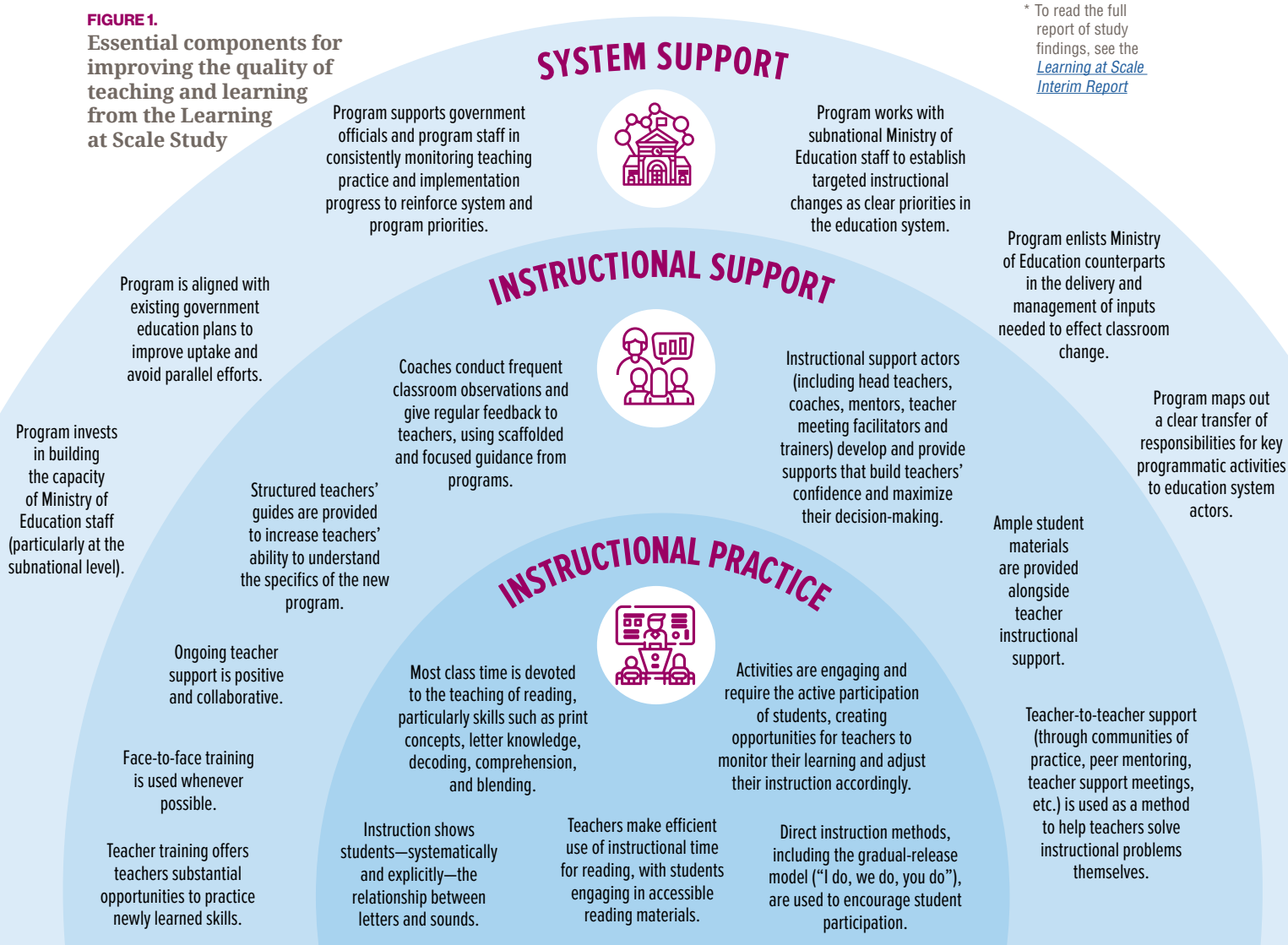# What Works to Improve Learning at Scale?

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 Pakistan Reading Project (PRP).[1] 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 PRP.

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 shared 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**).

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*

SYSTEM SUPPORT

Program supports government officials and program staff in consistently monitoring teaching practice and implementation progress to reinforce system and program priorities.

Program works with subnational Ministry of Education staff to establish targeted instructional changes as clear priorities in the education system.

