



Center for
Universal Education
at BROOKINGS

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DEEPENING EDUCATION IMPACT

EMERGING LESSONS FROM 14 TEAMS

SCALING INNOVATIONS IN LOW- AND MIDDLE-INCOME COUNTRIES

ONGOING ANALYSIS FROM THE ROSIE PROJECT

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EXECUTIVE SUMMARY

Education is crucial for the cultivation of successful individuals, healthy communities, robust societies, strong economies, and a healing planet. Yet, while most available education measures show impressive improvement in access in low- and middle-income countries over recent decades, there remains a heartbreaking gap in educational outcomes between and within countries. This is partly because, while access to school has increased, the quality of learning still often languishes—and that was before the COVID-19 pandemic.¹

While there are many attempts to address low learning outcomes around the world, many efforts abide by a short-term project mindset, limited funding, and a focus on proof-of-concept pilots. However, small-scale efforts cannot solve the challenges within education systems today. Addressing contemporary educational challenges requires coordinated action among stakeholders, ongoing evidence of impact, and an emphasis on expanding and deepening the impact of any single intervention so it reaches more learners and changes whole systems. In a word, it requires “scaling.”

The term “scaling” represents a range of approaches—from deliberate replication to organic diffusion to integration into national systems—that expand and deepen impact, leading to lasting improvements in people’s lives.

This report examines the scaling journeys of 14 regional and global education initiatives that are attempting to scale within 30 low- and middle-income countries (LMICs). In 2020, the Center for Universal Education (CUE) at the Brookings Institution joined the Global Partnership for Education’s (GPE) Knowledge and Innovation Exchange (KIX)—a joint partnership between GPE and the International Development Research Centre (IDRC)—to facilitate a cross-national, multiteam, design-based research and professional support initiative called Research on Scaling the Impact of Innovations in Education (ROSIE). The goal of this partnership is threefold:

1. To enhance the quality and results of scaling efforts among KIX global and regional projects through participatory action research and conceptual and practical guidance.
2. To generate new evidence around effective strategies for scaling education initiatives through research and analysis of KIX partner projects and through complementary research focusing on key drivers and enabling conditions from a national decisionmaker perspective.
3. To develop and disseminate practical, evidence-based resources and conceptual tools for KIX partners, education stakeholders in GPE member countries, regional entities, and the international development community on scaling education initiatives to optimize quality, inclusion, equity, and sustainability.

To pursue this, CUE has been reflecting on what can currently be learned from the 14 ROSIE collaboration teams in order to offer insights and recommendations both for the ROSIE collaborator teams and for other practitioners, policymakers, and funders around the world

working to scale the impact of their efforts to improve education and learning outcomes.

The report presents our empirical reflections and offers relevant guidance. Given that the research is ongoing, the report does not offer an overarching explanation of, or framework for, scaling but rather presents illustrative examples and provisional analyses of topics that constitute part of the scaling process in education globally.

THE INNOVATIONS

Each of the 14 teams that participated in the study is working on behalf of an innovation that shows promise to have a lasting and powerful impact on some aspect of schooling or education in at least one country. The innovations include learning/teaching tools or methodologies, teacher professional development (TPD) efforts, education management information systems (EMIS), and learning assessments.

Ten teams are implementing an innovation already developed elsewhere by partner organizations. The remaining four innovations were developed locally by the ROSIE collaborator teams themselves. Some teams are pursuing a top-down scaling strategy, while others are pursuing bottom-up or multiple-pathway strategies.

WHAT WE ARE LEARNING

Analyzing the ongoing scaling journeys of these 14 ROSIE teams, we confirmed some scaling findings and conventional wisdom already known, as well as ways that scaling—as an iterative, non-linear, complex process—is unlike previous technically-minded project implementation. Yet, we also found new insights around scaling and identified gaps or tensions that merit deeper investigation. The report discusses emerging findings from the teams’ scaling journeys organized within four broad categories: stakeholders, engaging teachers and school leaders, the enabling environment, and incentives. Along the way, the report raises assumptions to interrogate and practice recommendations to consider. More specifically, the discussions of this report are organized around four principles of practice.

I. TREATING MORE STAKEHOLDERS AS CHAMPIONS

By examining different stakeholder groups and how the ROSIE teams interact with them, we examine the role of these relationships in the scaling journey and why it can be beneficial to treat more stakeholders as champions and more champions as partners. We realize that shifting constituencies into more active participants requires extra time, can get messy, and if one is not careful, can devolve into diminishing returns, but it seems that carefully broadening the circle of active participants can exponentially advance key scaling goals such as buy-in, uptake, collaboration, and dissemination. Important stakeholder groups include national and regional government personnel, civil society organizations, community volunteers, students, and families.

II. ENGAGING TEACHERS AND SCHOOL LEADERS AS ACTIVE PARTNERS IN SCALING

All ROSIE teams include teachers in some way in the scaling process and over half of the innovations engage school leaders as stakeholders. We found several challenges with engaging teachers more actively as partners but believe that many of these challenges can be addressed and that engaging teachers in the scaling process carries the potential to reap increased, significant dividends.

III. UNDERSTANDING WHAT IS COMPLICATED AND WHAT IS COMPLEX IN THE ENABLING ENVIRONMENT

Scaling strategies must harness characteristics of the surrounding environment into acceptance and sustained support for embedding the innovation into regular use. Engaged effectively, these identified opportunities—or “drivers”—increase the likelihood an innovation will integrate into existing systems. In discussing the enabling environment, we draw a distinction between the words *complicated* and *complex*. While parts of the enabling environment can be messy, some aspects are predictable (complicated),

and some are unpredictable (complex). We must recognize that we can plan for the *complicated*, while *complex* challenges must be addressed as they arise. This means that both planning for scale from the beginning and adopting adaptive approaches are crucial ingredients.

Examples of environmental influences discussed in the full report include electoral politics, governance structures, financing, external shocks to the broader system (like global pandemics, national insecurity, and shifting governments), and educational technology.

IV. RECOGNIZING THAT INCENTIVES MATTER AND THAT WE CANNOT SHORT-TERM-THINK OUR WAY INTO LASTING IMPACT

Though scaling is a process requiring time, thought, and continual adaptation, it is also a process structured by incentives. When the incentives are aligned, their collective force multiplies. Conversely, when incentives are misaligned or contradictory, their effect can be diluted or become irreconcilable. For these reasons, what is incentivized, by whom, and how become salient questions for scaling. The final analytical section of the report discusses dimensions of the contemporary incentive structure faced by the ROSIE teams, raises issues around the role of research in scaling, and offers ways to incentivize equity in education quality efforts.

As a whole, the report shares some of what the ROSIE community has been learning from its scaling journeys, connects insights across the 14 teams, and provides guidance for scaling practitioners, researchers, policymakers, funders, and other members of the global education scaling community. Improving education in LMICs is a formidable task and one best confronted by all constituencies learning from each other and finding ways to work together. This report is meant to be one more step in that direction.

INTRODUCTION

Few would disagree that education is crucial for the cultivation of successful individuals, healthy communities, robust societies, strong economies, and a healing planet. Yet, while most available education measures show impressive improvement in access in LMIC countries over recent decades, there remains a heartbreaking gap in educational outcomes between and within countries.² This is partly because, while access to school has increased, the quality of learning still often languishes—even before the COVID-19 pandemic—and many would argue that national and global attempts at upgrading education systems continually fall short. As a result, there are constant calls around the world for education reform or wholesale systems transformation, and thousands of new education innovations and empirical studies are released every year.

It is within this context that this analysis reports on 14 regional and global education initiatives that are attempting to scale within 30 LMICs. In 2020, the Center for Universal Education (CUE) at the Brookings Institution joined the Global Partnership for Education's (GPE) Knowledge and Innovation Exchange (KIX)—a joint partnership between GPE and the International Development Research Centre (IDRC)—to facilitate a cross-national, multiteam, design-based research and professional support initiative called Research on Scaling the Impact of Innovations in Education (ROSIE). The goal of this partnership is threefold:

1. To enhance the quality and results of scaling efforts among KIX global and regional projects through participatory action research and conceptual and practical guidance.
2. To generate new evidence around effective strategies for scaling education initiatives through research and analysis of KIX partner projects and through complementary research focusing on key drivers and enabling conditions from a national decisionmaker perspective.
3. To develop and disseminate practical, evidence-based resources and conceptual tools for KIX partners, education stakeholders in GPE member countries, regional entities, and the international development community on scaling education initiatives to optimize quality, inclusion, equity, and sustainability.

To pursue this set of goals, we at CUE have been reflecting on what can currently be learned from the 14 ROSIE collaboration teams to offer insights, analysis, and practical recommendations both for the ROSIE collaborator teams and for other practitioners, policymakers, and funders around the world working to scale the impact of their efforts. Over the past 18 months learning from the collaboration teams, we have found uniqueness, both in terms of the kind of education innovations and scaling strategies and the different sets of implementers and partners in each location. Yet, there are also common aspects and themes that cut across these scaling journeys.

This report presents those empirical reflections and offers relevant guidance. Given that the research is ongoing, this report does not offer an overarching explanation of, or framework for,

scaling but rather presents illustrative examples and provisional analyses of topics that constitute part of the scaling process in education globally.

After introducing our methodology and the teams, their innovations, and their scaling strategies, we focus on four interdependent thematic discussions: engaging with stakeholders, engaging teachers and school leaders, ways the broader environment matters, and the power of incentives. More specifically, we find that: (1) There are opportunities to treat more of the stakeholders as active champions; (2) engaging teachers and school leaders as active partners in scaling is challenging but useful; (3) the enabling environment is both complicated and complex; and (4) scaling cannot short-term-think its way into lasting impact and change.

Why scaling?

Before exploring *how* teams are scaling, it is important to first discuss what scaling is and why we focus on it. While there are many attempts to address low learning outcomes around the world, many of these efforts abide by a short-term project mindset, limited funding, and a focus on proof-of-concept pilots. As a result, many innovations suddenly end or fade away and become “pilots to nowhere.”³

The challenges within education systems today cannot be solved by small-scale pilots. Addressing them requires coordinated action among stakeholders, ongoing evidence of impact, and an emphasis on expanding and deepening the impact of the intervention so it reaches more learners and lasts the test of time.

The intention of ROSIE is to bring together researchers and practitioners to study the process of scaling education initiatives. In early 2020, teams from the larger population of KIX applied, and six teams were selected to join ROSIE (See Box 1). This first cohort of ROSIE collaborators worked alongside the CUE team to think about, study, and deepen the impact of their work. In September 2021, after another round of applications,

BOX 1

What is a “scaling team?”

Scalers might be educators, policy implementation personnel, project managers, and researchers. ROSIE takes the position that scaling requires not only the work of the educators, project personnel, and initiative leadership but also researchers who document scaling and feed findings back into the process of advancing the scaling of the innovation. For this reason, ROSIE collaboration teams are composed of both practitioners and researchers. Rather than having distinct roles, as part of the action research approach practitioners and researchers simultaneously engage in “doing” and “learning” together. Since the group of people involved in scaling can be larger than just a project team, and stakeholders have different levels of involvement, for ease of understanding we use the term “ROSIE teams” throughout this report to refer specifically to the teams that have contributed their data, progress, and learnings to this action research project.

a second cohort was selected to join—this time nine teams from the KIX regional grantees.⁴

In total, these collaboration teams that are part of ROSIE currently work in 30 countries (See Figure 1). Additionally, the CUE team is conducting complementary qualitative research on how governments engage in the work of identifying, supporting, and adopting education innovations to scale. For our most recent complementary research report, [visit here](#).

Research methods

The ongoing ROSIE project from which this analysis draws was designed to answer two overarching questions: How can educational innovations be designed, adapted, and scaled to improve education access and quality? And how is institutional and adaptive capacity for scaling strengthened? To pursue these questions, CUE and ROSIE collaborators developed five common learning questions (CLQs), and the teams were encouraged to periodically share what they are learning in relation to the CLQs that interest them. Amid their work, 14 of the 15 teams generously submitted information related to their scaling journey every six months and discussed their progress with the CUE team through virtual meetings.ⁱ These data were coded by CUE using a qualitative research platform called Dedoose and were analyzed against contemporary scaling research,⁵ existing education reform paradigms,⁶ and literature on global education development.⁷ Before offering our four thematic discussions, it will be helpful to describe the innovations and scaling strategies of the 14 ROSIE teams. As a rule, we name the ROSIE teams when relevant in this report, but in examples where political sensitivities are present, we left out the team names.

ROSIE teams

For more information on each team refer to [Annex I](#).

COHORT 1

- **ABRA**
- **DMS**
- **PAL**
- **TARL AFRICA**
- **TPD@SCALE**
- **ULLN**

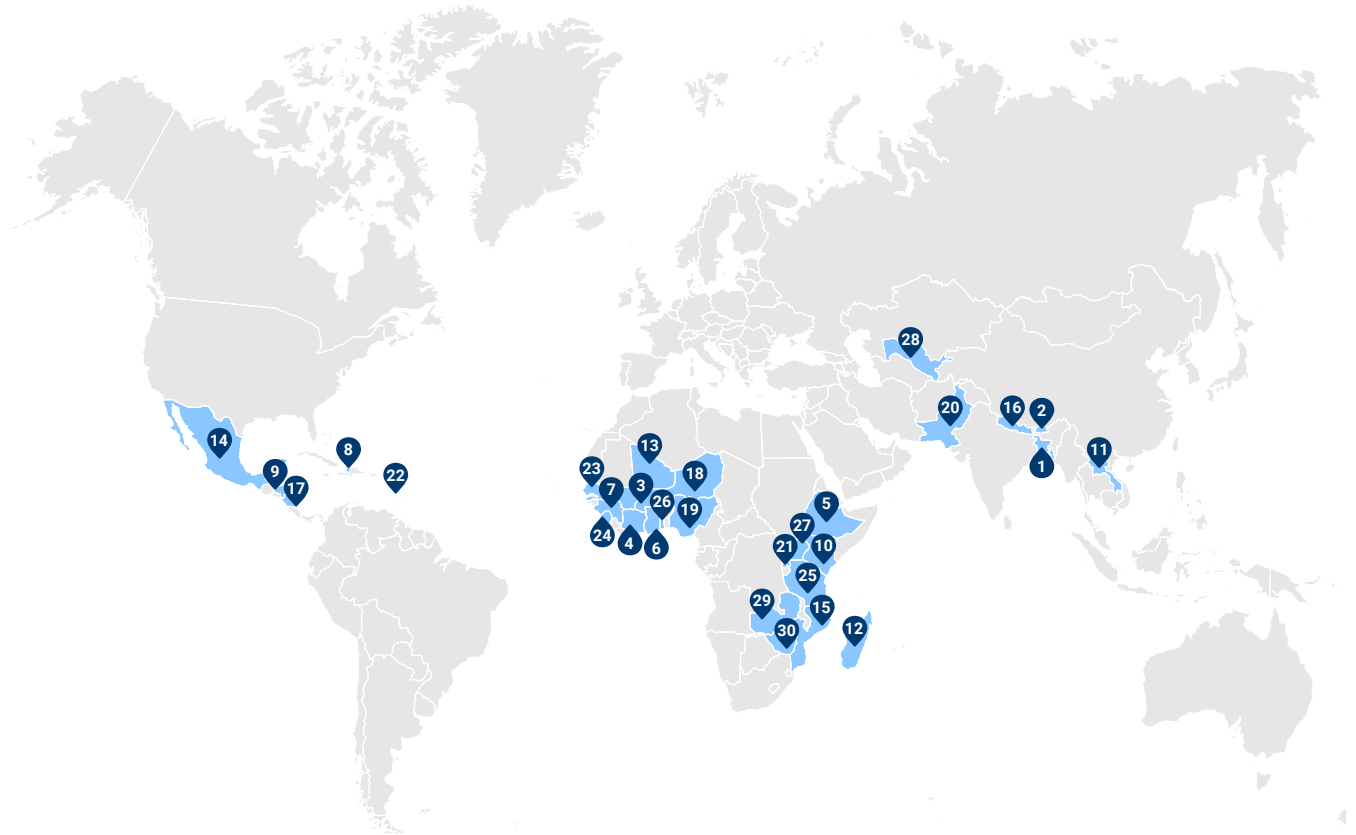
COHORT 2

- **AFC**
- **CAMFED**
- **CL4STEM**
- **CEIBAL**
- **DUCE**
- **IHELP**
- **KARANTA FOUNDATION**
- **SAHE**
- **UHAITI**

ⁱ We have lightly edited many of quotations in this report for clarity and flow, and in some cases have translated them into English.

