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USAID/Kenya Primary Math and Reading (PRIMR) Initiative: Annual Report



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**The Primary Math and Reading (PRIMR) Initiative
FY 2013 ANNUAL PROGRESS REPORT**

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

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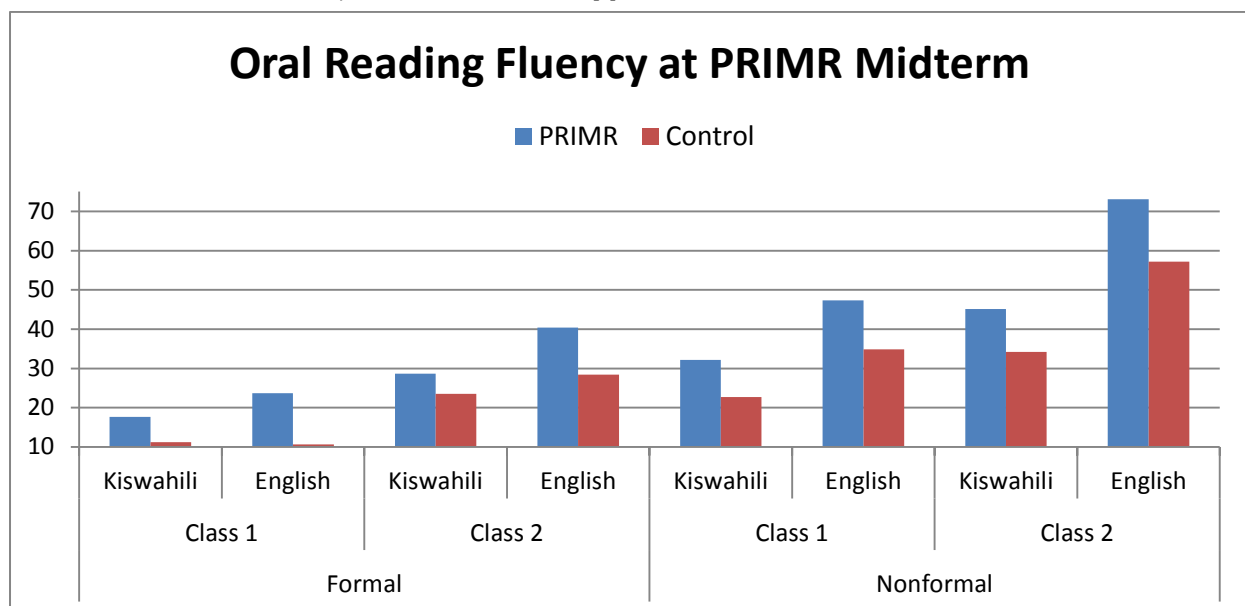
Acronyms and Abbreviations

APHRC	African Population and Health Research Center
CEMESTEA	Centre for Mathematics, Science and Technology Education in Africa
CIES	Comparative and International Education Society
COR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
DFID	UK Department for International Development
DMC	Decisions Management Consultants
DQASO	District Quality Assurance Officer
EdData II	Education Data for Decision Making (project)
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
EMACK	Education for Marginalized Children in Kenya (program)
FGM	female genital mutilation
FY	fiscal year
ICT	information and communication technology
ICT4E	ICT For Education (program)
KEMI	Kenya Education Management Institute
KICD	Kenya Institute of Curriculum Development
KIE	Kenya Institute of Education
KISE	Kenya Institute of Special Education
KNEC	Kenya National Examinations Council
M&E	monitoring and evaluation
MoEST	Ministry of Education, Science and Technology
NESSP	National Education Sector Support Programme
PDIT	Program Development and Implementation Team
PRIMR	Primary Math and Reading (Initiative)
PS	Permanent Secretary
RTI	RTI International (trade name of Research Triangle Institute)
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SAGA	Semi-Autonomous Government Agency
SSME	Snapshot of School Management Effectiveness
TAC	Teacher Advisory Centre
TSC	Teachers Service Commission
USAID	United States Agency for International Development

Executive Summary

The October 2012 to September 2013 period was a productive year for the Primary Math and Reading (PRIMR) Initiative. PRIMR expanded from 126 treatment schools in the previous year to 371 treatment schools; 121 schools remained as control schools until the final year of implementation (2014). At the same time, PRIMR was able to test the impact of the program on pupil achievement, and found striking results. Using per school expenditures that are less than the Ministry of Education, Science and Technology’s (MoEST’s) current budget, and depending on governmental employees already in the system, PRIMR was able to increase the proportion of pupils reading with fluency and comprehension at the MoEST benchmark by between two and three times. This impact held for Classes 1 and 2, for both Kiswahili and English, and in both public and nonformal schools. Figure 1 below shows the impact of PRIMR at the midterm (i.e., as of October 2012).¹ The figure shows the mean fluency rates for both English and Kiswahili, and indicates that PRIMR had a substantial impact on literacy outcomes for all levels.

Figure 1. Impact of PRIMR on oral reading fluency at the PRIMR midterm, by class, subject, and school type

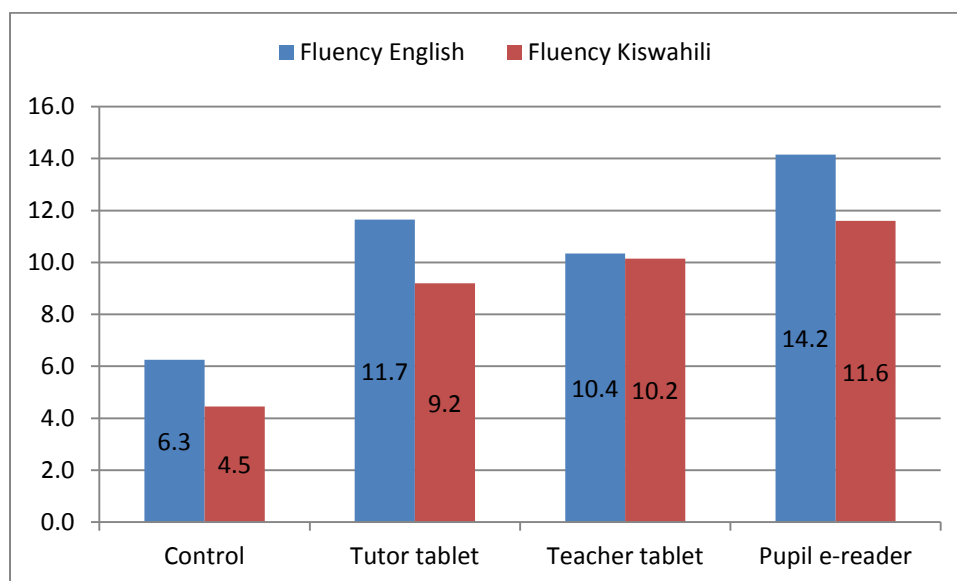


Kisumu County is the location of a unique experimental study in which PRIMR is testing the effectiveness and cost-effectiveness of three different information and communication technology (ICT) interventions. In the first intervention, pupils were given e-readers with the PRIMR books in e-format, as well as more than 200 other age-appropriate readers in English, Kiswahili, and Dholuo (the local language of many pupils in Kisumu County). In the second treatment group, teachers were provided with tablets that had the PRIMR teachers’ guides embedded in electronic format, and they were also given electronically based continuous-assessment tools to test the growth of their pupils in literacy over time. In the third treatment group, Teachers’ Advisory Centre (TAC) tutors were given tablets to use for following up and supporting their teachers.

¹ Preliminary results from the endline assessment under way in October 2013 are expected to become available in January or February 2014.

A baseline assessment was carried out in Kisumu in January 2013 just before the ICT interventions began, and a follow-up assessment in June 2013. The PRIMR initiative showed substantial impact on learning in Kisumu County. The three intervention groups were compared against a control group that in 2014 will receive whichever of these interventions is determined to be the most cost-effective. The results showed that all three ICT programs posted gains over both the baseline and the control group, and anecdotal evidence suggests that the endline data to be collected in October 2013 will show similarly positive findings. Figure 2 shows the gains in oral reading fluency in both English and Kiswahili in Kisumu County after a few months of treatment in 2013. All of the treatment gains were statistically significantly greater than those achieved in the control group, but were not significantly different from each other. This suggests that the success of the ICT program was more likely due to the quality and effectiveness of the PRIMR initiative base program than to the specific characteristics of the ICT hardware or software. The final evaluation of the ICT program will occur in late 2013 and early 2014.

Figure 2. Gains in English and Kiswahili oral reading fluency, by ICT treatment



The positive results of the program encouraged leveraged funding from the UK Department for International Development in Kenya (DFID/Kenya), which dramatically increased the number of schools benefiting from the PRIMR initiative. It also was the precursor for the selection of the PRIMR team to undertake the national tablet program. PRIMR's work was examined closely by the MoEST. Combined with many other sources, the MoEST examined the policy environment to investigate how best to scale-up literacy improvements at scale. Key policy documents in Kenya, including the Education Act, the Sessional Paper #14 of 2012, and the draft National Education Sector Support Programme (NESSP) all have explicit and focused references to improving literacy outcomes at the lower primary levels. Codifying this focus on early learning is a major accomplishment of USAID/Kenya and its partners.

