

What Works to Improve Learning at Scale?



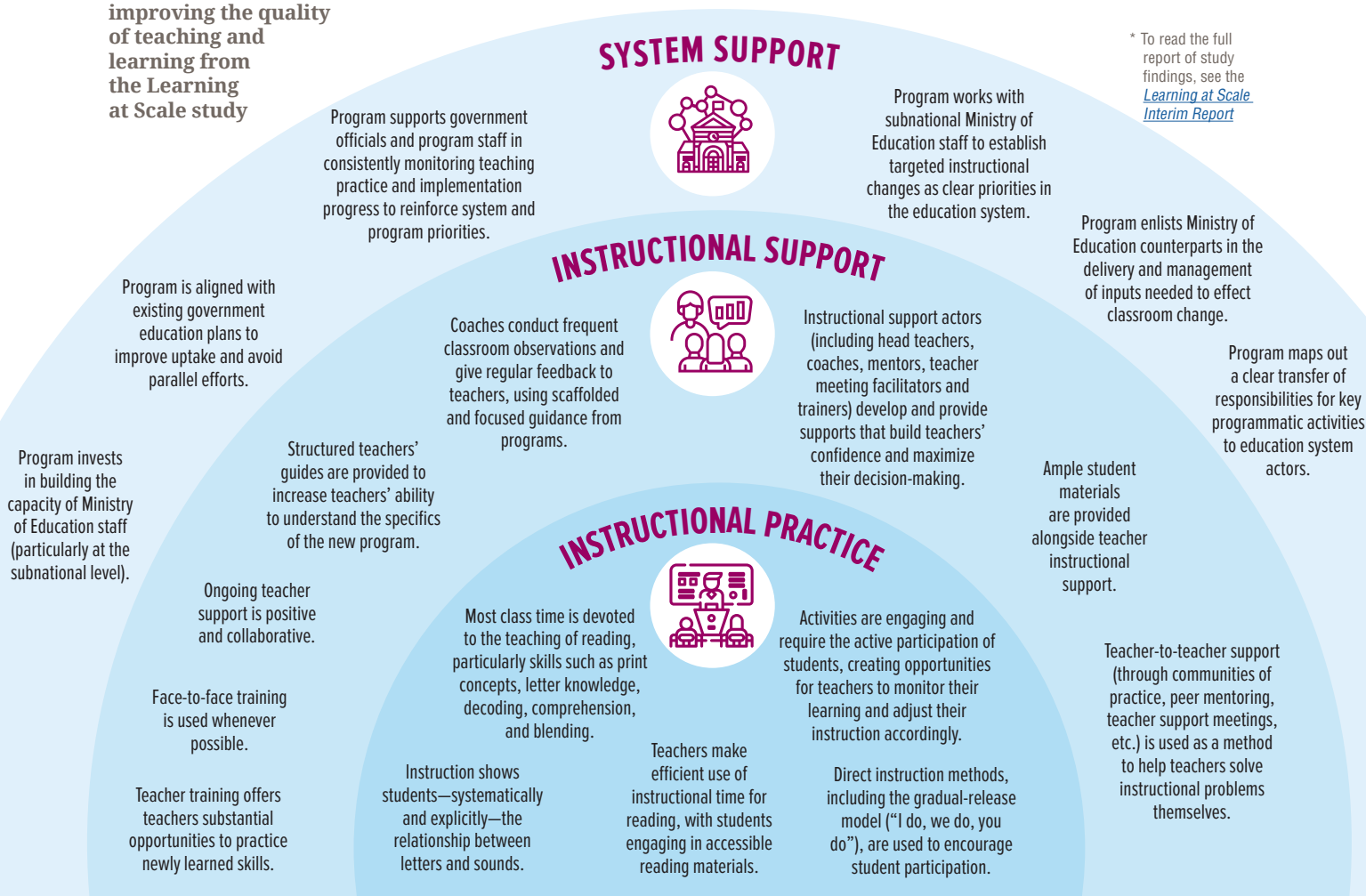
KEY FINDINGS FROM **LEARNING AT SCALE** AND THE **NORTHERN EDUCATION INITIATIVE PLUS IN NIGERIA***

JULY 2022

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 Nigerian Northern Education Initiative Plus (NEI+).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 NEI+.

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 NEI+.




