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EGRA Plus: Liberia

Quarterly Progress Report:
October-December 2008



Early Grade Reading Assessment (EGRA) Plus: Liberia
EdData II Task Number 6
Contract Number EHC-E-06-04-00004-00
Strategic Objective 3
January 31, 2009

This publication was produced for review by the United States Agency for International Development. It was prepared by RTI International and the Liberian Education Trust.

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Prepared for
USAID/Liberia

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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Abbreviations

COTR	COTR, Contracting Officer’s Technical Representative
DEO	District Education Officer
DIBELS	Dynamic Indicators of Basic Early Literacy [test instrument]
EGR	Early Grade Reading
EGRA	Early Grade Reading Assessment
EMIS	education management information system
FI	Full Intervention [schools]
GOL	Government of Liberia
GPC	grapheme-phoneme correspondence
ISEL	Illinois Snapshot of Early Literacy [test instrument]
LET	Liberian Education Trust
LI	Light Intervention [schools]
M&E	monitoring and evaluation
MOE	Ministry of Education
MoU	memorandum of understanding
PAS	[RTI] Project Administration Specialist
PEO	Provincial Education Officer
PMP	Performance Monitoring Plan
PTA	parent-teacher association
RFTOP	request for task order proposal
RTI	Research Triangle Institute
SoW	Scope of Work
ToR	Terms of Reference
USAID	United States Agency for International Development
WB	World Bank

Key Project Participants

RTI International

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Medina Korda, Task Coordinator

Marcia Davidson, Reading Expert

Eileen Reynolds, M&E Specialist

Cheri Brown-Alexander, Project Administration Specialist

Liberian Education Trust

Evelyn Kandakai, Project Supervisor

Ollie White, Technical Coordinator

Eli Lumei, Assistant to Technical Coordinator

David Walton, Finance Director

Moulton Seward, Office Manager

Ministry of Education

James E. Roberts, Deputy Minister for Policy and Planning

Hester Williams-Catakaw, Deputy Minister for Curriculum and Instruction

Yukhiko Amnon, Pre-Primary Education Department Director

Isaac Fufflay, Reading Expert

Farwenee Dormu, EMIS Administrator

USAID and other U.S. Government

George (“Gib”) Brown, USAID/Liberia Contracts Officer’s Technical Representative

Margaret Sancho-Morris, USAID/Liberia, Education Team Leader

This report summarizes activities under United States Agency for International Development (USAID) Contract Number Contract EHC-E-06-04-00004-00 for the period October–December 2008.

I. Overview of Significant EGRA Plus: Liberia Accomplishments

The accomplishments summarized here are grouped to facilitate reading and are listed in random order.

- **Subcontractor mobilization.** Mobilizing RTI’s subcontractor—the Liberian Education Trust (LET)—took place in the last two weeks of October 2008. Currently, the EGRA Plus: Liberia staff counts five full-time employees and one part-time accountant, plus 15 trainers of teachers (Coaches). Thanks to LET, the project was quickly mobilized, resulting in timely and uninterrupted implementation of the planned activities.
- **EGRA Plus: Liberia official launch.** The project was officially launched on November 14, 2008, at Precious Andrews Hall in Monrovia, Liberia. Close to 100 participants (inclusive of the project staff) were present. Journalists were invited as well, which resulted in a couple of articles published in both print and web-based media.
- **RTI–Ministry of Education (MOE) Memorandum of Understanding (MoU).** During the EGRA Plus: Liberia project launch event on November 14, RTI and the MOE in Liberia signed a Memorandum of Understanding that set the foundation for collaboration between RTI and MOE.
- **School sampling.** Selection of 180 EGRA schools was an important task and needed to take place as soon as the project was awarded. EGRA Plus: Liberia classified target schools into 60 control schools, 60 light-treatment (“Light Intervention”) schools, and 60 full-treatment (“Full Intervention”) schools. As per the agreements with the MOE, USAID, and the World Bank (WB), in order to make this a proper experiment, allocation of schools into these categories was randomized. It was also agreed that to make the schools representative of all of Liberian *children* (because the unit of interest, ultimately, is the child), selection would be random but proportional to school population (enrollment). Finally, as per the advice of the MOE, the project team used an expanded definition of “public schools” to include “self-help/community schools.”
- **Enumerator training.** In all, 23 enumerators were trained for data collection. Engaging 18 enumerators to collect data over the period of four weeks meant that the goal of fully training 18 enumerators in administration of Early Grade Reading Assessment (EGRA) instruments was accomplished. The majority of trained enumerators were from the MOE staff. At the end of the training, the MOE signed letters of support for the EGRA baseline data collection to be presented to District Education Officers (DEOs), principals, and teachers in target schools.

- **Baseline data collection.** Over the period of four weeks, baseline data were collected in 176 schools. The remaining four schools will be assessed in January 2009. As explained below, of the four schools that were not reached during the baseline, two turned out not to exist and the other two had low enrollments. The two schools that did not exist or ceased prior to data collection are: (1) Plunkor community school, Plunkor, Right Bank St Paul, Monteserado; and (2) Nomon Public, Kongba, Gbapolu. From the analytical point of view, having data collected from 176 schools is adequate for report writing.
- **Data entry.** Dr. Luis Crouch, RTI's Vice-President and the project's Principal Investigator, assisted the MOE's head of education management information systems (EMIS), Mr. Farwenee Dormu, to adjust the EGRA Plus: Liberia data entry application that was developed in June 2008 with support from RTI. Data entry commenced as soon as the first filled-out questionnaires arrived from the field.
- **Reading intervention materials.** With support from Task Coordinator Ms. Medina Korda and from Dr. Crouch, the RTI Early Grade Reading (EGR) Expert, Dr. Marcia Davidson (University of Utah), finalized development of reading intervention resource materials. Manuals and supplementary materials have been developed for both Light and Full Intervention schools. The selection of decodable books as well as other student resource materials was presented to and approved by the COTR and the MOE's Deputy Minister for Instruction, Ms. Hester Williams-Catakaw.
- **Trainers of teachers (Coaches).** The EGRA team identified and hired 15 Coaches (trainers of teachers) who will be supporting grade 2 and grade 3 teachers in treatment schools. The Coaches were selected using a three-stage approach: first round of short-listing based on a review of resumes, second round of short-listing through interviews, and final selection based on candidates' performance during their training.
- **Training of Coaches.** Twenty-five candidates for the position of Coach were trained during a five-day workshop held at Corina Hotel, Monrovia, Liberia. The workshop was facilitated by Dr. Davidson, RTI's EGR expert, with support from the EGRA Technical Coordinator, Ms. Ollie White, and Ms. Korda. Support was also provided by the MOE's EGRA representatives: Ms. Yukhiko Amnon, Head of the Pre-Primary Education Department; and Mr. Isaac Fufflay, Reading Specialist. By the end of the workshop, Ms. Amnon had arranged the signing of letters of support for the implementation of the reading intervention. The letters were delivered by the MOE to the County Education Officers (CEOs), while the Coaches delivered these to District Education Officers (DEOs) and to principals and teachers in the target schools.
- **Deployment of Coaches.** Upon the completion of training for Coaches but before their deployment, the EGRA team organized an additional day of training to firm up the plans and protocol for a five-day training for teachers in target schools, as well as for equipping Coaches with needed resource materials.

- **Training of grade 2 and grade 3 teachers.** Coaches were deployed just in time to allow for training of grade 2 and grade 3 teachers in Full Intervention schools before teachers went on the school break and the holiday season. A total of 160 teachers—all grade 2 and all grade 3 teachers—in Full Intervention schools were reached through this training.
- **Performance Monitoring Plan (PMP).** RTI's Monitoring and Evaluation (M&E) Specialist, Ms. Eileen Reynolds, assisted the EGRA team with development and submission of the project's PMP.

More details are included in the forthcoming sections.

II. EGRA Plus: Liberia—Overview

EGRA Plus: Liberia will follow a randomized controlled trial by which the target schools will be classified into control and treatment schools. As depicted in *Exhibit 1*, EGRA Plus: Liberia will fit into a complete cycle of learning support and improvement. It will be used as a comprehensive approach to improving student reading skills, with the first step being an overall system-level diagnosis and identification of areas for improvement. Based on the assessment results, EGRA Plus: Liberia will remediate the identified problems by implementing evidence-based reading instruction.

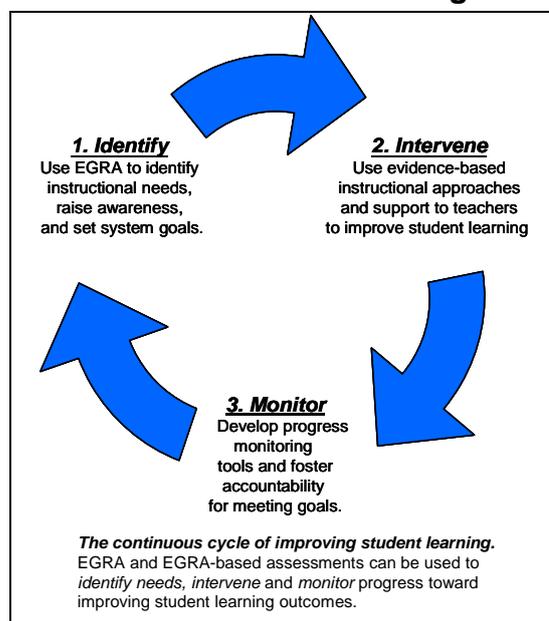
The implementation of EGRA Liberia commenced in June 2008 with World Bank funding and continues as of October

2008 with funding from USAID. The funding responsibilities between the two donors were agreed upon during RTI's EGRA Expert Panel organized in Washington DC in March 2008. The following points were agreed: All activities on or before September 30, 2008, will be funded by the WB; all activities following that date are to be funded by USAID.

