





Hundreds of millions of children around the world are not learning despite being in school. It is estimated that 262 million children worldwide will reach the last grade of primary education, but will not achieve the minimum proficiency levels in reading.¹

To compound the problem, teachers are often unaware of the extent of this issue, even in their own classrooms; research suggests that teachers tend to overestimate their students' skill levels. For example, one study in Rwanda found that teachers estimated 52% of their Grade 2 students could read and correctly answer questions on a simple passage, whereas in reality, only 7% were able to do this successfully.²

We believe that equipping teachers with simple assessment tools to track their students' progress is an essential part of the solution. We have found that providing teachers with a "low-tech, high-touch" approach helps them to see their students as individuals and enables them to more effectively respond to their students' needs.

 $1\quad {\sf UNESCO\ Institute\ for\ Statistics,\ "Children\ and\ Adolescents\ Are\ Not\ Learning\ Worldwide."}$

2 Beggs and Ogando Portela, A Study on Kinyarwanda.

262
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without gaining basic reading skills



Recognizing the urgent need to address this learning crisis, the international discourse over the past couple of decades has shifted from a focus on educational access to discussions of quality. This has been accompanied by a growing recognition on the importance of measuring learning outcomes. Governments and non-governmental organization (NGO) projects alike have increased the use and rigor of end-of-project evaluations, collecting information on the impact of their efforts. While these are important, such evaluations can be likened to a rearview mirror, providing information about what has already occurred, unable to help students in real time. For students currently in school, it is essential that their progress is assessed on a regular basis to ensure they get timely support that keeps their learning on track.

At the Luminos Fund, we are particularly aware of how crucial regular assessment is in delivering quality education. Luminos works with students who have either dropped out of school or who have never enrolled. In just 10 months, our

accelerated education program equips students with the reading, writing, and math skills they need to successfully join, or rejoin, government schools in grade 3 or 4. Given this short timeframe, we need to ensure that students are making good progress towards this goal throughout the school year; if we were to wait until the end of each three-month phase to discover the specific skills students were struggling with, it would be too late. These children have already been failed by the education system once, so we need to ensure that we are valuing their time and maximizing this opportunity for them to succeed.

Our model uses community teachers who have had limited formal qualifications or experience teaching, so they need a simple yet effective way to assess students' progress and provide support as needed. Furthermore, our experiences piloting assessment tools and processes have shown us that the benefits of frequent, teacher-led assessment run much deeper than just identifying students who might need additional support. Rather, it helps to change teachers' mindsets from seeing their students as a uniform group who all absorb information in the same way, to a collection of diverse individuals with varied abilities, needs, and preferences. This is often in stark contrast to the government schools in communities where we work. When we ask our students what is different between the government schools and Luminos classes we have been told more than once that this individual attention is what makes Luminos classes special, with students commenting that the teacher in the government school "doesn't even know my name." We believe frequent

Inside a Luminos classroom in Ghana. (Photo by Obeng Baah for the Luminos Fund)

The individual attention that students receive from teachers is what makes Luminos classes special, with students commenting that the teacher in a government school "doesn't even know my name."

assessment is an essential component of education that is truly learner-centered and based on individual student needs.

The Teacher-Led Assessment element of the <u>Luminos Method</u> includes information about how teachers assess their students, including weekly assessments of reading fluency, as well as more informal techniques for checking students' learning that are integrated into their daily routines. It describes how teachers use information from

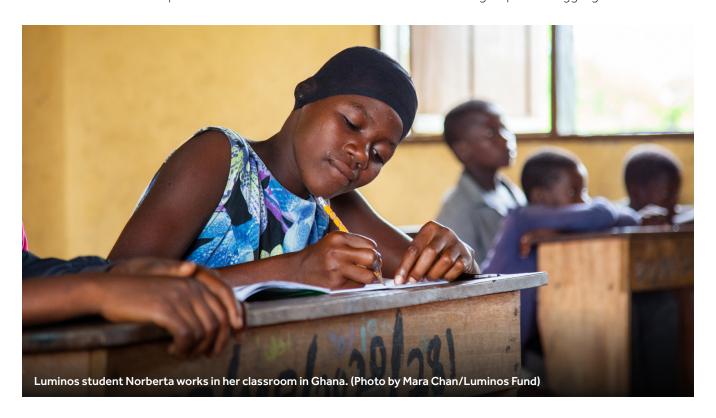


these assessments to inform future lessons and provide additional remedial support. This document also includes lessons learned and tips for other organizations that might be interested in adopting similar techniques, as well as the strengths and limitations of this approach.

