project were selected according to the following criteria:

1. low participation rate of children of 0-6 years of age in ECED services;
2. low Human Development Index;
3. high poverty rates;
4. classification as a poor district by the Decree on Disadvantaged Districts (*Kepmen Pembangunan Daerah Tertinggal*) 2005;
5. commitment to developing an ECED agenda in their respective districts.

Within each district, priority villages were identified according to fixed criteria. Given the wide disparities that exist within districts, 60 villages with the highest number of children ages 0-6 and the highest poverty rates were identified and targeted as priority within each district.

Table 2: The World Bank has supported ECED policy development and implementation at the central, provincial and district levels

Supported MoEC in establishing National ECED standards	Through the Early Childhood Education and Development project (2007-2013)			
	Established capacity at central, provincial, district levels to train village ECED teachers	Supported districts in providing regulatory and budgetary support to ECED program	Strengthened monitoring systems for project districts and beyond	
			Designed and analyzed data from Impact Evaluation	Monitoring and Evaluation framework utilized in developing country's first PAUD Census
	Covered 50 districts (in 22 provinces), 3,000 villages, 6,000 centers, 12,000 teachers	Provided facilitation and block grants to community to establish ECED services		

The project objectives are to increase access to ECED services among the poor and enhance children's school readiness. This is done through a package of interventions which are delivered sequentially and include:

- 1. Community Facilitation:** Sensitization of communities to the importance and benefits of ECED, and the training on how to submit a proposal for using project funds (provided as block grants).
- 2. Block Grants:** block grants (USD 18,000 over 3 years) with which to set up and operate two ECED centers
- 3. Teacher training:** 200 hours of training each to one teacher and one child development worker per center.

In order to ensure that project objectives are met and to build the evidence-base for ECED policy, a multi-year impact evaluation study has been ongoing since 2009. The government has collected two rounds of data with World Bank support and a third round is planned for early 2013. These data follow two cohorts of children – those born in 2008 and those born in 2005. When they were first surveyed in 2009, these cohorts were 1 and 4 years old.

This impact evaluation study uses a randomized control trial design. 100 villages are randomly assigned to receive the package of interventions above (henceforth the treatment) at the start of the project (the treatment group) and 100 villages receive treatment one year later (the control group). Because these villages were randomly assigned to the treatment and control groups, there should be no difference in enrollment rates prior to treatment being received. Over time, however, both treatment and control groups receive the project. Therefore, the study also collects information on 100 villages that never receive treatment (the comparison group). As the project unfolds, this group of villages will become the relevant group to compare project villages to. Table 3 captures the design of the study:

Table 3: The impact evaluation randomly assigns when villages receive treatment

	Project Timeline	
Type of Village	Start of Project	One Year into Project
Treatment Villages	100 villages randomly assigned to treatment	
Control Villages		100 additional villages randomly assigned to treatment
Comparison Villages	100 villages which never receive treatment	
Brown denotes project is received. Light brown denotes no project is received.		

3. Findings and Recommendations

This section focuses on findings from the project and uses them to provide recommendations the government may wish to consider as it develops other ECED initiatives. Data for the four-year old cohort in the study are analyzed and used to answer the following questions:

1. Does the project lead to increased enrollment in ECED?
2. What are the characteristics of those who enroll in ECED?
3. Do household environments support child development?
4. Does enrollment in ECED lead to better developmental outcomes for children?
5. How do we ensure financial viability of project centers?

3.1. Does the project lead to increased enrollment in ECED?

The package of interventions was implemented sequentially: the first step in the project was providing community facilitation – sensitization on the importance of ECED. The second step was disbursement of block grants and the third step involved training teachers before opening up centers. Using information on key project implementation dates, this section unpacks the effects of the project over its lifecycle by constructing enrollment rates at different points during implementation.

Taken together, the evidence suggests that raising community awareness and opening additional centers matters for raising enrollment rates. Figure 3 shows increases in enrollment as the project unfolded. This reveals that while enrollment tends to increase as children age, villages that are part of the project display larger increases than those outside the project.

