

Uganda ELM Baseline Report: June 2016



Overview

I. Research questions

II. Sample

III. Tools used

IV. Baseline skill scores

- Motor Development, Emergent Numeracy, Emergent Literacy, Social-emotional Development, Executive function, Approaches to learning

V. Conclusions & Recommendations



I. Research questions

1. **Are children in standard ECCD and ELM ECCD centers similar in terms of their measurable early learning and development skills before ELM programming begins?**
2. **Are there differences in children's learning and development skills by age?**
3. **Are there differences in children's learning and development skills by gender?**

II. Sample

	Standard ECCD (N= 259)	ELM (N=245)
Child age	4.65	4.63
% Female	49%	48%

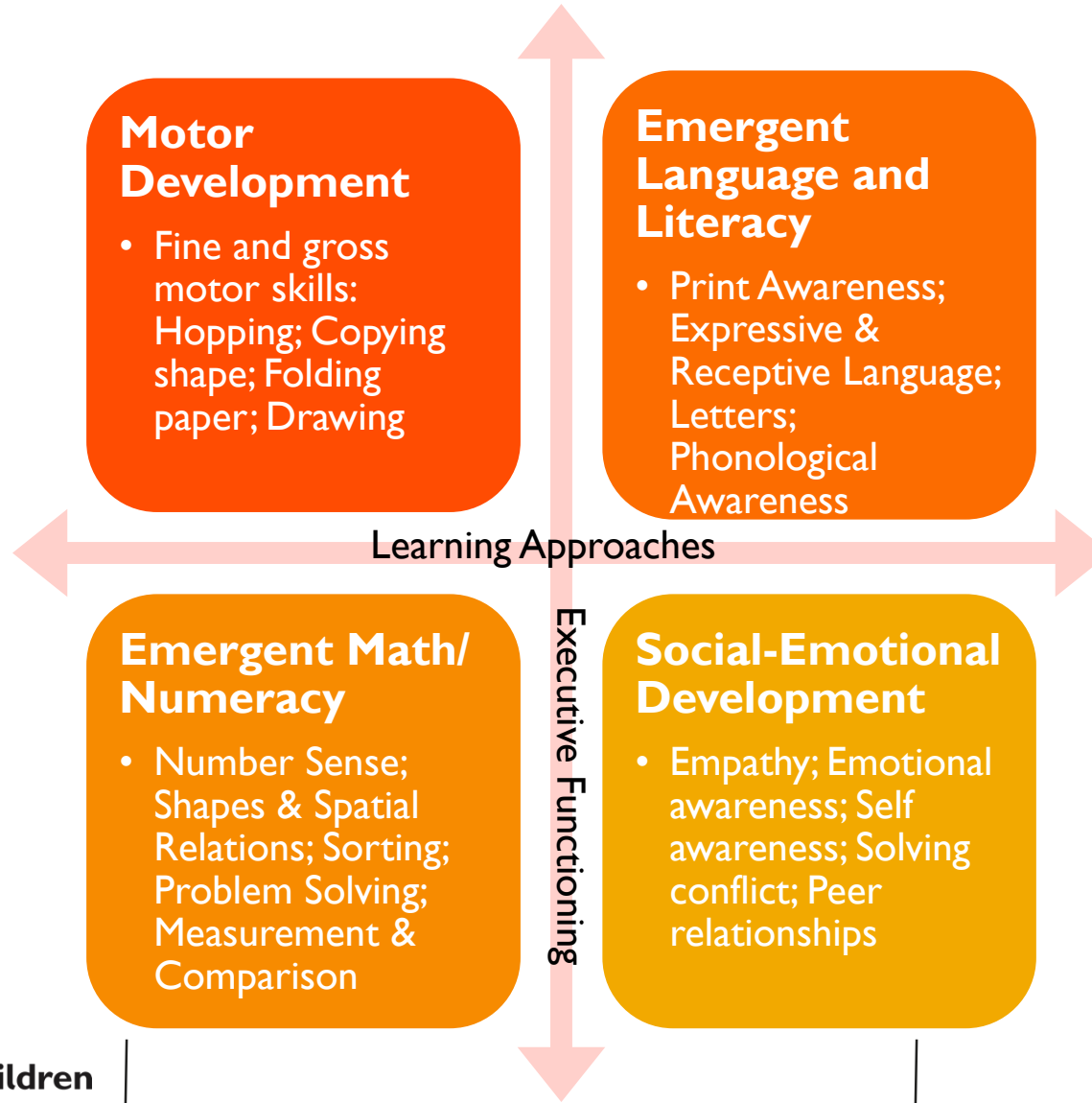
20 children were randomly chosen at each ECCD center

- 20 children were not available at some smaller centers and it was not possible to reach all 30 centers that were initially targeted so more than 20 children were assessed in some larger centers

In total, assessments were completed for 183 4-year-olds, 318 5-year-olds and three 6-year-olds

