



EdData II

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Scale-Up of Early Grade Reading Programs

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Scale-Up of Early Grade Reading Programs

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Abbreviations

cwpm	correct words per minute
CSO	civil society organization
DFID	UK Department for International Development
EGMA	early grade mathematics assessment
EGRA	early grade reading assessment
EGRP	Early Grade Reading Program
ERFKE	Education Reform for the Knowledge Economy
GILO	Girls' Improved Learning Outcomes
GPE	Global Partnership for Education
ICT	information and communication technology
KAPE	Kampuchean Action for Primary Education
LTTP2	Liberia Teacher Training Program 2
LQAS	lot quality assurance sampling
MSI	Management Systems International
MTB-MLE	mother-tongue-based, multilingual education
NEGRP	National Early Grade Reading Program
NGO	nongovernmental organization
PLP	Primary Learning Program
PRIMR	Primary Math and Reading Initiative
PRIORITAS	Prioritizing Reform, Innovation and Opportunities for Reaching Indonesia's Teachers, Administrators and Students
RAMP	Early Grade Reading and Math Project, Jordan
RISE	Research on Improving Systems of Education
RTI	Research Triangle Institute, International
SSME	snapshot of school management effectiveness
TSC	Teacher Service Commission
TTI	teacher training institution
USAID	US Agency for International Development

Executive Summary

In August 2012, RTI began discussions with USAID on a potential analytic topical study of scale up and sustainability of early grade reading programs. These discussions reflected a clear gap that was not addressed in the global education sector regarding reading: there was limited evidence-based guidance to Missions on how to actually reach Goal 1 of 100 million children reading. It was recognized that knowledge of "what works" in early grade reading is a question that continues to spark debate in USAID Missions and elsewhere, and that the synthesis of descriptions and knowledge of effective programs is not complete. By working closely with the public sector, the country's ministry or department of education, development agencies like USAID aim to support national government strategies by moving pilot programs to large scale reforms in the teaching and learning of reading. The core challenge USAID programs are facing is how to work through government education systems to implement, at scale or on increasing scale.

To contribute to the growing body of literature in addressing this challenge faced by USAID and to close the gap with nationally-scaled reading programs, RTI submitted Terms of Reference (TOR) for a topical analysis on scale-up and sustainability to USAID in 2012. The resulting report highlights distinct approaches to different phases of the process through the judicious selection and discussion of illustrative cases. In addition, the report incorporates useful and relevant concepts drawn from other analytic frameworks on the topic, notably those of Management Systems International (Cooley and Kohl, 2006) and The Brookings Institution (Perlman Robinson, Winthrop, and McGivney, 2016).

The analysis concludes with the following five points:

1. There are specific technical ingredients—curriculum, materials, training, teacher support, instruction, and assessment—that must be mutually aligned and reinforced if an early grade reading innovation that has been scaled up, is to be sustained.
2. The checklist of dimensions of scale up provided in the report, should be used to evaluate the scalability of a reading innovation. In order for these dimensions to be useful, innovations must be designed with scale in mind.
3. Long-term sustainability requires demand for the innovation.
4. All innovations in some way need to alter the existing arrangements in the education system. Wide-spread demand for change helps address the political economy that impinges on education sector policy and decision-making.
5. The terms of the principal-agent relationships that govern how the education system operates need to be altered if the new way of teaching reading in early grades is to be sustained.

Section I: Scale-Up of Early Grade Reading

1 INTRODUCTION

The greater availability of assessment data over the last decade has confirmed the need of education systems across the developing world to reevaluate whether they truly are achieving education for all, as opposed to just providing access to schooling. In response to the growing need to improve learning outcomes, the United States Agency for International Development's (USAID's) 2011 Education Strategy focused on improving the teaching and learning of reading in early grades. Its goal of 100 million children showing improved reading skills testified to USAID's commitment to investing in and measuring improvements in learning outcomes.

As a result, USAID education programs with a focus on early grade reading have become the norm, with such programs implemented in approximately 20 countries during the five years since the adoption of the education strategy. Several of the initial round of small scale projects targeting improved reading have shown promising results. USAID-supported pilot projects in Egypt, Jordan, Kenya, Liberia, Malawi, the Philippines, Rwanda, and Yemen reported measureable improvements in reading skills in the early grades of primary school. Other nongovernmental organization (NGO) projects, not necessarily funded by USAID—e.g., Save the Children's Literacy Boost program, Room to Read's reading interventions, the work of Pratham in India and World Education in Nepal, to name a few—are also realizing measureable improvements in learning outcomes.¹

More recently, the lessons of these successful pilot projects are being applied on increasing scale. Pilot projects in Egypt, Ghana, Jordan, Kenya, Malawi, and Rwanda are being taken to national scale, and others, like those in Indonesia, Nepal, and Uganda are being implemented on an expanded basis within the context of national strategies to improve reading. In other countries, USAID is supporting national programs aimed at improving reading outcomes being implemented at scale—as in Ethiopia and the Philippines. Taking successful pilot projects to scale and helping education systems implement their national reading strategies at scale have therefore become the primary challenges faced by USAID and other supporters of educational improvement in the developing world.

The challenges of realizing large-scale impact, and of seeing that impact sustained, are not new to development. However, they are being approached with renewed interest and attention in the education sector. And the need to think systematically about how education programs are designed and implemented to explicitly take on the challenges of scale and sustainability has made scale and sustainability central to USAID's work.

USAID has put forward the following definition of scalability:

“Scalability is demonstrated by (a) the ability to replicate the key elements of a project that were deemed critical to its effectiveness at scale (regional, national)”

¹ Public reports and materials for USAID-supported projects can be found on the Development Experience Clearinghouse website: <https://www.usaid.gov/results-and-data/information-resources/development-experience-clearinghouse-dec>. NGOs also provide information on their own websites.

and (b) the project’s affordability over the mid and long-term, given a country’s total projected resource envelope.”²

USAID attaches equal importance to sustainability, which it characterizes in the following manner:

“Sustainability is defined as achieved when host country partners and beneficiaries are empowered to take ownership of development processes, including financing, and maintain project results and impacts beyond the life of the USAID project.”³

For the purpose of this paper, we are treating scale and sustainability somewhat separately, and using the above definition of scalability to frame how we approach that topic. We note that the second part of USAID’s definition of scalability raises affordability as an important determinant of whether a pilot project can be scaled up and sustained. However, we recognize that the interplay between scale and sustainability is not just in financial terms. Perhaps even more important is the question of the in-country capacities needed to support large scale change. Therefore, and as called for by USAID Forward, we acknowledge the need to work in partnership with local institutions—government, civil society, the private sector—and through public sector systems to build capacity for large scale implementation.

Following this introduction, the first section of this paper (Section I) considers the education system capacities shown to be most important for supporting changes in day-to-day teaching and learning of reading. Section I also provides an overview of several countries where scale-up of early grade reading programs is occurring or has recently happened. And an approach to analyzing scale-up is presented. That approach to analyzing scale-up guides the discussion in Section II of the recent experience of selected USAID education programs. Section III concludes the paper with discussion of sustainability of early grade reading programs at scale.

2 FUNDAMENTAL FACTORS FOR SUCCESSFUL SCALE-UP

Assuring the provision of quality education across all schools is the fundamental purpose of a country’s education system. Whether that is done entirely through the public education system or through some combination of public, private, and community-based approaches is an open question. Examples exist of countries that rely almost exclusively on a combination of public funding and private provision (the Netherlands). And there are countries that by default rely almost entirely on large scale community-based or private initiative (Haiti and parts of some conflict-affected countries). In some countries low-fee private schools are serving growing segments of the demand for basic education (India, Nepal, and Pakistan, as well as urban centers in Ghana, Kenya, and Uganda). Some countries are experimenting with contract or charter schools (the US, UK, and Pakistan). But, development agencies such as USAID are supporting national scale efforts to improve education by primarily working closely with and through the public sector, namely a country’s ministry or department of education. The

2 US Agency for International Development (USAID). (2011a). Education Strategy Implementation Guidance. Washington, DC: USAID, p. 6.

3 USAID. (n.d.) Project Design Sustainability Analysis Tool. Washington, DC: USAID, p. 1.

programs reviewed for this paper are designed to support national government strategies to improve early grade reading. The exact way in which that is occurring differs across countries. However, all of USAID's attempts to move from pilot projects to large scale, if not education system wide, reforms in the teaching and learning of reading are confronting similar challenges. Two publications help frame those issues: the Brookings Institute's Millions Learning report⁴ and Management Systems International's (MSI's) framework for managing scale up.⁵

2.1 Millions Learning

Perlman Robinson and her colleagues (2016) reviewed the literature on scale-up and identified several examples of educational programs, interventions, and innovations around the world that have been scaled up and that are demonstrating improved learning outcomes. The authors note that improving learning outcomes for large numbers of children may require expanding a successful intervention, could involve integrating a successful pilot into a national system, or in some instances involves working at scale completely outside the formal education system.

The Millions Learning report focuses on education initiatives that have shown that large-scale improvements in learning outcomes are possible. The innovative approaches reviewed for the Brookings Institute report are providing educational opportunities to children (often from otherwise marginalized populations) in diverse settings. They hold important lessons for how to better tailor educational offerings to the needs of students. And the ability of those kinds of

Millions Learning: 14 Ingredients for Scale Up*	
Design	<ul style="list-style-type: none"> • Responsiveness to local needs • Cost-effectiveness • Flexibility • Elevating teachers
Delivery	<ul style="list-style-type: none"> • Alliances • Champions and leaders • Technology • Windows of opportunity • Using data
Finance	<ul style="list-style-type: none"> • Flexible financing • Long-term financing • "Middle phase" financing
Enabling Environment	<ul style="list-style-type: none"> • Supportive policy environment • Culture of R&D

* Adapted from Perlman Robinson, J., Winthrop, R., & McGiveny, E. (2016). Millions learning: Scaling up quality education in developing countries. Washington, DC: Brookings Institute.

innovations to spread within and sometimes across countries also provides insight into how scale up happens.

Millions Learning identifies 14 ingredients for successful scale up, which include those essential for designing, delivering, financing and creating an enabling environment for scale up. The insights provided by the Brookings Institute report help inform how we think about scale (as discussed later). The innovations reviewed by Brookings usually were cost-effective approaches designed to address specific learning needs. Flexibility, in terms of adaptation of the approach to different settings and in terms of use of financing was also important. Using data, and in some cases taking advantage of technology, are shown to help the approaches succeed at scale. Scale up of these programs relied

on alliances, made use of champions and strong leaders, and took advantage of windows of opportunity to spread—within and across countries.

Millions Learning addresses government policy as part of the enabling context for innovation to spread. However, the report draws on no examples of externally supported efforts to help

4 Perlman Robinson, J., Winthrop, R., & McGiveny, E. (2016). Millions learning: Scaling up quality education in developing countries. Washington, DC: Brookings Institute.

5 Cooley, L., & Kohl, R. (2006). Scaling up – From vision to large-scale change: A management framework for practitioners. Washington, DC: Management Systems International.

national governments take a successful educational intervention to scale. This may explain why it views the policy environment primarily from the perspective of government supporting other actors, with diverse models, operating on a large scale. Re-conceptualizing an education system in that way may be part of what is needed to assure learning opportunities for all children.⁶ Such a conclusion unfortunately leaves unanswered many of the questions confronting USAID as it works to support countries' capacity to scale up successful early grade reading interventions within their national education systems.

While the 14 ingredients highlighted by Millions Learning are useful for considering how to approach scale-up (and certainly are useful when thinking about how to encourage education systems to make space for and collaborate with other approaches to providing education), they do not address some of the challenges USAID education programs confront quite regularly and fairly consistently when trying to work at scale. For example, when trying to help education ministries support large-scale improvements in reading, the following issues repeatedly arise:

- Revising the national curriculum to be more appropriately attuned to the learning needs of students and to adequately address the teaching of reading
- Assuring that the basic set of inputs necessary to enact qualitative improvements are systematically made available to schools in a timely and efficient manner
- Making national systems for training and continuously developing and supporting teachers much more effective at building teacher's instructional skills
- Helping governments and private-sector publishers and printers work together to develop, print, and distribute better books to schools more efficiently and at lower cost

This paper looks at how current USAID education programs are addressing the above kinds of issues, and does so using aspects of another framework for thinking about scale-up, which is discussed below.

