EdData II

Task Order 15: Data for Education Programming in Asia and the Middle East (DEP/AME)

Case Study of Egypt's Early Grade Reading Activities during 2013 and 2014

EdData II Technical and Managerial Assistance, Task Number 15
Contract Number AID-EHC-E-00-04-00004
Task Number AID-OAA-BC-11-00001
November 2016, revised January 2017

This report was produced for review by the United States Agency for International Development. It was prepared by H. Dean Nielsen for RTI International.

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II

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Acronyms and Abbreviations

CCIMD	Centre for Curriculum and Instructional Materials Development
COP	Chief of Party
CV	curriculum vitae
DEP-AME	Data for Education Programming in Asia and the Middle East
EGMA	early grade mathematics assessment
EGR	early grade reading
EGRA	Early Grade Reading Assessment
EGRP	Early Grade Reading Program
GILO	Girls' Improved Learning Outcomes Project
GAEB	General Authority for Educational Buildings
GOE	Government of Egypt
KEYS	Keys to Effective Learning
MOE	Ministry of Education
MOE-EGR	EGR unit in MOE
NCEEE	National Center for Educational Evaluation and Examinations
PAT	Professional Academy of Teachers
PLP	Primary Learning Program
R&D	research and development
RTI	RTI International
SOW	Scope of work
STEP	Scholarships and Training for Egyptian Professionals
TOT	Training of Trainers
USAID	US Agency for International Development

Executive Summary

This case study was designed to examine progress in scaling up and institutionalizing Egypt's Early Grade Reading Program (EGRP) during 2013, the final year of which the Ministry of Education (MOE) was supported by the US Agency for International Development- (USAID-) funded Girls' Improved Learning Outcomes (GILO) project, and 2014, when the MOE managed EGRP without external technical or logistical support. The study also aims to articulate lessons learned and make recommendations for future directions. Due to restrictions on RTI business travel to Egypt during 2016, the study is predominantly based on document reviews carried out by the principal investigator, complemented by inputs from GILO's Chief of Party, and exchanges with other RTI technical expert staff.

EGRP was designed to change reading instruction in early grade classrooms, incorporating an emphasis on phonics, improved vocabulary and learning strategies, highly engaging teaching routines and multiple opportunities for student practice, classroom-based reading assessments to inform teaching, and specific focus on reading instruction during teacher supervision and coaching activities. Bringing these changes, piloted in four governorates with GILO project support, to national scale required the development of new teaching and learning methods and materials and the introduction of new teacher training content and support mechanisms, leadership, and institutional reforms.

The study team therefore examined documentation on the 2013–2014 period on student learning outcomes and their measurement, teaching practices in the classroom, textbook design and provision, teacher training, support and coaching, and EGRP leadership and institutionalization. Students' results on an April 2013 (baseline) Arabic Early Grade Reading Assessment (EGRA) for Grade 3 students indicated a low starting point, with over 21% of students unable to read aloud a single word in a short reading passage, and showing very poor evidence of reading comprehension at all. One year later, the first cohort of Grade 3 students to have experienced EGRP showed markedly better scores than their pre-EGRP peers in letter-sound correspondence, and modestly better decoding (non-word reading) skills. However, their oral reading fluency and reading comprehension performance overall was no better than that of their pre-EGRP peers, while listening comprehension performance declined.

A good part of these disappointing results can be ascribed to the social and political upheaval surrounding the removal of President Mohamed Morsi by the Egyptian army in July 2013, which led to weeks of violence, insecurity, and major disruptions to the 2013–2014 school year. Grade 3 students' EGRA performance in April 2014 was unquestionably compromised by the truncated school year and the broader security situation. The topics reviewed in the present study reveal some other potential factors in this low observed performance in April 2014, as well as some promising developments.

Overall, the findings of this review indicate that while much good work has been undertaken, Egypt's process of institutionalizing an EGRP that is entirely capable of improving the reading skills of most children to higher levels is not complete. The study's

key observations and suggested future directions are grouped by topic below. The suggestions are for the consideration of both policy makers and managers in the Government of Egypt (GOE) and its agency partners and donors, such as USAID, ideally acting in partnership.

Monitoring the Implementation of EGRP and Measuring Its Impact on Student Learning

The 2013–2014 school year was so chaotic due to social and political upheaval in Egypt that it was impossible to offer a full year of learning to students. Approximately six weeks of instruction were lost to instability. Grade 3 students' EGRA performance in April 2014, intended to provide a measure of impact of a full year's implementation of EGRP, was unquestionably compromised by the truncated school year and the broader security situation, and subsequent EGRAs conducted to date have not been statistically comparable to the 2013 baseline. The 2013–2014 year was also challenging due to novelty of the program and the absence of revised EGRP textbooks, which required teachers to adapt their use of existing textbooks to the EGRP approach. In other words, EGRP's impact on student learning has yet to be fairly assessed.

Despite the atypical 2013–2014 school year, the *2014 Observation Study* (RTI International, 2014d) provided valuable empirical data on the actual implementation of EGRP in the classroom and constructive views from practitioners on the ground. It helped to reveal that training and support provided to teachers may not have adequately presented teaching and learning strategies for developing higher-order reading skills such as fluency and comprehension, and these strategies were less in evidence in classrooms. Classroom overcrowding made it difficult for teachers to implement various EGRP features.

In addition to formal research, routine reports produced by district Arabic language supervisors equipped with EGRP observation instruments represent potentially valuable sources of information about how faithfully classroom teachers are implementing EGRP. In turn, such information could be used to improve and customize support and training for teachers. So far, however, these reports have not been compiled and mined to reveal patterns of strengths and weaknesses.

Suggested future directions:

- Continue the practice of observation for implementation fidelity to EGRP, using critical reviews of past observation and interview studies to guide improvements/enhancements for the new ones. More information about textbook quality and use, teachers' observed approaches to instruction in reading fluency and comprehension, and the substance and impact of teacher supervision/coaching would be useful. As EGRP matures, it will also be important to continue tracking teachers' motivation and commitment to reaching all students.
- To adequately capture the program effects of EGRP for Grade 3 students, a new national Grade 3 EGRA at the end of a full academic year of EGRP implementation is still needed. An EGRA carried out at the end of the 2016–2017

school year would be assessing 3rd graders who have benefited from early grade reading (EGR) instruction in EGRP's third year of implementation at each grade level. Comparing Grade 3 students' year-end performance results in 2017 with those from the 2013 baseline would provide a robust cross-sectional measure of program impact.

- Reducing early-grade student-teacher ratios substantially from observed levels would be a worthwhile element to explore as part of the government's long-term strategy for improving students' reading outcomes. Additionally, and in the shorter term, EGR managers could examine and learn from programs that have pioneered strategies for EGR instruction under large class-size conditions.
- In their supportive roles for EGR implementation, district Arabic language supervisors could be tasked with not only visiting and observing EGR classes but also regularly (quarterly or biannually) compiling and summarizing their findings and identifying patterns of strengths and weaknesses for use in the planning of coaching and new rounds of decentralized teacher training.

Teaching Practices in the Classroom

In any intervention, success is deeply dependent on how effectively and faithfully those on the ground implement the system. The 2014 EGRA administration round included structured classroom observations and teacher and head teacher interviews in a 20% random sample of the 200 assessment schools (RTI International, 2014d). The observations showed that a large proportion of observed Grade 3 teachers (71%) were using the EGRP lesson plans prepared by GILO, and that 84% were using pre-existing textbooks in a prescribed manner. In addition, 75% of teachers who received training in continuous student assessment reported using the EGRA materials for this purpose, and EGRP posters were displayed in 68% of observed classrooms. On the less positive side, fewer than 20% of teachers used other teaching resources such as word lists, letter cards, or storybooks. Most teachers (65%) were found to be applying the four procedures for effective early grade instruction: (1) beginning the lesson with a summary description of the lesson and its objectives, (2) modeling or demonstrating the skills of that lesson, (3) providing guided practice of the skills, with the teacher and students practicing together, and (4) providing an opportunity for independent practice by students on their own. Nearly all teachers (90%) used the discussion method in their reading instruction practice, although few teachers used any other method of reading instruction.

While many elements of effective EGR instruction were present in the schools observed, the *2014 Observation Study* (RTI International, 2014d) also identified several shortcomings in teachers' practices. Teachers emphasized letter sounds and other elements of phonics more than is appropriate for the end of Grade 3. Second, while teachers were covering the main thematic areas of the EGRP, they were using a limited number of tools and strategies in their coverage, certainly many fewer than were presented to them during training. In addition, responses of both teachers and principals indicated that many misunderstood EGRP to be mostly focused on letter sounds, syllables, and phonics. Together these factors may explain, at least in part, how the only

subtest to indicate a significant improvement over the 2013–2014 school year was letter sound identification.

Suggested future directions:

- Going forward, initial and refresher training should place more emphasis on the all-important skills of fluency and reading comprehension (including teachers, principals, and supervisors/coaches). Supervisors/coaches need to determine when these are not emphasized in the classroom and coach teachers in the use of appropriate teaching methods. The full range of tools and strategies has likely not been sufficiently modeled and practiced by teachers. Doing so is in line with our suggestions for more practice-oriented and needs-based teacher training (see below).
- Institutionalization of the EGR revolution must be accompanied by strategies to motivate continued high levels of teacher engagement and pride in their work. Both symbolic and tangible rewards are necessary, as well as more teacher engagement in systemic innovation and decentralized needs-based refresher training.

Textbook Design and Provision

EGRP teaching and learning materials, including textbooks, were developed in phases from 2010 through 2014. The complete package included lesson plans, student worksheets, alphabet flipbooks (Grade 1) and reproducible single-use student worksheets (Grades 2 and 3), teacher manuals, CDs, various training materials, and revised student textbooks in line with the EGRP approach

During the first year of scaled-up EGRP for a given grade level, schools relied on the existing textbooks, supplemented by the other EGRP learning materials and guidelines produced through GILO. New textbooks designed for EGRP were not available until the second year of national implementation in a given grade level (2012–2013 for Grade 1, 2013–2014 for Grade 2, and 2014–2015 for Grade 3).

The MOE's textbook rewriting program following the EGRP instructional process began in 2011 with Grade 1. To begin that process, the Center for Curriculum and Instructional Materials Development (CCIMD) assembled the specifications for the new Grade 1 EGR textbook with inputs from GILO. The government subsequently issued a tender for textbook creation and selected a contractor. The textbooks were accompanied by teacher guidebooks, which included scripted lessons. CCIMD followed the same processes for Grade 2 textbooks, which were finally delivered for the 2013–2014 school year. For Grade 3, CCIMD specialists themselves developed the textbooks, rather than relying on contractors as they had for Grades 1 and 2; these textbooks were delivered just prior to the start of the 2014–2015 school year.

The pre-existing, pre-EGRP textbooks were used in the first year of EGRP implementation in Grade 3 because, as with Grades 1 and 2, aligned textbooks for a given grade level were available only by EGRP's second year of implementation in that grade level.

The *2014 Observation Study* (RTI International, 2014d) indicated that most observed Grade 3 teachers (87%) were in possession of the EGRP lesson plan manual (which helped teachers overlay EGR methods on existing textbook lessons) and 71% were observed using it. However, a more general reference book, the *EGRP Teachers' Guide*, was available to only one-third of the teachers observed, and only 5% were observed using it.

In summary, a range of Arabic reading resource materials supporting the EGRP approach were made available to early grade teachers, classrooms, and supervisors during the 2013–2014 period. At the same time, the available textbooks were out of alignment with EGRP methods during the first year of EGRP implementation in a given grade level, requiring that the approach had to be conveyed through the use of supplementary learning materials. The degree to which this non-ideal situation may have affected (depressed) students' reading progress during the first year of Grade 3 EGRP cannot be determined by the data at hand, but may well have been substantial.

Suggested future directions:

- An external evaluation of textbooks' quality, use, and effectiveness should be prioritized before the next printing, with an emphasis on teacher and principal feedback. Such an evaluation could be accompanied by relevant details from supervisor reports and from observations carried out alongside new EGRAs conducted before the start-up of revisions. Many benefits would be derived from involving the higher education community in such an evaluation. Also, given the wide variation in student abilities and the crowded classroom conditions identified in the assessments, experimenting with the use of online student learning materials for enrichment and remediation is advisable.

