



# **REACT Thailand Mae Sot, Phob Phra, and Tha Song Yang Baseline Equity Study 2018**

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## Executive summary

Save the Children is implementing programming in Migrant Learning Centers in three districts of Thailand: Mae Sot, Phob Phra, and Tha Song Yang. This report conducts an equity study by examining a representative sample of children in Migrant Learning Centers and compares them to children studying in nearby Thai ECCD Centers. We examine the early learning and developmental status and background characteristics of these children and try to understand where gaps exist in an attempt to better target programming.

We used the International Development and Early Learning Assessment (IDELA) to measure 418 children's developmental status and the IDELA-Home Environment tool to interview 333 caregivers about their family and home characteristics. Overall, we are surprised to find few gaps in IDELA scores between children in MLCs and Thai ECCD centers.

While actual development did not appear to vary much between MLCs and Thai ECCD Centers, we find large and significant gaps in their home characteristics. Children studying in MLCs come from significantly more disadvantaged backgrounds. Children studying in MLCs are less likely to own common home possessions, have access to fewer learning resources, and have fewer positive learning interactions than their peers in Thai ECCD centers. These same children also experience higher levels of harsh discipline (hitting, spanking, and yelling), more time outside the care of an adult, and have less-educated parents. Children from MLCs

We also examined the relationships between background characteristics and IDELA scores. We find many of the expected relationships: more advantaged children perform better on IDELA. The language of instruction clearly plays a role as well. Children who speak Burmese (the language of instruction of MLCs) and Thai (the language of instruction of the Thai ECCD Centers) scored similarly on IDELA. However, children who spoke Karen scored significantly lower.

Girls generally performed slightly better than boys, especially on tasks requiring motor skills. Numeracy skills were correlated with higher levels of caregiver knowledge about positive discipline, and motor skills were correlated with caregiver's health status. We were surprised that positive caregiver interactions were not predictive of improved IDELA scores.

In general, we find that the relationship between development and background much more complex than simply "migrant children are disadvantaged". Language, gender, nutrition, health, and caregiver practices all interact in a complex process to affect child outcomes. Programs must not only work within MLCs but strive to influence the home environments that children experience.

## Introduction

### Background

In the 1960s and 1970s Thailand became a key destination point for refugees displaced by conflict in neighboring countries. The border areas received a large influx and the refugee camps along the Thai-

Myanmar border were established and filled. Thailand's strong economic growth in the late 1990s and early 2000s resulted in an influx of voluntary migration from Myanmar, Laos, Cambodia, and Vietnam to meet the demand for unskilled, cheap labor. Many workers brought their children, who were initially denied entry into Thai government schools as they, like many ethnic minority children born in Thailand, lacked Thai citizenship.

As international organizations and domestic NGOS brought attention to the crisis of hundreds of thousands of out-of-school children, the Thai government responded. The Cabinet Resolution of 5 July B.E. 2548 (2005) guaranteed the right of any child to enter Thai schools, regardless of citizenship or place of birth.

Yet problems remained. Schools were unprepared for the influx of children who knew little or no Thai. Teachers struggled to integrate them into their classes, and often felt that Thai students were neglected due to the special attention needed by the newcomers. Administrators were frustrated by the frequent movement of migrant families; large groups of students could suddenly appear after the school's budget—based on per-head allocations—had already been finalized. Illegal migrants (perhaps half of the total migrant population) feared that enrolling their children in Thai schools might increase their risk of being discovered and deported. Parents wondered about the true value of Thai schooling, especially as work opportunities emerged for older children. Those children who stayed in school faced other struggles, including the humiliation of older children being placed in classrooms with much younger Thai students due to their lack of Thai language abilities. A dozen years after the Cabinet Resolution, migrant children are still subjected to both “push-out” from the schools, and “pull-out” from their families.

Development organizations and migrant communities themselves have responded, establishing migrant learning centers (MLC) which, though generally informal, underfunded, and unrecognized by either the Thai or home country educational system, have sought to teach basic literacy and numeracy skills. Many MLCs remain in a precarious position, especially as international donor interest has shifted in recent years towards in-country interventions within Myanmar- the main source of Thai migrant labor.

## **Project**

This report includes data collected in Mae Sot, Phob Phra, and Tha Song Yang districts of Thailand. The early learning and development status of 418 children (210 boys and 208 girls) and background, family characteristics of 333 caregivers, and classroom environment of 20 Migrant Learning Centers Save the Children was assessed. Save the Children is implementing programming in Migrant Learning Centers through the migrant education portfolio, which includes the Reaching Education for All Children in Thailand (REACT) project and the Expanding Improving Migrant Protection and Assistance for Children in Thailand (Expanding IMACT). The REACT project aims to ensure migrant children are able to access a quality basic education and communities support children's learning; the Expanding IMACT project aims to strengthen local child protection mechanisms through capacity building and facilitate access to quality education for migrant boys and girls to ensure they learn.

Both projects will strengthen Emergent Literacy and Mathematics targeting migrant children aged 3 to 6 by strengthening the quality of learning environment in pre-primary classroom's at the 20 Migrant Learning Centers and in the home learning environment through strengthening parenting.

This research is primarily a study of equity in order to understand the gaps that exist between children studying in MLCs and children studying in Thai ECCD Centers. The type of center children attend is our primary dimension of equity, but we will also examine differences in language and ethnicity of children.

In order to assess these gaps, and to better understand the holistic situation of children, we examine their early learning and development as measured by the International Development and Early Learning Assessment (IDELA). To understand children's situation outside of school, we also conducted a comprehensive interview with as many caregivers of children as possible.

## **Research questions**

The key research questions explored in this report include:

- 1) What are differences do Thai and migrant children display in terms of their learning and development and background, family, and home situations?
- 2) What skills do children demonstrate (and not demonstrate) on the IDELA assessment?
- 3) How are background factors (e.g. socio-economic status, home learning environment, etc.) related to child development outcomes?

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This study would not have been possible without the consent and cooperation of the headmasters of the 20 MLCs that participated (Maw Kwee, Morning Glory 1, Rose Field, KM 42, Thoo Mwe Khee, Thoo Mwe Htee Ger Ni, St. Peter, Parami, Rocky Mountain 2, Naung Bo Den, New Day, New Society, Nam Tok, Morning Glory, Divine Love, Chicken School, Sauch Kha Hang Sar, Good Morning, Light School, and Mae Sot Advantist). We also extend our thanks to the directors of the 18 Thai schools that participated in the study (Aroonmetha School, Ban Phop Phra Community School, Banphakajer Community Learning Center, Banmunluchai School, Thairatkeeree School, Ban Wang Takhian School, Bankangphiban School, Banmaebatai School, Banmaekasa School, Banmaekuedsamtha School, Banmonhinhlekfai School,

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## Methods

### Data collection & sample

The IDELA child assessment was conducted in-person by enumerators recruited by Mahidol University. Data was collected in Thai ECCD centers and Migrant Learning Centers (MLCs) in three districts of Thailand near the border with Myanmar in Mae Sot, Phob Phra, and Tha Song Yang. As an equity study, this study is primarily interested in differences between children in MLCs who are typically Burmese or Karen, and children in Thai ECCD centers, where a majority of children are mainland Thai and some children represent Thai ethnic minority groups. We hope to better understand where gaps exist between populations and better target programming that is aimed at improving migrant children's lives.

In order to investigate these equity questions, data was collected both at Migrant Learning Centers and Thai ECCD Centers. For each MLC included in the study, we identified the nearest Thai government ECCD center to serve as a comparison. The assumption is that, being in a geographically similar area, that many of the differences between children and caregivers from these two populations are motivated by differences in language, ethnicity, migrant status, and other related factors.

The enrollment records of boys and girls aged 3 to 6 were collected from randomly selected MLCs and Thai ECCD centers in project areas. From the list of MLCs and schools, a further random selection of boys and girls with some replacement names was generated. The Mahidol University-led enumerator team first requested time with the selected students on their list. If these children were not available on the day of the field work, they requested children from the cache of replacement names by school. The school personnel were requested to contact the parents/caregivers of selected children and make an appointment for the enumerators to conduct the caregiver interview. In many cases the child assessment was conducted first followed by a scheduled interview with the parent/caregiver. This typically occurred when parents/caregivers were bringing their child to school in the morning or collecting their child at the end of the school day. In some cases, for example, schools situated just across the river from Myanmar, it was more difficult for the enumerators to conduct the caregiver interview because it was difficult to request the parent/caregiver to come for the interview. There were also a few cases where the migrant parents work all the time and it was difficult to request time with them. Lastly, some schools are situated in remote areas, for example Morning Glory MLC, the parents/caregivers were unable to come to the MLC for an interview due to transportation barriers as their homes are quite far from the MLC. The students travel to the school on a song taow (the back of a truck).

As can be seen in **Table 1**, the composition of MLC and Thai ECCD Centers by language and ethnicity are distinct, but have a substantial overlap. There are no Thai children in MLCs, but there are a number of non-Thai children in Thai ECCD Centers. More than one in four children in Thai ECCD centers was non-Thai. Burmese children were much more likely to be studying in an MLC than a Thai ECCD Center, but

Karen speaking children exist in similar numbers in both MLCs and Thai ECCD Centers. When considering equity, we will examine the difference of children in MLCs and children in Thai ECCD centers.

Most Burmese children choose to attend the Migrant Learning Center as the language of instruction is most commonly Burmese and some MLCs offer an education that is accredited in Myanmar. The team did not come across any Burmese language teachers or teaching assistants in the government ECCD centers.

In the case of the Sgaw Karen and Pwo Karen children, we assume that their choice of school is linked to the geographic area. They are more likely to choose the school that is in the closest proximity to their residence. Karen communities have historically settled in Phob Phra and Tha Song Yang for a long time, and have built relationships with Thai people in the area over many generations. The length of their stay in Thailand makes it easier to navigate access to basic services. Also many Karen people speak Thai, and they aspire for their children to speak Karen, Thai, and English – as these language skills are viewed as high status and beneficial to the future of the child. Karen people with more nationalistic passion may have an aversion to the Burmese language due to the intractable and on-going conflict in South-East Myanmar.