2.2 Management Systems International's Framework for Managing Scale Up

MSI: Management Framework for Scale Up*		
Develop Scale-Up Plan	<ul style="list-style-type: none"> • Create vision • Assess scalability • Fill information gaps • Prepare scale-up plan 	Another useful set of lessons for how to approach scale is offered by MSI's framework for managing scale-up.
Establish Pre-Conditions	<ul style="list-style-type: none"> • Legitimize change • Build constituencies • Realign and mobilize resources 	Cooley and Kohl draw primarily from examples of successful scale-up in the health sector. They identify, and have field tested, 10 tasks that are necessary for successful scale-up. These tasks are related to three steps: developing a scale-up plan, establishing the pre-conditions for scale-up, and implementing the scale-
Implement the Scale-Up Process	<ul style="list-style-type: none"> • Modify structures • Coordinate action • Track performance • Maintain momentum 	
<small>* Adapted from Cooley, L., & Kohl, R. (2006). <i>Scaling up – From vision to large-scale change: A management framework for practitioners</i>. Washington, DC: Management Systems International.</small>		

⁶ Lant Pritchett argues that this kind of education system—one that deliberately creates space for other actors to innovate and respond to the population's diversity of learning needs—is what is needed to overcome the widespread failure of schools to actually promote learning outcomes (Pritchett, L. [2013]. *The rebirth of education: Schooling ain't learning*. Washington, DC: Center for Global Development).

up process.⁷ MSI's tasks and steps cover some of the same conclusions reached by Millions Learning. However, the former provides a more systematic framework for planning and taking a successful pilot project to scale. Since this is essentially the challenge USAID is facing, this paper relies more on elements of the MSI framework to review a set of countries where USAID is supporting or is poised to support large-scale efforts to improve early grade reading. Where relevant, the lessons from the Brookings Institute work are drawn on as well.⁸

2.3 Scale-Up within Education Systems

The core challenge USAID programs are facing is how to work through government education systems to implement, at scale or on increasing scale, approaches that pilot projects are showing can be successful in teaching reading in the early grades of primary school. Therefore, USAID programs must confront the fact that most developing country education systems are presently not producing the desired levels of learning achievement for the vast majority of students. Many, if not most, of these education systems have extremely limited institutional capacity, and what capacity they do have is not organized around producing learning outcomes.

To become more “coherent for learning,” Pritchett emphasizes the key accountability relationships within education systems that must align. He refers to this as internal coherence—meaning that what actors throughout the system are asked to do must align with how their portion of the system is financed, with the information that they must report or that they are provided, and with the motivation conveyed to them.⁹

For example, if we want district education officers to provide services to schools that support improved teaching of reading in early grades, we cannot have district funding based solely on enrollment numbers, should not ask districts only to report on growth in inscription, and should not judge a district's performance based only on the percentage of students passing the primary education end-of-cycle exam. All those requirements and signals should instead align to the intended action of providing support services focused on early grade teaching and learning.

The other way Pritchett argues for coherence in education systems is across accountability relationships. For example, what districts are accountable for must align with what principals and teachers are accountable for. And if there are also accountability relationships between schools and their communities, then communities should be monitoring and holding schools accountable for the same things that the system does.¹⁰

Implementing an intervention successfully at scale also requires coherent alignment across the education system of the conditions necessary for that success. When it comes to early grade reading programs supported by USAID, it is possible to identify what some ingredients of success are, and therefore what accountability in the system must align to. For example, in the set of pilot early grade reading projects for which improvements in outcomes are documented, training teachers to use materials designed specifically for the teaching of reading is a common,

7 Cooley & Kohl, 2006.

8 For those interested, Annex A to this report contains a side-by-side comparison of the two frameworks.

9 Pritchett, L. (2016). Creating education systems coherent for learning outcomes: Making the transition from schooling to learning. Working Paper 15/005. Research on Improving Systems of Education (RISE).

10 Pritchett, 2016.

critical element.¹¹ At scale, the system must communicate to teachers that they are expected to use the new materials, hold them accountable for doing so, and hold the responsible entities accountable for getting sufficient quantities of materials to classrooms at the appropriate time.

The next part of this paper will look specifically at the essential factors for improving reading outcomes in early grades. It will then examine the extent to which different USAID programs are working with education systems to ensure those factors are being addressed as innovations are being taken to scale.

3 CRITICAL FEATURES OF EFFECTIVE AND SCALABLE EARLY GRADE READING PROGRAMS

The authors' review of early grade reading assessment (EGRAs) and snapshot of school management effectiveness (SSME) surveys done under EdData II shows a fairly consistent pattern across a diverse set of countries.¹² In most countries, reading outcomes were surprisingly poor, usually because the specific skills children need to become literate were simply not taught. Curriculum in early grades in most developing countries focuses on language, not reading. Both the curriculum and teachers appear to assume that students learn to read by reading—and therefore do not also include teaching students to understand the basic grapheme-phoneme correspondence that is needed to unlock the code of alphabetic languages. Class time is therefore often not used to develop students' specific reading skills. And a surprising amount of the available time for learning during the school day is actually wasted.¹³

In some countries where USAID is supporting improved early grade reading, the picture is not as dire as described above. In Asia in particular, where education systems are better resourced and have more capacity than, say, in sub-Saharan Africa, EGRA results show students with better levels of basic reading skills. Two examples are the Philippines and Indonesia. On a 2014 EGRA in selected provinces, the average oral reading fluency for grade 3 students in Bahasa Indonesia was 72 correct words per minute (cwpm), with less than 3% of students unable to read a single word.¹⁴ Similarly, on a 2013 national EGRA in the Philippines, the average oral reading fluency for grade 3 students in Filipino was 68 cwpm, with less than 2% unable to read a single word.¹⁵ These two countries compare very favorably to the much lower average oral

11 A recent report by the International Initiative for Impact Evaluation (3ie) reviewed 216 education programs and found, among other things, that structured pedagogy improves learning outcomes in most contexts (Snilstveit, B., et al. [2016]. *The impact of education programmes on learning and school participation in low- and middle-income countries: A systematic review summary report*. International Initiative for Impact Evaluation [3ie] Systemic Review Summary 7. London: 3ie).

12 Reports from early grade reading assessment and snapshot of school management effectiveness surveys done in numerous countries can be found on www.eddataglobal.org

13 DeStefano, J. (2011). Time misspent, opportunities lost: use of time in school and learning. In John N. Hawkins & W. James Jacob (Eds.), *Policy Debates in Comparative, International, and Development Education*. (pp. 247–264). New York, NY: Palgrave Macmillan; Bruns, B. & Luque, J. (2014). *Great teachers: How to raise teacher quality and student learning in Latin America and the Caribbean*. Washington, DC: World Bank.

14 RTI International (2014a). *Baseline monitoring report, Volume 3: An assessment of early grade reading*. Prepared for USAID's PRIORITAS Project. Research Triangle Park, NC: RTI International.

15 Pouezevara, S., DeStefano J., & Cummisky, C. (2013). *PhilEd Data: Strengthening information for education, policy, planning and management in the Philippines. Component 2: Early grade reading*

reading fluencies in sub-Saharan Africa and in Arabic speaking countries of the Middle East and North Africa. Zero scores in many African countries have been above 80%.

While basic reading skills such as letter sound recognition and fluency in reading words and connected text are much more developed in countries like the Philippines and Indonesia, EGRA results do show room for improvement in students' performance on reading comprehension. In countries where basic skills are not being developed, data on what goes on in school show pretty consistently that those skills are not being taught. Similarly, in the Philippines and Indonesia, comprehension skills are not taught explicitly enough. In either case, the evidence appears to confirm that the basic relationship between what and how teachers teach and what students learn is what needs to be addressed.¹⁶ In cases where students are not learning that letters have sounds, it is because teachers do not teach letter sounds. In cases where students have only limited, superficial comprehension, it is because teachers do not teach higher order comprehension skills like how to glean the main point of an essay or how to infer an author's point of view.

Across very diverse settings, successful early grade reading pilots are ones that are able to change teachers' understanding of how students learn to read, that support a balanced instructional approach to building all reading skills, and that provide teachers the materials, training, and support that enable them to make better use of available class time. Moore and colleagues looked at a set of projects for which data show a positive impact on reading outcomes. They identified 9 early grade reading projects implemented with USAID support, and an additional 12 examples of Literacy Boost programs being implemented by Save the Children or World Vision.¹⁷ The improvement in oral reading fluency achieved in these programs ranged from effect sizes of 0.80 to less than 0.05 standard deviations. Moore and her colleagues point out meaningful differences across these projects, in terms of what they refer to as dosage, duration, and enabling environment. For example, in terms of dosage and duration, there was variation in the length of time of reading lessons, the amount of training teachers receive, the types and quantities of materials provided, and the source and amount of follow up support to teachers. In terms of the enabling environment, programs interacted with government systems and in alignment with education sector policies to varying degrees as well. Some relied on ministry personnel to play key roles in project implementation (as teacher trainers or support providers), others directly employed staff to fill those kinds of functions. These variations across all three of the dimensions mentioned appear to contribute to the noted variations in the learning gains different projects have been able to achieve. However, the research designs of the impact evaluations carried out for this set of projects did not allow for identification of which types of support (e.g., materials versus training, or even dosage of training) most contributed to improved performance.

assessment. Prepared for USAID's Education Data for Decision Making Project II, Task Order 17. Washington DC: RTI International.

¹⁶ Though this appears self-evident, that it is not obvious in many education systems is the problem.

¹⁷ These are programs or projects for which available data show impact in terms of improved oral reading fluency; Moore, A.M., Gove, A., & Tietjen, K. (In Review). Great expectations: A framework for assessing and understanding key factors affecting student learning of foundational reading Skills. In P. McCardle, A. Mora, & A. Gove (Eds.), *Progress toward a literate world: Early reading interventions in low-income countries*. New Directions for Child and Adolescent Development.

Along with the variation seen across these projects, Moore and colleagues point out that the projects also show a remarkable degree of convergence around what is being done to bring about improvements in the teaching and learning of reading. The list of “ingredients” of successful pilots (and of some programs currently being implemented at larger scale) contains few surprises.

- **Curricular content** on reading (not just language) and space for that content within the school schedule
- **Teacher guides and student books** that communicate curricular content and the instructional approach to teachers and students
- **Additional reading materials** for students, such as leveled readers
- **Instructional strategies and techniques** for teachers that are better suited to promoting literacy acquisition (e.g., focused on ample student practice of skills and use of materials)
- **Teacher training** in the new curriculum/materials and in new instructional behaviors
- Periodic **on-site teacher support** to help and encourage teachers to adopt the new instructional behaviors and use the new materials
- **Monitoring** of both teaching practice and student acquisition of literacy skills
- Routinized **accountability** to sustain an effort that requires actors to work differently
- **Summative assessment** to measure whether all of the above is translating into improved learning outcomes
- **Mobilized enthusiasm** and **demand** for the new program/approach (within the education system and among parents, communities and key external stakeholders)

Some of the programs also had additional interventions aimed at families and communities. These include trying to either increase community involvement in schools, enabling and encouraging parents to support their children’s development of literacy skill outside of school, or, in the case of Literacy Boost, also providing basic literacy training for parents.