FIGURE 1

Where ROSIE teams are implementing their innovationsⁱⁱ



- | | | |
|-----------------|---------------|-----------------|
| 1 Bangladesh | 11 Lao PDR | 21 Rwanda |
| 2 Bhutan | 12 Madagascar | 22 Saint Lucia |
| 3 Burkina Faso | 13 Mali | 23 Senegal |
| 4 Côte d'Ivoire | 14 Mexico | 24 Sierra Leone |
| 5 Ethiopia | 15 Mozambique | 25 Tanzania |
| 6 Ghana | 16 Nepal | 26 Togo |
| 7 Guinea | 17 Nicaragua | 27 Uganda |
| 8 Haiti | 18 Niger | 28 Uzbekistan |
| 9 Honduras | 19 Nigeria | 29 Zambia |
| 10 Kenya | 20 Pakistan | 30 Zimbabwe |

ⁱⁱ Not all countries listed here are discussed in this report. Several teams are working in many countries, but for the purposes of the ROSIE research, they typically identified one country of focus in which their innovation is being scaled.



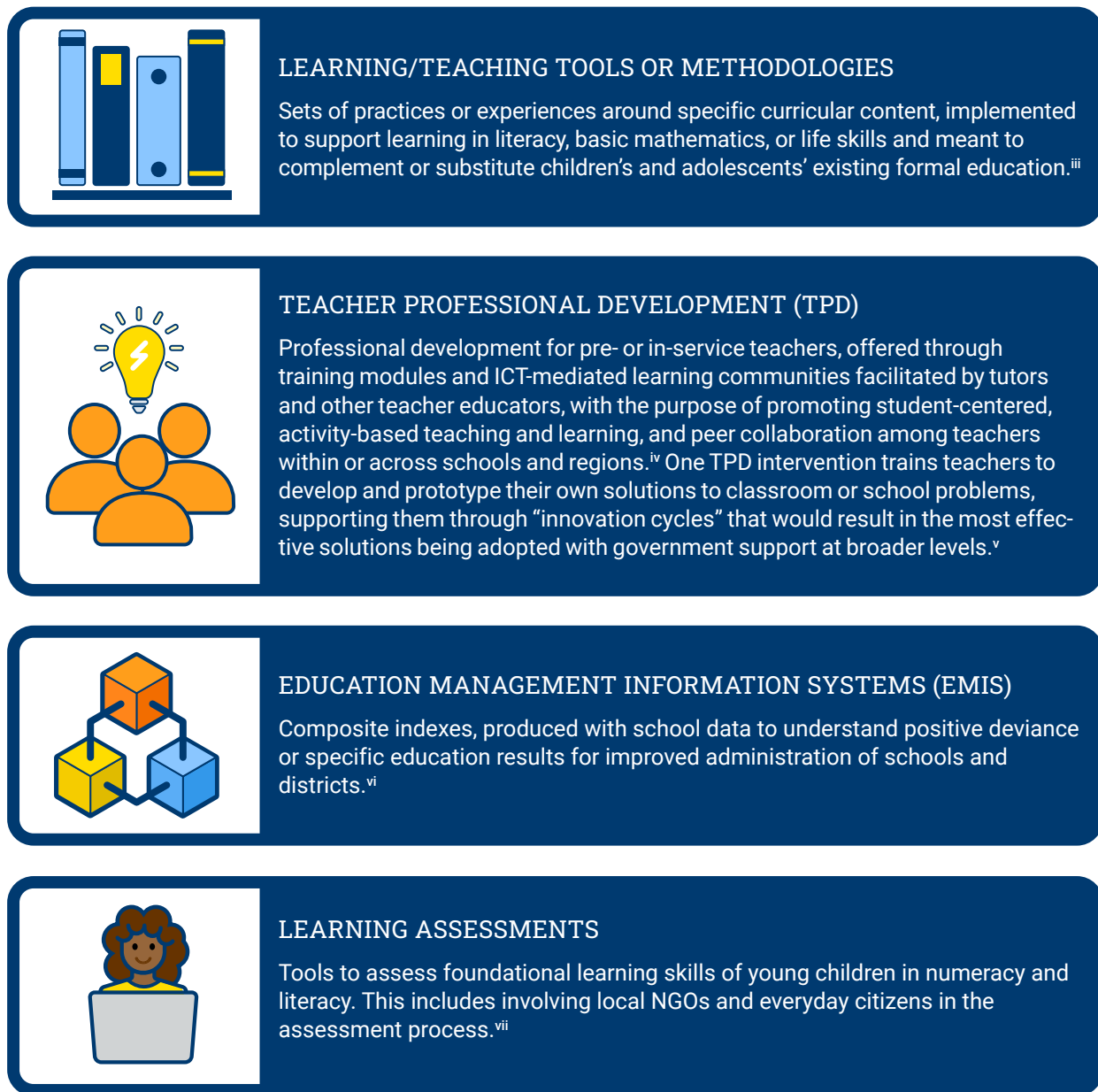
ROSIE COLLABORATORS' INNOVATIONS & SCALING STRATEGIES

| The innovations

Each of the 14 teams that participated in the study is working on behalf of an innovation that shows promise to have a lasting and powerful impact on some aspect of schooling or education in at least one country. These innovation types can be categorized as follows in Figure 2:

FIGURE 2

ROSIE teams' innovation types



iii. Two of these seven innovations rely on information and communications technology (ICT) for delivery and include complementary teacher training modules or programs for how to implement them with learners (ABRA and CEIBAL). Most of these tools are meant to be used inside school classrooms (ABRA), although some are located outside schools as either after-school tutoring/enrichment initiatives or learning programs for out-of-school-children/youth (OOSCY) (seven teams: ABRA, AfC, CAMFED, CEIBAL, Karanta Foundation, TaRL Africa, and ULLN).

iv. Three teams: CL4STEM, DUCE, and TPD@Scale

v. One team: UHAITI.

vi. Two teams: DMS and SAHE

vii. One team: PAL

The sources of innovations

Ten teams are adapting and implementing an intervention already developed elsewhere by partner organizations. Contextualizing the innovations for new locations includes adjusting the language and content of curricula, TPD, and data collection tools, as well as creating new incentive systems and in-country partnerships with government and other stakeholders. Structurally, the tailoring of the innovations also includes changes in the duration of teacher training, new ways for users to access the education materials, and different incentives for teacher participation (e.g., the inclusion of data costs, transportation, or overtime allowances).

The remaining four interventions (a girls' education curriculum, a nonformal education approach, TPD promoting teacher innovation, and a data management framework) were developed locally by the ROSIE collaborator teams themselves. Two are being undertaken by national organizations that either previously worked with provincial education authorities to scale (SAHE) or are using GPE KIX funding to test their innovation for the first time (UHAITI). The Learner Guides program was developed by a pan-African, grassroots-led movement tackling poverty (CAMFED), while the consortium working on a model for the integration/re-integration of out-of-school-children-and-youth (OOSCY) involves an intergovernmental organization supporting non-formal education in six West African Countries (Karanta).

The scaling strategies

In cases where significant organizational resources are pooled by consortium members or a government "window of opportunity" is identified, teams are pursuing a top-down approach to scaling.

Two such interventions involve governments actively developing the innovation alongside the ROSIE

collaborator team, either because its originators are intergovernmental in nature (Karanta Foundation in Mali, Burkina Faso, and Senegal), or because provinces adopted the innovation as part of their education monitoring efforts and have scaled it to all schools under their jurisdiction (SAHE in Pakistan). The remaining 12 interventions are pursuing different strategies to identify and solicit government participation, but their funding and scaling execution are led by ROSIE team partners.

Consistent with previous findings,⁸ several ROSIE teams (especially those following a top-down scaling approach) are succeeding by identifying government priorities and aligning their research or innovation with these existing needs. These innovations are presented to nationally or regionally elected governments as possibilities for addressing pre-existing issues, including public school quality concerns and the emerging importance of EMIS (Nepal), increased dropout rates during COVID-19 closures (Kenya, Uganda, Pakistan, Niger, and Burkina Faso), overcrowded facilities and classrooms (Nigeria, Kenya, and Tanzania), or the absence of a framework for rural education (Honduras), among others.

Another approach some ROSIE teams have followed is to embed components of their innovation into a country's existing education platform or teacher training system. For ABRA, this means getting its literacy software included in Kenya digital content portal, making it available for schools and teachers to use on- or offline, and have the accompanying training accredited under the government's new TPD requirement. Three other teams (in Ghana, Zambia, and Tanzania) are also working to have their innovation's TPD model included in the government's official teaching commission portal or repertoire.

Bottom-up approaches to scaling are less common among the 14 ROSIE teams. Five teams focus their scaling strategies on working with local beneficiaries and champions first. One of them (ULLN) engages churches and elected or appointed community leaders to support its community-led literacy innovation, which is standard practice for the broader organization

(World Vision) in charge of implementing the program. Two other teams are working to leverage grassroots teacher satisfaction into increased demand for sustaining the innovation (DUCE and UHAITI). Two additional teams are building school-driven demand by capitalizing on what they report as student enthusiasm for their innovations and government and community collaboration (CAMFED and CEIBAL). Reflecting a more integrated or flexible approach, one ROSIE collaborator team (TPD@Scale) frames the work of contextualizing its innovation by offering three approaches: a central top-down pathway, a localized bottom-up pathway, and a combination of the two.

We consider that scaling begins as soon as any initiative with plans to embed its innovation into widespread use for impact starts its work. (For the broad array of available scaling pathways, see the 2016 [Millions Learning](#) report). However, we know that there are many understandings of and approaches to scaling. Considering this, it is interesting to consider the reasons three teams do not necessarily consider their work as scaling. One team (PAL network) is adapting a previously used digital common learning assessment tool for use in other countries. They view their role in this process as developing, refining, and then sharing the innovation for users to employ however they wish. Although some would consider designing a tool and granting open access to it a scaling strategy, the team does not define their work this way. Two other teams believe that, because they are at the beginning of the process—still learning the landscape and designing their innovation—they are not yet at the stage of scaling. While this is understandable, it is important to highlight that the scaling science underscores the need to “plan for scaling from the beginning with the end in mind: Planning pilot projects and other programmatic research for successful scaling up.”⁹ This difference in understanding regarding how and when to scale highlights some of the complexities around the very notion of scaling, even among ROSIE teams.

Based on the 14 ROSIE teams’ experiences, three factors (not mutually exclusive) appear to facilitate acceptance of innovations for scaling. One is the existence of previous implementation results from

other locations that are accepted by local networks and stakeholders. This is especially true for ROSIE teams whose innovations and scaling approaches have been executed in multiple countries prior to their current, KIX-funded work. A second circumstance—especially for cases where the intervention has limited previous implementation in sites or much supporting evidence—is when the innovation and scaling partners already have an established reputation in the target region. In several cases, ROSIE collaborators are partnering with implementation organizations who have already been working on similar or adjacent innovations in the territory for a decade or more and so have a reputation, pre-established connections with champions, and a proven track record. A third circumstance is when the innovation has been aligned with a country’s pressing education need in a way that clearly demonstrates how the innovation will address the need. These countries’ needs can often be found in policy documents and sector plans, gleaned by studying education topics trending globally or regionally, or learned through relationships with in-country officials. One currently popular education topic is EMIS. Another is using ICT for TPD. We found that several teams are leveraging the cutting-edge popularity of their topic to increase support for their innovation.

We have described these innovations and scaling strategies not only to present their diversity but also to illustrate that a scaling strategy or pathway is never clear-cut and is always being adapted. Scaling strategies are systematic ways to think about expanding and deepening the impact of the innovation but should continually be reviewed and adjusted along the way.



WHAT WE ARE LEARNING

Analyzing the recent scaling journeys of these 14 ROSIE teams, we found confirmation of some scaling findings and conventional wisdom already known—including from frameworks such as “drivers and barriers,”¹⁰ the interplay between innovation and enabling environment,¹¹ and ways that scaling—as an iterative, non-linear, complex process—is unlike previous technically minded paradigms such as project implementation.¹² Yet, we also found new details and insights around scaling, and we identified gaps or tensions that merit deeper investigation. The rest of this report highlights emerging findings from these teams’ scaling journeys organized in four broad categories: stakeholders, engaging teachers and school leaders, the enabling environment, and incentives.

I. Treating more stakeholders as champions

We define a “stakeholder” as an individual, group, or organization who has an interest in the topic, policy, or innovation in question; whose interests are affected by it; or who can impact its implementation.¹³ We consider stakeholders to be less actively involved in a scaling strategy than those who are considered “champions” (dedicated to supporting the innovation) or “partners” (fully involved in the design, implementation, and adaptation of the innovation).