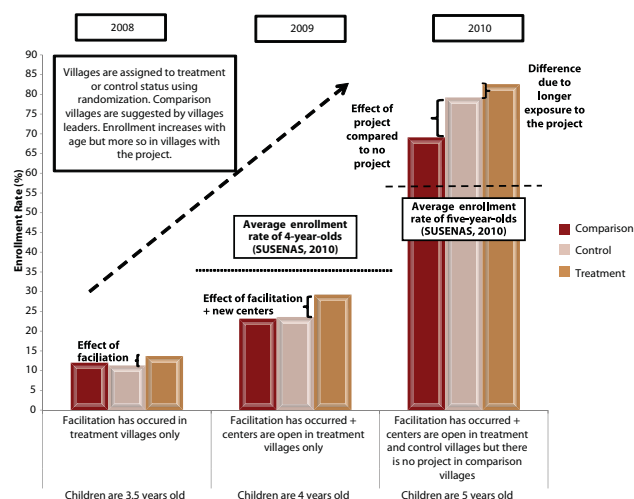
Raising community awareness (facilitation) on the importance of ECED has a positive effect on enrollment and knowledge of ECED services. Figure 3 reveals that facilitation helped increase enrollment by 2.4 percentage points. Knowledge of the nearest ECED location also increased among villages that received treatment relative to those that did not. Data are for the very beginning stages of the project – when facilitation was complete but not all project centers were open. Thus this reinforces the finding that facilitation helped improve awareness.

Opening additional centers has a positive effect on enrollment beyond that of raising community awareness. The data suggest that the combination of new centers and facilitation leads to a 5.6 percentage point higher enrollment rate in treatment villages when compared to other villages in the study where this had not yet taken place.

Furthermore, we find that longer exposure to the project results in a higher enrollment rate - 3.4 percentage points. These data also reveal that the effect of the project relative to no project ranges between 10-13.5 percentage points depending on whether the comparison is to control or treatment villages respectively.

Another way to consider this evidence is the following: If the project had no effect and we were only capturing increases in enrollment as a result of children aging – there is no reason for treatment and control villages to have different rates of increase. Therefore, we conclude that the project is increasing enrollment – a fact reinforced by evidence from national data sources.

Figure 3: Enrollment increases occur as a result of raising community awareness and opening new centers



Dotted line shows gross enrollment rate among 4 year olds from SUSENAS 2010. Dashed line shows gross enrollment rate among 5 year olds from SUSENAS 2010. Data are longitudinal. Children are 4 year olds at time of baseline data and 5 years old at time of midline.

Recommendation: In order for future government initiatives to increase enrollment in ECED, they should start by raising community awareness about the importance of ECED.

3.2. What are the characteristics of those who enroll in ECED?

This is a policy-relevant question raised by increases in enrollment and it is important if we are to:

1. identify potential groups that remain excluded despite increases in access provided by the project,
2. suggest possible mechanisms by which to reach such groups.

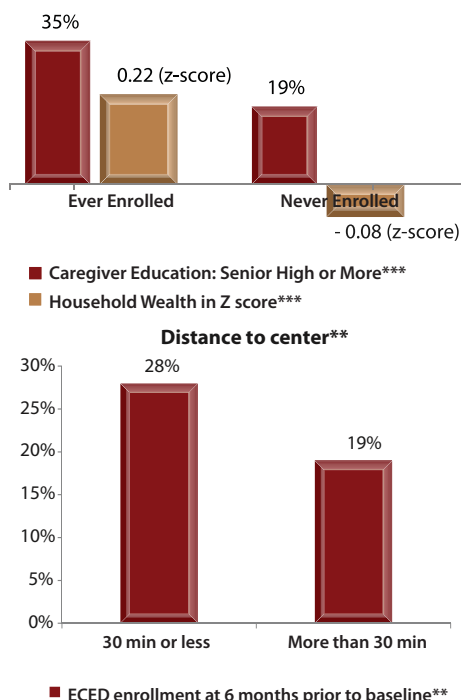
Figure 2 presented evidence from nationally representative data that enrollment rates for children 0-3 continue to be low. Thus this sub-section focuses on a sample of the 4-year old children followed in the ECED study and examines the characteristics of those who enroll compared to those who do not.

Our findings show there are four important characteristics that differentiate enrollees from non-enrollees.

1. Those who are enrolled in ECED services are much more likely to have caregivers with a senior high school education or higher (Figure 4).
2. Girls are more likely to enroll in ECED than boys.
3. Enrolled children belong to households that are wealthier and have higher participation rates in social service groups when compared to children that are not enrolled.
4. Distance to an ECED center is an important determinant of whether or not children enroll.

