JANUARY 2022

Instructional Support for Effective Large-Scale Reading Interventions

FINDINGS FROM THE **LEARNING AT SCALE STUDY*** **BRIEF 2** IN A SERIES

Introduction and Background

Learning outcomes are low and instruction is poor in many low- and middle-income countries (LMICs). These shortcomings are particularly concerning given the substantial learning loss due to COVID-19 from which many systems are suffering.

The Learning at Scale study aimed to investigate factors contributing to successful improvements in learning outcomes at scale in eight of the most effective large-scale education programs in LMICs (see list of programs on last page of this brief). These programs were selected based on their demonstrated gains in reading outcomes at-scale, from either midline or endline impact evaluations. The study addresses three overarching research questions, focused on understanding the components of instructional practices (**Brief 1**), instructional supports (**Brief 2**), and system supports (**Brief 3**) that lead to effective instruction.

This brief focuses specifically on instructional supports. It addresses the following research question:

What methods of training and support lead to teachers adopting effective classroom practices in successful, large-scale literacy programs?

DATA AND METHODS

All data collection activities for this study were planned to be completed by September 2020. However, our planned data collection activities for five programs were put on hold due to the COVID-19 pandemic.

The findings throughout this brief come from two main sources of data. The first source was descriptions of implementation approaches for all eight programs, based on program documentation and interviews with program leaders. The second was in-country primary data collected through grade 2 classroom observations of reading lessons, as well as interviews with teachers, head teachers, coaches, and teacher meeting facilitators. We completed data collection activities for three programs prior to March 2020: Education Quality Improvement Program in Tanzania (EQUIP-T), Scaling-up Early Reading Intervention (SERI), and Tusome.

* This brief highlights findings from the full Learning at Scale: Interim Report. For background information on the study, please see page 12.

Quantitative data were collected by assessors using structured questionnaires rendered on tablets using Tangerine software. For each program, data were collected in 60 treatment schools and 30 comparison schools in each program (as appropriate[1]). The samples were not designed to be representative of the entire program but instead were drawn to include schools from high- and low-performing districts. Qualitative interviews of between 15 and 20 key stakeholders were conducted by Learning at Scale team members for each program, with an interpreter assisting where necessary. Interviews were guided by a structured questionnaire that aimed to elicit evidence for and against study hypotheses.

Key Findings

Improving learning outcomes at scale requires better teaching. Further, evidence is consistent that in order to improve teachers' pedagogical methods, teachers need support.

This brief, drawn from preliminary findings from the Learning at Scale study, describes how eight effective, large-scale instructional improvement interventions supported teachers to improve their instruction (see final page of this brief for a list of selected programs). Our analysis suggests substantial commonalities in how teacher support should be structured to maximize program success. Eight essential characteristics of teacher support were identified in our findings, drawn from descriptive survey analyses as well as from primary quantitative and qualitative data collections (**Figure 1**).

> ***"It was very respectful relationships between a trainer and teacher. When you give respect to each other, relationships will grow. Teachers used to like this, because they got and gave respect. We always shared and showed that it [was] a two-way relationship."*** — Trainer, SERI (India)

FIGURE 1.
Essential characteristics of teacher support

1 Some programs were unable to identify appropriate comparison schools. For example, Tusome had no control schools because it is a national-scale program. Only treatment data are reported in these briefs. Full explanations of treatment and control data are included in the Interim Report.

Through structured program interviews, programs most consistently reported the following five areas as essential teacher support components in their work.

1. **Practicing pedagogical skills that the new instructional program requires.** Instead of assuming that intellectual understanding of what the programs were asking for was enough, these interventions encouraged teachers to rehearse those skills in trainings, coaching sessions, and communities-of-practice meetings.