**Table 1. Language of IDELA assessment in Migrant Learning Centers and Thai ECCD Centers**

Language	Migrant Learning Centers	Thai ECCD Centers
Burmese	169	24
Pwo Karen	2	6
Sgaw Karen	34	26
Thai	0	157
<b>TOTAL</b>	<b>205</b>	<b>213</b>

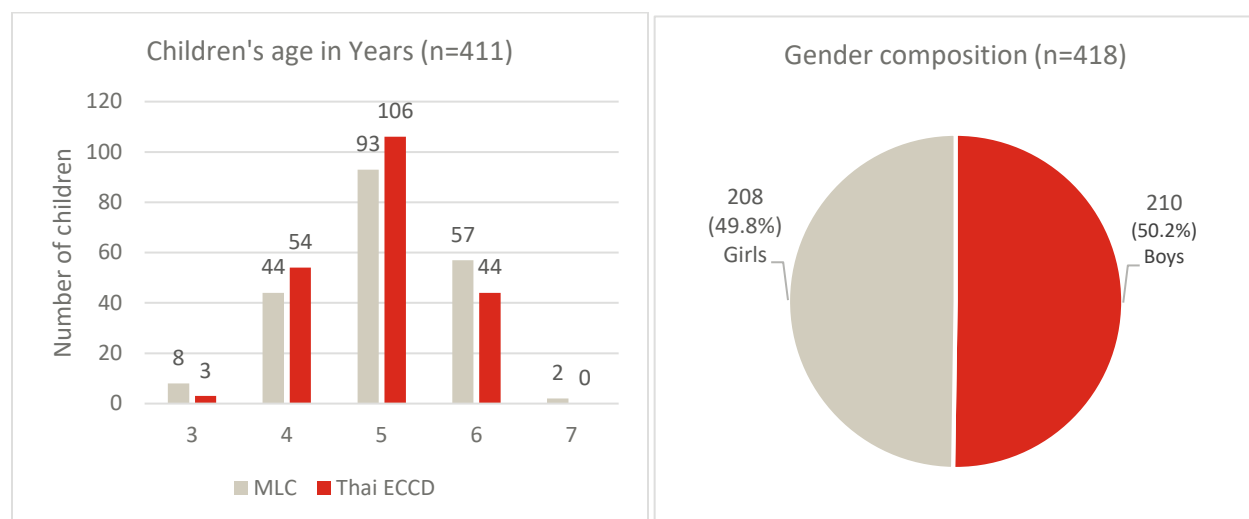
**Table 2. Child's most comfortable language (from IDELA-Home Environment)**

Language	Migrant Learning Centers	Thai ECCD Centers
Burmese	112	15
Pwo Karen	13	8
Sgaw Karen	25	33
Thai	2	90
Nothern Thai	0	13
Hmong	0	18
Other	1	3
<b>TOTAL</b>	<b>153</b>	<b>180</b>

As **Figure 1** shows, the age of children in the sample is normally distributed around 5 years, with an average age of 4.9. The sample is evenly split between male and female students.



**Figure 1. Composition of sample by age and gender**



There were no differences in either age or gender between children in MLCs and ECCD Centers.

## Measurement

Two instruments were used for the data collection for this report.

- 1) The **International Development and Early Learning Assessment (IDELA)** was used to measure the status of children's early learning children's early learning and development with direct observation through a series of games.
- 2) The **IDELA: Home Environment (IDELA-HE)** tool was used to assess key background characteristics that influence child development (e.g. socio-economic status, home learning materials, etc.) through an interview with the caregiver of the child.

Twenty-four standard subtasks are included in the IDELA: Child Assessment as listed in **Table 3**. The Total IDELA score comprises twenty-two of these subtasks, those that fall under the core domains of Motor Development, Emergent Literacy, Emergent Numeracy, and Social-Emotional Domains.

**Table 3. IDELA Child Assessment Subtasks**

Motor Development	Emergent Literacy	Emergent Numeracy	Social-Emotional Development	Other items
Hopping	Print Awareness	Comparison by Size and Length	Friends	Approaches to Learning
Copying a Shape	Oral Vocabulary	Sorting and Classification	Emotional Awareness/Regulation	Inhibitory control
Drawing a Person	Letter Identification	Number Identification	Empathy/Perspective Taking	Short-term memory
Folding Paper	Emergent Writing	Shape Identification	Sharing/Solving Conflict	
	First Letter Sounds	One-to-One Correspondence	Self-Awareness	

Oral Comprehension	Addition and Subtraction
Puzzle Completion	

The IDELA tool is a standardized assessment, with a small amount of contextualization required before each implementation of the tool. In this case, the largest change made to the tool (beyond translation) was the ability of the child to choose which alphabet and numbering system they wished to be assessed on. The child could choose between Thai and Burmese letters for the Letter Identification subtask. The Burmese letters chosen are the same symbols used in the Sgaw Karen alphabet with a different symbol (letter) to sound relationship. The Pwo Karen language community does not have a standard writing system. Similarly, children could choose between Arabic, Thai, and Burmese numbers for the Number Identification task.

The IDELA Home Environment tool is based around a core of questions to assess the background of children and then contextualized during each implementation. A summary of the sections of the interview is presented in **Table 4**.

**Table 4. IDELA Home Environment Questionnaire**

Section	Description
<b>1. General family information</b>	Sex of child, child age, number of children at home, parental literacy, parental education, languages spoken at home
<b>2. ECCD experience and educational expectations</b>	Child participation in ECCD programs, details of participation, parental expectation and aspirations of child's educational attainment.
<b>3. Access to early learning materials and resources at home</b>	Types of reading materials at home, types of toys at home
<b>4. Parenting practices and support for learning and development</b>	Adults in the home engaging with children to promote learning and development.
<b>5. Socioeconomic status</b>	Housing materials, objects/appliances owned, land/animals owned.
<b>6. Caregiver Knowledge, Attitudes, and Practices</b>	Caregivers' KAP towards positive and negative discipline.

## Analysis

The primary purpose of this analysis is to investigate differences children in MLCs and children in Thai ECCD centers and the predictors of early learning and development. We presented three analyses. First, we present an overview of the learning and development that exhibited on the IDELA. We use single regression with clustered standard errors at the MLC/ECCD Center level to assess whether differences between children at MLCs and Thai ECCD centers are statistically significant. Second, we use the same approach to present the results from the IDELA-Home Environment tool. This allows us to assess the degree to which children in MLCs and Thai ECCD centers come from similar or different backgrounds.

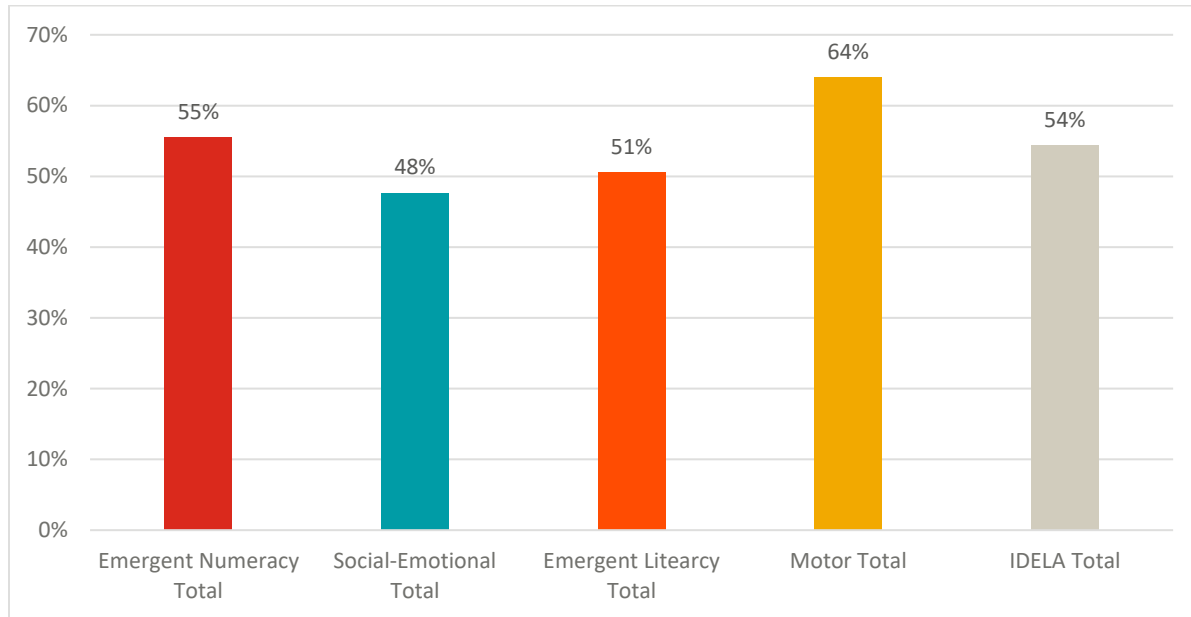
The final analysis we present is the result of a multivariate regression model building process to examine the effects that various background factors (as measured by the IDELA-HE) have on early learning and development (as measured by IDELA). We first present the model, and then, controlling for the other factors in the model, demonstrate how various background characteristics are related to IDELA Total and domain scores.

## IDELA results

The 22 core subtasks of IDELA fall into the four core domains of Motor Development, Emergent Numeracy, Emergent Literacy, and Social-Emotional Development. Domain scores are calculated as an average of subtask performance (the percentage of correct responses for each subtask). An unweighted average of domains is calculated to create a Total IDELA score to report children's overall early learning and development.

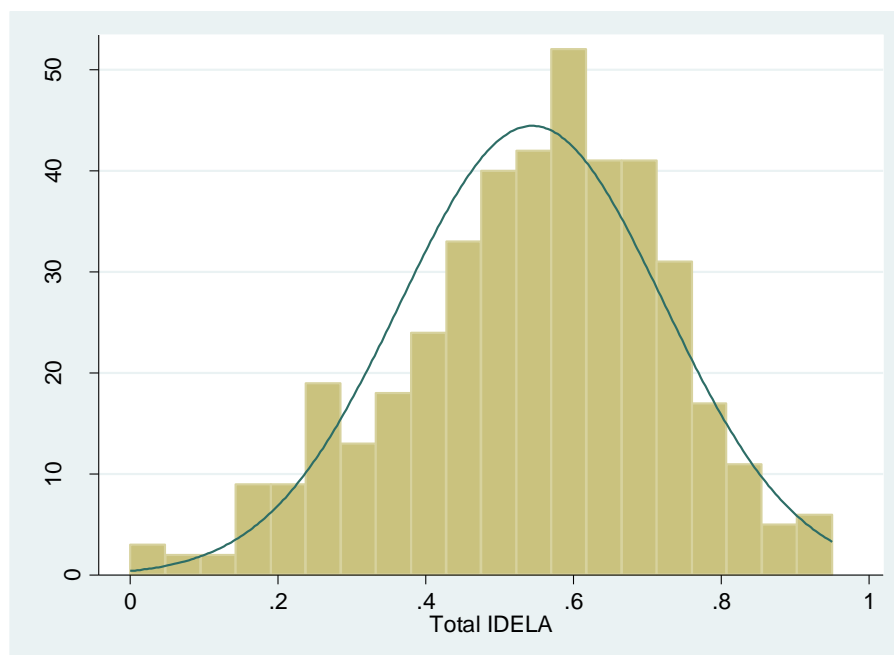
In addition to the four core domains, assessors also mark additional short-term memory and inhibitory control items as a proxy for Executive Function and report observations on children's persistence and engagement as a measure of their Approaches to Learning. These domains are less rigorously tested and validated than the core IDELA domains and are not yet part of the total IDELA composite. However, these observations can help provide a more holistic picture of children's early learning and development.