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 the NEI+ program in Nigeria. 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 NEI+

The findings presented in the remainder of this brief are based on data collected during May–June 2021, as outlined in **TABLE 1**.

TABLE 1.
Data collection tools and respondent counts (Bauchi State, Nigeria)

PROGRAM ELEMENT	RESPONDENT COUNT, BY TOOLS
Instructional practice	89 grade 2 teacher interviews
	92 grade 2 lesson observations
	1,237 student assessments
Instructional support	92 head teacher interviews
	24 coach interviews
	21 coaching observations
	13 trainer interviews
System support	3 interviews with local education secretaries
	3 interviews with central Ministry of Education officials
	1 interview with an official from the Bauchi State Universal Basic Education Board
	1 interview with an official from the Bauchi State Agency for Mass Education
	1 interview with a teacher training college lecturer
	1 interview with an official from the State Planning Commission

NEI+ at a Glance

-  6-year program (2015–2021)
-  Funded by USAID and DFID
-  Implemented by Creative Associates International, Inc.

GOAL: To strengthen the capacity of Bauchi and Sokoto states to provide greater access to basic education—especially for girls and out-of-school-children—and significantly **improve reading outcomes** for more than one million school-aged children and youth

REACH:

- 2 states** (Bauchi and Sokoto)
- 5,600** nonformal learning centers
- 950,000+** children reached with improved reading skill instruction
- 17,600+** schoolteachers and learning facilitators
- 20** local government education authorities



Instructional Practice: What classroom ingredients (e.g., teaching practices, classroom environment) led to increased learning at scale in Nigeria?²



In their own words: NEI+ participant quotes

The eight programs evaluated in the *Learning at Scale* study shared commonalities in how they approached instructional practice to 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 NEI+.

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 what capacity, and resources are 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 and could be considered in future teacher professional development activities.

“When we go out for supervision we look to see what the teachers are doing in the primary school; is he doing his own thing or following the NEI methodology. When we find problems, we advise them on what they are expected to do. When we have time and we are free and have fuel, then we can go. Teachers were mostly following the NEI Plus.”

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TABLE 2. Essential components of instruction: NEI+’s findings profile

ESSENTIAL COMPONENT	EVIDENCE OF ELEMENT IN NEI+
<p>Instruction shows students—systematically and explicitly—the relationship between letters and sounds. [>40% of class time on sounds/letters/word parts and >20% of teachers noting a positive impact on learning]</p>	<p>● NEI+ teachers used 38% of class time on phonics-based activities. Almost 60% of teachers felt that more focus on letters, sounds, and blending had the biggest impact on student learning.</p>
<p>Most class time is devoted to the teaching of reading, particularly skills such as print concepts, letter knowledge, decoding, comprehension, and blending. [>40% of class time focused on reading instruction]</p>	<p>● NEI+ teachers spent just 30% of their time teaching reading from text. They spent 32% of their time on oral language and 15% on writing.</p>
<p>Teachers make efficient use of instructional time for reading, with students engaging in accessible reading materials. [Students spend >40% of class time actively reading]</p>	<p>● Students spent only about 21% of their time reading, the lowest among all eight programs. Students spent most of their time providing oral responses (44%) and 23% of their time listening.</p>

LEGEND: ● Substantial evidence ● Some evidence ● Little evidence

TABLE 2. (continued)

ESSENTIAL COMPONENT	EVIDENCE OF ELEMENT IN NEI+
<p>Direct instruction methods, including the gradual-release model (“I do, we do, you do”), are used to encourage student participation.</p> <p><i>[>20% of teachers noting a positive impact on learning]</i></p>	<p>70% of NEI+ teachers said that the teaching methodology and instructional approach was different from what they were doing before, and 19% felt that this new approach was the most important factor for change.</p>
<p>Activities are engaging and require the active participation of students, creating opportunities for teachers to monitor their learning and adjust their instruction accordingly.</p> <p><i>[Most students engaged for >90% of class time. Students practice skills on their own in >50% of lessons]</i></p>	<p>Most or all students in NEI+ classrooms were found to be “on task” (i.e., engaged in the current activity) 81% of the time, and 29% of the teachers reported that students were more engaged because of the program. Additionally, 92% of observed lessons included an item or resource designed around increasing interaction between students and teachers, and about half (51%) of lessons included an opportunity for students to practice 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?”