Summary

Equipping teachers with simple assessment tools to track their students' progress is an essential part of ensuring quality learning is taking place in the classroom. Through a "low-tech, high-touch" assessment approach, teachers can more effectively respond to their students' individual needs in real time. We believe empowering teachers to conduct student assessments gives them the opportunity to see progress in a way that can be very powerful and motivating. This element of the Luminos Method provides an overview of effective teacher-led assessment across three areas:

- Weekly Reading Fluency Assessments: Every week, teachers listen to individual students read a new, short text aloud for one minute, generating a fluency score. They use these scores to set concrete reading targets to motivate students in upcoming weeks. Through these quick, regular temperature checks, teachers and students are able to see the progress they're making towards their goals.
- Informal Assessment Strategies: Built into the curriculum, these strategies help teachers quickly understand what knowledge and skills individual students, and their class as a whole, are either struggling with or excelling at throughout the school day.
- Responding to Assessment Data and Information: Using what they've learned from weekly assessments and day-to-day observations in the classroom, teachers can adapt their teaching throughout the week. Teachers can use this information to adjust the amount of time they spend with the entire class on a topic and also to inform topics for remedial instruction with individuals or small groups of struggling students.





Our Approach

Weekly Reading Fluency Assessments

The ability to read fluently is crucial for students to succeed across a range of school subjects. In order to read words with a level of automaticity that allows them to focus their attention to the meaning of the text, students need to be able to recognize letter combinations and link them to the sounds. While it is not sufficient on its own — students also need to develop a range of comprehension strategies — it is an essential precursor to successful reading. For this reason, much of our accelerated curriculum focuses on developing students' ability to decode words and build reading fluency. Our targets vary between countries to



QUICK TIP

Build time for assessment into the weekly timetable.

account for linguistic and contextual differences, but in all of our programs we aim for students to reach a specific number of correct words read per minute as a measure of their reading ability. To ensure that students are

making steady progress against this target, we assess their reading fluency on a regular basis, with teachers conducting weekly assessments.

Teachers are provided with training and coaching support on how to conduct these assessments, along with written guidelines. As noted above, our teachers are from the communities where we work and typically

have no prior teaching experience, so we aim to create a system that is simple to implement and also provides useful information that better informs future lessons.

The assessment takes place during regular lesson times, with the teacher working individually with each student while other students work independently. The teacher provides the student with a text that they have not seen before to avoid the chance that they have memorized the passage through repeated readings in previous lessons. In contexts where reading materials are severely limited, it can be challenging to find new texts, so we provide teachers with the assessment materials to match



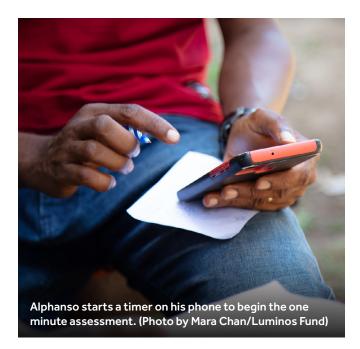


QUICK TIP

It's important that the text is one that students haven't seen before.

³ LaBerge and Samuels, "Automatic Information Processing;" National Reading Panel, *Teaching Children to Read*; Fuchs et al., "Oral Reading Fluency;" Hudson, Lane, and Pullen, "Reading Fluency Assessment."

⁴ Repeated readings of the same text can be a useful technique to build students' fluency (as shown, for example, by O'Connor et al., 2007) but in this case, the intention is to assess students' fluency in order to gain an indication of whether their skills are progressing as intended.



QUICK TIP

Train teachers to note how many words per line to save time when scoring.



each week of the curriculum. At the very beginning of the year, the reading material used as a stimulus may be lists of letters or one-syllable words, but it quickly progresses to a passage or story that is at the expected level students should be reading at during that stage in the program.