Program is aligned with existing government education plans to improve uptake and avoid parallel efforts.

Program enlists Ministry of Education counterparts in the delivery and management of inputs needed to effect classroom change.

Program invests in building the capacity of Ministry of Education staff (particularly at the subnational level).

Program maps out a clear transfer of responsibilities for key programmatic activities to education system actors.

INSTRUCTIONAL SUPPORT

Coaches conduct frequent classroom observations and give regular feedback to teachers, using scaffolded and focused guidance from programs.

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.

Structured teachers' guides are provided to increase teachers' ability to understand the specifics of the new program.

Ample student materials are provided alongside teacher instructional support.

Ongoing teacher support is positive and collaborative.

Face-to-face training is used whenever possible.

Teacher training offers teachers substantial opportunities to practice newly learned skills.

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.

INSTRUCTIONAL PRACTICE

Most class time is devoted to the teaching of reading, particularly skills such as print concepts, letter knowledge, decoding, comprehension, and blending.

Activities are engaging and require the active participation of students, creating opportunities for teachers to monitor their learning and adjust their instruction accordingly.

Instruction shows students—systematically and explicitly—the relationship between letters and sounds.

Teachers make efficient use of instructional time for reading, with students engaging in accessible reading materials.

Direct instruction methods, including the gradual-release model ("I do, we do, you do"), are used to encourage student participation.

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 the Pakistan Reading Project. We asked three overarching questions:

What **classroom ingredients**[2] (e.g., teaching practices, classroom environment) lead to learning in programs that are effective at scale?

What **methods of training and support**[3] lead to teachers adopting effective classroom practices?

What **system support**[4] is required to deliver effective training and support to teachers and to promote effective classroom practices?

Due to COVID-19 disruptions, including school closures, the research team was forced to limit our work in Pakistan to interviews with education officials (with no data collection at the primary school level). Therefore, the remainder of this brief focuses only on the third research question, whose findings are based on data collected in March 2020, as outlined in **TABLE 1**.

TABLE 1. Data collection tools and respondent counts (Pakistan)

INSTRUMENT	RESPONDENT COUNT
Central system interviews	11 interviews with federal and provincial education officials (Islamabad Capital Territory, Khyber Pakhtunkhwa, Azad Jammu and Kashmir, and Sindh)
District system interviews	7 interviews with district and taluka education officials (Islamabad Capital Territory, Khyber Pakhtunkhwa, Azad Jammu and Kashmir, and Sindh)
Program/donor interviews	1 interview with international donor representative Multiple interviews with program leadership

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

PRP at a Glance

Broadly speaking, PRP had three main components that were central to its theory of change:

1. **Educators and the school environment:** improved environment for reading in classrooms (through supplementary reading materials, in-service continuous professional development, pre-service teacher professional development, and use of technology for continuous professional development)

2. **Policies and systems:** improved policies and systems for reading

3. **Communities:** improved community-based support for reading

Materials were developed in seven languages (Urdu, Sindhi [two dialects], Pashto [two dialects], Balochi, and Brahuvi). However, the program was delivered primarily in Urdu and Sindhi, with the other language components consisting of small-scale pilots. The program used a cohort-based, staggered implementation approach, with each phase lasting approximately two academic years.

7-year program (2013–2020)

Funded by USAID

Implemented by the International Rescue Committee in partnership with World Learning, Creative Associates, and the Institute of Rural Management

GOAL:

To support provincial and regional departments of education in order to improve the quality of education for grade 1 and 2 students throughout Pakistan

REACH:

69 districts in Balochistan, Khyber Pakhtunkhwa (KP), Gilgit-Baltistan, Sindh, Azad Jammu and Kashmir (AJK), Islamabad Capital Territory (ICT), and the Newly Merged Districts
1.7 million students, **27,000+** teachers

What system supports did PRP draw on to deliver effective training and support to teachers and to promote effective classroom practices?

The eight programs evaluated in the *Learning at Scale* study shared commonalities 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 2** outlines the extent to which each of these components was noted by key informants in Pakistan and incorporated into PRP.