For instance, children who live less than 30 minutes walking distance from the closest ECED center (approximately 2 km or 1.25 miles) have much higher enrollment rates than children who live more than 30 minutes away from a center. However, there is no significant difference in the age of enrolled and unenrolled children or in caregiver reports of child health.

Figure 4: Enrollment rates are higher for girls from wealthier, more educated households which are closer to centers and participate in social service groups



Source: Authors' calculations.
 *** denotes statistical significance
 *** = 1%, ** = 5%

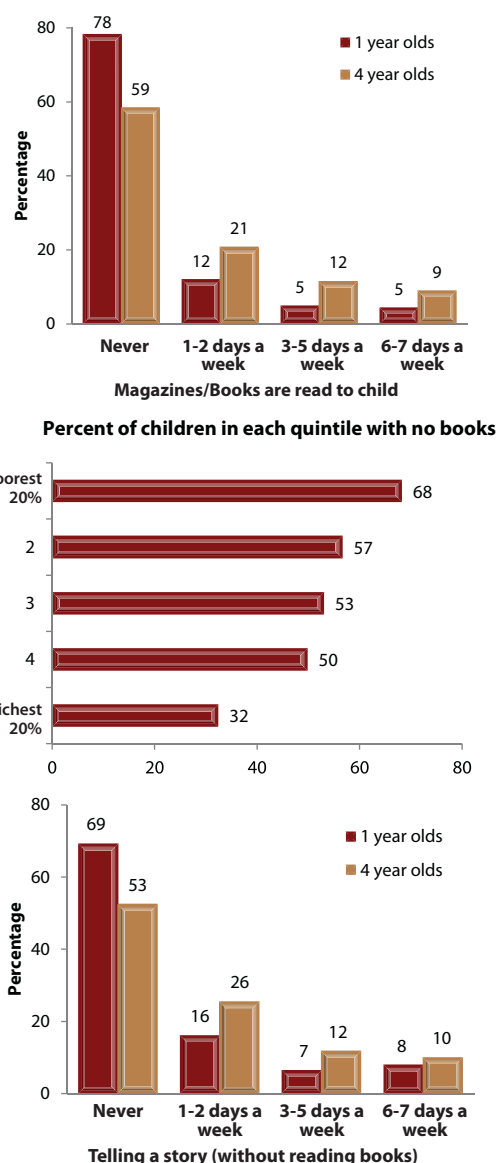
Recommendation: Community assessments should be promoted as part of initiatives to increase enrollment in order to appropriately cover the neediest segments of the village population.

3.3. Do household environments support child development?

ECED centers are not the only place where child development takes place. As shown in earlier sections, most children will spend a substantial portion of their day at home with their caregiver. Therefore, in this section, we delve within the household to assess whether these children grow up in environments which support child development. We focus on two aspects – support to cognitive development and child health.

The vast majority of the children observed in this study grow up in households where parents never read stories to their children, which can limit their cognitive development. For many households this is understandable since very few report owning any children's books. Two-thirds of children in the poorest quintile grow up in households with no children's books. Even among the more affluent households, one-third of children have no books which parents can read to them. Yet the situation is very similar when an alternative which requires no books is considered: few parents report telling stories to their children.

Figure 5: Parents don't read to their children nor do they tell them stories



The sample of Indonesian children we study have very high rates of stunting, wasting and being underweight which limits their ability to develop physically and cognitively. These rates are typical of the Indonesian population but are very high compared to the rest of the world. Table 4 shows the share of children aged 48-60 months that would be expected to fall below -3 standard deviations on height-for-age, weight-for-age and weight-for-height in a well-nourished reference population alongside the share of the sample of Indonesian children that actually fall below this threshold. In the well-nourished population, less than 1% of children are expected to be below -3 standard deviations. By comparison, in the Indonesian sample the prevalence rates of wasting (3.7%), stunting (10.4%) and being underweight (6.2%) are very high.