The fact that there is a degree of consistency across programs in what they are doing is not surprising. Curriculum, materials, instructional methods and support, assessment, and feedback are core aspects of how education is delivered (whether in formal systems or in informal settings). Crouch and DeStefano (2015) argue that these “core functions” are the areas of institutional capacity most needed in education systems, if those systems are to actually contribute to improved learning outcomes.¹⁸

That these ingredients are assembled differently and that across projects they vary considerably in terms of the amounts of any one feature compared to another may actually be a good thing. It shows that projects are adapting to the contexts in which they work and that USAID programs, implementing partners, and government counterparts are in a sense negotiating and trying to determine what makes sense in any particular country. As project interventions are increasingly taken to scale, the nature and outcomes of those negotiations will be a strong determinant of

18 Crouch, L. & DeStefano, J. (2015). A practical approach to in-country systems research. Prepared for the Research on Improving Systems of Education Conference in June 2015. Available at: <http://www.riseprogramme.org/content/practical-approach-country-systems-research>.

whether scaled-up versions continue to show improvements in learning outcomes of commensurate effect size.

Two programs have data showing effect sizes at two different “scales” of implementation. In Liberia, EGRA Plus achieved an effect size of 0.80 standard deviations (SD) when working in 120 schools. When that program was expanded under the Liberia Teacher Training Program 2 (LTTP2) to about 1000 schools, the effect size achieved was cut in half (0.41 SD). Similarly, the pilot project in Rwanda achieved an effect size of 0.55 SD when operating in 90 schools, but the expanded implementation achieved an effect size of only 0.19 SD.¹⁹

In the case of Liberia, the expanded implementation continued to rely on direct project management of all inputs. However, expanding into additional counties brought with it increased logistical challenges (given the poor physical and institutional infrastructure present in Liberia). Working at a larger scale also required collaborating with and relying on a broader set of actors, and meant that the intervention had to respond to a greater diversity of settings. As a result, the teacher training cascade had to stretch further and the number of schools covered by each project coach was increased (thus reducing the amount of support visits individual teachers received). Furthermore, it took much longer to get materials to schools because of poor road conditions—reading materials arrived halfway through the first school year of implementation.²⁰

In the case of Rwanda, implementation at scale meant operations no longer were under the direct control of the project, as was the case in the pilot. Reliance on government systems for delivering materials, for training and supporting teachers, necessarily compromised the degree of implementation fidelity. This was also what happened in Egypt, when the pilot project implemented by a USAID project was taken to scale by the government (see below and Section 2 for discussion of this). Compromises were necessarily made in terms of the amount of training and support for teachers and the degree of efficiency in getting materials out to schools in a timely manner. These are precisely the challenges programs face when working with government systems to achieve scale-up.

The identifiable set of issues that need to be addressed for reading outcomes to improve does provide a way to look at the challenges of scale-up. By looking at this finite set of ingredients together with the scale-up frameworks described earlier, we can see how scale is being managed across a number of programs and settings.

4 SELECTED COUNTRIES WHERE SCALE-UP IS HAPPENING

Of recent USAID early grade reading programs, several have involved implementation of a manageable scale pilot as a precursor to scaling up. Some of those moved through intermediate stages of scale—progressively increasing the geographic spread and number of schools before reaching national scale. Others jumped straight from pilot to national scale. Some skipped over

¹⁹ Data for these two examples are taken from Table 1 of Moore, Gove, & Tietjen, In Review, p 29.

²⁰ See DeStefano, J., Slade, T., & Korda, M. (2013). Midterm assessment of the impact of early grade reading and math interventions. Prepared for USAID’s Liberia Teacher Training Program (LTTP). Research Triangle Park, NC: RTI International for discussion of the expanded implementation of the Liberia pilot.

the pilot stage completely and began implementing at subnational or even national scale. Some projects are going to scale in the context of a national early grade reading strategy, others not. **Table 1** summarizes how scale-up has occurred or is occurring in 10 countries where USAID is providing support.

Table 1: Some Countries with Early Grade Reading Programs Going to Scale

Country	Pilot Phase	Nature of Move to Scale
Cambodia	Several international nongovernmental organization- (INGO-) run programs implemented at small scale and with some data on impact	In response to poor early grade reading assessment (EGRA) results, government implemented a national curriculum reform, drawing some elements from INGO programs
Egypt	GILO implemented in 166 schools with data on impact	Following Arab Spring, new government intent on delivering improved education moved to national scale implementation with some support from PLP
Indonesia	PRIORITAS identifying existing good practice and introducing some improvements in early grade instruction in 23 districts	Within district and district-to-district model of spread of innovation and good practice supported by PRIORITAS in 93 districts (about 20–25% of the schools in the country).
Jordan	EdData II piloted remedial program in 41 schools for two years with data on impact.	Working with Ministry of Education to progressively take remedial program to scale in three stages with support of RAMP
Kenya	PRIMR piloted innovations on small scale and expanded pilot to three additional counties, with data on impact	Program moved directly from expanded pilot to national implementation with support from Tusome
Liberia	EGRA+ implemented in 120 schools with data on impact	EGRA+ modified and expanding into about 1,000 schools under LTTP2
Malawi	MTPDS introduced EGR approach in two districts, with data on impact.	Expanding model into 11 districts under EGRA. Development of national early grade reading strategy and expansion from 11 to all 33 districts.
Nepal	INGO programs at small scale and with some data on impact	Government development of national early grade reading program with initial support from EGRP for implementation in 16 districts (out of total of 75)
Philippines	INGO supported programs on limited scale, with some data on impact	Change from bilingual system to mother-tongue based, multi-lingual education being implemented nationally. Support from Basa Project in two regions
Rwanda	L3 project introduced early grade reading in 90 schools with data on impact	Moved directly to national implementation with support from LEARN

Project acronyms in Figure 1: GILo—Girls’ Improved Learning Outcomes project; PLP—Primary Learning Program; PRIORITAS—Prioritizing Reform, Innovation, and Opportunities for Reaching Indonesia’s Teachers, Administrators and Students; RAMP—Early Grade Reading and Mathematics Project, Jordan; PRIMR—Primary Math and Reading Initiative task order; LTTP2—Liberia Teacher Training Program 2; MTPDS—Malawi Teacher Professional Development System project; EGRP—Early Grade Reading Program; L3—Literacy, Language and Learning; LEARN—Learning Enhanced Across Rwanda Now project.

In three of the countries in Figure 1 above, government of its own volition moved rapidly to implement large scale reforms—Cambodia, Egypt, and the Philippines—the latter two being driven primarily by political decisions. Of these three, only in Egypt was the national implementation based on a pilot that produced data demonstrating positive impact on reading outcomes. Kenya, Jordan, and Malawi took or are taking progressive steps to scale up successful pilots, albeit with different approaches to the number and timing of intermediate steps between small scale pilot and full national scale implementation as shown in **Table 2**. Jordan is taking a successful pilot to national scale in two steps. Nepal has adopted a national reading program, but is implementing it in phases, starting in 16 districts. Rwanda jumped

directly from a small scale pilot to national implementation. Indonesia is a distinct case because expansion of the early grade reading innovation is being achieved through school-to-school and district-to-district dissemination. In Liberia, the successful pilot was expanded into additional counties, but has not yet been fully scaled up to the national level.

Table 2 shows that most of these programs include some intermediate step in between the small scale pilot and full national scale-up. Interestingly, Egypt, the Philippines, and Rwanda moved rapidly to expand implementation to the national level (1 or 2 years), even though Egypt's and the Philippine's primary education systems are considerably larger than Rwanda's. Malawi, a country with severe capacity and resource constraints has the longest time between pilot project and national scale implementation. Kenya planned to take more time to research and evaluate different aspects of the pilot, including its limited expansion. But then in one year jumped to a 17-fold increase in the number of schools being reached. Kenya, the Philippines, and Egypt saw the largest increase in the number of schools to be included when moving to national scale. All three were driven by government commitment to reform at scale.

Table 2: USAID-Supported Scaled-Up Early Grade Reading Pilots

	Pilot (schools)	Intermediate Expansion (schools)	Full Scale Implementation (schools)	Years between Introduction of Pilot and National Scale-Up
Egypt	60	2,800	16,000	2
Kenya	547	1,354	22,600	4
Jordan	43	623	2,651	4
Liberia	120	1,200	na	na
Malawi ²¹	238	1,188 1,640	5,415	6
Philippines	900	-	46,000	1
Rwanda	90	-	2,035	3

We will now proceed to a more detailed analysis of how scale-up is occurring by applying the framework described below to Cambodia, Egypt, Indonesia, Jordan, Kenya, Nepal, and the Philippines. These are countries that present some interesting contrasts in how scale up is following different paths, with different roles played by project implementers and ministry of education officials, according to different timelines and with different contributions from USAID-funded programs.

5 ANALYZING THE SCALE-UP EXPERIENCE

As discussed earlier, the Perlman Rodman et al. and Cooley and Kohl conclusions regarding what is needed for successful innovations to be taken to scale share a basic framework that

²¹ The two sets of numbers in the intermediate expansion column show that the project spread first to 1,188 schools, then to 1,640 total in the second year of implementation.

involves three phases—designing or planning for scale, going to scale,²² and devoting attention to the enabling environment (with different definitions of what that means).²³ The MSI framework implies a linear approach that too often is not really how projects are taken to scale. In few, if any, cases, are carefully thought-out scale-up plans drawn up based on a thorough analysis of a pilot experience. Likewise, rarely, if ever, are all the enabling pre-conditions for scale put in place prior to expanding implementation. Nevertheless, the 10 tasks included in the MSI framework across the three phases of scale-up are worthy of consideration, even if they do not occur sequentially. The 14 essential scale-up factors distilled by Perlman Rodman and her colleagues in the Millions Learning report are also useful when examining how each phase of the scaling-up experience has proceeded or is proceeding in the selected countries.

We recognize that the two frames of reference we are employing—the conclusions of the Millions Learning study and the MSI framework—are meant as guidelines for how to address scale-up. They are not analytical frameworks. Nevertheless, we do see value in using those studies, and the broader literature and experience, to see whether and how the factors deemed important to successful scale-up are being dealt with in USAID programs.

In addition to seeing how different countries are moving through the phases of scale-up (and how they are addressing the various concerns highlighted as important by the two reference studies), we want to understand how each of the necessary ingredients for improving early grade reading outcomes is being assembled. Is a project developing the reading curriculum content? Was the ministry responsible for assuring teacher training as the project was going to scale? Did policy related to materials procurement need to change as a key enabling condition? To answer questions such as these, we created a two dimensional matrix that considers the phases of scaling up along one dimension, and the ingredients for improving reading outcomes along the other. **Table 3** below depicts the framework.

The first column in Table 3 shows the basic ingredients of successful reading programs organized into four categories—assuring basic inputs, improving instruction, monitoring and assessment, and communication. Each of these categories is of course interconnected—the materials need to reflect the curriculum, as do the instructional practices teachers are trained and supported to employ, as do the instruments and assessments used to monitor teacher behavior and student outcomes. When these ingredients are under the direct control of a project, it is easier (although not necessarily easy) to assure this kind of alignment and internal coordination. In going to scale, different ingredients may fall under the purview of different government offices or agencies (for example, curriculum, teacher training, and assessment are often handled by different entities), and therefore assuring alignment (or coherence in Pritchett’s terms) is inherently more challenging. How programs take on that challenge may be one of the important factors determining how successful they are at going to scale (and certainly at being sustained).

22 Defined as implementing the scale-up plan for Cooley and Kohl, and as delivering on an expanding basis the educational model for Perlman Rodman et al.

23 Perlman Rodman et al. advocate for a policy environment conducive to the emergence of numerous providers with varied approaches responding to the particular needs of the populations they are trying to serve. Cooley and Kohl pay more attention to the pre-conditions for scale-up to take place, including legitimating change, building a constituency for the new approach, and realigning and mobilizing resources.