The teacher uses a stopwatch or timer on their mobile phone and allows the student to read out loud for one minute, noting any words that were missed or read incorrectly and how far through the text the student read. They then count the number of words that the student read overall, subtracting any errors. The teacher uses the total score to set a target for students to work towards over the coming weeks. When a student reaches their target, this achievement is celebrated by the class and a new target is set. Teachers repeat this process with all students in the class during the allotted time. The quick nature of the test makes it much more feasible to do frequently compared to longer forms of assessment.⁵ However, if there are too many students to complete the assessment during the scheduled period, the teacher will start with those students the following week. In countries where we have an extended school day of seven hours, it is easier to assess all students once per week, but in programs where there is more limited instructional time, we are experimenting with assessing each half of the class on alternate weeks.

This process is one that Luminos has been using for several years and is still evolving. In some locations, our high-performing teachers have also been adding some quick comprehension questions about the passage

to ensure students are understanding what they are reading. We have also been exploring different approaches to setting targets, considering a level that is challenging but realistic for students. Generally though, we find this process of setting concrete targets very motivating for both students and teachers. Regular assessment also helps teachers and students see the incremental progress they are making towards national curriculum goals that can often seem unattainable. In all the countries where we work, there are dramatic gaps between typical reading levels and the stated curriculum goals. For example, in Ethiopia the national curriculum sets a fluency target of forty-five words per minute at the end of grade 2, but actual achievement levels are much lower — in several regions students were found to be reading fewer than thirteen words per minute on average at this stage. In such situations, breaking down this longer-term goal into smaller, short-term targets can allow teachers and students to feel that these loftier goals are within their reach. Perhaps even more importantly, it also serves to draw teachers' attention to individual students, the progress they are making, and where they need more support. While we know that

⁵ M. Shinn observes how one-minute reading fluency tests have the advantage that "they can be administered frequently, even weekly, to allow learning to be assessed on a routine basis" (2008, 675)...

⁶ USAID Ethiopia, Reading for Ethiopia's Achievement, 40.



students are not likely to make dramatic jumps in reading fluency in just one week, this kind of test does have the potential to be sensitive to short-term effects of instructional interventions and show change.⁷

This kind of regular assessment helps to emphasize the importance of learning outcomes to everyone involved in the program, and highlight reading fluency as a particularly important goal. We have also found that conducting the assessment on a weekly basis helps to build a routine for students and teachers. The importance of creating these habits cannot be underestimated. Caitlin Baron, CEO of the Luminos Fund, explains: "Pedagogically, of course, weekly assessment doesn't make much sense. Children's reading levels don't change measurably that quickly. But operationally, weekly assessment is essential. If you ask teachers in our context to assess once a month, it will never happen. But if you ask them to assess once a week, you establish a routine behavior."

Lessons Learned and Practical Tips

Over the course of our time implementing these assessments, we have learned several lessons on how best to support our teachers with the process. We

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Caitlin Baron, CEO, the Luminos Fund



Make training practical, including practice with stopwatches or mobile phones.

have found it useful to give specific guidance on how to ensure that the rest of the class is working productively while the teacher is conducting the assessments. This has included providing activities in the teachers' guide as well as leading discussions and modeling how to do this during teacher training. We also ensure training includes time to practice using stopwatches or mobile phones to time the assessments, counting the correct words,

⁷ Shinn, "Using Curriculum-Based Measurement."



recording students' scores, and setting new targets. In addition, teachers are provided with in-school coaching on how to do this.

We have also experimented with different durations for the assessment — originally, we listened to each child read for three minutes at a time. We felt that three minutes might give more information about students' performance, allowing them more time to warm-up, but



QUICK TIP

Providing teachers with a template for inputting scores and targets helps to save time and makes it easier to see student progress over time.

we have since found teachers can get the information they need within one minute, and by keeping the assessment short they are able to listen to greater numbers of students each week. It also has the practical advantage of avoiding teachers needing to divide the total number of correct words read by three to get the number of words per minute, which we have found can sometimes cause confusion and inconsistencies in the data being recorded.

Recently, we have started exploring how to conduct similarly quick one-to-one assessments for numeracy by testing students on simple mathematic questions. These numeracy assessments are designed to take between one to three minutes per child, and are also conducted weekly.

These literacy and numeracy assessments, alongside a range of less-formal formative assessment techniques, provide critical information to shape teachers' future lessons as described later in this document.



RECOMMENDATION

Recommendations for weekly reading fluency assessments¹



Build time for assessment into the weekly timetable.



To avoid errors, teachers should record data first before performing any calculations



Support teachers with how to manage work for the rest of the class.