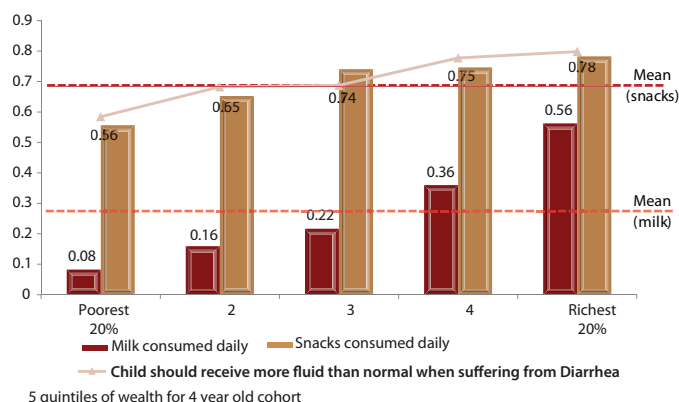
Table 4: Rates of stunting, wasting and being underweight are very high

	Percent of children below -3 Standard Deviations		95 % CI	
	Healthy reference population	Sample of Indonesian Children	lower limit	upper limit
Weight for Height	<1	3.7	3	4.4
Height for Age	<1	10.4	9.3	11.5
Weight for Age	<1	6.2	5.3	7

Source: Authors' calculations using WHO standards

Parental practices related to their children's diets may be doing little to improve the situation. Parents are more likely to report that their child consumes snacks daily than they are to report that their child consumes milk daily. This is a particularly striking fact since this is true at all wealth levels and all levels of caregiver education (not shown). There is some indication that this is the result of a lack of knowledge on the part of parents. For instance, when caregivers are asked whether a child with diarrhea should be given more or less fluid than normal, 40 percent of caregivers in the poorest quintile and 20 percent of caregivers in the richest quintile are unable to offer the correct response – which is to provide more fluid than normal.

Figure 6: Parenting practices and knowledge may be exacerbating existing problems

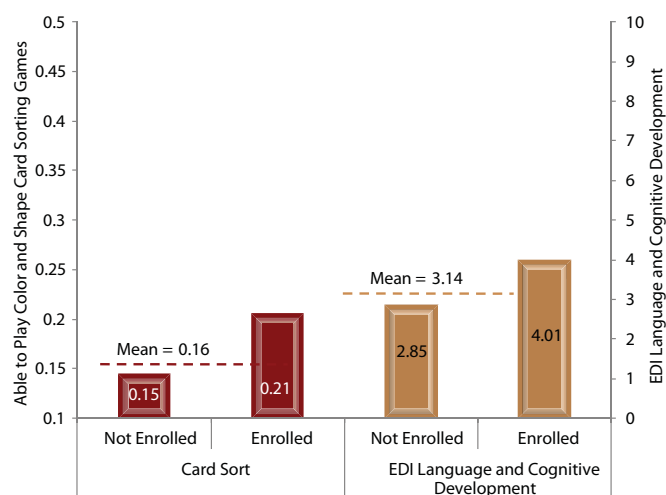


Recommendation: Communities could consider establishing partnerships with local community learning centers (PKBMs) to allow parents to borrow materials (such as children's books) so that they can reinforce in their homes the cognitive stimulation taking place in ECED centers as well as raising parental awareness about good dietary and parenting practices.

3.4. Does enrollment in ECED lead to better developmental outcomes for children?

Irrespective of how one chooses to measure child development, enrolled children have better developmental outcomes than those who are not enrolled. This study collects information on a range of child development outcomes: gross motor skills, fine motor skills, socio-emotional maturity, physical health, language skills, communication and cognitive abilities and executive function. These measures are collected using a variety of instruments including the Early Development Instrument (EDI), the Strengths and Difficulties Questionnaire (SDQ), and by asking the children to play a card sorting game intended to capture their executive function. Many of these instruments were adapted and applied systematically to children in Indonesia for the first time under this study. Figure 7 shows that enrolled children have better developmental outcomes than those who are not enrolled using the EDI and the measure of executive function.

Figure 7: Those who enroll in ECED do better on a battery of child development instruments



Means and 95% confidence intervals shown.

