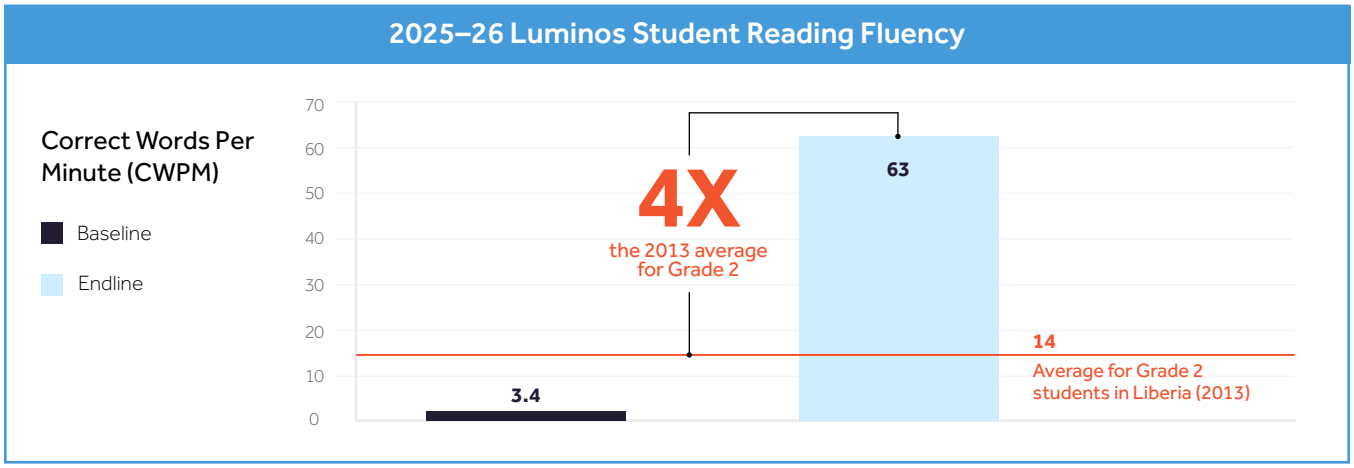
From Foundations to Fluency:

Learning Outcomes from the 2025–26 Luminos Program in Liberia

Executive Summary

The Luminos program is a ten-month accelerated learning program that helps children aged 8–14 who are out of school or have fallen behind build foundational literacy and numeracy skills equivalent to three years' worth of learning. Since 2016, Luminos has worked with community-based organizations and the government of Liberia to scale its catch-up education program, reaching more than 63,700 vulnerable children to date.

When asked to read a short passage of text at the start of the program, most children typically read only a handful of words. **In the 2025–26 school year, children finished the program reading 63 correct words in a minute—more than four times the level recorded among Liberian Grade 2 children in 2013.**[1] Students also answered 60% of reading comprehension questions correctly, compared with 14% among Liberian Grade 2 children in 2013. This is the program's strongest literacy result to date, and reaching this level within a single school year is an extraordinary result compared with other programs in Liberia or more globally.



Four in five children (80%) met or exceeded Liberia's Grade 2 oral reading fluency benchmark of 35 correct words in a minute, and 65% met or exceeded the Grade 3 benchmark of 50. Since 2022, reading fluency has climbed every year: 29 correct words in 2022–23, 40 correct words in 2023–24, 52 correct words in 2024–25, and 63 correct words in 2025–26, a 117% increase. **The gain children make within a single school year is more than double the largest single-year fluency gain documented in reading programs in low- and middle-income countries.**[2]

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[1] Vazquez, T., & Wayne, T. (2022). Proposing benchmarks for early grade reading skills in Liberia. RTI International. Based on the benchmarking workshop held in Monrovia, March 2014.

[2] Rossiter, J., Evans, D. K., Hares, S., & Henny, C. (2026). The Illusion of Comparability Among Standardized Effect Sizes: Why Education Evaluations Should Report Raw Effects. CGD Working Paper 748. Washington, DC: Center for Global Development.