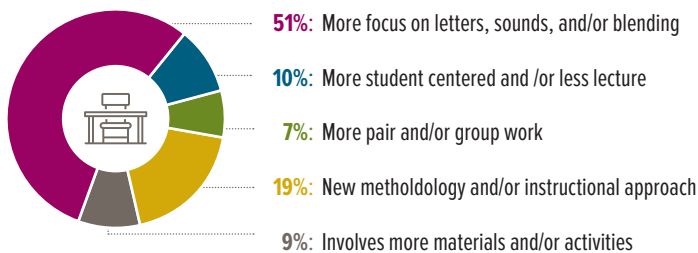
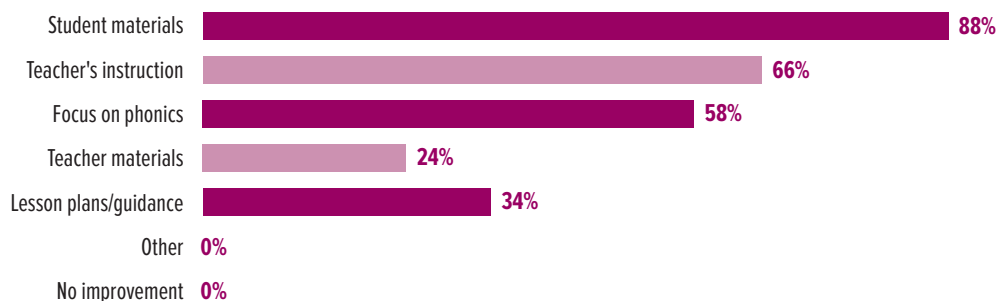


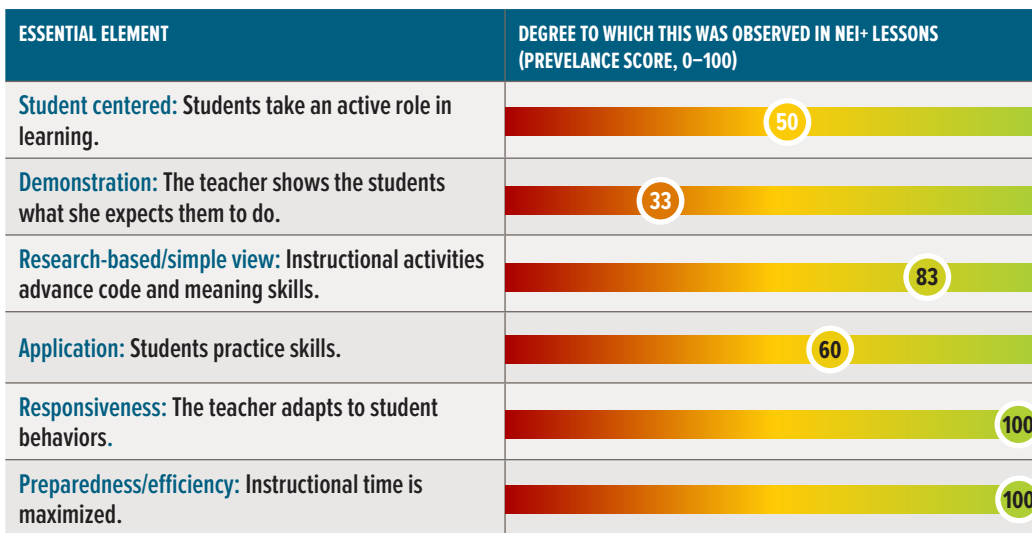
FIGURE 3. “Has NEI+ helped improve student learning? If yes, what factors had an impact on student learning? (Mark all that apply)”



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, demonstration, research-based/simple view of literacy instruction, application of skills, 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 NEI+ classrooms.

FIGURE 4. Observation findings from NEI+ classrooms: Prevalence of activities related to dimensions of effective instruction (prevalence score, 0–100)



In their own words: NEI+ participant quotes

The capacity building was mostly directed at SUBEB [State Universal Basic Education Board]. All basic schools and their teachers are controlled by SUBEB. So, the capacity building given to the teachers of SUBEB improved their pedagogy, EGR [early grade reading] global best practices—phonemics awareness etc., incorporation of formative assessment. All the directors at SUBEB and some few directors of the Ministry of Education—especially the QA and planning school services were also part of all the trainings.”