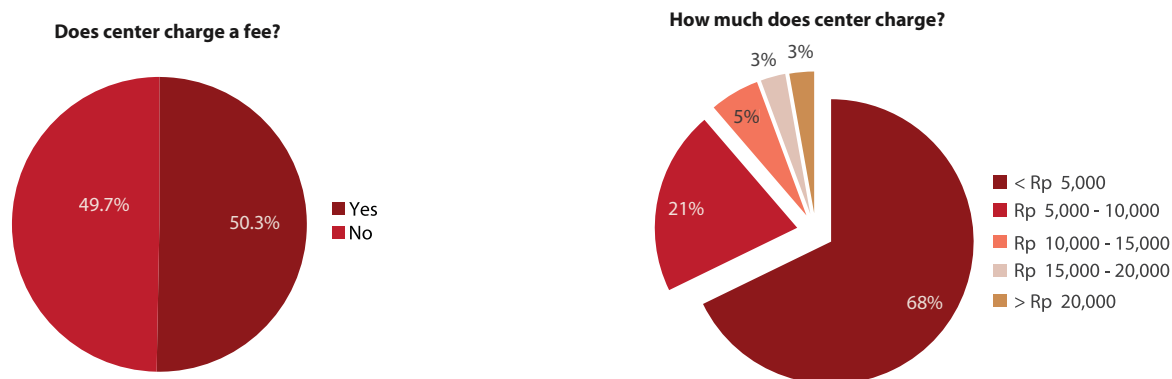
Recommendation: Establishing and operating ECED centers is an intensive exercise for communities – particularly the poorest. When communities are given the option to establish an ECED center, they should also be provided with information on the short and long-term benefits of early education so that they are aware of the full spectrum of benefits they will reap.

3.5. How do we ensure financial viability of project centers?

If they are to remain financially viable, all project centers will need to secure continued funding once the project closes. The ECED project has made funds available to centers since 2008 to be spent on learning, management, administration, health and nutrition expenses. Perhaps for this reason, half (50.3%) of the centers do not charge any fees. At the remaining centers, the amount that parents are required to pay varies greatly – from less than IDR 5,000 (approximately USD 0.5 per month) to as much as IDR 20,000 (approximately USD 2 per month). On the low end of this spectrum project centers are charging less than what comparable non-formal non-project playgroups are charging. On the high end of this spectrum they are charging as much as what formal kindergartens charge.

Recommendation: If ECED centers are to be financially viable, communities need to be sensitized to the need to raise funds to support themselves. One possibility would be to extend the government's program to provide operational support to education (*Biaya Operasional Pendidikan*, BOP) more broadly and target coverage to poor children in under-served communities such as the ones described here.

Figure 8: Communities must be sensitized to the need to raise funds if they are to keep centers open once the project closes



Box 1: Summary of findings and policy recommendations

Context	Recommendations
Early childhood education and development (ECED) services in Indonesia are provided in a variety of formats by several different Ministries.	There is significant scope for coordination between and across these various Ministries and formats of service provision.
Findings	Recommendations
1. Enrollment in ECED increased when the Government sensitized poor communities to the importance of early childhood development.	Future government initiatives to increase enrollment should start by raising community awareness about the importance of ECED.
2. Parental education and household wealth are positively associated with enrollment. Girls are more likely to be enrolled in ECED than boys. Distance to a center is an important determinant of whether children are enrolled.	Community assessments should be promoted if future ECED initiatives are to appropriately cover the neediest segments of the community.
3. Children often grow up in household environments that provide very few possibilities for stimulation. Child development gains could be greater if children received stimulation in the home and if parenting practices improved.	Communities could consider establishing partnerships with local community learning centers (PKBMs) to allow parents to borrow materials (such as children's books) so that they can reinforce in their homes the cognitive stimulation taking place in ECED centers as well as raising parental awareness about good dietary and parenting practices.
4. Children who enroll in ECED services show significantly higher levels of physical, socio-emotional and cognitive development than those that do not.	Communities considering the establishment and operation of an ECED center should be made aware of both short and long-term benefits of ECED.
5. The majority of project centers do not charge fees. Those that do charge less than comparable non-project centers.	If ECED centers are to be financially viable, communities need to raise funds to support themselves. One possibility would be to extend the government's program to provide operational support to education (<i>Biaya Operasional Pendidikan</i> , BOP) more broadly and target coverage to poor children.

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The findings, interpretations and conclusions expressed in this publication do not necessarily reflect the views of the Government of Indonesia, the Government of the Kingdom of the Netherlands, or the European Commission.

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