2. **Initial face-to-face training.** These highly effective large-scale programs saw face-to-face training methods for their initial trainings as essential to their success. Although many interventions have tried to replace the face-to-face meeting with a cheaper, often technology-enabled option, we found that the initial face-to-face approach was important to program success. The methodology of these programs mattered, and these trainings often were shorter, were more skill-based, and took place at a lower level (e.g. district or school) of the system than previous trainings. But having high-quality initial teacher training mattered substantially. Clearly, the ability to conduct face-to-face trainings has been complicated by COVID-19, so this issue will require careful attention to the growing research base on distance professional development options.

3. **Provision of structured teachers' guides.** Teachers perceived that teachers' guides with lesson plans were a key support to implement the new program. Six of the interventions included this type of instructional support, and the teachers in these programs identified that the clear instructions helped with daily pedagogical decision-making.

4. **Coaches supported with structured tools.** Coaching was identified as a key component in several of the intervention approaches, but we found that what mattered was not just whether teachers were coached. Coaches having access to structured tools to guide the classroom observation and instructional discussion was essential for the coaching to be effective. These tools provided the scaffold for coaches to change their practice, helping teachers to change theirs as well.

5. **Provision of high-quality student textbooks.** Student books were another key instructional support identified as essential for program success. These programs used better methods of pedagogy but it was also the quality of books, the interconnectedness of the books with better teaching, and the daily consistency of use that made a difference.

Three additional key characteristics identified by our primary data collection findings were:

6. **Increased teacher confidence.** The Learning at Scale program found that teacher support increased teachers' confidence in their ability to implement the new pedagogical techniques. This comfort that the programs instilled was essential for actual classroom implementation after the teacher training, teacher coaching, or teacher meetings. These support structures resulted in teachers not only knowing the new methods but also feeling confident in their abilities to implement.

7. **Positive and collaborative teacher support.** Teacher support was done in a positive, collaborative, and respectful manner. Many teachers in the Learning at Scale countries noted that the teacher support mechanisms were different in this program from what they had experienced in other settings, and that the clear positivity and collaboration affected their instructional decisions. This positivity and collaboration can be generated either through coaching or through communities-of-practice meetings.

8. **Increased frequency and direct problem-solving approach to coaching.** Coaching was used to support teachers, to motivate them to implement the program, and to help them solve problems in their teaching. Although the structure of teacher support differed somewhat among the programs, we found that teachers saw the coaching structures to be supportive, motivational, and essential to help teachers overcome the inevitable challenges of initial implementation and complex day-to-day instructional decision-making.

The design and implementation of the teacher support structures differed in these eight programs, yet these key findings were essential to understanding how instruction improved in Learning at Scale programs.

High-Level Findings Across 8 Programs

In this section, we describe the design and implementation approaches of these effective large-scale programs. We were interested in learning the answers to two questions: what program design elements were included in each of the eight programs, and which of these elements the programs themselves deemed as key to their success. We identified all of the elements in each program and then asked each program to identify up to three elements per domain that were key to their program's success.

A wide variety of elements were implemented across the eight programs, suggesting there are likely multiple paths to successful implementation at scale. There was similar variation in the elements that programs deemed as being key to their success. Results in this instructional support brief are presented across three domains: training, materials, and on-going teacher support teacher support.

KEY HIGH-LEVEL TAKEAWAYS

Our descriptive analysis found five instructional support elements that were reported to be key for four or more programs and suggest that future interventions consider those five elements as essential for program impact. The most essential instructional support elements are:

1. Program's teacher training focused on modeling and practicing new skills (seven programs)
2. Program included structured teachers' guides (six programs)
3. Coaches were provided structured tools to support teachers (six programs)
4. Program used face-to-face training methods for their initial trainings (six programs)
5. Student books were available at a 1:1 ratio for all students (four programs)