All children were given the opportunity to decline participation without penalty

III. International Development and Early Learning Assessment (IDELA)



IDELA: Items & Constructs

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

Approaches to Learning: Persistence, motivation and engagement

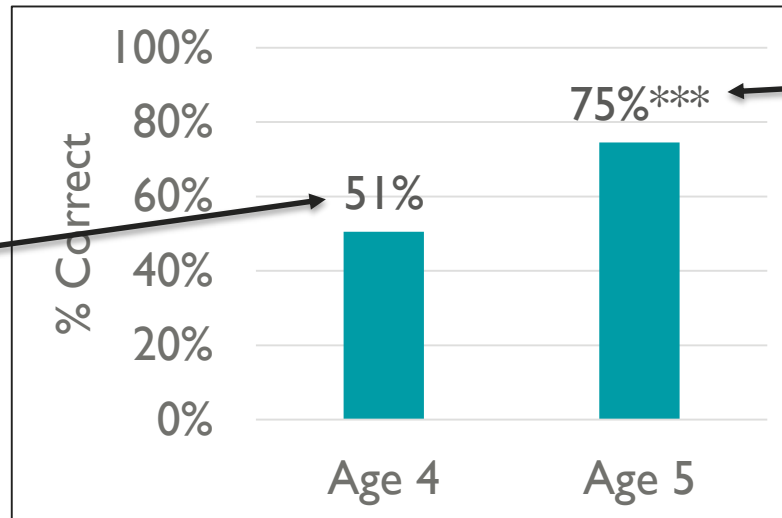
IDELA: How to read the slides

On average, children in the standard ECCD group answered 80% of the hopping on one foot item correctly.

There is no significant difference between the average hopping scores for children in standard ECCD and ELM centers

	Standard ECCD	ELM	Significant Difference	Total
Hopping on one foot	80%	85%		82%

On average, 4-year-old children answered 51% of the IDELA motor development items correctly.



5-year-old children scored significantly higher than 4-year-old children on the motor development items.

IV. Motor Development

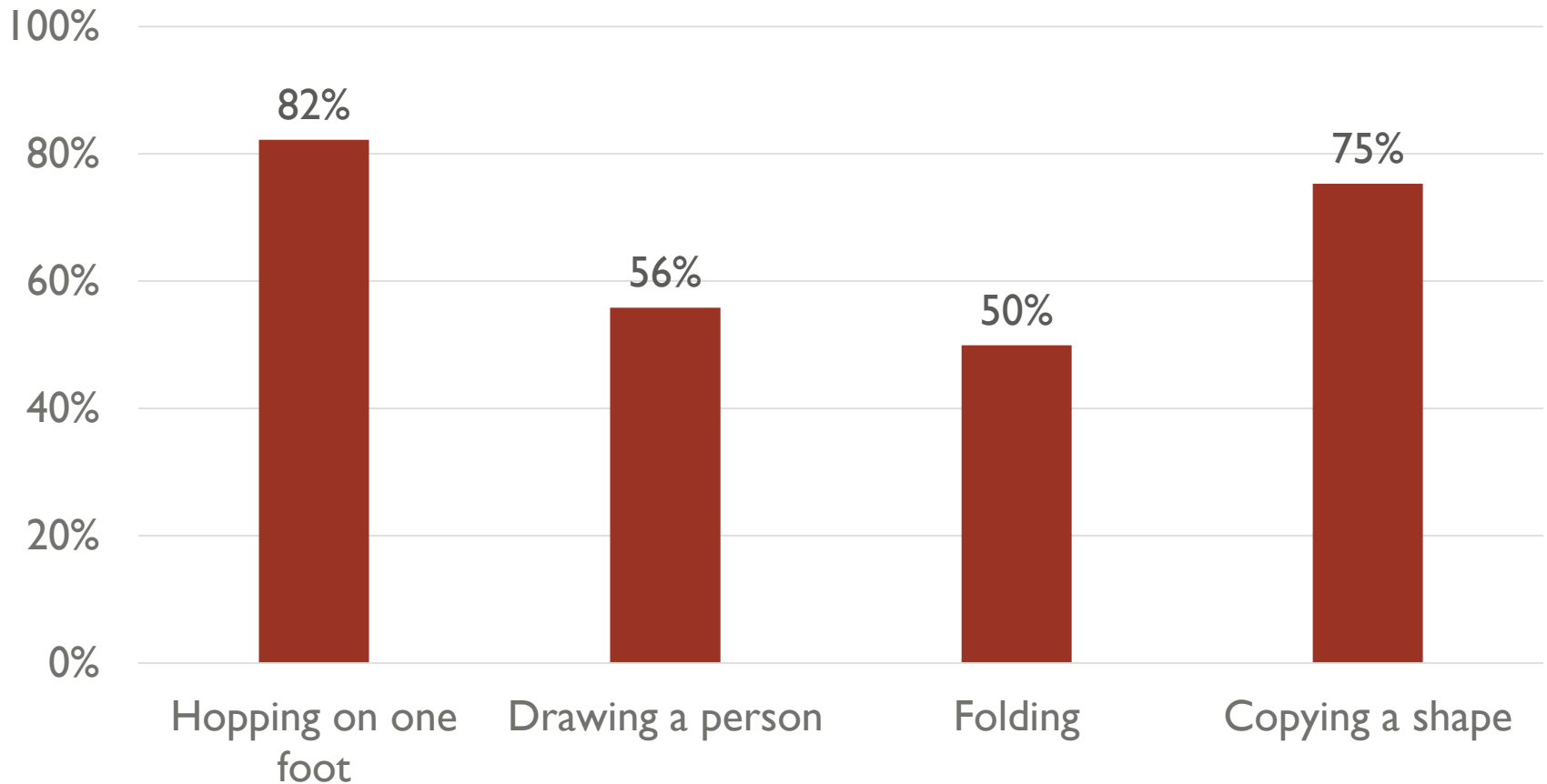
Table 1. Baseline Motor Development

	Standard ECCD	ELM	Significant Difference	Total
Hopping on one foot	80%	85%		82%
Drawing a person	54%	58%		56%
Folding	46%	54%	**	50%
Copying a shape	71%	80%	*	75%
Total Motor Development	63%	69%	**	66%