As part of the **World Bank's task order**, the pilot assessment was conducted in June 2008 in 46 randomly selected schools at the national level, in order to establish the current levels of student reading performance, but even more importantly to collect empirical evidence that fed into the design of the remedial intervention. The design of EGRA Plus: Liberia classifies schools into three different groups: control schools, Light Intervention (LI) schools, and Full Intervention (FI) schools. Control schools will serve as a comparison group for measurement of impact—that is, improvements in student reading performance in treatment schools. As per the WB's request, the treatment schools have been further classified into two categories—Light Intervention and Full Intervention schools:

The Light Intervention will test both the *power* of information and *accountability* when it comes to improving student performance. That is, it will examine the hypothesis of whether, if parents and teachers are informed that their students are not performing at the desired level, they will simply take advantage of the resources available to them in the existing context and take actions to improve teaching. It is also believed that the availability of such information will increase the level of accountability between parents and teachers, parents and students, and teachers and

Exhibit 1. The continuous cycle of improving student learning



students, resulting in improved teaching and more effort at home in helping students with their homework. It is to this end that the intervention for Light Intervention schools will simply consist of sharing information with schools and parents on their students' performance.

Students in Light Intervention schools will be assessed three times during the project (November 2008, June 2009, and June 2010), and the findings of the assessment will be provided to students, parents, school administrators, teachers, and community groups in the form of a school report card. The report card will also communicate what it is reasonable to expect, in terms of performance, at each grade level (based on the curriculum and on analysis of data from the June 2008 pilot and further analysis of data from the November 2008 baseline). At that time, schools will be informed that their students will have another opportunity to take the EGRA at the end of the 2008–2009 and 2009–2010 academic years to measure improvement. In a sense, then, Light Intervention schools will measure the power of pure information dissemination to lead to improvements.

Students in Full Intervention schools will take the EGRA and assessment findings will be disseminated to parents, school administrators, and community groups in a school report card, as in the Light Intervention schools. All will be notified that the same students will have another opportunity to take the EGRA again at the end of the 2008–2009 and 2009–2010 academic years to measure improvement. Teachers of grades 2 and 3 in Full Intervention schools will be trained in specific techniques for teaching reading. Teacher training will consist of two week-long, face-to-face capacity-building workshops (provided at the beginning of each academic year—December 2008 and September 2009). Additionally, grade 2 and grade 3 teachers in Full Intervention schools will be given ongoing school-based support and training.

The overall implementation of the EGRA Plus: Liberia project will be **funded by USAID** and by the end of 2010, the project will have accomplished the following:

- Establish and monitor student reading performance by conducting three nationally representative quantitative assessments of early grade reading in a total of 180 schools that will provide empirical data for national education policy, planning, and decision-making.
- Finalize the design of remedial interventions for 120 schools; implementing the interventions will introduce more effective practices for teaching reading.
- Improve student reading performance in grades 2 and 3 over the period of two years, namely: second-grade letter recognition improved and second- and third-grade reading fluency increased due to the newly introduced teaching practices.
- Foster significant interaction with all relevant stakeholders by ensuring that all of the project activities, schedules, and proposed accomplishments are achieved in a collaborative and transparent manner.
- Conduct a series of workshops that will strengthen the capacity of government officials and other stakeholders to design and use EGRA instruments and remedial interventions.

- Implement all of the project’s activities in close collaboration with the Ministry of Education, and thus increase the technical capacity of the education management information system.

III. Implementation of EGRA Plus: Liberia

III.1. Mobilize subcontractor and project pre-launch activities

The EGRA Plus: Liberia contract was issued to RTI International (RTI) on October 7, 2008, and soon after RTI issued a subcontract to the Liberian Education Trust. RTI, led by EGRA Task Coordinator Medina Korda, mobilized the contractor in the last week of October. At the same time, activities toward the project’s deliverables commenced. A more detailed account of the mobilization activities is presented here.

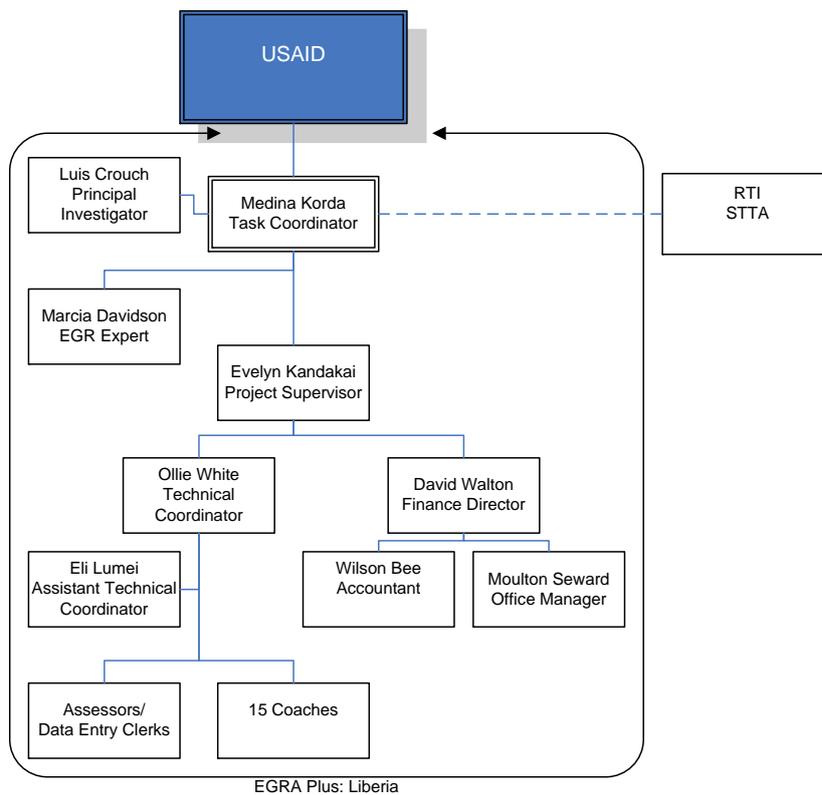
Finalization of LET staffing

During the last week of October 2008, LET finalized the staffing plan for EGRA Plus: Liberia. The following staff members will be implementing the EGRA Plus: Liberia project:

- Evelyn Kandakai – EGRA Project Supervisor. Dr. Kandakai will ensure timely and planned implementation of the EGRA project by overseeing the project activities and providing leadership and advice on various aspects of the project implementation.
- Ollie White – EGRA Technical Coordinator. Ms. White will be in charge of orchestrating all of the project activities, and most importantly will provide technical expertise in teaching reading. Ms. White is a reading expert and brings to the project precious expertise.
- Eli Lumei – EGRA Assistant to Technical Coordinator. Mr. Lumei will assist with all of the data-driven project activities. Mr. Lumei holds degrees in statistics and he will coordinate most of the tasks related to data collection and analysis.
- David Walton – EGRA Finance Director. Mr. Walton will manage the EGRA project finances.
- Wilson Bee – Assistant Finance Officer. Mr. Bee will assist Mr. Walton, on a part-time basis, during the busy times in project implementation.
- Moulton Seward – EGRA Office Manager. Mr. Seward will assist the EGRA team by organizing all of the logistics needed for the project implementation.
- 18 part-time data enumerators contracted for November 2008. Assessors will be hired as needed for the remaining two assessments, in June 2009 and June 2010.
- 15 trainers of teachers (Coaches). Employing a three-stage selection process, LET selected 15 Coaches who will be assisting teachers in 15 districts.

For all of these positions, LET has written Scopes of Work (SoWs) and executed contracts. *Exhibit 2* shows the positions and reporting arrangements.

Exhibit 2. Project positions and reporting lines



Project mobilization and annual workplan

The action list for the project mobilization was developed immediately upon the execution of the contract with USAID and was shared with the project’s COTR, Contracting Officer’s Technical Representative (COTR), Mr. George (“Gib”) Brown. Following the initial set of activities undertaken to kick off the project, the first draft of the annual workplan for EGRA Plus: Liberia was developed and shared with USAID. LET and RTI discussed activities pertaining to the October–December quarter in detail, plans were made, and tasks delegated to various individuals on the team. Various checklists were made for data collection, data entry, and project launch, as were preparations for Coach identification, hiring, and training. A shorter version of the workplan highlighting only the main tasks to be completed in the October–December quarter was shared with the Ministry of Education on October 28, 2008.

The project mobilization called for numerous activities to be taking place at the same time, with two major goals for the October–December quarter: (1) Conduct the baseline assessment in target schools, and (2) commence the intervention in the treatment schools. RTI’s subcontractor has experience in implementing education projects, but not of this size, complexity and intensity. The learning curve of the LET staff was very steep, but due to their commitment, all of the activities needed to accomplish the above two major goals were accomplished.

Meeting with the MOE: Informal project kickoff

On October 28, 2008, the MOE representatives, led by Assistant Minister Siebu Kertrurah together with LET and RTI, discussed the project and implications for the support to be received from the Ministry of Education. The meeting was organized by LET to briefly introduce the project to MOE and establish collaboration parameters. It was agreed that MOE and LET should fully collaborate and that support from MOE could be expected. Overall, the meeting was informative and lasted for close to two hours. Upon the completion of the meeting, a collection of relevant documents was handed off to the MOE for its use and information.

Other activities

- LET finalized the purchase of equipment to meet project needs.
- Adjustments to the budget, mainly reallocations, were made.
- Logistics for various tasks were managed: training of assessors, project launch, data collection field deployment, publishing of student resource materials, deployment of Coaches, etc.