By examining different stakeholder groups and how the ROSIE teams interact with them, we highlight the role of these relationships in the scaling journey and why it can be beneficial to treat more stakeholders as champions and more champions as partners. We realize that shifting constituencies into more active participants requires extra time, can get messy, and if one is not careful, can devolve into diminishing returns. However, carefully broadening the circle of active participants can exponentially advance key scaling goals such as buy-in, uptake, collaboration, and dissemination.

We notice that the term “stakeholder” seems to be used so broadly and in so many ways, that it is at risk of losing its value. We at CUE, with the help of ROSIE collaborators, hope to create a taxonomy of stakeholder types as something that scaling teams can use to differentiate terminology in place of the generic “stakeholder.”

Who do teams identify as stakeholders in their scaling journey?

Dozens of stakeholder groups are referenced in the information that ROSIE teams shared with CUE. Examples from the different teams about each stakeholder group are explored in more detail below.

GOVERNMENT AT ALL LEVELS

The role of government as a key stakeholder is common across all 14 ROSIE projects. Teams reach out to national authorities to introduce their projects or share implementation findings. It appears that they do so (a) to demonstrate that the intervention is not “owned” by a single organization but is rather a democratic scaling endeavor (a common strategy for engaging government buy-in), (b) to update allies on how the scaling is proceeding (typically to galvanize interest and increase uptake), (c) as a matter of raising awareness so that ministries of education will learn about the intervention, or (d) to cohere otherwise fragmented communication lines within public sectors.

Whether or not an eventual handover to public sector authorities is the goal of the scaling strategy, soliciting government support is usually necessary for an education innovation to thrive. The experiences of the ROSIE teams illustrate many different types of government support as discussed in the examples below:

- **Symbolic:** government expressing approval or offering kind words of support at project launches or other events or designating a public official to join or chair a working group
- **Official:** encompasses approval, permission, and/or provision of physical security to operate; oversight

of implementation efforts by the government was also considered a form of buy-in for the innovation^{viii}

- **Through inclusion in existing systems:** accrediting the intervention’s teacher training^{ix}
- **Material:** paying all or part of the salaries of those implementing the initiative on the ground^x; using budget monies for resources, or approving and installing the scaling innovation’s software on its national education cloud^{xi}; offering use of school infrastructure for the innovation^{xii}
- **Government participation** in the education data systems that are part of the innovation^{xiii}

While governments provide many forms of support, finding the right degree of engagement can be tricky. Many ROSIE teams want ministries to be involved but know that education officials rarely have the time (and that government bureaucracies can cause delays), and so striking a balance that is constructive for both sides but not onerous for either is the goal. As one team said, we have had to “tweak structures and bind choices...in order to avoid complete anarchy.”

INTERNATIONAL AND REGIONAL NGOS AND CSOS

Development partners such as bi/multilateral agencies, international and national NGOs, or regional civil society organizations (CSOs) are also innovation stakeholders holding a variety of roles. Whether as intervention funders, potential scaling allies, or as providers of advice on local contexts or particular populations, 12 of the ROSIE teams currently engage these actors (or plan to do so) through meetings and dissemination workshops.

LOCAL NGOS, COMMUNITY GROUPS, AND VOLUNTEERS

Community arrangements such as youth groups, faith-based organizations, development committees, and families are a key component of scaling. This is particularly true for teams focused on non-formal, accelerated, or rural education and for teams pursuing a bottom-up scaling strategy, as these teams rely on community partners to either directly deliver parts of the intervention or act as vehicles for the diffusion of the innovation.

Community volunteers deserve particular attention because all 14 ROSIE interventions use community volunteers in some form to deliver or implement part of the scaling of the innovation. For example, ULLN utilizes both reading facilitators and promoters. The former leads the reading camps and trains the caregivers on strategies to promote reading at home for their children. The latter is more experienced, and their role is to support the facilitators and monitor the quality of the camps. In some cases, volunteer facilitators are also promoters, and at the same time they can be parents or caregivers of some children attending the reading camp. TPD@Scale tutors accompany teachers in their training and professional learning communities in Ghana and Honduras, and Learner Guides mentor girls in participating schools in accordance with CAMFED’s life skills curriculum in Tanzania, Zambia, and Zimbabwe. A PAL team member shared that “recruiting volunteers promotes local engagement, helps reduce the cost of the surveys, and facilitates dissemination of the results and impact in the communities.” The approach of the ULLN team in Nicaragua illuminates how to identify and work with community volunteers in a systematic way: Before entering a new area, the team identifies key leaders and champions, and then additional contacts

viii. AfC, CEIBAL, CL4STEM, Karanta, ULLN

ix. ABRA, CL4STEM, TPD@SCALE, ULLN

x. DUCE, FAWE

xi. ABRA

xii. AfC, CAMFED, Karanta

xiii. At the provincial level in Pakistan for SAHE and the central level in Nepal for DMS

are made with “people who have a love for the work.” Agreements are made with churches, local leaders, and volunteers, and then partner staff deliver training for these individuals on the community component of the ULLN literacy intervention.

These examples illustrate some of the reasons community volunteers can be a significant asset to scaling an education innovation for impact. Because they are local, know the context, have pre-existing relationships, and are committed to improving their own community, the volunteers can be a significant benefit. However, because they are unpaid, they are often an unreliable population and many leave if paid work comes along. When they leave, they take with them their training and institutional memory of the innovation. To address the challenges of high turnover, some teams try to prepare existing community volunteers to train newcomers. Other teams are experimenting with ways to more officially recognize volunteers’ efforts, either through certification programs or access to future business or employment opportunities (CAMFED).

Regardless of the approach, we suggest teams reward volunteers in some way. Those who cannot pay community partners might find non-monetary ways to compensate them for their time (such as certificates, community perks, and/or public recognition of their important contributions).

STUDENTS AND FAMILIES

Families and caregivers play a critical role in many innovations’ scaling strategies. Describing them as “a fundamental pillar in their kids’ education,” ULLN provides training for families on “how to read to kids, how to read with kids, and how to create reading materials at home;” delivers traveling backpacks with books to students’ homes; and sends their children to the reading camps. ABRA offered higher-level reading materials in their weekly bundles during COVID-19-induced shutdowns once they saw that older siblings were stepping in to help younger ones. DUCE treats parents as scaling champions because they believe that parent support is necessary for “ensuring that [our] model is really happening at the school level.”

Family roles in scaling are not limited to parents. Several teams work with other caregivers, including siblings and neighbors (e.g., ULLN). The CEIBAL Foundation learned that in rural Nicaraguan communities, many students have a very long walk to and from school. Because parents are typically working and grandmothers are busy with community tasks, grandfathers often accompany the children on their walk. Seizing this opportunity, the scaling team is considering how grandfathers and children can engage in learning activities based on CEIBAL’s TV- and radio-based lessons during their walks.

Finally, several teams work to leverage student support for the innovation in scaling efforts. For example, one ABRA team member referred to the excitement shown by children toward their early literacy program: “When they skip one or two lessons, learners end up asking the teacher, ‘What’s going on? When is Mr. ABRA coming again?’” Some teams encourage students to talk with others about their interest in the innovation, or even—in the case of CEIBAL—share their work on social media, and teams regularly collect positive feedback from children to use when presenting to public and private sector audiences. These strategies align with prior research finding that the people most directly impacted by the scaling of an innovation are crucial components in the success of a scaling initiative.¹⁴

We therefore recommend that those who are interested in scaling be on the lookout for similar possibilities in which innovation beneficiaries—especially those closest to the learning, like students, community members, and families—can be engaged as champions, too. This not only strengthens scaling support but also focuses responsibility on scalers for ensuring that the innovation truly does improve life for its direct beneficiaries.

How are teams engaging stakeholders?

While the list of stakeholders described above is long, actual stakeholder involvement in the innovations—meaning stakeholders actively brought into the work of scaling the innovation—seems to be limited to a smaller group often engaged only at specific moments and for narrowly defined purposes.

Fewer than half of the ROSIE collaborators mention working collaboratively on the innovation design or scaling strategy with national stakeholders. Although there are a few teams co-creating the scaling with government (such as DMS and TaRL Africa), co-creation is more often focused on tailoring the data collection tools for the location or selecting implementation sites and regions. The DMS team followed a phased approach: first working to establish mutually agreed outcomes with ministry of education partners, then providing technical assistance to support government to organize and analyze the data, and then using those data to pursue further research on positive deviance.

We recommend connecting with government early, framing the innovation in terms of previously identified in-country education needs, and adapting the innovation to fit the government's existing goals as three common ways to increase likelihood of scaling success. See CUE's [Scaling Strategy Worksheet](#) for a tool to help design an adaptive scaling strategy with representatives from the start.

We found that ROSIE teams commonly sought out stakeholder perspectives during preliminary situation assessments or baseline studies. In doing this, research teams are able to inform a range of actors about the intervention; give voice to the perspective of government officials, teacher educators, school principals, teachers, and sometimes students; and strengthen support in scaling the innovation. As one team member said, “[W]e reached out to stakeholders during our situational analysis, [but] we weren’t asking

for anything at that point. This was strategic because there’s nothing for policymakers to say ‘no’ to—we were just assessing the lay of the land. This was a way to get our foot in the door.”

Not only is whom to engage an important question but it is also essential to find the right points of entry for engaging allies, champions, and families. Not all stakeholders need to be engaged at the same time or in the same way. In Nepal, a team learned that conversations have a better chance of success if they started at the level of the ministry of education joint secretary and then brought in political appointees once the scaling had progressed. A member from another team talked about identifying who the outward-facing officials are (and engaging them in areas of resources) and who the inward-facing officials are (and focusing them on areas of EMIS or national skill assessments).

We also found different forums and processes for engaging stakeholders and champions. One ROSIE team holds in-person meetings with each stakeholder separately at the start of an intervention—to avoid misunderstandings and to give stakeholders sufficient time to absorb the information so they can react thoughtfully. Taking a different approach, another team convenes multiple organizations simultaneously in order to work with various ministries; identify and overcome bottlenecks; and ensure that stakeholders from public, private, and civil society can hear each other and be included at every step of the way. Similar to this latter approach, three teams (ABRA, AfC, and CAMFED) have established formal advisory or technical working groups, not only to receive useful input but also to generate scaling support and assistance from diverse stakeholders. Another team adapts their approach based on the individual stakeholder group, meeting “weekly with financing partners, monthly with broader development partners, and as-needed with the thematic subgroups led by the government,” all while conducting daily research with a smaller, technical team of allies. This strategic approach for how and whom to engage is a hallmark of balancing resources and impact. But lest one think it is all formal and planned, it also emerged that establishing personal relationships and maintaining steady conversations is a treasured (but difficult during

COVID-19) way to maintain communication and support with stakeholders.

Knowing whom to engage within different stakeholder groups is key. One ROSIE team shared that it takes time to figure out which officials are skilled at navigating the bureaucracy or are truly committed to change, while another team noted that knowing whom to avoid can be as important as knowing whom to engage. It is also important to consider cultural norms and bureaucratic hierarchies. More than one team shared that sometimes team members new to a context have erred by not deferring correctly to the right person, by being too forward in communicating with senior officials, or by neglecting sociocultural variation among locales.

This highlights why it is important that scaling researchers and implementers know who does what in the public and private sectors, which individuals are authorized to make decisions and which ones are not, and in what sequence to enlist individuals in a formal bureaucracy. A stakeholder power analysis tool can be useful for this kind of exercise. It is also necessary to learn and privilege local customs and relational norms.

Conclusions

Like so many aspects of scaling a promising innovation, optimal stakeholder inclusion requires balancing efficacy, cost-effectiveness, and value added. Whose support will validate the innovation as a legitimate effort at scale? Whose support can be leveraged into concrete advancement? Which stakeholder might be highly supportive but is “not in good graces” with—as one team member said—or “is viewed poorly by” the people in power? Deepening and widening the circle of active participants in scaling appears to be a useful shift if it does not become unwieldy or disproportionate. It is important to clarify the purpose and roles of stakeholder engagement in the wider scaling strategy. These thorny questions are some of what ROSIE collaborators are grappling with as they make decisions about whom to engage, how, and in what sequence. As is often said in scaling, “no one size fits all.”

Trust, candidness, working with multiple individuals in any one department, continuity of participants,¹⁵ and efforts to establish clear communication are key. While time consuming, the investment of time and efforts appears to yield rewards, but this is an area on which more research is needed.



1 PRINCIPAL OF PRACTICE ASSUMPTIONS TO INTERROGATE

Throughout this report, we invite readers in the GPE KIX scaling ecosystem to be mindful of potential blind spots. Here, we wonder whether identifiable actors in the ecosystem today constitute a small universe of people who might switch roles but who will be around for a long time and are therefore useful to know. Today an entry-level civil servant, tomorrow a mid-level consultant for a development organization in the sector, someday an NGO founder or system leader—and perhaps dozens of lifelong teachers and community organizers who can be helpful in myriad ways.

We recommend identifying and building on community strengths, thinking long-term, and being open to building upon relationships—but also avoiding echo chambers that can arise from only consulting with the same few people. Including stakeholders—especially people directly impacted by the innovations—genuinely and transparently throughout the scaling process is one place to start.

II. Engaging teachers and school leaders as active partners in scaling

Research shows that teachers are active reform participants who make their own meaning out of innovations.¹⁶ Therefore, a primary way to shift more stakeholders to partners in scaling can be to actively embrace the value of teachers. However, there are challenges associated with teacher learning and working conditions that must be acknowledged if teams want to partner with teachers and school leaders as participants in a scaling journey.

All ROSIE teams include teachers and school leaders in some way in the scaling process. Perhaps unsurprisingly, innovations focused on teacher training or learning in school settings (such as ABRA, CL4STEM, TaRL Africa, TPD@Scale, and UHAITI) are more likely to include teachers as key stakeholders and often have systems in place to identify and engage outstanding teachers as scaling champions. For example, ABRA employs a tiered system to find teachers with high levels of “engagement, creativity, and understanding of the material” and invites them to become teaching assistants, eventually preparing and supporting some of them to travel to various in-country locations as teacher trainers. UHAITI works with teachers to identify innovations in the teachers’ own practice and scale them in their own schools.

In addition to classroom educators, over half of the 14 interventions engage school leaders as stakeholders, usually to enlist their support for, or supervision of, teacher involvement. As a DUCE team member shared, “If the innovation is for teachers, it is really for the administrators...because the leaders of schools are the ones who will help teachers to own the process and will make sure that things are moving.... other stakeholders are not in the schools.”

ROSIE teams focusing on TPD considered faculty of teacher education colleges, teaching centers, and normal schools as key stakeholders because of their “understanding of advantages and limitations of the [education] system, and...close relationships [with teachers].”