Include actions in a teacher's guide (or other similar document) to help teachers respond to assessment data.



Ensure the text is not one that students have seen before.



Include time for remediation.



Give teachers practical advice and training on marking errors, counting correct words quickly, and using stopwatches or mobile phones as timers.



Provide ongoing coaching on how to conduct assessments and use the information effectively.



Provide a format for inputting scores to help teachers keep track of student progress.



Complement reading fluency assessments with other forms of informal assessment.

¹ For further discussion of assessment-informed instruction and recommendations for practitioners, see Ralaingita et al., Assessment-Informed Instruction; and Rawal and Nayak, Embedding Assessment-Informed Instruction.

Informal Assessment Strategies

The data collected through the weekly fluency assessments is complemented by a range of other informal strategies built into the curriculum that draw teachers' attention to how students are progressing. Our pedagogical approach, which emphasizes student participation and active learning, naturally includes opportunities for teachers to gain insights on how students are grasping the knowledge and skills taught in their lessons. Often this can be as simple as asking students questions on the material, or prompting them to summarize the topic or lesson in their own words.

Students are also often asked to demonstrate their learning for the class or in small groups, allowing teachers to informally assess their progress. We encourage teachers to move around the classroom and observe students as they work in groups, noting

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QUICK TIP

Avoid teachers needing to perform calculations on the scores. who is excelling and who is struggling.
Teachers also provide regular spelling checks for the whole class, as well as numeracy and language arts exercises for students to complete in their notebooks. Teachers

mark these exercises and provide corrections and regular feedback. While the use of such techniques might sound simple or obvious, they are not common features in all classrooms where we work.

A method that has proved particularly successful in our Liberia program is the use of "exit tickets." Before students exit the classroom for breaks or at the end of the school day, the teacher will ask each student a quick question. The teacher notes who struggles with the content in order to address this in upcoming lessons. Teachers can also ask students to write their answer, along with their name, on a slip of paper that they hand to the teacher as they leave. This allows the teacher to sort the papers into piles of "correct," "somewhat correct," or "incorrect," allowing them to easily see which students need support with this specific skill.

Our teachers also encourage students to reflect on their learning; for example, giving the teacher a thumbs-up signal if they feel confident with the skill or topic at the end of the lesson, or a thumbs-down if they do not. It can also be used as a quick method for the teacher to check comprehension mid-lesson.

Exit Tickets

Students are asked quick questions as they leave the classroom to check their grasp of the lesson. For example:

What is 3 x 6?

What is the name of a shape with five sides?

What would be heavier: a book or a table?

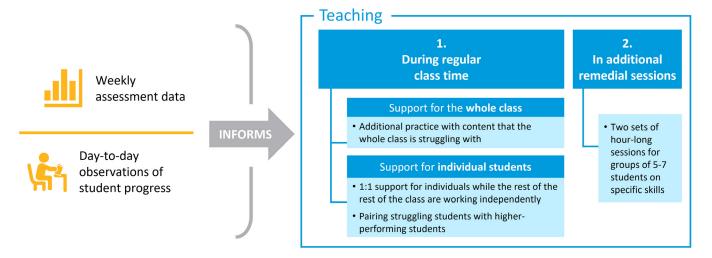
How do you spell "people"?

What word do the sounds /ch//a//t/ make?

Encouraging this type of feedback from students helps to reinforce the idea that they are active participants in the learning process and highlights how students can process the same information differently.

Responding to Assessment Data and Information

The data from the weekly assessments, as well as the day-to-day observations of students' progress, help to inform teachers' actions in two main ways. It helps them to adjust their teaching during whole-class instruction, and it provides information that informs additional, remedial sessions for small groups of students.



If teachers identify that the majority of students are struggling with a specific skill, they will provide additional time for the whole class to review. For example, this might be to review specific letter sounds or words that many students are struggling with, or it might be to provide additional explanations and practice on an activity like using number lines to support calculations.

During regular lesson times, teachers are trained to provide additional one-to-one support to students who are performing lowest in the weekly assessments. Opportunities for this — like when students are working independently on activities — are highlighted in the teacher's guide. Teachers also pair higher-performing students with those who are lower-performing so that they can help to provide additional support during lessons.