Teacher Training

The MOE utilizes a three-tier cascade model for teacher and supervisor professional development in EGR. In preparation for the 2013–2014 academic year, GILO worked with the MOE to produce instructors' manuals and sample scripted lessons for Grade 3. The 2013 training went according to the established pattern, with GILO assisting in centrally training 200 master trainers—at least two per grade for Grades 1, 2, and 3 for each governorate. These master trainers then returned to their governorates and trained a total of 3,190 district-level trainers in September 2013 for Term 1 training, which was then carried out at the district level for all 83,000 of the country's Grade 1–3 teachers. This cycle was repeated for Term 2 EGRP training, again with GILO support, with 200 master trainers trained in November 2013, and 3,190 district-level trainers trained in December 2013. In early 2014, at which time the MOE was operating without GILO or USAID support, the district trainers organized Term 2 EGRP training for the Grade 1–3 teachers in their districts. This training occurred during the midyear break (January–February 2014) and covered an estimated 80% of the target cohort.

During August–September 2014, the MOE EGR unit developed and implemented an assessment of EGRP teacher training, with support of the Scholarships and Training for Egyptian Professionals (STEP) Project. The assessment itself took place in September

2014 (Keys to Effective Learning, 2014). The assessment report noted that the instructors' manual, being the same for all three grades, required trainers to make their own links to the specific grade-level textbooks, which in the case of Grade 3 was problematic as the revised EGRP textbooks were not yet available. Another concern raised was the relatively limited time and material devoted to depicting actual classroom teaching episodes. The report also mentioned the brevity of training for district trainers, suggesting that it be increased from 2 to 3–5 days, that it cover more practice, and that it introduce more exercises and worksheets.

A significant result of the GILO MOE-EGR cooperation was the building of bridges to the Professional Academy of Teachers (PAT). In August 2013, PAT certified the EGRP package. Consequently, PAT has now made teacher training in EGR a requirement for promotion. It also certifies EGR training materials and trainers. So far, however, PAT does not conduct its own training in EGR for teachers who are not candidates for promotion. Motivating teachers to seek and appreciate further training in EGR is a challenge. At present, there is no formal incentive for pursuing further training except for those in line for promotion through PAT. The current cascade structure offers the same basic top-down lessons to all teachers, regardless of their experience and needs; many teachers have already been through this basic training multiple times.

During the first three years of nationwide implementation of EGRP (2011–2014), teacher training emphasized foundational skills for reading (phonics and basic grammar), a fact borne out by results showing improvement mostly in these areas. Now it is evident that an emphasis is needed on the more advanced skills of reading fluency and comprehension—areas where results have improved little, at best. There is a concern for the future that the current one-size-fits-all training will fail to motivate teachers whose school conditions and training needs are widely diverse. Related to that is a sense that cascade training is too conceptual and abstract and needs to demonstrate (live or via video) real EGR teaching episodes and give trainees time to practice them.

Suggested future directions:

- Intermediate and advanced levels of refresher training are called for, especially those focused on student reading fluency and comprehension. In addition, more decentralized needs-based approaches that emphasize practical skills need to be introduced. Such training could use existing organizations such as PAT and school-based mechanisms, such as "school training and quality units," which studies have found exist in most schools. A more decentralized approach to teacher training/enrichment could also be positioned to tap into the rich training resources in teacher training faculties throughout the country. This would also be a good strategy for closing existing gaps in EGR strategies between the pre-service and in-service training of teachers.

Teacher Support and Coaching

While classroom teachers are the main drivers of EGRP effectiveness, the program does not expect them to work in isolation. EGRP teacher support/coaching is typically provided by Arabic subject matter supervisors located in district offices, with each

supervisor expected to visit about 40 teachers on a monthly basis. In addition, senior teachers in Arabic are expected to provide coaching support to those in their schools who teach reading in the early grades. District supervisors/coaches and senior teachers are trained in EGRP at the same time as early grade classroom teachers. The governorate master trainers also train the district supervisors/coaches in supervision methods; in November 2013, 290 general and senior supervisors were thus trained with GILO assistance. During their school visits, district supervisors are expected to observe teachers during their lessons and to provide feedback and advice, using EGRP-issued observation instruments.

The teacher and head teacher interviews used in the *2014 Observation Study* (RTI International, 2014d) devoted considerable attention to teacher supervision and coaching. Results of these interviews indicated that teachers benefit from a rather complex web of support with elements from both within and outside the school, including the school principal, senior teachers, the school training unit, the district supervisor/coach, the district reading unit, and the governorate reading unit. The most active supervisors/coaches were found to be the district supervisors (identified as providing support by 81% of respondents and at a frequency of once a week, according to 60%, and once a month, according to 22%). District reading units focused on EGR are also said by most respondents to be supportive (89%) but with much less frequency (the modal level being once per term), likely through group meetings and events rather than individual visits. A majority of teachers also mentioned receiving support from a school senior teacher and/or the school principal, both of whom were reported by half of teachers interviewed as giving support once a week. In addition, many locations have "school training and quality units," set up to conduct periodic training sessions. And finally, MOE governorate offices now have Early Grade Reading Units that occasionally are perceived to be providing some supervision, presumably more for supervisors/managers than for teachers.

While these answers may present an exaggerated picture of the kinds of support provided and their frequency, they do make it clear that EGRP teacher support continued to be active during the post-GILO period, that multiple parties are involved, and that teachers are far from isolated.

Suggested future directions:

- To better understand the effectiveness of teacher supervision and coaching being carried out, and in turn to strengthen the coaching function, new data collection and analysis are needed. Such work would focus on what is taking place during this support, how well the support provided is addressing teachers' needs, encouraging and motivating teachers, identifying and overcoming weaknesses in applying methods and strategies, and whether follow-up is taking place.

EGRP Leadership and Institutionalization

Moving the EGRP from a cooperative venture between the MOE and USAID through GILO to a nationwide program run entirely by the MOE requires considerable

institutional strengthening, both regarding program leadership/ownership and the legal/structural changes that would ensure program sustainability. Early in EGRP's dissemination, the MOE cleared the path by issuing supportive policy actions (Nielsen, 2013). These included a regulation that phonics be taught for 25 minutes per day in early primary classrooms; a decree allowing mentor teachers posted in one school to give coaching on EGRP to teachers in others; and a requirement that Arabic language supervisors at the primary school level use EGRP observation forms to assess teacher performance in this area. More recently, notable policy actions have included the requirement that early grade teachers take the PAT EGR training course to be promoted; the establishment of the national EGR unit in the MOE (January 2013); and the inclusion of the EGRP in the government's *Strategic Plan of Pre-University Education, 2014–2030* (Ministry of Education, 2014) with a goal of full EGRP implementation in all public primary schools by 2017. In early 2014, the MOE issued an official Organizational Chart for the new EGR unit, and recruited a full-time department head (a professional with extensive EGRP experience).

As cautioned by Lant Pritchett (2013), however, getting all the rules and regulations in place is not a complete formula for sustainable improvement in reading skills, but must be accompanied by genuine capacity and support for local initiative and innovation.

By the time GILO closed in December 2013, the national EGR unit had taken charge of EGRP, as evidenced by its successfully directing the training of Grade 3 teachers during 2014 in all 27 provinces. The new Grade 3 textbooks were produced and distributed entirely under MOE leadership by October 2014, and school supervision has been undertaken during the 2014–2015 and 2015–2016 school years. Governorate and district EGR units were set up with GILO support in 2013 but have yet to become fully operational or officially recognized.

While progress has not been linear toward full Ministry assumption of all aspects of EGRA implementation responsibility since 2008 (when the first EGRA was conducted in Egypt), MOE and the National Center for Educational Evaluation and Examinations (NCEEE) have been fully engaged, particularly since 2010. Two efforts undertaken entirely by MOE and NCEEE in 2010 and 2015, while limited (2010) or problematic (2015), served as instructive lessons regarding the range of expertise required to carry out an EGRA operation from design to fieldwork and data management to analysis and interpretation.

In addition to the MOE proper, three semi-autonomous agencies have taken on important roles in EGRP's institutionalization: PAT, CCIMD, and NCEEE. By August 2013, PAT had certified 850 EGR trainers, and since 2013–2014, MOE has used these PAT-certified master trainers and trainers to carry out its EGR certification programs. During trainings, PAT deploys certified external reviewers to monitor the training process, adding an element of quality assurance. PAT has also reviewed and accredited all EGRP teaching and training materials developed. Governorate-level personnel from all 27 governorates (340 of these trained by GILO) prepared and submitted their own portfolios for consideration to receive PAT EGRP Trainer Certification; those selected serve as the official EGRP trainers for the country.

CCIMD was a member of the initial working group that developed EGR materials with GILO. It also created Grade 1 and Grade 2 textbook specifications and procured a contractor to produce the textbooks in 2012 and 2013, respectively. By 2014, after GILO closed, CCIMD had developed enough experience and confidence to create the Grade 3 textbooks in-house.

NCEEE participated in the early national EGRAs, acquiring their methods and instruments. In 2015, it conducted an ambitious EGRA without external technical support, and although there is still room for improvement, it is now in a position to lead future EGRAs.

Suggested future directions:

- Continue the efforts already made, including strengthening the capacity of the central EGR unit and solidifying its connections and influence with other MOE agencies (CCIMD, NCEEE, Primary Education, and advisors in Arabic, math, and English), as well as government departments outside of MOE, such as PAT. Fully functional governorate and district EGR units, implementation of benchmarks for reading performance, and expanded EGRA training roles of PAT are also needed. At the same time, care must be taken to avoid making institutionalization an end in itself, which could blunt local initiative and dynamism.

1. Introduction and Methods

1.1 Background

Nearly 10 years ago (2008) Egypt began to assess the reading skills of its elementary school students. At first, this work occurred through support received from the US Agency for International Development- (USAID-) funded Girls' Improved Learning Outcomes (GILO) project. While not designed to support early grade reading (EGR) as a distinct element, GILO's scope of work included a very small component to support the development and piloting of the first Arabic language Early Grade Reading Assessment (EGRA) tool. The instrument was adapted and piloted in 2008 for later administration in 2009. The assessment scores obtained in 2009 were so low that the Egyptian Ministry of Education (MOE) requested that GILO design a series of studies and pilot interventions to be implemented in three of GILO's four focus governorates. Within two years, a substantial improvement in reading skills from the pilot phase intervention was evident, as assessed in the administration of a second EGRA in April 2011. The promising results prompted further pilot activities, which became the Early Grade Reading Program (EGRP). By the end of 2011, the Government of Egypt (GOE) took the bold decision to extend EGRP to the national level, inclusive of all 27 governorates.

The USAID-funded Girls' Improved Learning Outcomes (**GILO**) project was designed to (1) expand equitable access to and coverage of K–9 education for children, especially girls, in remote and deprived areas in four governorates; (2) improve the quality of teaching and learning in targeted schools and districts through a package of interventions that included training, capacity building, coaching, and introducing technology into the learning environment (and EGRP); (3) strengthen the management and governance of education in targeted schools and districts through increased parental, community, and civil society participation; and (4) strengthen the organizational and institutional capacity of GOE authorities–the MOE and GAEB–to decentralize certain functions to the local level.

EGRP scale-up was launched for all Grade 1 students in the 2011–2012 school year, with GILO continuing to provide intensive and direct support to schools in the four GILO pilot governorates. Egypt's MOE provided EGRP in the remaining 23 governorates, with GILO technical support providing mentoring to all of the country's master teacher trainers. Teacher training was carried out through a massive cascade system beginning with central training of governorate-level master trainers who then trained district trainers upon their return to their governorates. The district trainers in turn trained teachers grouped at the district level. For the first scale-up year, the Ministry provided teachers with EGRP guidelines and sample scripted lessons for use in conjunction with existing textbooks. New student textbooks became available for Grade 1 at the start of the following school year (2012), for Grade 2 in 2013, and for Grade 3 in 2014, lagging one year behind the introduction of the program itself in each grade level.

Exhibit 1 presents an overview of the sequencing of GILO and EGRP actions leading up to and including the period of the present case study.

