LEAP Final Deliverables

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EXECUTIVE SUMMARY

All kids acquire basic numeracy and literacy skills to enter/return to school

Introduction

The global community is at risk of failing a generation of young people in the Global South who may never become the doctors, leaders, human rights activists, or teachers they might have been. Worldwide, it is estimated that 70% of children are not learning to read by the age of 10. An estimated 82 million primary-school-aged children are out of school due to crisis, poverty, or discrimination (UNESCO).

The Luminos Fund is tackling this challenge head-on, working alongside governments and community-based organizations to run accelerated education programs that help children catch up to grade level, reintegrate into government schools, and prepare for lifelong learning. In just 10 months, Luminos students progress from not recognizing letters of the alphabet to reading short stories. To date, Luminos has helped over 277,787 children in Ethiopia, Ghana, Lebanon, Liberia, and The Gambia secure a second chance to learn.

Organization's Role & Strength

The Luminos Fund was created to ensure all children have equal access to joyful, foundational learning, especially those shut out of education by crisis, poverty, or discrimination. Our vision is of a world where no child is ever denied the chance to learn. Luminos believes that learning to read is a crucial milestone in every child's life. At Luminos, we unlock the light in every child through the transformative power of foundational learning. We do this by upholding the following core beliefs and values:

1. We believe that every child is capable of learning a remarkable amount in a short period of time, if given the chance.

2. We keep children's joy and well-being at the heart of everything we do.
3. We embrace assessment as a key component of effective teaching and learning.
4. We celebrate and empower local leadership throughout our work with partner communities and governments.
5. We use research, program, data, and skilled classroom observation in the tenacious pursuit of excellence.
6. We celebrate the unique contexts and cultures of the communities we serve in our curricula and pedagogy.
7. We act with the highest standards of integrity and care, ensuring mutual accountability among colleagues and partners.
8. We take the initiative to solve problems where we find them, managing details large and small with urgency.
9. We act deliberately to ensure that our organization is inclusive for people of different genders, racial backgrounds, ethnicities, sexual orientations, religious beliefs, abilities, and other sources of diversity.
10. We build deep, authentic relationships with our supporters in celebration of the mutually transformative power of giving.

In just one school year, we teach students to read and do math – to learn how to learn – through a joyful, activity-based curriculum. Results of a IDinsight randomized controlled trial (RCT) of the Luminos program in Liberia prove children in Luminos classrooms learn a remarkable amount during the program. In one year, a child in the Luminos Liberia program learns 90% of what the average Liberian will learn in their lifetime.

Furthermore, 90% of Luminos students advance to local government schools to continue their education, and Luminos students are twice as likely to complete primary school than their peers.

Need Summary

Luminos has a robust evidence base and internal and external evaluation system to inform the continuous improvement of our program. Nonetheless, Luminos recognizes the need to strengthen its capacity for data-based decision-making to drive ever-better outcomes for students. For instance, in Luminos programs, average learning gains are significant; however, there is a small but persistent segment of students who seem to attend class regularly but fail to make material progress.

To that end, Luminos is working diligently to strengthen and refine its assessment and data collection capacities to better monitor individual student progress and learning gains in real time. To further improve the learning outcomes and understand the unique learning needs of each child, Luminos must ensure the effective and rigorous collection of high-quality data at the student level, with rapid feedback loops.

The Luminos MEAL system in each country includes weekly teacher-led assessments; thrice-annual curriculum-aligned summative assessments; and weekly field supervisor-administered assessments for a small sample of students in each classroom, followed by classroom coaching to teachers to ensure they are well-equipped to use assessment data to guide learning. This system is supported by Luminos' network of community-based organization partners. Luminos partners collect individual student assessment data quarterly, which is then processed and analyzed by our country teams to inform programmatic decisions.

There is significant value in streamlining the collection of student-level data, across Luminos program countries, to both increase data quality and further strengthen Luminos capacity to deliver rapid feedback and real time program iteration. Luminos is exploring high-impact, low-cost solutions that will provide further insights into learning variability and inform improvements to teaching and learning strategies through the collection of reliable, localized assessment data.

This low-tech, data-driven solution would allow Luminos to monitor incremental learning gains through weekly student assessments. Luminos works in challenging, low-resource contexts; ensuring the data it collects is relevant, timely, accurate, and complete is thus a key challenge.

Solution summary & next steps

Through the 2023 LEAP Challenge, Luminos aims to pinpoint struggling students earlier in the school year in order to provide targeted support and gain insights into the root causes of these difficulties. This will potentially allow for the creation of risk profiles that predict future needs.

This report serves as a springboard for developing a more robust assessment system that can effectively identify struggling students early on and inform targeted interventions. The recommendations aim to build on existing infrastructure, tools, and processes, rather than develop an entirely new approach to assessment.

The project has three deliverables:

DELIVERABLE 1. The team is proposing a set of guidelines for developing effective assessment strategies that incorporate two complementary approaches.

a) Using Response to Intervention (RTI), which is a framework that is used in schools to support students who are struggling either academically or behaviorally. The overarching aim is to identify struggling students as early as possible and then to provide them with intervention that is appropriate for their level.

b) Exploring a Curriculum-Based Measurement (CBM) which refers to a method to track progress toward educational goals, using short indicators of academic performance. CBM involves setting annual goals, frequent assessments, graphing scores, and using data to inform teaching decisions. It can be also used as a component in an RTI approach.

DELIVERABLE 2. The research team created a set of recommendations to identify certain conditions before and during the program that may affect a child's ability to learn at the same pace as other children. These conditions may involve previous schooling or learning opportunities, family literacy and numeracy skills, and age. Timely identification of children who may struggle during the program could allow Luminos to act early, even before the school year, or explore different teaching strategies.

DELIVERABLE 3. At the request of Luminos, the research team suggests options to conduct one or more pilots that will allow them, together with their implementing partners on the ground, to test the effectiveness and efficiency of deliverables 1 and 2.

Deliverable 1: Guidelines for developing effective assessment strategies

In Ghana, there is large variation between students in learning achievement. At the start of the school year, baseline data showed that children were entering the program reading just one word per minute (WPM) on average, but after just three months, reading abilities varied dramatically. As part of this LEAP Sprint, Luminos is asking for “high-quality real-time assessment data” that can be used to “measure and understand learning variabilities among students”. The goal is to “adapt classroom instruction to respond effectively to a wide range of individual student needs and ensure that each child can progress.”

An important objective is that every student in every classroom learns. Luminos is particularly concerned about the students at the low end of the distribution. We will provide guidelines for developing effective assessment strategies, leveraging the assessments that are already taking place on a weekly basis. Notably, while our recommendations address specific challenges within the Ghanaian context, we believe that the presented ideas may be relevant for other countries as well.

Current assessments

Student learning is currently assessed at different moments during the Luminos program.