Training activities under PRIMR were frequent. Each teacher and head teacher in PRIMR was trained for 10 days in the year, with additional cluster meetings taking place on a monthly basis. In addition, TAC Tutors and instructional coaches visited classrooms daily, providing the teachers with ongoing professional development and feedback in connection with their instructional performance. This combination of instructional support has created structures that maximize the ability of teachers to

implement the new program and are essential to the success of the Initiative in improving pupil achievement.

The challenges that the PRIMR team and the MoEST team faced in this year were substantial. A second teachers' strike in June and July 2013, which was longer than the one the project had endured in September 2012; the national general election in March 2013; and the political activities that preceded the election meant that teacher instructional time was less than was ideal. In the nonformal schools supported by PRIMR, the turnover rates were very high, with many teachers that the Initiative had trained leaving the school. In spite of these challenges, PRIMR saw high levels of take-up by teachers and head teachers, an increased demand for PRIMR, increased enrollment in PRIMR schools, and an ongoing enthusiasm for the program from the county education offices and Teachers Service Commission (TSC) offices. The PRIMR implementation team is thankful for the support of USAID/Kenya, the MoEST, and the Semi-Autonomous Government Agencies (SAGAs), as well as the county communities that have embraced such a radically new approach.

I. KEY ACHIEVEMENTS (Qualitative Impact)

The Primary Math and Reading (PRIMR) Initiative—a task order under USAID’s Education Data for Decision Making (EdData II) project—is uniquely focused on outcomes. The specific results are ambitious and are achievable only by combining PRIMR’s efforts with those of the Ministry of Education, Science, and Technology (MoEST), teachers, and students. PRIMR plans to achieve the following outcomes:

- Grade-appropriate reading fluency and comprehension increased for children in Classes 1 and 2;
- Grade-appropriate mathematical abilities increased for children in Classes 1 and 2;
- MoEST equipped and prepared to scale up successful early grade reading and early grade mathematics instructional features/approaches.

The initiative started on August 15, 2011; this annual report focuses on activities from 1st October 2012 through 30th September 2013. The first cohort of schools joined PRIMR in January 2012. This cohort comprises 60 non-formal schools and 66 public schools. The second cohort of schools joined the program in January 2013 and comprises 120 non-formal schools and 125 public schools. Of these, 65 public schools are in Nairobi, Kiambu, and Nakuru, while 60 public schools located in Kisumu County started receiving the ICT intervention activities in January 2013.

In addition, Kisumu County started receiving information and communication technology (ICT) intervention activities in January 2013. These interventions are described below under “TAC Tutors’ ICT Training.”

During this fiscal year,² the PRIMR Initiative focused on improving implementation and support of teachers in all PRIMR schools. Major accomplishments for the year included three training sessions each for all TAC Tutors and coaches, support for TAC Tutors and coaches to train their teachers, implementation of the ICT intervention study in Kisumu, and reporting of significant impacts on student outcomes based on data collected throughout the year. The following subsections detail the activities and accomplishments for the year. **Annex A** contains several success stories focusing on individuals.

Induction of New Coaches

PRIMR’s support to nonformal education institutions in Cohort 2 included an additional 120 schools in 10 clusters that were not supported in 2012. Preparations for implementation activities in these schools started with the hiring of eight coaches by CfBT Education Trust on 1st November 2012. On 2nd November, the new coaches were paired with the Cohort 1 coaches and they visited schools in various clusters. The aim of these visits was to expose the new coaches to the type of work they would be involved in, with particular emphasis on how the PRIMR team supports the coaches so that they, in turn, can support the teachers and improve their instructional skills.

On 9th November, the new coaches were introduced to PRIMR staff for a briefing on the Initiative and what was expected of them. The discussion was enriched through a question-and-answer session. The new coaches were taken through the school validation form and requested to obtain vital statistics from schools in their clusters, such as number of Class 1 and 2 teachers, location of schools, proper name of schools, number of pupils in pre-unit, number of pupils in Classes 1 and 2,

² For reference, note that USAID’s fiscal year runs from October to September, whereas Kenya’s school year is January–December.

number of teachers, and other critical information. The coaches were given two weeks to compile the information for the data clerk to key it in.

Coaches/Teachers' Advisory Centre (TAC) Tutors Monthly Meeting

On 23rd November, the coaches and TAC Tutors held their monthly meeting at the RTI boardroom. This was a reflection meeting for the existing tutors and coaches and a learning experience for the new coaches. The gist of the meeting was to try to answer two questions: (1) Which activities went as planned? (2) Which activities posed challenges, and how did the coaches and TAC Tutors mitigate those challenges? Coaches and TAC Tutors were given an opportunity to share their experiences during the 2012 year, but perhaps more important was their insights into what they needed to do to prepare for the first term of the school year beginning in January 2013, based on their previous experiences and challenges. The importance of filling in lesson observation forms and originating important data at the school level was communicated strongly to the coaches and TAC Tutors. Supporting the teachers to deliver instruction accurately and efficiently to improve pupils' outcomes in both reading and math was communicated to be the coaches' and TAC Tutors' key obligation.

PRIMR Materials Review Workshop

PRIMR spent a considerable time during the final quarter of 2012 developing, reviewing, and revising various learning materials for use by teachers and pupils. These materials included:

- Teachers' Kiswahili Lesson Plan Book 1
- Teachers' Kiswahili Lesson Plan Book 2
- Kiswahili Pupils' Book 1
- Kiswahili Pupils' Book 2
- Teachers' English Lesson Plan Book 1
- Teachers' English Lesson Plan Book 2
- English Pupils' Book 1
- English Pupils' Book 2
- Teachers' Math Lesson Plan Book 1
- Teachers' Math Lesson Plan Book 2
- Pupils' Math Activity Book 1
- Pupils' Math Activity Book 2

The PRIMR technical team focused on improving the Class 1 materials (based on feedback from 2012) and writing the Class 2 materials. The group consisted of PRIMR staff, international consultants in languages and math, TAC Tutors, coaches, and teachers from both the formal and nonformal sectors. This technical team worked continuously throughout October–December 2012.

A key workshop was organized in Nakuru between 9th and 12th December to review and critique the materials, with the aim of improving their quality, relevance, and appropriateness in line with Kenya Institute of Education (KIE) guidelines. The other objective of the workshop was to discuss the philosophical underpinnings of material development and review, and to share and appreciate the impact of the PRIMR intervention in the year 2012. The workshop brought together relevant stakeholders, including the Program Development and Implementation Team (PDIT) members; a staff member from the Centre for Mathematics, Science and Technology Education in Africa (CEMESTEA); PRIMR staff; and USAID representatives. In all, 32 (15 male and 17 female) participants were in attendance. The MoEST was represented by Madam Margaret Murage, who

gave the keynote address. In her remarks, she underscored the importance of the PRIMR Initiative as one of the MoEST processes for addressing gaps in the quality of education in Kenya, since PRIMR focuses on improving student outcomes in reading and mathematics in the early grades. The Ministry has now owned the materials and looks forward to scaling up the program once the implications are fully discussed and agreed upon.

Dr. Teresiah Gathenya and Dr. Christine Pagen from USAID also attended the two-day workshop. Dr. Gathenya acknowledged the teams for their dedication, noting that equipping a child with reading and math skills opens the whole world to that child. She urged the participants to keep up their dedication, in order to reach greater heights, including the 2015 answers to the millennium development goals and Education for All goals that require addressing education quality. She explained that the USAID Education Strategy focuses on early grade reading, with Goal 1 targeting 100 million children across the world being able to read with better fluency. Dr. Pagen echoed Dr. Gathenya's observations and promised to support the team to achieve more in the next year. Dr. Benjamin Piper, the PRIMR Chief of Party, expressed his appreciation to the team for the work well done. He noted that this was largely because the group cared about the issues of early grade reading and early grade math.

The technical team put in a great deal of effort during the workshop. In addition to editing the material, the group suggested changes to the content to better suit the age group with which PRIMR is working. In Kiswahili and English, the group suggested simplifying the language and made corresponding changes to some of the stories. A detailed report was compiled and shared with the members. After the workshop, a small team of the technical staff continued making corrections and improving the materials as suggested during the workshop. Most of this work was done between 13th and 31st December at RTI's offices.

On 5th December 2012, a smaller group of the technical team held a meeting to discuss the revisions done following the Nakuru workshop. This was necessary to further harmonize the changes that had been suggested and to ensure that all issues were taken care of. Layout of the material started in November and continued smoothly with a view to printing the copies for the schools to have in January, as the school year and teacher training began.

Sensitization Meetings for Cohort 2 Public Schools

A one-day sensitization meeting for Cohort 2 schools was held at KIE on 21st November with public school head teachers, District Quality Assurance and Standards Officers (DQASOs), and TAC Tutors. The newly selected Cohort 2 TAC Tutors and coaches also were invited as part of their training. The meeting was well attended, especially by head teachers, who seemed enthusiastic to start the program in 2013. During the meeting, the head teachers and the officers were taken through the design of the project. They were also given a brief report on the reading fluencies of different zones from the baseline study.