Table 3: Framework for Discussing Examples of Scale-Up

Ingredients for Improving Early Grade Reading	Designing and Planning for Scale	Going to Scale	The Enabling Conditions for Success at Scale
Assuring basic inputs: <ul style="list-style-type: none"> Reading curriculum Teacher guides Student books Supplementary readers 	<p>The discussion will include how “ingredients” for improving early grade reading were accounted for at each stage of the scale up process.</p> <p>For example, how was new reading content developed and introduced during the pilot, did that change while going to scale, and did additional work get done to build capacity or embed aspects of the reading content into the official curriculum policy?</p> <p>In addition, we will examine whether the project, the government, or another source contributed the human and financial resources needed to ensure these ingredients at each stage of going to scale.</p>		
Improving instruction: <ul style="list-style-type: none"> Specific pedagogy Training for teachers Regular ongoing support for teachers 			
Monitoring & assessment: <ul style="list-style-type: none"> Monitoring of instruction Assessment of outcomes Routinized accountability 			
Communication: <ul style="list-style-type: none"> Mobilized enthusiasm Demand for change 			

This framework for discussing scale-up will be applied to the following country examples:

- **Egypt**, where the initial expansion of the pilot was supported by the project, but then government made the decision to move rapidly to national implementation
- **Jordan**, where an intervention was deliberately piloted and evaluated by one project, then a follow-on project was designed to take it to scale
- **Kenya**, where, similar to Jordan, a carefully evaluated pilot (that deliberately tested aspects of different ingredients) was then taken to national scale by a follow-on project
- **Cambodia**, where numerous projects were introducing different approaches to teaching reading, and the government undertook a national reform of the curriculum for primary grades as a response to poor national EGRA results
- **Nepal**, where, similar to Cambodia, there were some successful projects operating at small scale and an EGRA led the government to develop a national early grade reading program, the implementation of the first phases of which a USAID project is supporting
- **The Philippines**, where the Department of Education had a mandate to reform the entire education system, an aspect of which included moving from a bilingual curriculum to an mother-tongue-based, multilingual education (MTB-MLE) approach in the first three grades. A project was introduced to support the government-led reform in two regions.
- **Indonesia**, a highly decentralized education system, where the emphasis of the USAID-funded project is on introducing innovations at the school level and helping them to disseminate within and across districts

Section II: Country Examples

6 SCALING UP EARLY GRADE READING—CASE EXAMPLES

The literature identifies three ways in which innovations are scaled up: expansion, replication, and collaboration. Expansion usually refers to the case in which the organization that introduced the innovation is the entity responsible for scaling up. Basically, it involves an organization (or project) simply expanding the geographic reach of its program. Replication occurs when other organizations adopt the innovation and apply it in a growing number of settings. This can include the ministry of education’s incorporating an innovation into the formal education system—a form of replication that is an explicit objective for most USAID programs. Collaboration for scale-up involves the originating organization assisting others to implement the innovation, including collaborating with the formal education system to do so. Distinctions are often made between different degrees of collaboration, based on how much the originating organization controls implementation as it is carried out by others. In the cases discussed below, one can see that these different approaches to scale-up can be operating simultaneously for different ingredients of an early grade reading innovation. In addition to the ways scale-up is said to occur—expansion, replication, and/or collaboration—we add a fourth notion, implementation at scale. In this case, an innovation is implemented directly in all schools.

A final note regarding the country examples. These examples are not meant to be exhaustive, but are intended to highlight some important aspects of how scale-up is occurring in real time in several different settings. The emphasis is on considering what were important determining factors in how pilots were designed, how scale-up was planned for (or not), and how scaling up has been or is being managed.

6.1 Example 1 - Egypt: Government-Led Replication, with Collaboration, but in a Hurry

Designing and Planning for Scale in Egypt

Poor results on a national EGRA and an analysis of textbook content led ministry of education officials and Girls’ Improved Learning Outcomes (GILO) project staff to work together to devise an instructional intervention that would improve early grade reading outcomes, which became known as the Early Grade Reading Program (EGRP). In 2013, average oral reading fluency for grade 3 students was 22 cwpm, with 22% of students not able to read a single word of a grade-level Arabic text.

A pilot project was designed to introduce a phonics lesson as a 20-minute per day add-on to the existing grade 1 and 2 curriculum. The model was piloted in 60 schools. Teachers received a manual of daily phonics lessons and some student worksheets (no new student textbook was introduced). The instructional focus was on techniques for introducing and helping students practice grapheme-phoneme correspondence and decoding, something teachers had not previously taught.

GILO managed the training of teachers, as well as procurement and distribution of the materials. Project staff trained ministry of education supervisors to visit schools and monitor and support teachers as they taught the lessons and used the materials. The costs associated with school visits were covered by the project, allowing for fairly frequent supervisor support to teachers. The monitoring by supervisors did not include systematically collecting data regarding teacher practice and did not assess student outcomes. A summative assessment was carried out by the project after two years of implementation and showed improved reading skills compared to control schools.

Based on the results obtained in the GILO pilot, the ministry was adamant that the program needed to be implemented in the whole country and began planning for expansion of EGRP to all 27 governorates. GILO provided assistance to the ministry to develop a scale-up plan. This work included comparing scenarios based on how quickly to scale up, the phasing of expansion across the country, and the extent to which the full pilot model would be respected (i.e., whether the amount of training and supervision would need to be compromised to lower costs). Three months before the start of the 2011–2012 school year, the government decided scale-up would begin during the coming school year, with GILO expanding its footprint in the four governorates where it was working, and the ministry replicating the pilot with some small assistance from GILO in the other 23.

Going to Scale in Egypt²⁴

The timing and roll out for the EGRP was as follows:

- Expand to all grade 1 classes in the first half of the 2011–2012 school year
- Develop the grade 2 materials and expand into grade 2 also during 2011–2012
- Continue implementation in the two grades throughout 2012–2013
- Develop grade 3 materials and roll out to that grade in 2013–2014

For the 23 governorates where the ministry was replicating the pilot, GILO supported the training of a cadre of master trainers, and the ministry took responsibility for the rest of the cascade. Likewise, the ministry had responsibility for procuring and distributing the necessary materials and assuring funding for supervisor visits to schools. Therefore the project only had control over the training of master trainers. In many instances books for teachers and students have not been supplied in sufficient quantity—leaving schools to make their own copies or figure out how else to cope with the situation. The ministry made a conscious decision to implement a modified version of the GILO pilot—compromising on the number of days of training and on the expectations for the levels of supervision and support that would be provided. Thus, while teachers on the whole were satisfied with and liked the reading program, many teachers reported not receiving adequate support to enable them to implement it well.

The follow-on project, Primary Learning Program (PLP), was explicitly designed to work on policy and systems issues as a way to help institutionalize the new approach to teaching reading in early grades. This project included continued support to curriculum, materials

24 Information here is drawn from Nielsen, D. (2013). Going to scale: The Early Grade Reading Program in Egypt, 2008–2012. Prepared for USAID’s Education Data for Decision Making Project II (EdData II), Task Order 15. Washington, DC: RTI International.

development, assessment, and decentralized management and finance. The last two elements were intended to help ensure the level of decentralized operational support needed for schools to successfully fully adopt the new reading program. After one year of implementation, PLP was canceled for political reasons.

National EGRAs were conducted in 2013, 2014, and 2015.²⁵ **Table 4** summarizes the results of those assessments for grade 3 students.

Table 4: EGRA Results for Grade 3 Students

	2013	2014	2015
Oral Reading Fluency	22	21	19
Percent unable to read a single word (zero scores)	22%	27%	30%

The above results indicate that not much change has occurred in the performance of students during this three-year time period. Bear in mind that comparison across these three different tests cannot truly be made, especially between 2013 and 2015 because the latter was administered at the start of the school year. Of greater concern than the apparent lack of improvement in performance is the unwillingness of the ministry to release the results from these assessments, stifling the ability of the system to reflect on how national implementation could be improved.

Enabling Environment in Egypt

In addition to trying to replicate a modified version of the GILO pilot, the ministry did take measures to institutionalize key aspects of the innovation. GILO was able to support revisions to the official Arabic textbooks that the ministry was undertaking, thereby ensuring that the pilot program's approach would be woven into the new textbook content for grades 1–3. Regarding teacher training, GILO worked with the ministry and the Professional Academy of Teachers to accredit the reading program's training content, approach, and manuals, as well as reference materials and assessment methods. The training program therefore became part of the requirements for new teachers, and both teachers and trainers can now be certified in the EGRP.

Another way the program has become institutionalized is through the early grade reading unit which the ministry has established. GILO helped build that unit's capacity. And it became more institutionalized when in 2014 the ministry produced its organizational chart and hired a full-time department head (with extension experience on EGRP).

Enthusiasm generated by the demonstrated impact of the pilot contributed to ministry leadership's desire to scale up rapidly. And teachers and parents also demonstrated support

²⁵ Note that although national assessments were conducted, differences in the instruments, sampling methodologies, and timing of the tests make these comparisons questionable. However, they show a general trend in the sector in the three-year period during which the EGRP was taken to scale.

and demand for the new approach. Positive stories helped spread interest in the pilot, but no systematic attempt was made to communicate, mobilize support, or generate broad-based enthusiasm for the program.

6.2 Example 2 - Cambodia: Government-Led National Reform at Scale

Designing and Planning for Scale in Cambodia

There was no specifically designed pilot program in Cambodia being deliberately used as a model for a future national program. Several International and local NGO-supported projects were (and are) implementing reading programs. Room to Read, Save the Children, Kampuchean Action for Primary Education (KAPE), World Education, World Vision, and the Asia Foundation have projects focused on piloting approaches to improving early grade reading. Some other smaller programs that include reading are being implemented by a few other NGOs as well. Only Room to Read and KAPE/World Education have data on the impact of their programs.

When the government saw the results of the first national EGRA in 2010, it launched an effort to reform the curriculum for primary grades 1–3. New student books were developed following a more phonics-based approach, which in fact was based on a traditional method of teaching grapheme-phoneme correspondence. The ministry did draw on some of the experience of the NGO programs mentioned above, incorporating into the new textbooks some of what those projects were suggesting as good approaches to teaching basic literacy skills. The ministry chose not to develop a separate teacher’s guide to accompany the student books.

When the new textbooks were developed, the ministry proceeded to roll them out to schools in a fairly typical fashion.

Going to Scale in Cambodia

The ministry took full responsibility for procuring and distributing the new textbooks and for providing cursory introductory training for teachers. Global Partnership for Education (GPE) funds covered the costs of producing the new books. The ministry has formal structures for school supervision and support at the district level, but rarely visits schools and does not have specific mandates (nor training, nor resources) to support teachers in effectively delivering the new curriculum in early grades.

No systematic means to collect data on student outcomes or teacher practice are in place. The ministry on its own, with financial support from GPE, did conduct a second national EGRA in 2012 to evaluate progress with respect to the baseline of 2010. Problems with the test design, enumeration, and analysis of data have made it difficult to reliably evaluate student performance in reading.²⁶

Teachers have reported enthusiasm for the return to a more phonics-based approach to teaching reading, something they are more comfortable using in their classrooms. The ministry

26 See RTI International (2015). Assessment of Early Grade Reading in the Education Sector in Cambodia. Prepared for USAID’s Education Data for Decision Making Project II (EdData II), Task Order 15. Washington, DC: RTI International, for a discussion of the problems with the 2012 EGRA.

has not conducted a systematic communication or mobilization campaign to support the rollout of the new curriculum.

Enabling Environment

The reading content for grades 1–4 is embedded in the national curriculum and conveyed via the official textbooks for students for those grades. The decision to not develop teacher’s guides is being revisited, and the need for some improvements to the materials has been identified. A move by the ministry to address these two issues would further institutionalize (and improve) the reading curriculum.

The ministry is receiving assistance to build the capacity of its school supervision and inspection operations, both in designing a system for school support and training of some staff. Investments are also being made to establish the capacity of the Quality Assurance Directorate so that it can more systematically monitor and evaluate system quality—including in terms of student learning outcomes. A review of existing assessment systems and recommendations for how to establish regular, rigorous evaluation of learning outcomes is being supported by USAID through EdData II.