We recommend that more teams find ways to connect with local universities—as those education faculty have already established connections with schools and teachers and may be in a position for bi-directional learning—where the local teacher education faculty can teach ROSIE teams about contextual education realities while the implementation teams teach new innovations to the university faculty.

Challenges with engaging teachers as stakeholders

While valuing teachers as partners is crucial, it is important to acknowledge some of the challenges in engaging teachers and school leaders. Many of these challenges are part of the external system and so lie outside the scope of influence of a particular education innovation, but they nevertheless can affect how an innovation is (or is not) adopted, adapted, and sustained at the classroom level. A few of these challenges are introduced below—from class size to TPD participation to reform fatigue—as well as examples of how ROSIE teams are addressing them, such as ICT-supported teacher communities of practice (Table 1). The section concludes by reflecting on some common assumptions related to teachers and teacher development.

TABLE 1

Challenges with engaging teachers as stakeholders

CHALLENGE	EXAMPLES FROM ROSIE TEAMS	POSSIBLE SOLUTIONS
Large class sizes	Shortage of math and science teachers in their target countries increases the workload for existing STEM teachers and may decrease the teachers' engagement in the innovation	<ul style="list-style-type: none"> • Demonstrate how their innovation eases teacher overwork^{xiv}
Teacher workloads & reform fatigue	Because teachers (especially head teachers, who are often the ones ROSIE teams tap to lead school innovations) are typically overloaded with non-instructional work like meetings and trainings, they are not always eager to participate in an innovation or the professional development it requires, especially in urban locations where educational reforms are more frequently piloted, thus causing fatigue and resistance.	<ul style="list-style-type: none"> • Continuity is a better approach than constantly cycling through various reforms. • Don't place teacher trainings and additional work that a new teaching innovation requires on top of the existing work. • Incentivize teacher participation with certifications, promotions, formal recognition, or extra pay and by thoroughly explaining the benefits teachers accrue from their investment of time and energy.
Teacher professional development & training	Barriers such as: <ul style="list-style-type: none"> • fewer teachers were signing up for the innovation training because they were worn out from constant shifts between in-person and remote schooling (due to COVID-19)^{xv} • student uprisings • teachers' own goals (such as finishing their degrees or working as coaches) often interfere with their participation in scaling the innovation • cost of teachers traveling to the nearby village or city where the TPD program takes place 	<ul style="list-style-type: none"> • Pay participants' travel costs or put the training online. • Three teams subsidize teacher participation in PD through transportation and overtime stipends or by covering the cost of internet/data since, "even teachers with smartphones sometimes cannot pay for internet access."^{xvi}

Providing clear and full information about the innovation, and/or the opportunity to observe the innovation succeeding in action can help teachers see how it will lead to student success and improve (or ease) their teaching. This is a useful way to treat teachers as champions, value their own adaptations to the innovation, and respect them as partners in scaling.

xiv. For example, a team researching effective models for in-service teacher mentoring is optimistic that its work will ease teaching because innovative teaching models offer teachers independent learning activities for students: "[I]f you have a methodology that can simplify the way you teach, even that large class can be easy to teach, so we are looking at this model as something that helps [teachers] to talk less and have students do more activities [on their own]."

xv. UHAITI

xvi. ABRA, CL4STEM, TaRL

ICT-SUPPORTED TEACHER COMMUNITIES OF PRACTICE

A common feature of TPD innovations touted by ROSIE teams is the creation of teacher learning communities for implementing the innovation and scaling its use. There appears to be a belief that teachers who regularly communicate with each other through ICT will master the innovation faster and adapt it to their own context once the implementation facilitators leave. “The point for...those WhatsApp groups is to develop the learning community...where people can support each other throughout the...process in hope that they will stay [in the groups] after they finish the course and...continue...learning together” (ABRA). The CL4STEM collaborators mentioned that when their Connected Learning Initiative was previously tested in 200 schools across four states in India, the community-of-practice model “motivated teachers across districts, because when they saw that one [educator] in an under-resourced school could make it happen, [they believed] it was possible for them to do it. Many of the teachers talked about [our innovation] in their local [teacher communities] as well, so the approach diffused into other schools that were not part of the pilot.”

It is therefore important for those involved in training, supporting, and working with teachers to know the research around teacher change, continually collect data on whether their interventions result in lasting teacher change, and advocate for the importance of effective TPD.

To evaluate the effectiveness of TPD models, we recommend conducting multi-data source studies that include in-person observation of teaching and learning activities whenever possible. Although it is costlier than gathering participant self-reports, participant surveys, or anecdotal evidence on pedagogical change, observational data linked to student-outcome metrics provide rich opportunities to examine the micro- and macro-dynamics of teacher learning—those “everyday activities... in classrooms and across educational systems” that Rincón-Gallardo (2016) believes must be understood in order to disrupt the instructional core for improved outcomes.



PRINCIPLE OF PRACTICE ASSUMPTION TO INTERROGATE

As previously mentioned, excavating and interrogating unexamined assumptions—or blind spots—in teams’ implementation/scaling work can lead to interesting discoveries and productive avenues forward, so we offer some reflections here.

One relevant assumption is that training modules always work and translate into straightforward solutions for whatever educational problem necessitated them in the first place. However, professional development involves complex adult learning processes that may not always result in changed practices and behaviors in ways intended by the instructional designers. Similarly, attendance and even participation in a purposefully designed training experience do not automatically launch new ways of working. Many TPD teams know these things, but cost and logistical restrictions sometimes constrain their ability to scale effective TPD approaches and so overly simple or deceptively straightforward TPD approaches eke out a continued existence. An assumption that teachers will teach differently if given a limited amount of—often virtual—TPD, or that other actors in the education system will perform differently with more information runs counter to literature on the way people develop, make meaning, and are able to change their understandings inside entrenched institutions such as schools and government bureaucracies.¹⁷

In addition to these specific training challenges, we also found that, while teachers were frequently cited as stakeholders, they were often treated as passive receivers by ROSIE teams. In both ROSIE’s action research and [its complementary research on government decisionmaking for education](#), we found common perceptions that teachers will learn the innovation and implement it with complete fidelity after participating in a training. Though we do not want to oversimplify this complex issue, there are some assumptions worth interrogating here.

It appears that teachers are often (but not always) being viewed as (a) insufficiently prepared with little content knowledge, (b) having been trained primarily for antiquated rote-based teaching and working with large homogeneous student groups, and/or (c) able to implement any innovation in precisely the way the developers intended. Those presumptions, however, conflict with existing research finding that, first, teachers can be active generators of innovative teacher practices themselves,¹⁸ and second, teachers often ignore or mediate the teaching reforms to which they are exposed.¹⁹ In other words, teachers are often active agents—not passive receptacles—who understand classroom realities in front of them. When it comes to them being offered formal teaching reforms or instructional innovations, they will often fit them consciously or not to their own deep-seated professional beliefs or routines. As a result, teachers often bypass or mediate innovations in daily practice.²⁰ We do not wish to treat all teachers as the same; there are knowledgeable ones and underprepared ones, passive curriculum deliverers and active professionals, and so on.

We suggest there is value examining how teachers can be more actively engaged in developing, adapting, and contributing to the development and scaling of instructional innovations. We also believe that deeper empirical investigation about teacher capacity, teacher recruitment, and workplace conditions in LMICs in particular is sorely needed so that assumptions are replaced by empirical perspectives.

Conclusion

The experiences of the ROSIE teams highlight some of the challenges of engaging teachers and school leaders as partners in scaling education innovations. Yet, they also illustrate why it is so important to work with these stakeholders as active developers or mediators of innovations at scale—as educators have perhaps the greatest influence over how an innovation is ultimately used and whether it is sustained. Thinking deeply about some of the more prevalent assumptions about teachers and the teaching profession is an important first step for many teams as they consider how to make teachers active partners in scaling.



III. Understanding what is complicated and what is complex in the enabling environment

Scaling literature shows that, as promising or successful a particular innovation might be, it will not be scaled unless it can engage successfully with the broader environment in which it will exist. Scaling strategies must harness characteristics of the surrounding environment into acceptance and sustained support for embedding the innovation into regular use. Engaged effectively, these identified opportunities—or “drivers”²¹—increase the likelihood an innovation will integrate into existing systems.

In discussing the enabling environment, drawing a distinction between the words *complicated* and *complex* is useful. Both terms refer to a composite assemblage of many parts, steps, and interactions. With things that are *complicated*, the messy assemblage can be predicted, whereas things that are *complex* are messy and unpredictable because their interactions affect and mutate each other in ways not always foreseeable. For example, consider a giant computer and the human immune system. The computer has numerous intricate pieces that work together, but experts know exactly how they fit together and typically there is nothing unpredictable about how the parts operate as a whole. A human immune system also contains myriad intricate parts but because those parts change each other as they interact, it is never wholly predictable and therefore requires reacting to it as much as predetermining it. Both the *complicated* and the *complex* can be difficult to manage, but *complicated* can be predicted and planned for, while *complex*—similar to the notion of VUCA (see Box 2)—will require continuous assessment, artistry, and adaptation. This distinction is important because it illuminates how ROSIE teams navigate and work within the enabling environment.

The section below illuminates how ROSIE teams are working systematically with aspects that can be predicted and strategically with elements that cannot. We focus here on five key aspects of the current environment: the COVID-19 pandemic, political climates and elections, governance structures, financing opportunities, and education technology. The section also examines how teams course-correct in response to both complex and complicated factors in the enabling environment.

BOX 2

VUCA

Drawing on theories by Bennis and Nanus (1985), VUCA is an acronym used in organizational leadership to describe the unpredictability of many conditions within institutional environments.

Volatility: things are always changing

Uncertainty: there are always surprises

Complexity: there are many forces that affect each other

Ambiguity: some things are rarely clear and often open to interpretation

COVID-19

In response to the challenges caused by the pandemic, ROSIE teams had to quickly adapt. This meant altering research timelines and data collection methods, increasing reliance on community volunteers, and turning to digital meeting platforms and instant messaging or emails for team communication. We heard from several teams that these changes limited the quality and depth of team conversations and marred intercontinental gatherings, but actually improved some aspects of collaboration by bringing together people—via online platforms—in multiple countries across time zones speaking different languages.

When schooling shut down, some ROSIE teams (ABRA, SAHE, and ULLN) whose innovations relied on digital learning inside the schools began printing their materials and supporting learning facilitators to make home visits or broadcast lessons to students on radio stations. Other teams altered their teacher training programs and support by adapting content, reducing contact hours, offering asynchronous and synchronous online sessions for teacher convenience, or developing informational videos and checklists to guide teachers' work in the absence of in-person mentoring. Teams found it difficult to deliver teacher development content that relies on teachers practicing what they are learning when schools were closed and there was no chance for experimenting with new pedagogies (a hallmark of several TPD approaches). And several teams reported that, because many teachers were "not in the right frame of mind" for professional learning, TPD participation rates fell.

Once schools reopened, teams also had to adapt and adjust. For example, one innovation in Kenya (ABRA) found that it had to invest additional funds to refurbish servers, computers, and tablets in participating schools once the schools reopened because ICT maintenance had not been budgeted by education authorities at any level, and the technology fell into disrepair during the school shutdowns. Several teams reported that teachers, suddenly overwhelmed with the socioemotional needs of students, were unable to commit to educational trainings or new pedagogies.

Another challenge was communicating with officials. Teams reported that most public sector personnel were busy responding to crisis conditions and had little time for education planning. For example, one team found that previously pledged funding for ICT-mediated TPD in the national strategic plan had been put on hold. In another rather tragic example, a team had to re-establish relations with the new head of primary education after the previous officer died during the pandemic—someone who had been a stalwart champion of scaling the innovation.

Additionally, several ROSIE teams reported that the research accompanying their scaling strategies was delayed by difficulties receiving government permission

for conducting studies, by data collection obstacles, and by travel and communication barriers—as well as from a general deprioritizing of research by government. In the words of one collaborator during this period, "Very little research is moving forward in consequential ways... since it's not considered urgent by government."

An important learning from these examples is that public crises relegate testing and implementing new educational approaches to the margins. Now that we know what can happen during a global emergency, we recommend that education stakeholders discuss contingency plans with partners ahead of time and use existing resources like the INEE Minimum Standards to develop a playbook for when national, regional, or local authorities are under extreme pressure. This is also a reminder that relying on a single contact at a government agency or a sole source of public financing is risky. Scalars should engage back-up counterparts (e.g., seconds-in-command), diversify their funding mechanisms, and build adaptivity into their formal scaling strategies. And finally, in 2022 the world now knows the profound effects of learning loss, teacher burnout, and implications of school closures on families and communities during a crisis—and so teams should consistently make forceful arguments for the need to sustain focused attention on education even when it might seem superfluous.

COVID-19 also presented some opportunities for scaling teams, especially those promoting digital technology related to curriculum, training delivery, or learning assessment. As a member of PAL reported: When "the traditional system [came] to a standstill... tech-based innovations for continued teaching and learning became central." Similarly, ABRA experienced a newfound "niche for...research-proven tools for literacy development." The PAL team also recognized increased interest in its learning assessment tool as stakeholders began noticing learning loss due to COVID-19. A few teams even found that some teachers who were once reluctant now became interested in working on "tech-connected innovations for...peer support, student diagnostics, [and] virtual assessments..." A member

of the PAL network said that in Bangladesh, nimble 21st century NGOs suddenly had an advantage over larger, more entrenched ones: “Traditional NGOs did not respond fast enough to the changes caused by the pandemic...and lagged...creating new space for new organizations with young, educated, and tech-savvy staff.”

We see a need for both NGO models here because long-standing, established NGOs have status and strong relationships with private and public sector champions even though they can sometimes be more fixed in their ways of operating. Deep systems can be hard to transform. But a fundamental rupture in the status quo—while lamentably creating chaos and upheaval—also offers a rare opportunity to rebuild structures and recalibrate human practices to be more in line with contemporary goals, technologies, and contexts. This potential opening for change is well suited for small, agile NGOs.

Scaling teams should look for opportunities in these types of focusing events to show policymakers how their innovation responds to an urgent need.

COVID-19 is one example of how external events can affect scaling. Other external examples cited by teams included attacks on schools by illegally armed groups, multidimensional crises (e.g., a confluence of security, socio-political, and health catastrophes), or natural disasters such as hurricanes or drought—all of which can halt learning and impede scaling. As mentioned previously, the disruptions caused by disasters are tragic, complex events that are hard to predict. However, teams have shown that these can also provide opportunities to highlight the importance of education innovations that ensure students continue learning even in times of crisis.

We hope that governments, educationalists, CSOs, and scaling personnel will find ways to come together during the next year to discuss purposes of education in their jurisdictions and find the courage to truly transform—not just cosmetically repair—ways of educating young people.