Note: * p < .05, ** p < .01, *** p < .001

IV. Motor Development

Figure I. Average Baseline Motor Development



IV. Motor Development

On average, children in the ELM group scored significantly higher than children in the standard ECCD group

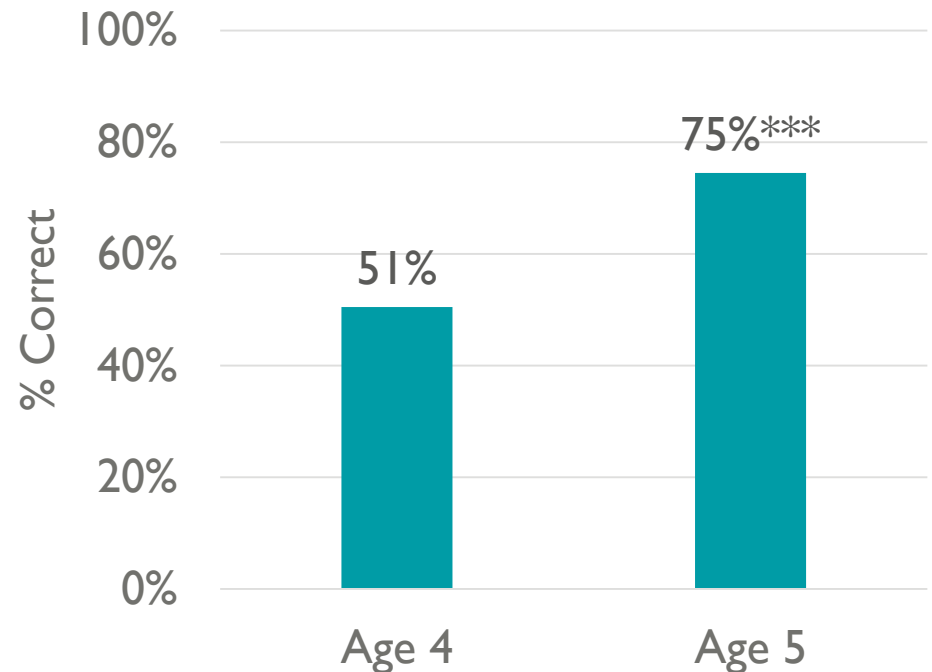
Strongest skill: Hopping

Weakest skill: Folding

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

Figure 2. Average Baseline Motor Development, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