**Figure 2. Total IDELA and core domain scores (n=418)**



**Figure 2** presents children's average scores on all core domains and the Total IDELA. We can see that scores were highest in the Motor domain and lowest in the Social-Emotional domain. We find no significant differences on scores between children in MLCs and Thai ECC Centers. As visible in **Figure 3**, Total IDELA scores exhibit a distribution close to normal a slight right skew.

**Figure 3 Distribution of Total IDELA Scores**



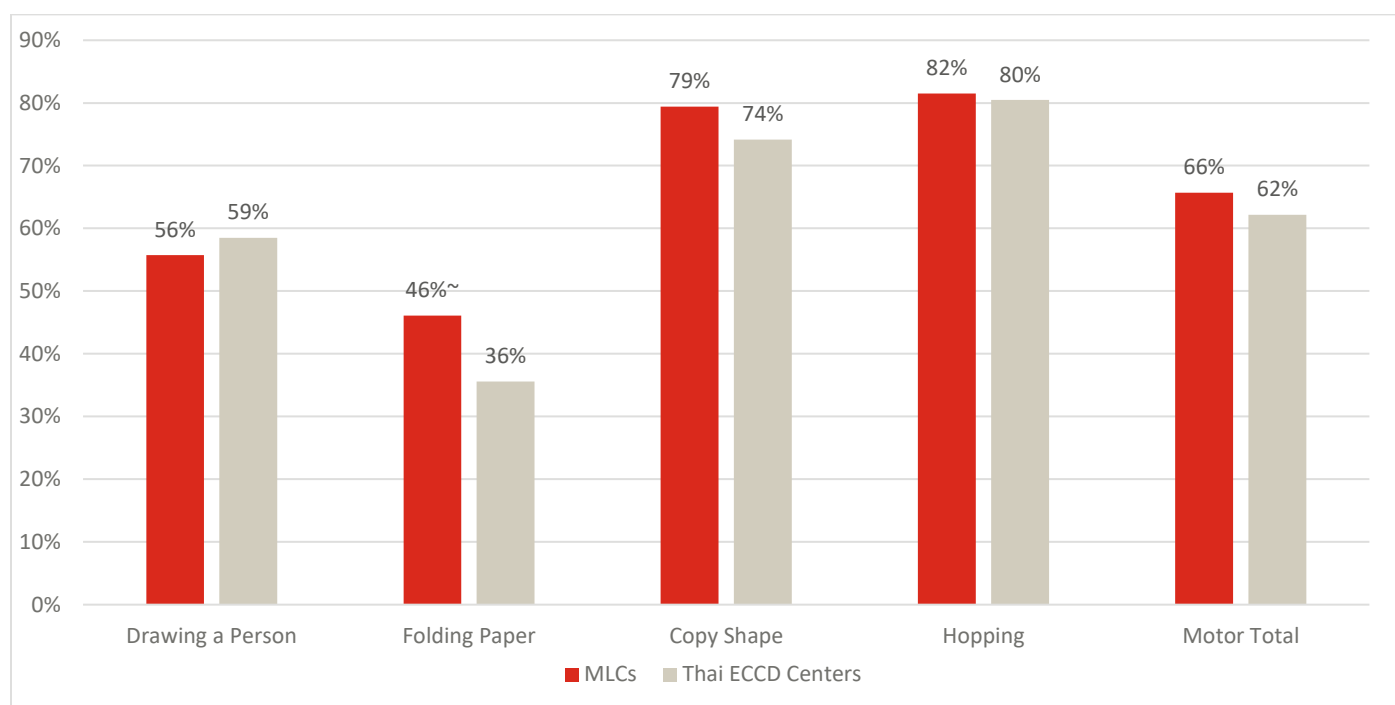
In general, we find few differences on the IDELA child assessment between children in MLCs and Thai ECCD Centers. **Appendix A: IDELA subtasks and domain summary scores by center type** presents a comprehensive breakdown of all subtask and domain scores by center type. We also present the same

analysis, including only younger (4 and under) children in **Appendix B: IDELA subtasks and domain summary scores by center type (younger children only)**. The sections below outline performance on each subtask as well as highlighting the few significant differences we do identify.

### Motor Development

**Figure 4** presents children’s average scores on the subtasks of the Motor domain. There were no differences in performance between children in MLCs and Thai ECCD Centers with the exception of the “Folding Paper” subtask. Children in MLCs performed marginally (though not significantly) better on this task, which measures fine motor skills, than children in Thai ECCD Centers. In general, children exhibited strong fine and gross motor skills.

**Figure 4. Motor domain subtasks, average percent correct in MLCs and Thai ECCD Centers (n=418)**

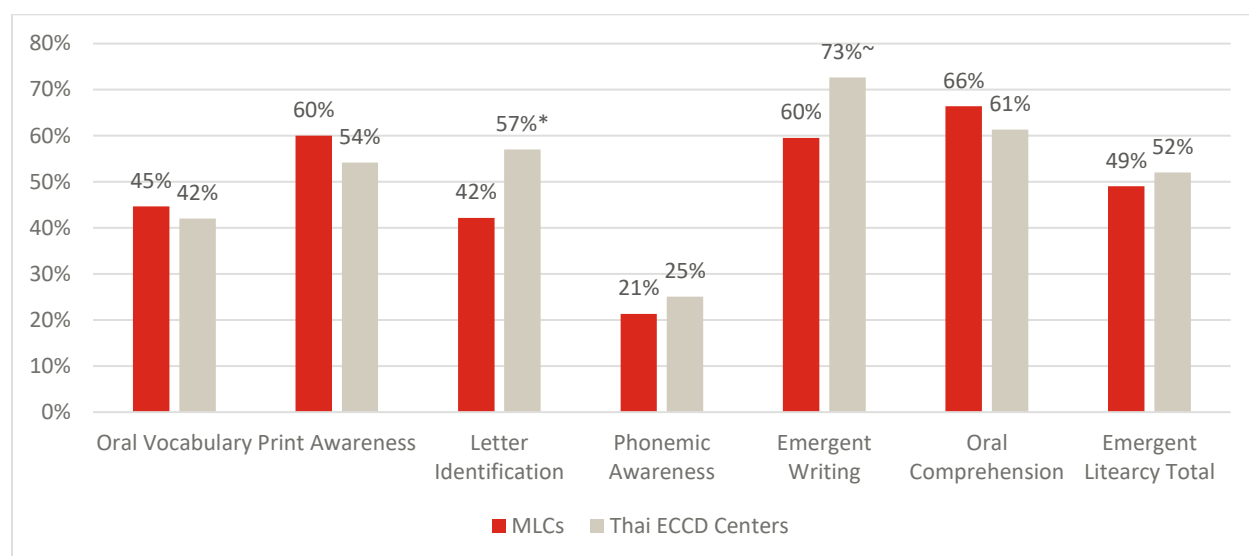


Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Emergent Literacy

**Figure 5** presents children’s average scores on the subtasks of the Emergent Literacy domain. Children in MLCs and Thai ECCD performed similarly on all tasks with the exception of the “Letter Identification” and “Emergent Writing” subtasks. Children in Thai ECCD Centers performed significantly better on the Letter ID subtask and marginally better on the Emergent Writing subtask. While the overall Emergent Literacy Domain scores were similar for children in both types of schools, writing and letter identification are two skills that are critical for school readiness and reveal a small, but important, gap.

**Figure 5. Emergent Literacy domain subtasks, average percent correct in MLCs and Thai ECCD Centers (n=418)**

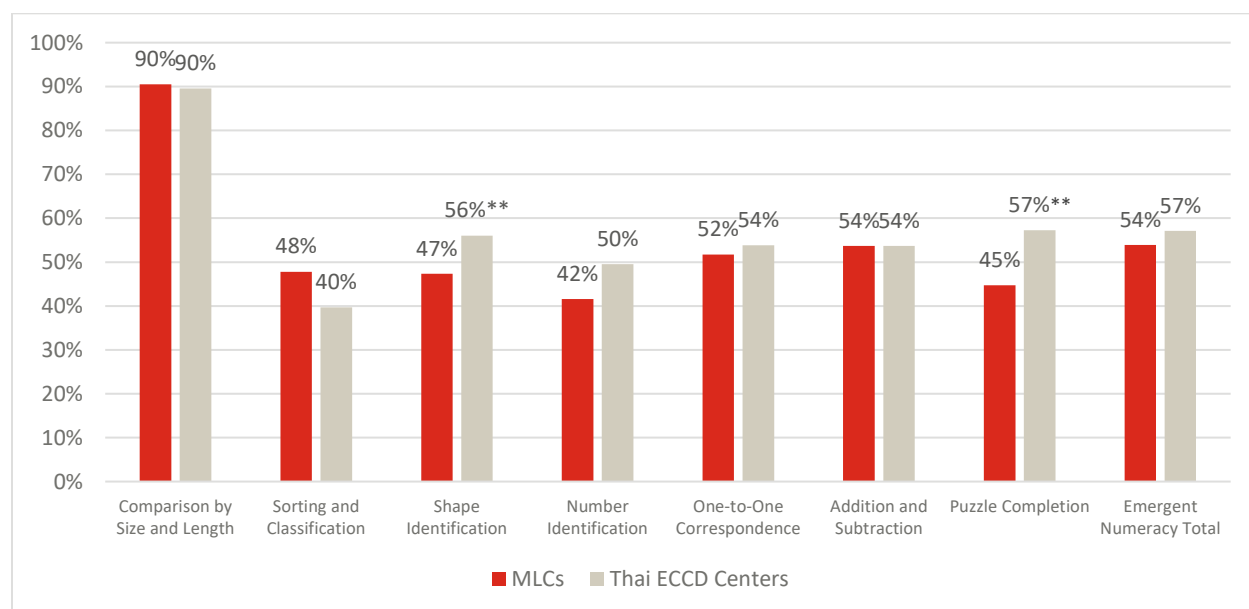


Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Emergent Numeracy

**Figure 6** presents children's average scores on the subtasks of the Emergent Numeracy domain. Children in MLCs and Thai ECCD performed similarly on all tasks with the exception of the "Shape Identification" and "Puzzle completion" subtasks. Children in Thai ECCD Centers performed significantly better on both of these tasks. While the overall Emergent Numeracy score was not significantly different between children in MLCs and Thai ECCD Centers, we do observe two subtasks with a significant equity gap.