6.3 Example 3 - The Philippines: A Government-Led Complete Overhaul of the Education System

Designing and Planning for Scale in the Philippines

With a strong desire to improve the country’s education system, the administration of President Aquino pursued a comprehensive reform. The Enhanced Basic Education Act was signed into law in 2013. Kindergarten was added to the beginning of formal schooling, secondary education became compulsory, and senior high school (grades 11 and 12) was added to the formal system.²⁷ The other major education reform was a switch from a Filipino and English bilingual system to a mother tongue-based, multilingual curriculum (MTB-MLE), under an executive order issued in 2009. The department of education developed a strategic plan for implementation of MTB-MLE in 2010. The strategic plan laid out specific activities to be undertaken, including advocacy; pre- and in-service teacher training; materials development; policy development, resource mobilization; and assessment, monitoring, and evaluation.²⁸ Mother tongues would be used as media of instruction in grades K to 3, with children acquiring literacy in their maternal language during that time. Filipino and English are also taught in the first three years, and children’s literacy skills are transferred to those languages, which become the media of instruction beginning in grade 4.

The political leadership of the Aquino administration was committed to the reforms of the education system, but the Enhanced Basic Education Act did face some opposition in the Philippine Congress. The department of education leadership were strong proponents of the reforms as well. However there was quite lively debate in the country about moving to MTB-

²⁷ Prior to 2013, the formal education system consisted of grades 1–10.

²⁸ Mother-Tongue-Based Multilingual Education Strategic Plan. Manila: Department of Education, Republic of the Philippines, 13 February 2010.

MLE, with many stakeholders within the education system and across society more in favor of a focus on learning English.

Going to Scale in the Philippines

Prior to 2009, many projects²⁹ had worked on literacy in mother tongue languages, but the piloting of MTB-MLE in the formal education system as a matter of department of education policy began in grade 1 in 900 schools in 2011. The following year, those “pioneer” schools added grade 2, and simultaneously, all 46,000 public primary schools began implementing the program in grade 1. In successive years, MTB-MLE rollout followed that initial cohort. Kindergarten was not included in the 2012 national implementation, but was added in 2013. At present literacy instruction is being provided in 19 maternal languages.

The department of education prepared all the curricular materials, distributed them to schools, and carried out waves of initial introductory training for teachers following the grade-by-grade rollout. At the time, the Philippines was receiving large amounts of budgetary support from the World Bank and Australian government, which provided some of the resources to cover MTB-MLE implementation.

In addition to MTB-MLE, the department of education has for many years been supporting initiatives aimed at improving the teaching and learning of reading. These include the department’s own initiatives as well as externally funded projects, with the later often targeting specific regions/populations. Beginning in 2013, USAID funded the Basa Project, which supports Filipino and English literacy instruction in selected parts of two regions. While focused on those two languages, Basa also provides technical assistance to department activities related to MTB-MLE and is helping train teachers and provide materials in the areas where the project is working.

There are no extraordinary provisions for on-site teacher support as part of the rollout strategy for MTB-MLE. Only the regular visiting of schools by local education officials is what is expected (with some schools hard to reach given the Philippines is one of the world’s largest archipelagoes).

USAID began assisting with the assessment of literacy acquisition in 2013 through a national EGRA in English and Filipino and in one region/language (Iloko) for a sample of pioneer schools. In 2014 and 2015, USAID supported EGRAs in four mother tongues in four regions to help the department of education monitor the implementation and impact of MTB-MLE. In 2016 the department is implementing another EGRA, this time taking on more of the responsibility for that assessment itself.

The department of education has produced numerous promotional materials for MTB-MLE and also makes good use of the internet and social media for communicating about education in general and for promoting MTB-MLE. Nevertheless, some factions within the country still oppose the use of maternal languages.

29 See McEachern, F. (2013). Local languages and literacy in the Philippines: Implications for early grade reading instruction and assessment. Prepared for USAID’s Education Data for Decision Making Project II (EdData II). Washington, DC: RTI International, for a thorough discussion of use of languages in Philippine education.

Enabling Environment³⁰ in the Philippines

With MTB-MLE being government policy, the necessary reforms, commitment of resources, and other features of the enabling environment have been and are being addressed, albeit with varying degrees of success. Teacher training and support have been perhaps the weakest aspects of MTB-MLE implementation. Towards the end of the 2013–2014 year, only 30% of grade 1–3 teachers reported being trained to teach in mother tongue. A much higher number—75 to 80%—reported being trained specifically for teaching reading in the early grades. Not all schools received the necessary materials during the initial national rollout. Even in the 2013–2014 school year, only half of teachers reported having the teacher’s guide and not all classrooms had the appropriate number of student books. Close to 90% of classrooms in grades 1 and 2 were using the regional mother tongue for instruction, but reading instructional practice was weak. In only about 20% of observed reading lessons did students spend adequate time on reading activities, and in only 10% of the observed lessons were students engaged regularly in productive speaking, listening, and/or writing activities.

The above measures of MTB-MLE implementation did improve according to a survey done towards the end of the 2014–2015 school year. A greater proportion of students had teachers who were better prepared and more comfortable teaching in mother tongue, Mother tongues were being spoken during the vast majority of observed reading lesson time. MTB-MLE materials were more readily available in three of the four regions. In one region (the Autonomous Region of Muslim Mindanao—the most disadvantage area of the country), the availability of diverse materials linked to MTB-MLE remains below what it should be. Teachers displayed more of the practices associated with building reading skill and more time during reading lessons was being used to practice specific skills in 2015 compared to 2014. Teacher expectations regarding students’ acquisition of literacy changed dramatically from 2014 to 2015 across all regions, with much higher percentages of teachers stating that students can learn to read in their mother tongues during grade 1.

EGRAs in four regional languages were conducted in 2014 and 2015. The results of passage reading portion of those assessments for students in grade 2 are summarized in **Table 5**. The data show slight improvements in three of the four languages as the MTB-MLE reforms concluded their third year of implementation at national scale.

Table 5: Mother Tongue Reading Assessment Results

	2014		2015	
	Oral Reading Fluency (cwpm)	% Zero	Oral Reading Fluency (cwpm)	% Zero
Cebuano	40	8%	45	5%
Hiligaynon	32	22%	27	25%
Ilokano	30	13%	33	10%
Maguindanaoan	21	38%	24	28%

³⁰ All the data in this section on MTB-MLE implementation come from two surveys supported by USAID in 2014 and 2015 under EdData Task Order 15.

While the Enhanced Basic Education Act and Department of Education Order 16 mandate the reforms to the education system, the recent change in administrations in the Philippines raises some uncertainty regarding whether government commitment to these reforms will continue.

6.4 Example 4 - Jordan: Replicating the Trojan Mouse ³¹

Designing and Planning for Scale in Jordan

Beginning in 2006 the Government of Jordan revised and updated the curriculum for grades K-12 under the first Education Reform for the Knowledge Economy (ERfKE) program. This was supported by funding from several development agencies and the government itself.

Modernizing and improving the education system was clearly a priority for the government.

USAID has been funding numerous initiatives in Jordan, most recently focusing on the teaching and learning of reading and math in early grades beginning with an EdData II Task Order (Number 16) to conduct a national EGRA and early grade mathematics (EGMA) survey, along with a snapshot of school management effectiveness in 2012. The results of the 2012 surveys revealed significant gaps in reading and mathematics instruction and learning in the early grades. Even prior to these results, the ministry was concerned with improving remedial education in the early grades. The 2012 results, along with the influx of Syrian refugee students into Jordanian schools, heightened the need to address basic skill remediation. Thus a remedial education pilot program was developed and introduced under an EdData II Task Order.

Targeting remedial education on a small scale (41 schools) was a strategic way to introduce improvements to instruction in the early grades. The pilot would serve as a “Trojan mouse”—like a Trojan horse, designed to sneak something into the system, but on a less obtrusive scale—enabling the project to take on issues of the content and teaching related to early grade reading and math, without getting embroiled in a broader effort to change curriculum.

Though the project worked in close collaboration and coordination with the ministry, all of the necessary ingredients for the pilot intervention were assured by the USAID-funded task order, including hiring project staff to serve as on-site coaches for teachers. In addition, the project worked in collaboration with two Jordanian partners to supplement the capacity of the Ministry.

Table 6: Pilot Project Results in Oral Reading Fluency

		Control Schools	Treatment Schools
Oral reading fluency (cwpm)	2012	19	20
	2014	22	28
% Zero scores	2012	22%	16%
	2014	9%	4%

After two years of implementation, the remedial pilot showed significant impact compared to control schools (in an evaluation carried out by the project, not by an independent third party). Data from the remedial pilot are summarized in **Table 6**. The demonstrated improvement in oral passage reading in Arabic for grade 2 and 3 students in

treatment compared to control schools led to the design of the Early Grade Reading and

³¹ Information for the Jordan case is drawn from EdData Task Order 16, the report on the impact of the remedial program, and the RAMP proposal, recent quarterly reports and project staff input.

Mathematics Project (RAMP), intended to progressively scale up the remedial program to all the schools of Jordan.

Going to Scale in Jordan

As a follow-up to the successful pilot, USAID supported RAMP to take the innovations to scale over the course of two years of implementation, expanding from the 41 pilot schools to a first cohort of approximately an additional 600 schools before expanding to the full country. The strategy was to work with “high density” schools first—those in larger population centers—making it easier to reach a large number of students. The second cohort would add in the “low density” schools in more rural settings. This two-stage scale-up strategy allowed the project and the ministry to first work in easier to reach places before taking on the greater logistical challenges of working in low density parts of the country.

The project remains in direct control of many of the ingredients during scale-up—funding and managing the production and distribution of materials, the training of teachers, and ongoing monitoring and evaluation and assessment. Ministry supervisors (92 total) were enlisted and are being trained to serve as “coaches”—carrying out the necessary regular on-site support to teachers. An additional cadre of 74 coaches were hired directly by one of the project’s local partners and are being trained alongside the ministry supervisors. The extra coaches decrease the school-to-coach ratio, thus enabling more frequent follow-up visits.

As implementation is spreading to the whole country, the project has also introduced a lot quality assurance sampling (LQAS) based approach to monitoring progress at the directorate (district) level. In the first LQAS-based survey, the project supported data collection by ministry supervisors, took care of all the processing and analysis, and has written the report.

Enabling Environment in Jordan

The pilot remedial intervention is being replicated across the country by the project in collaboration with the ministry. Other efforts to institutionalize some aspects of the program are foreseen. RAMP is working with the ministry’s Education Training Center to develop a sustainable teacher in-service model that incorporates some of the training content and approach of the project. The project is also enabling the development of a web-based community of practice among teachers and head teachers that could become self-sustaining. Work has begun with universities to link them to the work in early grade reading and math, so that eventually courses designed to train teacher candidates in the content and pedagogy best suited for lower primary will be incorporated into the pre-service program. And the project has begun working with the ministry on its official policy regarding teacher-led, school-based coaching.

To date, the project is handling all monitoring and evaluation related to early grade reading and math, including the LQAS-based approach mentioned above, and conducting national EGRA and EGMA surveys. The first LQAS-based survey permitted the project to map results by directorate, which has spurred the interest of the ministry in that kind of tracking of progress, including interest in the targeting of resources that such monitoring enables.

The project currently is handling the communication and mobilization of support for the national rollout.

RAMP has just responded to a request from the ministry to support a new curriculum update for grades K–12. This offers an opportunity to directly incorporate the project’s reading (and math) content and approaches into the new official curriculum for early grades, as well as to support the ministry’s move to a competency-based curriculum.