Exhibit 1. Sequence of GILO and EGRP Actions and EGRA Administrations

School Year	GILO (USAID-funded project)	EGRP (GOE program)	Administration of EGRA
Oct 2008 – Sep 2009	GILO launched	- - -	March 2009 (Grades 1 & 2, sample of GILO pilot schools)
Oct 2009 – Sep 2010	GILO supports GOE in initiating EGRP pilot in Grade 1 (4 Governorates)		March-April 2010 (Limited MOE test in urban areas)
Oct 2010 – Sep 2011	GILO supports GOE in extending EGRP pilot to Grade 2 (4 Governorates)		April 2011 (Grades 1 & 2, sample of GILO pilot schools)
Oct 2011 – Sep 2012	GILO supports GOE in extending EGRP pilot to Grade 3 (4 Governorates)	EGRP full scale-up for Grade 1 (23 Governorates);	- - -
Oct 2012 – Sep 2013	GILO leadership transfer to MOE	EGRP scale-up extends to Grade 2 and absorbs GILO governorates (27 governorates)	March 2013 (Grade 3 end-of-year national baseline)
Oct 2013 – Sep 2014	GILO closeout (Dec 2013)	EGRP scale-up extends to Grade 3 (27 governorates)	April 2014 (Grade 3 end-of-year)
Oct 2014 – Sep 2015	- - -	EGRP continues at national scale (27 governorates)	March-April 2015 (Census of Grades 3 & 4 at end-of-year). MOE-only effort; results not released
Oct 2015 – Sep 2016	- - -	EGRP continues	November 2015 (Grades 2 & 3 beginning of year)

As can be seen in Exhibit 1, national scale-up of the EGRP in Grades 1 and 2 was instituted before a national EGRA was conducted. Thus, a clear baseline could not be established for these grade levels. However, toward the end of the 2012–2013 school year, the MOE planned and executed an EGRA with a national sample of Grade 3 students. A second Grade 3 national EGRA was conducted the following year (April 2014) through the Data for Education Programming in Asia and the Middle East (DEP-AME) task order, offering a means of examining progression in Grade 3 student learning

outcomes at the end of the first year of EGRP provision at this grade level. The results of subsequent EGRAs carried out in 2015 are not publicly accessible.[1]

With GILO no longer active in 2014, EGRP implementation and technical support became the full responsibility of the MOE. Operating chiefly through the new early grade reading (EGR) units at national, governorate, and district levels, the MOE's main tasks consisted of the following:

- Training teacher trainers and teachers
- Completing and distributing teaching and learning materials (including new Grade 3 reading textbooks for the first time)
- Managing supervision of EGR efforts
- Conducting EGRAs (with technical support provided through DEP-AME in April 2014 and through the Primary Learning Project (PLP) in November 2015)
- Liaising with the Professional Academy of Teachers (PAT) for the delivery of EGR training to all teachers seeking promotion.

In 2012, a first EGRP Case Study was conducted, chronicling the progress achieved from the GILO / EGRP pilot period (2009) through the first year of national scale-up (2011-2012) (Nielsen, 2013). The present Case Study was commissioned in order to examine to what extent the earlier EGRP momentum and progress have been sustained by the MOE in the final year of GILO (2013) and during 2014 without USAID technical and logistical support.

1.2 Study Purpose and Scope

This second Case Study (2016) was designed as a follow-up to the first Case Study (2012) with the express purpose of examining progress in scaling up and institutionalizing EGRP in 2013 when the MOE was supported by GILO, and in 2014 when the MOE managed EGRP without external technical or logistical support. The study also aims to identify reasons for varying rates of progress during these two periods, to articulate lessons learned, and to make recommendations for future directions. The research topics, listed below, parallel those of the 2012 case study.

- Student learning outcomes and their measurement
- Teaching practices in the classroom
- Textbook design and provision
- Teacher training
- Teacher support and coaching

[1] The first of the 2015 EGRAs, conducted entirely by the MOE in April 2015 with Grade 3 and Grade 4 students, would normally have offered a third important reference point for determining the impact of EGRP by the end of Grade 3 against 2013 (baseline) and 2014 results. It was carried out precipitously under political pressure and with very poor design and quality control, however; no results have been released to this date. The November 2015 EGRA, carried out with RTI support through the Primary Learning Project (PLP), was conducted at the beginning of the school year; its results are not directly comparable to those of the 2013 and 2014 exercises since they were end-of-year assessments.

- EGRP leadership and institutionalization

This report also analyzes the extent to which the new directions recommended in the 2012 Case Study were pursued during the subsequent two years and what lessons can be documented.

1.3 Study Methods

This study is predominantly based on document reviews carried out by the principal investigator, Dr. Dean Nielsen. Key documents examined included:

- reports prepared under GILO (RTI International, 2014a, 2014b) and PLP (RTI International, 2016a) projects;
- the Egyptian MOE's strategic plan (MOE, 2014);
- EGRA 2013, 2014, and 2015 reports and data (RTI International, 2013, 2014c, 2016b);
- a 2014 study based on classroom observations and teacher and head teacher interviews (RTI International, 2014d), hereinafter referred in this report as the "*2014 Observation Stud*y," which accompanied the 2014 EGRA administration; and
- a brief produced by Keys to Effective Learning (KEYS, 2014) summarizing findings from their evaluation of EGR teacher training conducted in 2014.

The document review was complemented by discussions with and notes drafted by the co-investigator, Dr. Samir Shafik Habib (former GILO Chief of Party), and exchanges with other RTI technical expert staff. Plans for the study initially included site visits to be conducted in Egypt by the principal investigator and interviews with MOE staff and other key Egyptian informants. Regrettably, data collection of these field research aspects had to be cancelled.

It is important to note that the Principal Investigator was not involved in any aspect of GILO implementation, nor in any of the MOE's work during the period covered by this study, and thus brings an outside perspective to this review. Nonetheless, since the study was organized by RTI at USAID's request, and since most of its information is drawn from RTI sources, this work should be considered more as a critical self-assessment than a fully independent external review.

1.4 Report Organization

The body of this report is organized into three principal sections. The first section presents the study's findings relating to the progression of EGRP during 2013 and 2014, treating each of the research topics in turn. The second section discusses these findings in light of the 2012 case study findings and recommendations. The report closes with key observations resulting from the study and possible directions for future programming.

2. EGRP Progress during 2013 and 2014

The Early Grade Reading Program was designed to bring fundamental changes to reading instruction in early grade classrooms. ***Exhibit 2*** details specific changes in instructional and assessment approaches mandated and to be supported by the new program.

Exhibit 2. Early Grade Reading Instruction as Mandated in Egyptian Classrooms before EGRP and after the Arrival of EGRP

Before EGRP	With EGRP
Whole language based	Explicit phonics component
Abstract, lengthy vocabulary	Improved vocabulary and learning strategies
Teachers read orally; students recite	Highly engaging teaching routines
Limited independent reading	Multiple opportunities for student practice
Assessment results not used to inform teaching	Ongoing class assessments inform teaching
Very little time dedicated to reading	Expanded mandated reading time
Basic comprehension tasks (e.g., factual recall)	Explicit, direct comprehension strategies / approaches at multiple levels (e.g., inference)
Little attention to reading instruction in Arabic Language supervision	Supervision of reading instruction and teacher coaching, including use of EGRP classroom observation instruments

As a foundation for reading in Grades 1 and 2, EGRP required students to master five letter-recognition skills: naming the letter; recognizing the sound of the letter; recognizing the shape of the letter; reading a word with the letter in it, and writing a word with the letter in it. Across all grade levels, EGRP also introduced the process of direct instruction (scaffolding), with its gradual shift of responsibility for completing a task from the teacher to the student (from the teacher's "I do," to a joint "we do," and finally to a student's autonomous "you do").

Bringing about these changes, piloted in four governorates with GILO project support, to national scale required the development of new teaching and learning methods and materials and the introduction of new teacher training content and support mechanisms, leadership, and institutional reforms. For this study we therefore examined the available information about impact of the program on Grade 3 student learning outcomes after the 2013–2014 school year (the first year of EGRP's implementation in Grade 3). We also examined EGRP's progress in improving teaching practices in the classroom; designing and providing new student reading textbooks and other teaching and learning materials; training teachers and providing them with support and coaching on new methods for teaching reading. The study concludes with a discussion of professional leadership in early grade reading as a distinct area of pedagogy, teaching, and learning, and of its institutionalization at the MOE.

2.1 Student Learning Measurement and Outcomes

As noted previously, the results of EGRAs conducted in a sample of GILO pilot schools in 2009–2011 attracted a great deal of attention at the highest levels. By 2012, plans to conduct the first-ever nationally representative EGRA in Egypt were well underway, finally taking place in March 2013. The purpose of this exercise was to establish a national (representative) baseline of student reading skills that could be used to track the impact of the scaled-up national reading program. While it was too late to establish a pre-EGRP national baseline for Grades 1 and 2, it was determined still worthwhile to establish a baseline for EGRP Grade 3 interventions, recognizing that children assessed would have already been exposed to Grade 1 and Grade 2 EGRP inputs. A second assessment, to be conducted in 2014 with a sample of the first cohort of children who had received Grade 3 EGRP interventions, would provide a post-intervention measure to assess the impact of these interventions.

2.1.1 EGRA Methods and Implementation

In March 2013, an Arabic-language EGRA was conducted in a stratified, random sample of 200 public primary schools across five Egyptian regions (West Delta, East Delta, Metro Cairo, Middle Egypt, and Upper Egypt) [2], with 10 Grade 3 students (5 girls and 5 boys) randomly selected for assessment in each school. The assessment was carried out by 30 assessors and 15 team leaders, all MOE personnel (mostly district Arabic language supervisors) who were intensively trained by USAID contractors. Assessors included both men and women.

As with previous EGRAs undertaken in Egypt with pilot groups, the assessment covered five distinct reading or reading-related skills:

- Letter sound identification
- Decoding of unfamiliar words;
- Fluency in reading connected text
- Reading comprehension
- Listening comprehension

Skills were assessed separately through six distinct subtasks, with reading comprehension assessed in two ways, as follows.

1. Timed test of **Letter Sound Knowledge** – 100 letter sounds to be identified in 1 minute
2. Timed test of **Non-word Reading** (decoding of invented words) – 50 words of varying lengths, to be read in 1 minute.
3. Timed test of **Oral Reading Fluency** (passage reading) – 1 minute with diacritics. Number of words in the passage: 57–58 words.

[2] North Sinai and South Sinai were excluded due to security concerns. No modifications were undertaken to EGRA to include persons with disabilities, such as low vision/deaf or hard of hearing.

4. **Reading Comprehension 1** – 6 multiple choice questions about the oral reading passage
5. **Reading Comprehension 2** -Timed Maze test, which required the student to choose the right word, among three, to complete each of 14 blanks in a set of passages in 3 minutes. The passages contained a total of 141 words (including word selections).
6. Test of **Listening Comprehension** – After a passage of 69–70 words is read aloud to the student, the student is asked 7 verbal comprehension questions.

Testing was conducted on an individual basis and student answers were recorded by the assessor on an iPad tablet. Planning and management of the assessment were managed by the Ministry's Early Grade Reading Unit, created in early 2013 with technical support from GILO. Data collection was executed by MOE personnel in public schools across five regions (with both men and women assessors). For more details, see the full report on the findings of the baseline study (RTI International, 2013). \

In April 2014, a second nationally representative Grade 3 EGRA was conducted with support from USAID's EdData-II DEP-AME project. This round of EGRA used the same sampling and data collection design as in 2013 (200 schools with 10 students assessed in each). Its purpose was to measure progress in Grade 3 students' reading skills following the first academic year of EGRP implementation at that grade level. It should be noted that while Grade 3 teachers had received EGRP scripted lesson plans and training from master trainers using the EGRP training manual, revised textbooks for students following the new approach were not available until the following school year. The possible effect on student performance of this implementation wrinkle, among others, will be discussed in later sections of the report.

The 2014 subtasks were purposefully designed to match the level of difficulty of the 2013 baseline instrument. Equating of the two measures was carried out, using results from a sample of 100 Grade 3 students whose performance on both 2013 and 2014 subtasks was assessed. This important process is used to rule out or control for the possibility that observed differences in student performance across two administrations is an artifact of differences in the difficulty of subtasks used in the two administrations, and determine if score adjustments for differences in test difficulty are required. In this instance, the results confirmed that no adjustments were required.

2.1.2 Grade 3 EGRA Results, 2013 and 2014

Students' results on the six subtasks of the 2013 (baseline) and 2014 (post-implementation) Grade 3 Arabic EGRA administrations are presented in ***Exhibit 3*** below. Results shown include the percentage of students obtaining a score of zero on each measure; the average score achieved; and the percentage of students reaching agreed-upon benchmarks for the first four tasks.

Exhibit 3. Grade 3 National EGRA Results, 2013 and 2014

EGRA Subtask	Percent of Students with Zero Scores[3]		Average Subtask Score[4]		Bench-mark Score	Percent of Students Scoring at or above Benchmark[5]	
	2013	2014	2013	2014		2013	2014
Letter sound identification (clspm)	18.3%	11.4%	18.9	27.7	35	20.0%	35.3%
Nonword reading (decoding) (cnonwpm)	27.4%	25.9%	5.9	7.9	20	3.9%	7.8%
Oral reading fluency (cwpm)	21.6%	27.3%	21.9	20.7	50	12.2%	11.1%
Reading comprehension 1 (max 6)	35.4%	43.3%*	3.2	1.3**	5	8.7%	4.6%
Reading comprehension 2 (maze) (max 14)	35.4%	36.9%	3.6	3.5	NA	NA	NA
Listening comprehension (max 7)	13.3%	28.6%	1.9	2.4	NA	NA	NA

Source: RTI International (2014c), *Egypt Grade 3 Early Grade Reading, 2nd National Assessment,* EdData II Technical and Managerial Assistance, Task Number 15.