Challenges

- LET staffing: Dr. Kandakai needed to go through a couple of rounds of discussions with the EGRA Technical Coordinator, Ms. White, in order for her to accept the position. Ms. White owns a school and having her full-time on the project meant that she needed to hire someone to manage her school. Fortunately, Ms. White agreed to take the position and move to the city to work on the project.
- LET's capacity: LET has experience in managing education projects, but not projects of this size, intensity, and complexity. LET required constant support and leadership from RTI's Task Coordinator until its staff members had become capable of functioning on their own. With their commitment and hard work, all of the staff members came to "own" the project and continue the project implementation without face-to-face supervision.
- Budget: The publishing of decodable books was more expensive than originally planned. LET found ways to save on other items and put the savings toward the purchase of a sufficient quantity of decodable books for students. The same adjustments will be made for Year 2 of the project.
- Production of student resource materials: selection of student decodable books according to specific lesson plans took longer than anticipated resulting in delayed production. The EGRA team decided to supply the farthest Full Intervention schools with all of the resources needed, while the schools in and close to Monrovia would be supplied as student decodable books become available. It must be noted, though, that all Full Intervention schools were supplied with sufficient quantities of OYSS/Stella Maris books to build small libraries for students in Grades 2 and 3.

III.2. Select sample of schools for EGRA Plus: Liberia project

As per the commitment to USAID and the MOE, the sampling procedure focused on public schools only. The project selected 60 control schools, 60 “Light Intervention” schools, and 60 “Full Intervention” schools.

In reality there are four types of schools in Liberia as per the EMIS database: public, self-help/community, religious/mission, and private. As per the advice of the MOE, we used an expanded definition of “public” to include “self-help/community schools.” It was agreed previously that in order to make this a proper experiment, allocation of schools into these three groups would be randomized. It also was agreed that to make the schools representative of all of Liberian *children* (because the unit of interest, ultimately, is the child), selection would be random but proportional to school population (enrollment).

In order to make the intervention cost-effective, and to make its implementation reminiscent of what a scaled-up process would look like, the project team proceeded to select groups of schools that were similar in nature to the natural intervention or supervision area of district officers. Thus, schools were selected in clusters. Schools will be visited and assisted in clusters of four. This is a good compromise between the need to work efficiently and the need for representativeness, and will minimize problems with “design effect” (a technical issue discussed below). The project could have worked in clusters of one or two schools, but this would have raised the cost astronomically, and would not simulate what happens in reality, since officers work with groups of schools—that is the nature of supervision. On the other hand, the project could just do two, three, or four clusters of 30, 20, or 15 schools, but this would mean that the first-stage selection (of two or three clusters) could not possibly be representative of the country. A wise compromise is 15 clusters of four schools, with random selection at both stages.

It is extremely important to note that this sampling is not for a study, but for an intervention, and the sampling has to respect the nature of such an intervention.

Selection of districts

First, 15 districts were selected in a manner proportional to public school population. The selection tool is an Excel spreadsheet containing data on schools by region, county, and district.¹ The database contains data to characterize schools as to which settlement they belong to, but “settlement” is too small a unit of aggregation to permit efficient sampling selection in a first stage, as there are half as many settlements in the database as schools, making it an ineffective level of aggregation for a first stage of sampling. It would have been nice if “settlements” had corresponded closely to clusters of about four to five schools, since then a randomized selection of settlements could have been done. As is, selecting settlements would not have permitted efficient cluster selection, as the settlements are themselves below the cluster level of aggregation.

¹ The developed Excel software was shared with USAID/Liberia and the World Bank in late October. It is available upon request, but is not be included as an attachment to this report because it is a very large file.

A simple sampling program was written in Excel. The =rand() function in Excel is used to random sample. Sampling techniques are used to make the random sample proportional to population. The tool allows one to sample and re-sample, given that new samples can be generated easily simply by pressing F9. This can serve as a capacity-building exercise on how to sample proportional to population, using a simple, standard software in a very step-wise, transparent logic.

A district sample is the following:

Number	District/County	No. of schools to choose from, according to EMIS data
1	Foya/Lofa	51
2	Voinjama/Lofa	64
3	Kolahun/Lofa	82
4	Gbarnga/Bong	27
5	Salala/Bong	38
6	Greater Monrovia I/Montserrado	65
7	Greater Monrovia II/Montserrado	83
8	Saclepea #1/Nimba	38
9	Sanniquellie/Nimba	46
10	Zoe-geh/Nimba	55
11	Right Bank St. Paul*/Montserrado	72
12	Right Bank St. Paul*/Montserrado	72
13	Kakata/Margibi	69
14	Klay/Bomi	75
15	Kongba/Gbarpolu	14

* See explanation below for double sampling.

But note that the developed software would make it possible to re-sample.

The reader may note that some districts are included twice (in this case, Right Bank St. Paul). That is as it should be if one is sampling proportional to population. For example, the largest three districts in Liberia (Monrovia I, Monrovia II, and Right Bank St. Paul) have 11% of the (public) student population. Since 11% of 15 is more than 1, it makes sense that one district might appear twice in the average sample.

The project team has simulated the selection over *many hundreds of repeated samples*. The resulting correlation between the actual share of each district's population and the resulting proportion of the time each district shows up in a sample is 0.99 (converging to 1 at the limit). In repeated samples, the proportion of times in

which the largest three districts show up is 11%, if they are allowed to sometimes show up more than once in a sample, which is exactly proportional to the population.

Selection of schools within clusters

Once the districts were selected, clusters of four schools each were selected. The EMIS database has data on the X-Y geographical coordinates of the schools. The procedure used is as follows.

For the selected districts, the sampling team created a distance matrix of all schools i to all other schools j , simply calculating the length of the hypotenuse between $x(i)$, $y(i)$ and $x(j)$, $y(j)$. This is obviously not perfect, as it does not take into consideration infrastructure, but it is a good first approximation; it can be overcome with real information about closeness. There may be a need to substitute out some schools anyway, because of poorly entered X-Y coordinates, or other reasons, such as there being an unfordable river between schools that in terms of X-Y coordinates appear close to each other.

Staff then selected one school at random in the district, which can be considered the centroid of that district's cluster.

There remained two choices or options.

A first choice was to find the three schools closest to the centroid. The problem with this is not what one might at first think, namely that it creates a bias towards higher-population density areas. After all, if the selection of the centroid schools is truly random, some of them will be in low-density areas, and the nearest schools will actually be quite far, precisely because they are in low-density areas. This option does have the advantage of minimizing the cost of intervention, and also more closely mimicking the way an actual supervisor would work, by going from school to school, taking the closest ones in sequence. In that sense, it has all the "realism" and representativeness one needs.

However, the option does suffer from one problem, which is some design effect. Clustering on the closest schools, after picking one at random, does minimize the range of schools one is dealing with, to some degree. A clustering process, relative to a pure random sample, will restrict the range of observation somewhat, because schools within clusters will tend to differ from each other less than schools selected totally at random. In the ideal world, clusters should all be "mini populations." If that were the case, then clustering would be extremely efficient. But we know that in the real world, clustering censors the observed total variance relative to the real variance, because units will tend to be similar to each other. Thus, this is somewhat of a disadvantage. But because EGRA Plus: Liberia is a very labor-intensive intervention, it is important to economize. And because it is an intervention that one hopes is replicable, it is important to work in a way that mimics the "real" work that would be done in a project that is taken to large scale.

This is why we have clusters of four schools to begin with. If, having clustered at the district level, one picks a single school in the cluster, and then finds the closest three schools, one is then also restricting the range of observation. The other extreme is to

select the four schools completely at random within the cluster. But some of the districts in Liberia are big, so this creates an artificial cluster, unlike anything that anyone in real life would work. The average district has 90 schools, which is way beyond anything any one agent could truly help. In real life, any improvement process most likely would require a span smaller than 90 schools.

The cost saving involved in clustering within districts by picking a school at random, and then the three closest, seems worth the possible sacrifice in variability between schools. Again, this will not create an urban bias, or a bias towards areas with higher population density. It just makes the sampling a little less efficient in a statistical sense, but a great deal more efficient in a cost and substantive sense.

In conclusion, taking the above described two steps allows the sampling to be proportional to population, and groups the schools into reasonably natural clusters that are more or less similar to the administrative or jurisdictional units that would occur in reality, but also is random at each step.

III.3. Identify and train data collection enumerators

At the suggestion of the MOE, LET identified 23 potential enumerators to be trained and selected for the data collection. Out of these 23 enumerators, five accepted the Coach position and the remaining 18 individuals were deployed to the field for data collection. The training for enumerators was held on November 10–13, 2008, on the eighth floor of the MOE building.



Assessors learning how to hold a clipboard

The training lasted for three days and some of the enumerators were the same ones from the June 2008 data collection (funded by the World Bank).

During the first day of the training, the EGRA Plus: Liberia project was presented, the EGRA assessment instruments introduced, and various aspects of data collection discussed: scoring, marking, using stopwatches, holding a clipboard, etc. At the end of day 1, the EGRA trainers conducted the first interrater reliability exercise, which revealed that the enumerators were not at the desired level of performance with respect to the accurate collection of data. The interrater reliability exercise is a good proxy for determining the enumerators' ability to perform assessment techniques as accurately as possible. What it means is that a trainer will select several tasks from the EGRA assessment instrument and develop a modified version of each task that contains mistakes. The trainer, posing as a student, then reads these new subtasks aloud to the assessors, who are supposed to have marked the same mistakes. For instance, if the trainer made six mistakes on the letter-knowledge task, then the enumerators should have marked the same six mistakes.