- To determine overall effectiveness of the program, a sample of students are selected to take the EGRA/EGMA assessment at the start of the program, midway, and upon completion of the program. Although highly informative for program-level decisions, EGRA/EGMA data cannot be used to guide instruction for individual students because data are anonymized and only available for a subsample of students.
- Quarterly assessment data are available for each student and can be used to determine student progress. Yet, to better monitor student learning and to help facilitators adjust their instruction to address students’ needs, more frequent assessments are preferred.
- Weekly assessment data from the facilitator are available and already used to determine which children will receive additional instruction. The current assessments are curriculum-aligned, using material that has been covered in the past week, as well as material from earlier in the program. In addition, a random sample of children is being assessed by the supervisor.

Although the weekly assessments hold potential to identify struggling learners and to guide instruction, there are two main concerns with the current assessment strategy: (1) Weekly assessments are reported to the Luminos team as classroom averages and do not monitor individual student progress (i.e., week to week improvement), and (2) The time taken to carry out assessments takes away time for instruction and thus the cost/benefits need to be carefully weighed. This is a particular concern in Ghana where Luminos’ classrooms run for fewer hours per day over a shortened program duration compared to other Luminos country programs.

Goal of this deliverable

The key question that will be addressed in this deliverable is how to improve the current weekly assessment such that facilitators can better monitor student progress and adjust their instruction accordingly, while optimizing the balance between instruction time and assessment time. There are a few practical conditions that must be met, including that the assessment is low-tech (digital solutions are not feasible because of a low access to electricity and internet), relatively straight-forward and cost-effective to develop, and easy to learn and implement by the facilitators. Given the emphasis on the students who struggle, we argue that adopting a Response to Intervention (RTI) framework might be a promising approach, especially when combined with Curriculum-Based Measurement (CBM) for progress monitoring.

1. **Adopting a response-to-intervention (RTI) approach**

1.1 What is RTI?

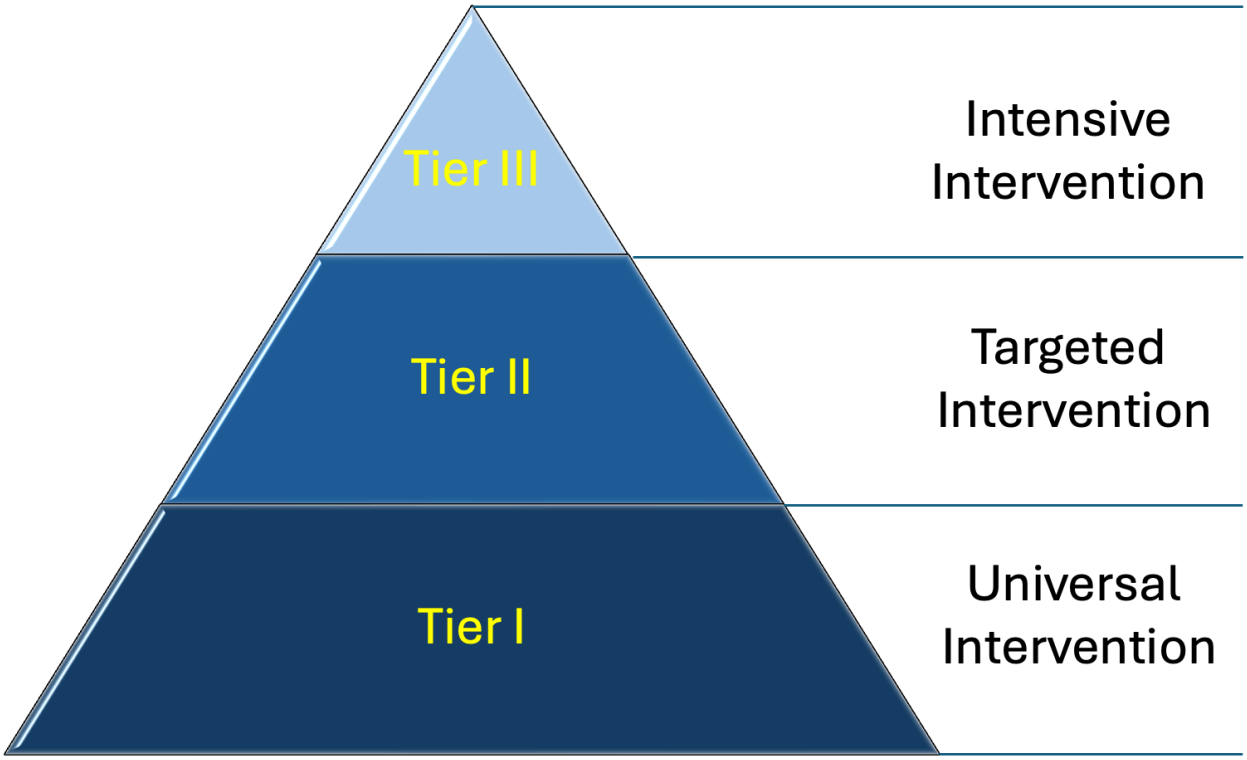
Response to Intervention (RTI) is a framework that is used in schools to support students who are struggling either academically or behaviorally. The overarching aim is to a.) identify struggling students as early as possible and b.) to provide them with intervention that is appropriate for their level (Fuchs & Fuchs, 2006).

As opposed to more traditional forms of identifying struggling learners, RTI is a proactive approach that emphasizes prevention rather than waiting until students fail academically or behaviorally. More specifically, RTI operates on a tiered system of education. Typically RTI operates using three tiers and students can move between these tiers depending on how they respond to the intervention offered within each of the tiers:

Tier 1 - Universal Interventions: Tier 1 represents universal instruction for all learners. The focus of the Tier 1 instruction is to provide effective teaching practices that benefit all students in the classroom.

Tier 2 - Targeted Interventions: Students who struggle and do not respond to Tier 1 instruction receive Tier 2 instruction which involves small-group intervention. These small group interventions are typically more targeted to focus on specific skills and areas of content that students are struggling with.

Tier 3 - Intensive Interventions: This tier represents the most intensive support for students who are not responding to Tier 2 instruction. Frequently Tier 3 involves one-on-one instruction and attempts to identify special educational needs.



Response to Intervention (RTI) Framework

1.2 The importance of universal assessments in RTI

In order for RTI to work effectively it requires universal screening and continuous progress monitoring. Screening is used to identify students who may be at risk for learning difficulties or who may need additional support. The screening process typically involves assessing all students at specific moments during the year. Progress monitoring, on the other hand, often focuses specifically on struggling students. It involves regularly assessing students' academic progress over time and can be used to evaluate the effectiveness of instruction or interventions. In RTI, data from screening and continuous progress monitoring are the primary tools by which educators move learners up and down the tiers. In the context of this deliverable we recommend the implementation of Curriculum-based measurement tools (CBM) as a way to implement screening and subsequent continuous progress monitoring (See section 2 for more details on CBM).

1.3 Is RTI appropriate to be used in the context of Luminos?

The RTI framework in conjunction with the CBM measurement proposal outlined in Section 2 has great potential for advancing Luminos Fund’s objective to ensure that every student in every classroom learns. This framework will require the design of Tier 2 and, possibly, Tier 3

instruction. It might be possible to restrict it to two tiers. The additional instructional time that will be gained through the implementation of RTI can be used for Tier 2 instruction for those students who are non-responders over a certain period of time. For example, after all students have received 3 weeks of CBM, students who demonstrate limited progress may be assigned to supplementary remedial instruction. After this point, some of the time allocated for screening and progress monitoring via CBM can now be used for Tier 2 instruction. While students are in Tier 2 instruction they should be continuously assessed using CBM and may then, if sufficient progress is made by students in Tier 2 over time, be reassigned to only Tier 1 instruction.