The Cohort 2 head teachers shared their experiences and the challenges that they had been facing teaching pupils how to read and do math. They were concerned about the delivery of learning materials in their schools in time for the 2013 school year. However, they were assured that the materials were undergoing review and would be delivered as soon as the revision exercise was complete and the materials printed.

Sensitization Meetings for ICT Kisumu Public Schools

At the beginning of the fiscal year, the PRIMR staff at the Kisumu office visited several schools that would receive the ICT intervention beginning in January 2013. They also visited the Teachers Service Commission (TSC) office, the Kisumu County Directors office, and the Education Officers of the

four districts (Nyando, Nyakach, Kisumu Municipality, and Kisumu West). A sensitization workshop was held with head teachers from participating schools on 29th November 2012. The workshop was also well attended by local representatives such as the Kisumu County Education Director, TSC Director, DQASOs, and TAC Tutors from the participating zones.

Education Development Partners Meeting

On 5th December, PRIMR preliminary midterm results from the October 2012 assessment were presented to the education development partner meeting, held at the World Bank. The meeting was attended by a variety of education stakeholders and included a compelling presentation by the Innovations in Poverty Action group, summarizing the findings of dozens of randomized control trials in Kenya. The participants were very impressed by the impact of PRIMR, as discussed from the preliminary results analysis.

TAC Tutors' and Coaches' Trainings

PRIMR conducted three total trainings for TAC Tutors and coaches this year. Trainings took place in Nairobi and Kisumu. They were facilitated by PRIMR local and home office staff. The trainings were conducted in January, April, and August of 2013.

January 2013: TAC Tutors from Kiambu, Nairobi, and Nakuru counties, as well as coaches from Nairobi, were trained at the RTI Nairobi office from 7th to 16th January 2013. A total of 10 TAC Tutors (five from Cohort 1 and five from Cohort 2) were trained on how to support Class 1 and 2 teachers in teaching reading and math. During the same training, 15 coaches were trained (five from Cohort 1 and 10 from Cohort 2). The total number of TAC Tutors and coaches trained was therefore 25. The training was facilitated by the PRIMR technical team and external consultants. Updated training materials—including the training manuals and teachers' guides—were used. At the end of the training, the TAC Tutors and the coaches were expected to be fully equipped to deliver the same standard of training on reading and math instruction to the Class 1 and 2 teachers in their respective clusters and zones. In addition, they were also expected to have developed their capacity to support teachers in pedagogy as related to the PRIMR intervention.

The initial trainings for Kisumu's new TAC Tutors took place in Kisumu from 7th to 11th January. The training took five days and was held at the RTI International offices in Kisumu. Six TAC Tutors—one each from Ragumo, Barkorwa, Otonglo, Kodingo, Bolo, and Nyabondo—attended the training. The training focused on implementing the PRIMR lesson plans regardless of which ICT intervention would be under way. The aim of the training was to build the capacity of TAC Tutors to support teachers in delivering effective reading instruction. The TAC Tutors' evaluation of the training indicated that they appreciated the PRIMR approach to teaching reading in Class 2.

April 2013: PRIMR conducted refresher trainings for all TAC Tutors and coaches in Nairobi, Nakuru, and Kiambu on 29th April and 2nd May 2013. This training brought together TAC Tutors and coaches implementing the USAID PRIMR Initiative in Nairobi, Kiambu, and Nakuru. This workshop was in preparation for the four-day teacher training workshops to be held immediately afterward in all zones and clusters. The training aimed at equipping the TAC Tutors and coaches to improve the teachers' knowledge of the PRIMR implementation approach, enhance their classroom instruction skills, and provide initial training to new teachers who had replaced those who had left PRIMR-supported schools. The training reviewed each of the five components of reading as well as basic math principles and specific activities with which the teachers were struggling. It also reviewed the administration of the Early Grade Reading Assessment (EGRA) instrument to be used in the classroom to monitor progress of students. TAC Tutors and coaches also spent time reflecting on how the implementation was going, what was working, and what was challenging; and brainstorming practical solutions that would help better support teachers.

As in January, 10 TAC Tutors and 15 coaches were trained, with the same type of PRIMR facilitation, materials, and ultimate expectations of the trainees.



During their training, TAC Tutors and coaches worked together on key skills required under the PRIMR Initiative.

August 2013: At the beginning of Term 3 of the school year, in September 2013, PRIMR presented a four-day training for all TAC Tutors and coaches in the PRIMR Initiative in preparation for training the teachers for three days. The training was well attended, with every tutor and coach in the PRIMR program in attendance. The Kisumu participants received their training at PRIMR's Kisumu office, while the Nairobi, Nakuru, and Kiambu teams trained in the PRIMR Nairobi offices. The trainings focused on the areas that were most essential to improving outcomes at scale, with significant time spent on reading comprehension strategies.

TAC Tutors' ICT Training

According to the PRIMR program design, the ICT intervention is evaluating how three different kinds of technologies will impact instruction and pupil learning. During 2013, all the project schools in Kisumu received the PRIMR training, materials, and ongoing support. In one set of schools, TAC Tutors also received a hand-held tablet through which they would have access to additional teacher support content that they could use when interacting with teachers. In the second strand of the ICT intervention in Kisumu, teachers were provided with hand-held tablets through which they could directly access supportive lesson materials themselves. In the third strand of the ICT intervention, pupils used e-readers loaded with supplementary reading materials they could access and use in and outside of school. The design included a control group of 20 schools that did not receive any intervention during 2013 but for ethical reasons will participate in the ICT activities in 2014, after the endline assessment. The results obtained in the schools using these three ICT interventions will

be compared and the associated costs taken into account to determine how cost-effectively these different approaches enhance reading.

The ICT intervention study required separate training focused on the use of the technology within the PRIMR Initiative. Throughout the year, trainings in Kisumu followed the same schedule as the trainings in Nairobi. The trainings also had similar content except that they included special content dealing with ICT and its use in the different treatment groups.

January 2013: Training was conducted in Kisumu from 22nd to 25th January 2013 following the initial training explained above. This training focused on the ICT component of the PRIMR Initiative.



Lead trainer Carmen Strigel conducting a session during a four-day ICT training at PRIMR's office in Kisumu. In attendance were the TAC Tutors, DQASOs, and municipal and district ICT Officers. Other trainers present during the training were Sarah Koko, Joan Mwachi Amollo (Worldreader), and Mildren Lang'o.

PRIMR invited TAC Tutors, DQASOs, and ICT Officers in Kisumu to a three-day meeting focusing on teaching the PRIMR lesson plans using the Nexus tablets and E-readers issued according to the respective zones' intervention. The schools receiving various materials were grouped as follows: Otonglo and Kodingo, e-readers; Barkorwa and Nyabondo, teacher tablet; Ragumo and Bolo, tutor tablet.

The six TAC Tutors who attended the second training in Kisumu were from Barkowa, Otonglo, Ragumo, Bolo, Kodingo, and Nyabondo zones. In addition, four DQASOs—from Kisumu West District, Kisumu Municipality, Nyando District, and Nyakach District—attended the training. The four ICT Officers were from Kisumu West District, Kisumu Municipality, Nyando District, and Nyakach District.

April 2013: Refresher training for those TAC Tutors involved in the ICT study in Kisumu took place from 29th April to 2nd May 2013. The four-day refresher training was held at RTI's offices in Kisumu. Six TAC Tutors—one each from Ragumo, Barkorwa, Otonglo, Kodingo, Bolo, and Nyabondo—attended the training. Similar to the Nairobi refresher training, the ICT refresher training focused on improving the knowledge and understanding of the five components of reading, with specific review and practice of activities in which teachers were struggling as well as reflection on challenges and solutions that tutors found very helpful.

The three ICT treatment groups had specific refresher training on the use of ICT in their particular treatment group. The “ICT for TAC Tutors” group reviewed and practiced using electronic tablets loaded with lesson plans and the Tangerine® software to assess students.³ The “ICT for teachers” group reviewed how to support teachers’ use of the multimedia lesson plans, the Papaya™ software application that can produce letter sounds and pronounce words, and the Tangerine:Class™ application that supports teachers assessing and making instructional decisions based on students’ reading skills improvement. The third group, which will be using e-readers to provide supplemental reading material for students, also reviewed how to use and track the students’ use of the supplemental reading materials.

August 2013: In August, the six TAC Tutors trained with the PRIMR technical team for four days in preparation for the teacher training that was to follow. By the third-term training, the central emphasis of the time spent was on how to implement the instructional program more effectively, rather than on how to use the ICT.

Teacher Training (Nairobi, Nakuru, and Kiambu)

Immediately following each TAC Tutor and coach training in 2013, teachers were given the same training facilitated by their TAC Tutor or coach and supported by PRIMR staff. These trainings took place in January, May, and September 2013. The trainings took place in the communities of each cluster of schools.

