

# What Works to Improve Learning at Scale?



## KEY FINDINGS FROM **LEARNING AT SCALE** AND THE **SCALING UP EARLY READING INTERVENTION (SERI)\***

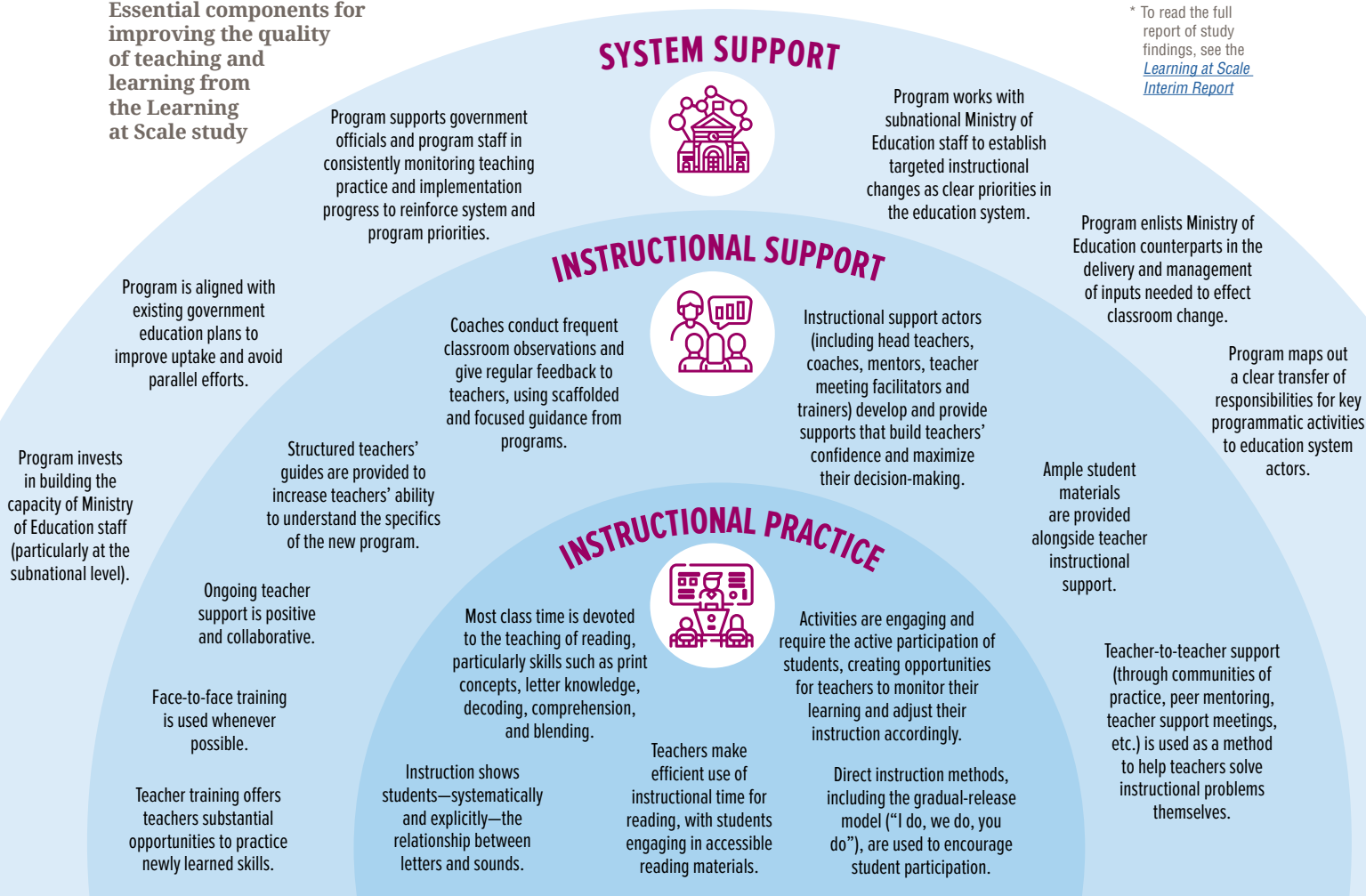
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This brief presents findings on what worked to improve learning outcomes at scale under eight successful early grade literacy programs, with a focus on findings from the Scaling-Up Early Reading Intervention (SERI) in India.<sup>1</sup> These findings were generated as part of the Learning at Scale study, conducted by RTI International with the Center for Global Development and funded by the Bill and Melinda Gates Foundation. The study examined eight of the most effective large-scale education programs in low- and middle-income countries, including SERI.