6.5 Example 5 - Kenya: A Research-Based Approach to Expansion through Collaboration³²

Designing and Planning for Scale in Kenya

The Kenyan government’s official policy statements made clear its commitment to improving the teaching and learning of reading (in Kiswahili and English) and math in the early grades of primary school. Working toward that objective, USAID and the ministry of education in Kenya collaborated in 2011 to design the Primary Math and Reading Initiative (PRIMR). PRIMR by design worked closely with the ministry and relied on the expertise of several Kenya institutions to develop the components of the program. PRIMR represents perhaps the best example of a pilot program designed to test a cost-effective and scalable model’s ability to improve literacy and numeracy among class 1 and 2 pupils. And the pilot was also designed to build ministry capacity and to institutionalize key elements of the reading and math interventions as a precursor to scaling up implementation.

The project collaborated with the ministry and other institutions to assure the development and implementation of the key ingredients, many of which were approached with scalability in mind. For example, student books were designed to be inexpensive (US\$ 0.75 each) and teachers’ materials included a self-contained guide with reduced scripting of lessons, some simple instructional aids, and an assessment manual. However, all the materials were not part of the official curriculum, creating some confusion at the school level as to which materials to use. The advantage the pilot (and scaled up implementation) had was that these materials were available in sufficient quantity for each student to have a book and each teacher to have a guide.

The approach to teacher development put more emphasis on assuring on-site follow-up and support, using Teacher Service Commission (TSC) staff, and relying on only 10 days of off-site training delivered in three doses at the beginning of and during the school year. Much of PRIMR’s attention and energy was spent in supporting visits to schools for observations of lessons and feedback to teachers. The project covered the cost of all the materials and training, and the provision of tablet computers to the TSC staff, as well as the coaching-associated travel expenses, instituting a performance-based system of reimbursing those costs.

The pilot included a research design that would enable comparison of project to control schools, comparison within project intervention sites between different coach-to-teacher ratios, and comparison of three different information and communication technology (ICT) interventions. PRIMR ran for two years, and made several revisions to the teachers’ guides during that time, based on feedback from the field (e.g., regarding the level of scripting and organization of content). In the third year, additional funding from the UK Department for International

³² Information relayed in this example comes from the PRIMR and Rural Expansion design documents as well as impact evaluations, and from the Tusome design documents and current experience.

Development (DFID) enabled the project to expand the pilot into three additional, rural counties, with two cohorts of schools: 251 in 2013 and another 657 in 2014.

The expanded pilot was designed to test four different topics of interest to the ministry. These included comparing the amount of improved reading achieved when teachers used the PRIMR teachers' guides to that achieved when teachers develop their own lessons. The DFID-supported project also compared teacher practice and student outcomes in classrooms where only training was provided to teachers versus those where training and the PRIMR materials were provided. The expanded project also tested mother tongue literacy instruction in another set of schools. The cost-effectiveness of the variations mentioned here was also evaluated, with an eye towards scalability.

The combination of the two projects, PRIMR and its rural expansion, provided the ministry and its development partners' data showing how to improve reading and math instruction and outcomes. But these two projects also made it possible to test variations on the intervention, so as to better position the education system to undertake scaling up of the program. The data available from evaluating the different variations on the PRIMR intervention formed the basis for designing the ensuing approach to scale-up.

Going to Scale in Kenya

Based on the large impacts seen in the pilot program and its expansion, the ministry committed to implementing the PRIMR intervention at scale. In 2014, USAID awarded the Tusome project to support national scale implementation of the PRIMR model in classes 1 and 2, but only for reading, not math. Tusome continues the project control over the funding and management of most of the ingredients for improving reading—developing (in collaboration with government counterparts), purchasing, and distributing materials; training teachers; equipping curriculum support officers (CSOs) and covering the costs of them visiting schools once per month; and compiling and analyzing all monitoring and evaluation data. The project works in close collaboration with the ministry, drawing CSO and teacher trainers from among ministry and TSC staff, and continuing to work with key parastatal institutions on policy development and institutional capacity building.

For the 2015 school year, Tusome began implementing the program in all 22,600 formal primary schools, plus 1,000 alternative basic education centers.

The project is supporting monitoring of implementation across the whole country, using tablets to capture data showing whether CSOs are visiting schools, whether teachers are adopting the instructional strategies and using the materials, and whether student outcomes are improving.

In addition to the national implementation of the PRIMR reading intervention through Tusome, the ministry has received assistance from GPE to implement the PRIMR math intervention in all primary schools, beginning in the 2016 school year. The ministry is managing all aspects of the scale-up for math, attempting to follow the approach used by Tusome.³³

³³ However, with some major setbacks in terms of the ministry's ability to procure and distribute materials in a timely manner and to organize and manage the logistics for delivering training.

Enabling Environment in Kenya

Capacity building is a key focus of the scaling up approach. CSOs, quality assurance officers at the county and sub-county level, and technical staff in central ministry and parastatal institutions are all receiving training and opportunities to learn by doing. Particular focus is being placed on building up the decentralized capacity to support teachers—enabling CSOs to effectively observe instruction, model lessons, provide feedback to teachers, and capture information on instructional practice and student outcomes. However, the ministry continues to rely on Tusome to underwrite the costs associated with the training and ongoing provision of support. Attempts by the ministry to take this on under the GPE program indicate that much more needs to be done to build capacity and institutionalize certain procedures (e.g., using e-money to reimburse CSO travel costs).

Tusome is supporting the compilation and sharing of information collected by CSOs, enabling the education sector for the first time to have rigorous data to monitor the provision of teacher support services (e.g., the number of visits carried out per month) and have indicative data on student performance (mini EGRAs implemented during each school visit). However, at some juncture, this capacity will need to be transferred either to the ministry or another Kenyan institution.

PRIMR put in place project-based capacity to develop, design, and to have produced and distributed all the necessary learning materials (e.g., student books, teachers' guides, supplementary readers). Under Tusome, project staff continue to manage this aspect of implementation. However, the project has engaged in policy dialogue with the ministry, other government institutions, and the private publishing industry in Kenya to examine how educational materials are developed, procured, and distributed. Currently the ministry leadership is considering how to reform textbook policy and better manage the textbook chain, as it wants to reproduce the reduced costs and greater efficiencies realized through the projects.

The ministry is beginning a process of reviewing and revising the primary school curriculum. Leadership have approached Tusome to support the revision for reading and math in classes 1–3, thus ensuring that the content and approach piloted under PRIMR will be incorporated into the official curriculum and future textbooks. The orientation of the new curriculum toward a competency-based approach positions Tusome well to integrate into that curriculum the PRIMR developed approach (which itself is based on developing specific reading and math competencies). This also offers an opportunity to extend the project approach to include class 3, something USAID has since asked Tusome to take on.

6.6 Example 6 – Nepal: Collaborating to Implement the National Early Grade Reading Program

Designing and Planning for Scale in Nepal

Three international NGOs have been implementing early grade reading programs in Nepal, with slightly different approaches, but all with data to show improvements in reading outcomes. USAID funded a national EGRA in 2014 that revealed low levels of reading performance, especially among certain regions and populations (notably, non-native Nepali speakers). **Table**

7 shows the EGRA results for grade 2 students for the three main ecological zones of Nepal and the Kathmandu valley compared to the national average.

Table 7: EGRA Results, Grade 2, Nepal

	Oral Reading Fluency (cwpm)	% Zero Scores
National Average	14	37%
Kathmandu Valley	17	36%
Mountain Eco-Belt	20	26%
Hill Eco-Belt	17	31%
Terai Eco-Belt	11	42%

Following the dissemination of the EGRA results, two things happened. The government became more interested in early grade reading as a priority area, and, with additional support from USAID, began working on developing a national early grade reading program (NEGRP). USAID also supported an assessment of the status of early grade reading within the Nepali education system. The results of that assessment led to the design of an intervention meant to support the first phase of implementation of the NEGRP (in 16 of the

country's 75 districts).

Under the USAID-funded project, EGRP (in support of NEGRP), a deliberate attempt has been made to bring together the government and the international NGOs with experience in early grade reading to determine the aspects of each program to be pulled together into the government's model. Ostensibly, these pre-existing programs are being treated as proven models from which to develop a scalable innovation as part of the government's own national program. The first year of the project was spent negotiating the relationships necessary to arrive at an approach that could draw on the international NGO experience and respond to what the ministry wanted to see in its national program. Based on the results of that negotiation, a set of materials have been developed and is being rolled out to the first cohort of schools in the 16 target districts.

Going to Scale in Nepal

The implementation strategy for the NEGRP is to start in the 2016 school year in a first cohort of schools in 16 districts as a first phase, allowing evaluation of the approach, and giving the system an opportunity to learn important lessons regarding how to overcome some of the constraints it faces at the decentralized level. The initial phase of scale-up therefore is meant to model some of the key relationships needed to assure school support. The EGRP will provide the necessary inputs for this first phase of implementation: copies of materials, training for teachers, and support for recurring costs associated with ongoing school and teacher support.

Resource centers are hubs from which school support and teacher in-service opportunities are to be provided; however, they are chronically understaffed and underfunded. The ministry has created a new role meant to address this need. "Reading motivators" will be assigned to resource centers, from which they can provide support services to teachers. From among existing teachers identified as good, districts will recruit those who can play this new role. EGRP will help train them, provide them with tools for being effective coaches, and will cover the costs of them getting out to schools.

Working out the details of how this new role will operate in the system is one of the important learnings intended to be drawn from the first phase of scale-up.

Additionally, EGRP is helping these 16 districts plan their support to implementation. Districts are limited in the resources they have. Therefore, developing procedures for prioritizing among their different needs will be an important aspect of capacity building.

Enabling Environment in Nepal

Although it has developed the NEGRP, the ministry's will to carry through a national program is limited. Conflicts have arisen over the timing of interventions and the schedule for rollout of NEGRP (in part, through the EGRP). One issue concerns how any model for improving early grade reading will have to be flexible and adaptable enough in its approach to respond to the diversity of settings across Nepal. For example, schools, and even classrooms, differ in how homogenous or how heterogeneous their enrolled students are. At least three distinct groupings were identified during the early grade reading sector assessment—those with predominantly Nepali speaking students, those with predominantly speakers of another language, and those that are heterogeneous. Any model for teaching reading in early grades will have to be flexible enough to adjust how literacy is approached (for example, whether Nepali is treated as a first or second language, whether students need scaffolding in more than one other language, or whether another mother tongue could be used as the language of literacy). EGRP will need to work out these issues with the ministry in Kathmandu and with the districts where the first phase is being implemented.

Another enabling environment issue relates to the reading motivators mentioned above. EGRP and the government will need to work out the details of this new role — job descriptions, criteria for selection, relationships of reading motivators to schools and teachers, training needed, and other ongoing resource requirements.

In addition to the EGRP, USAID is providing a government-to-government grant to cover some of the ministry's recurring needs. However the structure, timing, and requirements of government to government funding at times impedes advancement of the program objectives.

The project is supporting the ministry in developing a 5-year rollout plan for NEGRP. However, agreement still needs to be reached regarding the model for reading improvement that NEGRP will be promulgating.

6.7 Example 7 – Indonesia: A Propagation of Innovation Approach to Increasing Scale

Designing and Planning for Scale in Indonesia

Distinct from the other early grade reading programs of USAID, Prioritizing Reform, Innovation, and Opportunities for Reaching Indonesia's Teachers, Administrators and Student (PRIORITAS) in Indonesia is taking a very different approach to introducing and supporting the spread of improvements in teaching practice. The effort is not as singularly focused on early grade reading as in other countries, with support to schools and teachers covering a broader set of teaching and learning issues (other subjects, other general teaching strategies). However, it is introducing two units related to teaching the five building blocks of literacy. Data on grade 3

student performance at baseline (2013) and midline (2015) for a set of partner schools that worked with the project are compared to other schools in the same districts. The data show no statistically significant change in either set of schools in reading fluency (since students are reading at already relatively high rates of fluency), but do show marked improvements in reading comprehension, and more so in partner schools (**Table 8**).