**Figure 6. Emergent Numeracy domain subtasks, average percent correct in MLCs and Thai ECCD Centers (n=418)**

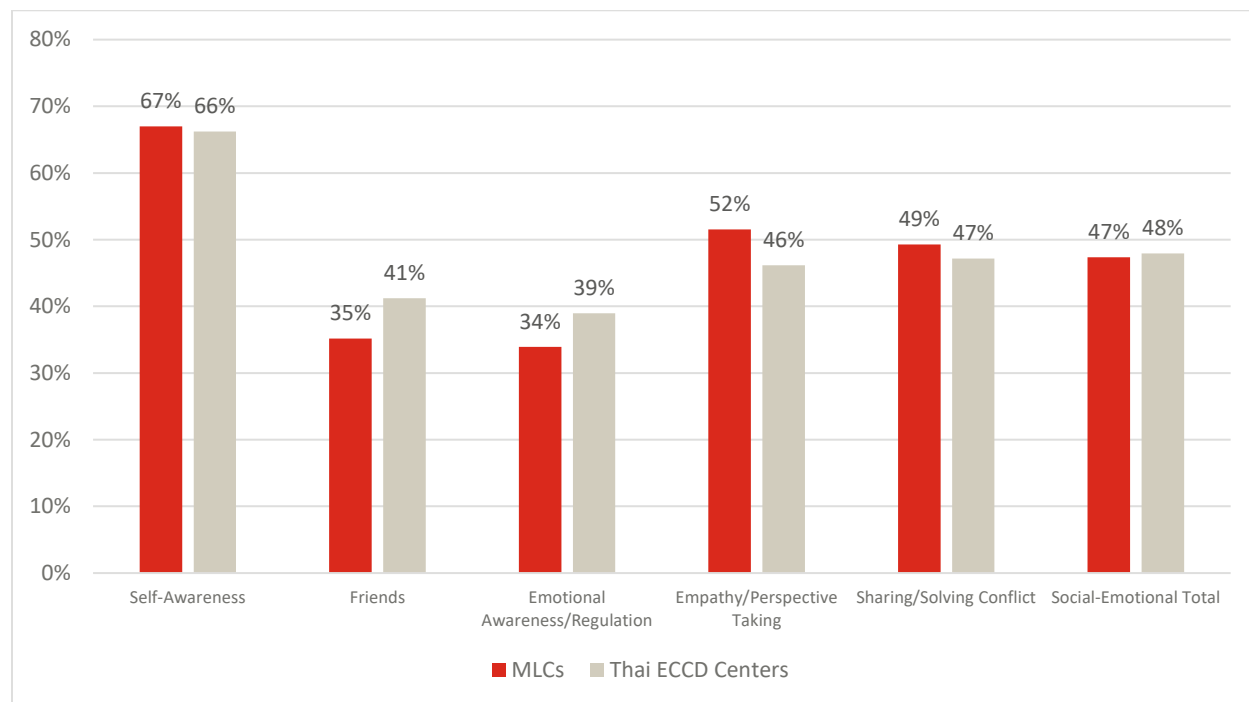


Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

## Social-Emotional Development

**Figure 7** presents children's average scores on the subtasks of the Social-Emotional Development Domain. We find no significant differences between children in MLCs and Thai ECCD centers.

**Figure 7. Social-Emotional domain subtasks, average percent correct in MLCs and Thai ECCD Centers (n=418)**

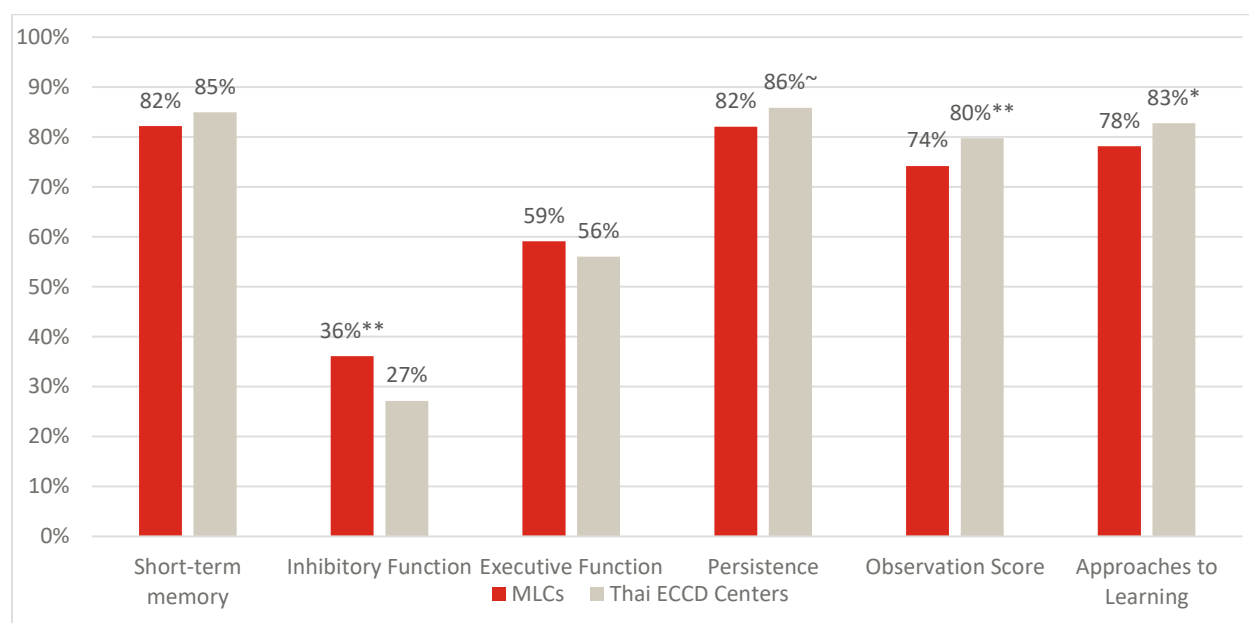


Note:  $\sim = p < 0.10$ ;  $* = p < 0.05$ ;  $** = p < 0.01$ ;  $*** = p < 0.001$

## Executive Function and Approaches to Learning

As mentioned earlier, the IDELA child assessment also includes measures of short-term memory and inhibitory control as proxies for Executive Function and observation items to assess children's Approaches to Learning. While these items are less well validated than the core IDELA domains (and as such are not included in the composite score), we report on them in **Figure 8**. In this case, we observe a mixed trend. Children in MLCs performed significantly better on the Inhibitory Control subtasks, which measures a child's ability to react to contradictory instructions and self-regulate. However, enumerators rated children in Thai ECCD Centers significantly higher on the Approaches to Learning domain, with children in Thai ECCD centers scoring higher on persistence and overall motivation than children in MLCs.

**Figure 8. Executive Function and Approaches to Learning domain subtasks, average percent correct in MLCs and Thai ECCD Centers (n=418)**



Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

## IDELA Home Environment results

We first presented a snapshot summary of the early learning and development status of children's early learning and development in MLCs and Thai ECCD Centers. We now examine the differences that these children exhibit in their home environment and background characteristics.

IDELA scores revealed few significant differences between children in MLCs and children in Thai ECCD centers. In contrast, we find large and significant differences in children's background characteristics. Children studying in MLCs have come from significantly less advantaged backgrounds and family situations than children studying in Thai ECCD Centers.

### Parental/language characteristics

**Table 5** presents a summary of children's parents and their home languages. Unsurprisingly, families with children in Thai ECCD centers were much more likely to speak Thai, and children in MLCs were much more likely to speak Burmese.

We also find that both mothers and fathers of children in Thai ECCD centers are significantly better educated on average and more likely to be literate. 84% of fathers of children in Thai ECCD Centers had completed primary school, whereas this figure was just 65% in MLCs. Children from MLCs also come from significantly larger families, meaning that their caregivers may be able to devote less individual attention.

Access to a quality basic education is a key issue for families originating from Myanmar on both sides of the Thai-Myanmar border. Many migrant parents and caregivers or ethnic minority parents and



caregivers thus grew up without access to education. Many people move to Thailand to seek a better life for their children. There is a need for outreach with parents and communities to emphasize the value of education and empower them to support their children's learning, even if they are not literate or less familiar with the process and content of formal schooling. The economic status of the family is a key factor to their children's educational arch.

**Table 5: Parental and language characteristics**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>Mother's age</b>	35.0	32.2	*	331
<b>Father's age</b>	37.5	36.1	No	331
<b>Mother is literate</b>	66%	80%	*	330
<b>Father is literate</b>	75%	90%	*	327
<b>Mother completed primary school</b>	62%	76%	~	319
<b>Father completed primary school</b>	65%	84%	*	307
<b>Number of children in the home</b>	3.2	2.4	**	332
<b>Home Language(s)</b>				
<b>Sgaw Karen</b>	24%	24%	No	333
<b>Pwo Karen</b>	15%	8%	No	333
<b>Burmese</b>	78%	12%	***	333
<b>English</b>	1%	1%	No	333
<b>Other home language</b>	2%	21%	*	333
<b>Thai</b>	6%	64%	***	333

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Early childhood development class participation and educational aspirations

**Table 6** presents information about ECCD Center/MLC participation, reasons for attending, and knowledge about the classes. Children in MLC centers were marginally more likely to attend classes on a daily basis than children in ECCD Centers. In general, the reasons for sending children were similar for both groups of caregivers, with the unsurprising exception that caregivers in MLCs were much more likely to report learning in the mother tongue as a priority and caregivers in Thai ECCD Centers were much more likely to report learning in the Thai language as a priority.

There appear to be large and significant gaps in what caregivers believe children are learning in MLCs and Thai ECCD Centers. Most caregivers of both MLCs and Thai ECCD Centers reported that their children were learning letters, but knowledge about other learning was significantly lower in MLCs. A large majority of caregivers from Thai ECCD Centers reported that their children were learning a variety of math, literacy, hygiene, and social skills. But caregivers of children in MLCs did not exhibit this same knowledge. This is a somewhat concerning gap: either there is a large knowledge gap between what is happening in MLCs and caregiver knowledge, or the activities in MLCs are limited.