The findings from *Learning at Scale* are organized into three categories: instructional practice, instructional support, and system support. The eight programs evaluated in this study have commonalities in how they approached implementation to maximize program success. We identified five essential components for improving instructional practice, eight essential components for improving instructional support, and six essential components for system support (as shown in **FIGURE 1**). Many of these elements were core to the success of SERI.


**FIGURE 1.**  
Essential components for improving the quality of teaching and learning from the Learning at Scale study

\* To read the full report of study findings, see the [Learning at Scale Interim Report](#)




## Learning at Scale Study at a Glance


This research study examined eight of the most effective large-scale education programs in low- and middle-income countries, including SERI in India. We asked three overarching questions:



What **instructional practices** lead to learning in programs that are effective at scale?



What **methods of instructional support** lead to teachers adopting effective classroom practices?



What **system support** is required to deliver effective training and support to teachers and to promote effective classroom practices?

### Criteria for programs to be considered for inclusion in the Learning at Scale study

**Effectiveness:** Evidence of causal impact at scale or at pilot with evidence of effective scale-up

**Scale:** Operating in most or all schools in at least two administrative subdivisions

**Subject:** Includes a literacy component

**Geography:** Located in a low- or middle-income country

**Type of program:** Program aims to improve classroom teachers' effectiveness

**Data available for analysis:** Impact evaluation data and raw data on cost

**Time frame:** Active through 2019

**Sector:** Public sector, civil society, or private sector


## Findings from SERI in India


The findings presented in the remainder of this brief are based on data collected in March 2020, as outlined in **TABLE 1**.


**TABLE 1.**  
Data collection tools and respondent counts (India)

PROGRAM ELEMENT	RESPONDENT COUNT, BY TOOLS
<b>Instructional practice</b>	88 grade 2 teacher interviews
	90 grade 2 classroom observations
	87 head teacher interviews
	1,341 student reading assessments
<b>Instructional support</b>	8 teacher meeting facilitator interviews
	10 trainer interviews
	22 coach interviews
	12 coach observations
<b>System support</b>	2 interviews with donor staff
	2 interviews with program staff
	4 interviews with state education officials
	11 interviews with district-level education officials

### SERI at a Glance

 5-year program (2015–2020)

 Funded by USAID

 Implemented by Room to Read

**GOALS:** To demonstrate a **robust model for improving the early grade reading skills**

of students attending public primary schools

To implement an **innovative approach** for effectively scaling up the early grade reading model within the public education system

### REACH:

**4 states** (Chhattisgarh, Uttarakhand, Madhya Pradesh, and Uttar Pradesh)

**2,662** primary schools

**Over 300,000** students

**10,103** teachers







## Instructional Practice: What classroom ingredients led to increased learning at scale in India?<sup>2</sup>

The eight programs evaluated in the *Learning at Scale* study adopted similar approaches to instructional practice that helped them maximize their success. Drawing on findings from program document reviews, discussions with program leadership, and school-level interviews and observations, we identified five components essential to such success.

**TABLE 2** outlines the extent to which each of these components was found in SERI.

Components with a green dot were found to be a robust part of program design and implementation and should continue to be supported. Components with a yellow dot were found to be a key part of the program’s design but may have been implemented or taken up by stakeholders with less fidelity; an examination of the capacity and resources needed to support these components could be considered for future programming. Components with a red dot were not found to be a key part of either program design or implementation but could be considered in future teacher professional development activities.