In numeracy, students correctly identified an average of 31 numbers in a minute by the end of the program, compared with an average of 10 among children entering the program the previous school year, the closest available comparison. They also solved an average of 12 single-digit addition and 9 single-digit subtraction problems in a minute, up from 4 and 2 respectively among children entering the previous school year. This indicates strong development of the foundational number skills needed for future mathematics learning.

Learning gains held consistently across different subgroups. Girls and boys showed similar progress in most skills, and children with and without prior schooling performed comparably overall. Luminos continues to focus on supporting children who face a home language barrier and on building more advanced skills in children, such as decoding made-up words (nonwords) and identifying number patterns.

About the Evaluator

FieldWorkz (formerly The Khana Group) is an independent research and evaluation firm focused on driving social impact across Africa. Established in 2008, FieldWorkz specializes in data collection, strategic analysis, and evidence-based policy development. Over the past 14 years, the organization has completed more than 300 projects in 25 countries. FieldWorkz independently administered the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA) used in this evaluation and conducted the data cleaning. Luminos conducted the analysis using the resulting dataset. This report summarizes key findings from the 2025–26 endline evaluation conducted in Liberia.

Background

The Luminos accelerated learning program enables children aged 8–14 years to acquire foundational literacy and numeracy skills equivalent to three years' worth of learning in ten months. The Luminos program uses a joyful, student-centered structured pedagogy approach with phonics-based instruction, incorporating local materials, songs, and stories into daily lessons. Small classes of 25–30 students meet five days a week. Luminos partners closely with community-based organizations and government to co-deliver the program, weaving global best practices with community insights and experiences.

During the 2025–26 school year, Luminos and its community partners supported 4,781 children across 150 classrooms and eight counties.

2025–26 School Year:

4,781
students

150
classrooms

8
counties

Evaluation Overview & Methodology

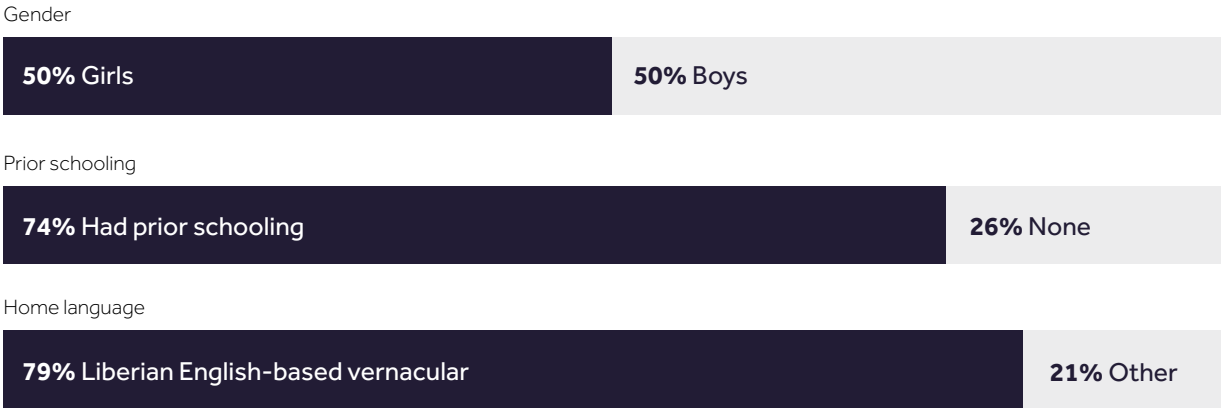
The evaluator, FieldWorkz, partnered with Luminos to assess learning outcomes among children completing the program in Liberia, measuring literacy and numeracy at the end of the 2025–26 school year. FieldWorkz conducted an endline evaluation using the national EGRA and EGMA tools, assessing 1,049 students (50% girls and 50% boys). Seven students were randomly selected from each of the 150 Luminos classrooms.

Enumerators completed four days of training, including in-person classroom-based sessions, field practice, and inter-rater reliability testing. An inter-rater reliability score of 84% demonstrated a high level of consistency in assessment administration and scoring. FieldWorkz collected data using the Tangerine mobile platform. Luminos analyzed the resulting dataset, and disaggregated results by key student characteristics, including gender, prior schooling, and language background.