Political climates and elections

Another complexity in the enabling environment for many teams is political transitions. Looking at the ROSIE information, we found that national and regional elections in 2021 and 2022 affected how several collaborators pursued their scaling. Government changes affected the continuity of scaling journeys. Some examples include one country replacing a socialist-Maoist government with a more centrist one; a government increasing oversight of NGOs and prohibiting CSOs from engaging in activities that could be construed as political; another country where many private-sector organizations (such as TV stations and internet providers that play a key role in scaling the ROSIE teams’ ICT innovations) became reluctant to partner with public initiatives.

Aside from governmental transitions, electoral cycles can impact education in other ways. In three different countries, teams reported that relationships with public authorities turned tentative and the government’s amenability to private and civil society sectors weakened during elections. In a few countries, the election season disrupted school operations (and innovation scaling plans) when schools become polling places for extended periods. In another instance, collaborators in a country shared that “bad memories of past presidential [elections] resulting in violence have added to our current uncertainty.”

A common challenge faced by ROSIE teams is how to maintain government support when their innovation is tied to an outgoing administration. Politicians often campaign on rejecting the status quo; for ROSIE teams that have sometimes spent several years engaging the support of government in service of their innovation, it can be difficult to start this process all over again when a new administration enters. Some ROSIE teams have built ways to address this in their scaling strategy—such as aligning their innovation with public priorities that remain intact even when power changes hands (e.g., the importance of STEM education in an industrialized economy or prioritizing girls’ education as

a universal right); emphasizing the positive collection of impacts their scaling will produce; or establishing relationships with non-elected, non-appointed government technocrats. One ROSIE team had initially garnered government support for its composite data index for school improvement by aligning it with the administration's high-stakes accountability system. When that administration was replaced by one that did not support high-stakes accountability, the team recast its composite index as one that could illuminate school needs rather than measure school performance.

Aside from elections, a political situation can also shift without warning in countries with unstable governments. A few ROSIE teams in Central America and one in Africa reported that frequent turnover at the ministerial level and internal tensions in government became a regular source of stress and internal turnover in teams. Furthermore, one team reported that, in the case of its particular scaling strategy, everything depended on government and when there was a signal that government priorities might change, their university partners and other stakeholders ceased all communication until they knew what direction government was going to take. The paradox of scaling with governments is that an innovation typically needs the government for the scaling to take hold, but the government is also able to pause or derail it at any time. This challenge is particularly acute in locations with unstable governments. That government can be both the primary enabler, and a powerful barrier, is a complex fact of life for scaling in some LMICs.

As a result, we recommend focusing on the value of the innovation to children, families, and schools rather than tying innovations to politics.

Governance structures

While individual relationships with government leaders and shifting electoral priorities are complex problems, the structures of government can be more predictable; this makes them complicated but not complex. Teams that invest in understanding governance structures in their target countries can proactively plan how and when to leverage the enabling environment in support of their innovation in ways less encumbered by the vagaries of electoral politics.

One value of focusing on governance is that it allows teams to engage policymakers across different levels of the system. For example, the Karanta Foundation began its scaling work by soliciting input from local authorities already running non-formal education programs. Once its own non-formal education innovation was underway, the connection to local officials was already in place, which nicely positioned the team to seek “buy-in from those in charge in the higher-level ministry.” Another example is ABRA enlisting support of local officials in a way that offered the officials their own political ownership in connection to the innovation. Similarly, DUCE includes regional authorities in its training and dissemination events in order to create opportunities for potential champions to articulate the promise of the innovation across public-sector levels. Sure enough, as a DUCE member said, “We had a regional education officer who said, ‘When you’re writing your report, make sure I’m copied because I want to communicate this innovation to the ministry.’”

Many ROSIE collaborators pointed out that government staff turnover is more frequent the higher up the hierarchy one goes, and so teams attempt not only to engage ministry of education personnel and other senior-level government officials but also “the technical people below them.” There is widespread belief that mid-level technocrats are an indispensable stakeholder population because they learn the innovations more fully, are intimately familiar with the education system in their jurisdiction, stay in their positions longer, and are considered less political in their decisionmaking.

In countries where education decentralization is well-established (which seem to include Anglophone Africa, Pakistan, and Nepal but appear to exclude Latin America and the Caribbean), this extends to including regional and local governments as stakeholders. And yet we also know that the daily roles and practices of mid-level and local bureaucrats and educators are notoriously impervious to top-down change.

Given these intricacies, we hope more research will be conducted on this important, but sometimes overlooked, middle level of scaling champions.

Decentralization, whether recent or decades old, also plays a role in how ROSIE teams engage across different levels of governance. AfC talked about its need to work with multiple government levels simultaneously and to strategically know which level can support which aspect of scaling. They knew that state ministries of education in Nigeria were essential in implementing programs like theirs and that international organizations could offer funding, but that—unless the central government was kept in the loop and could report its own successes in relation to the innovation—nothing would be sustained. Similarly, CAMFED found that recent decentralization in Zambia means that the scaling team must enlist new stakeholders because funding for electoral districts or constituencies has increased and thus local councils will soon determine spending priorities. Understanding and harnessing these changes is important and so CAMFED has had, in their own words, to begin “learning how to work with political [stakeholders]” to include their innovation in local development plans.

Some scaling proponents say that taking on whole systems is neither cost-effective nor possible, given the considerable complexity and incoherence of education systems, and so they recommend a focus on small-scale impact—in particular, focusing on communities that might flourish and spread. Others recommend narrow systems change by way of scaling to affect only one part of the system, but deeply. Other scaling proponents fully embrace systems change and push for creating synergies across multiple innovations as a way to effect broad transformation.²²

We believe that scaling and systems change are not incompatible and, in fact, can be pursued in complementary ways. An important question for scalars (and their stakeholders) to ask themselves is, “How can you position your innovation in a way that encourages whole structures or populations to do things differently?” If the scaling strategy for an innovation includes linking multiple system parts for holistic change, then systems transformation is possible.

Financing

We believe that the financing aspect is both complicated and complex and so in this section we treat it as both. Like scaling, the topic of funding can be viewed as having stages. Initial grants usually support short-term pilots and limited testing or scoping research. A primary goal of such endeavors is to secure subsequent long-term (ideally public) financing for the scaling process—a middle stage of funding commonly known as the “valley of death” because its scarcity leads to the demise of many promising scaling efforts. This middle phase is often overlooked by donors, originators, implementers, and other scaling partners. We entreat scaling teams and funding partners to focus on this stage early and to continuously track their plans for middle phase financing. And the third phase—the one most sought-after—is for government to build sufficient funding for the innovation’s scaling into its national education budget to continue the innovation’s use permanently.

Many ROSIE teams actively work to generate greater public sector interest and engagement in their innovations in part as a pathway to long-term financing. For example, TPD@Scale and ABRA are working to integrate their TPD innovation and online education, respectively, into the national education portals, taking advantage of recently created TPD allowances or mandated teacher retraining requirements. CL4STEM, DUCE, PAL, and TPD@Scale are each partnering with central education authorities and in-country service providers in some locations. But securing a line-item in the national budget does not always mean that funding will follow.

For many ROSIE teams, access to long-term government funding for scaling continues to be a challenge. Some teams report that one barrier to scaling is implementation costs that governments must cover. For example, ABRA recognizes that “regular maintenance and support of [the digital innovation] devices... need to be embedded in the ministry of education budget. But it’s expensive.” The ULLN team shared that, “[I]f the government were to promote [our innovation], there are associated costs...[and] to come up with funding to do that...would require them to cut out something else. And [because] the national economy has contracted in the last few years, finding this funding would not be straightforward.” Several teams noted that financing difficulties underscore the importance of having proper cost data in order to accurately predict the budgeting requirements of scaling the innovations.²³

On the short-term side of the funding spectrum, teams typically turn to development financing. Regional and international partnerships with donor organizations are common sources for future funds. For example, accelerated education programs have been financed or supported by USAID, the World Bank, GPE, Co-Impact, the Bill and Melinda Gates Foundation, FHI360, and UN-OCHA, among others, and many local implementers rely on such funding to operate. The role of short-term funding on scaling is discussed in more detail in a following section on incentives.

Teams looking for middle-phase funding should focus on mechanisms that connect innovators with scaling partners, such as the Global Innovations Fund, which stage financing by level of innovation advancement and evidence of potential for success. Some nonprofit organizations in LMICs have found that establishing endowment funds can help secure operational revenues and ensure financing for this stage. The grants under the GPE KIX program are another way to fund the foundation-building needed to support long-term scaling efforts. Working more closely with the municipal or provincial/state levels and—when appropriate, with private companies—could provide opportunities to pass successfully through the middle-phase of financing.

Educational technology

An increasingly influential factor in the enabling environment for scaling education innovations in many countries is education technology (ed tech). We found that all ROSIE collaborators working with ed tech innovations—and the governments that are working with them—are optimistic about the success of using digital technology in education in LMICs, but the reality is both complicated and complex, and deeper, third-party attention to dimensions of scaling ed tech in LMICs is desperately needed.

HOW ROSIE TEAMS ARE USING TECH

We found that ROSIE teams’ innovations use ed tech in three broad ways: (1) ICT tools to enhance learning, teaching, and assessment; (2) online or blended TPD; and (3) EMIS.

ICT is the most common, with seven of the 14 teams focusing on ICT devices in some aspect—from computers to tablets to mobile, smart, or flip phones, the internet and—to a lesser extent—on traditional broadcasting media such as television or radio. ICT is typically employed by ROSIE teams as a tool to foster teacher support and collaboration—often through instant messaging apps, searching for information online, printing materials, and typing out lesson plans. Another role for ICT is to help teachers diagnose students’ learning development: Several ROSIE team innovations feature digital assessments that provide feedback on student listening, reading comprehension, and decoding tasks in order to help teachers “quickly bridge the gap between assessments and actions to improve learning.”

Using tech to improve access, quality, and coverage for TPD is also common. Because they are more likely to be digitally literate, newly qualified (and therefore younger in age) teachers are perceived to be better at using electronic devices for work than older educators, but ROSIE data suggest that all teachers are presumed to benefit from ICT-mediated TPD. One benefit frequently

cited is that it connects people across geographies and facilitates exchanges between participants outside a single institution. We also heard the claim that teachers learn better from people they do not know, although we would caution that this belief contradicts some of the research on teacher learning.²⁴

Technology in TPD is also perceived as a useful replacement for the traditional cascade model with its risks of dilution and its high implementation costs. A scaling team member working in Central America shared that, “Within the Secretary of Education, some... are absolutely sure that virtual means are the way to go, and with this project, they see that they can reach more people with less monetary resources.” Blended or fully online training also carries the advent of “simultaneous interpretation to support multi-language meetings.” With an eye toward sustainability, remote TPD also offers the possibility for teachers to increase ownership of their own learning around a new teaching intervention because they will be teaching themselves how to use the intervention. As a member of ABRA said, there is the hope that remote online TPD will support the transition from high intensity “in-person handholding by our team” to “getting teachers learning” and replicating the innovation’s program on their own, supported by available video materials and online resources. It was also put forward as a good way to reach teachers in remote locations.

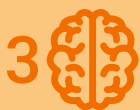
While five teams are working on ICT-based innovations, we note that only one reports having enlisted a national telecommunications service provider as an ally for scale. For this team, the alliance was beneficial and resulted in discounted data bundles for teachers to access the program’s TPD and whitelisted TPD websites (i.e., “no internet charges will apply to access/download the[ir] materials”). In general, because ed tech tends to rely on professionals and organizations outside the traditional education system, it requires new ways of working and new public-private approaches to scaling efforts. That carries both opportunities and challenges.

Another ed tech approach is using ICT to alter teaching and learning dynamics. In other words, a touted promise of ed tech for many has long been that it changes (and

improves) how teachers and learners relate to each other around curricula. For example, CEIBAL is focusing on students and teachers constructing knowledge together:

Like in social media, students create threads: We have them input narratives, stories, drawings, etcetera, related to the content. And then they discuss these with teachers in school and upload them on their devices. [We are even trying to] replicate this principle of reciprocity in rural schools, even if it is not digitally mediated. Students can share their thread maybe in the central square or in the market that they have on Saturdays.

Another group noted how students supporting teachers with technology use in the classroom has the knock-on effect of empowering students as educators.



PRINCIPLE OF PRACTICE ASSUMPTION TO INTERROGATE

While these examples highlight the potential and use of ed tech in the education ecosystem, we also think it is important to examine some underlying assumptions about ed tech. One assumption is the idea that introducing ICT by itself facilitates improved student learning or improves teachers' pedagogical practices. Specific examples we found include beliefs that digital content is inherently learner-centered, that teachers will work effectively with a large class through workstations, that students learn better through adapting learning algorithms and virtual exposure to educational content, and that tech intrinsically encourages teachers to interact more creatively with learners. These propositions may or may not be true; collecting and reflecting on evidence around themes is necessary to confirm if, and under what conditions, such promises actually occur.

Another assumption relates to what kind of support is required to sustain ed tech interventions. Several teams are finding that teachers need more TPD on using the technology than initially expected in order to learn the innovation. A few teams have begun recognizing that digital hardware does not last long (especially in locations with heat or moisture). Several teams are finding it hard to persuade governments to fund upkeep of the machines. And at least one of the social organizations that used to supply refurbished computers to schools in LMICs has shut down. These details underscore a worry that the popularity of machine-based learning for teachers and students in LMICs will wane when the novelty—and initial funding—evaporates.

And finally, the assumption that teachers will appreciate and authentically engage with digital instructional tools may be more aspirational than realistic. As one team member said, "We can buy the machines for schools and put our programs on them but [we] don't know if they'll be used by students and teachers—or if teachers will [continue] the learning that our innovation initiates." Teams recognize several risks related to teacher uptake of tech innovations: (1) that initial excitement "might fade away," (2) that low-quality printed materials may end up being digitized "in the effort to put content on the devices," (3) that TPD could end up focusing more on using the hardware instead of "technology as a conduit for effective instruction in the subject areas...to enhance learning and not to replace the teacher," and (4) that teachers might see the technology as an easy way out. For example, one team found that some teachers did not like having to "actually learn learning theory and the new pedagogies needed" to apply the ed tech mediated instruction in their classrooms: "They would rather just turn on the machines."