Alongside these types of support during regular lessons, teachers also identify students who would benefit from additional small-group instruction. Each week, between five and seven students join two additional hour-long sessions that provide targeted instruction on specific skills. Some teachers have their highest performing students join these sessions to support their peers.



Ark is a 10-year-old Luminos student in Liberia who excelled from the start of the program and can now read full stories with ease. "I was excited to be here and learn more," says Ark. Ark's teacher, Louise, saw Ark's rapid progress and paired her with struggling students. Louise notes, "One of the students she impacted is a girl called Mamie. She worked with her very hard and now Mamie can read more than forty words per minute." Mamie came into the program not knowing how to read.



QUICK TIP

Include actions in the teacher's guide to help teachers respond to assessment data. The activities in the small-group classes vary across contexts and students' needs but often include time to strengthen their grasp on foundational concepts and skills that will enable them to catch up with other students in the class. Suggestions on the essential skills to cover at each point in the curriculum are provided in the teacher's guide. These remedial sessions always have a literacy or numeracy focus.

The targeted instructional sessions are particularly important because students often progress at very different rates. This is perhaps not surprising given the range of student ages, backgrounds, and experiences. While most students join us unable to read a single

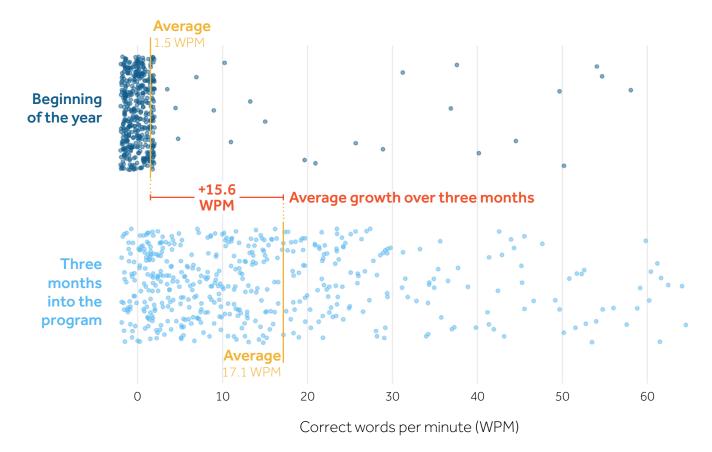
Build time for remediation into the timetable.

QUICK TIP

word, we find that midway into the year, reading abilities can vary quite dramatically.

Essentially, teachers have a classroom with such mixed abilities it is similar to that of a multi-grade class. Figure 1 demonstrates this, showing the assessment scores of students in Liberia at the beginning of the year and after about three months of instruction.

Figure 1. 2021-2022 Luminos Liberia Reading Fluency Scores⁸



For teachers to respond effectively to a wide range of individual student needs and ensure each child can progress in the classroom, it is essential that they are aware of the varying levels of achievement in their class.

⁸ Because these assessments are part of our monitoring and evaluation procedures, they are conducted by Luminos staff or other external assessors rather than teachers. While the tools used in each of these assessments differ slightly and therefore make direct comparisons impossible, this data highlights the wide range of reading levels that our teachers are working to support in their classes.



Exploring Trade-offs and Hard Choices

We believe that our approach to assessment could be of use to teachers in accelerated education programs — and perhaps early literacy programs in other similar contexts. Empowering teachers to do student assessments gives them the opportunity to see progress in a way that can be very powerful and motivating. It also highlights that not all students in their class are picking up skills at the expected rate, and assessments can help teachers identify and respond to students who need additional support. It highlights to the teacher that just because something has been taught, it does not mean it has been learned. Research suggests that teachers tend to overestimate the achievement levels of their students.9 Providing teachers with tools to collect data on how their students are actually performing leads them to consider how they can teach topics or skills in a different way that ensures all students are making good progress. However, we recognize that there are aspects of our approach to assessment that would be difficult to replicate in some contexts

Finding Time

In some countries, we have negotiated an extended school day, and in all our programs we limit class sizes to thirty students. Nonetheless, it is still a significant time commitment to assess every student every week, and despite the benefits we see, our team is considering only assessing half the class each week to explore whether the process can be streamlined. We have not done so yet, partly because we want a clear and simple message that will help teachers establish a routine of listening to every student regularly. In addition, adding complexity to the routine, including how to select students or what to do when someone is absent, could add confusion and lessen the accuracy of the teachers' data. While some of these could likely be avoided by adjusting the format of the record sheets, making changes in protocols requires training time, and there is perhaps a balance to be struck between continuously improving the model and overloading the program with changes.