January 2013: In Nairobi, Nakuru, and Kiambu, teacher trainings were rolled out and conducted by the respective TAC Tutors and coaches. The five-day teacher trainings focused on reading and math instruction and were implemented in two phases. The first phase, which took place from 21st to 25th January 2013, was conducted among teachers from Cohort 2 schools. The training was attended by 136 male teachers and 530 female teachers for a total of 666 teachers. This figure included 161 head teachers. The PRIMR technical team monitored and supported the TAC Tutors and coaches during these trainings. The involvement of PRIMR staff provided quality control, especially because the TAC Tutors and the coaches were conducting such trainings for the first time.

The second phase of the teacher trainings focused on teachers in Cohort 1 schools. These trainings were conducted from 28th January to 1st February in the respective zones and clusters. It was necessary to retrain Cohort 1 teachers because the learning materials, including lesson plans and pupils’ books, had been revised according to comments received from teachers, MoEST, TAC Tutors, coaches and others. A total of 470 teachers and some head teachers were retrained, comprising 132 males and 338 females. Teachers from nonformal schools in Cohort 1 came from the following clusters: Gatwekera, Matopeni, Gicahgi, Kariobangi North, and Congo. Teachers from public schools in Cohort 1 came from the following zones: Nairobi West, Dandora, Eastern Nakuru, Mauche, and Ithanga.

The key facilitators of these trainings were the Cohort 1 TAC Tutors and coaches, with the support of the PRIMR technical team. The teachers were taken through the revised lesson plans and pupils’ books. Further, they were taken through the philosophy of teaching reading and engaged in lesson practice activities centered on specific lesson components and sometimes whole lessons. This ensured the teachers gained confidence using the materials provided and were able to internalize the different routines within the PRIMR lessons for proper implementation of the reading and math

³ Tangerine® is open-source data collection software developed by RTI and customized for the EGRA and EGMA; Tangerine:Class™ is a related program intended for teachers’ use for continuous assessment in the classroom. Both are available from www.tangerinecentral.org.

intervention. A total of 1,196 teachers and head teachers were trained in Nairobi, Kiambu, and Nakuru.

May 2013: In Nairobi, Nakuru, and Kiambu, refresher teacher trainings were rolled out and conducted by the respective TAC Tutors and coaches. The three-day teacher refresher trainings replicated the refresher training received by TAC Tutors and coaches the previous week. The facilitators of these trainings were the TAC Tutors and coaches, with the support of the PRIMR technical team.

The refresher training took place from 8th to 10th May 2013, and was conducted among teachers from Cohort 1 and 2 schools. The training was attended by 252 male teachers and 832 female teachers for a total of 1,084 teachers.

The PRIMR technical team monitored and supported the TAC Tutors and coaches during these trainings. The involvement of PRIMR staff provided quality control.

September 2013: Teacher training was well attended in September 2013. From nonformal schools, 481 teachers participated. From the formal schools in the three counties, XXX teachers and head teachers attended. The training emphasized practicing instruction in reading comprehension and other key areas of emphasis, based on the findings from a limited mini-EGRA administration in June–July (see Section IV) and feedback from teachers and others in the field.

Teacher Training (Kisumu)

Kisumu teachers received the training given to their TAC Tutors three times throughout the year. These trainings were facilitated by the TAC Tutors with support from PRIMR staff.

February 2013: A total of 64 Class 2 teachers in Kisumu and head teachers of intervention schools in Kisumu County were trained by the TAC Tutors on PRIMR lesson plans. The purpose of the training was to ensure teachers used structured lessons and aligned pupils' learning materials with the instruction. The teachers who were trained came from the following zones in Kisumu: Barkorwa, Otonglo, Ragumo, Bolo, Kodingo, and Nyabondo.



A teacher training session that took place in Otongolo Zone, Kisumu county.

May 2013: From 7th to 9th May 2013, the Kisumu teachers also received the refresher training from TAC Tutors for three days. The TAC Tutors led the same training for the teachers in Kisumu as the non-ICT teachers had received. The refresher training focused on the five reading components, reflection of successes and challenges, and use of ICT in their particular treatment group. The teachers who were trained came from the following zones in Kisumu: Barkorwa, Otonglo, Ragumo, Bolo, Kodingo, and Nyabondo. In all, 134 teachers (67 male and 67 female) were trained.

September 2013: From 9th to 13th September, PRIMR TAC Tutors and instructional coaches trained the Kisumu teachers for three days on how to improve the quality of their lesson delivery in reading comprehension and other key areas. The training was well attended and focused, as the teachers were then focusing on instructional delivery before the PRIMR endline assessment in October.

TAC Tutors' and Coaches Visits to Schools (Nairobi, Nakuru, and Kiambu)

The key role of TAC Tutors and coaches in the PRIMR Initiative is to support teachers at the school level. Each TAC Tutor or coach should observe each teacher twice a month. The TAC Tutors' and coaches' support to teachers is a key strategy of the PRIMR Initiative, and efforts were made to keep supporting teachers in the intervention schools. This was sometimes difficult because of distances between schools, and the number of Class 1 and 2 teachers that each TAC Tutor is responsible for. During lesson observation, the TAC Tutor or coach interacts with the teacher on the quality of the lesson and gives appropriate feedback on various aspects of the lesson, including the use of lesson plans and pupils books. This year, TAC Tutors and coaches continued to provide essential in-class support and feedback. The school visits by TAC Tutors and coaches in Nairobi, Nakuru, and Kiambu in both public and nonformal schools are shown in **Tables 1 and 2**.

Table 1. Summary of TAC Tutors' support to teachers in Nairobi, Nakuru, and Kiambu Counties

Zone	Cohort	Classroom Observations				
		Jan-Mar	May-Jun	July	Sep.	Oct.
Nairobi West	1	67	58	23	9	TBD
Dandora	1	6	0	0	0	0
Riruta	2	58	24	20	28	30
Juja Road	2	7	38	5	10	8
Ithanga	1	38	22	0	19	24
Madaraka	2	27	22	11	14	24
Eastern Nakuru	1	49	41	4	25	19
Mauche	1	27	23	0	0	9
Central Nakuru	2	45	45	6	23	15
Kambi ya Moto	2	41	28	31	22	27

Table 2. Summary of coaches' classroom observational support to teachers in nonformal schools in Nairobi County

Cluster	Cluster Type ^a	Cohort	Classroom Observations				
			Jan-Mar	May-Jun	July	Sept	Oct
Posta	15:1	2	98	71	52	32	53
Babagogo	10:1	2	86	93	51	46	53

Cluster	Cluster Type ^a	Cohort	Classroom Observations				
			Jan-Mar	May-Jun	July	Sept	Oct
Zimmerman	10:1	2	79	80	42	37	48
Riruta	10:1	2	58	54	5	33	37
Kianda	10:1	2	94	31	26	40	31
Soweto	10:1	2	87	73	52	37	53
Korogocho	10:1	2	63	35	40	30	24
Kayole	15:1	2	96	123	58	52	72
Makina	15:1	2	100	40	52	33	39
Chokaa	15:1	2	102	110	60	62	32
Gichagi	10:1	1	68	60	17	36	35
Kariobangi	15:1	1	103	102	60	47	61
Congo	15:1	1	169	39	0	48	44
Gatwekera	10:1	1	64	23	21	24	18
Matopeni	10:1	1	82	90	53	43	45

^aNumber of schools per coach.

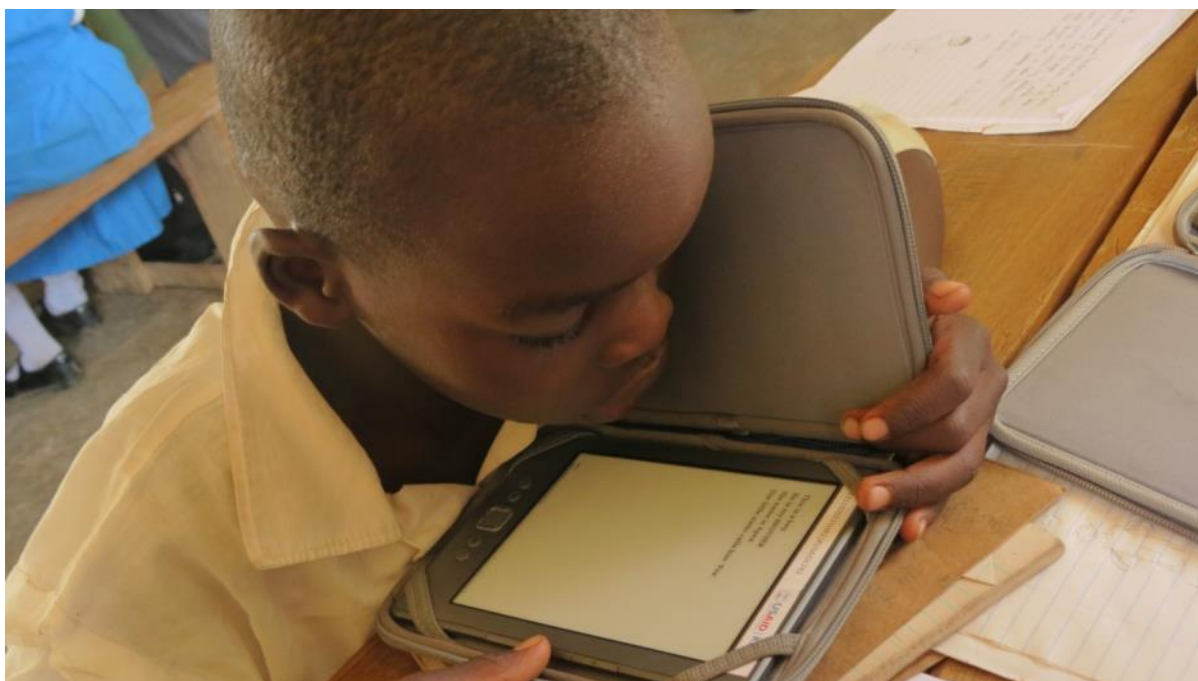
The first term was shortened because of the national elections. Pupils were given a whole week off in early March, from the 4th to the 8th, because the schools were used as voting centers. PRIMR also had scheduled teacher trainings during the month of January that limited the time available for TAC Tutors and coaches to visit schools. Thus, the numbers shown for the TAC Tutors and coaches for “Jan-Mar” in the tables actually reflect only the month of February 2013.