The 2013 results, shown in columns 2, 4, and 7 reveal the average starting point for Grade 3 students on all assessment subtests. Almost 20% of the sampled students were assessed with "zero scores" on *letter sound identification*, signaling a shaky foundation for other reading skills. In fact, *non-word reading, oral reading fluency*, and *reading comprehension* all showed even higher percentages of zero scores. Reading comprehension was so low (on average, less than two correct answers out of six) that it is likely that many of those appearing to read fluently were actually "mechanical readers" or "word-callers"—those who do not comprehend what they read. When compared to benchmarks, the baseline outcomes are especially troubling for *non-word reading* and for *reading comprehension*, on both of which well below 10% of students were meeting the benchmark.

The challenging task of moving Grade 3 students forward on these tasks was to begin the following year (2013–2014), when EGRP was rolled out to Grade 3 students for the

[3] "Zero scores," frequently used in EGRA reporting, show the proportion of students who could not read one letter sound or word (or answer one question) correctly.

[4] Average subtask scores and Benchmark scores are expressed as follows: for Letter Sound Identification, in terms of the number of correct letter-sound correspondences produced per minute (clspm); for Non-Word Reading, in terms of the number of non-words read correctly in one minute (cnonwpm); and for Oral Reading Fluency, in terms of the number of words read correctly in one minute (cwpm). For other tasks, scores indicate the number of correct responses made, out of the maximum possible number of correct responses (max).

[5] The 2013 baseline results were used during a GILO workshop in June 2013 to establish a set of agreed Grade 3 EGRA benchmarks for the first four tasks (excluding listening comprehension and maze tasks), representing desired or expected Grade 3 performance levels. These benchmarks were more rigorously developed than an earlier set used in the EGRA 2013 baseline results report (RTI, 2013), and thus differ from the benchmarks presented in that report.

first time. The 2014 EGRA results, presented in Exhibit 3 (columns 3, 5, and 8) alongside the performance in 2013, show performance outcomes for this first cohort of students having experienced EGRP at Grade 3. Comparisons between the averages in the two years provides a rough indication of whether Grade 3 students, exposed to EGRP during the school year 2013–2014, attained higher outcome levels than those in the previous year who had not yet been exposed to EGRP's new reading methods. In reviewing the zero scores for the two years, *letter sound identification* appears to have improved markedly from 2013 to 2014. *Non-word reading* also improved to some extent, but performance on other subtasks stayed the same (*maze comprehension*) or even declined (*oral reading fluency, reading comprehension,* and *listening comprehension*). Comparing average scores across 2013 and 2014 illustrates a similar pattern: both *letter sound identification* and *non-word reading* showed significant improvement, whereas *oral reading fluency* and *maze comprehension* revealed virtually no change. Reading and listening comprehension changed in a negative direction.

Benchmark comparisons also moved in similar directions. The percentage of students performing at or beyond the benchmark in the basic skills of *letter sound identification* and non-word reading were considerably stronger in 2014 than 2013; whereas *reading fluency* and *reading comprehension* comparisons to benchmarks showed slight and substantial negative change, respectively.

Summary of Key Results across

2013 and 2014 National Grade 3 EGRAs

- ✓ **Letter sound identification**: Excellent improvement in this basic pre-reading skill.
- ✓ **Decoding (assessed through non-word reading task)**: Good initial progress from a very low base.
- ✓ **Oral reading fluency**: Static performance from 2013 to 2014 in this paramount Grade 3 reading skill.
- ✓ **Comprehension**: Mixed but generally weak results
  - Reading Comprehension 1 (questions on oral reading fluency passage): Slightly lower performance in 2014
  - Reading Comprehension 2 (Maze task): Static performance.
  - Listening Comprehension: Lower performance in 2014
- ✓ **Mixed progress toward benchmarks**
- ✓ **Wide divergence among schools** in the paramount (Grade 3) reading skill: Oral Reading Fluency.
  - Many failing schools, *especially in Middle and Upper Egypt*.
  - National project and targeted effort needed to reach failing schools and teach all children to read.

Source: RTI International, 2014c.

These results, while somewhat disheartening as they appear to show at best only a modestly positive effect of the EGRP Grade 3 program in its first year on some skills, and for others no change or even a decline in performance, are not entirely surprising. The social and political turmoil surrounding the removal of President Mohamed Morsi by the Egyptian army in July 2013 led to weeks of violence and insecurity. The 2013–2014 school year was so chaotic that it was impossible to offer a full year of learning to students. The insecurity prompted delays in school openings, approximately six weeks of lost instruction (15% of the official 201-day school calendar), and an early school year termination. Grade 3 students' EGRA performance in April 2014, intended to provide a measure of impact of a full year's implementation of EGRP, was unquestionably compromised by the truncated school year and the broader security situation.[6] In other words, the 2013-2014 school year was not a fair example of "typical" EGRP implementation or impact. The examination of the other topics in the scope of this study, presented below, reveals some additional potential factors in students' meager performance in April 2014.

2.1.3 Note on 2015 EGRA Exercises and Results

It is worth noting that EGRA exercises continued under EGRP during 2015, although their results cannot be used to extend the impact analysis of the program on students' reading performance. On the one hand, the MOE's commitment to continuing to assess EGR performance at the system level marks a positive move toward continued evidence-based decision-making. However, the execution of the April 2015 EGRA with Grade 3 and Grade 4 students, undertaken entirely by the MOE without external assistance, was marred by rushed design, instrumentation, assessor preparation, and fieldwork, and thus does not present a useful candidate for extending the analysis of Grade 3 performance progression through a second year of EGRP implementation. In fact the data, held by the MOE, have not been released for any outside use, nor has a public report on the findings of this study been produced.[7]

The April 2015 EGRA exercise, requiring broad mobilization of assessor teams across Egypt, also resulted in postponement of the RTI-supported EGRA/EGMA exercise with Grade 2 and Grade 3 students, initially intended for the same period, to November 2015. This second effort was better prepared and executed than the April 2015 exercise. Fieldwork involved 3,520 Grade 2 and 3 students, 328 Grade 2 and 3 Arabic teachers, and 166 Grade 2 math teachers. However, its new November time frame resulted in

[6] For a discussion of the influence of opportunity to learn on student learning outcomes, see "Measuring Opportunity to Learn and Achievement Growth: Key Research Issues with Implications for the Effective Education of All Students" (Elliott, 2015) and "Opportunity to Learn: A high impact strategy for improving educational outcomes in developing countries" (USAID, 2008).

[7] The USAID-funded PLP had been ready to help the MOE conduct Grade 2 and Grade 3 EGRAs in March–April 2015, in order to generate baselines for PLP and direct government-to-government assistance. A number of discussions on the matter took place, with the focus largely being on the scope and overall purpose of the exercise. Ultimately the MOE, responding to growing concerns about remedial reading, determined that this matter would best be served by assessing all Grade 4 students in the country on their reading skills during the March–April time frame (RTI International, 2016a).

children being assessed at the beginning rather than the end of their Grade 2 or Grade 3 school year, such that the performance data produced were again not directly comparable to those of the 2013 and 2014 Grade 3 EGRA exercises. In addition, the 2015 test items were not equated against those used in 2013 and 2014, thus it would not be possible to control for any differences in item difficulty.

November 2015 student reading performance highlights. While it is not possible to impute the November 2015 EGRA results specifically to EGRP, they are still instructive as they reveal persisting performance gaps that could benefit greatly from further technical and policy support, and inform potential areas of focus for future USAID intervention. A full report of findings was produced by RTI International (2016b). Not yet approved by the MOE for public dissemination, the report at this time serves only as an informational and planning resource for USAID and the MOE. Key findings from this report are the following:

- Gender was a significant factor in student performance, especially on reading subtasks. Girls' average performance in both Grades 2 and 3 significantly outpaced that of boys in each skill. Girls systematically outperformed boys in reading by almost 30% on average.
- While EGRP places a strong emphasis on the alphabetic principle, phonemic awareness, and grapheme-phoneme correspondence, these skills were still found to be weak among many students even at the beginning of Grade 3.
- Grade 2 and Grade 3 students still exhibited low levels of fluency, accuracy, and comprehension in their reading performance relative to the benchmarks established in 2013.

2.2 Teaching Practices in the Classroom

In any intervention, success is deeply dependent on how effectively and faithfully those on the ground implement the system. In the case of EGRP, implementation on the ground relates primarily to how well teachers followed EGR guidelines and practices in their teaching. Ideally, teacher practices would be the focus of continuous internal tracking of implementation fidelity to the program (Carroll et al., 2007). Under EGRP, district supervisors routinely visit classrooms and observe teachers, and they are expected to make reports of their observations. However, those reports have not been compiled and analyzed in a way that would reveal implementation fidelity.

Fortunately, the 2014 EGRA administration round included structured classroom observations and teacher and head teacher interviews in a 20% random sample of the 200 assessment schools. The observation and interview protocols covered several aspects of teacher fidelity to EGR methods. While not comprehensive, these results reveal much about EGRP implementation, both from an external observer's point of view and through the perspectives of teachers and head teachers. Results of this work are reported in RTI International (2014d),.

One relevant finding from the *2014 Observation Study* was that a large proportion of observed Grade 3 teachers (71%) were using the EGRP lesson plans prepared by GILO. Teachers were seen using these plans to guide their lessons because in 2013–

2014 the official EGR-aligned textbooks and teachers' guides for Grade 3 were not yet available. During this transition year, the expectation was that teachers would use these lesson plans together with the existing textbooks. In fact, 84% of sampled teachers were observed using the textbooks and in a prescribed manner (e.g., as a source of passages for oral reading).

Another indication of fidelity was the observation that 75% of teachers who received training in continuous student assessment (i.e., mastery monitoring) were using the EGRA materials for this purpose during the observed class. EGRP posters were displayed in 68% of observed classrooms. On the less positive side, fewer than 20% of teachers used other teaching resources, such as word lists (16%), letter cards (11%), and storybooks (18%).

2.2.1 General Teaching Practices

Concerning EGRP teaching methods, observers collected data on teachers against a list of crucial general instructional methods (with an emphasis on those comprising direct instruction), from which the number of teachers who used these methods at least once during the observed lessons was calculated. ***Exhibit 4*** shows the results for the 40 classrooms (39 usable data records).

Exhibit 4. Teachers Observed Using Crucial General Teaching Procedures and Methods

Teaching Procedure or Method	Number of Teachers (out of 39)	Percent
Teacher begins lesson with summary description of lesson and objectives	24	62%
Teacher provides example or models the skills of this reading lesson	23	59%
Teacher provides guided practice of skills (teacher and students practice together)	26	67%
Teacher provides an opportunity for independent practice (students practice on their own)	25	64%
Teacher uses discussion method in reading instruction	35	90%
Teacher uses role play method in reading instruction	2	5%
Teacher uses cooperative learning methods in reading instruction	1	3%
Teacher uses group work methods in reading instruction	4	10%
Teacher uses other methods in reading instruction.	2	5%

Source: RTI International (2014d), *Egypt Grade 3 Early Grade Reading 2nd National Assessment: Classroom Observations*. EdData II Technical and Managerial Assistance, Task Number 27.

The following summary of the above findings was presented in the RTI classroom observation report (RTI International, 2014d, p. 12):

- Most teachers—nearly two-thirds—applied the four procedures for effective early grade instruction: (1) they began the lesson with a summary description of the lesson and its objectives, (2) they modeled or demonstrated the skills of that lesson, (3) they provided guided practice of the skills, with the teacher and students practicing together, and (4) they provided opportunity for independent practice by students on their own.
- Nearly all teachers (90%) used the discussion method in their instruction practice; although few teachers used role play, cooperative learning, or group work.

2.2.2 Practices Specific to Early Grade Reading Instruction

Investigators in the *2014 Observation Study* also observed how teachers organized their instruction to specifically support EGR in five key areas:

1. Letter sounds and linguistics
2. Vocabulary learning strategies
3. Reading comprehension strategies
4. Reading practice
5. Classroom reading assessment

The results of the study on these areas are summarized below.

Letter sounds and linguistics. In about half of the classes, teachers were observed working with the children on letter sounds (breaking words into syllables; combining letter sounds and adding one or more sounds to make new words, etc.). This is content that EGRP emphasizes in Grades 1 and 2 and at the beginning of Grade 3. Most classrooms also covered some degree of linguistic aspects of Modern Standard Arabic, which is material that EGRP also addresses early in Grade 3. The observations occurred near the end of the school year, when more advanced topics, such as reading fluency and comprehension, would have been expected to predominate. One potential explanation for this is that the observers' perception that teachers were better trained at—and more comfortable with—teaching phonics than the other kinds of content.