These concerns are important because if structural, educational, or fiscal support is not provided for all participants (including families) to access and use the equipment, the scaling of ed tech might actually increase existing inequities. Four teams highlighted ICT's exclusionary properties more than its contribution to the education of learners in marginalized populations. This equity implication could be compounded because those who are excluded from technology are often the same groups historically excluded from the modern education system. Teams shared multiple examples, including teachers who cannot afford smartphones

(CL4STEM); people who are visually impaired (ABRA); OOSCY such as girls who got pregnant during the pandemic (ABRA); or children in hard-to-reach areas often populated by indigenous groups (ABRA, PAL, and TPD@Scale). Choices must be made about who will benefit from edtech approaches and cost, efficiency, equity, and quality of education sometimes work against each other.

Another presumption we noticed is the notion that learning to use ICT in the classroom will motivate veteran educators to develop new, creative teaching

practices. A representative example is this statement by one team member: “The teachers see the technology doing pre-literacy activities and, as a result, they can come up with their own ideas of how to turn those into... classroom activities when students are not using the technology.” Decades of research have found both that most teachers use the technology to teach the same way they taught before and that interest in a new tech gadget in the classroom dissolves over time or is replaced by the next ed tech innovation.²⁵ Furthermore, we heard from several teams that many teachers (especially more veteran educators who are both less likely to be digital natives and more likely to be lead teachers in a school), did not know how to use ICT comfortably.

GPE KIX grants offer an opportunity not only to scale promising interventions, but also to generate evidence that helps confirm or disprove assumptions about popular reforms. We therefore invite all ROSIE teams—not only those with tech-based innovations—to examine their whole collection of impacts on teaching and learning. If technology does bring an element of joy, learner autonomy or teacher innovation into classrooms; improves how students and teachers relate to each other; or in other manners increases learning, then it is imperative for research to capture what is happening. If its promises are not borne out by the reality, those stories must be shared as well.

Course corrections to respond to complexity

As teams implemented their scaling strategies, they learned lessons about what works and what needed to be adapted. As a result, during the first year of ROSIE, teams made a number of insightful course corrections to their scaling strategies and implementation plans.

One category of adjustment comes from learning from public sector partners along the way. Working with government personnel is not only a scaling driver but also a bi-directional learning experience

for ROSIE teams and public sector partners. For example, one team initially expected that once it taught its government partners how to conduct the technical research of analyzing education data, the government could take over the statistical work. This was one way the team would encourage government ownership. But that turned out to be overly ambitious: “The process of engaging with them made us realize that it’s unrealistic to expect that something that takes years of statistics training can be transferred by way of a series of remote sessions to staff who already have so much on their plate.” As a result, the ROSIE team realigned this mid-term goal and established a different process so government partners could take ownership of the data without having to conduct the statistical analyses themselves. The team recognized that this was not perfect but that some government engagement at this point in the scaling process was better than no engagement at all. “Maybe it’s a trade-off, but it is probably necessary ... and will likely better achieve our ultimate goal.”

We recommend including partners in early discussions of what is feasible versus what is desirable, in terms of building the institutional capacity of the education system over time. It is easy to overlook that stakeholders, even education experts, might not have the same expertise, capacity, or time as scaling implementers and that learning new practices is rarely simple or quick. Learning which variables can be predicted and addressed ahead of time is one way to transform the complex into the complicated.

Another learning experience for ROSIE teams as they pursued scaling was that, either because of inaccurate calculations or limited budgets, initial cost projections were too low. One regional collaboration team (SAHE) researching the application of a composite index for school improvement at scale found that it was too expensive to send field monitors out to all schools to collect school data. To adapt, they are now experimenting with schools self-reporting the data. But recognizing the trade-off between collection costs (prohibitively high) and data accuracy (schools are not always truthful in their self-reporting), the researchers

are trying to find a viable balance. This team also discovered that its software was treating missing data as absent performance and they are now working to adjust this.

These examples underscore that scaling is often a process of learning along the way. It is important to be on the lookout for small but significant—sometimes buried—details.

Another category of adaptation occurs when replicating an innovation in a new location—we call this “contextualization.” Given that more than half of the ROSIE scaling strategies are of this variety, contextualization is an important topic. While developing its digital assessment tool for multiple countries, the PAL team needed to learn and represent the frequency of particular words in participating languages in each location. Finding a source to represent word frequency across multiple languages turned out to be difficult and they ultimately chose to rely on existing textbooks, “even if the books don’t reflect the most advanced ways of teaching.” Some teams reported a need to replace their reading materials with texts that reflect the local history and traditions. They did this by reaching out to community members as cultural informants.

Other teams talked about having to adjust their implementation timelines to match altered academic calendars of countries. In some cases, teams even saw the need to relocate their implementation sites in order to increase public sector support. Where government backing was absent or less straightforward, one team opted to move activities to a more supportive country and work with a different public interlocutor (the prime minister’s office instead of directly with the ministry of primary education) to advance the innovation.

These examples demonstrate not only that multiple components of the enabling environment must be favorable for scaling to occur, but that on-the-ground conditions cannot always be predicted ahead of time. For some initiatives, moving locations or sacrificing parts of an innovation is an acceptable trade-off. This should remind scalers

that it is the core idea or central feature of the innovation that should be protected; the other parts can often be altered or even jettisoned if it means that the core methodology can be advanced.

As these examples reveal, scaling rarely goes to plan—even when the innovation has been scaled previously in another location. This means not only that an adaptive mindset is important, but that learning from scaling case studies,²⁶ talking regularly with colleagues who are scaling other education innovations, and prioritizing the collection and use of real-time evidence is essential. Scaling is a process of continual improvement that requires collecting the right kinds of data and a mind open to identifying deficiencies, opportunities, and possible adjustments. One helpful tool for this is CUE’s [Adaptation Tracker](#).

Conclusions

These many factors—from COVID-19 to political transitions to the rise of ed tech—all highlight elements in the enabling environment that can influence a scaling journey. Some of these are complicated, meaning they can be planned for. Others are complex and will therefore arise unexpectedly. For example, teams may be able to plan for an upcoming election cycle, but they may not be able to predict how their government stakeholders will react during that period. Or, teams can plan for middle-phase funding, but will have to adapt on the spot if those funds do not materialize. Understanding the interplay between both complex and complicated problems in the enabling environment is essential for teams as they develop and adapt their scaling strategies. Naming the predictable complications and planning for them—while continuously collecting evidence and reflecting on how things are going along the way—can position ROSIE teams for seeing and capitalizing on increased opportunities.

IV. Recognizing that incentives matter and that we cannot short-term-think our way into lasting impact

Though scaling is a process requiring time, thought, and continual adaptation, it is also a process structured by incentives. When the incentives are aligned, their collective force multiplies. Conversely, when incentives are misaligned or contradictory, their effect can be diluted or become irreconcilable. For these reasons, what is incentivized, by whom, and how become salient questions for scaling.

While the 14 ROSIE projects are at different points in their scaling journeys, all of them are thinking about scaling the long-term impact of their innovations in some way. Yet, the reality is that time constraints, institutional pressures, and funding structures tend to incentivize the technical completion of bounded projects—often called “project implementation”—instead of deeply investigating how to achieve lasting scaling impact. This “speed-versus-depth” tradeoff is one that many teams face.

Electoral cycles incentivize quick results and shift priorities

The scaling science has shown that even highly productive new models and technologies may take over 15 years to scale.²⁷ However, government administrations in democratic countries span four to eight years. The frequent shifts in political governance disincentivize the long-term implementation required to effectively take something to scale. This political

reality can inhibit government stakeholders from having honest conversations about how to define optimal scale and how to develop a portfolio of innovations to test and adapt over time.²⁸ In turn, this “intervention discontinuity”²⁹ also means that some technocrats and teachers learn to navigate transitory priorities by not investing themselves in the discussions taking place from one administration to the next or not getting too involved in new educational interventions that cycle through.³⁰

When working with stakeholders, we recommend focusing on the specific problem, emphasizing the potential impact of the intervention, and centralizing how the innovation improves learning outcomes for children—rather than aligning the innovation with specific political priorities.

Short-term grant funding incentivizes competition and fragmentation

With short-term financing increasingly laden with an imperative to scale, some teams move their innovation forward by applying for several consecutive or simultaneous grants—focusing on aspects of the intervention to fit different calls for proposals. This strategy might creatively address the misalignment between funding and scaling durations, but it adds project management costs, dilutes a singular focus on a given collection of impacts, and may result in preliminary interventions being framed as innovations ready for scaling when the evidence is still insufficient to justify them.

Competitive funding mechanisms also fragment the innovation landscape and encourage competition over collaboration. Because past successes give local NGOs an “upper hand in being picked” by international organizations that “are always looking for partners” to subcontract, managers and researchers continue to be

rewarded for securing and carrying through individual grants or bounded projects. As one team told us, “There is a confrontational [sic] conflict of interest because... [national and INGOs]...all compete for the same... projects and funding.” As a result, this could create reluctance for teams to share with others what they are learning and could motivate teams to keep conducting versions of the same thing (because it gets funded), rather than experimenting with alternative scaling approaches.

Funding timelines also impact how ROSIE teams work with stakeholders. Stakeholders and partners are essential for scaling but working with them requires time and diplomacy. When administrative progress reports, reviews of materials, and the messiness of collaborative work are added, it can become very time-intensive: effort that is worthwhile but that stretches out the timeline. And donors dislike stretched timelines. As one team said, “[T]here are a lot of reviews...a lot of comments everybody wants to input, and we love it. This is...in the DNA of the project. At the same time, as the grant deadline is looming, we need to rethink about how we are doing co-creation because we need to move; otherwise, we’re not going to be done with the research in time.”

Groups that have a promising innovation for scaling that addresses a clear demand would do well to first invest time in understanding the science of scaling, learning deeply about the problem they hope to address, engaging multiple stakeholders to learn best practices for effective scaling, and developing long-term timelines that go beyond their current project scope. To do this, however, donor organizations must offer funding that supports this “pre-scaling” stage—such as what GPE, the World Bank, and some others currently do. Not funding the pre-scaling planning work is to incentivize a team to begin before it is fully prepared to do so—thereby lessening its chances of success.

Research focused on impact data is incentivized over qualitative research on implementation and scaling process

All 14 ROSIE teams include researchers. An array of monitoring, evaluation, and learning information is being collected for program management and implementation purposes, including data on reach and access, as well as data on student learning outcomes in a few cases (including, but not limited to, ABRA and TaRL Africa). See Table 2.

TABLE 2

How do ROSIE teams use data

PURPOSE OF DATA	EXAMPLES OF ROSIE TEAMS
Collect information on student performance, teacher profiles, and other school inputs that feed into composite indexes	DMS and SAHE
Study word frequency in reference textbooks in participating languages	PAL (e.g., informs decoding tasks in the digital assessment)
Identify key elements of education programs to pilot as best practices	Karanta
Gather participant demographics, prior knowledge, and perspectives	UHAITI (e.g., includes teachers' openness/resistance to change)
Conduct situational analyses related to the issues that innovations seek to address in targeted countries	AfC and CL4STEM
Conduct <ul style="list-style-type: none"> • Pre-/post-training surveys and/or base-, mid-, and end-term qualitative evaluations with participants or capture these participation effects through interviews, focus groups, and surveys • literacy and numeracy learning assessment for students Observe teaching practice	<ul style="list-style-type: none"> • ABRA, CAMFED, CEIBAL, CL4STEM, DUCE, and UHAITI • ABRA, PAL, TaRL Africa, and ULLN • ABRA and CL4STEM
Use anecdotal evidence ^{xvii}	<ul style="list-style-type: none"> • TPD@Scale (e.g., from teacher exchanges in learning communities, teacher self-reports of "things they have changed") • CAMFED and DUCE (e.g., triangulating monitoring data)

Source: ROSIE data.

Two teams mention longitudinal research on, and scalability of, their innovation in countries of focus for ROSIE (ABRA and CAMFED). However, other ROSIE collaborators point to the multiplicity of factors that affect teaching and learning in any context and do not look at related outcomes

^{xvii}. Teams have reported the prohibitively expensive nature of observations, and many instead rely on anecdotal evidence.

because either they cannot attribute them solely to their intervention, or because they are currently at a level where they are measuring access to the intervention only—not whether participating in the innovation changes anything for children and adults.

As highlighted earlier, many teams' information collection and dissemination exercises are designed to "get a foot in the door" and galvanize relevant stakeholder interest. Teams hope that sharing research outputs will result in greater buy-in for intervention uptake. For some teams, how the data will be used to improve the innovations' ability to scale is less clear. The role of research often seems to be to move the interventions along initially agreed-upon plans and metrics, not necessarily to learn if criteria for scaling are being met or if lasting change is occurring—and in what ways and for whom. Furthermore, given that the data are used to showcase the potential of the innovation for scaling and the researchers are members of the ROSIE teams, there could be tacit pressure to downplay negative outcomes. And, finally, when research institutions and publishing venues privilege certain study designs—such as evaluation studies, quantitative metrics, or research on educational access—researchers must go against the grain if they want to conduct qualitative research such as process studies, longitudinal work, or ethnographic studies of scaling's impact over time.

We believe that the science and practice of scaling education innovations will be enriched by increased use of mixed-methods research to examine innovations' collection of impacts, by qualitative studies that investigate how locations are changed by an innovation, and by open-ended process investigations of how scaling works. Additionally, because research can help teams think more effectively about their ongoing work, we recommend not losing sight of the evidence that justifies scaling the innovation (or not). As McLean and Gargani (2019) describe, look at the changes occurring for those with the greatest vested interest or impact risk.

Research that incentivizes an equity lens can highlight new dimensions of scaling

Given the GPE KIX initiative's explicit focus on gender equity and social inclusion, we were not surprised to see several teams using their research to investigate issues related to gender. We additionally found a frequent equity focus on rural education and educational access for all.

For example, DUCE is focused on understanding why there were higher failure rates for female students in mathematics and found the prevalence of male teachers to be a factor. In response, the team developed a gender strategy that supports teachers to encourage equal participation of girls and boys in their classrooms. AfC is investigating how early marriage and parent perceptions of education and gender roles influence rates of OOSCY. This research informs the accelerated education programs with which AfC works, and some programs now specifically include components for girls, including mentoring by community role models. ULLN actively supports mothers and other women who become critical parts of their reading camps, and recognizes their important contributions. Two groups working on EMIS are attempting to integrate gender and inclusion indicators into their composite indexes for school improvement (DMS and SAHE).

Some teams whose innovations focus on teacher development are collecting data to understand which teachers have access to ICT devices that allow them to participate in the digital TPD. One team is doing pre-field testing research on the gender breakdown of teachers with mobile data. Another team partnered with the Open University in Tanzania because it "has offices in many locations [so] if teachers do not have access to devices, they can come to Open University centers and participate in [our] modules from the university space."