**TABLE 2.**  
Essential components of instruction: SERI’s findings profile

ESSENTIAL COMPONENT	EVIDENCE OF ELEMENT IN SERI
<p><b>Instruction shows students—systematically and explicitly—the relationship between letters and sounds.</b>  <i>[&gt;40% of class time on sounds/letters/word parts and &gt;20% of teachers noting a positive impact on learning]</i></p>	<p> SERI teachers dedicated less than one-third of class time (31%) to teaching letters, sounds, and word parts. However, over one-half (58%) of SERI teachers believed that more focus on letters, sounds, and blending was the most important instructional factor in improving student learning.</p>
<p><b>Most class time is devoted to the teaching of reading, particularly skills such as print concepts, letter knowledge, decoding, comprehension, and blending.</b>  <i>[&gt;40% of class time focused on reading instruction]</i></p>	<p> SERI teachers dedicated, on average, 48% of class time to the explicit teaching of reading skills.</p>
<p><b>Teachers make efficient use of instructional time for reading, with students engaging in accessible reading materials.</b>  <i>[Students spend &gt;40% of class time actively reading]</i></p>	<p> Students spent 42% of class time actively reading, compared to 18% of time spent listening to the teacher and 17% of time giving oral responses. Additionally, 78% of SERI teachers noted that students read books from the library a few times per week or more, and 66% said students take library books home with them a few times per week or more.</p>
<p><b>Direct instruction methods, including the gradual-release model (“I do, we do, you do”), are used to encourage student participation.</b>  <i>[&gt;20% of teachers noting a positive impact on learning]</i></p>	<p> Just 19% of SERI teachers said that using a new methodology or instructional approach in the classroom had the biggest impact on improving student learning. However, 71% of SERI teachers noted that they were using a new methodology as a result of the program.</p>

LEGEND:  Substantial evidence  Some evidence  Little evidence



**In their own words:** SERI participant quotes

*We only teach one letter in one day. What happens in that, the kids never forget the letter. They can remember the letter for a long time. This program includes the sound, the writing, and the reading of the word. It really works in favor of the kids.”*

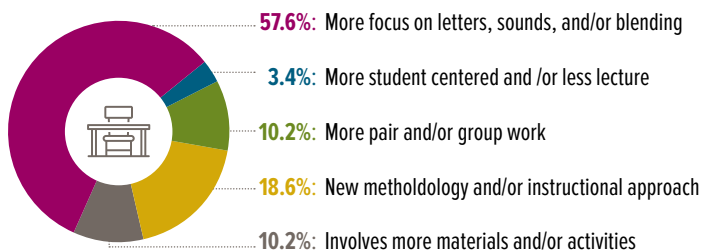
HEAD TEACHER, SERI

**TABLE 2. (continued)**

ESSENTIAL COMPONENT	EVIDENCE OF ELEMENT IN SERI
<p><b>Activities are engaging and require the active participation of students, creating opportunities for teachers to monitor their learning and adjust their instruction accordingly.</b></p> <p><i>[Most students engaged for &gt;90% of class time. Students practice skills on their own in &gt;50% of lessons]</i></p>	<p><span style="color: #008000;">●</span> Most or all students in SERI classrooms were found to be “on task” (i.e., engaged in the current activity) 94% of the time, and 49% of teachers reported that students were more engaged because of the program. Additionally, 70% of observed lessons included an opportunity for students to practice reading skills without the teacher.</p>

**WE ASKED TEACHERS, “WHAT HAD THE BIGGEST IMPACT ON STUDENT LEARNING?”**

**FIGURE 2. “What part of your instruction has had the biggest impact on student learning?”**



**FIGURE 3. “Has SERI helped improve student learning? If yes, what factors had an impact on student learning? (Mark all that apply)”**



**DIMENSIONS OF EFFECTIVE INSTRUCTION: FINDINGS FROM CLASSROOM OBSERVATIONS**

Drawing from a review of existing instructional best practices, the *Learning at Scale* study team developed a score to indicate the prevalence of six evidence-based dimensions of teaching: student centered instruction of skills demonstration, research-based/simple view of literacy instruction, application, teacher responsiveness, and preparedness/efficiency. **FIGURE 4** presents a brief description of each of these dimensions and the degree to which they were observed in SERI classrooms.