Even with the election effects, note the striking differences between the Jan-Mar and the Apr-Jun figures in the numbers of observations made by TAC Tutors and coaches. This was due to the teachers’ strike in Kenya that began in June. Teaching in public schools was suspended during this time; thus, TAC Tutors were not able to visit teachers in those classrooms. However, nonformal schools continued to teach and were visited.

Nevertheless, the TAC Tutors’ and coaches’ support to teachers is a key strategy of the PRIMR Initiative, and efforts were made to keep supporting teachers in the intervention schools despite the shortened period of time that schools were operational in 2013. Further, with many newly trained TAC Tutors and coaches in Cohort 2 joining the program at the beginning of the school year, it might be advisable to read the data with less inference, given that the additional TACs Tutors and coaches were learning the system.

TAC Tutors’ Visits to Schools (Kisumu)

In Kisumu, TAC Tutors play the same key role as in all PRIMR-supported schools. The one difference in Kisumu is that one group of TAC Tutors uses tablets as part of the tutors’ participation in the ICT study.



A pupil from an e-reader-supported PRIMR school in Kisumu County reads a grade-appropriate electronic book.

Monitoring of the ICT PRIMR intervention in Kisumu County started at the end of January. The TAC Tutors returned completed observation sheets to the monitoring and evaluation (M&E) team. TAC Tutors in Kisumu experienced similar breaks in their classroom observations as explained above due to elections and the teachers’ strike. The number of visits made by each TAC Tutor to schools is shown in **Table 3**.

Table 3. Summary of TAC Tutors’ support to schools in Kisumu County

Zone	Number of classroom observations 2013				
	Jan-Mar	May-Jun	July	Sep.	Oct.
Nyabondo	35	21	11	23	20
Bolo	51	17	20	20	20
Barkorwa	24	10	16	17	22
Ragumo	40	22	22	27	22
Kodingo	24	8	16	17	10
Otonglo	36	18	22	24	24

PRIMR Examinations

The PRIMR technical team identified the “examination culture” as influencing parallel teaching in intervention schools. That is, many teachers and head teachers have been convinced that following solely the PRIMR curriculum would negatively affect students’ performance on the Kenya National Examinations Council (KNEC) end-of-term examinations. This being the case, the TAC Tutors were engaged to develop ways of mitigating this misunderstanding, which would affect the implementation of the PRIMR intervention if not continuously addressed. The agreement was to have the PRIMR technical teams guide the zones on how to assess mastery of reading skills and key math ideas as outlined in the PRIMR lesson plans. The technical teams then set the examinations for distribution to the respective zones. All zones set their own examinations using the existing panels, based on the draft PRIMR exam set by the PRIMR team.

A benefit of the monthly zonal/cluster meetings between TAC Tutors/coaches and their supported schools has been the opportunity to discuss the creation of local end-of-term examinations, as well as the best method of aligning these examinations to the PRIMR content being taught in class.

Exams were developed and distributed to teachers in July 2013. The results of this activity were that teachers were allowed to give examinations on content that matched the instructional methods used in PRIMR.

Reading Contests

Each TAC Tutor and coach is tasked with organizing a reading contest termly. This involves each school picking the best two pupils (a girl and a boy) who then compete at the zonal/cluster level with pupils chosen from other schools in the zone or cluster.

During February, March and April, coaches organized reading contests in their clusters for the nonformal schools in Nairobi. These reading contests involved approximately 720 pupils (360 boys and 360 girls) drawn from the 15 clusters in Nairobi County.

Cohort I public schools also organized reading contests. Zones that held reading contests included Eastern Nakuru, Dandora, Madaraka, Riruta, and Nairobi West. Among the zones that did not hold contests, the most frequently cited reasons were a short, busy first term; the late receipt of materials; and the start of end-of-term assessments.

In May, the coaches organized reading contests in their clusters for the nonformal schools in Nairobi. These reading contests drew pupils from the 15 clusters in Nairobi County. Exactly as in the other areas, those zones that had not held their reading contests yet gave as reasons the short, busy term; the late receipt of materials; and the start of end-of-term assessments.

Project Visits

In May and June 2013, the project received distinguished guests from USAID, the Ministry of Education, and the RTI home office (see list below). The main objective was to monitor progress of project implementation. The guests visited Korwenje, Kirembe, and Ogango Primary Schools in Kisumu, in May; and Ithanga Primary in Thika East district in June. The guests were:

From USAID/Washington, DC, and USAID/Kenya:

- Christie Vilsack, Senior Advisor on International Education, USAID/Washington, DC
- Katie Donohoe, Deputy Director for Basic Education, USAID/Washington, DC
- Dr. Dwaine Lee, Director of Education and Youth Programs, USAID/Kenya
- Dr. Christine Pagen, Deputy Director, Education and Youth Programs, USAID/Kenya
- Dr. Teresiah Gathenya, Contracting Officer's Representative (COR), USAID/Kenya
- Rosemary Wanjala, Office of Education and Youth, USAID/Kenya

From MoEST headquarters in Nairobi:

- Prof. George Godia, Permanent Secretary, MoEST
- Margaret Okemo, Director, Basic Education
- Philip Yator, Deputy Director, Directorate of Basic Education
- John Temba, Head of ICT for Education (ICT4E)
- Martin Kungania, ICT4E Technical Officer
- Peter Were, ICT Technical Officer
- Eric Nderitu, ICT Technical Officer

From the Teachers' Service Commission and MoEST, Kisumu County:

- Beatrice Adu, MoEST County Director
- Beatrice Agala, TSC County Director
- Milka Arucho, County MoEST Quality Assurance and Standards Officer
- Paul Ajuoga, County Education Officer
- Jackson Ongeto, County TSC Officer
- Juma Omwendo, Municipal Education Officer, Kisumu
- Philip Ong'ele, TAC Tutor, Otonglo zone
- Dalmas Alego, TAC Tutor, Barkorwa zone
- Beatrice Otieno, District Education Officer, Kisumu West
- George Ouma, DQASO, Kisumu West
- Dan Osewe, Principal, Omuya Secondary School
- School management committee members
- Parents of students in Classes 1 and 2 from various schools within the zones

From the RTI PRIMR team:

- Dr. Benjamin Piper, Chief of Party, PRIMR
- Salome Ong'ele, Deputy Chief of Party, PRIMR
- Isaac Cherotich, Senior Education Specialist, PRIMR
- Mildren Lang'o, Education Officer, PRIMR
- Sarah Koko, Education Research Coordinator, PRIMR
- Dunston Kwayumba, M&E Officer, PRIMR

Distribution of Materials and Equipment

PRIMR delivered various materials to the intervention schools. These materials included the revised lesson plans, teachers' and pupils' books, various visual aids, and other items, as shown in **Table 4**. ICT equipment was also delivered to schools in Kisumu County. The training of pupils took place from the 7th of February, after the last batch of e-readers had been distributed to the target schools by Worldreader staff. Head teachers or their representatives, such as the deputy head teacher or a senior teacher, received the devices at the schools. Pupil training remained an ongoing process to ensure that pupils became proficient in manipulating the e-reader. The teachers also received support from TAC Tutors and the PRIMR technical team on how to manipulate the equipment.

From January through September, PRIMR delivered learning materials to the intervention schools that had enrollment increases.