The first interrater reliability exercise showed that only around 60% percent of the enumerators were able to accurately mark the mistakes that the trainer intentionally made. This informed the trainers about the enumerators' performance and the



MOE's EGRA coordinator, Ms. Amnon, helping with assessor training

approach to the training was altered to include more close supervision. This change led to significant improvements, bringing the enumerators' level of accuracy to 95% by the end of the last training day.

In conclusion, it must be noted that the participants learned a lot. The EGRA assessment technique is a demanding and very detail-oriented task. Even experienced assessors have to spend some time learning various techniques, such as timing the student and marking the responses. The enumerators

suggested for EGRA Plus: Liberia were not experienced enumerators and it required some time for them to understand and apply the newly introduced concepts and techniques. By using the interrater reliability exercise, the trainers were able to detect what were the exact challenges and then apply techniques to correct those. Nevertheless, several enumerators did make one mistake across the board, which was a failure to collect enrollment data broken down by sex. This will be corrected either in January 2009 or at the time of June 2009 midterm assessment.

III.4. Create EGRA Plus: Liberia instruments

Overall, to develop the complete Early Grade Reading Assessment, RTI's EGRA development team reviewed more than a dozen assessment instruments, including the Dynamic Indicators of Basic Early Literacy and Illinois Snapshot of Early Literacy (DIBELS/ISEL), the Peabody Picture Vocabulary Test, and instruments applied in Spain, Peru, Kenya, Mongolia, and India.

As discussed above, to obtain feedback on the initial design of EGRA, USAID, the World Bank, and RTI hosted a meeting of experts (a summary of proceedings and a list of workshop participants can be found at www.eddataglobal.org, under News and Events). Based on this and other expert consultations, a complete Early Grade Reading Assessment was developed for application in English. The resulting instrument contains eight tasks, or subtests, as presented in *Exhibit 3*.

Exhibit 3. Review of Instrument Components

Component	Early reading skill	Skill demonstrated by students' ability to:
1. Orientation to print	Orientation to print	<ul style="list-style-type: none"> • Indicate where to begin reading (uppermost left corner) • Indicate direction of reading within a line (left to right) • Indicate direction of reading within a page (top to bottom)
2. Letter-name knowledge	Letter recognition	Provide the name of upper- and lowercase letters distributed in random order
3. Phonemic awareness	Phonemic awareness	<ul style="list-style-type: none"> • Segment words with 2 to 5 phonemes • Identify words with different beginning or ending phoneme
4. Familiar-word reading	Word reading	Read simple and common one- and two-syllable words
5. Unfamiliar non-sense word reading	Alphabetic principle	Make grapheme-phoneme correspondences (GPCs) through the reading of simple nonsense words
6. Oral reading fluency with comprehension	Oral reading fluency	Read a text with accuracy, with little effort, and at a sufficient rate
	Reading comprehension	Respond correctly to different types of questions, including literal and inferential questions about the text they have read
7. Listening comprehension	Listening comprehension	Respond correctly to different types of questions, including literal and inferential questions about the text the enumerator reads to them
8. Dictation	Alphabetic principle	Write, spell, and use grammar properly through a dictation exercise

The EGRA tool tests skills that are frequently needed in the early grades if children are to have a solid basis upon which to progress with their reading in the later grades.

The development of EGRA Plus: Liberia assessment tools was based on two foundations: (1) a well-vetted default instrument that has received input from leading international reading experts at various workshops convened by USAID, the World Bank, and RTI; and (2) input from Liberian experts at a workshop carried out in June 2008 (funded by the WB). The Liberian EGRA assessment, in the end, had components on

- orientation to print,
- phonological awareness,

- letter-naming fluency,
- familiar-word fluency,
- unfamiliar-word fluency,
- fluency in reading connected text,
- comprehension based on read text, and
- a listening comprehension test.

The internal cohesion and reliability of this tool was checked using various statistical procedures, and the reliability was found to be good, certainly in the range of other similar assessments used in both developed and developing countries. For example, the alpha coefficient of reliability is above 0.8, which is a good benchmark (0.7 being considered an absolute minimum).

The EGRA Plus: Liberia instruments were adjusted for the baseline assessment during the enumerator training on November 10–13, 2008. The additional “Student Background Questions” were included to reflect the project’s Performance Monitoring Plan as well as the request by the WB for inclusion of additional questions. The following three instruments were administered for the November 2008 baseline assessment:

- Student instrument,
- Teacher instrument,
- Principal instrument.

The same instruments—i.e., the same format—will be used in the midterm assessment in June 2009. New questions asking respondents about the newly introduced techniques will be included in both the principal and teacher instruments. And in the student instrument, the changes made will pertain to the student instrument and specific tasks within it. Words will be reshuffled and new ones will be introduced; letters will be reshuffled; new passages will be written; etc. While doing so, the project team will take great care to ensure that the instrument used in the midterm assessment is of equal difficulty to the one used in the baseline assessment in order to ensure as much accuracy as possible in comparing data collected on two different occasions.

III.5. Launch EGRA Plus: Liberia project

While the training for data collection was taking place, LET made arrangements for the project launch on November 14, 2008. Close to 100 participants were at the project launch, representing various institutions: the MOE, USAID, the World Bank, the project staff, and students from a couple of local schools. The approach to the project launch consisted of three steps: (1) remarks by USAID, MOE, and RTI; (2) group work that elicited information needed for the project implementation; and (3) the signing of a Memorandum of Understanding between RTI and MOE.



EGRA Project Launch: Deputy Ministers Roberts and Williams-Catakaw and Luis Crouch

The MoU was signed at noon, marking the start of the official collaboration between the MOE and project implementers. The signatories were:

- For RTI: Dr. Luis Crouch, Principal Investigator and main signatory; Ms. Medina Korda, Task Coordinator and witness
- For MOE: Mr. Joseph Korto, Minister of Education and main signatory; Mr. James Roberts, Deputy Minister for Policy and Planning and witness

A copy of the MOU is available upon request.

III.6. Conduct baseline assessment in target schools

During the week of November 10–14, 2008, the EGRA team also finalized the logistics for data collection in 180 schools. Through joint collaboration with the MOE, the data collection teams were assigned and their routing decided in a manner that ensures efficiency and effectiveness. As mentioned above, training of enumerators took place on November 10–13, and the teams were deployed on November 15–16, 2008. On November 15, the EGRA team was assisted by Ms. Amnon from the Ministry of Education, who helped with the final instructions being given out to the teams, supervised the deployment of teams, and in the end reiterated the importance of this project for the Ministry of Education. Ms. Amnon also distributed copies of the MOE's letter of support to the baseline assessment.



MOE's EGRA Coordinator, Ms. Yukhiko Amnon, supervising field deployment

In all, nine data collection teams were formed, each team consisting of two enumerators. Both individuals were tasked with assessment; however, one of them assumed the role of a supervisor. This introduced a layer of accountability needed to ensure that at least one person on the team would be held fully accountable for execution of the assigned tasks.

The data collection teams that had to travel long distances were deployed on Saturday afternoon to allow for two days of traveling. Others who would not need to travel that far were deployed on Sunday. From that point on, LET stayed in touch with the assessors by phone on a daily basis. Various tools for quality control were employed, from ensuring that every page of the instrument was marked with its unique number to calling the enumerators regularly to confirm that they had reached their schools. Perhaps the most important decision was to make sure that the enumerators located their school (schools) a day prior to assessment. This step would ensure that teams arrived at school on time (given that they would know where it was) and would exclude the possibility of teams arriving at the site only to find that the school that was supposed to be assessed did not exist or had ceased to operate. With respect to school replacements, the teams were not given replacement schools ahead of time but instead had to call if a school did not exist or was not geographically accessible. The EGRA Technical Coordinator would verify this information by speaking with the EGRA assessor by cell phone while the District Education Officer was present.



EGRA Technical Coordinator giving final instructions for field deployment on November 15, 2008

MOE supported the management of the data-collection process by extending the services of Mr. Farwenee Dormu, EMIS administrator at the MOE. Mr. Dormu called all of the DEOs from the selected districts and informed them about the upcoming assessment without specifying the exact time of the teams' arrival. Finally, various checklists, the MOE's letters of support for baseline collection, and the data collection guide were prepared and given out to the teams. In addition, the main points were repeated to the teams on the day of their deployment.

Having a team of two assessors assessing one school per day was an ideal arrangement. It allowed enough time for drawing a sample in the morning and splitting the workload between two assessors, resulting in all students being assessed by the time they were supposed to go home anyway. The project team hopes to keep most of the enumerators to carry out the assessment in June 2009.

While the performance of the enumerators during the four weeks of data collection was remarkable, there were a few exceptions, resulting in the fact that enrollment data disaggregated by sex for a number of schools was not collected. Dr. Crouch and Ms. Korda had made a last-minute change to the instrument that required the enumerators not only to collect the enrollment broken down by sex, but also to link that enrollment to teachers. Several assessors thought that they needed to collect teachers' names only. This problem was remedied as soon as the first instruments arrived from the field, and the missing enrollment figures will be collected either in January 2009 or

June 2009 at the time of the midterm assessment. (It must be noted that enrollment figures for each school *were* recorded on a school data collection summary sheet, but were not disaggregated by sex.)

A total of 176 schools have been assessed and data for these schools is being entered. The additional (missing) four schools will be assessed in January 2009. The final list of schools is available upon request.

III.7. Intervention design

The EGRA intervention design was jointly funded by the World Bank and then finalized with USAID's support; therefore, it is important to give a complete overview of the design process. This section is presented in two parts: Drafting of the EGRA Plus: Liberia Intervention—World Bank; and Finalization of the resource materials—USAID. These two steps have resulted in the following intervention components of the EGRA Plus: Liberia:

- Full Intervention – teacher resources for teaching reading, and student resource materials;
- Light Intervention – student report card manual.