Vocabulary learning strategies. In the majority (82%) of observed classrooms, students were observed to be engaged in vocabulary learning. EGRP teacher training for Grade 3 introduced six strategies for vocabulary learning. The researchers observed two main strategies: word mapping and vocabulary matrix.[8]

Reading comprehension strategies. The use of reading comprehension strategies was also observed in most of the classrooms (80%), but, as with vocabulary learning,

[8] A word map is a visual organizer for vocabulary development that engages students in mapping synonyms and antonyms for a particular word, specifying parts of speech (subject, verb, etc.), and writing a sentence using the word. A vocabulary matrix is a visual organizer for vocabulary building that requires students to associate one word with others (e.g., school with teacher, student, book, classroom, desk, library, principal, and playground).

teachers appeared limited in the approach they took to this. Of the six introduced during their training, the teachers mainly used one: asking direct questions (62%).

Reading practice. Providing time for students to read in class is a major expected feature of EGRP. Observers looked for different kinds of student reading opportunities and found that two predominated: reading individually aloud (82%) and reading together aloud (54%). The report welcomed that first approach because it gave all students a chance to demonstrate proficiency (or lack thereof) and teachers an opportunity to spot individual strengths and weaknesses. With this approach, however, larger class size poses a problem (in the sample, the average class size was 47, with some classes reaching 60–80 students), giving each student limited reading time per week. The other traditional method, reading aloud together, is not supported by EGRP because it permits struggling readers to hide behind the others. The practice of silent reading was virtually unobserved (3%). Other approaches, such as reading aloud in small groups, were not included in the 2014 *Observation Study* (but perhaps should have been).

Classroom reading assessments. In programs that have adopted EGRP methods around the world, teacher-managed continuous assessments of student progress in reading have generated much discussion. Some systems have asked teachers to use a modified version of EGRA (Cambodia); others have created simple paper-and-pencil EGR tests (Zambia).[9] Egypt has adopted a mastery monitoring system, connected to new textbook chapters, that reveals which students have mastered the concepts covered in a chapter. This information can be used by teachers to create appropriate interventions, including re-teaching and remediation for students with especially low mastery. The *2014 Observation Study* showed that 59% of observed Grade 3 teachers received training in mastery monitoring. Of those, approximately 75% were observed using the system to assess student mastery of appropriate knowledge and skills. Nothing, however, is known about how effective this system has been in identifying and overcoming student weaknesses.

2.2.3 Summary and Discussion of Teacher Practices Findings

From the *2014 Observation Study* it is clear that many elements of effective EGR instruction were present in the schools observed (learning materials, trained teachers and managers, supportive supervision, basic teacher adherence to EGR procedures and methods), a situation that would lead one to expect consistent improvement. On the other hand, issues identified through this study included the following:

- Letter sounds and linguistics are being emphasized more than is appropriate for the end of Grade 3.
- While teachers were covering the main thematic areas of the EGRP, they were using a limited number of tools and strategies in their coverage, certainly many fewer than were presented to them during training.

[9] These are discussed in two unpublished manuscripts: H.D. Nielsen (2016), "Cambodia's Education Assessment and Quality Assurance Systems: A Brief Situation Analysis and Discussion", and H.D. Nielsen (2014), "Early Grade Reading and Math Assessments in 10 Countries: Dissemination and Utilization of Results: A Review.

Together these factors may explain, at least in part, how the only subtest to indicate a significant improvement over the 2013–2014 school year was letter sound identification, while reading fluency and comprehension did not improve. The first point suggests that less time than expected is being spent on more advanced topics, such as reading fluency and comprehension. The second suggests that students may not be experiencing the variety of learning activities needed to hold their interest and to engage students with a variety of learning styles.

These observed behaviors are partially explained by the interview portion of the 2014 Observation Study. Interview results indicated that both teachers and head teachers often misunderstood EGRP to be mostly focused on letter sounds, syllables, and phonics. In addition, teachers reported they did not receive as much training on instruction of higher-order EGR skills as they would have liked. Teacher training may need to provide a better balance of emphasis on higher-order reading skills alongside basic skills, to correct incomplete understanding of EGRP. Further discussion of shortcomings in the EGR training is provided in Section 2.4.2.

The *2014 Observation Study* was not comprehensive. It left unobserved several important features of good reading instruction, such as teachers' feedback on student performance, the nature of EGR coaching provided to teachers, and its impact on their instructional practices. Future studies would do well to include more comprehensive examination of classroom instruction and teacher support variables.

2.3 Design and Provision of EGRP Textbooks and Other Resources

EGRP teaching and learning materials, including textbooks, were developed in phases from 2010 through 2014. The complete package included lesson plans, student worksheets, alphabet flipbooks (Grade 1) and reproducible single-use student worksheets (Grades 2 and 3), teacher manuals, CDs, various training materials, and revised student textbooks in line with the EGRP approach, among other items, as shown in ***Exhibit 5***.

Exhibit 5. EGRP Resources

<table>
<tr><th>Grade 1</th><th>Grade 2</th><th>Grade 3</th></tr>
<tr><td colspan="3">RESOURCES FOR TEACHERS AND STUDENTS</td></tr>
<tr><td>• Scripted Lesson Plans for Term 1 & Term 2
• Alphabet Flipbooks for Term 1 & Term 2
• Grade 1 Mastery Monitoring Trainee Manual
• CDs on Arabic Alphabet
• DVD
• Revised Grade 1 Arabic reading textbook</td><td>• Grade 2 Mastery Monitoring Trainee Manual
• Student Worksheets (paper and on CD)
• Revised Grade 2 Arabic reading textbook</td><td>• Student Worksheets (paper and on CD)
• Revised Grade 3 Arabic reading textbook</td></tr>
<tr><td colspan="3">• EGRP Teacher's Guide
• Student-Centered Active Learning Teacher Manual</td></tr>
</table>

Grade 1	Grade 2	Grade 3
RESOURCES FOR MASTER TRAINERS AND TEACHER TRAINERS		
• Grade 1 Mastery Monitoring Trainer Manual	• Grade 2 Mastery Monitoring Trainer Manual	
• EGRP Trainer Manuals • Effective Supervision Trainer and Trainee Manuals • Library to Support Trainer and Trainee Manuals • Training of Trainers Trainer and Trainee Manuals • Student-Centered Active Learning Trainer Manuals		

2.3.1 Rollout of EGRP Resources and Textbooks

Exhibit 6 illustrates the phased production of new resources and textbooks as they became available. During the first year of scaled-up EGRP for a given grade level, schools relied on the existing textbooks, supplemented by the other EGRP learning materials and guidelines produced through GILO. New textbooks designed for EGRP were not available until the second year of national implementation in a given grade level (2012–2013 for Grade 1, 2013–2014 for Grade 2, and 2014–2015 for Grade 3).

Exhibit 6. Rollout of EGRP Materials Development and Provision

Time Frame	Grade 1	Grade 2	Grade 3
2010–2011	Formal analysis of Grade 1 textbooks; Initial EGRP resources developed	Formal analysis of Grade 2 textbooks	
November 2011	EGRP resources[10] delivered to 27 GILO governorates		
July 2012		EGRP resources delivered to 27 governorates	
August 2012	New EGRP textbook developed		
October 2012	New EGRP textbook delivered to 16,000 schools in 27 Governorates		
May 2013			Grade 3 textbook analysis recommendations made to MOE
August 2013		New EGRP textbook developed	EGRP resources delivered to 27 governorates

[10] "EGRP resources" is used here to refer to all resources listed in Exhibit 5 with the exception of revised textbooks themselves.

Time Frame	Grade 1	Grade 2	Grade 3
October 2013		New EGRP textbook delivered to 16,000 schools in 27 Governorates	
August 2014			New EGRP textbook developed
October 2014			New EGRP textbook delivered to 16,000 schools in 27 Governorates

2.3.2 Content and Process of Production of New Textbooks

Prior to 2012, use of the whole language approach was the language learning perspective behind textbooks for Arabic instruction in the early grades until the MOE—in collaboration with GILO—experimented with a more phonics-based approach to reading instruction that involved using innovative lesson scripts alongside the current textbooks. Based on the results of the 2009 and 2011 EGRAs, and a systematic analysis of the existing Grade 1 and Grade 2 textbooks by the MOE and GILO, the MOE decided in 2011 to develop new textbooks for Arabic instruction in the first three grades, incorporating the phonics-based and student-centered teaching methods and principles of the EGRP approach.

The MOE's textbook rewriting program began in 2011 with Grade 1. To begin that process, the Center for Curriculum and Instructional Materials Development (CCIMD) assembled the specifications for the new Grade 1 EGR textbook with inputs from GILO. The specifications called for one book per semester, both having three units. The first semester focused on introducing basic concepts (unit one) and then introduced the 28 letters over the next two units (in contrast to the old textbook which started teaching words from the beginning). The second-semester Grade 1 books introduced short texts that students needed to decode and a set of exercises for each. The government subsequently issued a tender for textbook creation and selected a contractor. The textbooks were accompanied by teacher guidebooks, which included scripted lessons.

CCIMD followed the same processes for Grade 2 textbooks for the 2013–2014 school year. The products were two new books, one for each semester and each consisting of three units covering four lessons (later reduced to three). These books built upon the Grade 1 texts yet presented more vocabulary learning and reading comprehension exercises. To increase reading fluency and comprehension, they included a greater variety of reading texts, such as dialogues and short stories. These kinds of texts were used to encourage students to decode and to read rather than to memorize. As with Grade 1, the new Grade 2 textbooks were accompanied by the creation of linked teacher guides with scripted lessons.

For the 2014–2015 school year, the MOE requested experts of the CCIMD to develop the Grade 3 textbooks, rather than relying on contractors as they had for Grades 1 and 2. Designs for the two-book series for Grade 3 drew from the principles and examples

used in the Grade 1 and 2 materials (e.g., use of phonics and the steps of direct instruction). Likewise, they used the same format of three units, each covering three lessons.

2.3.3 Provision of Textbooks and Other Reading Resources to Schools

Administrative records and the *2014 Observation Study* confirm that all schools (and nearly all teachers) were receiving the new learning materials by the beginning of the school year. Teacher guidebooks had also been universally distributed to schools, although sometimes not in sufficient numbers. As noted, the old textbooks were used in the first year of EGRP implementation in Grade 3 because, as with Grades 1 and 2, aligned textbooks for a given grade level were available only by EGRP's second year of implementation in that grade level.[11]

More specifically, the *2014 Observation Study* indicated that most observed Grade 3 teachers (87%) were in possession of the EGRP lesson plan manual (which helped teachers overlay EGR methods on existing textbook lessons) and 71% were observed using it. However, a more general reference book, the *EGRP Teacher's Guide*, was available to about one-third of the teachers observed, and only 5% were observed using it. The 2014 *Observation Study* contained little feedback concerning the quality of the learning materials, in terms of either format or content. The formative evaluation of the new textbooks that was started under the PLP was not completed prior to the program's closing.

2.3.4 Summary and Discussion of Findings on Reading Resources

As noted above, a range of Arabic reading resource materials supporting the EGRP approach were made available to early grade teachers, classrooms, and supervisors during the 2013–2014 period. At the same time, the available textbooks were out of alignment with EGRP methods during the first year of EGRP implementation in a given grade level, requiring that the approach had to be conveyed through the use of supplementary learning materials. The degree to which this non-ideal situation may have affected (depressed) students' reading progress during the first year of Grade 3 EGRP cannot be determined by the data at hand, but may well have been substantial.