It is important to think about activities for Tier 1 students during the time that Tier 2 students receive remedial instruction. It is beyond the scope of this deliverable to provide a detailed and comprehensive list of recommendations. Yet, one promising approach that may be explored for use in this context is peer tutoring (Fuchs, Fuchs, & Burish, 2000; Fuchs & Fuchs, 2005).

2. Curriculum-based measurement (CBM)

2.1 What is CBM?

Curriculum-Based Measurement (CBM) refers to a method to track progress toward educational goals, using short indicators of academic performance (Lembke & Espin, 2005). CBM involves setting annual goals, frequent assessments, graphing scores, and using data to inform teaching decisions. It can be also used as a component in an RTI approach.

CBM measures the same skill throughout the year but, whereas the skill being assessed is the same, the specific items are not (to avoid practice effects). Measuring the same skill across time allows progress monitoring toward a long-term goal. In that regard, CBM is different from curriculum-aligned assessment (sometimes referred to as Curriculum-based Assessment; CBA), which involves measuring students' performance on specific objectives drawn from the classroom curriculum each week (akin to what is currently done in the Ghana Luminos program). Because a curriculum-aligned assessment focuses only on the skill currently being taught, progress monitoring is not possible. Put differently, the distinct advantage of CBM over CBA is the ability to track student progress over time. This is also necessary within an RTI framework, as those students that do not progress over time are assigned to Tier 2 instruction (see above), while those that progress remain in Tier 1. Conversely students who are in Tier 2 instruction and are showing steady progress can be reintegrated into Tier 1 instruction.

CBM generally uses timed tasks, where evaluation is based on the number of accurate responses within the allotted time frame. For instance, children may be given one minute to

read a passage, and the number of correctly read words is counted. Timed measures are useful for several reasons (cf. Lembke & Espin, 2005):

- Timing allows for greater sensitivity to growth in performance as scores reflect both improvements in accuracy and fluency.
- The correlation between the number of correct responses within the designated time frame generally shows a stronger correlation with academic performance than that of the percentage of correct answers.
- Timed measures are shorter, which makes it more manageable for both teachers and students.

Reading measures generally require one-on-one assessment (with the exception of the CBM Maze task, see below), but math probes may be group-administered. The weekly assessment results are usually plotted on a graph, providing a visual representation of progress that can be easily compared to the goal line. A deviation from the goal line indicates that instruction should be adjusted.

Examples of CBM are provided in section 2.5. In short, tests for early readers include letter naming fluency, phonemic segmentation fluency (which involves segmentation of words into their individual phonemes), nonsense word fluency and word reading fluency. More advanced readers are typically given a passage of text, and are asked to read aloud for 1 minute. An alternative that does not require one-on-one assessment is a “Maze selection task” (see below). CBM numeracy measures typically comprise problems that are reflective of the problems encountered in the curriculum throughout the school year. Early numeracy tasks may include number naming, number comparison, and ordering. Tasks for more advanced learners include addition, subtraction, multiplication and division with increasing complexity.

Notably, the tasks that are included in CBM are seen as indicators of skill in a certain area, and do not necessarily measure the skill itself. For example, the number of correctly read words in 1 minute serves as an indicator for general reading proficiency and not just fluency in reading words. Similarly, the ability to read a passage aloud can be used as an indicator of reading comprehension, even though passage reading does not directly measure comprehension itself (Wayman et al., 2007; Reschly et al., 2009).

2.2 Why use CBM?

The main goal of CBM is to help teachers decide when instructional changes are needed (Lembke & Espin, 2005). Specifically, the teacher sets a goal based on students’ baseline data (which generally involves a ‘benchmark test’ that is somewhat more extensive than the progress monitoring tests). In the following weeks the teacher tracks progress towards that

goal. If a student consistently falls short of her goal, adjustments to instructions need to be made (e.g. assigning a student to Tier 2 instruction within an RTI framework, see above). If the student consistently exceeds expectations, the goal is raised.

Advantages of CBM are that it is relatively easy and inexpensive to develop, easy to learn and implement, and does not require a significant amount of class time to implement (Lembke & Espin, 2005; Reschly et al., 2009).

CBM data should not be used to measure overall teacher effectiveness, as there are likely many other variables at play over which the teacher does not have control. However, CBM can serve as a tool to evaluate the effectiveness of specific interventions implemented by a teacher, or to get insight into the effectiveness of the program as a whole.

2.3 Is CBM appropriate to be used in the context of Luminos?

- Opportunities
    - CBM can be a quick and relatively easy way to track progress of students in the Luminos program, and can be integrated with the RTI framework described in section 1.
    - It allows progress monitoring, which would not be possible for a curriculum-aligned assessment that is changed from week to week.
    - There are resources available that provide guidance on how to construct CBM measures (see appendices in Lembke & Espin, 2005 and other resources below).
    - Although initially developed to track individual students, CBM can also be used to examine program-wide improvement. This may identify areas that students particularly struggle with.

- Challenges
    - Facilitators should have enough time and skill to act on the information provided by the CBM. Simply collecting data does not improve student outcomes. As part of this, graphing student progress over time and reviewing individual student learning trajectories is critical.
    - New materials must be created to match the curriculum and language in Ghana. This also involves setting appropriate goals.
    - As students start the program without any literacy or numeracy education, it may be necessary to implement 2-3 assessment phases with a different selection of assessment tasks.

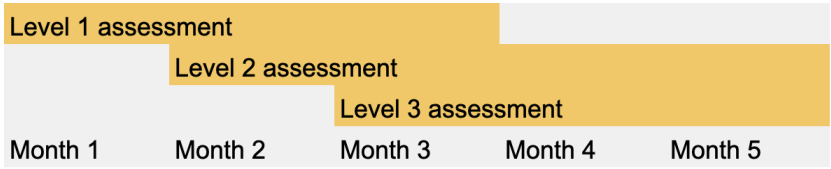
- It may be challenging to link the different assessments to depict growth over the entire period (cf. Wayman et al., 2007).
- Due to variability in learning progress, some students may require more difficult assessment tasks than others, which could complicate procedures for the facilitator.
- Although some materials may be group administered, grading of the group assessments will take time.
- Facilitators need to be trained to properly conduct the timed assessment and use graphs to depict the data.

2.4 Advice on using CBM in the Luminos context

1. To measure progress it is recommended to administer the same assessment tasks every time. Yet, new items should be provided each time, with efforts made to ensure that the items are of comparable difficulty levels.

2. For the reasons outlined above, it is highly recommended to use timed tasks. Yet, it is important to note that children should be encouraged to do their best, rather than attempting to be as quick as possible. In section 2.5, we provide some suggestions of tasks that could be included.