Table 8: Grade 3 Student Performance, Baseline and Midline

	Partner Schools		Comparison Schools	
	2013	2015	2013	2015
Oral reading fluency (cwpm)	75	73	69	70
% reaching 80% or better on reading comprehension	56%	73%	52%	66%

PRIORITAS worked with the teacher training institutes (TTIs) to develop a two-day training module for teachers on basic literacy instruction. Working with a local NGO, the project also developed another module focused on how to use leveled readers with students grouped according to reading ability. This included supporting the NGO to review and improve the content of existing readers and to ensure a coherent sequence of levels. PRIORITAS procured and delivered a set of these improved leveled readers to approximately 10,000 schools.

Sixteen hundred best practice schools in clusters in 23 selected districts have served as demonstration sites for implementation of improved instruction, including that which is focused on basic literacy. These demonstration sites are also meant to provide opportunities to train district supervisors and to work out how to establish school support relationships for TTIs. PRIORITAS is also intended to build system capacity for TTIs to be school support service providers.

Going to Scale in Indonesia

What is being taken to scale in Indonesia is a mix of school-level strategies aimed at improving instruction, among which is some training for teachers on how to better cover the five dimensions of literacy acquisition in the early grades of primary school. The model for scale-up has two approaches. In one province, Aceh, the provisional office made the decision to invest in replicating the training modules and materials in all the districts, which then had responsibility to propagate the innovation to the school level (relying on district funding). Limitations in the available human and financial resources at the district level has made penetration to the school level challenging. Districts have resources, but they must use them to respond to all the training needs of their schools. Therefore an important issue has been how districts can prioritize early grade reading among all the other needs.

In other provinces, PRIORITAS has taken a demand-driven approach to the dissemination of school-level innovations. Because of the highly decentralized nature of the system, the project creates opportunities for districts and schools to learn about the success of their peers (either in their district or elsewhere) through showcase events, social media, blogs, and other

communication strategies. Schools are invited to share their experiences and strategies with each other, and replication of the innovations is organic—with schools or districts choosing to adopt what strikes them as useful. Districts cannot force schools to implement innovations they are not interested in, because schools have their own resources and choose what they wish to invest in by paying for their teachers to participate in training.

The project responds to demand, supporting those schools and districts that request assistance so they can adopt new practices (including those related to early grade reading). The project also drops those schools or districts if their interest wanes.

Enabling Environment in Indonesia

In addition to supporting the initial introduction of teaching innovations and leveled readers, and seeding the spread of those innovations across schools and districts, PRIORITAS is working on some of the broader enabling conditions for improved education. Inefficiency in teacher deployment has been a longstanding problem in Indonesia and PRIORITAS continues to support analysis of the problem and is working with districts that wish to develop and implement strategies to rationalize the assignment and management of teachers.

The project has also worked with the central ministry's curriculum department to have the leveled readers it introduced officially authorized for use in primary schools, thus helping institutionalize those resources as part of approved list of books that can be used by schools. And the project is working with TTIs to help them improve the training they provide and building their capacity to provide useful support services to schools.

7 SUMMARY DISCUSSION OF CASE EXAMPLES

Reviewing the above cases two things become clear. First, there are some patterns to how scale-up is occurring, and in particular to the ways in which projects can best work with governments to assure successful implementation at scale. Second, variations in how scale-up is being approached reveal some of the weaknesses that need to be addressed, in particular in terms of the government capacities needed to take on responsibility for implementation at scale and for creating enabling conditions that embed reading program features in the institutional fabric of the education sector. As a basis for discussing these patterns, **Table 9** summarizes the key aspects of the different cases according the three phases of scale up in the MSI framework.

Table 9: Key Aspects of Scale-Up by Phase

Ingredients for Improving Early Grade Reading	Designing and Planning for Scale	Going to Scale	The Enabling Conditions for Success at Scale
<p>Assuring basic inputs:</p> <ul style="list-style-type: none"> • Reading curriculum • Teacher guides • Student books • Supplementary readers 	<p>Pilot projects in Egypt, Jordan, and Kenya were designed to model innovations in curriculum content and teacher and student materials as precursors to scale-up. In Nepal, pre-existing small scale pilots are being drawn on as inspiration for design of basic inputs for national program. In the Philippines and Cambodia, curriculum reforms at national scale drove design of new materials. In Indonesia, a pilot addressing more than just early reading was introduced in select schools, in selected districts.</p>	<p>In Kenya and Jordan, projects are assuring basic inputs on expanding basis as reading programs are taken to scale. In Nepal, a project is supporting basic inputs for the first phase of scale-up implementation. In Egypt, the Philippines, and Cambodia, government is attempting to assure basic inputs itself, in the latter two cases with external financing, but in all three cases relying on government institutional infrastructure for implementation. Issues are evident in all three cases in terms of government's ability to get adequate supplies of materials delivered to schools on time. In Indonesia, the project is supporting horizontal dissemination of innovations.</p>	<p>The Philippines and Cambodia have reformed national curriculum and materials for teachers and students to address early grade reading. Egypt reformed its national curriculum and materials to incorporate reading lessons introduced through the pilot. Kenya is in the process incorporating the reading program into new curriculum and materials being developed for grades 1–3. In Jordan, a curriculum reform is being launched that offers the opportunity to incorporate the project approach and materials for early grades. In Indonesia, a highly decentralized system, districts are supporting schools that take up the new approach to teaching reading.</p>
<p>Improving instruction:</p> <ul style="list-style-type: none"> • Specific pedagogy • Training for teachers • Regular ongoing support for teachers 	<p>Egypt, Jordan, Kenya, and Nepal rely on project-provided teacher guides to map sequences of lessons and lesson content for teachers. During pilot, all training and coaching assured by these projects as well. In Indonesia, arrangements for teacher training and support are made between the project, teacher training colleges, and districts.</p>	<p>Training and coaching of teachers at scale are fully supported by the project in Kenya and Jordan, and for 16 districts during the first phase of scale-up in Nepal. In Egypt, the Philippines, and Cambodia, the government is taking responsibility for training teachers. Teacher support in Egypt is supposed to be provided by <i>Idarra</i>-level education offices. No provisions are made for ongoing support/coaching in Cambodia and the Philippines.</p>	<p>The project training program and approach were officially recognized and certified by the government in Egypt. Teachers receiving the training are given additional certification. Government is designing training program modelled on project experience in Kenya. And curriculum support officers have officially taken on the coaching role developed under the project in Kenya. The Philippines is developing an early grade reading specialization within its universities offering teaching degrees. A project in Indonesia is working to form service-provider relationships so schools/districts can procure training and support services from teacher colleges.</p>

Ingredients for Improving Early Grade Reading	Designing and Planning for Scale	Going to Scale	The Enabling Conditions for Success at Scale
<p>Monitoring & assessment:</p> <ul style="list-style-type: none"> Monitoring of instruction Assessment of outcomes Routinized accountability 	<p>Projects conducted monitoring and assessment of pilots in Egypt, Kenya, Jordan, Indonesia, and Nepal.</p>	<p>Projects are supporting assessment at scale in Kenya, Jordan, Egypt, Nepal, and the Philippines. The project in Jordan has introduced lot quality assurance sampling as an approach to monitoring regional performance. Cambodia conducted its own assessments of its curriculum reforms (and had problems analyzing the early grade reading assessment [EGRA] results).</p>	<p>Kenya, with project support, is using EGRA data to monitor performance at the county and sub-county levels. Government in the Philippines has been progressively taking greater responsibility for implementing annual EGRA to monitor mother-tongue-based, multilingual education (MTB-MLE) progress.</p>
<p>Communication:</p> <ul style="list-style-type: none"> Mobilized enthusiasm Demand for change 	<p>Data from pilot projects were used to mobilize government interest in going to scale in Kenya, Egypt, and Jordan. Data from national EGRA in Nepal helped motivate government to develop a national early grade reading program.</p>	<p>Use of demonstration and learning events in Indonesia is helping innovation spread within and across districts. Results from Kenya experiments influenced government's and its partners' approaches to national scale implementation.</p>	<p>Projects are supporting leadership committed to improving learning outcomes in Kenya, Nepal, Jordan, Egypt, Cambodia, and the Philippines. The Philippine department of education invested in persuading legislative and executive leadership to support MTB-MLE reforms. Reforms were thus written into law.</p>

In the cases where government is handling implementation at scale on its own—Egypt, the Philippines, and Cambodia—problems are evident. Some initial training is provided to teachers, but the governments are relying too heavily on a multilevel cascade to deliver it, thus diluting the quality. Training content is focused on introducing teachers to the reading program, rather than developing teachers' instructional skills, and failing to train teachers in how to make appropriate use of the new materials. Materials are getting out to schools, but not in adequate numbers nor on time to coincide with teacher training and/or the start of the school year. Ongoing support or coaching is essentially non-existent in these cases.

In contrast, where scaled-up implementation is being directly supported by a project, in Kenya and Jordan, more training is provided (and is focused on instructional skill), adequate supplies of materials are delivered on time, and coaching is being assured with impressive frequency. In both cases, the projects are using ministry personnel to conduct training and serve as coaches (with some additional project-hired coaches being used in Jordan to allow for a lower coach-to-school ratio). And in both cases, those personnel are officially designated as coaches. The projects are equipping and training the coaches, as well as covering the expenses associated with their visiting schools. They are demonstrating that it is possible for ministry staff to provide ongoing, regular, and frequent teacher support.

The contrast between the cases of Jordan and Kenya on one hand, and the Philippines, Egypt, and Cambodia on the other, shows that governments assuming responsibility for implementation at scale, before the necessary institutional infrastructure and capacity are in

place, can lead to severely compromised implementation. The experience of Kenya and Jordan illustrate how projects can be designed to help bridge government capacity to assuring implementation at scale—provided that the project is adequately resourced and is given enough time. The challenge for such projects is that they need to assume responsibility for many of the logistical challenges of scale-up, while also building government capacity to eventually take over those responsibilities. This generally takes more time, more effort, and more creativity than may be assumed at project design. The struggles being presently encountered in Nepal testify to this, as the disconnect between the project schedule of deliverables and the government’s timeline for implementing its national reading program is making it hard for the project to appropriately support and develop ministry capacity.

In cases like Egypt, the Philippines, and Cambodia, where governments have launched their own national scale reforms, project have been able to provide assistance after the fact. As these governments confront the numerous challenges of implementation at scale, they become more open to outside assistance to help build some of the missing capacity that is compromising their national ambitions. Thus USAID has been able to build key institutional capacities in the Philippines and Egypt, and is poised to do so in Cambodia.