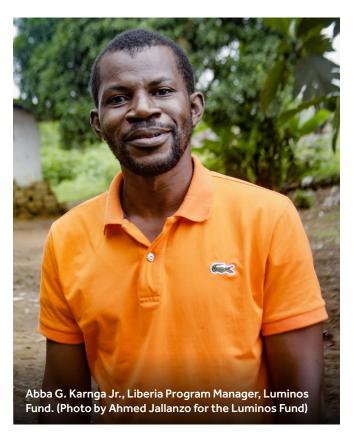
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⁹ For example: Beggs and Ogando Portela, A Study on Kinyarwanda; and Wadmare et al., "Teachers' Perceptions."

66 The assessment is a good way to build confidence with the kids because they can see their own progress. If this week they're reading five words per minute, another week they're reading eleven words per minute, that builds their confidence and motivates them to do more."

Abba G. Karnga Jr., Liberia Program Manager, the **Luminos Fund**



The Myth of Overassessment

Some might argue that there is also the danger of overassessing students. While we recognize that students are not likely to make significant measurable progress over the course of one or two weeks, we believe there is value in this type of frequent assessment. There is sometimes a false assumption that assessment harms children somehow. In the hands of a supportive teacher who praises and encourages their students, these kinds of weekly fluency checks are often seen by students as just another activity that they undertake in their classroom, rather than a test to be concerned about. In fact, the one-to-one time can be a chance for the teacher to provide undivided attention and encouragement to a child and provide a valuable opportunity for that child to access additional support. It can also be very motivating for students to see their own progress over the course of the program. Abba G. Karnga Jr., Luminos' Program Manager in Liberia explains, "The assessment is a good way to build confidence with the kids because they can see their own progress. If this week they're reading five words per minute, another week they're reading eleven words per minute, that builds their confidence and motivates them to do more "

Developing Materials and Training Teachers

The development of the assessment materials and protocols does take an investment of time. While assessments can be undertaken with existing stories or passages, in many places where we work, reading materials are in short supply. This is especially true in regions where the language of instruction is not the dominant language in that country. Sourcing

local-language, age-appropriate texts can be very difficult. In these situations, finding texts that students haven't seen before, and have not potentially memorized, can be challenging. Furthermore, the text must be at the appropriate level, testing students only on the letter combinations that they have learned at each stage of the year. For example, testing students on a passage using the words "bought," "although," "through," and "rough" before they have been taught the various sounds that can be made by the letters "ough" would not be an accurate measure of their progress against the curriculum. We have found that taking the burden of tool development away from teachers and providing them with the materials is a more efficient use of their time. However, it does still require an investment of time, resources, and training to ensure that local staff can develop quality assessment tools for each language of instruction.

Once the materials have been created, teachers also need training and support on how to deliver the assessments. We have found that even amongst our partners' staff, many of whom have significant experience working on NGO-led education projects, conducting these kinds of assessments is a new skill. Perhaps even more challenging, though, is working with teachers on why we do these types of assessments and how to effectively respond to the data they have collected. We have tried to make responses very specific and concrete; for example, allocating students additional time in remedial sessions if they read under a certain number of words per minute, and pairing them with a peer to provide support. In an ideal world, responses would be more nuanced than this, with teachers differentiating lesson content more fully. Indeed, some of our teachers have demonstrated great creativity and sensitivity in how they adjust their approach with different students.

However, using a range of assessment approaches and then being able to use that information to respond effectively to students' needs is a high-level skill that can take qualified teachers years to develop, ¹⁰ and our community teachers are generally at the beginning of their teaching careers. Furthermore, many grew up with their own teachers making negligible adjustments for individual student needs. Changing these kinds of educational paradigms takes time, and teachers need this process to be scaffolded in the same way we scaffold students' learning.

Equipping Teachers with Assessment Tools

Part of Luminos' approach to teacher professional development is equipping them with tools that can make their work easier, be this in the form of assessment materials or in the provision of a detailed

Breaking into small groups, teachers learn the Luminos pedagogy in their initial training in Liberia. (Photo by Kaitlynn Saldanha/Luminos Fund)

Changing educational paradigms takes time, and teachers need this process to be scaffolded in the same way we scaffold students' learning.

teacher's guide. While using a range of formative assessment techniques in lessons and responding appropriately is a high-level skill, using the weekly fluency checks is relatively simple.