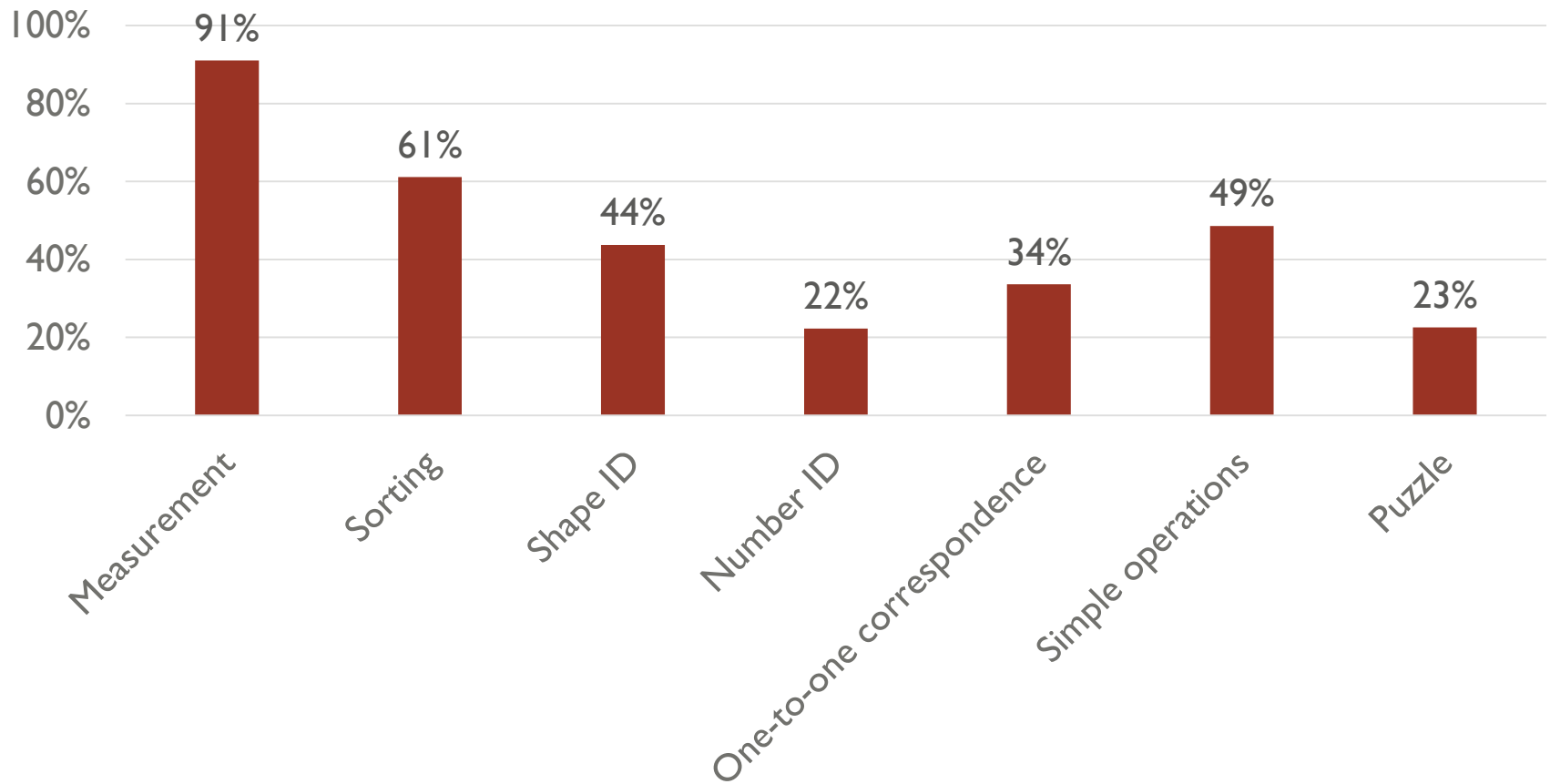
IV. Early Numeracy

Table 2. Baseline Early Numeracy

	Standard ECCD	ELM	Significant Difference	Total
Measurement	90%	92%		91%
Sorting	58%	64%		61%
Shape ID	40%	47%		44%
Number ID	21%	24%		22%
One-to-one correspondence	31%	36%		34%
Simple operations	46%	51%		49%
Puzzle	21%	24%		23%
Total Early Numeracy	44%	48%	*	46%
Note: * p < .05, ** p < .01, *** p < .001				

IV. Early Numeracy

Figure 3. Average Baseline Numeracy Skills



IV. Early Numeracy

On average, children in the ELM group scored significantly higher than children in the standard ECCD group

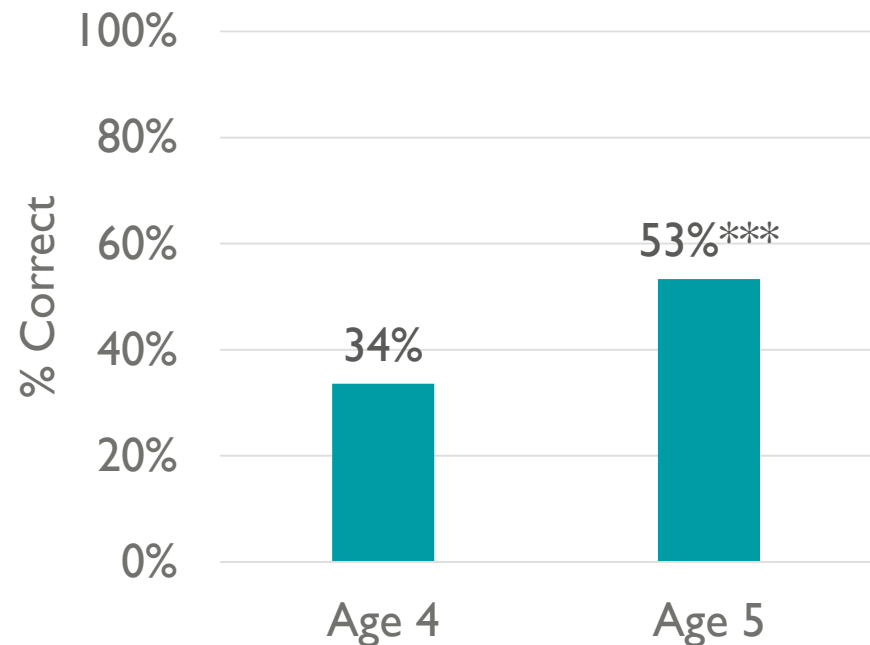
Strongest skill: Measurement

Weakest skill: Number identification

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

Figure 4. Average Baseline Numeracy Skills, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Early Literacy