3. It is important for the assessment to include items that measure skills aligned with the end goals of the curriculum. Given that the Luminos program is an accelerated learning program that covers multiple grade levels, it may prove beneficial to implement 2-3 overlapping assessment phases, each spanning approximately one grade. As an example, the figure below shows a potential progression of assessments over a five-month period.



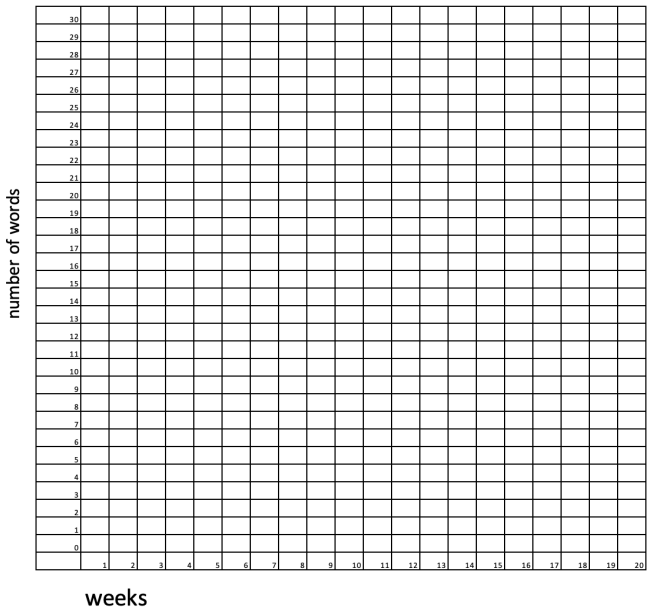
4. Frequency of assessment: When CBM is used in schools, the progress of children with difficulties is typically monitored on a weekly basis. All other students are screened two to three times a year. For example, DIBELS (Dynamic Indicators of Basic Early Literacy Skills) screening is administered at the beginning, middle and end of a grade. In the

present situation, it might be necessary to screen children more often, to ensure that none of the children is left behind. It is recommended to use benchmark tasks for screening that are somewhat more extensive than the progress monitoring tasks (e.g., use two or three tasks instead of one), as this will give more reliable data.

5. Variability in skill level: At the start of the program, it is recommended to administer the different tasks in order of difficulty. To ensure that students are not unnecessarily burdened by material that is far beyond their abilities, a discontinuation rule can be applied. A discontinuation rule is a predetermined criterion for discontinuing the administration of a particular test. Once this criterion is met, the administrator stops the subtest, and scoring is based on the items completed up to that point. For example, in DIBELS, administration of the word reading subtest will be discontinued if the student cannot read any of the first 5 words correctly (DIBELS, 2023). In addition, a criterion can be implemented for discontinuing the administration of further subtests. For example, if during a letter recognition task, a student scores at or below the criterion of a certain number of letters in 1 minute, the word reading subtest will not be administered. Finally, letter and word reading tests could be constructed in such a way that there is a gradual increase in difficulty. For example, in some DIBELS subtests, the first 20% of items contain letters/words that are easier (e.g., more frequently used) than the rest of the items. This allows students to build confidence and reduce anxiety.

6. Variability in learning progress: Once students have mastered basic tasks, one could start testing at a more advanced level (e.g., the literacy assessment could start at word reading rather than letter recognition). A gating rule could be established to determine whether to advance to a more challenging task (if a student's performance is at or above the criterion) or revert to a simpler task (if a student's performance falls below the criterion). This is also a strategy that is employed in DIBELS.

7. Depiction of the data: It is beneficial to chart weekly assessment outcomes on a graph. A straightforward approach is to indicate the number of correct items (e.g., the words accurately read in a word fluency test, see below), on grid paper and then connect these data points with a line.



8. Assignment to remedial instruction: Given the potential complexity in creating a ‘goal line’ and assessing deviations from it, an alternative approach can be taken where the Luminos team establishes a set of rules that facilitators can follow to determine whether a student will receive remedial instruction or not. This could be as simple as ‘children who read less than X words per minute will receive remedial instruction’ or ‘children who do not show improvement (i.e., more words over the course of X weeks) will receive more intensive one-to-one instruction’. It is recommended that setting thresholds (e.g. X number of words per minute) is done against the background of a small pilot study to have an idea of how students in a particular context perform.

2.5 Creating CBM materials

2.5.1 Reading

Below, we provide some recommendations for creating assessment tests suitable for readers at different skill levels, which is largely based on tests and guidelines provided in the DIBELS administration and scoring guide (2023) and the guidelines provided by Lembke & Espin (2005). It is important to note that these recommendations are based on assessments conducted in the English language, and it is uncertain whether all recommendations are applicable to the local language.

Level 1 reading assessment

Assessment tests that are appropriate for beginning readers are letter naming fluency and phonemic segmentation fluency. In letter naming fluency, the student is tasked with reading aloud as many (uppercase and lowercase) letters as possible within a one-minute time frame. In phonemic segmentation fluency, the facilitator orally presents a number of words and the student produces the individual phonemes, e.g., “bal” > “/b/ /a/ /l/”. Students are given one minute to segment as many words as possible. Given that it might be more complex to construct appropriate items for phonemic segmentation, we recommend using letter naming fluency. Nonetheless, we provide some recommendations for both types of tests.
Recommendations for creating letter naming materials:

- Parallel tests should be of equivalent difficulty in terms of letter frequency.
- It is recommended to start each assessment with high frequency letters, as this may prevent frustration (e.g., in DIBELS, the first 20 out of 100 letters are high frequency letters).
- It is important to take into account letters with a multi-syllabic pronunciation (such as the “W” in English). Although students should obviously learn these letters, it is recommended to leave them out of the assessment as they will negatively impact the students’ score (DIBELS, 2023). In addition, it may be decided to avoid the lowercase L, as it is easily confused with the uppercase i (DIBELS, 2023).

Recommendations for creating phonemic segmentation materials:

- Parallel tests should be of equivalent difficulty in terms of word frequency and the number of phonemes in a word.
- It is recommended to begin each assessment with words containing two phonemes, and slowly progress to words with three or more phonemes (e.g., in DIBELS, the number of phonemes increases after every 8 items).
- Only include high frequency words that are typically known to students.

Level 2 reading assessment

The next level is the ability to decode and read words. Two common ways to assess this ability are word reading fluency and nonword reading fluency. In word reading fluency, the student is tasked with reading aloud as many words as possible within a one-minute time frame. In nonword reading fluency, students are presented with nonsense words and are asked to read them aloud as whole words and/or individual letter sounds (e.g., “/b/ /a/ /f/”). This method assesses decoding skills more directly than word reading, as knowledge of real words does not influence performance. However, the construction of materials in the local language may present a challenge, as (the frequency of) the spelling patterns has to be taken into account (DIBELS, 2023). Moreover, it has been argued that word reading fluency shows higher validity than nonword reading fluency (Fuchs, Fuchs, & Compton, 2004). Therefore, we suggest that word reading fluency is the preferred method. Below we provide some recommendations for creating word reading fluency materials:

- Parallel tests should be of equivalent difficulty in terms of the frequency and complexity (i.e., number of syllables) of each word.
- It is recommended to begin each assessment with high-frequency words containing one syllable, and slowly progress to words with three or more syllables.
- Only use words that are typically known to students at this age.