A baseline assessment was not conducted for the cohort assessed at the 2025–26 endline (June 2026). To provide context for the endline findings, this report presents results alongside data from the 2024–25 baseline cohort (October 2024). Because these assessments involved different groups of students, the comparisons should be interpreted as indicative of learning gain rather than as direct measures of change within the same cohort. Baseline results have, however, been highly consistent across cohorts: average oral reading fluency at entry was 3.4 correct words in a minute in both the 2022–23 and 2024–25 school years.

Who the Children Are

1,049 children assessed across 150 classrooms



Literacy and Numeracy Results

At the end of the 2025–26 school year, children's literacy results were exceptional. Children who entered the program reading only a handful of words from a short passage finished the program reading fluently and with understanding. The gain Luminos students achieve in a single school year far exceeds what reading programs typically achieve. Numeracy results were also strong. The sections below report results for each, followed by an analysis of outcomes across the different subgroups.

Literacy

Timed literacy subtasks assess children's fluency in a skill (Table 1); developing these skills with automaticity allows children to decode text without significant cognitive effort. Table 2 shows how accurate children were on these subtasks.[3] Table 3 shows mean performance on untimed subtasks as a raw score and a percentage.

Table 1. Students' Performance on Timed Literacy Skills: Items Correct in One Minute

Subtask	Baseline	Endline	Difference
Letter Name Identification	37.8	91.9	+54.1
Letter-Sound Identification	15.4	81.0	+65.6
Familiar Word Reading	2.8	32.6	+29.8
Nonword Reading	0.2	14.3	+14.1
Oral Reading Fluency	3.4	62.7	+59.3

Note: Baseline results are from the 2024–25 cohort; endline results are from the 2025–26 cohort. Because these are different groups of children, "Difference" is a between-cohort comparison and not individual-level change over time. This applies to all tables in this report.

Table 2. Students' Performance on Timed Literacy Skills: Percentage Accuracy

Subtask	Baseline	Endline	Difference
Letter Name Identification	69%	91%	+22%
Letter-Sound Identification	44%	91%	+47%
Familiar Word Reading	11%	76%	+65%
Nonword Reading	1%	48%	+47%
Oral Reading Fluency	11%	89%	+78%

Table 3. Students' Performance on Untimed Literacy Skills: Mean Scores

Subtask	Total Items	Mean Item Score			Mean % Score		
		Baseline	Endline	Difference	Baseline	Endline	Difference
Initial Sound Identification	10	3.9	9.4	+5.5	39%	94%	+55%
Reading Comprehension	5	0.1	3.0	+2.9	2%	60%	+58%
Listening Comprehension	3	1.7	2.2	+0.5	57%	73%	+16%

[3] Accuracy is the number of items a child answered correctly expressed as a percentage of the items that child attempted, not of all items on the subtask. It therefore reflects how reliably a child applied the skill, independent of how many items they completed within the time allowed.

By the end of the 2025–26 school year, children were reading short passages fluently. Students typically enter the program with very limited reading ability: in the 2024–25 school year, baseline oral reading fluency scores averaged just 3.4 words in a minute.

Children's strongest learning outcomes were in letter name recognition, letter-sound knowledge, and oral reading fluency. By the end of the program, they correctly named an average of 92 letters and identified 81 letter-sounds in a minute, compared with typical entry-level performance of 38 letters and 15 sounds. Their oral reading fluency averaged 63 correct words in a minute of a short passage compared with just 3.4 words in a minute for a typical student starting the Luminos program. This means that most children progress from being unable to read simple text to reading about 1 word per second. Four in five children (80%) met or exceeded Liberia's Grade 2 oral reading fluency benchmark of 35 correct words in a minute, and 65% met or exceeded the Grade 3 benchmark of 50.

Children also performed well on reading comprehension, correctly answering 60% of the reading comprehension questions, compared with 14% among Liberian Grade 2 children in 2013. Children were not just reading faster. They were reading with understanding—a critical milestone for learning in later grades.