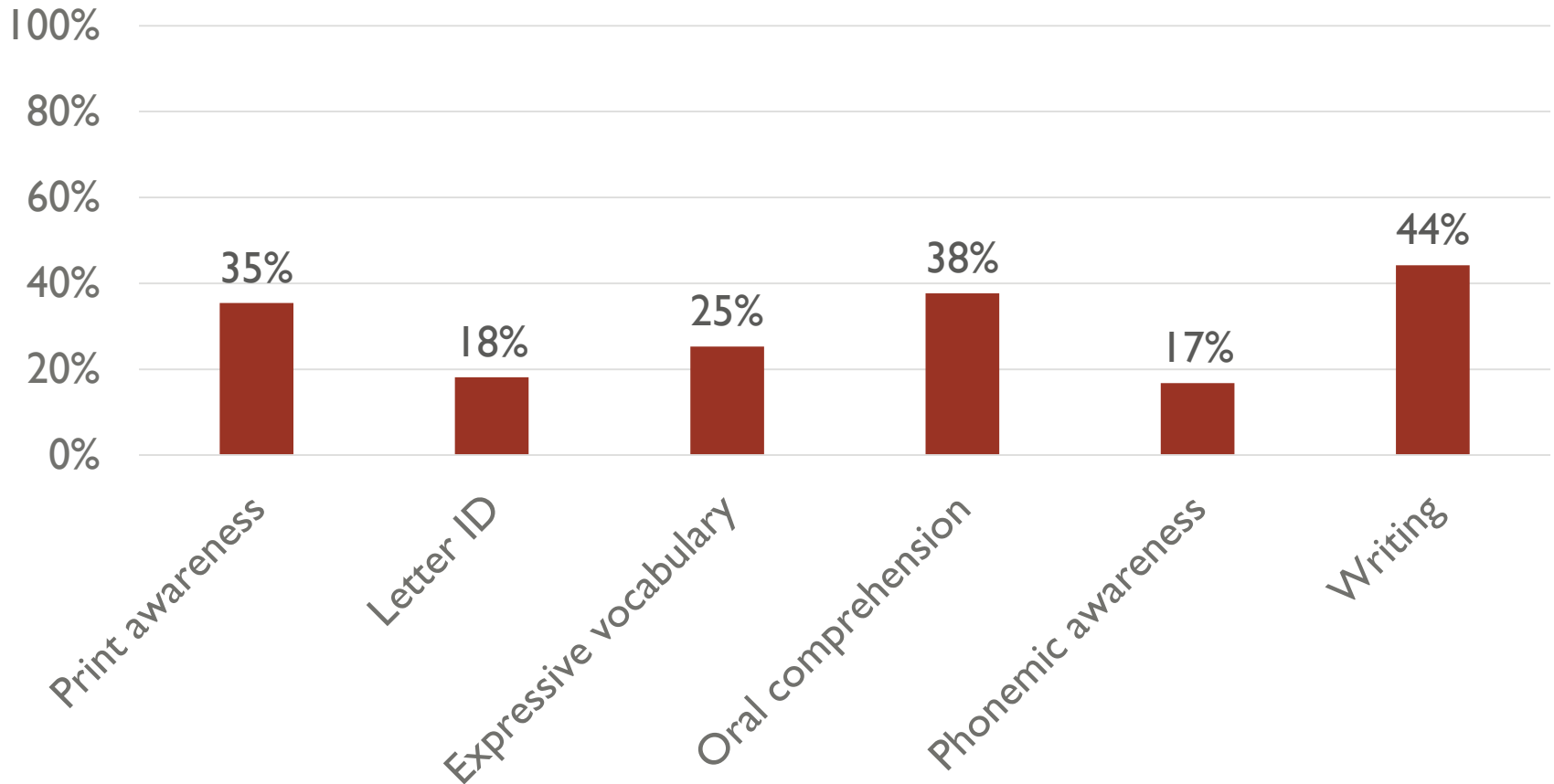
Table 3. Baseline Early Literacy Skills

	Standard ECCD	ELM	Significant Difference	Total
Print awareness	33%	38%		35%
Letter ID	16%	20%		18%
Expressive vocabulary	23%	28%	**	25%
Oral comprehension	34%	42%	*	38%
Phonemic awareness	14%	20%	*	17%
Writing	44%	45%		44%
Total Early Literacy	27%	32%	*	30%

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Early Literacy

Figure 5. Average Baseline Literacy



IV. Early Literacy

On average, children in the ELM group scored significantly higher than children in the standard ECCD group

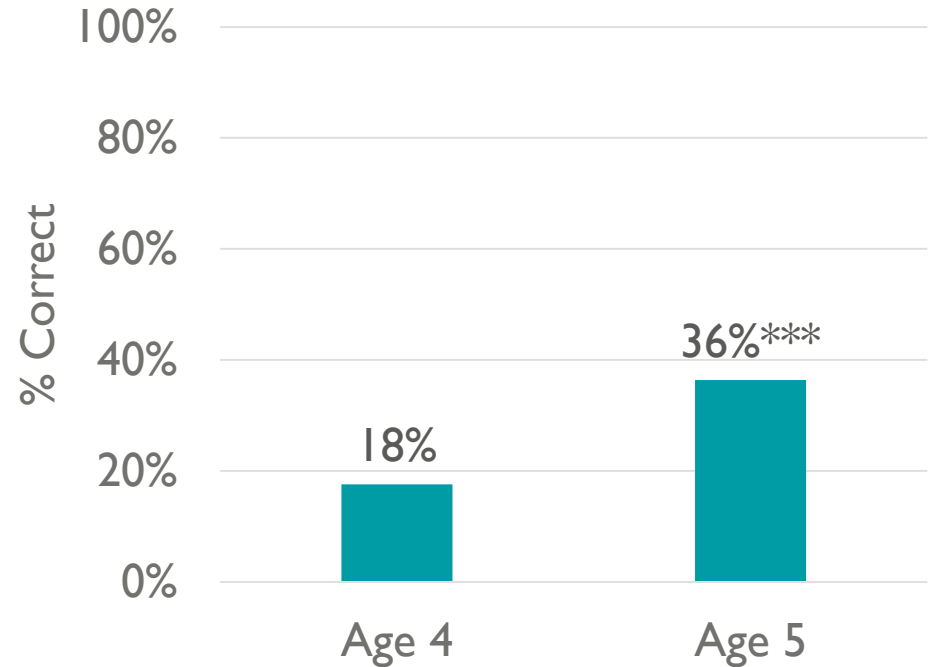
Strongest skill: Writing

Weakest skill: Phonemic awareness (letter sounds)

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

Figure 6. Average Baseline Literacy, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Social-emotional Development