*I can see the progress in the kids. Their reading quality has improved. They get connected to each other. I ask the kids what they have learned. If they read to me correctly (word accuracy). First, I read, then I ask the children how much they understand. If they didn't answer, I tell them to answer the question to each other. They do that usually. These interactions connect them to each other.”*

TEACHER, SERI

**FIGURE 4.** Observation findings from SERI classrooms: Prevalence of activities related to dimensions of effective instruction

ESSENTIAL ELEMENT	DEGREE TO WHICH THIS WAS OBSERVED IN SERI LESSONS (PREVALENCE SCORE, 0–100)
<b>Student centered:</b> Students take an active role in learning.	75
<b>Demonstration:</b> The teacher shows the students what she expects them to do.	66
<b>Research-based/simple view:</b> Instructional activities advance code and meaning skills.	100
<b>Application:</b> Students practice skills.	80
<b>Responsiveness:</b> The teacher adapts to student behaviors.	66
<b>Preparedness/efficiency:</b> Instructional time is maximized.	100



*Because of that [technique], students are now really participating. Before the teacher used to write the word, and say this is what it is, they were not getting how to read. Now, children are eager to learn.”*

HEAD TEACHER, SERI



### Instructional Support: What methods of training and support used in SERI led to teachers adopting effective classroom practices?<sup>3</sup>

The eight programs evaluated in the *Learning at Scale* study also had commonalities in how they approached instructional support. Drawing on findings from program document reviews, discussions with program leadership, and school-level interviews and observations, we identified eight components essential to successful support to teachers. **TABLE 3** outlines the extent to which each of these components was found in SERI.

**TABLE 3.** Essential elements of instruction: SERI’s findings profile

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN SERI+
<b>Teacher training offers teachers substantial opportunities to practice newly learned skills.</b> <i>[&gt;50% of teachers say trainings have more practice time than previous programs]</i>	● 74% of teachers said that the SERI trainings included more small-group practice than previous trainings, and 30% of teachers said that they found small- or large-group practice to be the most useful training methods used by the program.
<b>Face-to-face training is used whenever possible.</b> <i>[&gt;40% of teachers say trainings were the most useful support]</i>	● At the time of data collection, all trainings were face to face.
<b>Ongoing teacher support is positive and collaborative.</b> <i>[&gt;50% of teachers say coaches/mentors are friendlier or more supportive]</i>	● When asked how interactions with coaches were different under SERI, 68% of teachers said that coaches were more supportive, 76% said that coaches provided more suggestions on how to improve teaching, and 45% said that coaches were friendlier.

**TABLE 3. (continued)**

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN SERI+
<p><b>Structured teachers’ guides are provided to increase teachers’ ability to understand the specifics of the new program.</b>  <i>[&gt;50% of teachers say teachers’ guides are better organized and easier to follow than previous programs]</i></p>	<p>● 66% of teachers said that SERI’s teachers’ guides were better organized and easier to follow than previous guides they had used; over 75% also noted that the guides provided teaching aids that kept students more engaged and that they included better activities and examples for teachers to use.</p>
<p><b>Coaches conduct frequent classroom observations and give regular feedback to teachers, using scaffolded and focused guidance from programs.</b>  <i>[&gt;50% of teachers receive coaching observation “a few times a year” or more]</i></p>	<p>● Under SERI, in later phases of implementation (when data were collected), coaching was typically conducted by cluster resource coordinators. Because these coordinators were very busy, they dedicated more time to the use of teachers’ guides and to training than to coaching observation. While 93% of teachers reported receiving a coaching visit a few times a year or more, coaches observed an entire lesson in just one-half of their visits.</p>
<p><b>Instructional support actors (including head teachers, coaches, mentors, teacher meeting facilitators, and trainers) develop and provide supports that build teachers’ confidence and maximize their decision-making.</b></p>	<p>● In qualitative interviews, teachers said that trainings in particular (conducted by program staff and government cluster resource coordinators) helped them address instructional challenges and develop self-efficacy.</p>
<p><b>Ample student materials are provided alongside teacher instructional support.</b>  <i>[&gt;90% of students have their own book]</i></p>	<p>● 95% of students in SERI schools had their own textbook (1:1 ratio) during observation. Additionally, 85% of students had a supplementary book from the classroom or library.</p>
<p><b>Teacher-to-teacher support (through communities of practice, peer mentoring, teacher support meetings, etc.) is used as a method to help teachers solve instructional problems themselves.</b>  <i>[&gt;50% of teachers meet with peers to discuss instruction once a month or more, and 50% of teachers say they have useful discussions]</i></p>	<p>● 74% of SERI teachers reported participating in teacher meetings once per month or more. 86% of teachers said that these meetings were useful because they provided a place for discussion with other teachers, while 81% said that they learned new information or approaches during these meetings.</p>