Drafting of the EGRA intervention—World Bank

In preparation for the remedial intervention design activities that took place in September 2008, RTI analyzed the revised National Language Arts Curriculum standards (published in June 2008). The main conclusion from this analysis was that many of the learning outcomes that were stated resulted from good instruction, but the curriculum did not clearly provide specific information about the content and pedagogy of instruction. Based on this assessment, RTI concluded that the remedial intervention should begin with the creation of an instructional model and key reading sub-skills that need to be taught. A clear model and a scope and sequence of instruction for each of the five key components of reading, and for each grade (2 and 3), needed to be developed. In addition to the mentioned analysis, RTI used the findings of the June 2008 EGRA assessment to inform the finalization of the remedial intervention.

Following the initial assessment that took place in June 2008, RTI staff members spent the last week of September 2008 in Liberia working with the local counterparts to develop the first drafts of various components of the EGRA intervention.

As requested by the World Bank contract, the participants were a mix of teachers and reading experts in Liberia. Around 15 teachers (about half of the participants) were chosen by the MOE to take part in the workshop. These teachers traveled from all over Liberia to extend their support and give their input into the intervention design. The remainder of the participants were MOE officers and most of them were also present at the first June 2008 workshop.

The workshop was opened by Ms. Siebu Kerturah, the Assistant Minister, who expressed appreciation for EGRA project and demanded hard work from the workshop participants. Ms. Williams-Catakaw, the Deputy Ministry for Primary

Education, joined the workshop later that day and also greeted participants as well as emphasizing the importance of EGRA to the MOE’s agenda of improving quality of education. Following the remarks by Ms. Kerturah, Ms. Amnon, the MOE’s EGRA coordinator, opened the workshop to the participants.

After providing an overview of the EGRA Plus: Liberia project, rationales for reading intervention in early grades, and the “big five” in teaching reading (phonemic awareness, phonics, fluency, vocabulary, comprehension), Dr. Crouch presented the findings of the June 2008 assessment. Some of the conclusions that were



The Assistant Minister, Ms. Siebu B. Kerturah, reading the assessment tools exercise, along with her MOE counterparts.

presented to the participants revolved around the fluency in connected text and comparisons between the Liberian children and children in other countries. This comparison was used *only* to illustrate that while Liberia is doing better than Kenya, for instance, it is far from reaching desired and needed reading performance benchmarks. For a source of information used in this comparison, we used oral reading fluency norms published in 2006 by the International Reading Association (Hasbrouck & Tindal, 2006), grades 1–8.

While the final EGRA assessment report is available upon request, some of the most important findings follow.

Regarding *student reading performance*, as expected by both RTI and the MOE officials, children in Liberia are not reading well. *Exhibit 4* illustrates the performance of Liberian children in grades 2 and 3 as compared to children in the same grades in the United States (DIBELS measurements). The Liberian children know their letters, averaging 78 correct letters per minute. However, their performance is significantly lower on other tasks requiring knowledge of sounds (for the test of nonsense words) and automaticity for tasks in connected text and comprehension. On the key measure—that is, the connected-text fluency measure—students in grade 2 are reading only 18 correct words per minute. In grade 2, one can observe a nice progression and a difference of 10 correct words per minute by the time the student reaches third grade. However, when compared to a developed country, such performance is at an alarmingly low level and demands immediate attention. Children reading less than 70 correct words per minute in grade 2 in the United States would be considered to be at severe risk and, because of this, would be given special attention.

Exhibit 4. Base values for Liberia and U.S. benchmarks

	Grade 2 Liberia	Grade 2 USA at-risk benchmark	Grade 3 Liberia	Grade 3 USA at-risk benchmark
Letter-naming fluency	64	Not applicable for grade 2, only established for kindergarten, greater than 40 no risk	73	Not applicable for grade 2, only established for kindergarten, greater than 40 no risk
Familiar-word fluency	14	Not applicable	20	Not applicable
Nonfamiliar-word fluency	2	Not applicable for end of grade 2, less than 30 considered weak in grade 1	4	Not applicable for end of grade 3, less than 30 considered weak in grade 1
Connected-text fluency	18	Less than 70 considered at risk	28	Less than 80 considered at risk

Source: Calculated by the authors using survey data in the case of Liberia, DIBELS benchmarks, and goals for the United States.

On the other hand, information collected via questions in the Student Context Interview revealed some interesting and very important findings for future policy making. While this point has been made elsewhere in the world, the research in Liberia proved that having children read at home would make a whole grade difference in terms of their reading performance. *Exhibit 5* illustrates some factors that have strong and not-so-strong associations with reading performance. A few are worth highlighting in terms of policy implications for both teachers and policy makers. First, if teachers were to read aloud to students, student performance would increase by 10 correct words per minute—that is a whole grade of difference (remember, grade 2 students read 18 correct words per minute, while grade 3 students read 28). Further, if students were to read aloud to someone at home, again they would be reading by 10 correct words per minute more than children who did not read at home. Finally, if there were sufficient books at home, children would also read nine correct words per minute more than those children who did not have books for home.

Exhibit 5. Factors taken singly and reported by child: Impact on measured reading in grades 2 and 3

	Average reading level	1 Children without the factor (average fluency in correct words/min)	2 Children with the factor (average fluency in correct words/min)	2 – 1: Difference children with and without the factor	Percentage with the factor
Memo item					
Average reading level in grade 2	18				
Average reading level in grade 3	28				
Factors with apparently negative influence					
Has failed a grade		24	20	-4	
Missed school days previous week		23	21	-2	

	Average reading level	1 Children without the factor (average fluency in correct words/min)	2 Children with the factor (average fluency in correct words/min)	2 – 1: Difference children with and without the factor	Percentage with the factor
Factors with apparently weak influence					
Teacher practices sounds		22	24	2	
Has radio at home		22	23	2	
Ate breakfast day of assessment		22	24	2	
Had lunch during school break		21	24	4	
Does homework		19	24	5	70%
Mother reads/writes in English		21	26	5	
Has library at school		22	27	5	12%
Father reads/writes in English		19	24	5	
Attended some form of preschool		18	23	6	89%
Factors each of which is associated with difference nearly equal to one grade level or statistically significant					
Reads aloud to own class		18	24	6	75%
Has TV at home		21	28	7	
Someone reads aloud to child at home		19	27	8	51%
Speaks English at home		20	28	8	
Has homework 4 or 5 days / week (versus less)		21	29	8	16%
Practices silent reading at school		17	26	9	62%
Has reading books at home		20	30	9	26%
Teacher reads aloud to child		14	23	10	75%
Reads aloud to someone at home		17	28	10	51%

Following this presentation, Dr. Crouch presented some of the experiences in improving reading elsewhere in the world: India, the Gambia, and South Africa. The main goal of this session was to let the Liberian counterparts know that, although performance of their students is low, they are not alone, and most importantly that improvements—significant ones—can be accomplished rather quickly. The intervention, however, has to be approached in a systematic and focused manner if these results are to be accomplished. For instance, in the Gambia, increases of hundreds of percent were reported in a very short period of time.



Dr. Crouch presenting the EGRA June 2008 assessment results

The participants were greeted by the Deputy Minister for Policy and Planning, Mr. Roberts, who once again emphasized the importance of teaching and reminded the participants that for quite a long time, the Liberian teachers have not been

teaching reading, and that it is time to change that. He also thanked RTI and its partners for assisting the MOE in making this change in Liberia.



Presentation on “Why Early Grade Reading” by Dr. Marcia Davidson, RTI’s EGR Expert

After a half day of analysis and discussion about the scope and sequence, it was decided (1) to move the focus to an instructional model, and (2) to design a scope and sequence of instruction outside of the meeting context. Instead, the educators spent time developing a number of stories and comprehension questions, both of which would fit within the

specific scope and sequence of skill acquisition. By the end of the workshop, the participants had written close to 70 stories and almost all of them found their way into the intervention. As an example, here is one story:

“A clean class”

Yesterday Mrs. Jah was very unhappy. The students ate candies in the classroom and dropped the wraps on the floor. The classroom rules say no dropping dirt on the floor. After school, nobody cared to clean up the mess. All the students rushed home. Mrs. Jah spent two hours cleaning up the mess. She was unhappy. The next day at school she told the class how she felt about what they had done. The students were sorry. They started throwing the dirt in the trash can. The class remained clean. Everyone was happy.

Comprehension questions:

1. Why was Mrs. Jah unhappy?
2. How long did it take Mrs. Jah cleaning the floor?
3. How did the students feel when Mrs. Jah told them what they had done?
4. How did the students solve the problem?
5. How did the students feel at the end?

Vocabulary

wraps – the covering on the candy; trash – dirt; unhappy – sad.

It is also very important to understand the existing practices that teachers are using in Liberia in order to fully understand all that is happening in the classroom. Here are a few questions that were discussed with the participants:

- Are you using a comprehensive reading program or your own reading program?
- Are you explicitly teaching reading?
- What techniques are you using to teach reading to students?
- How do you teach these techniques?
- Which techniques are working well for you? Why?
- Which techniques are not working well for you? Why not?

- How much time do you spend each day teaching reading?
- How do you teach students with different skill levels who are in your classrooms?
- How do you develop lesson plans?

The answers to these, and many other questions that were not mentioned here, provided important information to RTI with respect to devising appropriate and relevant teaching strategies that would enable effective implementation of the intervention.



Gib Brown, USAID Education COTR, reading the stories

Overall, through repetitive demonstrations, coaching, and joint teaching, the participants realized the importance of being specific for each lesson plan, but also the importance of sequencing lessons—why to start with teaching sounds

first, what the difference is between teaching phonics and phonological awareness, why there is a need to teach all—phonics, phonological awareness, vocabulary, comprehension, fluency—at the same time and not to slice it up.