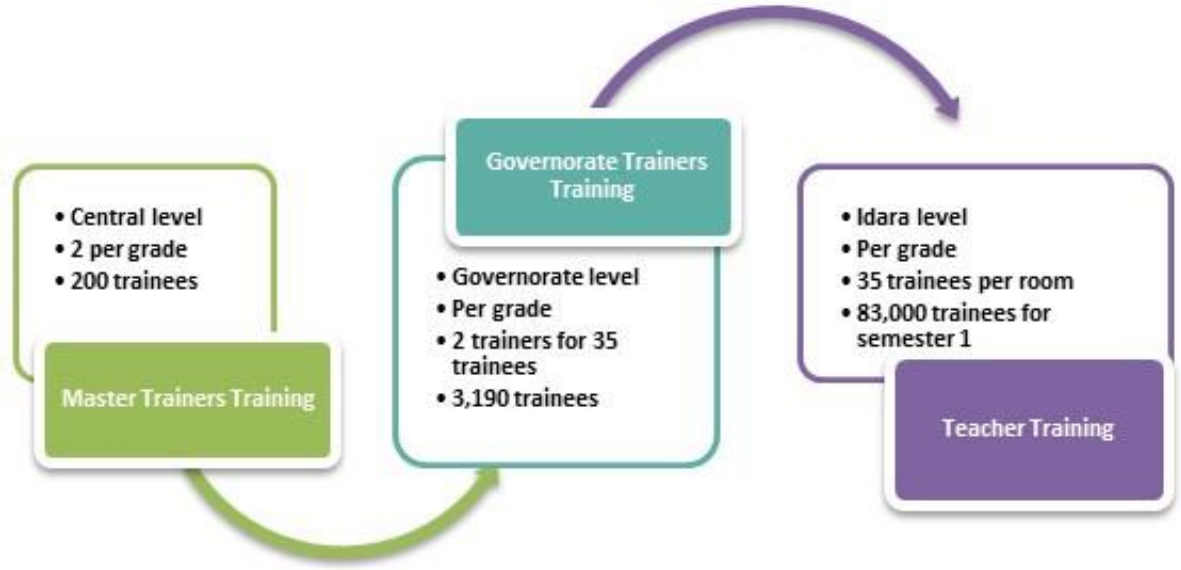
2.4 Teacher Training

The MOE utilizes a three-tier cascade model for teacher and supervisor professional development in EGR, first created by GILO and used by the MOE for the 2011–2012 EGRP scale-up and applied again in 2012–2013 and 2013–2014. In preparation for the 2013–2014 academic year, GILO worked with the MOE to produce instructors' manuals and sample scripted lessons for Grade 3. GILO also worked to build connections with

[11] While the political upheavals that rocked Egypt in 2011 and 2013–2014 perturbed the school calendar significantly, these events did not cause the lag in availability of revised EGRP textbooks. Textbook development, production, and delivery were planned with the one-year lag which, though not ideal, accommodated workflows and procurement requirements negotiated with the MOE.

PAT, which strengthened the EGRP teacher training program in many ways and subsequently certified the entire EGRP package and training model (for more about this, see the section on EGRP Leadership and Institutionalization, below). 2013 training went according to the established pattern, shown in ***Exhibit 7***. However, due to MOE budget limitations, not all teachers received copies of the training material that year. Rather, a limited number of copies (in some cases a single set) were sent to schools for local reproduction.

Exhibit 7. EGRP Training of Trainers and Teachers (GILO-Assisted): 2013



Source: GILO quarterly report of December 2013 and final report (RTI International 2014a and 2014b, respectively).

2.4.1 Trainings Conducted in 2013–2014

Prior to the beginning of the 2013–2014 school year, GILO assisted in centrally training 200 master trainers—at least two per grade for Grades 1, 2, and 3 in all 27 governorates, with additional master trainers trained for large governorates, such as Cairo, Beheira, and Sharqiyya. These trainers returned to their governorates and, following a governorate-developed plan, trained a total of 3,190 district-level trainers with GILO support in September 2013 for Term 1 training. With GILO support, EGRP Term 1 training at the district level was carried out for all 83,000 of the country's Grade 1–3 teachers in September 2013, just in time for the beginning of Term 1.

Starting in November 2013, the cycle was repeated for Term 2 EGRP training, again with GILO support, with 200 master trainers trained in November, and 3,190 district-level trainers trained in December 2013. In early 2014, at which time the MOE was operating without GILO or USAID support, the district trainers organized Term 2 EGRP training for the Grade 1–3 teachers in their districts. This training occurred during the midyear break (January–February 2014). The MOE not only managed this training without GILO support but also covered all its costs.

The 2013–2014 training for the three grade levels used the EGRP instructors' manual developed in previous years. Trainers made connections to grade level-specific subject matter through reference to the textbooks, which had been aligned with EGRP methods for Grades 1 and 2. Sample scripted lesson plans were also provided to the instructors and teachers, to help teachers apply EGRP concepts to specific curricular topics and lessons. Because the Grade 3 textbook had not been revised at the time of the training, trainers and participants encountered challenges at that level in connecting the EGRP with textbook concepts. Those challenges were rectified in 2014–2015 with the release of a new Grade 3 textbook and teachers' guide. For Grade 1 and 2 teachers, this training was considered to be refresher training, although it was accompanied by the new Grade 2 textbooks for the first time. For Grade 3 teachers, this training constituted the first official EGRP training.

2.4.2 Training Quality and Sufficiency

During August–September 2014, the MOE EGR unit developed and implemented an assessment of EGRP teacher training, with support of the Scholarships and Training for Egyptian Professionals (STEP) Project. The assessment itself took place in September 2014 in five governorates (Dakhiliyya, South Sinai, Matrouh, Luxor, and Qalyubiyya). A brief report summarizing the deliverables and outcomes of this work (Keys to Effective Learning, 2014) provides some insight into the findings of the assessment. It raised the issue of the instructors' manual being the same for all three grades, requiring trainers to make their own links to the textbooks (which in the case of Grade 3 were the old unaligned ones). Another concern raised by the assessment was the relatively limited time and material devoted to depicting actual classroom teaching episodes. The report called for videotapes of lessons and time for supervisors to practice classroom observation.[12] The report also mentioned the brevity of training for district trainers (but did not address that for classroom teachers), suggesting that it be changed from 2 to 3–5 days, that it cover more practice, and that it introduce more exercises and worksheets.

This last concern about insufficient and impractical training is consistent with the results of the *2014 Observation Study.* In that study, 52% of teachers interviewed reported having been trained at least twice; and 26% more than five times. The content of training differed each time and advanced along a continuum from basic instructional skills to more sophisticated (e.g., mastery monitoring or use of technology), building layers of teacher skill sets. Refresher training requested by the MOE was also included. Even so, 40% of teachers mentioned that they had not received sufficient training.[13] Given that teachers were observed concentrating mostly on fundamental skills (letter sounds, etc.), it is possible that their reports of insufficient training referred to lack of adequate training on more advanced topics such as reading fluency and comprehension. In 2015, the US-

[12] The PAT-certified EGRP program included a CD of teaching routines and demonstration videos of teachers using EGRP instructional routines in Grade 1 classes to teach the Arabic alphabet.

[13] For a teacher to have attended "five" prior Grade 3 EGRP trainings is not technically possible, because 2013–2014 was the first year that EGRP was implemented at that grade level. However, teachers who had previously taught in Grades 1 or 2 would have also taken part in those trainings; and some Grade 3 teachers may simply have participated in these earlier trainings.

Egypt PLP worked with MOE-EGR in delivering an enrichment course on oral reading fluency and comprehension to all Grade 1–3 teachers (including grade-specific instructional activities). This course is an example of intermediate- and advanced-level training programs that the 2014 Observation Study report indicated were necessary for all EGR teachers.

One challenge is the institutionalization of such courses. A significant result of the GILO MOE-EGR cooperation was the building of bridges to PAT. In August 2013, PAT certified the EGRP package. Consequently, PAT has now made teacher training in EGR a requirement for promotion. It also certifies EGR training materials and trainers. So far, however, PAT does not conduct its own training in EGR for teachers who are not candidates for promotion, which limits its coverage and, thus, its contribution to the system-wide change in this field.

Motivating teachers to seek and appreciate further training in EGR is another challenge. At present, there is no formal incentive for pursuing further training except for one promotion opportunity. The current cascade structure offers the same basic top-down lessons to all teachers, regardless of their experience and needs; many teachers have already been through this basic training multiple times. Presumably, making training more needs-based, and offering more intermediate and advanced training options (and incentives for pursuing them) will make it more attractive for teachers. This idea is discussed further in the **Future Directions** section.

2.5 Teacher Support and Coaching

The main drivers of EGRP effectiveness are, of course, the classroom teachers, but the system does not expect them to work in isolation. A crucial element of the system is a program of teacher support or coaching.

2.5.1 EGRP Teacher Support and Coaching System

In Egypt, EGRP teacher support/coaching is typically provided by Arabic subject matter supervisors located in district offices. Each supervisor is expected to visit about 40 teachers on a monthly basis. In addition, senior teachers in Arabic are asked to provide coaching support to those in their schools who teach reading in the early grades. In some cases, when district supervisors cannot cover all the teachers in their district, the district will get help from school principals in designating a surrogate at the school level, usually a senior teacher.

These district supervisors/coaches and senior teachers are trained in EGRP at the same time as early grade classroom teachers. The governorate master trainers also train the district supervisors/coaches in supervision methods; in November 2013, 290 General and Senior Supervisors were thus trained with GILO assistance. During their school visits, district supervisors are expected to observe teachers during their lessons and to provide feedback and advice, using EGRP-issued observation instruments.

2.5.2 Teacher Support and Coaching in Practice

The *2014 Observation Study* teacher and head teacher interviews devoted considerable attention to teacher supervision and coaching. The interview results indicated that teachers benefit from a rather complex web of support with elements from both within and outside the school, including the school principal, senior teachers, the school training unit, the district supervisor/coach, the district reading unit, and the governorate reading unit. ***Exhibit 8*** shows the sources and frequency of support/coaching as reported by teachers.

Exhibit 8. Sources of Professional Support for Early Grade Reading Teachers

Provider of EGRP Support	Q: Do You Receive Support from [provider]?		Percent of Teachers Receiving EGRP Support by Frequency				
	No	Yes	Daily	1x per week	1 x per month	1 x per term	1x per year
Senior Teacher	24%	76%	11%	46%	19%	0%	0%
School Principal	27%	73%	5%	51%	8%	0%	0%
School Training Unit	46%	54%	0%	22%	27%	3%	0%
District Supervisor	19%	81%	0%	60%	22%	0%	0%
District Reading Unit	11%	89%	0%	14%	27%	49%	0%
Governorate Reading Unit	57%	43%	0%	0%	16%	19%	8%

Source: RTI International (2014d), *Egypt Grade 3 Early Grade Reading 2nd National Assessment: Classroom Observations*. EdData II Technical and Managerial Assistance, Task Number 27.

These responses need to be viewed with some caution because *social desirability bias* is likely to be at play (i.e., giving a polite answer that the interviewer presumably wants to hear). Nevertheless, the responses still provide some important messages. For example, they show the most active supervisors/coaches to be the district supervisors (identified as providing support by 81% of respondents and at a frequency of once a week, according to 60%, and once a month, according to 22%). Even if the responses are positively biased, a downward correction would probably place it no lower than once a month, on average, which is the standard. District reading units focused on EGR are also said by most respondents to be supportive (89%) but with much less frequency (the modal level being once per term), likely through group meetings and events rather than individual visits.

The other supports mentioned by a majority of teachers are that of a school senior teacher, presumably, an Arabic specialist acting as a school-based EGR coach. These were seen by half of the teachers as coaching once a week, probably either through classroom visits or subject matter meetings, and the school principal, also reported by half of teachers interviewed as giving support once a week. In addition, many locations

have "school training and quality units," set up to conduct periodic training sessions. And finally, MOE governorate offices now have Early Grade Reading Units that occasionally are perceived to be providing some supervision, presumably more for supervisors/managers than for teachers.

As mentioned, these answers may present an exaggerated picture of the kinds of support provided and their frequency, but they do make it clear that EGRP teacher support continued to be active during the post-GILO period, that multiple parties are involved, and that teachers are far from being isolated. Another question, not addressed in the *2014 Observation Study*, concerns the specific nature and content of the supervision/coaching sessions carried out. It would be useful, for example, to know whether the coaching provided is tailored to the specific needs of individual teachers, and whether it addresses practical issues teachers encounter in the classroom, so that they may effectively apply the EGR methods while adjusting to the performance and engagement levels of their pupils. This concern is further discussed in the **Future Directions** section.

2.6 EGRP Leadership and Institutionalization

Moving the EGRP from a cooperative MOE/USAID (GILO) venture to a nationwide program run entirely by the MOE became the government's intention in 2011. Realizing this intention requires considerable institutional strengthening, both regarding program leadership/ownership and the legal/structural changes that would ensure program sustainability. Progress along these lines was examined in the present study as follows.

2.6.1 Policy Framework for EGRP

Early in EGRP's dissemination, the MOE cleared the path by issuing supportive decrees and regulations (Nielsen, 2013). These included, for example:

- A MOE regulation that phonics be taught for 25 minutes per day in early primary classrooms (subsequently superseded by the issuing of EGR textbooks and daily reading lessons which incorporate phonics)
- A decree allowing mentor teachers posted in one school to give coaching on EGRP to teachers in others
- The requirement that Arabic language supervisors at the primary school level use EGRP observation forms in assessing teacher performance in reading instruction and giving feedback

Other more recent decrees/regulations include the following:

- The requirement that early grade teachers take the PAT EGR training course to be promoted
- The establishment of the national EGR unit in the MOE (January 2013)
- The inclusion of the EGRP in the government's *Strategic Plan of Pre-University Education, 2014–2030* (Ministry of Education, 2014) and its goal that all public

primary schools implement the EGRP by 2017 (an objective already reached on paper by 2014).