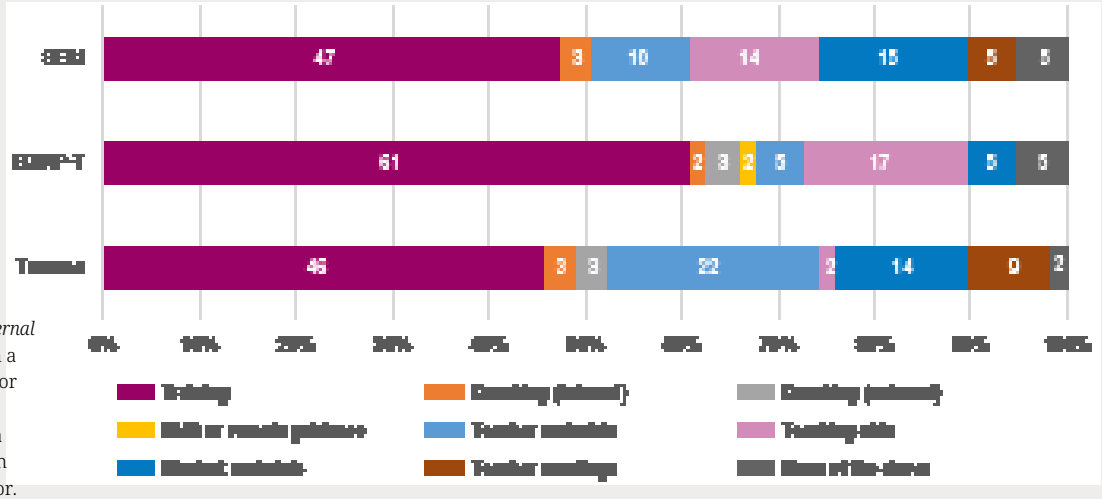
Furthermore, six USAID-funded programs (Lecture Pour Tous, Ghana Learning, Northern Education Initiative Plus [NEI Plus], Pakistan Reading Project [PRP], SERI, and Tusome) were similar in design and in the program elements deemed most important for program success. On the other hand, we found that two programs (EQUIP-T and Read India) had designs that were somewhat different, without the focus on coaching or structured teachers' guides. This suggests that there are multiple pathways to success at scale.

Quantitative Results (EQUIP-T, SERI, and Tusome)

This section presents analyses of data from the three programs whose Learning at Scale data collection was completed before the pandemic: EQUIP-T, SERI, and Tusome.

Although each of these programs gave teachers a range of instructional support, we asked teachers which type of support they found to be most useful overall (**Figure 2**). Most teachers across the three programs said that training was the most important support provided, with 61% of teachers in EQUIP-T, 47% in SERI, and 46% in Tusome pointing to training as essential. Thus, teacher training can be a critical part of effective programs if done well (e.g. focused on new instructional approaches; prioritizes modeling and practice; supportive and collaborative; etc.). Despite the fact that most of the teachers in each program reported that their teaching changed because of the coaching they received, coaching was rarely selected as the most important program support.

FIGURE 2.
Most useful program supports reported by teachers, by program

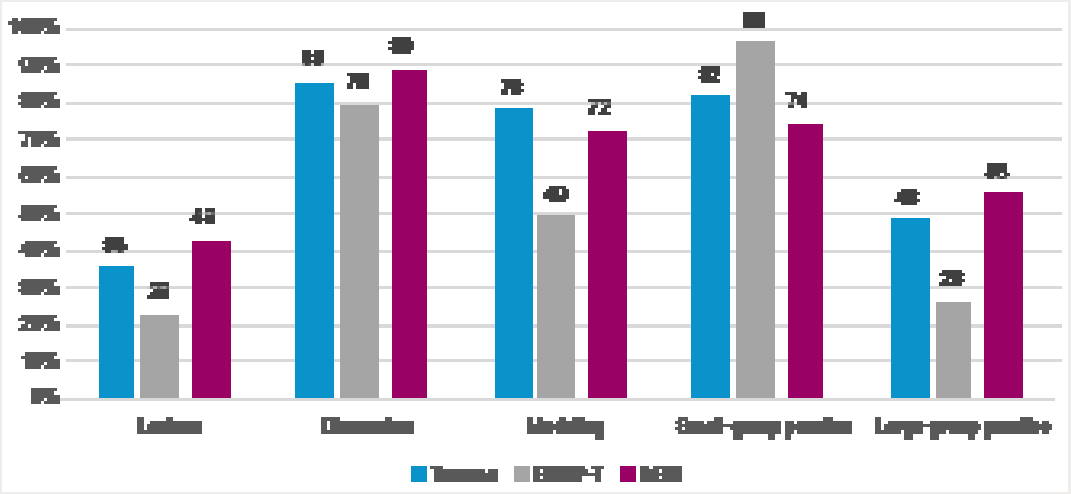


Note on coaching: *Internal* refers to support from a school's head teacher or skilled peers; external means support from a government education official or other advisor.