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Instructional Support: What methods of training and support used in NEI+ led to teachers adopting effective classroom practices?³







The eight programs evaluated in the *Learning at Scale* study also shared 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 NEI+.

TABLE 3. Essential elements of instruction: NEI+’s findings profile

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN NEI+
Teacher training offers teachers substantial opportunities to practice newly learned skills. <i>[>50% of teachers say trainings have more practice than previous programs]</i>	● 65% of teachers said that the NEI+ trainings included more small-group activities than previous trainings, and 28% said that they found small-group practice to be the single most useful training method.
Face-to-face training is used whenever possible. <i>[>40% of teachers say trainings were the most useful support]</i>	● 61% of NEI+ teachers reported that trainings were the most useful support, followed by teacher materials and student materials.

LEGEND: ● Substantial evidence ● Some evidence ● Little evidence

TABLE 3. (continued)

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN NEI+
<p>Ongoing teacher support is positive and collaborative. <i>[>50% of teachers say coaches/mentors are friendlier or more supportive]</i></p>	<p> When asked how interactions with coaches changed during NEI+, 44% of teachers said that coaches were more supportive, 6% said that coaches were friendlier, and 56% said that they received more suggestions on how to improve their teaching.</p>
<p>Structured teachers' guides are provided to increase teachers' ability to understand the specifics of the new program. <i>[>50% of teachers say teachers' guides are better organized and easier to follow than previous programs]</i></p>	<p> 90% of teachers said that NEI+ teachers' guides were better organized and easier to follow than previous guides they had used; 42% also noted that the guides provided teaching aids that kept students more engaged.</p>
<p>Coaches conduct frequent classroom observations and give regular feedback to teachers, using scaffolded and focused guidance from programs. <i>[>50% of teachers receive coaching observation "a few times a year" or more]</i></p>	<p> Under NEI+, coaching was typically conducted by local government education authorities; 92% of teachers reported receiving coaching a few times a year or more, and 72% received visits once per month or more. While 94% of teachers stated that receiving guidance from coaches impacted their teaching, no teacher identified coaching as the most important factor for improving student learning.</p>
<p>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.</p>	<p> N/A</p>
<p>Ample student materials are provided alongside teacher instructional support. <i>[>90% of students have their own book]</i></p>	<p> NEI+ provided students with books in Hausa and English at a 1:1 ratio.</p>
<p>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. <i>[>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> 89% of NEI+ teachers reported participating in teacher meetings a few times per year or more, with 46% participating more than once per month. 75% of teachers said that these meetings were useful because they provided a space for discussion with other teachers.</p>



In their own words: NEI+ participant quotes

Not only SUBEB, but MOE, BASAME [Bauchi State Agency for Mass Education] and some other parastatals, even Budget and Planning benefitted immensely on capacity building. And the teachers and head teachers also benefitted were given training on innovative methods and approach that improved learning achievement. Even those LGEA [local government education authorities] that were not benefitting from the program can learn from others so that we can start having uniform performance. Lots of training within the state and even outside. Really have a lot of knowledge sharing. Later on we were still made to give other training to non-NEI implementing states. So, the capacity of staff at the basic level—ed managers, school admin, SSOs teachers and even CSOs [civil society organizations]—... have been built.”

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We asked teachers, coaches, and meeting facilitators, “What program supports were most useful?” Almost two-thirds of teachers (61%) said that trainings were the most useful support they received from NEI+, while 20% cited teacher materials and 14% cited student materials as being the most useful.

TRAINING

We asked teachers open-ended questions on what they believed the most important overall differences were between NEI+ training sessions and other teacher training sessions they had attended. Their responses (TABLE 4) point to a combination of design, planning, and organizational factors. From a design standpoint, teachers most often cited the fact that NEI+ trainings provided more time to practice, were better organized, and provided more relevant or useful materials.