LEGEND: ● Substantial evidence ● Some evidence ● Little evidence

**WE ASKED TEACHERS, COACHES, AND MEETING FACILITATORS, “WHAT PROGRAM SUPPORTS WERE MOST USEFUL?”**

Close to one half (48%) of teachers said that trainings were the most useful support they received from SERI, while 24% cited teacher materials and teaching aids as being most helpful. Another 15% of teachers said that student materials were the most helpful support provided by SERI.

**TRAINING**

We asked teachers open-ended questions about what they believed the most important overall differences were between SERI training sessions and other teacher training sessions they had attended. Their responses (TABLE 4) point to a combination of design, planning, and organizational factors. Teachers most often cited the fact that SERI trainings were better organized, had ample time for practice and discussion, and included an increased focus on specific reading skills. Many teachers also noted that SERI trainers were better prepared and that materials were higher quality.



*With the teacher guide, all the problems went away.”*

TEACHER, SERI

**TABLE 4.** “Overall, what do you see as the most important differences between SERI training sessions and other training sessions?”

ANSWER	% TEACHERS	ANSWER	% TEACHERS
Training is better organized	80%	Training sessions are more frequent	37%
More time for discussion	69%	Less lecture	20%
More time to practice (individual, pair, group)	61%	Workload was manageable	19%
More focus on specific reading skills	59%	Expectations are clear	15%
Trainers are better prepared or more knowledgeable	54%	Better allowances (transportation, per diem, etc.)	6%
Materials are more relevant or helpful	54%	Program training sessions are worse	4%



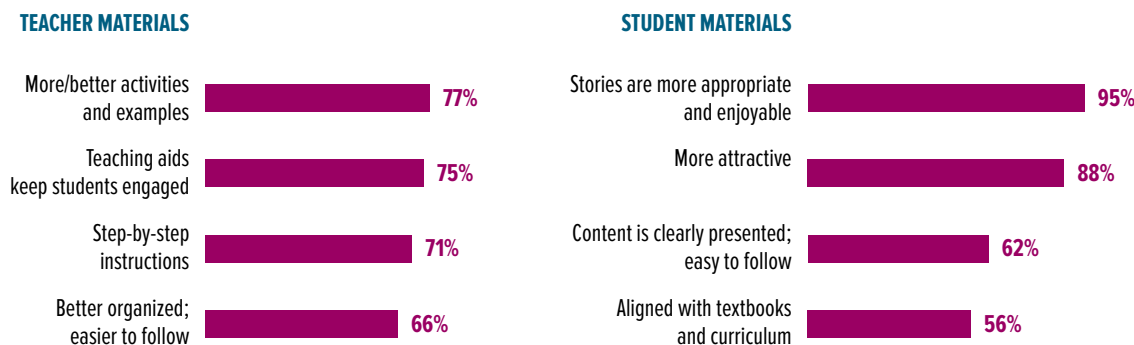
*The coach is something of a guide. I sometimes might make mistakes. For me to improve, he won't scold. The interactions are friendly. Whenever the coach visits there is respect between the teacher and the coach. If he is going to scold, there wouldn't be improvement. There should be a respectful relationship. They cannot be bossy. The coach was not bossy.”*

TEACHER, SERI

**TEACHER AND STUDENT MATERIALS**

Nearly twice as many teachers in SERI than in other programs studied noted that the SERI teaching materials included better activities and examples. They also noted that program teaching aids kept students more engaged. Nearly every teacher interviewed said that SERI student materials were more appropriate and enjoyable (FIGURE 5).

**FIGURE 5.** “How do SERI teacher and student materials differ from what you were using before the program?”



**System Support:** What system supports did SERI draw on to deliver effective training and support to teachers and to promote effective classroom practices?<sup>4</sup>

The eight programs evaluated in the *Learning at Scale* study some strategies in how they utilized system-level support to maximize their success. Drawing on findings from program document reviews, discussions with program leadership, and interviews with system-level actors, we identified six components essential to such success. TABLE 5 outlines the extent to which each of these components was noted by key informants in India and incorporated into the SERI program.