Level 3 reading assessment

The next level is the ability to read words in context. Two common ways to assess this ability are oral reading fluency and the maze selection task. In oral reading fluency, students are asked to read aloud a passage of text for one minute. The facilitator counts the number of correctly read words. An alternative for the oral reading fluency test is the Maze selection task. In this task, which usually takes about 3 minutes, students quietly read a passage of text in which every 7th word is removed and substituted with three optional words. Students must select the words that fit best. One advantage of using Maze selection tasks is that they can be group-administered. Yet, for primary-grade students, oral reading fluency seems to be a more suitable measure than Maze selection tasks (Wayman et al., 2007).

Recommendations for creating text passages:

- Passages that are used should be novel for the students, i.e., they should not have read them before (Lembke & Espin, 2005).
- Parallel texts should be of equivalent difficulty. Factors that influence the difficulty level are the frequency and 'decodability' of words, the number of syllables per word, and number of words per sentence. Furthermore, texts should ideally be drawn from the same type of source (e.g., from the curriculum, literature, or mainstream articles), as texts from different sources likely exhibit differing levels of complexity (Wayman et al., 2007).
- As long as all parallel texts are drawn from the same type of source, it does not seem to matter much which source that is (Wayman et al., 2007).
- It is not necessary to match the material of the progress monitoring tests to the material used in the curriculum (Wayman et al., 2007).
- Students may be assessed with material that is *somewhat* above or below their instructional level. Yet, it has been shown that growth rates may be impacted if the material is excessively difficult, particularly for beginning readers (Wayman et al., 2007).
- The passage should be long enough to ensure that the student will not be able to finish reading within one minute. In English, this is usually about 200-300 words (Lembke & Espin, 2005).
- Choose passages without pictures and without many complex pronouns (Lembke & Espin, 2005).

Specific recommendations for scoring oral reading fluency:

- The final score of the oral reading fluency test is the number of words read correctly within one minute. For ease of scoring, the facilitator may put a slash mark through

each word that the student reads incorrectly and a bracket around the last word that is read (Lembke & Espin, 2005). Omitted or substituted words as well as hesitations longer than 3 seconds are usually counted incorrect (DIBELS, 2023). If a student self-corrects an error within 3 seconds, this may be counted as correct (DIBELS, 2023).

Specific recommendations for Maze selection tasks:

- Follow the guidelines for creating text passages, and replace every seventh word with 3 options: the correct word and two distractors (Lembke & Espin, 2005).
- The distractors should be about the same length as the correct word (one letter more or less) and should be easily identifiable (does not rhyme, does not start with the same letter, etc).
- It is recommended to leave the first two sentences and the last sentence intact (Lembke & Espin, 2005; DIBELS, 2023).
- It is not recommended to use Maze selection tasks more frequently than once a month (DIBELS, 2023).
- For additional suggestions regarding the construction and placement of maze selections within the texts, see Lembke & Espin (2005).

Font and font size

The DIBELS manual includes a brief review of the literature discussing font types and sizes for typical readers and students with reading difficulty. The decision for the fonts that were used in DIBELS (Rockwell for letter and word reading, Times New Roman for passage reading), was mainly based on the distinguishability of the letters (e.g., difference between capital i (I) and lowercase L (l)). Font size starts with 24pt in Kindergarten and gets smaller in each grade. In 3rd grade, DIBELS uses font sizes of 16/18 pt.

2.5.2 Math

2.5.3 Useful resources

1. For concrete advice on administration and scoring of oral reading fluency, maze selection, and a basic CBM math task, see Lembke & Espin (2005). This book chapter also includes directions for material development.

2. We refer to the DIBELS materials for examples regarding the administration, instructions and scoring of different reading assessments.

3. The interventioncentral website provides links to free Curriculum-Based Measurement resources that can be found on the Internet. The website also contains manuals on how to use CBMs and how to interpret the results to make good decisions for instruction. https://www.interventioncentral.org/curriculum-based-measurement-reading-math-assessment-tests

4. The website from the Iris Center at Peabody College (Vanderbilt University) provides an online learning module on progress monitoring, including knowledge clips, background, and concrete advice about curriculum based measurement. https://iris.peabody.vanderbilt.edu/module/pmr/

5. It is beyond the scope of the current deliverable to provide advice on peer tutoring, but the Education Endowment Foundation website might provide some relevant insights: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/peer-tutoring

3. References

Our advice on CBM is primarily drawn from the following book chapter by Lembke & Espin. Please note the appendices providing guidance on creating CBM materials. Due to copyright restrictions, this chapter will be shared exclusively with Luminos.

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Deliverable 2: Recommendations to identify students´conditions that may affect their learning

Learning issues due to events in the past and background information that Luminos can collect to better tailor their intervention:

In this section, we outline some common characteristics observed in struggling learners, explore some examples of interventions that could tackle these characteristics, and make some recommendations that the Luminos team could take to build a more robust support environment for the learners in the future.

We must note that we don't say here that these *are* the characteristics that affect the learners in Luminos centers but that the Luminos team could use this non-exhaustive list as a starting point to identify which characteristics plague learning and which interventions the organization feels it could implement for maximum effectiveness.

Information collected at the beginning of the program can be compared to learning outcomes along the process in order to explore certain correlations of the student's personal context that may be limiting or slowing their learning compared to other children. It is important to understand that, given the diverse backgrounds, ages and families, some children may be able to learn faster because of previous schooling or other previous forms of learning including

parents' literacy and numeracy skills. Luminos presented the hypothesis that the best predictor of performance is an entry level exam. This approach can certainly reflect the diversity in skill levels of the children and signal some that may require additional help to succeed. However, the team believes that a more thorough identification of potential causes may lead to a more effective intervention.

The analyses can begin just by trying to establish direct correlations between a contextual situation and learning outcomes. However, it is possible that a multivariable approach can lead to a clearer perspective on the combination of factors and the weight of each factor in limiting the speed of learning.

Here, we outline some learner, family, and community characteristics that we recommend Luminos collect at the beginning of the learning year. While Luminos collects learner data through its enrolment process, past experience suggests that more targeted data could be collected to better understand student profiles.

Characteristics of the learner

- Home language
- Student learning/ schooling history
- Age and gender of the student (for future correlation based on the LEAP team's suggestion)
- Do some learners have special needs? What can be done in these situations?
- Reason student dropped out from the previous school

Characteristics of the family

- Family demographic - social-economic status, caste/ creed/ religion/ affiliation and its impact in the new location
- Parent literacy and numeracy skills (similar for elder siblings and other family members)
- How big is the student family? What responsibilities do they have at home?
    - Are learners expected to stay at home and support their families by taking care of their siblings? (particularly if they are the eldest child, which puts greater pressure on them to drop out of school)
    - Early or forced marriage and pregnancy
    - Are the learners obliged to work to supplement their families' income rather than go to school?

Characteristics of the wider community

- How far are the students coming from?