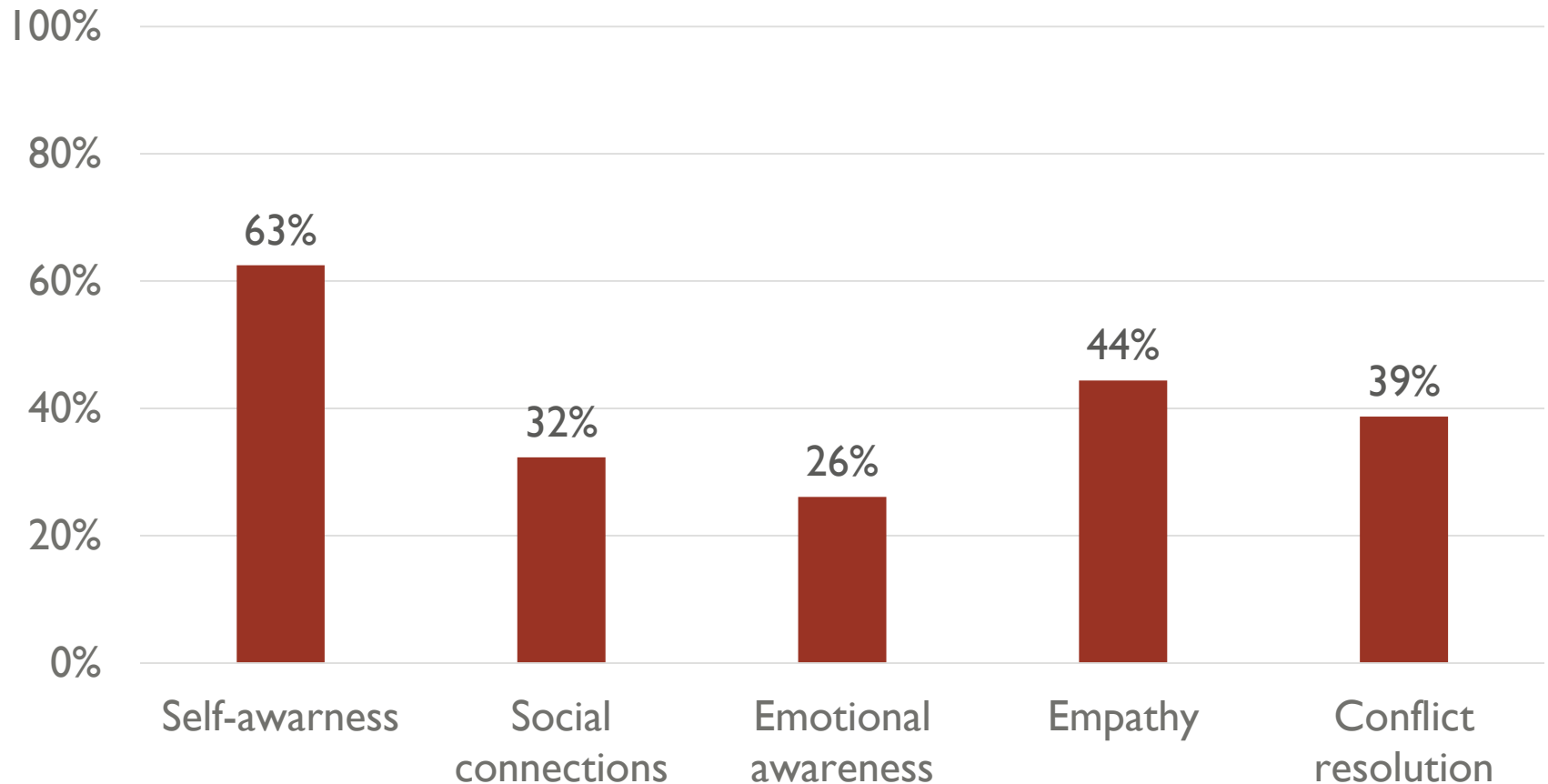
Table 4. Baseline Social-emotional Development Skills

	Standard ECCD	ELM	Significant Difference	Total
Self-awareness	62%	63%		63%
Social connections	31%	34%		32%
Emotional awareness	21%	31%	**	26%
Empathy	40%	49%	*	44%
Conflict resolution	33%	45%	**	39%
Total Social-emotional development	37%	44%	**	41%

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Social-emotional Development

Figure 7. Average Baseline Social-emotional Development



IV. Social-emotional Development

On average, children in the ELM group scored significantly higher than children in the standard ECCD group