**TABLE 5. Essential components of system support: SERI's findings profile**

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN SERI
<p><b>Program invests in building the capacity of Ministry of Education staff (particularly at the subnational level).</b></p>	<p>The main focus of capacity building in SERI was the government cluster coordinators. One interviewee explained that cluster coordinators were involved from SERI's beginning. In the first phase of the program, the "I do" phase, the coordinators observed Room to Read's literacy facilitators but did not make decisions. In the second phase, "we do," the coordinators monitored teachers alongside the literacy facilitators. SERI gradually reduced the number of program literacy facilitators from 50 in year 1, to 25 in year 2, and eventually to zero by the "you do" phase</p>
<p><b>Program is aligned with existing government education plans to improve uptake and avoid parallel efforts.</b></p>	<p><i>"Programs may be good, but if the enabling factors are not there, it won't be implemented. We got the enabling factors right—the clarity of agreement from state to district to schools. They are in sync with what is expected. The cluster coordinators and support staff became critical. If they faced challenges, they could get help to address them. The state already has a focus on improving learning outcomes. They saw that the work in Raipur was successful. They saw this in the field and the monitoring data. The state resource group was formed which review[ed] content and look[ed] at the approach."</i></p> <p>STATE MANAGER</p>
<p><b>Program works with subnational Ministry of Education staff to establish targeted instructional changes as clear priorities in the education system.</b></p>	<p>In SERI, district officials faced challenges resulting from teacher skepticism of external initiatives. Teachers were also not used to scripted lesson plans, which were proposed by the program.</p> <p><i>"Across the board, I find people saying that there were NGOs saying do this or do that, this package or that package, and we were apprehensive when Room to Read came along."</i></p> <p>SENIOR EDUCATION SPECIALIST</p> <p>To ensure teacher buy-in, SERI's district focal persons focused on convincing teachers to participate. For example, the district focal person in Baloda Bazar went to teachers block by block, concentrating more energy on one block where teachers are more politically active. Because the focal person was a well-known and respected person in the area, he used his influence to motivate teachers to <i>"take up the profession with sincerity to gain respect in return."</i></p> <p>District focal persons used evidence and firsthand experience to convince teachers if they were unwilling to participate. One district focal person said that he took a friendly approach and suggested that they could drop the program if they did not see any improvements in six months. Using these strategies, he was able to convince teachers to participate.</p>
<p><b>Program supports government officials and program staff in consistently monitoring teaching practice and implementation progress in order to reinforce system and program priorities.</b></p>	<p>To some degree, school monitoring in the SERI districts studied was already strong. For example, the State Ministry of Education in Chhattisgarh played several roles in monitoring was to reinforce the district monitoring system. One respondent explained his philosophy: <i>"Once you monitor, people will implement. If you stop monitoring, people will stop."</i> Key indicators of SERI implementation—such as checking on the status of libraries—were incorporated into these monitoring visits.</p>
<p><b>Program enlists Ministry of Education counterparts in the delivery and management of inputs needed to effect classroom change.</b></p>	<p>The government played a substantial role in SERI's implementation. A senior education specialist said that her most important role with SERI was working with the government to communicate program priorities to the schools because it was necessary for messages to come from the government rather than from Room to Read. USAID helped set up a state resource group composed of government experts who operated like a think-tank and advisory body. This advisory group was actively involved in giving feedback to SERI.</p>
<p><b>Program maps out a clear transfer of responsibilities for key programmatic activities to education system actors.</b></p>	<p>In the program's "we do" phase, data collected by the cluster coordinators were analyzed by the Room to Read program officer, who reported results to the Ministry of Education and district offices. The "we do" phase was successful in transferring responsibility to the government system, although this transfer of responsibility was limited to the cluster coordinators.</p>



**We asked system education stakeholders, “What was your experience with SERI in terms of communication and monitoring?”**

### **PRIORITIZATION AND CLEAR COMMUNICATION BY GOVERNMENT**

The SERI program began with a memorandum of understanding signed by the state government and Room to Read. As one interviewee said, “Convincing the government is crucial—in Indian schools, a lot of things are top down. Once you are successful, they are with you.”