The rest of the workshop was spent on devising learning assessment methodologies and disseminating assessment findings. The task of devising **learning assessment methodologies** was organized in form of an exercise for which the participants were given a set of parameters, plus samples of assessment tools, and then were asked to design their own EGRA Plus: Liberia assessment tools. The following are some of the questions asked of the participants for the entire exercise (full exercises available upon request):

- Who should assess children and propose which “tests” or “assessments” should be given to the children? How often should children be assessed?
- How should teachers track progress? What tools should teachers use?
- If teachers were to be visited eight times per year by EGRA project personnel, what assessments tools would they need? Would all students be assessed?
- EGRA project personnel will conduct three informal assessments in one year. What assessment tools should they use? Should all children be assessed?



What tools to use while visiting schools

- For the end-of-year formal external assessment, should all children be tested, or just a sample? In all skills areas or just some? Consider the cost and time requirements.
- Please discuss: What should the role of the principal be in all this?
- Design a small form that children should take home every day to ensure that parents have heard them reading every day. For how many minutes? At which stage?

To support their thinking, the participants were provided with samples and types of assessments needed. The participants were split into four groups and each presented its suggestions. The tools were developed for either oral fluency or letter knowledge, but most had national, school, and student benchmarks. The participants gave suggestions regarding what tools to use while visiting schools, whether to assess all children, whether to assess all skills, whether to use a teacher tracker (they even designed one), what the principal's role would be, etc. All of their inputs were analyzed and used in finalizing the remedial intervention.

The rest of the workshop was spent on designing a *student report card*. The participants were given another set of instructions for completion of this exercise. Their tasks were to discuss different ways of informing parents about their children's performance and to design the actual student report card on flipchart paper. Here are just a few questions that participants were asked while developing a student report card²:

- Should there be a graph or just a table? Are parents more or less likely to understand a graph?
- Should it show the individual child's score?
- Should it show the classroom's average score as well? Or *only* the classroom's average score?
- Considering the difficulty of getting the data, should it include data for any other classrooms at other schools?
- Should the teachers be asked to make a special assessment on which to base the report, or just use their existing tracker?
- Should the report card mention what should be the GOAL at the end of the given grade (2 or 3)? Or only show base and progress?

² The exercise contains more questions than included here. A few are presented to give readers a flavor of the discussions that went on during this session.

- Should the average information be sent to the parent-teacher association (PTA) or school committee head and be discussed at PTA or school committee meetings? Obviously, individual child information should not be sent. But, what information? The experimental classroom's data? Progress over time? Or just performance compared to goal?
- If we show goals, should there be a goal for the first year of the pilot, and another goal for the second year?

	1st sem	2nd sem
National target	80	100
School AVE	65	85
Student score	40	60

* Words per minute

Student report card: Reporting on connected-text reading fluency

The participants developed quite a few different student report cards and all were analyzed for the purpose of finalizing the remedial intervention for Light Intervention schools (also used in Full Intervention schools).

On the last day, the participants were asked to design implementation approaches to various tasks that will be undertaken in order to implement EGRA Plus: Liberia effectively. Again, the participants were given a set of guiding questions for each task: baseline, intervention, dissemination of assessment findings, etc. Here are a few guiding questions given to the participants for conducting the baseline assessment (full exercises are available upon request)³:

- Think about a need to assess approximately 3,600 students. How many assessors and supervisors should be engaged? How many days should they spend per school? How many members should each team have? How would you deploy teams? What should be qualifications of the assessors and supervisor?
- You would need to train both assessors and supervisors. How long should the training be? What qualifications should the trainers have when it comes to student assessment?
- What other logistical arrangements would do you need to make (e.g., copies of instruments)?

The participants were presented with various pros and cons of their proposed approaches, mainly analyzed through the lenses of cost and time savings as well as practicality of their suggestions. All of their other inputs were discussed and the most important points of the project's implementation were agreed upon. Overall, the participants were grateful to have been given an opportunity not only to listen to presentations but actually to engage in the brainstorming process and come up with the ways by which the project would be best implemented. Their inputs found their way into the final intervention design.

³ Same comment as in footnote 2.

Finalization of the resource materials—USAID

Under USAID’s EGRA Plus: Liberia contract, Dr. Davidson and Dr. Crouch worked to finalize Full and Light Interventions, respectively. In the end the following resource materials were developed.

Full Intervention

- **Main teacher manual:** The manual consists of the scope and sequence for teaching reading, plus weekly and daily lesson plans. As the training for Coaches was unfolding, several places where improvements could be made were identified. Dr. Davidson will revise the manual in due time.
- **Supplementary manuals:** Phonics, vocabulary, and comprehension manuals. Each manual is linked to the main teacher manual.
- **Decodable books:** Each student in grades 2 and 3 in Full Intervention schools would receive a set of three compilations of decodable books; each compilation has around 20 small (decodable) stories. These books are for students and each book is linked to a specific lesson plan presented in the main manual. These books were downloaded from www.teachtheworldtoread.com. Given that some of them had to be edited for grammatical and spelling mistakes, a permission for edits was granted by the Teach the World to Read website manager (copy of the letter available upon request). The final set of books was presented to and approved by the MOE.
- **OYSS/Stella Maris books:** The inclusion of OYSS books was suggested by the MOE. Enough OYSS books for grades 2 and 3 were procured and will be used to build small libraries for students in grades 2 and 3. Teachers will be in charge of making sure that these books are safe (not locked) but also checked out by students for reading at home. A reading-at-home tracker was developed as well, thereby introducing three-way accountability among teachers, students, and parents. Students will be required to read at home (either OYSS books or their own personal books) every day for 20 minutes, and at the end of the week all students, teachers, and parents will sign and confirm that students indeed spent that much time reading at home every day.

Light Intervention (also used in Full Intervention schools)

- **Student report card manual:** Students’ performance on reading will be assessed by teachers three times before this academic year ends. Teachers have been given a manual that contains all of the instructions on how to assess and track student performance. There are three periods (Periods 4, 5, and 6) remaining in the academic year, and teachers will assess and report on reading performance at the end of each period.
- **Student report card:** Teachers will fill out the student report card and send it home to parents by way of their children. Given that the student report card will list goals to be achieved by students, a discussion arose around the issue of illiterate parents who may not know what the card says. It is customary in Liberia

for students whose performance is below a certain benchmark to have their scores written using red ink. For students whose performance is above a certain benchmark, their performance is written in blue ink. Parents are accustomed to interpreting red as performance under a certain benchmark, and blue as performance above a benchmark. It was agreed that teachers should follow this practice with the EGRA student report card.

- **PTA report card:** Teachers and principals will fill out a PTA card and discuss it with parents and teachers at the time of the PTA meeting.

The reading intervention materials described above are available upon request. Hard copies of the materials were submitted to USAID in December 2008.

Observation. Sequencing of student decodable books according to the lesson plans took longer than anticipated resulting in a delayed start of the production. Due to the volumes of publishing and printing needed, 16 out of 60 Full Intervention schools did not receive decodable books. The priorities were made and those schools that are far from Monrovia received all of the materials needed. The schools that are in Monrovia or nearby (thus, those 16 schools) will be resourced as decodable books become available. Nevertheless, all of the schools have received OYSS books in sufficient quantities as well as teacher manuals.

III.8. Identify, train, and deploy trainers of teachers (Coaches)

As noted above, 15 Coaches were hired to support EGRA Plus: Liberia in 15 clusters (see *Exhibit 6*). Each Coach will serve eight schools: four Full Intervention schools and four Light Intervention schools. During the data-collection training that took place in mid-November 2008, LET chose the five best assessors who were willing to take the position of Coach. This meant that LET needed to identify 10 additional individuals.

To this end, LET reviewed more than 45 applications for the Coach position. The first round of short-listing was done based on qualifications and years of experience. The second round of short-listing included interviewing 25 candidates. Out of these 25 candidates, LET further short-listed 15 individuals to take part in the training. The final round to select the 10 needed Coaches took place during the Coaches' training.

Exhibit 6. Selection of Coaches

Timeline	Selection Process
Nov 10–13	Five assessors selected for the Coach position
Nov 1–20	Call for applications issued; close to 50 resumes reviewed
Nov 21	35 candidates short-listed and interviewed
Nov 21–25	15 short-listed and invited for training
Dec 1–5	Final 10 selected out of 25

The workshop for Coaches was held December 1–5, 2008, at the Corina Hotel, Monrovia. The workshop was opened by the MOE’s Reading Specialist, Mr. Isaac Fufflay, who stressed the importance of the project and called for the participants’ commitment to the workshop and to the project overall. On day 1, the EGRA team developed an exercise aimed at determining the participants’ knowledge about teaching reading without them having a chance to hear



EGRA Technical Coordinator and Coaches during the training

any of the project’s reading approach. The participants were charged with developing a scope of work for the position of Coach. They were given background information on the project, plus guiding questions on teaching reading, and they were also allowed to ask questions during their work. The following are some of the tasks for this exercise (only a few are provided, for illustrative purposes):

- If you needed to organize a five-day workshop for grade 2 and grade 3 teachers on how to teach reading in four schools that would be in a cluster, how would you approach it? There would be approximately 16 teachers in the session (two per grade). How would you (1) organize the program across the five days, and (2) teach teachers how to develop a 45-minute lesson plan? Develop both of these and write them on flipchart paper.
- Imagine that you need to support teachers by spending one day in their school. If there were approximately four teachers (two for grade 2 and two for grade 3), please describe: (1) How would you go about your day, from the moment of arrival to the moment of leaving? (2) What would you observe to determine whether teachers were teaching reading adequately? (3) How would you keep records?
- If you were to support teachers from month to month, how would you track their performance and how would you know that your support was effective? That is, how would you know that students were actually learning how to read?
- For the first three points above, list the resources that you would need.
- What would you do if teachers were not cooperating? To whom would you talk first? What measures would you undertake?
- What kinds of records would you keep to inform the senior management about your work? Perhaps you could design a tracker for this.