Regarding this last point, the *Strategic Plan of Pre-University Education, 2014–2030* highlighted the country's challenges in improving the quality of its pre-university education programs and results, noting that "35% or more of pre-university students do not master reading and writing." One way the national government addressed that challenge was to include, as one of the plan's goals for primary education, the implementation of EGRP in all primary schools by the end of 2017 (Ministry of Education, 2014, p. 33). The goal included the development of new textbooks for reading instruction in Arabic and training teachers in the use of the new textbooks; these objectiveswere essentially met for Grades 1 to 3 by the 2014–2015 school year.

Going forward, the policy framework for EGR could be further strengthened through the following actions:

- Officially establishing the governorate and district EGR units put in place with GILO support
- Officially recognizing EGR benchmarks and using them to track system performance
- Exploring an expanded role for PAT in EGR training (covering not only teachers seeking promotion)

One cautionary voice (Pritchett, 2013) has made the point that when institutionalization takes the form of bureaucratic uniformity (what he calls "isometric mimicry"), it tends to place more value on adopting the "right" structural appearance than real change, and becomes resistant to novelty and self-evaluation. Teaching under such conditions often becomes worse rather than better—the system becomes "value subtracting." This observation suggests that getting all the rules and regulations in place is not a complete formula for sustainable improvement in reading skills, but needs to be accompanied by genuine capacity and support for local initiative and innovation.

2.6.2 MOE Leadership and Management of EGR

When the EGRP scale-up was initiated in 2011, GILO assisted the MOE to establish an EGR planning team in each governorate. From then on these teams have managed EGRP planning (e.g., teacher training), troubleshooting, and social marketing, and the mobilization of resources. In anticipation of GILO's closing (initially planned for July of 2013 but extended to December), the MOE's leadership and management of the EGR program needed to be fully established. This objective was advanced in January 2013 by the creation (through Ministerial Decree) of an EGR unit in the MOE. During the remainder of the year, GILO helped build that unit's capacities in planning, budgeting, reporting, and management of training and materials development. An additional step toward institutionalization was the establishment of EGR units at both the governorate and district levels.

By the time GILO closed in December 2013, the national EGR unit had taken charge of EGRP, as evidenced by its successfully directing the training of Grade 3 teachers during 2014 in all 27 provinces (see the **Teacher Training** section above). In early 2014, the

MOE issued an official Organizational Chart for the new EGR unit, and recruited a full-time department head (a professional with extensive EGRP experience). Also, under the MOE's leadership, the new Grade 3 textbooks were produced and distributed by October 2014, and school supervision has been undertaken during the 2014–2015 and 2015–2016 school years.

Building connections and synergies between the EGR unit and other parts of MOE, and with outside agencies, is still a work in progress. Although governorate and district EGR units were set up with GILO support in 2013, they have yet to become fully operational or officially recognized. These areas of unfinished business, and others, are further discussed in the **Future Directions** section.

2.6.3 Official Accreditation and Certification of EGRP Materials and Training

Progressively during GILO and through the end of 2013, PAT reviewed and accredited all EGRP teaching and training materials developed with the support of the project, beginning with the Grade 1 manuals, flipbooks, and CDs. PAT's Gold Seal, official stamp, and official signatures were added to the resources. PAT awarded GILO a review score of 94.6 out of 100 points for the Grade 1 materials (the "passing" score is 85%), and subsequently worked closely with GILO toward the accreditation of the Grade 2 and 3 materials.

Governorate-level personnel from all 27 governorates (340 of these trained by GILO) developed and submitted their own portfolios to PAT for consideration to receive PAT EGRP Trainer Certification. These trainers will continue to be the official EGRP trainers for the country. In other words, whenever MOE or another organization requires an EGRP training, these Trainers will be called upon to provide the training as well as receive a salary of approximately 80 Egyptian pounds (LE) per hour plus expenses.

2.6.4 Progression of Responsibility for EGRA Implementation

Exhibit 9 below presents the timeline and implementing agencies responsible for the EGRAs conducted across the period 2008 to 2015. The assessments were developed in response to the MOE's evolving needs and its growing commitment to measuring student learning outcomes as a basis for policy and program improvement.

Exhibit 9. EGRA Administrations by Date and Implementing Agency

Time Frame	Implementing Agency	Purpose and Features of Administration
2008	Conducted by the GILO project, working with local (Egyptian) Arabic language experts	EGRA development pilot, not representative
January-February 2009	Conducted by the GILO project with independent data collectors	Baseline EGRA administered with representative sample of Grade 2, 3, and 4 students from 3 GILO governorates

Time Frame	Implementing Agency	Purpose and Features of Administration
March-April 2010	Conducted by MOE / NCEEE with no external support	Non-representative Test of EGRA in urban environment
April-May 2011	Conducted jointly by MOE / NCEEE and GILO	Follow-up EGRA administered with representative sample of Grade 2 students from 3 GILO governorates, to evaluate effectiveness of GILO interventions
October 2011	Conducted jointly by MOE / NCEEE and GILO	Non-representative sample of Grade 1 students drawn from El-Beheira and Cairo governorates
March 2013	Conducted jointly by MOE / NCEEE and DEP-AME with GILO support	Baseline EGRA administered with representative sample of Grade 3 students across 5 regions (excluded North and South Sinai)
April 2014	Conducted jointly by MOE / NCEEE and EdData II Task Order 27	Follow-up EGRA administered with representative sample of Grade 3 students across 5 regions (North and South Sinai excluded) to evaluate effectiveness of EGRP Grade 3 interventions
March-April 2015	Conducted by MOE / NCEEE with no external support	Assessment of all Grade 3 and Grade 4 students across the country in order to identify those in need of remedial reading instruction and inform planning of a remedial summer program
November 2015	Conducted by MOE / NCEEE with PLP support	EGRA administered with nationally representative sample of Grade 2 and Grade 3 students

While progress toward full Ministry assumption of all aspects of EGRA implementation responsibility has not been linear, Exhibit 9 shows that in general, MOE and the National Center for Educational Evaluation and Examinations (NCEEE) have been fully engaged in the later years. The two efforts undertaken entirely by MOE and NCEEE in 2010 and 2015 were limited (2010) or problematic in their design and execution (to the point that the results of the ambitious 2015 effort have never been made public). But these exercises likely also served as instructive lessons for MOE and NCEEE regarding the range of expertise required to carry out an EGRA operation from design to fieldwork and data management to analysis and interpretation.

2.6.5 The Role of Semi-autonomous Agencies of MOE

In addition to the MOE proper, three semi-autonomous agencies have taken on important roles in EGRP's institutionalization. These are

- the Professional Academy of Teachers (PAT);
- the Center for Curriculum and Instructional Materials Development (CCIMD); and
- the National Center for Educational Evaluation and Examinations (NCEEE).

PAT. In the first years of the EGRP scale-up, as noted above, PAT certified the program's training materials for teachers, supervisors, and program trainers. It also made training in EGR an official requirement for promotion. By August 2013 PAT had

certified 850 EGR trainers, and since 2013–2014, MOE has used these PAT-certified master trainers and trainers to carry out its EGR certification programs. During the training, at various levels throughout the country, PAT deploys its certified external reviewers to monitor the training process, adding an element of quality assurance. Also, e-training materials and management of the e-learning portal developed by the MOE and GILO were turned over to PAT at the end of GILO, to use for distance education of teachers in EGR.

As mentioned in the **Teacher Training** section, PAT's EGR training programs are only available to teachers who are in line for a promotion. Expanding this mandate could be one way of furthering EGRP institutionalization (further discussed in the **Future Directions** section below).

CCIMD. CCIMD, specifically its Arabic department, was part of the MOE working group that participated with GILO in 2009 in creating materials for EGR. Since then, it has cooperated with MOE and GILO in developing a new curriculum and new textbooks, the latter influenced by the textbook analyses for Grades 1–3 led by GILO. Based on the concepts developed by the partnership, CCIMD created Grade 1 and Grade 2 textbook specifications and procured a contractor to produce them in 2012 and 2013, respectively. By 2014, after GILO closed, CCIMD had developed enough experience and confidence to create the Grade 3 textbooks in-house.

Thus far, no systematic assessments of the quality and use of these textbooks have occurred. With the revision cycle on the horizon (potentially starting as soon as 2017 for the Grade 1 textbooks if one applies an industry-standard five-year textbook lifespan), carrying out such an assessment in the near term could usefully inform the revision process and strengthen the next edition of textbooks.

NCEEE. NCEEE was a participant in the early national EGRAs, acquiring their methods and instruments. In 2015, as noted above, it conducted an ambitious EGRA without external technical support, and although there is still room for improvement, it is now in a position to lead future EGRAs.

3. Follow-Up on 2012 Case Study Recommendations

The first Case Study of the GILO-supported EGRP was conducted in October–December 2012 to examine the measures taken to scale up EGRP and to identify and discuss the strengths and weaknesses of these measures (Nielsen, 2013).

It also presented ideas about possible future directions (Nielsen, 2013, p. 8). These ideas, provided to help shape government and USAID follow-on activities, can be summarized as follows:

- Evidence was strong that the Government of Egypt (GOE) is committed to covering operational costs of continued EGRP functioning; however, development costs for continued model development may require continued external financial support.
- Needed further developments included collection and analysis of stronger data on teacher performance

- Development of EGRP routines and materials for Grade 3, as well as vertical and horizontal integration with other parts of the curriculum, would be very useful.
- Also desirable would be more R&D on system efficiency (e.g., e-learning), continued use of monitoring and evaluation (M&E) for system improvement, and better linkages with higher education for pre-service and further EGR research and experimentation.

The 2012 Case Study also underlined the value of conducting additional nationally representative EGRAs to inform and track effectiveness of EGRP implementation over time, and of producing a revised Grade 2 textbook that reflected the EGRP approach. In fact, MOE and USAID were already planning to pursue both of these actions at the time of the study.

Exhibit 10 presents the evidence we could gather, within the time and access constraints of this study, on the extent to which these future directions proposed in 2012 were pursued in subsequent years.

Exhibit 10. 2012 Case Study Suggestions Compared to Actions Taken in 2013 and 2014

Future Directions Suggested in the 2012 Case Study	Actions Taken / Implemented in 2013 and 2014
Continued external financial support for development costs	The USAID-funded GILO was originally planned to end in September 2012. It was extended (Phase 2) to March 31, 2013 in order to support the MOE's national EGRP scale-up, and again (Phase 3) to December 2013, at which time it closed. EdData-II supported the administration of the 2014 EGRA. In 2015, USAID launched PLP to further support the MOE in institutionalizing core aspects of the EGRP nationwide and to build on the case study recommendations. In particular, PLP was designed to help the MOE put in place a viable curriculum implementation system with technical assistance rather than implementation support which was to be the responsibility of the MOE.
Stronger data on teacher performance	The *2014 Observation Study (RTI International, 2014d)* accompanied the 2014 EGRA conducted in April of that year. This study included teacher observations and questions for a random sample of Grade 3 teachers. The study covered many performance topics but was not comprehensive and did not include Grades 1 and 2. A teacher observation component was also included in the November EGRA exercise (RTI International, 2016b).
EGRP routines and additional teaching and learning materials for Grade 3	Teachers' guide and Grade 3 lesson plans were distributed to all schools in 2013–2014. An aligned Grade 3 reading textbook was completed for the 2014–2015 school year.
Vertical and horizontal integration with other parts of the curriculum	The 2014–2017 Education Sector Strategic Plan included a goal to review curricular standards for Arabic instruction in Grades 1–3 and 4–6. Such a review was started in 2015 by CCIMD with PLP support, but it was not completed because PLP closed prematurely in early 2016 for non-technical reasons.[14]

[14] https://www.rti.org/news/research-triangle-institute-termination-work-egypt

Future Directions Suggested in the 2012 Case Study	Actions Taken / Implemented in 2013 and 2014
More research and development (R&D) on system efficiency (e.g., e-learning)	The review found no evidence of R&D on system efficiency during 2013 and 2014. PLP, which was launched in 2015, planned to support work on e-learning during its second year. This work had to be dropped because of the early PLP closure.
National EGRA	National EGRAs were undertaken in March 2013 and April 2014 with external support from the EdData II mechanism to determine the first year's impact of EGRP in Grade 3, and during 2015 for other purposes.
Revised Grade 2 textbook	A revised Grade 2 textbook was developed and distributed in the 2013-2014 school year with GILO support, followed by a revised Grade 3 textbook distributed in the 2014-2015 school year.
Better links with higher education for pre-service and EGR research and experimentation	The review found no evidence of improved links to institutions of higher education during 2013 and 2014. PLP was designed in part to support the building of links with five Faculties of Education to improve pre-service courses for teaching early reading and math. Work in this area was planned for 2016 but was not carried out because of the early PLP closing.