The most challenging skill was decoding made-up words. By the end of the program, children correctly read an average of 14 made-up words in a minute. Liberian Grade 2 children assessed in 2013 read an average of 3.2 made-up words in a minute.[4] Because made-up words cannot be memorized, they offer a strong measure of a child's ability to apply letter-sound knowledge to new or unfamiliar words. The results suggest that while children in the Luminos program built strong foundational reading skills, continued emphasis on decoding made-up words will help children become even more independent, confident readers.

Overall, these findings show that children in the Luminos program built the foundational reading skills they need to succeed. They finished the program reading and comprehending text with confidence.

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[4] Vazquez, T., & Wayne, T. (2022). Proposing benchmarks for early grade reading skills in Liberia. RTI International. Based on the benchmarking workshop held in Monrovia, March 2014.

Numeracy

Table 4 shows children's fluency in timed numeracy subtasks, Table 5 shows how accurate children were with completing these subtasks, and Table 6 shows mean performance on untimed subtasks as a raw score.

Table 4. Students' Performance on Timed Numeracy Skills: Items Correct in One Minute

Subtask	Baseline	Endline	Difference
Number Identification	9.9	30.9	+21.0
Single-Digit Addition	3.8	12.4	+8.6
Single-Digit Subtraction	2.1	9.2	+7.1

Table 5. Students' Performance on Timed Numeracy Skills: Percentage Accuracy

Subtask	Baseline	Endline	Difference
Number Identification	42%	89%	+47%
Single-Digit Addition	32%	82%	+50%
Single-Digit Subtraction	18%	70%	+52%

Table 6. Students' Performance on Untimed Numeracy Skills: Mean Scores

Subtask	Total Items	Mean Item Score			Mean % Score		
		Baseline	Endline	Difference	Baseline	Endline	Difference
Number Discrimination	10	3.7	8.4	+4.7	37%	84%	+47%
Missing Number	10	0.4	3.8	+3.4	4%	38%	+34%
Two-Digit Addition	5		3.0			60%	
Two-Digit Subtraction	5		2.0			40%	
Word Problem	5	2.0	3.1	+1.1	40%	62%	+22%

Children built strong skills in numeracy, leaving the Luminos program with a solid foundation for more advanced mathematics when they transition to government schools. Children demonstrated the strongest outcomes in number identification and number discrimination. By the end of the program, they correctly identified an average of 31 numbers in a minute, compared with 10 numbers in a minute among children who entered the program in the 2024–25 cohort. They also correctly compared numbers 84% of the time.

In basic arithmetic, children solved an average of 12 single-digit addition and 9 single-digit subtraction problems in a minute and correctly answered 3 out of 5 word problems. These findings indicate that children are not only becoming faster and more accurate with basic calculations but are also beginning to apply these skills to everyday problem-solving situations.

Foundational number knowledge was strong, but identifying the missing number in a sequence was children's most challenging numeracy skill—only 38% answered correctly by program end. Two-digit arithmetic was also demanding: children solved an average of 3 of 5 two-digit addition items and 2 of 5 two-digit subtraction items correctly.

Overall, children left the program able to recognize numbers, perform basic math calculations, and solve simple word problems. Further practice in higher-order skills, such as identifying numeric patterns and sequences, will help children build on this foundation as they continue through school.

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Equity Analysis

The comparisons below describe the difference between groups on each of the 16 literacy and numeracy subtasks assessed. Because no baseline was collected for this cohort, these comparisons cannot establish whether gaps at endline reflect differential progress during the program or a gap that was already present between groups at entry.

Gender

The sample split evenly between girls (50%) and boys (50%). At the end of the program, girls and boys performed similarly across most literacy and numeracy skills, with no meaningful differences observed in 9 of the 16 assessment areas or subtasks. Boys showed small additional gains on some higher-order numeracy tasks, such as missing number and two-digit subtraction.

These findings suggest that the Luminos program reached girls and boys equitably and supported literacy learning. The differences in some numeracy skills point to specific areas, such as missing-number tasks, where girls may benefit from additional support, but they do not indicate a broader pattern of gender disparity in learning outcomes.