It is likely the case that there is both an inconsistent range of activities in MLCS and a disconnect between caregiver knowledge and MLC's coverage of learning activities. Many MLCs follow their own curriculum and have limited training opportunities for teachers, particularly at the pre-primary level. Migrant parents and caregivers face obstacles to participate in MLC based activities due to long work hours, their freedom of movement related to their regularized or irregularized status as a worker, their values and experiences with formal education, and their family dynamics.

**Table 6: Participation and attitudes towards education**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>Child goes to class daily</b>	93%	86%	~	333
<b>Why do you sent your child to ECCD/MLC?</b>				
<b>Child likes the classes</b>	25%	17%	No	333
<b>Child is kept busy</b>	15%	29%	*	333
<b>Child learns Thai language</b>	25%	51%	**	333
<b>Child is fed</b>	12%	18%	No	333
<b>Child learns culture</b>	34%	48%	~	333
<b>Child learns to sit and listen</b>	33%	37%	No	333
<b>Neighborhood children also go</b>	22%	26%	No	333
<b>Get ready for school</b>	59%	63%	No	333
<b>Learn mother tongue</b>	33%	12%	**	333
<b>What does your child learn at ECCD/MLC?</b>				
<b>Hygiene</b>	48%	75%	**	333
<b>Letters</b>	87%	89%	No	333
<b>Other literacy skills</b>	42%	85%	***	333
<b>Numbers</b>	52%	87%	***	333
<b>Other math skills</b>	27%	69%	***	333
<b>Social interactions</b>	36%	66%	***	333
<b>Are ECCD/MLC classes taught in your home language?</b>	93%	65%	**	328
<b>Expect child to finish primary school</b>	100%	98%	No	321
<b>Expect child to finish secondary school</b>	99%	94%	*	320

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Home Learning Environment

Children spend most of their time at home, and there is growing research that demonstrates the importance of the home learning environment to children's early learning and development. It is in this

area that we observe some of the largest differences between children at MLCs and at Thai ECCD Centers.

**Table 7** presents a summary of the types of reading materials and toys owned by caregivers. As we can see, Thai children have access to a significantly wider range of reading materials and toys. On average, children in Thai ECCD Centers have a much richer home learning environment. These children have access to many more types of reading materials and toys than children in MLCs. Children in Thai ECCD centers have access to an average of 4.3 types of reading materials, more than double the number for children in MLCs (2.1). The story is similar with the number of toys children have access to in the home, though the difference is not quite as severe.

**Table 7: Home Learning Environment**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>Does your family own the following reading materials?</b>				
Storybook	39%	56%	~	327
Textbook	57%	82%	**	330
Magazine	10%	31%	**	324
Newspaper	13%	24%	*	320
Religious books	33%	49%	*	324
Coloring books	56%	89%	***	330
Comics	28%	61%	***	325
Number of storybooks owned	2.1	4.3	No	327
<b>Does your family own the following toys?</b>				
Homemade toys	61%	63%	No	327
Shop-bought toys	73%	86%	*	326
Household object as toys	78%	71%	No	324
Outside objects as toys	75%	86%	*	320
Toys for drawing	75%	90%	*	328
Puzzle toys	31%	44%	No	320
Hand-eye coordination toys	33%	70%	***	316
Shape-based toys	36%	58%	*	323
Number-based toys	39%	57%	*	326
Total number of types of toys	5.0	6.2	*	333

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

While access to physical items such as books and toys was vastly different for children in MLCs and Thai ECCD centers, there are few differences in the *activities* caregivers report doing with their children. As

**Table 8** shows, we observe no significant differences in the likelihood that caregivers engaged in any of the learning activities within the past week. We also asked about specific caregivers, as presented in

**Appendix C: Home Learning Activities** by caregiver. Again we find few significant differences in likelihood that caregivers engage in these home learning activities with their children.

**Table 8: Home Learning Activities**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>In the past week, any caregiver?</b>				
Draw with child	66%	75%	No	330
Go out with child	87%	92%	No	333
Hug child	95%	94%	No	331
Play with child	65%	62%	No	329
Read to child	68%	78%	No	330
Sing song to child	72%	68%	No	326
Teach child letters	71%	82%	No	329
Teach child something new	72%	76%	No	328
Told story to child	61%	63%	No	329
Total number of HLA	7.2	7.6	No	333
Total number of HLA with father	0.6	0.5	No	333
Total number of HLA with mother	2.2	2.5	No	333
Total number of HLA with other caregiver	1.5	1.7	No	333

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Caregiver Knowledge, Attitudes, and Practices

We find a number of significant differences in caregiver's knowledge, attitudes, and practices (KAP) and specifically about negative discipline. **Appendix D: Parental knowledge and attitudes towards positive discipline** presents details information on the proportion of caregivers that agree and disagree with various statements about positive discipline.

On average, children in MLCs spend significantly less time with their mothers and fathers and are marginally more likely to spend time alone. **Table 9** illustrates the difference in childcare between children studying at ECCD Centers and MLCs.

**Table 9: Childcare practices and attitudes**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>In a typical day, how many hours does the child spend:</b>				
In the care of the mother?	3.5	4.9	*	333
In the care of the father?	2.3	3.5	*	333
In the care of another child?	2.2	1.8	No	333
Alone?	1.6	0.8	~	333

Some of the most dramatic differences in caregiver behaviors are presented in Table 10. We see that caregivers of children in MLCs are much more likely to report using physical discipline than caregivers in Thai ECCD centers. This is driven by a large difference in the rate of physical discipline usage by **mothers** of children in MLCs. While there was no difference in the likelihood that children were spanked, caregivers of children in MLCs were significantly more likely to hit their child and yell at them.

**Table 10: Use of negative discipline**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>In the past week has anyone:</b>				
<b>Spanked the child?</b>	79%	73%	No	329
<b>Other caregiver</b>	10%	15%	No	329
<b>Father</b>	22%	19%	No	329
<b>Mother</b>	63%	57%	No	329
<b>Hit the child?</b>	76%	45%	***	329
<b>Other caregiver</b>	10%	9%	No	329
<b>Father</b>	19%	11%	~	329
<b>Mother</b>	61%	32%	***	329
<b>Yelled at the child?</b>	82%	66%	**	327
<b>Other caregiver</b>	10%	15%	No	327
<b>Father</b>	16%	19%	No	327
<b>Mother</b>	69%	48%	***	327
<b>Total number of types of negative discipline activities</b>	2.4	1.8	***	333
<b>with mother</b>	0.6	0.5	No	333
<b>with father</b>	1.9	1.3	***	333
<b>with other caregiver</b>	30%	37%	No	333

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

The results are not surprising based on SCI Thailand's ongoing work to reduce violence against children in the home setting. Migrant caregivers have less opportunity to access knowledge, understanding, and resources related to parenting, this is particularly true for illiterate caregivers. Many caregivers practice the discipline techniques they experienced as a child. Migrant caregivers face greater adversity such as their legal status, fragile economic situation, risk of being deported, discriminated against or harassed by police, and associated levels of toxic stress that may lead to depression or other mental health issues. **Table 11** breaks down this relation by district. While there are some differences by district, levels remain high across all, with Phob Phra demonstrating slightly better results.

**Table 11: Use of negative discipline by district in MLCs**

	Mae Sot (n=181)	Phob Phra (n=45)	Tha Song Yang (n=12)
<b>In the past week has anyone:</b>			
<b>Spanked the child?</b>	81%	65%	92%
<b>Hit the child?</b>	79%	66%	83%
<b>Yelled at the child?</b>	92%	83%	75%
<b>Total number of types of negative discipline activities</b>	2.4	2.2	2.5

### Socio-economic status

**Table 12** presents some drastic differences in the background characteristics for children in ECCD Centers and MLCs and **Appendix E: Detailed Socio-economic status** includes additional details about the differences in socio-economic status.

Without a doubt, children in MLCs come from poorer families with fewer possessions. The likelihood that a child has an indoor toilet, electricity, a refrigerator, etc. was much lower for children in MLCs. In a disturbing finding, a majority of caregivers in MLCs (twice as many as in Thai ECCD Centers) reported not being able to feed their children preferred foods because of economic hardship. Some MLCs have recognized this hardship and have the resources to provide lunch to their students, but most children attending MLCs must bring their own food from home.

**Table 12: Socio-economic status indicators**

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>Total number of rooms in house</b>	3.6	4.2	***	333
<b>Total number of possessions</b>	4.3	6.8	***	333
<b>Caregiver has a support network</b>	65%	79%	*	333
<b>Caregiver has had trouble with authorities</b>	9%	12%	No	333
<b>Caregiver has another source of income</b>	27%	38%	*	329
<b>In past month, caregiver could not afford to feed child preferred foods.</b>	52%	25%	**	326

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Relationships between IDELA and Home Environment

The last step of our analysis is to examine relationships between children's background characteristics (from the IDELA-HE) and their early learning and development as demonstrated on the IDELA. We accomplished this through a detailed model building process.

First, we took a large number of variables from the Home Environment tool and assessed their pairwise relationship with Total IDELA scores. We narrowed this comprehensive list of variables to a subset of 21 variables that demonstrated at least a marginal relationship ( $p < 0.10$ ) with Total IDELA. We then

expanded our model building process to consider the joint significance of multiple variables. Given that different variables may explain the similar variance in the outcome, we strove to find a model that was both predictive and parsimonious.

In order to accomplish this, we considered these 21 variables in turn and their joint significance in predicting the four core domains plus the overall IDELA. We kept only variables that were significant in at least one core domain when controlling for others through a systematic stepwise process, selectively removing variables that failed to significantly predict any of the outcomes.