- Language barriers, social norms, xenophobia, unclear legal and administrative processes, lack of identification documents, or recognition of previous educational attainment (and their implications on families)
- The absence of firewalls. Example – policy frameworks that prohibit the sharing of information between immigration authorities and service providers – can prevent undocumented children from accessing education/ services for fear of detection, detention or deportation (will this prevent the students from enrolling in formal schools?

Learning issues and causes from the present and what Luminos can do to tackle them

This section outlines some common learning issues and causes observed across classrooms of different contexts. For each outlined cause, we suggest interventions or further lines of inquiry to be pursued at the Luminos/ partner organization/ Supervisor/ facilitator levels. We also highlight which stakeholders (main actors) will have to invest the most in tackling these causes. This list is not exhaustive and is only intended to kickstart a process of identifying and addressing learning causes.

Learning issue	Main actor(s) for suggestion implementation			
	Lum	Par	Sup	Fac
Facilitators are not meeting the kid's needs (meeting them where they are) and are unable to provide individual attention (Zone of Proximal Development) • Facilitators know what learning needs are and how to identify them. • Supervisors know how to identify whether facilitators are implementing need-based teaching and can support and model this for facilitators. • Partner org checks with supervisors about facilitator-led teaching and supports supervisors in pushing for implementation and data collection. • Luminos expects data on facilitator-led teaching at kids learning needs, highlighting the importance to the partner org.			Yes	Yes
Do some learners have special needs? What can be done in these situations?		Y		Y

• Facilitators understand what special needs mean and (with guidance) learn how to cater to learners with special needs. • Supervisors can identify facilitator intervention for learners with special needs and support and can support and model this for facilitators. • Partner org trains facilitators and supervisors about identifying and addressing special needs in learners, checks with supervisors about this, and supports supervisors on implementation and data collection. • Luminos shares their focus on identifying and addressing special needs in learners to the partner org, expects data and reporting on progress made by learners with special needs.				
Is there a relation between student learning and their age? • Facilitators are trained on the relationship between student age and learning and how to address it. • Supervisors are trained to support facilitators in the relationship between student age and learning and test the hypothesis in the centers. • Partner org gets the data on student learning by age and follows the hypothesis set by Luminos to train supervisors and facilitators. • Luminos cuts learning data by age and develops hypotheses that can be used to train supervisors and facilitators on learning and the age of learners.	Yes	Yes		
Student absentia - need individual-level data, especially in the first few weeks of school • Facilitators follow up with students who are missing school and make community visits where needed. • Supervisors check student attendance data and push facilitators to follow up with students with low attendance. • Partner org trains facilitators on addressing low student attendance. • Luminos shares their focus on identifying and addressing low student attendance in learners to the			Yes	Yes

partner org, expect data, and reporting on the progress made.				
Biases facilitators and supervisors may hold against a certain set (caste/ creed/ religion/ affiliation etc.) of students • Facilitators are trained on biases and the effects they can have on learners. • Supervisors are trained on biases and check in on facilitators about biases when working with students. • Partner org works with Luminos to identify biases facilitators and supervisors may have and find ways to address them. • Luminos works with the partner organization to identify biases facilitators and supervisors may have and find ways to address them.	Yes	Yes		
Student organization/ disorganization (seating, materials, notebooks, etc.) • Facilitators are trained in identifying and remedying student disorganization in class. • Supervisors are trained on how to address student disorganization and how to support facilitators in addressing it. • Partner org works with supervisors to collect data on disorganization and ways to address them. • Luminos asks the partner organization to collect and address data on facilitation disorganization.		Y	Y	Y
Timely, meaningful, and consistent responses to data are crucial to student learning • Facilitators collect data as requested by the partner org and are trained to have a broad understanding of the data and how to use it to inform student support. • Supervisors ensure timely data collection by facilitators and help them form a broad understanding of the data and how to use it to inform student support. • Partner org trains facilitated and supervisors on what and how to collect data and how to make sense of data.	Y	Y		

• Luminos asks partner org to collect data and generate insights from this data.				
Lack of clarity (in learning goals, muddy procedures, difficult-to-follow teacher questioning, a confusing instructional sequence, or a disconnect between a literacy strategy and the content to be learned) • Facilitators have increased clarity of their role. • Supervisors have increased clarity of their role. • The partner organization aligns with Luminos on defining clarity from the organization level (strategy) to facilitation, explains the approach to supervisors and facilitators, and trains them on implementation at their level. • Luminos aligns with the partner org on defining clarity from the org level (strategy) to facilitation.	Yes	Yes		
Facilitator content knowledge/ pedagogical knowledge • Facilitators understand the need to upskill themselves and implement new knowledge in their centers. • Supervisors are trained and upskilled to support facilitators better. • Partner organizations identify gaps in facilitator knowledge, come up with ways to address them, and train facilitators to upskill them and supervisors to support facilitators. • Luminos identifies key facilitator knowledge upskilling needed.		Yes		Yes
Disconnect between planned (or structured lesson) and learning goal (which will be different for different sets of learners) • Facilitators understand the goal of the new resources and ensure fidelity in their implementation to meet the learning needs of all students. • Supervisors support facilitators in implementing new resources. • Partner org works with Luminos to identify the disconnect between structured lessons and student	Yes	Yes		

learner needs, builds lessons to cater to every student's needs, and trains the teachers and supervisors on the new resources. • Luminos works with the partner org to identify the disconnect between structured lessons and student learner needs and builds lessons to cater to every student's needs.				
Unmanageable data (cannot be used effectively - what is needed, how to interpret it, and how to act on it) • Facilitators understand the importance of data collection, sharing it, and acting on data insights and do so in their centers. • Supervisors ensure data completion as required by the partner org and support facilitators struggling to collect, share, and act on data. • Partner org works with Luminos to identify what data is needed and how to collect, interpret, and codify it in action. It also trains facilitators and supervisors on what data to collect and how. • Luminos works with the partner organization to identify the needed data and how to collect, interpret, and codify it.	Yes	Yes		
Assessment design • Facilitators conduct assessments on time and enter and share data as required. • Supervisors ensure timely and proper assessment rollout, data collection, and support facilitators where needed. • Partner org works with Luminos to design assessments that inform student learning and areas of breakdown. • Luminos works with the partner organization to design assessments that inform student learning and identify areas of breakdown.	Yes	Yes		
Understanding the 'why' of learning (text to life connection) • Facilitators understand why it is important to make text-to-life connections and do so in the centers.		Yes		Yes

• Supervisors look for evidence of facilitators using text-to-life connections and support them when needed. • Partner org trains facilitators and supervisors on the importance of making text-to-life connections and how to do so in everyday lessons. • Luminos indicates to its partner org the importance of addressing student misbehavior in centers.				
Student misbehavior, facilitator not equipped to handle the class, chaos/ disruption • Facilitators are equipped to handle student disruption and do so when facilitating. • Supervisors support facilitators who struggle with student disruption. • Partner organizations train facilitators and supervisors on the causes and strategies to mitigate student disruption. • Luminos indicates to its partner org the importance of addressing student misbehavior in centers.		Yes		Yes
Lack of experiential/ active involvement • Facilitators understand the importance of active teaching and follow it when facilitating. • Supervisors support facilitators in implementing active learning. • Partner org trains facilitators and supervisors on the why and how of active learning when facilitating. • Luminos indicates to its partner org the importance of active teaching in centers.	Yes		Yes	
Are learners (and parents) receiving feedback? • Facilitators understand why and how to give feedback and do so for students and parents. • Supervisors oversee and support facilitators, providing feedback to learners and parents. • Partner organizations train facilitators and supervisors on what feedback to provide to learners and parents and how to provide it.	Yes	Yes		