Luminos takes away the burden of test preparation by providing the assessment materials. Although the content that students read changes each week, the routine for teachers stays the same, enabling them to build their confidence with the process. We also provide teachers with day-by-day guidance on what to teach, along with recommended methods and activities. Evidence (and our experience) suggests that this is important for

¹⁰ Ralaingita et al. (2021) provide a helpful categorization of the different kinds of assessment techniques that might be used by teachers at varying levels of skill and professional development.

Although the content that students are tested on changes each week, the routine for teachers stays the same. This enables teachers to build their confidence with the process.

teachers with limited experience, and provides a valuable resource to support them in their daily work. However, these kinds of structured approaches can make it harder for teachers to respond flexibly to individual students.

By providing teachers with resources and guidelines to use during whole-class instruction, alongside some flexibility in the form of additional remedial periods, we aim to give teachers space to address these needs. Nonetheless, we are far from claiming we have found the perfect balance. Rather, we believe some of these approaches can support teachers with practical solutions while we continue to investigate how to best address student needs within the practicalities of the contexts where we work.





Conclusion

As with many aspects of our program design, Luminos is constantly striving to find the right balance — not overcomplicating what we ask teachers to do, but also having high expectations and aspirations for what can and should be achieved for the benefit of our students. If we are not ambitious, we are failing the students. We believe that having clear targets for students, measuring their progress, and providing additional support is an essential part of achieving these ambitions. That being said, if we set unrealistic expectations with teachers and deploy burdensome processes, we risk creating systems that simply do not get used.

We have found that providing teachers with simple instructions for an assessment that can be repeated on a regular basis is empowering for them, and builds teachers' confidence to measure their own progress towards the goals they set for their students. These weekly fluency assessments are straightforward, concrete actions which are complemented by a range of other activities that help teachers to see if their students are learning. We also provide some simple

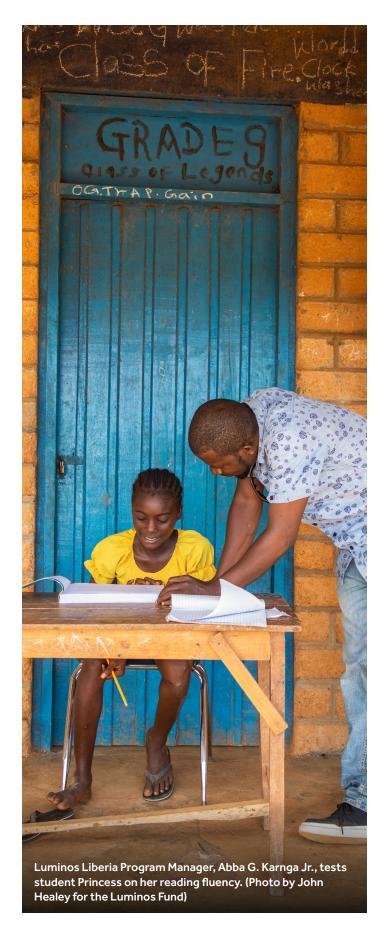
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steps that teachers can take based on the results from an assessment, which provide additional support to students who are struggling. While we are still working to ensure that teachers have a full range of responses in their pedagogical toolkit, we have found that once teachers become confident with these initial steps and begin to see their students' individual needs, they are in a stronger position to seek solutions for themselves. Once teachers have worked on the program for two to three years, we see that they often begin to use their creativity to develop unique responses to ensure all students are gaining a solid foundation in these essential skills.

Of course, these approaches might be challenging to apply in classrooms with more than forty children, especially if instructional time is scarce. However, it could be argued that if a class is too big for a teacher to listen to each child read for one minute per week, it might be too big for those children to learn effectively.

In the context of the current global learning crisis, it is time for governments to radically reassess what is needed to ensure students are completing the early grades with the essential skills they need. While shrinking class sizes across the system could be costly and unfeasible, a strategic investment in more manageably sized grade 1 classrooms could pay significant dividends in efficiency over time. After all, nothing is more inefficient than a system that fails to teach 70% of children to read by age 10.



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