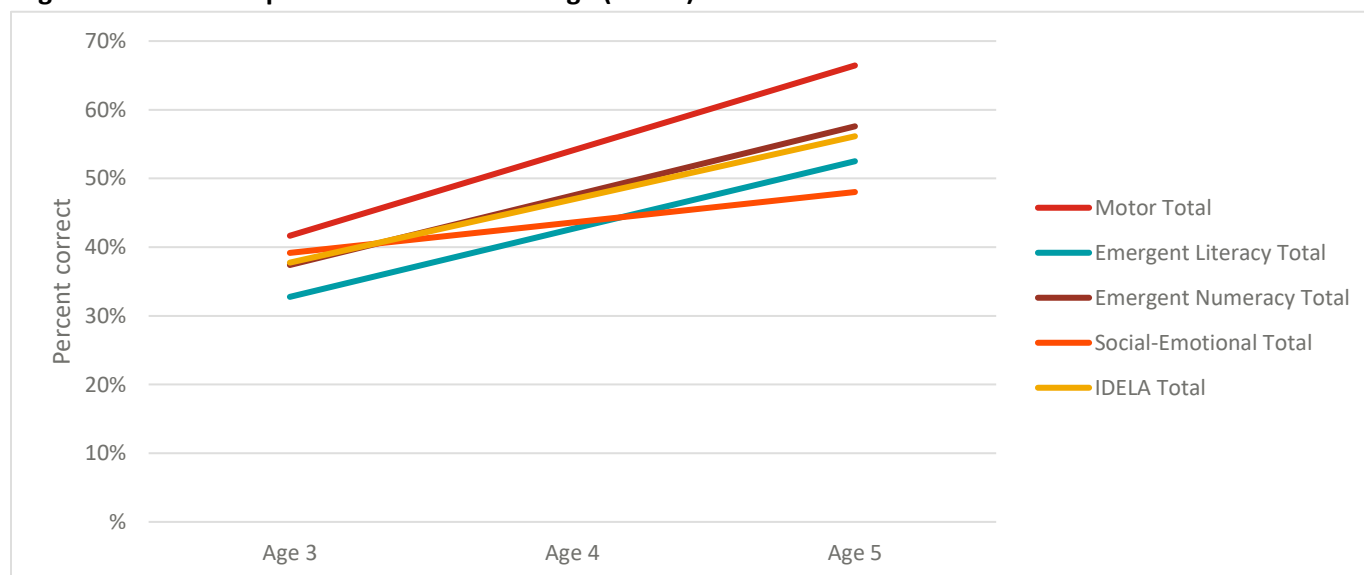
**Appendix F: Final model predicting IDELA domains** presents the end result of our model building process and includes the results for the Total IDELA along with the four core domains. Our final model includes variables that capture the child's age, gender, and language, the mother's educational status and the caregiver's health, along with a measure of socio-economic status (the number of types of possessions in the home).

Below, we explore the relationship of each variable included in this model in turn. When speaking about the effect of each variable, we present the marginal effect derived from our final model, holding all other variables constant. This allows us to speak about the effect of a variable, controlling for the other factors in our model.

### Child's age and gender

Age is, as expected, a strong predictor of early learning and development. Age is the only variable in our final model that has a significant relationship with all core domains. As **Figure 9** displays, we find a strong relationship between children's age and each of the core domains and Total IDELA. One year is associated with 9.2 percentage point increase on Total IDELA. While the relationship was significant for all domains, the relationship was strongest with the Motor Domain (one year was associated with a 12.4 p.p. increase) and weakest with the Social-Emotional Domain (one year was associated with a 4.4 p.p. increase).

**Figure 9. Relationship of core domains with age (n=319)**





As **Table 13** shows, we observe no significant differences between boys and girls on Total IDELA and most domains, with one notable exception.

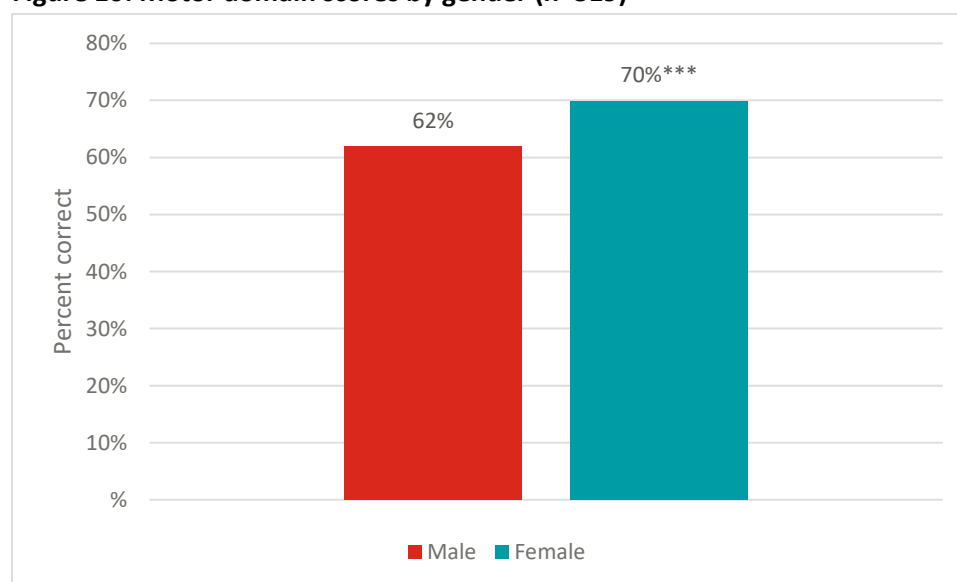
**Figure 10** displays this finding: girls, on average, have significantly higher scores than boys on the Motor domain. Girls, scored 7.9 percentage points higher on the than boys, the equivalent of approximately 9 months of a year of development.

**Table 13: Average domain scores by gender (n=319)**

Variable	Male	Female	Significant Difference?
Motor Total	63%	71%	***
Emergent Literacy Total	51%	55%	No
Emergent Numeracy Total	57%	58%	No
Social-Emotional Total	49%	47%	No
<i>IDELA Total</i>	55%	58%	No

Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

**Figure 10: Motor domain scores by gender (n=319)**



Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Language & ethnicity

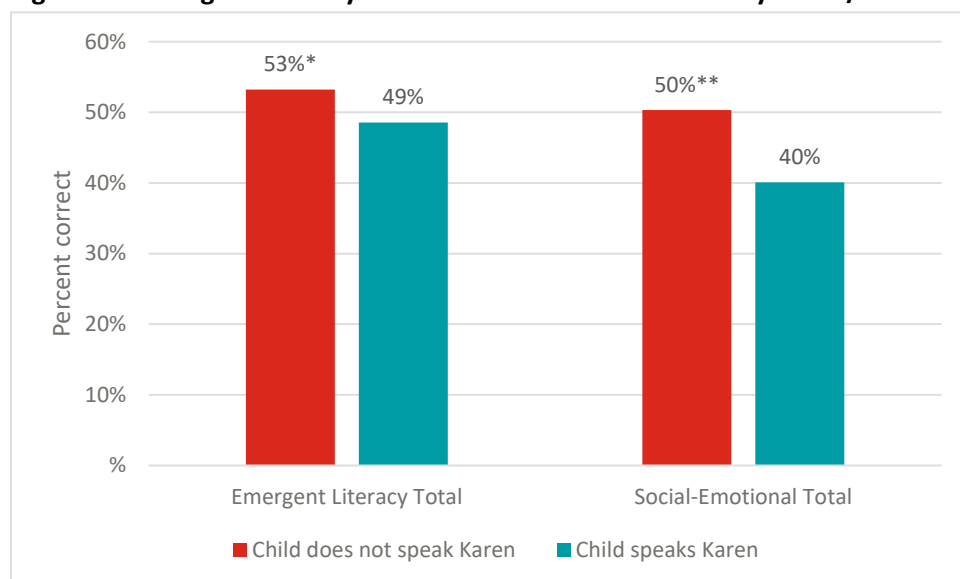
In general, there did not appear to be a large, direct correlation between ethnicity, migrant status, or center-type and children's developmental outcomes. Individually, we observed a few relationships related to these factors (language and migrant status), but our final model includes only a single related variable. Burmese-speaking and Thai-speaking children scored similarly across all domains (after controlling for other factors), but Karen-speaking children scored lower. **Figure 11** displays this relationship; showing that Karen-speaking children (both Pwo Karen and Sgaw Karen) scored

approximately 10 percentage points lower than Thai and Burmese speaking children on the Social-Emotional domain and 4 percentage points lower on the Emergent Literacy domain. Interestingly, these gaps were motivated most strongly by differences on the Conflict and Empathy subtasks.

Children learn best in a language they speak and understand. Policy and practice related to the language of education have important implications for children’s learning opportunities. Language is also an equity issue – in Tak province the Thai-speaking majority and the Burmese speaking migrant majority clearly have more access to early education services in a language their children understand. Sgaw Karen and Pwo Karen children are linguistic minorities in the area and face difficulty accessing early education in the Karen language. In Tak province only a few MLCs offer education in Karen languages.

Karen people are the second-largest minority population in Myanmar. The term Karen subsumes 17 to 20 sub-groups of the Karen language family, whose members often speak mutually unintelligible languages. The ethnic armed resistance movement has been documented since colonial times, once Burma gained independence in 1948 the Karen asserted their right to secede and form their own state. The on-going and historic experiences of cruelty and oppression from Burmese to Karen cannot easily be effaced from memory.

**Figure 11. Emergent Literacy and Social-Emotional domains by Karen/non-Karen speaking (n=319)**



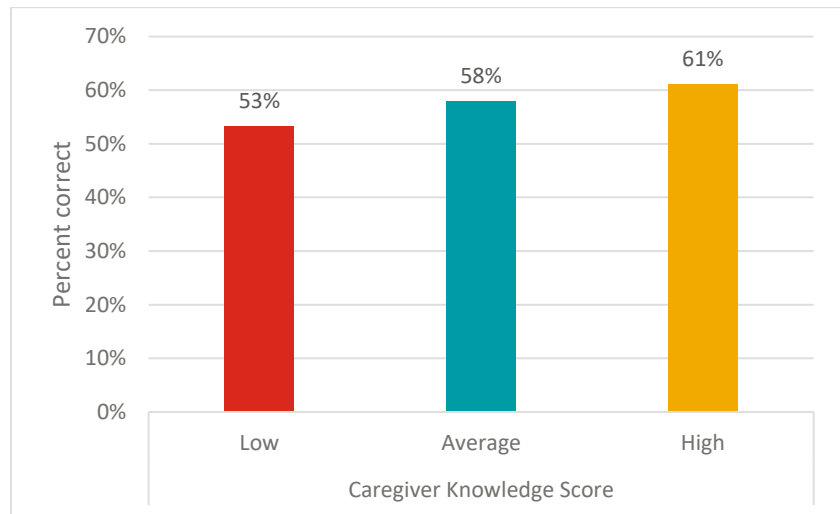
Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Caregiver knowledge, attitudes, and practices and education

Assessing the caregiver’s knowledge, attitudes, and practices (KAP) helps us better understand the mentality of the caregivers and the situation that children have at home. In a somewhat surprising finding, we observe no significant relationship between the number of learning activities that a caregiver engages with their children and their child’s development. We also observe no relationship between the attitudes or practices of discipline that a caregiver holds and their child’s development. However, as we show in **Figure 12**, we do observe a significant relationship between a child’s Emergent Numeracy skills and the caregiver’s knowledge about positive discipline. Children whose caregivers had a high score on