In addition to gender and access to ICT, teams are also focusing on education in rural areas. CEIBAL chose to work specifically in rural areas because they believe educational needs are greater in rural locations in their focal countries. AfC has focused on how particular challenges in rural areas—including school quality, distance to school, and gender disparities—contribute to more out-of-school children compared to urban areas. Many teams grapple with how to bring their ed tech components to rural areas that do not have easy access to the internet.

Cultural variations—especially language—as an equity issue also arose, albeit more moderately. Two groups (ABRA and AfC) are developing curriculum and content in local languages or dialects to be sure that they represent minority populations, and CEIBAL hopes to include the promotion of multiple languages as a scaling goal in the future.

One team mentioned their desire to focus on inclusion but noted that the availability of data on children with disabilities could be challenging as it was often too small or nonexistent to “be taken into account in the same manner with which we use the other data sets.”

A final focus is on research dissemination, with one team explicitly using their gender strategy to inform research communications and another team (PAL) promoting events focusing on education “for marginalized, poor women” through network members.



PRINCIPLE OF PRACTICE ASSUMPTION TO INTERROGATE

These findings highlight that incentivizing equity in scaling research not only produces valuable insights for others but can also inform scaling teams themselves to ensure that their innovations are truly reaching *all* beneficiaries in meaningful ways. When equity is centralized as a research topic, it will become more prevalent in conversations around scaling and, ultimately, in education practice.

We also, however, want to call attention to aspects of equity that seem to be absent. There was little in the way of students (or OOSCY) with learning differences, nothing about LGBTQA+ issues in education, and—with the exception of rural foci and multilingualism—scant reference to violence toward or exclusion of ethnic minorities.

Incentivizing attention to issues of equity is crucial—and we found more than one positive remark about the GPE KIX initiative’s emphasis on equity—but we hope that the global field broadens and deepens how equity is treated. And we encourage researchers and practitioners to find ways to translate the rhetoric into increased action, and frame quality and equity as complementary dimensions of scaling (rather than some kind of trade-off to “manage”).



Conclusions

While not always as tangible as stakeholder engagement or as visible as environmental factors, incentives are crucial when considering scaling. If the incentives are weak or misaligned, they can disrupt or constrain even the most well-planned scaling strategy. This challenge between wanting to plan for scale but having to contend daily with small but impactful incentives that work against scale was highlighted repeatedly by the teams. This is important because scaling in education cannot expect that short-term thinking will meet long-term goals. If the education scaling community truly hopes to meet the targets of SDG 4 and improve learning for all children, then restructuring the existing incentive structure is critical. This will need to occur at all levels of governments, communities, other stakeholders, CSOs, and donors. And yet, those groups are themselves incentivized by their own constituencies, histories, and forces—a second level of incentives that must also be interrogated.



FINAL THOUGHTS

Because the ROSIE project is ongoing, the insights and details shared in this report are provisional and will likely deepen and be fine-tuned during our next rounds of data collection and reflection. We conclude by pointing to four components of scaling that emerged in this analysis as being key locations for action.

| Stakeholders

Various stakeholders and partners—including government personnel, teachers, and families—are essential to scaling but are not always treated as well-defined constituencies, and how and to what extent to engage them is rarely clear to scaling teams. Although there are complexities and challenges, we believe that shifting more stakeholders to active partners and co-constructors of scaling will increase buy-in, support, and equity in the scaling process. This can be accomplished by naming and mapping *all* potential champions early in the journey and strategizing how individuals, groups, and networks can collaborate together to achieve scaling

goals. There also appears to be real value in treating teachers as active, knowledgeable professionals whose co-construction, input, and commitment to students learning will improve the innovation designs and sustain implementation and likely improve teaching quality and teacher retention.

The enabling environment

An enabling environment contains forces and factors that impede or advance the scaling of a promising innovation. Capitalizing on enablers and mitigating the barriers requires understanding the broader environment, as well as identifying ahead of time which complicated facilitators to harness (and how) and which challenges to address (and how). But, given that there is also complexity in any environment—especially in the sociopolitical contexts in which education sits—there is a need to be highly adaptable. Scalers should look for surprises, collect and reflect on evidence, and continually make (and track) adjustments to their scaling process along the way. Employing a tool like CUE’s [Adaptation Tracker](#) or a flexible research design can encourage this. Simplifying the core innovation or abandoning peripheral components during scaling when needed will often facilitate broader, deeper, or sustained use of the innovation. All this means that, sometimes, scaling is more of an art than a science.

Incentives

Scaling is a process of embedding a promising idea or practice into long-term use to change the practices of a system or location. Yet, the global incentive architecture that surrounds scaling can be contradictory, which has the effect of diluting effects or inadvertently promoting short-term efforts whose impact will not last. We recommend that the people and organizations involved in incentivizing the work—including funding organizations, technical supports, research institutions, and governments—work to restructure their systems. And scalers might do well to look for strategic ways to

push back against the current project mindset. If all the parts of funding, planning, governing, and researching the scaling of education improvement can work together to promote long-term change, the paradigm can move fully into a scaling or systems change paradigm. A tall order, for sure, but not impossible—and well worth the effort.

Equity

And finally, there have been gains in education access, but quality still lags. And, even when quality is the primary metric, it is still often set in opposition to equity. As a result, equity is seen as important but as a trade-off to manage—not a core tenet of scaling. Additionally, the *actions* around equity have not yet caught up with the *rhetoric* of equity. We recommend three broad efforts for the field. One is to frame equity and quality as complementary: providing robust teaching and learning to all populations, providing inclusive and just education practices for everyone, and valuing the rights and assets of traditionally marginalized groups is not an add-on—it *is* quality education. Two is to broaden equity emphases past gender and geography to also centralize LGBTQA+, ethnic minorities, learning differences, religious freedom, physical differences, and purposes of education. And three is to take advantage of the increased rhetoric around equity in education to incentivize substantial and sustained actions toward equity goals.

This report illuminates and learns from the impressive scaling work that the ROSIE teams have been conducting, while also underscoring how difficult this work truly is. We hope that continued detailed and candid examinations of the work will increase clarity on some of the areas requiring sustained focus or interrogation, as well as those places where success perennially remains elusive. As the field builds on its experiences and analyses of those experiences, we hope this report offers useful perspectives. We look forward to sharing more insights and recommendations from our continued ROSIE collaboration in the year to come.

ANNEX I

ROSIE COHORT 1

GLOBAL GRANTEES

ABRA

CONCORDIA UNIVERSITY, WILFRID LAURIER UNIVERSITY, AGA KHAN ACADEMIES UNIT OF AKDN, WORLD VISION CANADA

- **Project:** *Using technology to improve literacy in the Global South.*
- **Countries of focus:** Bangladesh, Kenya, Rwanda.
- **Research question:** What are the impacts of the innovations ABRACADABRA and READS, including associated professional development methods and support, on students' reading and writing? Do these effects generalize across learning contexts, teacher characteristics, and student characteristics?
- **Project summary:** This project uses literacy software tailored for the Global South to improve children's learning outcomes in low-income countries to increase student learning by enhancing teaching practices through education technologies for professional development. The project scales two education software innovations, ABRACADABRA and READS, which is implemented through professional development and follow-up support for teachers in face-to-face, blended, and fully online formats. The project involves field studies in urban, rural, and remote communities, and ongoing evaluation of the project and its scaling strategies feed into incremental enhancements to the tools and techniques to increase the likelihood of success.

DMS

UNICEF OFFICE OF RESEARCH – INNOCENTI

- **Project:** *Data Must Speak (DMS) about positive deviant approaches to learning.*
- **Countries of focus:** Burkina Faso, Ethiopia, Lao PDR, Madagascar, Nepal, Niger, Togo, Zambia.
- **Research Question:** What are the data-related factors that impede and enable the implementation of DMS?
- **Project summary:** This project adapts and scales a UNICEF-led proven innovation on data use in the education sector, DMS, and aims to generate knowledge and improved practices on using increasingly available education data to expand access and elevate school-level performance. The research incorporates the concept of positive deviance, uses a mixed-methods approach, and is simultaneously implemented in eight countries across Africa and Asia that have identified the need for better data management as a critical element of their Education Sector Plans.

PAL

THE PEOPLE ACTION LEARNING (PAL) NETWORK, PRATHAM, AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH

- **Project:** *Common-scale assessment of early and foundational math learning across the Global South.*
- **Countries of focus:** Bangladesh, Kenya, Mali, Mozambique, Nepal, Nicaragua, Nigeria, Pakistan, Senegal, Tanzania, Uganda.
- **Research question:** What are in-country and cross-country similarities and differences in numeracy and literacy competences?
- **Project summary:** This project seeks to scale a digitally adaptive common-scale literacy and numeracy tool (ELANA) tailored for assessing, reporting, and providing community-relevant data that parents and communities can easily understand. KIX supports the design and expansion of this tool to three districts in 12 countries in Latin America, Africa, and Asia.

TaRL Africa

TEACHING AT THE RIGHT LEVEL (TARL)

- **Project:** *Teaching at the Right Level (TaRL): Learning how to improve mentoring and monitoring support to teachers at scale in African government systems.*
- **Countries of Focus:** Côte d'Ivoire, Nigeria, Zambia.
- **Research question:** How can TaRL mentoring, training, and monitoring models be made more cost-effective for government systems to run at scale?
- **Project summary:** The TaRL Africa team is currently working with the government in Côte d'Ivoire, Nigeria, and Zambia to implement the TaRL approach. This project leverages current TaRL work to promote sustainable and effective government ownership of the TaRL approach. The project is piloting new innovations to the TaRL mentoring and monitoring approaches and rigorously testing the best innovations at scale in government systems.

TPD@Scale

FOUNDATION FOR INFORMATION TECHNOLOGY EDUCATION AND DEVELOPMENT (FIT-ED), SUMMA, WORLDREADER

- **Project:** *Adapting and scaling teacher professional development approaches in Ghana, Honduras, and Uzbekistan.*
- **Countries of focus:** Ghana, Honduras, Uzbekistan.
- **Research question:** How and to what extent can the TPD@Scale approach be used for in-service teacher training in these three countries to improve all teachers' access to quality professional development?

- **Project summary:** The TPD@Scale project applies ICT to enable more equitable access to and participation in quality teacher learning experiences otherwise impossible through conventional means. The project’s main objectives are to develop a framework and guidelines for adapting, implementing, evaluating, and continuously improving upon proven TPD@Scale models; to build the capacity of ministries of education and relevant stakeholders at all levels to design, develop, implement, evaluate, and continuously improve TPD@Scale; and to promote evidence-informed changes in policy and practice toward improved access to quality teacher professional development using the TPD@Scale approach.

ULLN

WORLD VISION, ONTARIO INSTITUTE FOR STUDIES IN EDUCATION, THE SCHOOL OF EDUCATION AND LEADERSHIP OF THE UNIVERSITY OF GHANA, FORO SOCIAL DE LA DEUDA EXTERNA Y DESARROLLO DE HONDURAS (FOSDEH)

- **Project:** *Improving literacy for children through the support of community networks (or Unlock Literacy Learning Networks (ULLN))*
- **Countries of focus:** Ghana, Honduras, Nicaragua.
- **Research question:** How can community actors and networks (both formal and informal)—with distinct and contextualized social issues—be strengthened to create their own adaptive systems to support children’s literacy at scale, focusing on the implementation of the Unlock Literacy program and its impact on literacy outcomes?
- **Project summary:** The Unlock Literacy Learning Network (ULLN) consortium project model works with teachers, community leaders, parents, volunteers, and administrators to adapt the Unlock Literacy (UL) approaches project model within local learning systems. Through research, the consortium explores how community-based actors work together, adapt, and interact with the formal education sector to implement and support community literacy activities (including reading camps) to improve girls’ and boys’ reading fluency within distinct contexts in Ghana, Honduras, and Nicaragua. This project aims to provide evidence on improving collaborative stakeholder networks that advance quality, sustainable, and effective gender-responsive and inclusive education programming for early grade students (grades 1-3) to improve children’s literacy levels within vulnerable populations.

ROSIE COHORT 2

REGIONAL GRANTEES

AfC

ASSOCIATES FOR CHANGE (AFC), GHANA, CENTRE FOR THE STUDY OF THE ECONOMIES OF AFRICA (CSEA), NIGERIA

- **Project:** *Increasing access to quality education for rural and marginalized children in West Africa: A comparative study of accelerated education programs and girls focused education models in Ghana, Nigeria, and Sierra Leone.*
- **Countries of focus:** Ghana, Nigeria, Sierra Leone.
- **Research question:** How can government capacity be built to adopt and scale up effective accelerated education innovations into policy to reduce the number of out-of-school children?
- **Project summary:** This project aims to generate lessons to enhance the scalability of Accelerated Education Programs (AEP) in Ghana, Nigeria, and Sierra Leone and conducts an analysis of four ongoing innovations in these countries (School for Life Complementary Basic Education Project, Strategic Approaches to Girls Education, Addressing Education in Northeast Nigeria, and Purposeful-Girls Circles project in Sierra Leone) and their effectiveness at reaching large populations of out-of-school children. Intended outcomes of the project include a strong evidence base on the effectiveness of AEP and girls focused education programming across rural, poor, and emergency contexts.

CAMFED

THE CAMPAIGN FOR FEMALE EDUCATION (CAMFED)

- **Project:** *Scaling a youth-led social support and mentorship program to improve quality of education for marginalized girls in Tanzania, Zambia, and Zimbabwe.*
- **Countries of focus:** Tanzania, Zambia, Zimbabwe.
- **Research question:** How can governments adopt and scale core elements of a youth-led social support and mentorship program in these three countries?
- **Project summary:** This project examines how the governments of Tanzania, Zambia, and Zimbabwe can adopt and sustainably scale core elements of the evidence-based, youth-led social support and mentorship program, Learner Guide. The Learner Guide program focuses on improving girls' access to and retention in secondary education and equipping them with a broad set of life skills necessary to transition to productive, fulfilling livelihoods. The project examines the program's effectiveness under government co-implementation and its impact on marginalized girls in Tanzania and investigates how this approach could be transferred to Zambia and Zimbabwe to integrate the intervention into their government structures.

CEIBAL

CEIBAL FOUNDATION

- **Project:** *Digital adaptations for effective and inclusive distance learning in rural communities in Honduras and Nicaragua.*
- **Countries of focus:** Honduras and Nicaragua.
- **Research question:** What is the best strategy to adapt, implement, and scale up the use of tech for distance and blended learning in rural communities in Honduras and Nicaragua?
- **Project summary:** This project seeks to strengthen education systems to enhance equity and inclusion in rural communities in Honduras and Nicaragua through distance and blended learning models using various available technologies and appropriate pedagogical frameworks. The project defines and tests proven uses of technology—including digital platforms and educational television—and associated learning strategies in culturally diverse rural contexts, and establish conditions and pathways for scalability and replicability. Expected outputs of the project include public policy guidelines, pedagogical frameworks, technical standards, and resources for professional teacher training.