TRAINING

Teachers across all three programs reported that the training sessions used more discussion (ranging from 79% to 89%) and small-group practice (ranging from 74% to 96%) than previous teacher training sessions they had attended **(Figure 3)**. Approximately three-quarters of Tusome and SERI teachers reported that the program training sessions included more modeling than previous training sessions. Coupled with the fact that teachers consistently reported that discussion, small-group practice, and modeling were the most useful training methods, it seems clear that these adjustments in program training sessions were well received by teachers and likely influenced program uptake.

FIGURE 3.
Percentages of teachers reporting program training methods used more frequently than in pre-program trainings

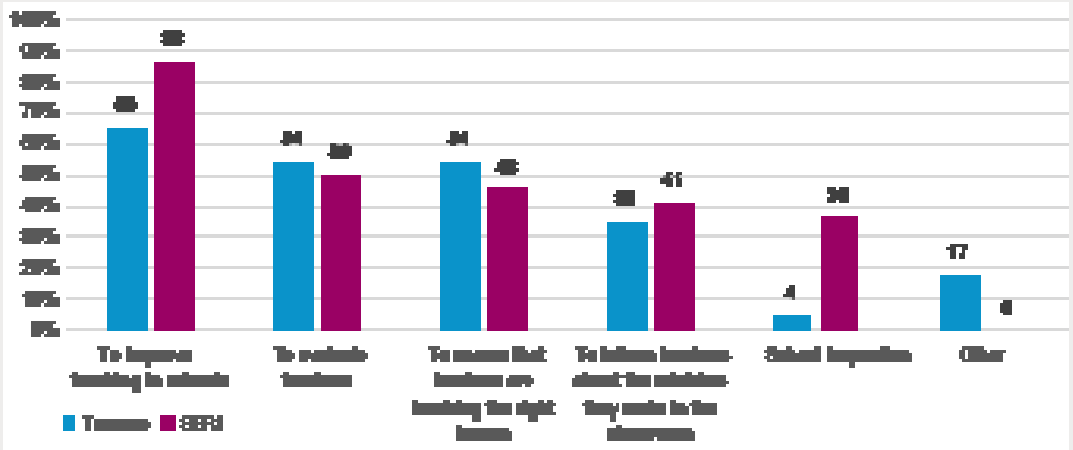


COACHING

Coaching frequency varied across the three programs: the largest portion of SERI teachers reported that they were coached monthly, Tusome teachers said they were coached a few times per year, and the majority of EQUIP-T teachers noted that they were never coached (though coaching was not a component of the EQUIP-T activity). Approximately 80% of teachers in SERI and Tusome said that coaching improved their teaching, while teachers in all three programs claimed that the most valuable components of coaching were the provision of guidance on how to teach and the fact that coaches were more supportive and friendlier than they were before the program.

A large majority of coaches in SERI and Tusome (both of which used government officials for coaching), reported that the purpose of their coaching was to improve teaching in schools (86% in SERI and 65% in Tusome; see **Figure 4**). Less than 5% of Tusome coaches reported that their role was for school inspection, though more than one-third of SERI coaches noted school inspection as at least a part of the purpose of coaching. This finding for Tusome aligns with the program's goal of focusing coaching on teacher support and moving away from earlier models of school inspection.