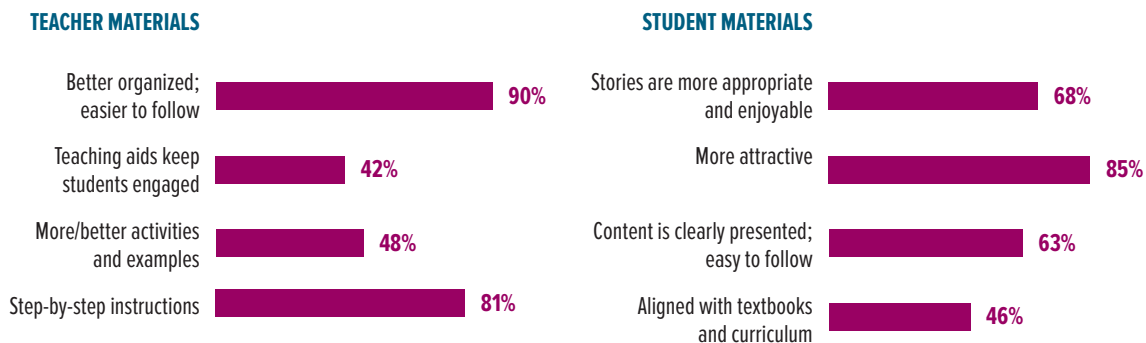
TABLE 4. “Overall, what do you see as the most important differences between NEI+ training sessions and other training sessions?”

ANSWER	% TEACHERS	ANSWER	% TEACHERS
More time to practice (individual, pair, group)	56%	Expectations are clear	16%
Materials are more relevant or helpful	54%	Better allowances (transportation, per diem, etc.)	14%
Training is better organized	53%	Workload was manageable	12%
Training sessions are more frequent	39%	Less lecture	11%
More time for discussion	39%	Program training sessions are worse	4%
More focus on specific reading skills	35%	Other	0%
Trainers are better prepared or more knowledgeable	30%	Nothing	0%

TEACHER AND STUDENT MATERIALS

Generally, teachers reported that NEI+ student materials—compared to other program materials—were more attractive, had more appropriate and enjoyable stories, and featured content that was clear and easy to follow. Meanwhile, the teacher materials were better organized and easier to follow and included step-by-step instructions (FIGURE 5).

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



System Support: What system supports did NEI+ draw on to deliver effective training and support to teachers and to promote effective classroom practices?⁴

The eight programs evaluated in the *Learning at Scale* study shared 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 Nigeria and incorporated into the NEI+ program.

TABLE 5. Essential elements of system support: NEI+'s findings profile

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN NEI+
Program invests in building the capacity of Ministry of Education staff (particularly at the subnational level).	NEI+ dedicated significant resources to capacity building at the state and local levels, including school support officers (SSOs) and officials from the Ministry of Education and State Universal Basic Education Board. Among other topics, state and local staff were trained in data management and budgeting. NEI+ also conducted an institutional capacity assessment at the start of the project, which helped guide its capacity building strategy. The same assessment was conducted at midline and endline, the latter of which showed an improvement in institutions' capacity to manage early grade reading programs.
Program is aligned with existing government education plans to improve uptake and avoid parallel efforts.	NEI+ supported states in the development of their Basic Education Sector Plans, which include several policies related to reading and improving access to education. In addition, the activity developed a budget planning tool that was used by states to develop and cost their plans.
Program works with subnational Ministry of Education staff to establish targeted instructional changes as clear priorities in the education system.	NEI+ developed policy briefs on the 5 "Ts" of reading (teaching, testing, text, time, and tongue), which included policy recommendations around increased instructional time for reading and regular professional development for teachers. It also worked with Ministry of Education staff at the state and central levels to develop a draft National Reading Framework that would guide reading instruction in Nigeria. In collaboration with the Nigerian Educational Research and Development Council, NEI+ also developed specifications for measuring early grade reading performance. At the subnational level, NEI+ provided SSOs with coaching tools to observe targeted instruction practices in schools.
Program supports government officials and program staff in consistently monitoring teaching practice and implementation progress in order to reinforce system and program priorities.	NEI+ supported SSOs in providing constant supervision to teachers to ensure that they were using the skills learned from the training in classrooms. It also provided technology-enabled coaching tools for SSOs (such as tablets and pico projectors) to record classroom observations and support teachers. Although the data were made available through a dashboard, not all stakeholders had access to the dashboard.