Previous Schooling

Nearly three-quarters of the children assessed (74%) previously attended school before joining the Luminos program, while 26% had no prior schooling experience. The two groups showed comparable learning outcomes in literacy and lower-order numeracy subtasks. Children with prior schooling showed a small advantage on higher-order numeracy skills, including two-digit addition (61% correct compared with 53%) and missing-number tasks (40% compared with 33%).

These results show that children left the program with strong foundational literacy and numeracy skills regardless of prior schooling, with similar scores on most subtasks. The slight advantage in higher-order numeracy skills for children with prior schooling suggests that additional support could help children with no prior schooling close this gap. Luminos is addressing this through teacher training: in the 2025–26 school year, we developed a short guide to help teachers identify common numeracy misconceptions and address them in real time. The guide will help teachers recognize and respond to the specific gaps most common among children with no prior schooling.

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Language Spoken at Home

Around four in five children (79%) reported speaking a Liberian English-based vernacular, closely related to the English used for instruction, as their primary home language. Performance was similar for those who spoke the vernacular at home and those who did not across most literacy and numeracy skills, with only marginal differences on 13 of the 16 subtasks. Children who spoke the language of instruction at home, however, achieved stronger results in higher-order literacy skills, specifically oral reading fluency and reading comprehension. They read an average of 64 correct words in a minute compared with 57 for children facing a language barrier and answered 63% of reading comprehension questions correctly compared with 49%.

Despite facing a language disadvantage, children who did not speak the language of instruction at home ended the program performing largely on par with their peers who did, matching them on most literacy and numeracy skills. Understanding connected text, however, remains more challenging for children facing a language barrier. This highlights the importance of providing additional language and reading comprehension support to help these learners fully benefit from instruction and achieve the same level of reading proficiency as their peers. Luminos is addressing this through teacher training: Guided Reading and Read Aloud lessons already build in comprehension strategies such as making predictions and connections during the picture walk, retelling using the summary hand structure, and asking inferential questions—such as "How did the story make you feel?"—that go beyond literal recall. The opportunity now is to train teachers to use these strategies more intentionally in the moment.

Comparison with National Data and Previous Program Results

In the 2025–26 school year, children who completed the Luminos program in Liberia read an average of 63 correct words in a minute. That is more than four times the 14 correct words in a minute recorded among Liberian Grade 2 children in 2013. Luminos students also answered 60% of comprehension questions correctly, compared with 14% among those Grade 2 children, and read 14 made-up words in a minute, compared with 3.2.

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Measured against Liberia's national benchmarks, 80% of children finishing the program met or exceeded the Grade 2 oral reading fluency benchmark of 35 correct words in a minute, and 65% met or exceeded the Grade 3 benchmark of 50. These benchmarks describe the level government expects children to reach, not the level most Liberian children currently achieve.

The program's results are also impressive by international standards. A recent review by the Center for Global Development assembled 94 measurements of reading program impact on oral reading fluency, each converted to a gain per year so that programs of different lengths can be compared fairly, drawn from studies across Africa, Asia, and Latin America.[5] Most programs recorded gains of fewer than 5 correct words in a minute per year, and the largest single-year gain in the set was 22.5 correct words in a minute, in a Grade 2 English program in Kenya.[6] Children entering the Luminos program in Liberia start close to zero: baseline oral reading fluency was 3.4 correct words in a minute in both 2022–23 and 2024–25. In a 2022–23 randomized evaluation, children who were out of school but not in the Luminos program moved from 3.3 correct words in a minute to 7.3 over the school year, while children in the program moved from 3.4 correct words in a minute to 28.7. Even allowing for potential control group gains, the gain Luminos students in Liberia made in the 2025–26 school year is more than double the largest single-year gain in the Center for Global Development's review.