FIGURE 4.
Purpose of coaching, as reported by coaches in Tusome and SERI schools (percentage)



TEACHER MEETINGS

Teacher community-of-practice meetings occurred more than once a month in EQUIP-T, monthly in SERI, and a few times per year in Tusome. Teachers across all three programs commonly found having the opportunity for discussions with other teachers to be the most useful aspect of teacher meetings (with between 61% and 86% of teachers making this claim). Teachers also said that feedback on how to improve and handle challenges (44% to 74%) and learning new information and/or approaches (32% to 81%) were relatively useful. While SERI and Tusome focused heavily on coaching as the instructional support needed to improve outcomes, EQUIP-T's focus on community-of-practice meetings suggests an alternative pathway to be used as a core instructional support modality.

MATERIALS

All three programs heavily emphasized the use of student materials as essential to the program's impact on student learning, and 100% of Tusome teachers saw the textbooks (which were aligned with the teachers' guides and designed to be engaging for students) as the most useful student material. In each country, teachers consistently noted that student stories were more appropriate and enjoyable than in previous programs. They also said that student content was clearly presented and easy to follow, marking an important change from prior materials. SERI and Tusome teachers also noted that the programs' teacher materials were different because they included step-by step instructions. Teacher materials were seen as essential for improved student learning by teachers across all three programs, and the materials-development process in all three programs occurred at the country level while also involving local experts.

Qualitative Results (EQUIP-T, SERI, and Tusome)

We examined instructional support using structured qualitative interviews with teachers, head teachers, coaches, meeting facilitators, trainers, and district officials for the same three programs: EQUIP-T in Tanzania, SERI in India, and Tusome in Kenya.

Instructional supports for these three programs consisted of instructional materials, training, and ongoing support to improve the instructional methods. Ultimately, the programs (1) prioritized time to practice the methods in the trainings and follow-up; (2) increased teachers' self-efficacy, confidence, and motivation; (3) supported relationships that were collaborative, respectful, and ongoing; and (4) promoted instructional materials that made teaching easier and encouraged children to engage with them.

TRAININGS AND FOLLOW-UP INCLUDE TIME TO PRACTICE METHODS

All three programs aimed to improve teachers' instructional methods. One way they achieved this aim was by prioritizing practice at the trainings. The initial training, the follow-ups, and the ongoing peer support were structured so that teachers had time to practice the methods.

Teachers in the two programs that included centralized, external-to-school training said that the training was critical. Along with opportunities for practice, the most important part of training was having the trainers model instructional methods. Time to practice was prioritized at the trainings (see **Quote 1**) and teachers identified the benefits of the time devoted to modeling (see **Quote 2**).

QUOTE 1.

Practice Prioritized at Training

"When we did a demonstration, if there were 50 people, they worked on different parts. And everyone would watch and discuss. They would give the right/wrong feedback. The teachers improved from these demonstrations and input. We did this every day [of the training]." — Coach, SERI

QUOTE 2.

Practice Contributes to Confidence

"You feel confident modeling and do it practically and you don't feel shy—you can teach like any other teacher. It made me feel confident. I used to teach upper [primary] before but this training encouraged me to come back to lower [primary] and teach."

— Teacher, Tusome

SELF-EFFICACY

The trainings improved teachers' self-efficacy and confidence. According to the trainers and others working with the teachers, the trainings improved teachers' self-efficacy and this confidence contributed to high levels of program implementation. For example, whether the trainings were offered at a centralized venue or at a single school, they helped teachers address problems and needs and developed their ability to apply the methods (see **Quotes 3 and 4**).

QUOTE 3.

Influences on Self-Efficacy

"In phase 1, [teachers] were not confident. By phase 2, they were confident, and they said it was working; kids were learning. So by phase 2, they were asking questions and getting better with the techniques. They were using them more." — Trainer, SERI

QUOTE 4.

Influences on Confidence

"Classes are now alive as a result of the skills shared in meetings. This has made teachers very confident in teaching lower grades."

— Meeting Facilitator, EQUIP-T

EQUIP-T differed from the other two programs in its use of a school-based training to reach all teachers. The teachers who attended a centralized, external-to-school training afterward gave a school-based training to their peers. Teachers spoke of a range of benefits that showed the appeal of a school-based model, with a few issues also raised (see **Figure 5**).