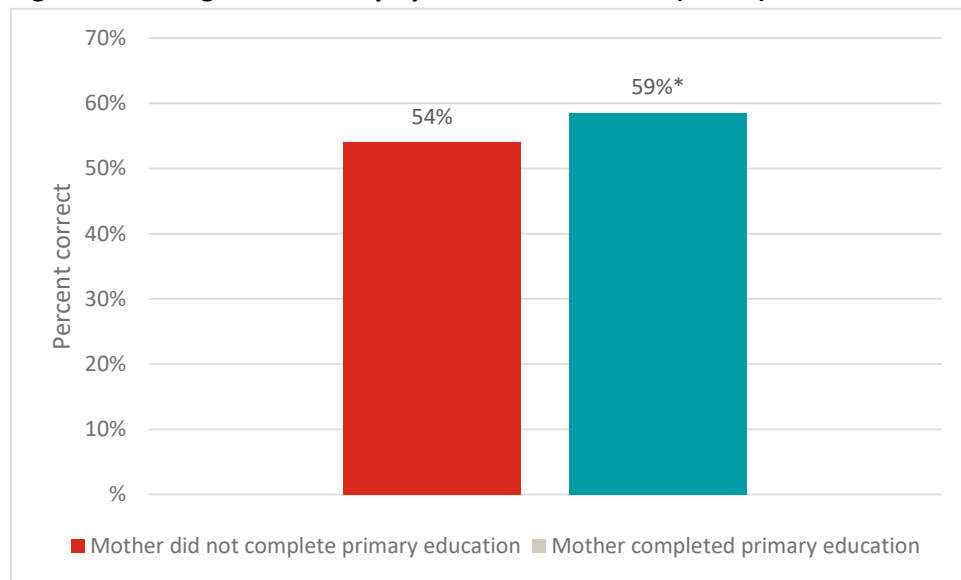
knowledge regarding positive discipline scored 8 percentage points higher on Emergent Numeracy than those children whose caregivers had a low score.

**Figure 12. Emergent Numeracy domain by caregiver knowledge about positive discipline (n=319)**



When it comes to the caregiver's educational background, we found two variables that consistently had some predictive power during the model building process: father's literacy and mother's education. In the end, we kept only the mother's education level. As we see in **Figure 13**, children whose mother had completed primary education scored significantly higher on the Emergent Numeracy domain.

**Figure 13. Emergent Numeracy by mother's education (n=319)**



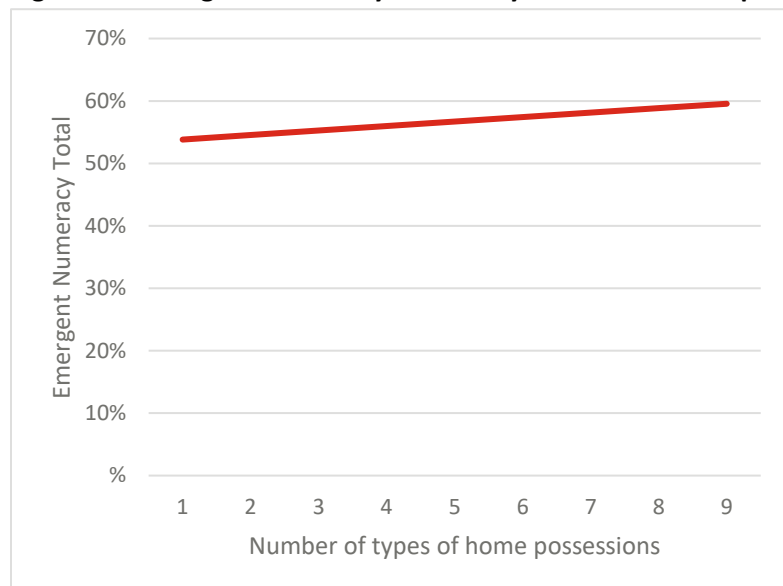
Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$

### Socio-economic status and health

As we saw in the first section, we found large and significant differences between children in MLCs and Thai ECCD centers on their Socio-Economic Status. We observe a significant relationship between children's socio-economic status and their Emergent Numeracy scores. For each additional home

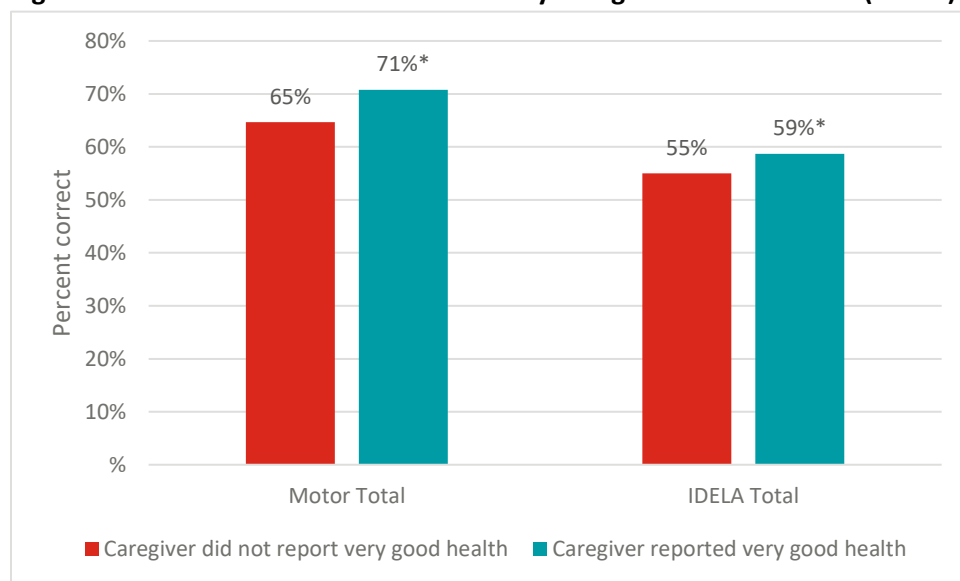
possession reported, we predict an additional 1.3 percentage points correct on the Emergent Numeracy domain.

**Figure 14. Emergent Numeracy domain by number of home possessions (n=319)**



We also find a significant relationship between caregiver’s reported health status and their child’s Motor development. As **Figure 15** shows, caregivers who reported that their health was “very good” had a higher Total IDELA score, driven in part by a 6.1 percentage point advantage on the Motor domain.

**Figure 15. Motor domain and Total IDELA by Caregiver’s health status (n=319)**



## Discussion

In the first section of our analysis, we found large and significant differences in the background characteristics of children in MLCs compared to those in Thai ECCD centers. Children in MLCs undeniably

represent “the most deprived” in this context. Children in MLCs have parents that are less educated, and come from larger families with fewer resources with which to learn. Parental engagement is lower among children as well, with children in MLCs spending less time with their parents, and experiencing fewer learning experiences with their caregivers. The use of harsh discipline is widespread among both groups, but it’s practically universal among children studying in MLCs.

While the differences in background characteristics are crystal clear (showing that children in MLCs are substantially disadvantaged), the evidence regarding their learning and developmental outcomes is more mixed. Our second set of analyses showed that, while children in Thai ECCD centers did generally score higher, these differences were only significant in a small subset of tasks. The gaps that exist in IDELA scores are much less dramatic than the gaps that exist in background characteristics.

Our final analysis focused in on factors that best predicted early childhood development. As to be expected, we found a wide range of factors to be significantly associated with IDELA scores, and all factors are in the expected direction. Higher socio-economic status, more caregiver education, and better caregiver knowledge were all associated with higher IDELA total or core domain scores. In terms of equity findings, we find that children in MLCs and Thai ECCD centers scored equally. Similarly, Burmese and Thai children, after controlling for other factors also scored equally. We identified two areas in which Karen-speaking (both Pwo and Sgaw) scored lower than their Thai and Burmese classmates. However, with some exceptions, the large background gaps between children in MLCs and Thai ECCD centers did not translate to equally large gaps in their early learning and development.

## **Limitations & recommendations**

The primary limitation of this study is limited generalizability. Our sampling strategy ensures that our sample is representative of children attending MLCs and Thai ECCD centers in the areas that Save the Children is working. However, we cannot assert that these relationships are generalizable to the migrant community as a whole, either to migrants living in other parts of the country or to migrants who do not send their children to MLCs or Thai ECD centers.

Similarly, with a fairly small number of children surveyed included in this analysis (418 children and 333 caregivers), our statistical power to assess small relationships is limited. We had sufficient power to identify larger correlations but many of the trends we observe were not significant. It is impossible to know whether this is because of a limited sample size or the non-existence of the relationship.

We recommend the following for the next steps of programming and research:

- In terms of materials, SC staff should prioritize providing math-based manipulatives for migrant children such puzzles and shapes in the school environment and the home environment.
- Migrant teachers should enhance the quality of instruction related to letter knowledge that is provided to migrant children in the MLC learning environment.
- We would like to learn more about migrant children’s access to proper nutrition, and explore options to facilitate increased access to nourishing foods for families.

- We will attempt to increase the knowledge, understanding and resources on positive discipline provided to MLC teachers for use in their activities and any outreach to parents/caregivers in an attempt to reduce the use of negative discipline.
- Discussion with teachers and caregivers to better understand the motor development of young boys and girls to inform programming.
- We recognize the need to increase parenting skills related to positive discipline and how to support young children's development with a particular emphasis on emergent literacy and numeracy.
- We would like to better understand the different needs of young boys and girls revealed in the results of this baseline study and how to increase gender mainstreaming in project implementation.

## **Conclusion**

This equity study found that the gaps between children in MLCs and Thai ECCD centers are complex. The most surprising finding was the lack of a consistent pattern in gaps on IDELA score. However, the background factors of migrant children demonstrates that children from MLCs undoubtedly come from more disadvantaged backgrounds. Save the Children programs will attempt to use the findings from these reports to influence MLC curricula and specialized trainings to reduce gaps by socio-economic status, language, and skills to ensure that all children are ready for school.