TABLE 2. Essential components of system support for PRP

ESSENTIAL COMPONENT	EVIDENCE OF COMPONENT IN PRP
Program invests in building the capacity of Ministry of Education staff (particularly at the subnational level).	In addition to training government staff to lead teacher trainings, teacher inquiry groups, and school support visits, PRP built the capacity of government staff to develop and administer early grade reading assessments, as well as to develop content for curricula, standards, and materials. PRP supported provincial and regional governments in revising the government "scheme of studies" to include reading instruction time (35–45 minutes for reading each day), revising the language curriculum to reflect updated reading standards, integrating PRP reading materials into the government's new language textbooks, integrating components of the PRP teacher training model into the government's continuous professional development (CPD) model for teacher training, and developing reading test item banks to be made available for government assessment bodies and teachers. A high-level official from the Ministry of Federal Education and Professional training explained how the ministry built the capacity of the institutions: *"PRP did not create a curriculum but instead provided technical guidance to the [ministry] for curriculum design. Alignment with PRP methods was key (including PRP materials being included in the curriculum and textbooks and item banks being provided to teachers for reading assessment)."*

TABLE 2. (continued)

ESSENTIAL COMPONENT	EVIDENCE OF COMPONENT IN PRP
Program is aligned with existing government education plans to improve uptake and avoid parallel efforts.	One key to ensuring government buy-in for PRP was providing concrete evidence of the need for the program. This point was confirmed by a high-level ministry counterpart, who admitted that that he was tough to convince initially but got on board once there was evidence of effectiveness. From that moment forward, he appreciated what PRP did and even went so far as to adopt similar programming in other areas of his province. One USAID official remarked: *"We got many questions from government about 'why reading?' There are so many other subjects, why would we just focus on the one? We had [early grade reading assessment] baseline and other evidence to show the poor performance."* Furthermore, PRP leaders noted that buy-in came from genuinely working with the government, not just claiming that programming was being planned jointly. This was also confirmed by high-level ministry officials. For example, one official noted: *"Those who came up with this project were very smart. The planning was excellent. They carried out a very clever needs assessment of the society and desires of the people and government."* Another high-level ministry counterpart noted: *"The relationship between PRP and the government was based on needs from the government. [The government] had certain work they wanted to accomplish and reached out to PRP for technical support. This was important because it wasn't the program forcing things."*
Program works with subnational Ministry of Education staff to establish targeted instructional changes as clear priorities in the education system.	Nearly all responsibilities for the education system in Pakistan are decentralized to the provincial level. Accordingly, despite the near national coverage of PRP, the program was often seen as having to run seven programs simultaneously. This meant that establishing priorities with provincial officials was essential for the program's success. District-level officials further offered that expectations were set by provincial officials and that once an official letter was provided to them, it was simply their job to ensure that teachers attended trainings and used program materials in schools. A key high-level ministry official explained that *"the political leadership sets the priorities. In the education sector, we have a sort of forum to establish and determine priorities. They are all reflected in five-year plans [Education Sector Plans] … This program [PRP] is part of a five-year plan, so it was disseminated to all districts/schools."*
Program supports government officials and program staff in consistently monitoring teaching practice and implementation progress to reinforce system and program priorities.	Although government officials regularly monitor schools, implementation oversight for PRP was ultimately a program responsibility. For example, PRP developed a monitoring and evaluation system, which consisted of data that were monitored by provincial- and district-level program staff. However, these data were shared and discussed with government counterparts. By Cohort 3, however, district level MOE employees were serving as mentors and providing school support visits, for which they developed and submitted reports.

TABLE 2. (continued)