The exercise was informative for several reasons. It provided an excellent opportunity to determine which of the participants had (1) prior knowledge and experience working with teachers, (2) knowledge and experience in teaching reading and language specifically, (3) creativity to come up with solutions to presented tasks as

well as to ask relevant questions, and (4) commitment and eagerness to complete the assignment. Each group presented its work, and then they were asked to comment on each others' work—not necessarily to criticize but rather to supplement what the group was saying. If there were significant differences in views and positions of different groups, those were resolved during the plenary.

Following this session, the participants spent some time learning the sounds of the English language. They were taught how to sound out each letter of the alphabet and then they found one word for each sound that would be a “golden word” to be used by all. For instance, the word “apple” would be used for sounding out the initial “a.” Finally, the participants were given the teacher manuals and the scope and sequence for teaching reading, in preparation for the activities during the rest of the workshop.

Day 2 was facilitated by Dr. Davidson, with the support from Ms. White. Participants practiced sounds, reviewed the teacher manual and the scope and sequence for teaching reading, and—most importantly—reviewed the lesson plan to be used by teachers. Great care was taken to explain the EGRA model



Training of Coaches. December 1-5, 2008

for teaching reading and its simple approach: “I do; we do; you do.” The participants spent the afternoon modeling teaching reading by implementing a few lessons from the teacher manual.

On **day 3** of the workshop, the participants continued reviewing the main teacher manual, as well as supplementary manuals: comprehension manual, fluency manual, and vocabulary manual. The participants were tasked to prepare for the actual demonstration of a lesson. Then, each group presented its lesson and together the participants looked for weaknesses and strengths. A lot of progress was made, but it was agreed that they needed more practice and more time to understand the mechanics of maneuvering among different manuals. To this end, the workshop agenda was altered so that **day 4** also was spent practicing modeling teaching reading until it was fully understood. The focus in terms of lesson plans was put on the first month of teaching; however, slowly but confidently, the Coaches moved toward more difficult lesson plans taking place in months 4 and 5. The discussions among the participants were excellent and much of the learning took place during these discussions.

Day 5 of the workshop focused on the use of the student report card. During the first part of the session, the Coaches were trained on how to assess student reading performance. They were taught how to time students, and how to mark and score student responses. The rest of the day was spent reviewing the student report card manual and various checklists. It was agreed that timing would be a challenge for teachers since they did not have stopwatches and in most cases not even wristwatches.



MOE's EGRA Coordinator, Ms. Amnon; and EGRA Technical Coordinator, Ms. White, preparing letter cards for training

At the end of the workshop, Ms. Yukhiko addressed the participants once again, called for their hard work, and closed the workshop. She also assisted with signing the letters of support that Coaches would take to the field.

Observations: The participants were fast learners, but it was felt that perhaps a few extra days of training would have been better given the amount of new knowledge that was transferred. Given that this was not possible in December 2008, the EGRA team will look into a two-day retreat halfway through the end of the academic year. RTI will most likely organize another trip to Liberia by Dr. Davidson to provide further support to Coaches.

III.9. Commence training for grade 2 and 3 teachers in target schools

Before deploying the Coaches, the EGRA team worked to systemize the support the Coaches would be providing. This will be an important part of the project's implementation. Coaches were given a handout with guidelines on (1) how to systemize their approach to training teachers in December, and (2) how to organize and conduct the first support visit to teachers in January 2009.

Observation checklists and trackers to be used by Coaches for both Full and Light Intervention schools have been developed. These will serve as tools to further systemize Coaches' support to teachers.

The training of teachers in grades 2 and 3 was somewhat constrained by the fact that most of the teachers were already on their school breaks (as well as Christmas holidays). Another challenge was the fact that a number of teachers are volunteers and they initially refused to take part in training given that they are not paid by the government. This delayed the training by a day or two, but the Coaches kept going back and talking with the principal and teachers until the training arrangements were agreed upon. In the end, all of the Coaches completed training for teachers in Full Intervention schools before December 24, 2008. For more than half of the Full Intervention schools, the principals also participated in the training.

The Coaches met with LET on December 24, 2008. They shared their experiences and expressed that teachers were very grateful for the resource materials that they received. The teachers also appreciated the stipends that paid for their transportation

to go to a cluster school for the training (usually teachers have to figure this out on their own, it seems), as well as all the knowledge that they got in just one week. Some of the teachers said that they did not know that letters had sounds. Overall, the Coaches reported that the enthusiasm will not be lacking. Most of the teachers said that they will get together on Saturdays to discuss the intervention—not only in their own schools, but also among Full Intervention schools in their chosen clusters. Teachers asked for EGRA certificates, and the Coaches were advised to inform teachers that the certificates would be issued upon the successful completion of the first EGRA year in June 2009. As for the Coaches, they were excited and appreciative to be part of the project.

III.10. Data entry

An EGRA data entry application was developed in June 2008 by Mr. Dormu of the MOE, with guidance and support from RTI. According to Mr. Dormu, the EGRA database was the first database that the MOE had developed since the end of the conflict in Liberia. Mr. Dormu was grateful to be given an opportunity to engage in such important work and to use it to build the capacity of the EMIS staff. Lessons learned were used to adjust the data entry application in November 2008 and this resulted in a brief manual for data entry.



Mr. Farwenee Dormu, EGRA Data Entry Supervisor.

The data entry will be completed toward the end of January 2009.

Observations: The most challenging aspect of data entry was the actual scoring of instruments. The project team freed the enumerators from this task, given that they had a lot of work to do while in the field, but then in the end someone had to do it. LET has been working full time in scoring all of the instruments and because this is a time-consuming task that delayed data entry by a week, the scoring will be put back into the scope of work for the assessors for the June 2009 and June 2010 assessments.

III.11. Develop a Performance Monitoring Plan

The development of the PMP was led by RTI's Monitoring and Evaluation Expert, Ms. Reynolds, who spent November 19–26, 2008, in Liberia. Draft documents were discussed with relevant stakeholders and the final version of the PMP was submitted to USAID/Liberia for discussion on December 9, 2008.

Prior to her arriving in Liberia, Ms. Reynolds prepared a draft PMP, including a results framework, indicators, and detailed indicator reference sheets. Dr. Crouch and Ms. Korda gave feedback on this first draft. Upon her arrival in Liberia, Ms. Reynolds and Ms. Korda reviewed the draft plan again and then together met with LET staff to have a preliminary discussion about the PMP.

Meanwhile Ms. Korda and Mrs. Reynolds continued to discuss and work through the selection of indicators. Rather than base the bulk of project M&E on data from the EGRA questionnaires, they refocused on what ongoing implementation activities

could be measured in a timely manner and could serve as a test case to make sure the project would remain on track. Working with LET staff, they were able to use M&E to inform the design of program tracking tools that would provide the data needed to monitor implementation. For example, one of these key tools is the tracking tool that Coaches will use to monitor teacher performance when the Coaches conduct their school visits.

Ms. Korda and Ms. Reynolds met with Mr. Brown, the project’s COTR, to clarify some of the indicators listed in the EGRA Plus: Liberia contract. Finally, Ms. Korda and Ms. Reynolds met with Mr. Dormu to discuss whether he could provide certain data that might be required for the M&E plan, such as enrollment, grade completion, and dropout and repetition rates; and to understand how the EMIS and MOE define and calculate these values.

Observations: LET’s awareness and experience in M&E is not extensive, yet they appeared to quickly grasp the fundamentals and also appeared to be genuinely interested in doing this well. One of the largest challenges will be the demands on LET staff’s time, due to multiple project activities and pressures. Another challenge will be the project’s reliance on the Coaches to provide high-quality data for M&E. They will need the right tools and frequent support to ensure they are reporting consistently and understand the data they are to collect. With support from RTI, LET’s capacity will be built to respond to the requirements as the project unfolds.

IV. Summary Status on Meeting Workplan Targets

All of the tasks planned for the first quarter were accomplished, with the exception of two: data entry and the baseline report writing. During the planning stage, it was decided to free assessors from scoring the instruments and instead to focus them on high-quality data collection. Scoring would demand that each team spend an additional two to three hours in an already busy day on scoring the instruments. However, instruments needed to be scored and this responsibility fell on LET. If it takes about two to three hours to score instruments from one school, then 180 schools would require a considerable amount of time. LET had a busy schedule in the last week of November and early December, but worked through holidays so that data entry could continue without interruptions. Nevertheless, data entry was delayed by a couple of weeks. Also, some time likely will have to be spent in data cleaning, with both of these tasks resulting in delays for report writing. These realities will be taken into account for the June 2009 and June 2010 assessments.

Exhibit 7. Summary of status on meeting workplan targets

October-December 2008 Status		
Workplan Tasks	Status	Notes
Subcontractor mobilized and all staff hired	November 1. Completed.	Mobilization commenced in mid-October and all staff was hired by November 1.
Branding and Marking plan	October 13. Completed	Finalized immediately upon the execution of the contract
180 target schools selected	November 10. Completed	Sample of schools was finalized in the last week of October and first week of November. Approach to sampling was discussed with MOE, USAID, and WB.