Table 4. Materials distributed to schools

Materials and Equipment	TAC Tutors	Pupils	Teachers	Total
English learner book I		1,883	64	1947
Kiswahili learner book I		1,873	64	1937
Letter cards			64	64
Stopwatch			64	64
Batteries			64	64
Report card			60	60
English lesson plan			124	124
Kiswahili lesson plan			124	124

Pocket chart			64	64
Reading at home tracker	3,127			3,127
Student stimulus			124	124
Student tracker			64	64
Tips sheet			124	124
Assessment manual			124	124
Classroom library			64	64
Classroom baskets			64	64
Supplementary readers			64	64
Evaluation sheet			64	64
Notebook			124	124
Pen			124	124
Materials for Kisumu only:				
Nexus tablets	4		21	25
E-readers	2	950	22	974

Table 5 presents the overall numbers of items distributed to schools in Nairobi, Nakuru, and Kiambu counties. For the pupil books, note that the Cohort 2 schools used Class 1 books for both English and Kiswahili in Classes 1 and 2, while they used Class 1 and 2 books for mathematics in Classes 1 and 2. The rationale was that the reading content in PRIMR books was more sequential, and required pupils to go through the entire year of Class 1 materials before attempting those prepared for Class 2.

Table 5. Material distributed in Nairobi, Nakuru, and Kiambu Counties

Materials	Numbers
Class 1 English book	27,316
Class 2 English book	6,682
Class 1 Kiswahili book	27,316
Class 2 Kiswahili book	6,682
Class 1 math book	15,765
Class 2 math book	16,275
Class 1 math lesson plan	706
Class 2 math lesson plan	715
Class 1 Kiswahili lesson plan	1 170
Class 2 Kiswahili lesson plan	330
Class 1 English lesson plan	1 130
Class 2 English lesson plan	330
Pocket charts	869
Letter cards	869
Numeral cards	803
Pupil tracker	35,738
Class 1 math sheets	2,392
Class 2 math sheets	1,624
Student stimulus	1,238
Student tracker	1,869
Tips sheets	1,238
Assessment manual	1,238
Classroom library	463
Classroom basket	462
Supplementary reader	463
Evaluation sheets	867
Rulers	803
Scissors	803

Materials	Numbers
Manila sheets for instructional aids	803
Stopwatch	684
Batteries	684
Notebooks	1,238
Pens	1,236

II. PROGRAM PROGRESS (Quantitative Impact)

Quantitative impact of the PRIMR Initiative was measured during this fiscal year via the midterm combined EGRA, Early Grade Mathematics Assessment (EGMA), and SSME in October 2012. The resulting evaluation report⁴ focused on the Initiative's impact on pupil outcomes in Classes 1 and 2. Recall that PRIMR is supporting 492 schools in three cohorts from 2011 to 2014; the analysis of the midterm data compared the impact of PRIMR in the 126 Cohort 1 schools (60 nonformal [private slum] schools, and 66 public schools) against the Cohort 3 (control) schools. This section, taken largely from the Executive Summary of the midterm evaluation report, presents the causal effects of PRIMR between the baseline evaluation in January 2012 and the midterm evaluation in October 2012, which was the last data set available at the time of this October 2013 annual report.

From Piper & Mugenda (2013):

PRIMR is designed to be a cost-effective and simple intervention focused primarily on ensuring take-up by teachers of a new instructional approach. The key elements of the PRIMR intervention are the following:

- **Low-cost books provided for every pupil.** Unlike the existing instructional model in Kenya, where relatively generous textbook funds only achieve a 1:1 book-pupil ratio, PRIMR spends significantly less money on books to achieve a 1:1 book-pupil ratio, while increasing the length of the books by nearly 100%.
- **Targeted lesson plans.** Each teacher receives a set of lesson plans for English, Kiswahili, and mathematics. These lesson plans were designed, along with the MoEST, to be correlated directly with the pupil books and to help pupils progress from initial literacy skills to full reading fluency and comprehension within one year. During the 2012 academic year under evaluation here, Class 1 and 2 teachers used only the Class 1 materials. The lesson plans were buttressed by modest instructional aids, including pocket charts and flashcards.
- **Focused training on lesson delivery.** In a departure from the typical professional development program in Kenya, PRIMR's training provides teachers with quite a bit of practice on how to implement improved instruction. Brief introductions to new substantive topics are followed by modeling and then practice by teachers. In 2012, teachers and head teachers received 10 days of training, to ensure take-up.
- **Ongoing instructional support.** PRIMR invests time and resources into helping the Kenyan system improve the quality of instructional support that teachers receive. This means that Teacher Advisory Centre (TAC) tutors, each responsible for a set of 8 to 20 schools in the public sector; and instructional Coaches, responsible for 10 or 15 schools in the nonformal settlements, were heavily trained. They received nearly 20 days of direct training, and were given a key mandate to observe teachers' instruction, provide reflection sessions, and be the actual implementers of the training above. PRIMR provided transport reimbursements that were slightly less than the official budget for transport for TAC Tutors. PRIMR believes strongly that helping TAC Tutors to support instruction is the key element to a sustainable instructional improvement program in literacy, math, or any other subject. More work is necessary to retrain TAC Tutors in technical areas important for improving outcomes.

⁴ Piper, B., & Mugenda, A. (2013). *The Primary Math and Reading (PRIMR) Initiative: Midterm Impact evaluation*. Prepared for USAID under the Education Data for Decision Making (EdData II) project, Task Order No. AID-623-M-11-00001. Research Triangle Park, NC, USA: RTI International.
<https://www.eddataglobal.org/countries/index.cfm?fuseaction=pubDetail&ID=486>

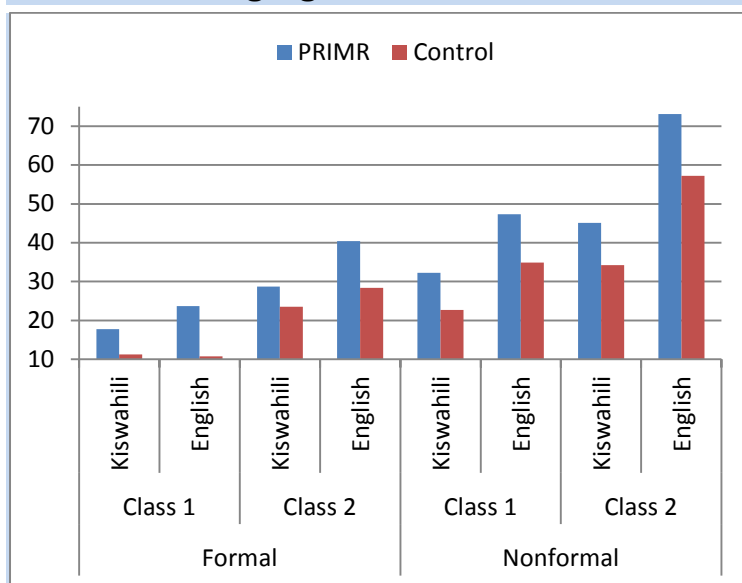
- **Low-cost inputs.** Given PRIMR’s mandate to help the MoEST plan for and implement a national literacy program, PRIMR decided to test the impact of a low-cost program. This means that the investments—from the TAC Tutors’ support, to the training of all key actors, instructional materials, 1:1 textbook ratios, and ongoing instructional support—cost less than US\$2 per subject per pupil. The costs would be even lower if the existing pupil book allotment were to be spent on PRIMR books instead of books in the market.

The largest challenge to the successful implementation of PRIMR was a teachers’ strike during Term 3. This strike lasted three weeks and meant that the public schools had no implementation of PRIMR before the midterm data collection took place. Nonformal schools involved in the initiative proceeded normally. There is some evidence from PRIMR’s own internal assessments that outcomes in public schools declined slightly between the July and October 2012 data collection, and that the most likely cause was the month-long term break followed immediately by the strike.

With those caveats, the PRIMR midterm evaluation shows that PRIMR increased pupil outcomes in literacy to a meaningful level. **Exhibit 1** shows the average oral reading fluency rates of pupils in PRIMR and control schools for English and Kiswahili, in public and nonformal schools, in both Class 1 and Class 2. The exhibit shows that in every combination, midterm scores were significantly higher

in PRIMR schools than non-PRIMR schools. In fact, for nonformal schools in Class 2, the mean fluency rates of 45.1 wpm for Kiswahili and 73.1 for English mean that the average rates of fluency in PRIMR nonformal schools were above the MoEST’s benchmark for Class 2.

Exhibit 1. Average fluency rates at midterm for PRIMR and control schools, by public/nonformal, class, and language



Given the modest differences in outcomes between treatment groups at the baseline (January 2012), the PRIMR identification strategy is not simply to depend on the randomized assignment of clusters of schools to treatment groups, but also to utilize a differences-in-differences model. This model accounts for any differences in outcomes at the baseline prior to the PRIMR

intervention. The differences-in-differences estimator is fit using Ordinary Least Squares regression models with and without background variables for continuous outcome variables (such as oral reading fluency and reading comprehension), and logistic regression models with and without background variables for dichotomous outcome variables (such as whether the pupil reached the MoEST’s benchmarks for literacy).

This report is primarily interested in whether PRIMR increased pupil achievement. It did. In Class 1, for both public and nonformal schools, PRIMR had a statistically significant impact on all reading-related subtasks (letter sounds, nonword decoding, connected text fluency, reading comprehension) for both Kiswahili and English. In Class 2, PRIMR effects were significant for all literacy measures in nonformal schools, and about half of the measures for public schools. This is expressed numerically in **Exhibit 2**.