FIGURE 5.
EQUIP-T teacher reflections on school-based trainings

Benefits:
- Collaborate with other teachers
- Gain correction for skills they had not mastered
- Solve problems
- Learn new skills
- Get motivation from the head teacher

Issues:
- Not all teachers have a chance to participate in the centralized training
- Inequity of per diems for external vs. school-based events
- Meetings not sustained

COLLABORATIVE AND RESPECTFUL PROFESSIONAL RELATIONSHIPS

With both training models, the interactions between trainers and teachers were positive and collaborative, pursuing a shared goal. These respectful relationships contributed to an environment in which teacher concerns about what to practice were addressed and teachers were motived and engaged in the trainings (see **Quotes 5 and 6**).

QUOTE 5.
Collaborative Relationships

"The trainers were very collaborative. The way they engaged [teachers] throughout. They put them in groups in the same ward [subdistrict]—they give them some questions to answer. Then they give them directions on how to change ideas so they can help one another in helping students."
— Teacher, EQUIP-T

QUOTE 6.
Respectful Relationships

"It was very respectful relationships between a trainer and teacher. When you give respect to each other, relationships will grow. Teachers used to like this, because they got and gave respect. We always shared and showed that it [was] a two-way relationship." — Trainer, SERI

For all three programs, either a central or school-based training introduced the goals of the program and emphasized practice with the methods using the instructional materials. These were valued orientations. But it was the ongoing support and interactions via coach visits and teacher meetings that improved or reinforced teacher knowledge and skills. These interactions provided support, motivated both teachers and coaches, and solved problems. In SERI and Tusome, coaches visited the schools where they modeled, helped teachers to feel confident, and were considered supportive (see **Quote 7**).

QUOTE 7.
Perceptions of Coaches

"[The] Curriculum Support Officer [coach], she comes twice a term. She comes to my class to support me. She comes and sees my lesson and any problem I have she corrects. She supports us and doesn't harass us." — Teacher, Tusome

Coaches also grew professionally from the programs. Their growth was managed explicitly through trainings as well as through program- or government-provided support on how to better serve their teachers. In both Tusome and SERI, coach training—including the novelty of it—contributed to coaches accepting the program and their motivation to do the activities (see **Quote 8**).

QUOTE 8.
Coach Perception of Support

"I like especially [name of coach]. He was [a] CSO like me. He comes to support me. I give feedback and then I ask them to add. Can you tell me if I did well? So I can do better next time." — Coach/Trainer, Tusome

INSTRUCTIONAL MATERIALS MAKE IT EASIER TO ENGAGE CHILDREN

Fundamental to all three of the programs were teachers' guides, books, and learning materials that combined to make it easier for teachers to engage students. Depending on the program, the materials were either provided or teacher-made. All three programs, regardless of the type of teaching material, focused the materials on the specific instructional methods required for developing reading skills, and teachers used them regularly (see **Quote 9**).

QUOTE 9.
Materials Developmentally Appropriate

> ***"They also understand what kids need to learn, the 'matra' [vowel signs]. What happens in other books, letters and matras are together. In these books they are separate. They cover everything of that. This is the best. They have a lot of words for examples. In other books there are not many examples. In Room to Read the teacher does not need to find the examples."*** — Head Teacher, SERI

The teacher guides motivated the teachers. The fact that they offered clear lesson plans and instructions (see **Quote 10**) made teachers' work more effective and easier (see **Quote 11**).

QUOTE 10.
Teachers' Guides Are Clear

> ***"[Teacher guides] give skills and direction on how to teach [including the three steps to teach a skill]."***
> — Teacher, EQUIP-T

QUOTE 11.
Teachers' Guides Make Teaching Easier

> ***"It used to make mine and teachers' work easier. Most of the teachers were comfortable and agreed that it's much easier. For the others, you have to create a scheme of work and lesson plan. The other system is time-consuming. You spend a lot of work writing."*** — Head Teacher, Tusome

The benefits of these guides were best summed up by a SERI user who said, **"With the teacher guide, all the problems went away."**

SUMMARY OF QUALITATIVE FINDINGS ON INSTRUCTIONAL SUPPORT

- Trainings and ongoing support emphasized teacher practice of the methods.
- Training improved teachers' confidence to implement skills.
- Positive, collaborative, and respectful relationships evolved between trainers and teachers.
- Coaches supported and motivated teachers and helped them solve problems.
- Teachers' guides with clear instructions and child-friendly content supported teaching.