• Luminos decides what feedback to share with the learners and families and asks the partner organization to train facilitators and supervisors on it.				
How big is the student family? What responsibilities do they have at home? (Separate for boys and girls) • Facilitators collect information about the learner's family and visit the learner's home to understand the home situation. • Supervisors collect learner environment information from facilitators and develop profiles for family situations and student responsibilities. • Partner org collects the information from the supervisors and trains supervisors and facilitators on engaging parents and families. • Luminos identifies this as a priority area and asks the partner organizations to collect this data and address any issues that arise.		Yes	Yes	Yes

Issues to be tackled at the community, policy, and partnership level, and what advocacy efforts Luminos can pursue:

This section outlines some actions Luminos can take outside of its center-related work to build an ecosystem that supports its learners.
Priority suggestion:

- Collaborate and coordinate with partners:
    - Engage other actors working with migrant communities (especially health nutrition-focused organizations).
    - Understand the context of their work and tackle common problems faced by each other.
    - This collaboration should be deliberate and long-term.
    - Work towards collective goals.
- Involve communities:
    - Work with parents and communities.
    - Create peer groups of children from similar communities and backgrounds - build a sense of connection and community and leverage the ones that already exist.
    - Involve the formal school community and prepare parents for what lies ahead.
- Push for advocacy:

- Which government initiatives for migrants and marginalized communities have not been implemented? Which CSOs could help Luminos push the government to implement these initiatives?
- What government-led data platforms exist that will better help students' demographic and support systems? How can Luminos get access to this data?

Deliverable 3: Proposed pilot opportunities

This section outlines the plan for a pilot to test the recommendations we made earlier. The goal is for Luminos and its partner organizations to test the recommendations, assess their effectiveness, learn, and realign the course.

Objective

We propose two modifications to the weekly facilitator assessment:

1. An RTI framework that assesses struggling learners weekly and others less frequently. This approach's main goal is to increase instruction time.
2. Changing the assessment to a CBM assessment. The main goal is to track learning progress. This change may improve the ability to select learners in need of remedial instruction and to make decisions regarding the content of remedial instruction (i.e., what skills to focus on).

Ideally, the approaches are implemented together, but choosing only one or the other is possible. Below, we propose a matrix that outlines all possible combinations of intervention.

	Assess everyone every week	Assess struggling learners each week and the others less frequently (RTI)
Current assessment	(1) Status quo	(2) Increased instruction time
Curriculum based measurement (CBM)	(3) Learning levels/ trajectories from all learners	(4) Learning levels/ trajectories from struggling learners Increased instruction time

Luminos has indicated that they would like to study the benefits of a combined approach: RTI + CBM. In deliverable 1, we describe how to implement RTI and CBM, and refer to resources that may help to create CBM materials that are suitable in the context of Luminos.

The objective of the pilot is threefold: (a) to assess whether the new approach has the intended effect, i.e., better identification and monitoring of struggling learners while increasing instruction time, (b) to evaluate the fidelity and feasibility of implementation by the facilitators, and (c) to examine the effectiveness of the approach in improving learning outcomes.

Implementation methodology

The following considerations need to be addressed at the organizational level to move to an RTI-CBM approach:

- For RTI
    - Build guidelines on frequency of assessment and threshold mastery of topics to be considered for frequent assessment.
    - Train facilitators and supervisors on the RTI approach and why and how to assess some students more frequently.
    - Build mechanisms to ensure learners not being assessed frequently are not slipping below the threshold regularly and to realign the threshold if this happens.
    - Address the stigma associated with why some learners are being assessed frequently, and not let this hamper learner confidence.
    - Involve parents in this shift in assessment frequency to ensure alignment for all stakeholders.
    - Ensure effective use of increased instruction time for all learners.
        - Think about the content of remedial instruction for Tier 2 students.
        - Think about activities for Tier 1 students during the time that Tier 2 students receive remedial instruction. One approach that could be explored is peer tutoring.
- For CBM
    - Create new assessment tools, based on the instructions provided in deliverable 1. Establish the validity and reliability of these assessments.
    - Determine cut-off scores, as well as guidelines for instruction based on the information obtained from the assessments.
    - Train facilitators and supervisors on the CBM approach, including the assessment and interpretation of data.
    - To improve data quality, train facilitators why and how to repeatedly assess the same skills (but not the same items). Also inform them about the importance of not helping students during the assessment.
    - Train facilitators and supervisors to make sense of emerging trends by topic and student demographics.

At the program-level, gaining a better understanding of the sources of learning variability could facilitate the development of program-level solutions. To allow program-level based decisions, the following questions need to be addressed:

- Which methods can be used to get weekly assessment data to the Luminos team in an error-free and cost-effective manner?
- How do we effectively collect other relevant sources of data, including learner, family, and community profiles? How can this data be used to generate hypotheses about student learning breakdowns?

Questions and analysis plan

We recommend the Luminos team implement this RTI-CBM approach in phases to gauge the fidelity and feasibility of implementation and to assess impact on student outcomes. Since this revamped approach will require alignment of multiple stakeholders and revamp of some program materials, we suggest a phased rollout with periodic pit stops to reflect on what aspects of the program are working and which are not. Our recommendation for implementation is, thus, grounded on an approach to measure implementation effectiveness. For effective measurement, we suggest a quasi-RCT rollout to certain learners in a phased manner.

We suggest two approaches to implementation:

- Identify centers with similar learners, facilitators, and learning levels in a country and roll out the RTI-CBM program in half of these centers (selected at random). This approach has the highest claim to robustness because of the random selection of centers with similar profiles.
- Implement the RTI-CBM program by partner organization. This approach will be easier to implement, as the new program will need to be rolled out to one partner, leaving the implementation as is with the other partner organization. This approach has a lesser claim to robustness because we are not rolling the intervention out.

We suggest a number of questions that should be addressed:

1. Questions regarding the implementation of the RTI-approach
    - Does the RTI-approach lead to more time for remedial instruction?
    - Do the selection criteria lead to a reasonable group size?

    These questions could be addressed by measuring the time it takes to do the assessment each week and the number of children in the progress monitoring group, and compare this between the RTI-CBM approach and status-quo.

2. Questions regarding the implementation of the CBM
    - Is the to-be constructed CBM a reliable and valid instrument?
    - Does the CBM-approach improve the ability to select learners in need of remedial instruction?
    - Does the CBM-approach improve the ability to make decisions regarding the content of remedial instruction (i.e., what skills to focus on)?