Exhibit 2. PRIMR effects on performance on EGRA subtasks, by class and school type

EGRA subtask	Language	Metric	Class 1		Class 2	
			Formal	Nonformal	Formal	Nonformal
Letter-sound fluency	English	clpm	11.89***	30.38***	13.33***	32.88***
	Kiswahili	clpm	15.78***	23.41***	14.89***	29.83***
Nonword decoding fluency	English	cwpm	4.40**	10.76***	-0.79	8.19**
	Kiswahili	cwpm	3.01*	6.11***	-0.86	6.98**
Connected-text fluency	English	cwpm	8.74**	14.05***	2.62	16.21***
	Kiswahili	cwpm	3.31*	10.97***	0.77	12.88***
Reading comprehension	English	%	3.07~	3.15~	-4.87	9.06*
	Kiswahili	%	5.81*	12.00***	1.56	9.64*
Listening comprehension	Kiswahili	%	12.97**	-4.93	7.90~	-3.22
Proportion of fluent readers	English	%	4.78~	10.16***	12.09*	21.07**
	Kiswahili	%	7.21**	15.49***	8.25*	17.34**

clpm = correct letters per minute
 cwpm = correct words per minute
 ~p < .10, *p < .05, **p < .01, ***p < .001

For math, the impacts were much more modest, as was expected with the very time-limited program implementation that took place during 2012. Statistically significant impacts were found in Class 1 on the EGMA subtasks for addition fluency, number identification, and word problems. For Class 2, significant impacts were found in number identification, missing numbers, and word problems. A statistically significant negative impact was found for subtraction level 2. These findings are explained in more detail in the body of the report.

PRIMR's explicit focus is on improving the likelihood that pupils will be able to read at the MoEST's benchmarks, which were set in July 2012 for both Kiswahili and English. **Exhibit 3** shows that PRIMR was able to do that, quite remarkably. For Class 1 and 2, and in both English and Kiswahili, pupils in PRIMR schools were between 1.9 and 27.9 times more likely to read at the MoEST's fluent-reader benchmark than those in control schools. All of these analyses were statistically significant, and they suggest that PRIMR has made it at least two times more likely that pupils can read at the benchmark across the two years, two languages, and two school settings.

Exhibit 3. Logistic regression models estimating the odds ratio of reading fluently at midterm in PRIMR schools, by Class and nonformal vs. public

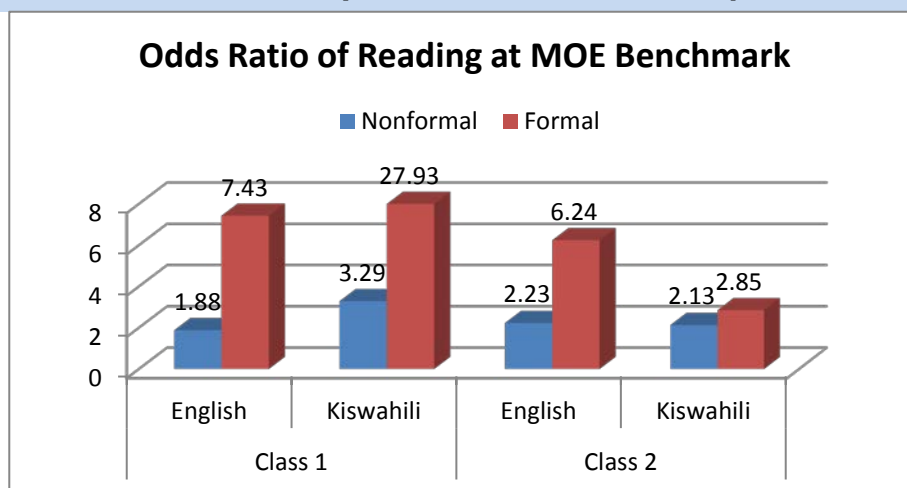


Exhibit 4. Growth trajectory for performance of pupils in PRIMR and non-PRIMR classrooms

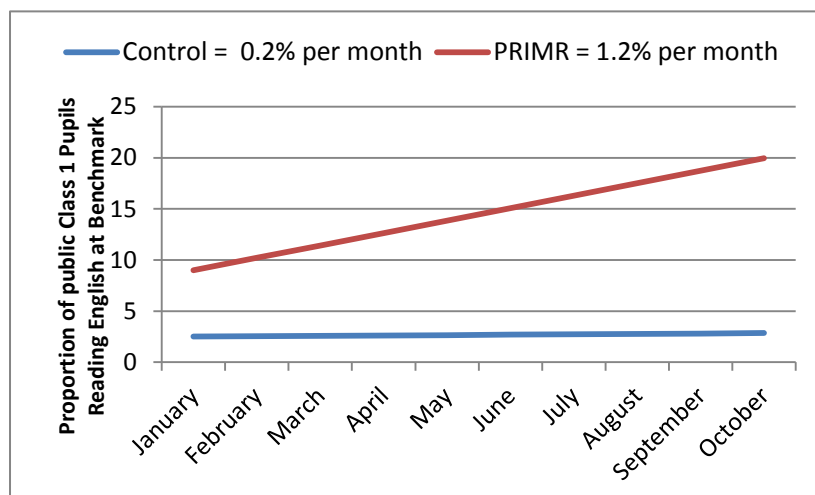


Exhibit 4 presents the impact of PRIMR in a different way. Given the focus on rapidly increasing the percentage of pupils who can read in both languages, the exhibit presents the growth trajectory for pupils in PRIMR and non-PRIMR classrooms. It shows that PRIMR has been able to rapidly increase the percentage of pupils who can read. This is necessary given the very slow growth trajectory of the control

schools. At an increase of 0.2% per month, it will take several years for most of the pupils in Kenya's public and nonformal schools to learn to read. These results show that PRIMR is able to quickly increase the proportion of pupils able to read with fluency and comprehension.

Lessons Learned from the Midterm Evaluation

These PRIMR results suggest several recommendations for Kenya and the Initiative.

- **Revise the Kenyan books policy.** Kenya made a decision in 2002 to cede technical development of textbooks to publishers, with KICD serving as the vetter. The vetting guidelines focus much more on layout and topical issues than on what research says about how pupils learn how to do literacy skills. The vetting guidelines should therefore be updated based on the key literacy skills for young learners. Even more importantly, while Kenya has a relatively generous per-pupil allotment for book purchases, the cost of books on the market is very high. Adapting PRIMR-type texts even with higher-quality print production, and in color, could guarantee a 1:1 book-pupil ratio; and no additional money would have to be spent from the Treasury.
- **Revise the syllabus to include the key elements of literacy.** The KICD syllabus includes the four components of literacy, namely listening, speaking, reading and writing. Research shows that the entry point to improving outcomes across the literacy area is focusing on reading and writing, and having listening and speaking be part of the balanced literacy approach. The syllabus should therefore be revised to include more emphasis on reading and the technical components necessary to achieve outcomes.
- **Focus on low-cost interventions.** The PRIMR Initiative midterm impact evaluation suggests that some relatively low-cost interventions can drive improvements in learning outcomes. This includes a budget-neutral move to a one-to-one ratio between pupils and textbooks, and a budget for transport and classroom materials that falls within the government's guidelines.
- **Expand PRIMR to rural areas.** While the USAID-funded portion of PRIMR is being undertaken in peri-urban schools, an expansion of PRIMR is necessary to determine the effect of PRIMR in rural areas. The DFID-funded rural expansion of PRIMR in an additional 800 schools should be able to help disentangle these issues.
- **Focus on TAC Tutors and their support.** The PRIMR experience shows that the TSC Staffing Officer's decisions on how to use the TAC Tutors matters, and that where the TSC can

allow the TAC Tutor to support instruction, outcomes are likely to change substantially. The existing corps of TAC Tutors should therefore be provided ongoing technical training to support their ability to help teachers improve instruction.

- **Increase instructional time and variety.** In a typical classroom, pupils spend quite a bit of time practicing a single topic; by contrast, in PRIMR, teachers spend much more time actually teaching, and a variety of instructional topics are addressed within a lesson. We recommend increasing the amount of time spent in literacy and numeracy to 40 minutes per day, and expecting teachers to teach for that entire period.
- **Focus on letters, phonological awareness, and decoding.** PRIMR's current and ongoing work to develop training strategies for teachers not using PRIMR lesson plans has reinforced the important contribution of PRIMR on focusing on letters, phonological awareness, and decoding skills. The existing books in the market ignore the important skills of phonological awareness and alphabetic principle. Books used in primary schools should focus pupils on the basic skills of literacy across languages. Given that teachers have limited training in these areas, in-service and pre-service programs should include training on these key building blocks of literacy.
- **Improve the teaching of comprehension.** Learners in the average Kenyan classroom spend quite a bit of time asking questions about stories read by teachers, but those questions predominately involve factual recall. PRIMR's expanded comprehension strategies are essential to this objective. This should be expanded to the country, with teachers trained on how to use simple strategies to improve comprehension outcomes.