Implications

Combining our descriptive and qualitative analyses, we found eight different elements that were essential to the instructional support mechanisms investigated for the Learning at Scale program. Based on our findings on teacher support from these 8 programs, we recommend that future programs consider the following adaptations to their design and implementation.

Ensure that teacher training offers teachers substantial **opportunities to practice newly learned skills.**

Use **face-to-face training** as a first choice, when possible.

Ensure that **on-going support to teachers is positive and collaborative**. For the most part, "business as usual" in coaching and communities-of-practice programs needs to change; teachers respond better to supportive and collaborative interactions.

Support teachers by supplying **structured teachers' guides** to increase teachers' ability to understand the specifics of the new program.

Provide **scaffolded and focused guidance to coaches** on how to observe classrooms and give feedback to teachers more frequently.

Target the **confidence of teachers' decision-making** to maximize their likelihood to implement the new program.

Combine the support for teachers with **student materials at a 1:1 ratio**. These available materials make the teachers' job easier.

Use teacher support as a method to help t**eachers solve instructional problems themselves**.

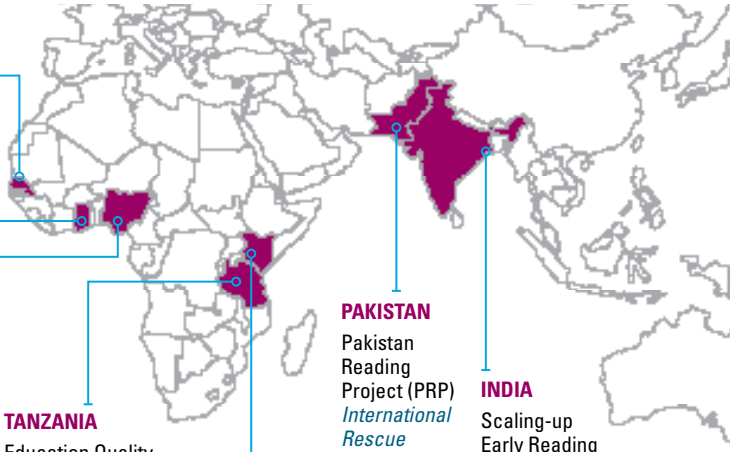
Learning at Scale Study Background

Although the number of successful foundational literacy programs is growing, relatively few have demonstrated impact at large scale. The Learning at Scale study was designed to identify existing programs with demonstrated impact on basic skills at scale and to conduct in-depth investigations of these programs to determine what makes them successful.[2]

After an extensive search, we identified eight of the most effective large-scale education programs in LMICs for inclusion in this study, as shown in **Figure 6**.

FIGURE 6.
Selected programs for inclusion in Learning at Scale

Implementing organization



With demand for information about how to implement effective interventions at large scale at an all-time high, this brief is designed to provide preliminary findings from our study to date. Given that complete data could not be collected from all eight programs due to COVID-19 school closures, the findings and implications based on analyses of the initial primary data collected are preliminary and must be cautiously interpreted until the final data collections can occur, and the results can be analyzed for all programs.

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2 This research is being led by RTI International and is part of the Center for Global Development (CGD) education research consortium, funded by the Bill and Melinda Gates Foundation.
3 RTI International was the lead research implementer of Learning at Scale and one of the programs (Tusome) was implemented by RTI. Given this conflict of interest, final selection of the Learning at Scale programs was determined by an independent advisory committee. RTI established clear mitigation procedures that separated data collection, analysis, and writing of the Tusome results from the researchers involved in the program.