## Appendix A: IDELA subtasks and domain summary scores by center type

Subtask/Domain	MLC	Thai ECCD Center	Significant difference?
Comparison by Size and Length	90%	90%	No
Sorting and Classification	48%	40%	No
Shape Identification	47%	56%	**
Number Identification	42%	50%	No
One-to-One Correspondence	52%	54%	No
Addition and Subtraction	54%	54%	No
Puzzle Completion	45%	57%	*
<b>Emergent Numeracy Total</b>	<b>54%</b>	<b>57%</b>	<b>No</b>
Self-Awareness	67%	66%	No
Friends	35%	41%	No
Emotional Awareness/Regulation	34%	39%	No
Empathy/Perspective Taking	52%	46%	No
Sharing/Solving Conflict	49%	47%	No
<b>Social-Emotional Total</b>	<b>47%</b>	<b>48%</b>	<b>No</b>
Oral Vocabulary	45%	42%	No
Print Awareness	60%	54%	No
Letter Identification	42%	57%	*
Phonemic Awareness	21%	25%	No
Emergent Writing	60%	73%	~
Oral Comprehension	66%	61%	No
<b>Emergent Literacy Total</b>	<b>49%</b>	<b>52%</b>	<b>No</b>
Drawing a Person	56%	59%	No
Folding Paper	46%	36%	~
Copy Shape	79%	74%	No
Hopping	82%	80%	No
<b>Motor Total</b>	<b>66%</b>	<b>62%</b>	<b>No</b>
<b>IDELA Total</b>	<b>54%</b>	<b>55%</b>	<b>No</b>

Note: Significant differences are noted with (~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$ )

## Appendix B: IDELA subtasks and domain summary scores by center type (younger children only)

Subtask/Domain	MLC	Thai ECCD Center	Significant difference?
Comparison by Size and Length	91%	89%	No
Sorting and Classification	49%	35%	*
Shape Identification	48%	58%	**
Number Identification	43%	52%	No
One-to-One Correspondence	51%	57%	No
Addition and Subtraction	54%	55%	No
Puzzle Completion	46%	61%	**
<b>Emergent Numeracy Total</b>	55%	58%	<b>No</b>
Self-Awareness	67%	66%	No
Friends	36%	43%	~
Emotional Awareness/Regulation	34%	41%	No
Empathy/Perspective Taking	54%	42%	**
Sharing/Solving Conflict	50%	47%	No
<b>Social-Emotional Total</b>	48%	48%	No
Oral Vocabulary	43%	45%	No
Print Awareness	58%	57%	No
Letter Identification	44%	61%	**
Phonemic Awareness	22%	25%	No
Emergent Writing	62%	75%	*
Oral Comprehension	65%	63%	No
<b>Emergent Literacy Total</b>	49%	54%	No
Drawing a Person	56%	60%	No
Folding Paper	45%	35%	No
Copy Shape	79%	75%	No
Hopping	82%	80%	No
<b>Motor Total</b>	66%	62%	No
<b>IDELA Total</b>	54%	56%	No

Note: Significant differences are noted with (~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$ )



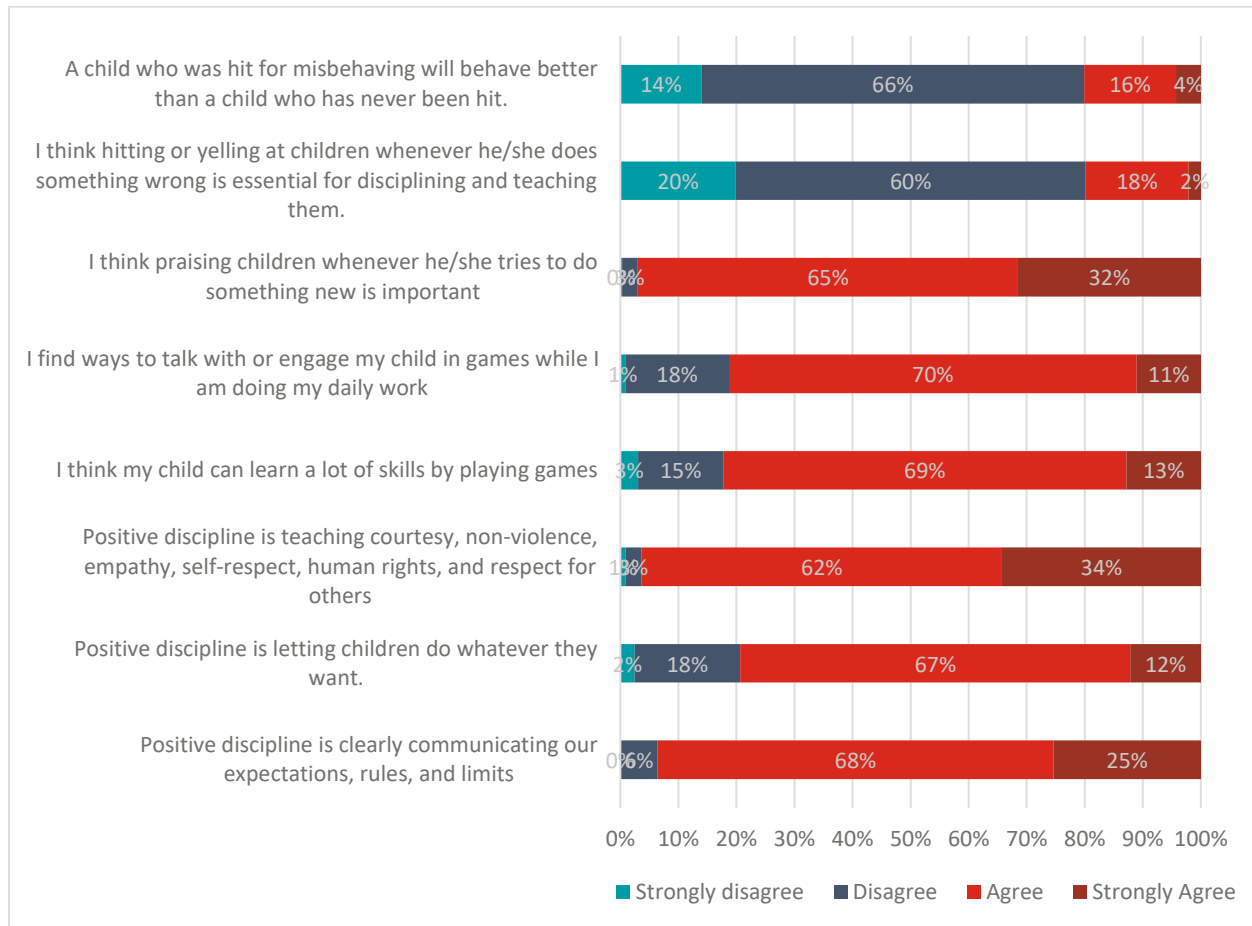
## Appendix C: Home Learning Activities by caregiver

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
In the past week, did you?				
Draw with child	66%	75%	No	330
with father	15%	18%	No	330
with mother	41%	54%	~	330
with other caregiver	17%	17%	No	330
Go out with child	87%	92%	No	333
with father	27%	37%	~	333
with mother	69%	68%	No	333
with other caregiver	12%	22%	*	333
Hug child	95%	94%	No	331
with father	47%	52%	No	331
with mother	78%	81%	No	331
with other caregiver	19%	21%	No	331
Play with child	65%	62%	No	329
with father	22%	26%	No	329
with mother	45%	37%	No	329
with other caregiver	13%	17%	No	329
Read to child	68%	78%	No	330
with father	19%	23%	No	330
with mother	39%	55%	No	330
with other caregiver	17%	18%	No	330
Sing song to child	72%	68%	No	326
with father	15%	15%	No	326
with mother	54%	50%	No	326
with other caregiver	14%	15%	No	326
Teach child letters	71%	82%	No	329
with father	20%	24%	No	329
with mother	48%	59%	No	329
with other caregiver	15%	18%	No	329
Teach child numbers	67%	75%	No	329
with father	22%	22%	No	329
with mother	45%	52%	No	329
with other caregiver	14%	18%	No	329

<b>Teach child something new</b>	72%	76%	No	328
<b>with father</b>	20%	20%	No	328
<b>with mother</b>	47%	59%	No	328
<b>with other caregiver</b>	17%	16%	No	328
<b>Told story to child</b>	61%	63%	No	329
<b>with father</b>	15%	17%	No	329
<b>with mother</b>	40%	42%	No	329
<b>with other caregiver</b>	12%	14%	No	329
<b>Total number of HLA</b>	7.2	7.6	No	333
<b>Total number of HLA with father</b>	0.6	0.5	No	333
<b>Total number of HLA with mother</b>	2.2	2.5	No	333
<b>Total number of HLA with other caregiver</b>	1.5	1.7	No	333

*Note: ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$*

## Appendix D: Parental knowledge and attitudes towards positive discipline



## Appendix E: Detailed Socio-economic status indicators

	MLCs	Thai ECCD schools	Difference significant?	Number of observations
<b>Home as a:</b>				
Bedroom	97%	97%	No	330
Kitchen	99%	94%	*	330
Living room	53%	75%	**	329
Washroom	85%	90%	No	330
Inside toilet	29%	70%	***	330
Total number of rooms in house	3.6	4.2	***	333
<b>Family has:</b>				
Electricity	77%	96%	**	331
Land for crops	35%	54%	**	331
Livestock	49%	51%	No	326
Radio	21%	49%	***	328
TV	69%	89%	**	330
Refrigerator	18%	80%	***	330
Bicycle	58%	78%	*	330
Motorbike	28%	86%	***	328
Mobile telephone	87%	95%	*	331
Total number of possessions	4.3	6.8	***	333

## Appendix F: Final model predicting IDELA domains

	IDELA Total	Emergent Numeracy	Emergent Literacy	Social-Emotional Development	Motor Development
<b>Child is female</b>	0.027 (0.017)	0.004 (0.025)	0.032 (0.023)	-0.006 (0.022)	0.079*** (0.019)
<b>Child's age in years</b>	0.092*** (0.017)	0.101*** (0.020)	0.099*** (0.018)	0.044* (0.018)	0.124*** (0.021)
	0.020 (0.020)	0.045* (0.022)	0.015 (0.022)	0.034 (0.039)	-0.016 (0.021)
<b>Child speaks Karen</b>	-0.037~ (0.018)	-0.020 (0.024)	-0.047* (0.022)	-0.102** (0.035)	0.021 (0.019)
<b>Caregiver reports very good health</b>	0.037* (0.017)	0.017 (0.023)	0.044~ (0.022)	0.027 (0.027)	0.061* (0.023)
<b>Caregiver knowledge score</b>	0.006 (0.006)	0.016* (0.008)	0.009 (0.008)	0.005 (0.010)	-0.005 (0.007)
<b>Number of types of possessions at home</b>	0.004 0.005	0.007 0.006	0.013* 0.006	-0.002 0.005	-0.002 0.007
<b>Constant</b>	-0.001 (0.106)	-0.136 (0.115)	-0.141 (0.109)	0.221 (0.140)	0.053 (0.124)
<b>R-sq</b>	0.225	0.187	0.202	0.083	0.245
<b>N</b>	319	319	319	319	319

*Note: Standard errors (clustered at center level) are listed below point estimates, significance of point estimates is indicated by ~ =  $p < 0.10$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$*