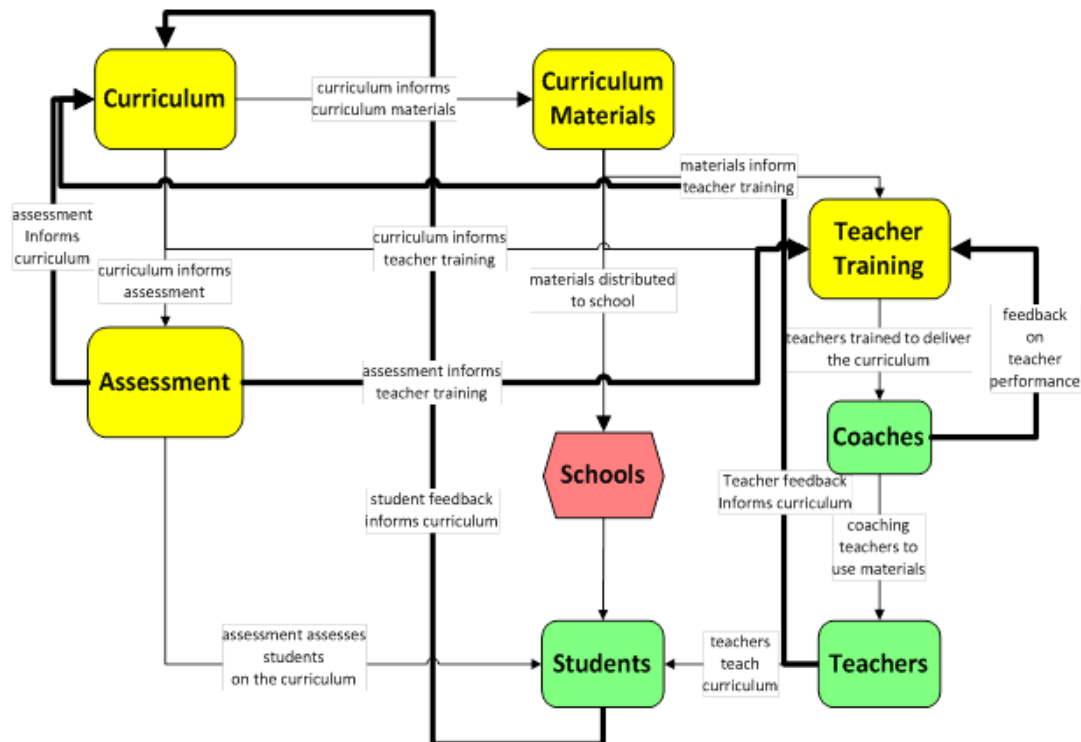
Section III: Sustainability

8 SUSTAINABILITY

As stated in the introduction, the purpose of this paper is to look at the initial challenge of taking successful pilots to scale. Or as illustrated by the examples provided, helping implement at scale a national commitment to improving reading in early grades. We have left aside the question of the sustainability of the scaled-up innovation. This is not because sustainability is unimportant; in fact, the opposite is true. However, we have to recognize that for many of the countries where USAID is implementing education programs, sustainability is a very long-term concern. With that in mind, discussing whether the current approaches to scale-up are (or are not) laying the foundations for eventual sustainability is worth considering. What should projects be doing to promote sustainability?

First, the ingredients discussed in this paper as necessary to achieving improved reading outcomes must at some point become integrated into the workings of the education system. And those ingredients must align and relate to each other in a systematic way. **Figure 1** summarizes how curriculum, materials, training, teacher support, instruction, and assessment must be mutually aligned and reinforcing if an early grade reading innovation that is being or has been scaled up is to be sustained.

Figure 1: Alignment of Technical Ingredients Needed for Improved Reading



For example, we can perhaps assume that the materials made available to schools are based on and communicate effectively the curriculum content deemed necessary for acquisition of literacy in the early grades. Teacher pre-service training and ongoing in-service professional development must align with that curriculum and build teacher competency in the pedagogy and use of materials that bring the curriculum to life in their classrooms. Similarly, teacher support (and supervision) must reinforce these same practices. If not, the system will send mixed signals to teachers, jeopardizing successful implementation, to say nothing of sustaining the innovation. Another example is that assessment must evaluate students based on the reading competencies that are at the heart of the innovation. Otherwise, again, the system will send mixed signals about what is important—as happens when emphasis is placed on a national examination, leading schools and teachers to devote most of their efforts to content related to that exam, rather than to the teaching and learning of basic skills in early grades.

So projects must be concerned not only with developing institutional capacity in each of the technical areas shown in the diagram, but also in working on the policies and institutional relationships needed for each of the technical elements to be mutually reinforcing as depicted in Figure 4.

Second, innovations must be designed with scale in mind if they are to have a shot at being sustained. Cooley and Kohl provide a check list for evaluating the scalability of innovation models along the following dimensions:

- **Credibility** – is there sound evidence demonstrating impact, and is that evidence espoused by recognized leaders
- **Observability** – teachers, principals, officials, and parents must be able to see tangible results
- **Relevance** – does the innovation respond to a recognized need (e.g., as a response to poor EGRA results)
- **Comparative/Relative Advantage** – does it show a cost-effective alternative to existing practice
- **Ease of transfer and adoption** – it cannot be too far of a leap for the average teacher
- **Compatibility** – it cannot be completely incompatible with existing norms, values, and arrangements (e.g., it cannot require a complete reimagining and reorganization of the education system)
- **Testability** – can potential users try it out safely without risking too much

In addition, designing the innovation with scale in mind also means making sure that it can be implemented at reasonable cost. This does not mean that only low-cost solutions are viable at scale. The set of projects currently wrestling with implementing large-scale early grade reading programs are helping identify the investments needed to bring about meaningful improvement in teaching and learning. That investment may in fact initially be quite high. Changing the instructional practices of every teacher in an education system with tens of thousands of schools perhaps cannot be accomplished cheaply. However, as indicated by both the MSI and the Millions Learning study, long-term sustainability means that costs must be accurately evaluated, sources of financing identified, and allocations better targeted to the ingredients that impact literacy in early grades.

Third, long-term sustainability requires demand for the innovation. Parents, students, teachers, and education officials must first recognize and admit that literacy instruction needs to be improved, and they must express demand for leadership in the sector to do something about it. And they must see themselves as having enough agency (or ownership) to do something about it as well. The EdData II project (and initiatives like Pratham's and Uwezo's household surveys) has been very successful at generating data that then can be used to leverage increased demand for improved early grade instruction.

Fourth, one of the things that wide-spread demand for change helps address is the political economy that impinges on education sector policy and decision-making. All innovations in some way need to alter the existing arrangements in the education system. Those arrangements are no accident—different actors have a stake in the existing relationships, resource allocations and organizational culture, and behavior. As innovations are taken to scale, the associated stakes increase, making implementation at scale inherently more confrontational than introducing a small scale pilot.³⁴ Both MSI and Millions Learning recognize the importance of mobilizing demand, champions, leaders, and constituencies and alliances to support the innovation. Scale-up must include strategies for this kind of communication and mobilization if large-scale implementation is to succeed and be sustained. If broad-based support is not established, a successful scale-up could easily regress back to the status quo ante over time (loss of momentum and enthusiasm are often cited for why sustainability is hard once an outside source of energy goes away).

Fifth and last, the terms of the principal-agent relationships that govern how the education system operates need to be altered if the new way of teaching reading in early grades is to be sustained. This involves how information and expectations are transmitted, the consequences or rewards associated with what the information says about what is or is not happening, and the support that flows in response to need. Alignment of the complex web of principal agent relationships³⁵ in an education system is perhaps the biggest obstacle to sustaining innovation at scale. How do politicians relate to education policy makers? How does the central ministry relate to its decentralized managers? And how do they relate to schools and teachers? What role do parents and the citizenry at large play in holding any of those actors accountable?

Some of the examples of scale-up of early grade reading programs included in this report are taking on some of these longer-term issues; some more so than others. In the countries where government has taken the initiative for scale-up—Egypt, the Philippines, Cambodia, and even Kenya—projects need to help them devote attention and effort to communicating effectively, mobilizing support, building constituencies and alliances, and responding to the inevitable ways the system will resist change. An example is the work being done in Kenya to support the ministry in rethinking and improving its existing relationship with the publishing sector. Another example is the deliberate strategy to create opportunities for demand to spread from school to school, or from district to district, as is being done in Indonesia.

34 Crouch & DeStefano, 2006.

35 A useful depiction of the complexity of these accountability relationships is presented in Gershberg, A, Gonzalez, P.A., & Meade, B. (2012). Understanding and improving accountability in education: A conceptual framework and guideposts from three decentralization reform experiences in Latin America. *World Development*, 40(5) pp. 101245-1041.

After compiling the information presented in this report, it is evident that USAID is supporting scale-up of early grade reading programs across a wide variety of settings. Strategies appear to be context specific—which is likely a good thing—but also dependent on other parameters. For example, the amount of available funds for an early grade reading program plays a big role in determining how directly involved a project is in supporting all the facets of the program at scale. Projects in Africa for example, like in Rwanda, Kenya, and Malawi, have levels of funding that allow them to directly support implementation. Those in Asia, such as in Nepal, Cambodia, the Philippines, and Indonesia, have limited resources, so are relying on a more indirect approach to scale (or are taking a smaller scale bite of a national strategy).

Continuing to probe the question of how best to support scale-up is something important that USAID must do. Only through national scale early grade reading programs will the Agency be able to meet its goal of helping 100 million children achieve improved reading skills.

Annex A: Side-by-Side Comparison of Scale-Up Frameworks

Brookings: 14 Core Ingredients for Scale-Up		Management Systems International (MSI): Management Framework for Scale-Up	
Design	Local Education Needs: design interventions in respond to local demand	Create a Vision: what will go to scale, how will scale-up occur, who will perform which functions, where will it happen?	Develop Scale-Up Plan
	Cost-Effective Learning: design for affordability at scale	Assess Scalability: determine viability of the model for scaling up and assess the organizational and social contexts	
	Flexible Adaptation: protect core elements, but adapt rest to local circumstances	Fill Information Gaps: analyze costs, determine modifications, evaluate model, identify institutional requirements	
	Elevating Teachers: leverage community expertise to support teachers	Prepare Scale-Up Plan: bring together need, vision, evidence, timetable, roles, resources	
Delivery	Education Alliances: different actors need to work together	Legitimize Change: leaders, champions, high-level advisory boards or commissions, policy dialogue	Establish the Pre-conditions for Scaling Up
	Learning Champions and Leaders: champions focused on learning in and outside government are essential	Build a Constituency: coalitions, political actors, grassroots and grasstops campaigns	
	Technological Advances: appropriate technologies can accelerate education programs	Realign and Mobilize Resources: donor roundtable, budget process, decentralized financing, market mechanism, bridge funding	
	Windows of Opportunity: align the approach with country priorities	Modify Organizational Structures: re-engineering, leadership development, capacity building	
Finance	Better Data: data on learning can inform action and policy	Coordinate Action: governance structures, joint ventures or partnerships, grants, virtual networks	Implement the Scaling Up Process
	Flexible Education Financing: flexible financing, including to build core capacity	Track Performance and Maintain Momentum: third party monitors, citizen oversight, scorecards, media coverage	
	Long-Term Education Financing: stable and predictable support is needed		
Enabling Environment	Middle “Phase” Financing: resources are needed to bridge from pilot to scale-up		
	Supportive Policy Environment: policy must protect every child’s right to an education, but remain open to a diversity of ideas and actors contributing		
	Culture of R&D: ethos of experimentation and using learning data is needed		

The diagram on the preceding page shows the 14 ingredients for scale-up identified in the Millions Learning study side-by-side with the 10 steps that make up the MSI-developed management framework for scale-up. The red arrows connect parts of both lists that are clearly related, namely:

- Attention to cost-effectiveness appears in both lists, as a critical consideration in determining the scalability of an innovation.
- Brookings idea of flexible adaption is mirrored in MSI's attention to the modifications that may need to be made to a pilot intervention, in order to adapt it to different settings. While adaptability is important, so is protecting the core characteristics of the innovation that will have made it effective during the pilot stage.
- During scale-up, both frameworks also highlight the importance of forming alliances, building constituencies, and coordinating action across an array of actors critical to success at scale.
- Having champions and leaders are part of what helps legitimize the innovation.
- Better data and tracking of performance are recognized by both Brookings and MSI as key to building and maintaining momentum for change and informing broader policy decisions that can create a sector environment more conducive to the intended change.
- Both sides of the diagram show the importance of realigning resources, mobilizing additional resources, and determining the need for and securing long-term funding for the hard slog of implementation on increasing scale. The Brookings framework raises the issue of having funding for the middle phase of going to scale. In fact, we would argue that not enough attention is paid in general to the middle phase. This is when one can implement a successful pilot on a large enough scale to have to interact with the education system in a meaningful way. That enables the government and its partners to identify the details of how the relationships, use of information, reporting, responsibility, and accountability within the system may need to change to support scale-up.

The main differences between the two views of scale-up have to do with whether one is planning specifically to engage the government, or if one is just looking to understand how innovations can be implemented at increasing scale, often independent of the education system.

And the difference between these two frameworks and what we have tried to apply in this paper is that we are paying attention to the specific aspects of the education system that are needed to support improvements in the teaching and learning of reading.

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