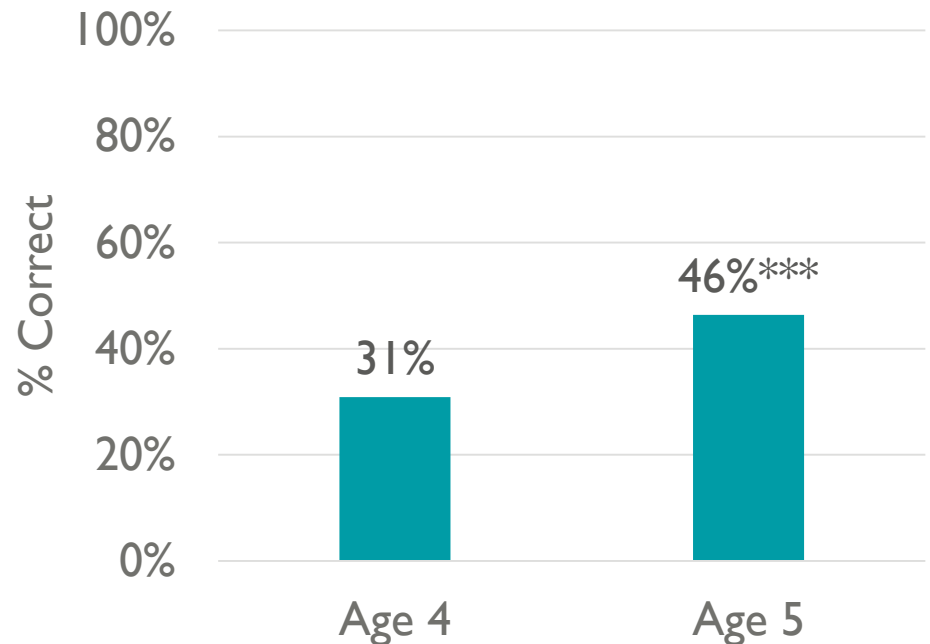
Strongest skill: Self-awareness

Weakest skill: Emotional awareness

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

Figure 8. Average Baseline Social-emotional Development, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Executive Functioning

Table 5. Baseline Executive Functioning Skills

	Standard ECCD	ELM	Significant Difference	Total
Short-term memory	56%	56%		56%
Inhibitory control	45%	50%		47%
Total Executive Function	51%	53%		52%

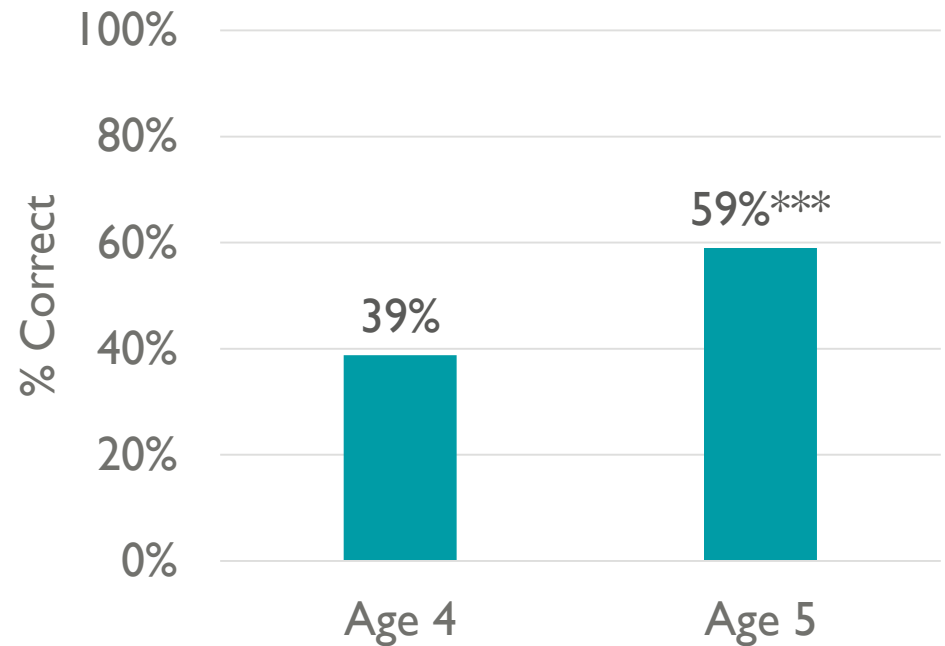
IV. Executive Functioning

On average, no significant differences between children in ELM and standard ECCD centers

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

Figure 9. Average Baseline Executive Function, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Approaches to Learning

Table 6. Approaches to Learning

	Standard ECCD	ELM	Significant Difference	Total
Persistence during assessment	66%	72%	***	69%
Observation post- assessment	72%	81%	*	76%
Total Approaches to Learning	69%	76%	***	73%

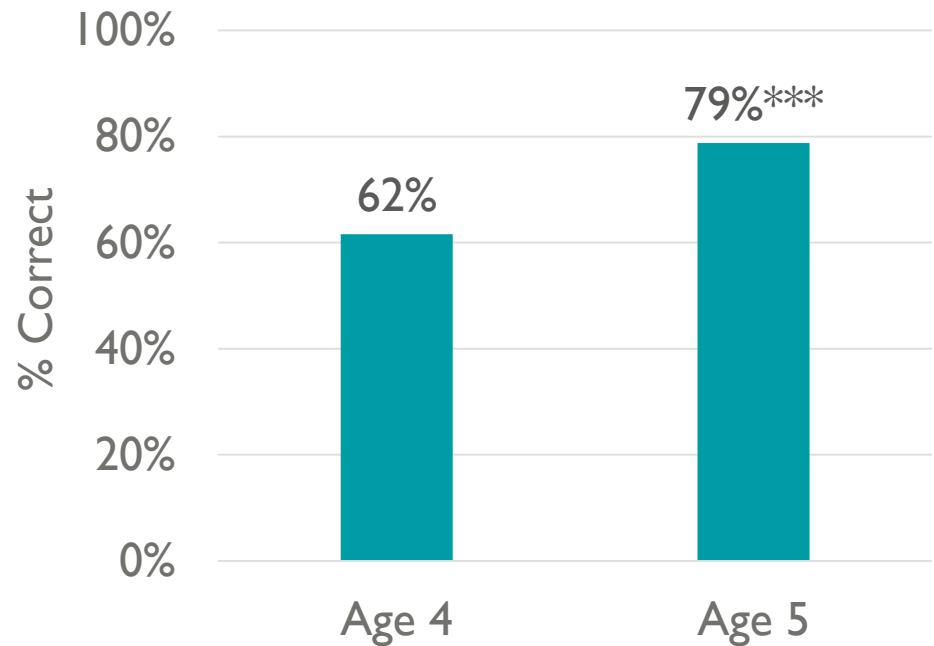
IV. Approaches to Learning

On average, children in the ELM group scored significantly higher than children in the standard ECCD group