ESSENTIAL COMPONENT	EVIDENCE OF COMPONENT IN PRP
Program enlists Ministry of Education counterparts in the delivery and management of inputs needed to effect classroom change.	Ministry counterparts regularly spoke about the strong working relationship and joint activities conducted between PRP and the ministry. Ministry and program staff worked together at multiple stages in the needs assessment, curriculum revision, teacher training, material development, and textbook revision processes. There was also close communication between ministry officials and PRP. As one high-level ministry official noted: *"The entire curriculum development process included experts from schools and districts (to ensure buy-in from the start). Once the curriculum was approved, orientation workshops were held for head teachers and language teachers. For the first time, 100% of Urdu teachers in primary schools received training on use of the new curriculum. PRP facilitated these workshops/trainings and provided materials, but technical leads were all from [the Ministry of Education]."* As another high-level ministry official stated: *"It was also clear that during the planning of the project, the program was aware of the entire government, and therefore, not a single place was left unattended. PRP worked with every department and level within the government. In a way, this project was a replica of the entire department, with something new to say."*
Program maps out a clear transfer of responsibilities for key programmatic activities to education system actors.	One the main focuses of PRP was to impact policy change and to ensure the institutionalization of program practices. Most high-level ministry officials that we interviewed stated that the program's CPD model was the best success story for institutionalization. According to a key high-level ministry counterpart, the program's CPD framework garnered significant support from the ministry, receiving an allocation of 1 billion PKR per year for its implementation in provinces. Before PRP, there was no such allocation for training or professional development. The official added, *"It was beautifully integrated into the entire teachers' program in the province—truly sustainable."* On a provincial level, the KP and AJK governments also incorporated the CPD model and were working to expand its use comprehensively throughout each district in their respective provinces. To this end, ministry officials in KP expanded CPD into districts that were not part of the program. Furthermore, a key high-level ministry official noted that as a result of PRP, the system now approaches issues differently: *"Due to PRP, [the] government now uses needs assessments to inform training (diagnostic assessment). They also helped [with] ethnic and gender inclusion in government materials. [The] government now uses steering committees that include people from all levels of the system (whereas they used to just be for senior officials)."* Additionally, education officials in Sindh province changed the pre-service training as a result of the program. They also worked with PRP to revise the curriculum to focus entirely on reading (a factor that was missing prior to PRP). Lastly, the KP secretary of education noted several important changes enacted in his province as a result of PRP's implementation. First, all schools in the province changed to a science of reading approach (with a focus on phonics) and provided annotated scripted lessons to teachers as a guide. Furthermore, the KP government revised textbooks up to grade 5 to incorporate reading, writing, listening, and speaking standards. One KP ministry official noted, *"I have taken as a policy, to the textbook board, the need to incorporate more PRP supplementary materials into all schools."*

What major challenges did PRP face?

PRP faced some initial challenges at the start, including obtaining buy-in from relevant ministry departments. This was due in part to the initially misaligned priorities between PRP and the government. For example, the program tried to introduce a new way of working and doing professional development. Additionally, the PRP reading approach included a large focus on phonics (e.g. letter frequency, building phonological awarenesss, etc.), as opposed to the traditional whole language approach being used previously. The program also focused on teaching reading, while reading time did not yet exist in the government's scheme of studies. Lastly, there was resistance to the local language approach for grades 1 and 2, as many people preferred English to be the language of instruction.

These initial issues were rectified through a combination of efforts, including more consistent working meetings with government officials, strong support from USAID, focused alignment of PRP activities with government priorities, and changes in PRP's provincial-level leaders.

What factors most contributed to the success of PRP, according to program stakeholders?

All interview respondents for the *Learning at Scale* study were asked about the biggest contributors to the success of each program. The most common responses across programs were good collaboration—and alignment of goals—between the program and the government; effective pedagogical approaches, ncluding explicit and systematic teaching of reading skills based on the science of reading, and training that made teachers' tasks simpler. More specifically for PRP, the biggest success factors were noted as follows:

- Monthly teacher inquiry group meetings, which were cluster-based meetings where teachers could share their experiences with the program, including difficulties and solutions.[5]
- PRP's coordination and strong working relationship with education ministries, including its effort to build on government needs and plans. One high-level ministry official shared that people used to joke during their government monthly education meetings by asking, *"Is this a PRP meeting or an education meeting?"* Although the meetings were previously government only, PRP officials often attended in order to ensure that the program was aligning with government priorities.
- PRP's strong leadership and consistency at the top levels of management.
- Strong teacher and student materials, teacher training, and explicit and systematic approach to teaching reading (including phonics).

There are many lessons to be learned from both the challenges and successes of PRP, including their ability to make sustainable changes to the government education system (such as revising the scheme of studies to include time for reading, as well as revising language curriculum to reflect data-driven performance standards). Now—as education systems across the globe look for ways to recover from COVID-19 disruptions to schooling—using programs such as PRP as a model for leveraging and investing in these elements is more important than ever.

*This brief was authored by **Dr. Jonathan Stern.***

1 The eight programs examined are 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 the 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*.
5 Although participants found teacher inquiry groups to be highly effective, data from PRP's randomized controlled trial on the impact of professional development activities indicated that teacher inquiry groups were the least cost-effective activity (with coaching being most cost-effective) and that teachers who did not receive an assignment to a teacher inquiry group were equally successful through alternative means (e.g., WhatsApp groups).