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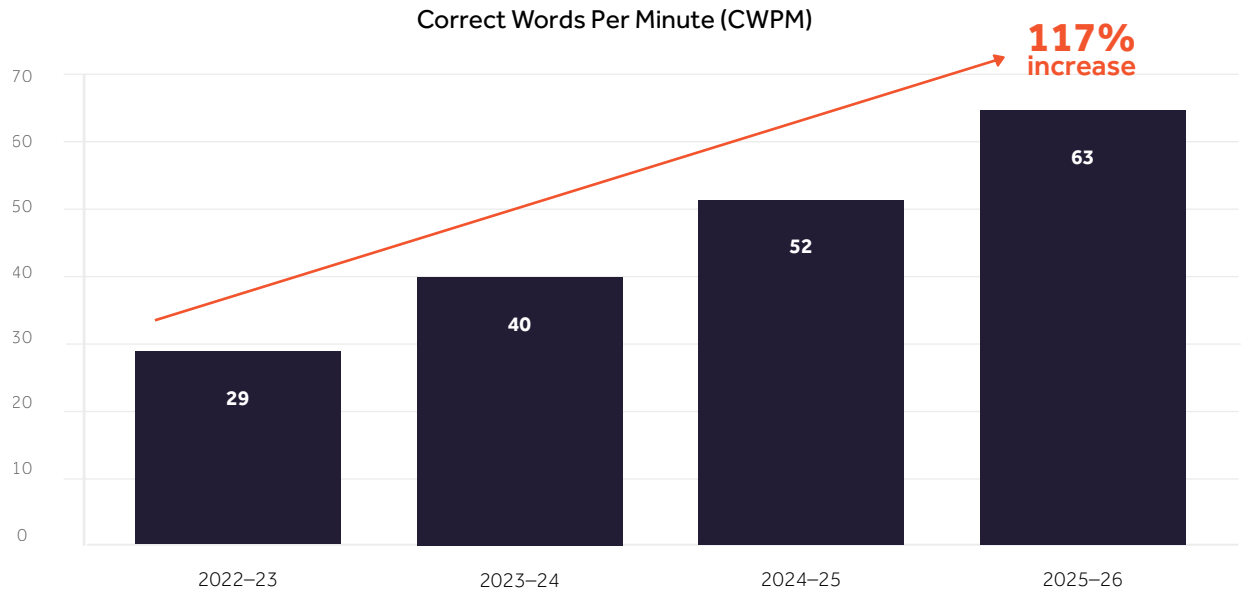
[5] Newman, K., & Mansingh, A. (2026, September 15). To Solve the Literacy Crisis, We Must Aim High. Luminos Fund. https://luminosfund.org/blog/to-solve-the-literacy-crisis-we-must-aim-high/

[6] Rossiter, J., Evans, D. K., Hares, S., & Henny, C. (2026). The Illusion of Comparability Among Standardized Effect Sizes: Why Education Evaluations Should Report Raw Effects. CGD Working Paper 748. Washington, DC: Center for Global Development.

Student Reading Fluency at Endline (Last 4 Years)



Children's oral reading fluency outcomes have shown especially sustained improvement in the past three school years, reaching their highest level yet in 2025–26.

Each cohort was drawn from the same population of out-of-school children and spent the same ten months in the program. Year-to-year differences reflect changes in how the program is delivered rather than changes in who it serves or how long they attend. Sustained gains since 2022 reflect deliberate refinement of the program: structured remediation for the children furthest behind, greater emphasis on letter-sound instruction, and more practice time for newer community teachers during training. Luminos also strengthened its use of classroom data—a redesigned dashboard and closer collaboration between the program and impact teams allowed support to be tailored classroom by classroom. Item-level analysis this year showed, for example, that many children were struggling specifically with three-digit numbers containing a zero in the middle, such as '305', and Luminos built and delivered a targeted training plan in response.

The 2025–26 cohort achieved the best reading fluency results to date, surpassing the previous high of 52 correct words in a minute recorded in the 2024–25 school year and demonstrating continued progress in helping children reach strong levels of reading proficiency.

Children's oral reading fluency outcomes have shown especially sustained improvement in the past three school years, reaching their highest level yet in 2025–26.

Conclusion

The 2025–26 endline evaluation of the Luminos program in Liberia records the strongest learning outcomes the Liberia program has achieved: children completing the program read an average of 63 correct words in a minute, more than four times the 14 correct words in a minute recorded among Liberian Grade 2 children in 2013. Performance was strongest in the foundational skills that enable continued learning, including letter recognition, letter-sound knowledge, oral reading fluency, number recognition, and basic calculations.