      We recommend to focus on the reliability and validity first. There are several ways to get insight into this (cf. Wayman et al., 2007):
        - Validity means that the test measures what it intends to measure. It can be assessed by examining the correlation between CBM measures and other measures of the same construct, such as EGMA/EGRA data or quarterly assessment data. You may for example, do a small pilot with say 20 students in which you administer the new CBM tool as well as another measure of reading and math and then evaluate how the results from the CBM task are related to the other measures of academic achievement.
        - Test-retest reliability measures consistency of an assessment when it is administered at two different occasions. This could be assessed by having children perform the same assessment twice, and to examine to what extent the two measures are correlated. A high correlation indicates a good test-retest reliability.
        - Inter-rater reliability measures to what extent a measure is independent of the person conducting the assessment. This could be measured by looking at the agreement between the facilitator assessment and the supervisor assessment.
        - Parallel forms reliability measures the consistency between different versions of the assessment. This is important for progress monitoring as it is assumed that different tests can be used interchangeably. Parallel forms reliability is typically assessed by administering different versions of the test to the same group of participants at the same time.
        - Difficulty level of parallel forms Besides examining the correlation between different versions of the test, it is valuable to explore whether there is a systematic difference in performance, suggesting that one of the versions is more difficult than the other.

3. Questions regarding the experience of facilitators
    - Do facilitators have a good understanding of how to do the assessment?

- Do facilitators have a good understanding of how to graph and interpret the data?
- Does the assessment provide enough information for the facilitators to decide who will be in the remedial instruction group?
- Do facilitators have the capacity to act on the results of the assessment, i.e., do they have the capacity to adjust remedial instruction depending on the learning needs?
- How feasible is it to assess and provide instruction to low-performing students while simultaneously managing the activities of the other students? What role could supervisors play here?

These questions could be assessed by questionnaires or interviewing facilitators and supervisors who work with the new RTI-CBM approach.

4. Questions regarding the efficacy of the combined RTI-CBM approach
    - Does the combined RTI-CBM approach lead to enhanced learning?
    - Is there a difference between low-performing students and high-performing students in the extent to which they benefit from this approach?

    To answer these questions, we recommend a time (pre vs. post) x treatment (new approach vs. status quo) interaction to assess the effectiveness of the new approach.

    We hypothesize that the proposed approach is particularly beneficial for low-performing students because there is more time for remedial instruction and these students will receive more targeted instruction. For high-performing students, the benefits of this approach are less clear. If assessment time is not replaced by instruction or other forms of learning, these students might not experience benefits. Yet, if effective forms of learning are implemented during the time that the facilitator works with the low-performing students (e.g., peer tutoring), high-performing students might benefit as well.

One approach to address these questions uses the existing beginning and end of program EGRA/ EGMA assessments of learners. These data may give broad indications of change in student outcomes with the new approach relative to the status-quo. A challenge is that EGRA/EGMA assessments are performed by an external party and it is not possible to map their results to individual students. Therefore, we suggest a workaround, similar to what is currently done with attendance data, where Luminos provides a learning variable (e.g., whether the student spent most of the year in Tier 1 or Tier 2 instruction) to the external party that

conducts the EGRA/EGMA assessments. This enables the external party to include this variable in their analyses.

Another possible issue is that the EGRA/ EGMA assessments are just for a sample of learners, suggesting that there might not be enough struggling readers in the sample. One way to address this could be to not use an external party but implement the EGRA/ EGMA tests themselves. Another option would be to use other similar outcome measures (e.g., the benchmark test developed in the context of the CBM or the quarterly assessment data). A drawback is that this will require more resources than the quasi-RCT rollout suggested above.

5. Questions regarding the understanding of learning variability

- Which factors predict individual differences in baseline achievement?
- Which factors predict individual differences in learning gain?

These questions can be assessed by correlating baseline achievement and learning gain with demographic variables and other relevant factors, including age, gender, attendance, student language, …

Appendix

The current information collected by Luminos before enrolling a learner:

District Selection Criteria
1. The district level government is supportive of the Luminos CBE program being run in the area and is eager to collaborate.
2. High prevalence of out-of-school children in the area between the ages of 8-14 that would allow us to run the Luminos CBE program for at least 2 years.
3. Asante Twi is predominantly spoken in the district and understood by children and their families.
4. Public schools in the district have the capacity and infrastructure to enroll all Luminos CBE graduates.
5. The district is relatively easily accessible for operations, and has a clustering of communities with out-of-school children (to facilitate weekly supervision of classrooms) and nearby schools.

Community Selection Criteria
1. Availability of out-of-school children in the community between the ages of 8-14 (minimum of 25 children).
2. The community neighbours areas where we could set up other classrooms close by.
3. Out-of-school children speak and understand Asante Twi fluently.
4. Community leaders are supportive of the Luminos CBE program in the community.
5. Availability of a space to run the Luminos CBE classroom that can accommodate children 15- 20 hours per week for 10 months (3-4 hours daily).
6. Availability of youth in the community that can serve as facilitators. Preference for communities that can identify at least 2 facilitators.
7. The community is accessible via car or motorbike, especially during the rainy season.
8. Availability of a formal school in the community or nearby communities where children will not have to walk for long distances (ideally within 3 km) and/or a formal written agreement with the District Assembly and GES to transform the Luminos CBE class into a formal/wing school after learners graduate.
9. Parents agree to attend parental engagement meetings monthly.
10. Availability of Community Oversight Committee (COC) members.

Facilitator Selection Criteria
1. Candidate can understand, speak, read, and deliver classes in Asante Twi (verified through an assessment).
2. Candidate possess strong numeracy skills (verified through an assessment).
3. Candidate can understand and speak the dominant mother language in the community.
4. Candidate exhibit strong motivation to teach and commitment to the program.
5. Candidate possesses high school degree.

Learner Selection Criteria
1. Children between the ages 8 - 14.
2. Children who have been out of school for 2 years or more between and who do not possess

foundational literacy and numeracy skills.
3. Children who can speak and understand Asante Twi at a moderate to proficient level (verified through an assessment).
4. Children who can speak and understand at least one of the languages known to the facilitator.
5. Children whose families demonstrate understanding of the Luminos CBE program and commitment to support daily attendance and completion the program.

Learner Profile

1. Surname last name of CHILD First name of CHILD
2. What is CHILD'S popular name/nickname?
3. Is CHILD male or female?
4. How old was CHILD at his/her last birthday?
5. What is the mother tongue/native language of CHILD?
6. Can CHILD speak and understand Asante Twi?
7. Is CHILD a native of this community?
8. How long will CHILD stay in this community?
9. Is CHILD attending school?
10. Which school is CHILD currently attending?
11. During this current school year, which grade is CHILD enrolled?
12. Has CHILD ever attended school or any Early Childhood Education program?
13. What is the highest grade CHILD completed?
14. In which year did CHILD last attend school?
15. Why did CHILD not attend school or dropped out from school?
16. Who in your household can best confirm if CHILD has not attended school or has dropped out?
17. First name of the CHILD's primary caregiver/gaurdian
18. Surname of the CHILD's primary caregiver/gaurdian
19. Sex of CHILD's primary caregiver/gaurdian
20. Do you or anyone else in your household currently have a working phone?
21. What is the phone number?