October-December 2008 Status		
Workplan Tasks	Status	Notes
EGRA Plus: Liberia Project officially launched	November 14, 2008 Completed.	A day long event was organized to officially launch the project.
Memorandum of Understanding between RTI and MOE signed	November 14, 2008 Completed.	The MOU between RTI and MOE was signed at the project launch.
Baseline assessment	December 12, 2008 Completed for 176 schools. 4 remaining schools to be assessed	This step also included finalization of instruments, training of assessors, logistics for field deployment, and supervision.
Data entry	December 31, 2008 75% completed.	This step also included adjustment of data entry application development, training of data entry clerks, scoring of instruments, and follow-up for quality assurance. By December 31, 75% of data entered. It is anticipated that by January 25, data entry will be completed.
Report writing	December 31, 2008 Delayed.	Report writing has been delayed due to a time-consuming task of scoring the instruments. Report will be written as soon as the data is cleaned.
Training of Coaches, 1 st Capacity building workshop	December 5, 2008 Completed.	This step included a month long process for selection of coaches. A total of 15 coaches were trained and deployed to 15 districts in which Full and Light Interventions are being implemented.
Finalization, production, and distribution	Dec 31, 2008 90% Completed.	Teacher and student resource materials were finalized in late November. Coaches took sufficient materials for training of teachers in December 2008. However, a number of decodable books were not published in time for deployment. These books will be distributed as they become available.
Face-to-face training of Grade 2 and 3 teachers	December 24, 2008 Completed.	Coaches succeeded at training teachers in full intervention schools despite imminent holiday season.

V. Progress Toward Project Deliverables – Year 1

The figure below lists all of the deliverables listed in the EGRA project award for Year 1.

Exhibit 8. Progress toward project deliverables – Year 1

EGRA Plus: Liberia Deliverables for Year 1	Date Due	Status (end of December)	Notes
1. Milestone/Annual Workplan	November 7, 2008	Completed	The annual workplan was submitted to USAID on time. The workplan included a logistics and mobilization plan that was discussed and agreed upon between RTI, USAID, and MOE. A shorter version of the workplan was presented to and discussed with MOE.
2. Memorandum of Understanding between the study implementer and Ministry of Education.	November 14, 2008	Completed	The Memorandum of Understanding between RTI and MOE was signed on November 14, 2008 at the EGRA Project Launch event.
3. a. Approval letter for visiting the selected schools obtained from the Ministry of Education.	November 11, 2008	Completed	The letter of support for the baseline assessment was signed by the Deputy Minister Williams-Catakaw and Assistant Minister Kerturah. Copies of the letter were given to the assessors as part of their data collection package.
3b. Baseline data – EGRA conducted in target schools	December 12, 2008	Completed	Out of 180 schools, 176 were assessed. The remaining 4 schools will be assessed in early 2009. We consider this deliverable met since the number of students assessed in 176 schools is sufficient for all of the analysis needed to draw baseline conclusions.

EGRA Plus: Liberia Deliverables for Year 1	Date Due	Status (end of December)	Notes
3c. 18 Enumerators trained and deployed	Nov 16, 2008	Completed	A total of 25 enumerators were trained; 18 were engaged and deployed to the field. The majority of them were the MOE staff.
3.d. Data entry clerks trained	November 25, 2008	Completed	The MOE EMIS staff trained for EGRA data entry.
3.e. Data entry completed	December 19, 2008	75% Completed	On December 31, 2008, data entry was 75% complete. The remaining instruments will be entered and cleaned by January 25, 2009. The delay was caused by a need to score instruments, which proved time consuming for the subcontractor.
3.f. Data analyzed and 2 final assessment reports written (for November 2008 and June 2009 assessments).	December 31, 2008	Ongoing for 'November 2008 Report'	Reports will be finalized by mid-February. Data entry took longer than planned. This lesson learn will be taken into account for future plans with respect to report writing
3.g. Data sets provided to MOE and USAID.	February 28, 2009	To be completed	Data sets will be shared as soon as they are available.
4. Train sufficient teacher trainers to implement Light Intervention and Full Intervention (estimate 16 (sixteen) needed).	December 5, 2008	Completed.	A total of 25 candidates trained; 15 were hired on a full-time basis to serve schools in 15 chosen districts.
5. Suitable literacy materials identified, MOE and USAID approval obtained, and materials provided in sufficient quantities to supply grade 2 and 3 classrooms in at least the 60 (sixty) Full Intervention schools.	November 30, 2008	90% completed.	Planned materials for teachers and students identified and approved by the MOE and USAID. 60 Full Intervention schools received sufficient quantities of OYSS/Stella Maris books to be used to build small libraries in Grades 2 and 3. Decodable student books were also distributed to 44 schools in the farthest counties. Remaining 16 schools (located mostly in and around Monrovia) will receive these books as they become available in January and February, 2009.
6. 2 (two) annual policy and capacity building workshops held with key stakeholders. 1 (one) will focus on capacity building of the MOE's EMIS officers, while the other will focus on capacity building of teacher trainers (estimated 16 of them).	December 5, 2008	1 st capacity building workshop completed. 2 nd is planned for April 2009	Training of coaches was completed on December 1-5, 2008, and with this we consider this deliverable complete. Additionally, the training for assessors that took place on November 10-13, 2008 was an important capacity building event for the MOE staff.
Approximately 240 (two hundred forty) teachers trained in Full Treatment schools.	December 24, 2008	Completed for Full Intervention Schools	A total of 160 teachers (inclusive of principals) in Full Intervention schools were trained. The target of 240 teachers in Full Intervention schools could not be met due to a lower than anticipated number of grade 2 and 3 teachers. USAID and RTI assumed an average of 2 teachers in grade 2 and 2 teachers in grade 3 at each of the 60 FI schools, but instead we found that some schools had 1 teacher and some had 2 or more per grade. Thus, the total number of teachers is lower than anticipated.
Approximately 240 (two hundred forty) teacher resource kits distributed to teachers in Full Intervention schools.	December 31, 2008	Completed for all target schools.	A total of 160 received a package consisting of reading instruction manuals and student report card manuals.
8 (eight) follow-up capacity building workshop training sessions held for teachers in Full Intervention schools.	June 30, 2009	To commence in late January.	The first visit will take place when schools open in 2009.
Schools, parents, and students in 60 Light Intervention and 60 Full Intervention schools informed about and understand the implications of their students' reading performance.	End of Term 4 of academic year	To be taking place at the end of each term in Year 1, thus 3 times.	Teachers in Full Intervention schools were informed about low student reading performance (as discovered by the June 2008 assessment). Teachers in Light Intervention schools will be informed about the same at the time of their training in early 2009.

EGRA Plus: Liberia Deliverables for Year 1	Date Due	Status (end of December)	Notes
At least one communication tool developed and used to communicate findings of assessments to diverse audiences of education stakeholders in Liberia.	October 2010	Concept development stage to commence in the summer of 2009	It is suggested that MOE, USAID, LET and RTI will agree upon a communication tool in the summer of 2009.
Appreciably higher reading fluency and comprehension rates of students in Full Intervention classrooms.	June 30, 2009	Report to be written by August 31, 2009	Not until the mid-term assessment in June 2009 will we know if the intervention led to higher student scores on reading test. It is expected that due to the EGRA intervention students will be reading at higher levels than at the time of the baseline assessment.
Measurably improved quality of instruction in Treatment 2 classrooms.	June 30, 2009	Report to be written by August 31, 2009	Same as previous.
Copies (hard and electronic of all development experience documents submitted to CDIE as required under the BPA.	Ongoing		First quarterly progress report to be uploaded upon approval by USAID.
Annual Workplan for FY 2010	August 31, 2009		Annual workplan will be submitted in draft format by August 31, 2009 and finalized by September 30, 2009.
3 quarterly reports	1 st QPR – Jan 31, 2009	Completed.	3 QPRs will be submitted according to fiscal year calendar, with the 1st Quarter report in FY 2009 including startup activities in October of 2008.
Annual report (end of 4th quarter)	September 30, 2009		Annual report will be submitted as planned on September 30, 2009.

VI. Progress on Project Performance Indicators

Performance Monitoring Plan (PMP) was submitted to USAID on December 9, 2008. Confirming the indicators proposed in the PMP remains to be confirmed with USAID.

The EGRA Plus: Liberia indicators are tied to the Workplan and project Deliverables specified in the project award document. Future reports will include a table showing performance indicators agreed upon with USAID as part of the project's PMP.

VII. Next Quarter Activities

Ms. Korda will spend two weeks in Liberia on February 7-20 in order to re-adjust the workplan jointly with LET, USAID, and MOE. Readjustments are needed due to a delay in continuation of the school year caused by the teacher strike. Instead of classes resuming on January 5, they resumed on January 19, 2009. This 2-week long delay will have an impact on the schedules overall. The dates presented below will be readjusted in February.

Exhibit 9. Planned Activities for January–March 2009

Major Workplan Activities	Dates	Location
Data cleaning and baseline assessment report writing	Jan 26-Feb 31	US, Liberia
Workplan readjustments	Feb 14-20	Monrovia, Liberia
1 st project management visit	Jan 12-Feb 12	15 target districts
2 nd project management visit	Mar 23-Apr 30	15 target districts
1 st follow-up visit to FI schools	Jan 20-31	15 target districts, 60 FI schools
2 nd follow up visit to FI schools	Feb 16-20	15 target districts, 60 FI schools
3 rd follow up visit to FI schools	Mar 23-27	15 target districts, 60 FI schools
1 st information dissemination and training in LI schools by Coaches	Jan 5-9	15 target districts, 60 LI schools
1 st informal assessment in a sub-sample of FI schools	Mar 16-20	A sub-sample of FI schools chosen randomly across 15 target districts.
2 nd capacity building workshop	Mar 16-20	Monrovia; organized for the MOE staff.