CL4STEM

IBRAHIM BADAMASI BABANGIDA UNIVERSITY, LAIPAI (IBBUL), TATA INSTITUTE OF SOCIAL SCIENCES (TISS), AND THE OPEN UNIVERSITY OF TANZANIA

- **Project:** *Connected learning for teacher capacity building in science, technology, engineering, and mathematics (CL4STEM).*
- **Countries of focus:** Bhutan, Nigeria, Tanzania.
- **Research question:** To pilot the Connected Learning Initiative (CLIX) platform developed by the Tata Institute for capacity building for science, technology, engineering, and mathematics (STEM) teachers.
- **Project summary:** This project addresses the global undersupply of quality STEM teachers by adapting and testing CLIX, an open education resource platform developed in India that aims to support a community of practice via mobile devices for middle and secondary STEM teachers' professional development. The project takes a participatory approach to scaling the innovation and involves two major studies incorporating both quantitative and qualitative research methods— 1) an innovation diffusion study to generate knowledge on the processes and factors that support the adaptation of the innovation for new contexts and the conditions to support scaling in these contexts and 2) CLIX impact studies on learning outcomes attained by teachers and students. From this project, a suite of open education resources is curated and adapted for suitability to local contexts and needs, new communities of practice are created on ICT platforms, and new knowledge on adapting teacher training approaches is shared and integrated into teacher education institutions.

DUCE

DAR ES SALAAM UNIVERSITY COLLEGE OF EDUCATION (DUCE), KIBABII UNIVERSITY (KIBU), AND UNIVERSITY OF ZAMBIA (UNZA)

- **Project:** *Strengthening in-service teacher mentorship and support*
- **Countries of focus:** Kenya, Tanzania, Zambia.
- **Research question:** What are the existing and promising mentorship and support approaches for secondary school teachers, and how can they be scaled in these three countries?
- **Project summary:** This project adapts and scales up the school-based in-service teacher training (SITT) teacher mentorship and support model, which involves training experienced teachers and college tutors to mentor other secondary school teachers through peer learning exchange, model lessons, and team teaching. SITT has been successful at primary-school levels and is contextualized and adapted to secondary schools in Tanzania, Kenya, and Zambia—three countries with demonstrated commitment to continuous teacher professional development that lack comprehensive programs incorporating the mentorship and support approach. The project’s intended outcome is strengthening government efforts to implement well-functioning school-based in-service teacher training programs that improve the quality of teaching, empower students, and enhance the quality of basic education.

I-HELP

THE INCLUSIVE HOME-BASED EARLY LEARNING PROJECT (I-HELP)

- **Project:** *The Inclusive Home-based Early Learning Project: Increasing access to quality and equitable early child care and education.*
- **Countries of focus:** Kenya, Uganda, Zimbabwe.
- **Research question:** How can effective early childhood care and education (ECCE) models be adopted and scaled to increase access and improve school readiness in vulnerable communities?
- **Project summary:** This project seeks to adapt and scale up key elements of three early learning models (home-based, center-based, and play-based) to address the gap in government support faced by family and community engagement ECCE programs in many African countries. The project integrates different elements of these three models to create the I-HELP to generate lessons about how parents and teachers can support learning in a home and classroom environment enriched with sensory experiences to improve access and learning outcomes for children. The project’s intended outcome is increased community- to national-level action to provide access to quality ECCE for boys and girls—including those with disabilities—in Uganda, Kenya, and Zimbabwe.
- **No data from I-HELP are included in this current round of analysis*

Karanta Foundation

KARANTA FOUNDATION, FORUM FOR AFRICAN WOMEN EDUCATIONALISTS (FAWE), EDUCATIONAL RESEARCH NETWORK FOR WEST AND CENTRAL AFRICA (ERNWACA)/ RÉSEAU OUEST ET CENTRE AFRICAIN DE RECHERCHE EN EDUCATION (ROCARE)

- **Project:** *A new model of bridging classrooms to improve learning for out-of-school children and youth in the six member countries of the Karanta Foundation (Learning Center) in West Africa.*
- **Countries of focus:** Burkina Faso, Côte d'Ivoire, Guinea, Mali, Niger, Senegal.
- **Research question:** To what extent does the innovation proposed here provide solutions to the common policy challenges of providing new opportunities for out-of-school children and youth who have dropped out of primary and early secondary education?
- **Project summary:** The project "A new model of bridging classes to improve learning for out-of-school children and youth" in the six member countries of the Karanta Foundation in West Africa, is a research project in non-formal education. It is implemented by the Karanta Foundation in partnership with the Forum for African Women Educationalists (FAWE) and the Educational Research Network for West and Central Africa (ERNWACA). The overall objective of the project is to implement an innovative program to provide new opportunities for children and youth aged 8-15 years, outside the school system, through bridges between non-formal and formal education. Through in-depth research on proven educational practices and innovations in bridging, a new model of school-based non-formal education centers are being developed and piloted in countries. The innovative program emphasizes gender, inclusion, and uses bilingual teaching. At the end of the experimental phase, a plan for scaling up the model will be proposed by the project team.

SAHE

SOCIETY FOR THE ADVANCEMENT OF EDUCATION (SAHE)

- **Project:** *Data use for school improvement - opportunities, challenges, and scalable solutions.*
- **Countries of focus:** Nepal, Pakistan.
- **Research question:** How can the School Improvement Framework (SIF) be adapted, enhanced, and scaled in these countries?
- **Project summary:** This project aims to generate knowledge to optimize the use of data produced by schools to improve their management and results, and inform how other education system levels can support improvement at the school level. Indicators in key domains present information on student participation and personal development, teachers and teaching, leadership and school support, and school environment. Combined into a composite index, the data allow schools to assess themselves and to be categorized by level of need for improvement. The project combines qualitative and quantitative approaches in

action research design, and expected outputs include a contextualized path to scaling up the innovation in Nepal and Pakistan.

UHAITI

STATE UNIVERSITY OF HAITI

- **Project:** *Strengthening teachers and school principals' capacity for scaling innovation from the bottom up in the education system in the Caribbean.*
- **Countries of focus:** Haiti, St. Lucia.
- **Research question:** To what extent do training and capacity building for social innovation help principals and teachers be agents of change in the education system?
- **Project summary:** This project seeks to enhance the capacity of local actors in Haiti and St. Lucia's education system to identify and understand concrete educational challenges, devise and test solutions, and share results with peers and decisionmakers. The project aims to meet three goals: addressing social needs, improving key stakeholders' capacities, and using scarce resources efficiently. This project combines qualitative and quantitative methods with participatory components and tests proven methodologies focused on training key actors to introduce innovations from the bottom up, inform ongoing national policy reforms in St. Lucia and Haiti, and focus on conditions for effective scalability of innovations.

Endnotes

- 1 We have lightly edited many of quotations in this report for clarity and flow, and in some cases have translated them into English.
- 2 David Sengeh and Rebecca Winthrop, “Transforming Education Systems: Why, What, and How,” (Washington D.C.: Brookings Institution, 2022). Alexis Le Nestour, Laura Moscoviz, and Justin Sandefur, “The Long-Run Decline of Education Quality in the Developing World,” Center for Global Development Working Paper 608 (February 23, 2022).
- 3 Arntraud Hartmann and Johannes F. Linn, “Scaling up: A framework and lessons for development effectiveness from literature and practice” (Washington D.C.: Brookings Institution, 2008).
- 4 Regional grants range from US\$0.5 million to US\$1.5 million for up to three years. The four regional hubs led consultation and validation processes with countries to identify policy priorities in their region, including across six KIX themes. Gender, equity, and inclusion considerations are key priorities across the calls. All projects funded through regional calls are multi-country and implemented by Global South organizations. Twenty million dollars were allocated to 22 grantees, 9 of whom also joined the ROSIE project. IDRC issued the calls for proposals for global and regional grantees, manages the independent assessment panels, and oversees and supports KIX grantees.
- 5 Robert McLean and John Gargani, *Scaling Impact: Innovation for the Public Good*, (Ottawa: Routledge, 2019).; Jenny Perlman Robinson and Rebecca Winthrop with Eileen McGivney, “Millions Learning: Scaling Up Quality Education in Developing Countries” (Washington, D.C.: Brookings Institution, 2016).; Larry Cooley, “Scaling up from vision to large scale change: A management framework for practitioners,” (Washington D.C.: Management Systems International, a Tetra Tech Company, 3rd ed. 2016).
- 6 Linda Darling-Hammond, *The Right to Learn: A Blueprint for Creating Schools that Work*, (San Francisco: Jossey-Bass, 1997).; Michael Fullan, “The Elusive Nature of Whole System Improvement in Education,” *Journal of Educational Change* 17, (2016).
- 7 Sam Hickey and Naomi Hossain, *The Politics of Education in Developing Countries: From Schooling to Learning*. (Oxford: Oxford University Press, 2019).; Lant Pritchett, *The Rebirth of Education: Schooling Ain’t Learning*, (Washington D.C.: Center for Global Development Books, 2013).; Gita Steiner-Khamsi, *The Global Politics of Educational Borrowing and Lending*, (New York: Teachers College Press, 2004).
- 8 Brad Olsen, Patrick Hannahan, and Gustavo Arcia, “How Do Government Decisionmakers Identify and Adopt Innovations for Scale?” (blog) Brookings Institution, April 21, 2021.
- 9 Geneva: World Health Organization, 2001.
- 10 Hartmann and Linn, “Scaling Up”. Lloyd Provost and B. Bennett, “What’s your Theory?.” *Quality Progress* 48, no. 7 (2015). Institute for Healthcare Improvement, “Driver Diagram Framework,” (2017).
- 11 Perlman Robinson et al., “Millions Learning.”; Cooley, “Scaling Up.”
- 12 Fullan, “The Elusive Nature of Whole System Improvement.”; Olsen et. al., “How Do Government Decisionmakers Identify and Adopt Innovations for Scale?”
- 13 Management Systems International, “Scaling Up: From Vision to Large-Scale Change, Tools for Practitioners,” (Washington D.C.: Management Systems International, a Tetra Tech Company, 2nd ed., 2021).
- 14 Santiago Rincón-Gallardo, “Large Scale Pedagogical Transformation as Widespread Cultural Change in Mexican Public Schools,” *Journal of Educational Change* 17 (2016). Vicky Colbert and Jairo Arboleda, “Bringing a Student-Centered Participatory Pedagogy to Scale in Colombia,” *Journal of Education Change* 17 (2016).

- 15** Continuity of leadership has been identified as a critical factor in education reform. For more information on this, see: Michael Barber, Chinezi Chijioke, and Mona Mourshed, "How the world's most improved school systems keep getting better," (McKinsey & Company, November 2010).
- 16** Brad Olsen and Lisa Kirtman, "Teacher as Mediator of School Reform: An Examination of Teacher Practice in 36 California Restructuring Schools," *Teachers College Record* 104, no. 2 (2002).
- 17** Eleanor Duckworth, *The Having of Wonderful Ideas: And other Essays on Teaching and Learning*, (Teachers College Press, 2006). Amy Bitterman, Lucinda Gray, and Rebecca Golding, *Characteristics of Public and Private Elementary and Secondary Schools in the United States: Results from the 2011-12 Schools and Staffing Survey*, (National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, 2013). Robert Kegan and Lisa Lahey, *Immunity to Change: How to Overcome it and Unlock the Potential in Yourself and Your Organization*, (Cambridge, MA: Harvard University Press, 2009).
- 18** Marilyn Cochran-Smith and Susan Lytle, *Inside/Outside: Teacher Research and Knowledge*, (New York: Teachers College Press, 1993).; Brad Olsen, "Adapting Education Innovations and Their 'knock-on effects' in the Time of COVID," (blog) Brookings Institution, November 8, 2021.
- 19** Ann Lieberman and Lynne Miller (Eds.), *Teachers Caught in the Action: Professional Development that Matters*, (New York: Teachers College Press, 2001).
- 20** Olsen and Kirtman, "Teacher as Mediator of School Reform."
- 21** Hartmann and Linn, "Scaling Up."
- 22** Bruce Fuller and Hoyun Kim, "Systems Thinking to Transform Schools: Identifying Levers that Lift Educational Quality," (blog) Brookings Institution, September 12, 2022.; Richard Kohl, "Scaling and Systems Change: Overview," *Scaling Up Community of Practice Workshop*, 8 November 2021, Scale-Up M&E Webinar featuring Educate! and Young1ove (scalingcommunityofpractice.com).
- 23** Emily Gustafsson-Wright and Dayoung Lee, "Getting Both Costs and Effectiveness Right to Improve Decisionmaking in Education," (blog) Brookings Institution, December 23, 2021 .; Emily Gustafsson-Wright and Sarah Osborne, "What are the Barriers to Cost Data on Education and Early Childhood Development?" (blog) Brookings Institution, March 18, 2021.
- 24** Lieberman and Miller, *Teachers Caught in the Action*.
- 25** Rincón-Gallardo, "Large Scale Pedagogical Transformation as Widespread Cultural Change in Mexican Public Schools." Larry Cuban and Petar Jandrić, "The Dubious Promise of Educational Technologies: Historical Patterns and Future Challenges." *E-Learning and Digital Media* 12, no. 3-4 (2015).
- 26** Jenny Perlman Robinson and Christina Kwauk, *Millions Learning Case Studies*, (Washington D.C.: Brookings Institution, 2016).; Jonathan Stern, Matthew Jukes, and Benjamin Piper et al., *Learning at Scale: Interim Report* (Washington D.C.: RTI International, 2021).; Patrick Hannahan, Jenny Perlman Robinson, and Christina Kwauk, "Improving Learning and Life Skills for Marginalized Children: Scaling the Learner Guide Program in Tanzania," (Washington D.C.: Brookings Institution, 2021).; Molly Curtiss Wyss and Jenny Perlman Robinson, "Improving Children's Reading and Math at Large Scale in Côte d'Ivoire: The Story of Scaling PEC," (Washington D.C.: Brookings Institution, 2021).
- 27** Cooley, "Scaling Up."
- 28** McLean and Gargani, "Scaling Impact Innovation for the Public Good."
- 29** Laurence Chandy, Akio Honson, Homi Kharas, and Johannes Linn (Eds.), *Getting to Scale: How to Bring Development Solutions to Millions of Poor People*, (Washington, D.C.: Brookings Institution Press, 2013).
- 30** Judith Warren Little, "The Emotional Contours and Career Trajectories of (Disappointed) Reform Enthusiasts," *Cambridge Journal of Education* 26, no. 3 (1996).

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