In their own words: NEI+ participant quotes

Absolutely able to achieve the goal. We made a comparison between the last NEI project and NEI Plus—when we had a joint meeting with the Sokoto, we realized that 95% of the pupils in Bauchi initially were unable to read in the local language fluently. But after the midterm then we realize that substantial numbers are now able to read. But also the EGMA [early grade mathematics assessment] showed that improvement and that has impacted the performance.”

DIRECTOR OF PLANNING AT
THE MINISTRY OF BUDGET AND
ECONOMIC PLANNING

TABLE 5. (continued)

ESSENTIAL ELEMENT	EVIDENCE OF ELEMENT IN NEI+
<p>Program enlists Ministry of Education counterparts in the delivery and management of inputs needed to effect classroom change.</p>	<p>Almost ten million teaching and learning materials were developed in collaboration with government officials and delivered to schools and classrooms across the two states. A memorandum of understanding signed with the state governments also required joint funding from the states to support these materials' production and distribution.</p>
<p>Program maps out a clear transfer of responsibilities for key programmatic activities to education system actors.</p>	<p>NEI+ developed a sustainability plan to ensure that state governments were able to take responsibility for some of the activities. As mentioned above, this also included counterpart funding and budgeting for teaching and learning materials and for teachers' professional development. Further, the draft National Reading Framework provided a roadmap for developing, funding, managing, and sustaining early grade reading program inputs.</p>

We asked system education stakeholders, “What was your experience with NEI+ in terms of communication, capacity building, and monitoring?”

CAPACITY BUILDING

NEI+ provided capacity building throughout all levels of the education system. Government officials were also able to train teachers and local government education staff in non-NEI+ areas of intervention.



The capacity building was mostly directed at SUBEB [State Universal Basic Education Board]. All basic schools and their teachers are controlled by SUBEB. So, the capacity building given to the teachers of SUBEB improved their pedagogy, EGR [early grade reading] global best practices—phonemics awareness etc., incorporation of formative assessment. All the directors at SUBEB and some few directors of the Ministry of Education—especially the QA and planning school services were also part of all the trainings.”

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MONITORING AND DATA USE

NEI+ introduced new approaches to monitoring and data use and incorporated technology into its monitoring process. The activity introduced the “local education monitoring approach” and the “group-administered learning assessment.” Education management information system (EMIS) officers and SSOs were trained to use these monitoring approaches and to use and manage the education dashboard. NEI+ used the data collected by the SSOs to monitor the implementation of the program. The SSOs supported and supervised teachers in using the pedagogical approaches taught during the trainings. According to some interviews, the

district teams did not have direct access to the data, which were managed and analyzed by the EMIS team. The EMIS team also reviewed the assessment reports and identified schools and districts in need of additional support. High-level officials reported that they monitored the program's performance in terms of student assessments.



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DIRECTOR OF PLANNING AT THE MINISTRY OF BUDGET AND ECONOMIC PLANNING



Lessons Learned from NEI+

Collaboration with multiple stakeholders

Working with the government and other organizations was a key component of NEI+ and one of its areas of success. Still, obtaining buy-in from multiple agencies working within State government, as well as collaborating with NGOs working in sectors tangential to education, proved particularly challenging. This points to a potential opportunity for cross-sectoral and cross-agency mapping.

Addressing a shortage of teachers

A challenge for NEI+ was the shortage of teachers at some schools. For instance, in hard-to-reach areas, there may be only one teacher, who also serves as the headmaster, making it hard for that person to attend trainings or meetings. Additionally, several schools have teachers teaching very large classes and multiple grades at the same time. Interviewees suggested that this is something government and programs alike will need to continue to address in order to see effective implementation.



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

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

- Teacher training approach, including the “I do, we do, you do” approach. Students enjoyed their classes more.
- The enabling environment provided by the state and political support for the program. States even put their own resources into the program and expanded it to other areas.
- High-quality, context-specific materials. Also, the materials were available for all teachers and students in participating schools.
- Shift in the level and type of support provided by the SSOs. They shifted toward providing more instructional support for teachers and were seen more as partners.

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

Endnotes

1 The eight programs examined are the Education Quality Improvement Program in Tanzania (Cambridge Education), Ghana Partnership for Education: Learning (FHI360), Senegal Lecture Pour Tous (Chemonics), Nigerian Education Initiative Plus (Creative Associates), Pakistan Reading Program (IRC), 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 system support, see the brief [System Supports for Effective Large-Scale Reading Interventions](#).