Some communication about SERI was delivered to teachers directly from the state government. One respondent estimated that during the course of the program, the government issued between 10 and 15 circulars that gave teachers instructions. Some of these circulars—such as those asking teachers to attend training—were issued at the request of Room to Read.

The other key line of communication was between the state pedagogy coordinator and SERI program focal persons. In one district, a district resource group was set up to coordinate with the program and review materials.

### **MONITORING AND DATA USE**

**“** *The [cluster resource coordinators] collect information like are all schools making use of the library? Is there a library? Are teachers trained and using the Room to Read methodology? Are they following the schedule at the right pace? There are 38 [cluster resource coordinators]. My team has a call center, and my team would call one person in the [coordinator] group to receive information.”*

**STATE PEDAGOGY COORDINATOR**

In addition to interacting with district-level monitoring teams to collect data from schools, members of the state team were directly involved in analyzing the data produced by the district. An additional role for the state was to monitor the implementation of the program in schools directly. In one state, the pedagogy coordinator set up an online process for the state office to monitor the availability of books in a sample of schools. He explained his process:

*A few schools said they had zero books. We shared this info with the district. We sent a memo that all books should be available in the school... Books travel: district, block, cluster, school. Somewhere along the chain it gets dumped.”*

## **Lessons Learned from SERI**

### **Addressing a lack of teaching staff**

**“** *Poverty and migration are issues in hard-to-reach areas. The number of teachers is less in these areas. We have placed some guest teachers in schools where there are no teacher[s]. We intensify program[s] when children are there [and not migrating]—extend the amount of time on the program each day. And they also work during summer vacation.”*

**DISTRICT PROJECT COORDINATOR**

### **Staff attrition**

*“There is a challenge in proper monitoring of the program because there was an LF [literacy facilitator] and a BRC [block resource coordinator] and CRC [cluster resource coordinator]—now the BRC and CRC are no longer there [i.e., the position no longer exists]. They are trying to address this challenge. Deputy block-level people are the only ones supporting the project. But others may come later.”*

**SENIOR DISTRICT INSTITUTE OF EDUCATION AND TRAINING LECTURER**

## What factors contributed to the success of SERI?

Many of the essential elements found across the eight programs in the study were core to the success of SERI. Particular aspects of SERI that stood out in study findings include the following:

- SERI dedicated half of class time to explicit reading instruction and gave students ample opportunities to read and practice skills on their own.
- Student and teacher materials developed by SERI were well-organized and engaging and included helpful examples and activities for teachers to use. These materials were referenced and reinforced through trainings and coach visits.
- Teacher support was multifaceted and frequent—a majority of teachers met with coaches and attended teacher meetings once a month or more.
- A demonstration phase (“I do”) of the program helped convince government officials and teachers that the program was effective. The “we do” phase was equally critical in transferring key support roles (such as coaching) to government officials, with program support.

**In addition to these findings, the SERI program designers emphasize that sustained literacy gains in the Indian context require three things to be in place: ample oral language in classrooms, systematic orthographic knowledge (akshara/phonics) and exposure to a variety of graded texts.**

Now—as education systems across the globe look for ways to recover from COVID-19 disruptions to schooling—using programs such as SERI as a model for leveraging and investing in these elements is more important than ever.

**This brief was authored by Rachel Jordan and Dr. Matthew Jukes.**



Photo credit: SERI/Room to Read



### Endnotes

- 1 The eight programs examined are the Education Quality Improvement Program in Tanzania (Cambridge Education), Ghana Partnership for Education: Learning (FHI 360), Senegal Lecture Pour Tous (Chemonics International), Nigerian Education Initiative Plus (Creative Associates), Pakistan Reading Program (International Rescue Committee), Read India (Pratham), India Scaling-Up Early Reading Intervention (Room to Read), and Kenya Tusome Early Grade Reading Activity (RTI International).
- 2 For more findings on instructional practice, see the brief [Instructional Practices for Effective Large-Scale Reading Interventions](#).
- 3 For more findings on instructional support, see the brief [Instructional Support for Effective Large-Scale Reading Interventions](#).
- 4 For more findings on systems support, see the brief [System Supports for Effective Large-Scale Reading Interventions](#).