5-year olds score significantly higher than 4-year olds

No difference between skills of boys and girls

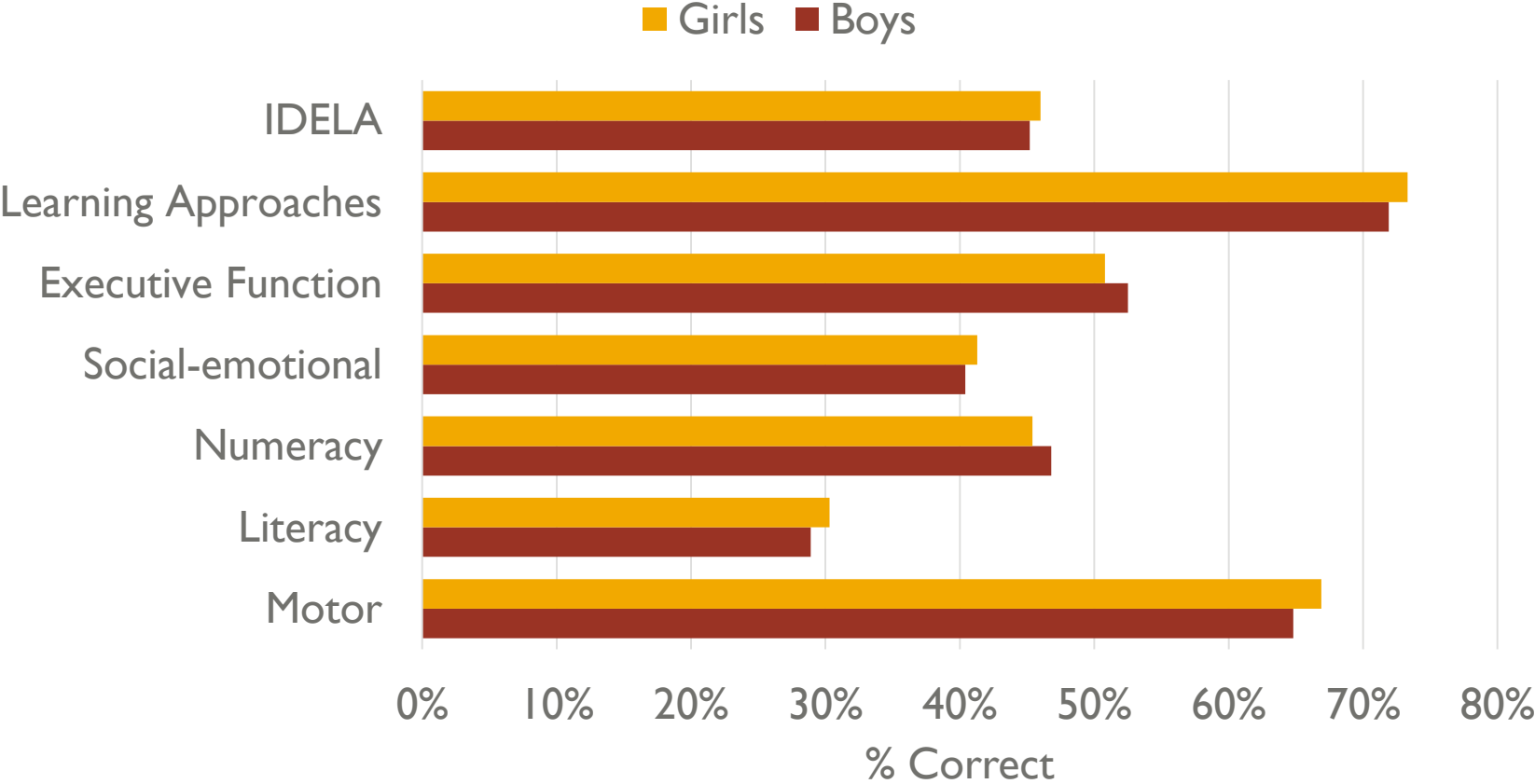
Figure 10. Average Baseline Approaches to Learning, by Age



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Gender Summary

Figure 11. Average Baseline Skills, by Gender



V. Conclusion and Recommendations

Conclusion: Children in ELM centers have stronger skills than children in standard ECCD centers

Recommendation: Control for baseline scores during endline analysis

Conclusion: 5-year-olds have stronger skills than 4-year-olds

Analyze learning gains separately for these two groups to compare learning between younger and older children

Conclusion: No gender differences between children's learning and development

Recommendation: Repeat analysis at endline to test whether there is differential learning between boys and girls over the academic year

Conclusion: Overall, children's skills are weakest in the area of literacy, followed by social-emotional development and numeracy

Recommendation: Focus on learning gains in these areas at endline to see where both ELM and standard ECCD programs have strengths and weaknesses in supporting children's learning.



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