The 2011–2012 scale-up of EGRP had so much drive and momentum that USAID extended its support through GILO for 15 months beyond its original end date (through December 2013). As shown in Exhibit 10, many of the future directions outlined in the first EGRA Case Study were begun during 2013 and 2014. This support included assistance for the administration of national EGRAs (2013 and 2014) and the production of new EGR textbooks and related teaching and teacher support materials (Grades 2 and 3),[15] as well as implementation of a teacher performance study (*2014 Observation Study*).

Except for the inclusion of a curricular review in the 2014–2017 MOE Strategic Plan, the study team was unable to find evidence of implementation of curricular integration, R&D on system efficiency, or links to higher education during 2013 and 2014 on the basis of the evidence reviewed for this study, and because the co-investigators had no direct access to government informants. What is known is that aspects of this work were intended to go forward with PLP support, but were not completed because of the project's early closure.

4. Key Observations and Possible Future Directions

The findings of this review indicate that while much good work has been undertaken, Egypt's process of institutionalizing an EGRP that is entirely capable of improving the reading skills of most children to higher levels is not complete. The study's key observations and some possible future directions to help continue the process are grouped by topic below. These suggestions are for the consideration of both policy

[15] The 2013 EGRA and Grade 2 textbook production were already on the drawing boards when the 2012 Case Study was written.

makers and managers in the GOE and its agency partners and donors, such as USAID, ideally acting in partnership.

4.1 Monitoring the Implementation of EGRP and Measuring Its Impact on Student Learning

1. ***Measuring the impact of EGRP on student learning:*** The 2013–2014 school year was so chaotic due to social and political upheaval in Egypt that it was impossible to offer a full year of learning to students.[16] Approximately six weeks of instruction (15% of the official 201-day school calendar) were lost to instability. Grade 3 students' EGRA performance in April 2014, intended to provide a measure of impact of a full year's implementation of EGRP, was unquestionably compromised by the truncated school year and the broader security situation.[17] In other words, the 2013-2014 school year was not a fair example of "typical" EGRP implementation or impact. As noted also, subsequent EGRAs conducted to date have not been statistically comparable to the 2013 baseline and it is therefore not appropriate to use them for determining trends or impact relative to the 2013 baseline performance.

   Suggested future directions: *To adequately capture the program effects of EGRP for Grade 3 students, a new national Grade 3 EGRA at the end of a full academic year of EGRP implementation is still needed. If an EGRA could be carried out at the end of the 2016–2017 school year, it would be assessing 3rd graders who have benefited from EGR instruction in its third year of implementation at each grade level. Comparing Grade 3 students' year-end performance results in 2017 with those from the 2013 baseline would provide a robust cross-sectional measure of program impact.*

2. ***Addressing large class size:*** The classroom overcrowding observed in schools in 2014 made it difficult for teachers to implement various EGRP features. All students were given ample time to read aloud in class and individual levels of content mastery were assessed on a regular basis.

   Suggested future directions: *Reducing early-grade student-teacher ratios substantially from observed levels would be a worthwhile element to explore as part of the government's long-term strategy for improving students' reading outcomes. Additionally, and in the shorter term, EGR managers could examine and learn from programs that have pioneered strategies for EGR instruction under large class-size conditions.*

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[16] The social and political turmoil surrounding the removal of President Mohamed Morsi by the Egyptian army in July 2013 led to weeks of violence and insecurity. This prompted both delays in school openings, approximately six weeks of lost instruction, and an early school year termination. The sporadic school closures left a fraction of the standard number of effective school days.

[17] For a discussion of the influence of opportunity to learn on student learning outcomes, see "Measuring Opportunity to Learn and Achievement Growth: Key Research Issues with Implications for the Effective Education of All Students" (Elliott, 2015) and "Opportunity to Learn: A high impact strategy for improving educational outcomes in developing countries" (USAID, 2008).

3. ***Tracking implementation of EGRP:*** The *2014 Observation Study* provided valuable empirical data on the actual implementation of EGRP in the classroom and constructive views from practitioners on the ground. It helped to reveal that training and support provided to teachers may not have adequately presented teaching and learning strategies for developing higher-order reading skills such as fluency and comprehension, and these strategies were less in evidence in classrooms. The 2013–2014 year was also challenging due to novelty of the program, the shortened school year, and the absence of revised EGRP textbooks which required teachers to adapt their use of existing textbooks to the EGRP approach. Would implementation be stronger once these three challenges subsided in subsequent years?

   Suggested future directions: *It would be worthwhile to continue the practice of observation for implementation fidelity to EGRP, using critical reviews of past observation and interview studies to guide improvements/enhancements for the new ones. For example, our review of the 2014 Observation Study suggests a need for more information about textbook quality and use, teachers' observed approaches to instruction in reading fluency and comprehension, and the substance and impact of teacher supervision/coaching. In addition, as EGRP matures, it will be important to continue tracking teachers' motivation and commitment to reaching all students.*[18]

4. ***Making use of supervisor reporting***: Routine reports produced by district Arabic language supervisors equipped with EGRP observation instruments represent potentially valuable sources of information about how faithfully classroom teachers are implementing EGRP. In turn, such information could be used to improve and customize support and training for teachers. So far, however, these reports have not been compiled and mined to reveal patterns of strengths and weaknesses.

   Suggested future directions: *In their supportive roles for EGR implementation, district Arabic language supervisors could be tasked with not only visiting and observing EGR classes but also regularly (quarterly or biannually) compiling and summarizing their findings and identifying patterns of strengths and weaknesses for use in the planning of coaching and new rounds of decentralized teacher training.*

4.2 Teaching Practices in the Classroom

5. ***Tools and strategies:*** Most Grade 3 teachers observed in 2014 were found to be employing the steps of the *direct teacher method* emphasized in their training: beginning with a summary of content and objectives and then modeling skills, organizing guided practice, and providing an opportunity for independent practice. However, observations revealed two main shortcomings:

[18] In EGRP's early pilot years, participating teachers were observed to be quite enthusiastic about the innovative system and engaged in it with a strong sense of commitment and pride (Nielsen, 2013). This level of engagement frequently typifies the atmosphere of a well-designed pilot project. As the project was rapidly brought to scale during 2011–2013, it became the required Ministry approach to reading instruction. An inevitable reduction in this enthusiasm and commitment would have set in over time. Now questions exist on how best to motivate teachers to change and further develop their instructional behaviors and to redouble their efforts to reach all students.

- Teachers emphasized letter sounds and linguistics more than appropriate for the end of Grade 3, which should focus more on reading fluency and comprehension.
- While covering the main thematic areas of EGRP, teachers used a limited number of tools and strategies, thus putting student interest and engagement at risk.

Suggested future directions: *Going forward, initial and refresher training should place more emphasis on the all-important skills of fluency and reading comprehension (including teachers, principals, and supervisors/coaches). Supervisors/coaches need to determine when these are not emphasized in the classroom and coach teachers in the use of appropriate teaching methods. The full range of tools and strategies has likely not been sufficiently modeled and practiced by teachers. Doing so is in line with our suggestions for more practice-oriented and needs-based teacher training (see below).*

6. ***Teacher engagement:*** Now that using EGRP methods is required of teachers, the excitement of being on the cutting edge of an innovative and highly successful social experiment has begun to fade, reducing the high levels of teacher enthusiasm and commitment that were evident in the first Case Study (Nielsen, 2013). This is the age-old question of how to keep the fires burning within an innovative program once it has gone to scale and become embedded in the bureaucracy.

   Suggested future directions: *Institutionalization of the EGR revolution needs to be accompanied by strategies to motivate continued high levels of teacher engagement and pride in their work. Both symbolic and tangible rewards are necessary, as well as more teacher engagement in systemic innovation and decentralized needs-based refresher training.*

4.3 Textbook Design and Provision

7. ***Textbook evaluation:*** A rigorous external evaluation of the new reading textbooks and related guides and learning materials (scripted lessons, charts, worksheets, etc.) for Grades 1–3 has not yet been implemented. Assuming a 5-year lifetime for a given textbook, a new round of revisions to EGR-aligned textbooks is due to begin in 2017.

   Suggested future directions: *If an external evaluation of the textbooks' quality, use, and effectiveness has not been planned, it needs to be prioritized. In the process, feedback from teachers and principals needs to be emphasized. Such an evaluation could be accompanied by relevant details from supervisor reports (compiled at the district and governorate level) and the observation section of any new EGRAs conducted before the start-up of revisions. Many benefits would be derived from involving the higher education community in such an evaluation. Also, given the wide variation in student abilities and the crowded classroom conditions identified in the assessments, experimenting with the use of online student learning materials for enrichment and remediation is advisable.*

4.4 Teacher Training

8. ***Cascade Training:*** The top-down cascade model of teacher training has served the country well in bringing the new reading program (including vast quantities of learning materials) to virtually all Grade 1–3 classroom teachers in the country in a remarkably short time. During the first three years of nationwide implementation of EGRP (2011–2014), this training emphasized foundational skills for reading (phonics and basic grammar), a fact borne out by results showing improvement mostly in these areas. Now it is evident that an emphasis is needed on the more advanced skills of reading fluency and comprehension—areas where results have improved little, at best. There is a concern for the future that the current one-size-fits-all training will fail to motivate teachers whose school conditions and training needs are widely diverse. Related to that is a sense that cascade training is too conceptual and abstract and needs to demonstrate (live or via video) real EGR teaching episodes and give trainees time to practice them.

   Suggested future directions: *Intermediate and advanced levels of refresher training are called for, especially those focused on student reading fluency and comprehension. The MOE, however, should not be in a hurry to provide more large-scale, top-down/cascaded, uniform training. Based on feedback from the teachers themselves, evaluations (such as the 2014 Observation Study), and supervisor/coach reports, more decentralized needs-based approaches that emphasize practical skills need to be introduced. Such training could use existing organizations such as PAT and school-based mechanisms, such as "school training and quality units," which studies have found exist in most schools. A more decentralized approach to teacher training/enrichment could also be positioned to tap into the rich training resources in teacher training faculties throughout the country. This would also be a good strategy for closing existing gaps in EGR strategies between the pre-service and in-service training of teachers.*

4.5 Teacher Support and Coaching

9. ***Teacher Coaching:*** Teachers do not appear to be isolated; most are being reached through multiple avenues of support (*2014 Observation Study*). Teachers interviewed in November 2015 (RTI International, 2016b) reported that they continued to receive support visits. Yet, teachers noted also that almost all support visits failed to provide them with concrete follow-up to trainings they had taken. In general, the type and helpfulness of the support being offered were not explored in these studies. For example, does such support cover the nuts and bolts of their daily instruction? Does it help them where they need it? Is real coaching being offered? Do the coaches check to see if their advice is paying off? The responses of reading teachers provide partial

   Suggested future directions: *To better understand the nature and effectiveness of teacher supervision and coaching as they are currently carried out, new data collection and analysis are needed. Such work would aim to sort out what exchanges*

are taking place during various kinds of teacher supervision/coaching and how effective they are in the following:

- Addressing teachers' needs
- Encouraging and motivating teachers
- Identifying and overcoming weaknesses in applying methods and strategies while at the same time encouraging initiative and creativity
- Following up to determine whether coaching support was used/useful

Findings from such work could be used to strengthen the coaching function.

4.6 Leadership and Institutionalization

10. ***Institutionalization:*** Many solid steps have been taken toward establishing strong national leadership for institutionalizing and sustaining EGRP in Egypt, which kept the initiative alive during 2013–2014. By the end of 2014, significant institutional strengthening was still required, tempered by the realization that a dynamic program also needs to reward and strengthen local initiative and innovation.

    Suggested future directions: *Continue the efforts already made, including strengthening the capacity of the central EGR unit (in strategic planning, budgeting, etc.) and solidifying its connections and influence with other MOE agencies (CCIMD, NCEEE, Primary Education, and advisors in Arabic, Math, and English), as well as government departments outside of MOE, such as PAT and the Social Work department. Fully functional governorate and district EGR units, implementation of benchmarks for reading performance, and expanded EGRA training roles of PAT are also needed (for the latter, see the* ***Teacher Training*** *section). At the same time, care must be taken to avoid making institutionalization an end in itself, which could blunt local initiative and dynamism.*

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