Notably, oral reading fluency has risen in each of the past three years—from 29 correct words in 2022–23, already twice the 14 recorded among Liberian Grade 2 children in 2013, to 63 correct words in a minute in 2025–26, the program's strongest result recorded to date. Across 94 annualized measurements of reading program impact on oral reading fluency compiled by the Center for Global Development, most programs gained fewer than 5 correct words in a minute per year and the largest single-year gain was 22.5 correct words in a minute, less than half the change children make in the Luminos program in a single year. This rise coincides with deliberate refinement since the 2022–23 school year: structured remediation for the children furthest behind, greater emphasis on letter-sound instruction, and stronger use of classroom data to tailor support classroom by classroom.

Oral reading fluency has risen in each of the past three years—from 29 correct words in 2022–23, already twice the 14 recorded among Liberian Grade 2 children in 2013, to 63 correct words in a minute in 2025–26, the program's strongest result recorded to date.

In numeracy, children ended the program identifying an average of 31 numbers in a minute and solving 12 single-digit addition problems in a minute, compared with 10 and 4 respectively among children entering the program the previous year.

Outcomes were broadly similar across subgroups, with modest advantages for boys on some numeracy skills and for children who speak the language of instruction at home on oral reading fluency and comprehension.

While overall outcomes were strong, two areas remain priorities for further improvement: decoding made-up words and identifying missing numbers in sequences. These skills require children to apply reasoning rather than rely on memorization and therefore represent important next steps in strengthening deeper literacy and numeracy skills. Continued focus on these areas will help children transition from foundational skill acquisition to more advanced learning.

Appendix

Early Grade Reading Assessment (EGRA)		
Subtask	**Reading Skill**	**Description**
Letter Name/Sound Identification	Alphabet knowledge	Students have 60 seconds to name as many of 100 letters or letter-sounds aloud as possible.
Initial Sound Identification	Phonemic awareness	Students identify the first sound of each of 10 words read aloud by the assessor. This task is untimed.
Nonword Reading	Decoding	Students have 60 seconds to read aloud as many of 50 nonsense words as possible.
Familiar Word Reading	Word recognition	Students have 60 seconds to read aloud as many of 50 frequent, grade-level-appropriate words as possible.
Oral Reading Fluency	Oral reading fluency	Students have 60 seconds to read aloud a 60-word written passage.
Reading Comprehension	Reading comprehension	Students answer up to five oral questions about the passage read during the oral reading fluency subtask. This task is untimed.
Listening Comprehension	Oral language comprehension	Students listen to a short passage read aloud by the assessor and answer 3 oral comprehension questions. This task is untimed.

Early Grade Mathematics Assessment (EGMA)		
Subtask	**Numeracy Skill**	**Description**
Number Identification	Number knowledge	Students have 60 seconds to read aloud as many one, two, and three-digit numbers as possible.
Number Discrimination	Comparing numbers	Students are shown 10 pairs of numbers and asked to identify which number in each pair is larger. This task is untimed.
Missing Number	Number patterns	Students are shown 10 number sequences and asked to identify the missing number in each. This task is untimed.
Addition Level 1 (single-digit)	Addition fluency	Students have 60 seconds to solve as many of 20 single-digit addition problems (sums no greater than 20) as possible.
Subtraction Level 1 (single-digit)	Subtraction fluency	Students have 60 seconds to solve as many of 20 single-digit subtraction problems (inverses of the Addition Level 1 items) as possible.
Addition Level 2 (two-digit)	Addition fluency	Students solve 5 addition problems of increasing difficulty (sums no greater than 70). This task is untimed; administered only to students who score above zero on Addition Level 1 and stop after four successive errors.
Subtraction Level 2 (two-digit)	Subtraction fluency	Students solve 5 subtraction problems of increasing difficulty (inverses of the Addition Level 2 items). This task is untimed and administered only to students who score above zero on Subtraction Level 1; it stops after four successive errors.
Word Problems	Real world problems	Students listen to 5 orally presented word problems and solve them using addition and subtraction. This task is untimed.