IV. PERFORMANCE MONITORING

ICT Kisumu Baseline Survey⁵

As noted above, the Kisumu ICT component of the PRIMR intervention was implemented beginning in January 2013, in 80 schools spread across eight zones. The schools were randomly selected following set criteria discussed among RTI, MoEST, and Kisumu County education officials. Preparation for the ICT baseline study started during the first week of November 2012. A working budget was developed to ensure optimal use of resources during the exercise. The logic of using the larger study's midterm tools (i.e., the EGRA, EGMA, and SSME student assessments, questionnaires, and checklists) was that these tools had been pretested and the EGRA reading passages equated before the midterm study. However, the M&E team reviewed and corrected the tools before the instruments were uploaded to electronic tablets. A "Tangerine assistant" was hired to help the PRIMR M&E officer make the programming corrections in the electronic versions of the tools and then load them onto Kindles.

During December, the M&E officers revised and updated the field training manual for supervisors in line with the ICT intervention and the local conditions in Kisumu. A training program was also developed and took place during 9th to 12th January 2013. The assessors were trained on proper manipulation of the Kindles, administration of the EGRA and the interview tools, and use of the lesson observation instrument (supervisors only).

- For the ICT Kisumu baseline survey, 24 assessors were trained for 5 days between 8th and 12th January 2013. Data were collected between 14th and 25th January. The research team made a strategic decision to hire 12 assessors from Nairobi who were experienced in using Kindles and Tangerine® to collect EGRA data. The other 12 assessors were hired in Kisumu County in an effort to build the capacity of local assessors. After the training, assessors were grouped into eight teams, each team comprising two assessors and one supervisor. They were then allocated schools according to a detailed routing plan.
- At the school level, 20 Class 2 pupils in each of the 80 schools in the project (including control schools) were assessed using the Tangerine® data collection tool on the Kindles. The assessment teams uploaded the data from their Kindles to the server at the end of each assessment day.⁶ Team members also interviewed Class 2 teachers and the head teacher, and the supervisors observed reading and math lessons being taught in Class 2 classrooms. The supervisors' classroom observation data were entered into the database after data collection since this portion of the survey was manually done. Data cleaning started in early February 2013 but most of the analyses were done in March 2013. PRIMR's technical team leaders finished and submitted the final Kisumu data analysis report in April.

PRIMR Full Study: Midterm Data Collection and Analyses, Reporting, and Dissemination

Data collection for the overall PRIMR midterm assessment started on 1st October 2012 and was supposed to end on 24th October. However, due to the teachers' strike and the resulting changes in

⁵ Results of the data analysis from the Kisumu baseline assessment were presented in full in Piper, B., Kwayumba, D., & Mugenda, A. (2013). *The Primary Math and Reading (PRIMR) Initiative, information and communication technology (ICT) intervention: Baseline analysis report*. Prepared for USAID under the Education Data for Decision Making (EdData II) project, Task Order No. AID-623-M-11-00001. Research Triangle Park, NC, USA: RTI International.

⁶ The upload procedures were similar to those described in more detail in the next section, which covers the October 2012 full PRIMR midterm assessment.

the school calendar, the data collection exercise was completed on 29th October. A total of 64 assessors were hired and trained during the last week of September. The assessors were divided into 16 teams. Each team had three assessors and one supervisor. Teams were randomly assigned to enumeration areas as follows: two teams to Thika, three teams to Nakuru, and 11 teams to Nairobi. Those who had been assigned to Nakuru during the baseline study were automatically assigned to Nairobi to give others a chance to work in Nakuru and Thika. The data collection teams were coordinated by Dan Kwayumba (Nakuru/Nairobi); Dr. Abel Mugenda (Thika/Nakuru); Sarah Koko (Nairobi), and Kenya Luwelo (Nairobi).

In this assessment, the Tangerine® application was used to collect PRIMR data electronically using Kindles. The EGMA, EGRA (English and Kiswahili), and teacher and head teacher interviews were uploaded into the Kindles and the assessors trained on how to use the technology. As noted, the lesson observations in reading and math were done using paper and later entered into the same database using appropriate interfaces. Other than teething problems associated with the new application and upgrading of some of the attendant software, the system worked well, with a total of 4,274 pupils assessed in math, Kiswahili, and English. In both Kiswahili and English, a Maze comprehension task was added to the EGRA instrument, and the untimed stories were removed. The decision to add the Maze task allows PRIMR to have a more robust measure of reading comprehension. The untimed stories section was removed because it had produced little additional information in return for the time invested.



Tablet being used for data collection.

At the end of each data collection day, each supervisor met with his/her team and verified that all assessments and interviews could be viewed on the Kindle. Using a mobile router, the assessors then connected the Kindles to a cloud-computing service that housed the database and uploaded their data into the database. The Tangerine®-based data collection technology eliminates the need for separate data entry and the potential errors and time-intensive labor associated with that process. Data cleaning and analysis can therefore start quite quickly. The classroom-observation data, however, were collected using paper and pencil because the complexity of these instruments makes programming for mobile devices quite difficult. These data therefore needed to be entered, cleaned, and validated. The final step was to merge all the data: midterm EGRA and EGMA assessments, midterm interviews, lesson observations, and all the baseline data. This allowed the comparative analyses to be done among the various treatment and control groups so that PRIMR's impact on pupil outcomes could be estimated.



One of the PRIMR midterm data collection teams having to push their minibus out of the mud.

The PRIMR technical team, led by Dr. Mugenda and Dr. Piper, spent most of the October–December 2012 quarter on the cleaning, analysis, and writing of the PRIMR midterm report. They were spurred on by the acceptance of their presentations at the Comparative and International Education Society (CIES) conference in early March 2013, which was an opportunity for PRIMR to present three papers on its progress to the international education community. The presentations were titled:

- From Assessment of Learning Outcomes to Influencing Classroom Practice in Kenya
- Instructional Practice: Student Outcomes, Teacher Behavior, and Time in Kenya
- Measuring Impact: Methods of Assessment Reading Improvement in Kenya

All of the presentations were well attended and PRIMR received several follow-up requests for the abstracts and PowerPoint presentations from the conference.

Drs. Piper and Mugenda disseminated the finalized midterm results report to various Kenyan stakeholders. The report was submitted to USAID on 17th April 2013. It showed a significant impact of PRIMR on pupils' achievement.

A report on the workshop to present the PRIMR midterm findings, submitted in July 2013, documented the dissemination activities for the midterm report.⁷ As of the end of June 2013,

⁷ Piper, B., & Ong'ele, S. (2013). *The Primary Math and Reading (PRIMR) Initiative: PRIMR midterm findings workshop report*. Prepared for USAID under the Education Data for Decision Making (EdData II) project, Task Order No. AID-623-M-11-00001. Research Triangle Park, NC, USA: RTI International.

PRIMR had shared the findings of the midterm report with dozens of officials across the MoEST and the Semiautonomous Government Agencies (SAGAs) and had met the directors of all the relevant SAGAs (except the Kenya Institute of Special Education [KISE], whose director was unavailable), and all of the relevant Directorates in the MoEST (except Policy, Planning and East Africa Community Affairs; this Director was on leave).

Mini-EGRA

This assessment, not part of the original scope of work, but done by PRIMR to ensure progress in learning, took place in June–July 2013 in all 80 Kisumu County public schools, the 180 Nairobi nonformal schools, and the 127 public schools in Kiambu and Nakuru. While the project team had planned to assess 387 schools, the aforementioned national teachers' strike began in June 2013 while data collection was ongoing. This action limited the assessment to 218 schools. The mini-EGRA showed encouraging findings in treatment schools.

V. PROGRESS ON LINKS TO OTHER USAID PROGRAMS

During 2013, PRIMR had many opportunities to collaborate with USAID programs, particularly the Education for Marginalized Children in Kenya (EMACK) program implemented by the Aga Khan Foundation. Given EMACK and PRIMR's work location in the nonformal settlements of Nairobi, it remained critically important to collaborate in order not to overlap schools and programs. This required that EMACK and PRIMR consistently share school lists and communicate about activities. In addition, in 2013, PRIMR was able to assist EMACK with using the EGRA and EGMA tools to assess learning outcomes. EMACK was able to meet with PRIMR technical staff on a few occasions to share the tools and to discuss sampling and implementation of the study. EMACK hired several assessors who had already trained with PRIMR to undertake their data collection.

VI. PROGRESS ON LINKS WITH KENYAN GOVERNMENT AGENCIES

Collaboration with MoEST and SAGAs

During this fiscal year, PRIMR remained heavily focused on working alongside MoEST as well as the SAGAs that support the Ministry: TSC, KNEC, the Kenya Institute of Curriculum Development (KICD), the Kenya Education Management Institute (KEMI), and KISE. As an example, during September 2013, PRIMR held a set of joint dissemination workshops with KNEC to announce the PRIMR midterm report findings and the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) findings. This workshop was kicked off by a formal launch event, officiated by the Permanent Secretary, MoEST, at the Intercontinental Hotel. This was followed by county-level dissemination, which attracted representatives of 33 counties to better understand how PRIMR could help their counties. **Annex B**, a report prepared by KNEC about the launch event, documented the strong feedback received from the counties.



Mr. Paul Wasanga, Chief Executive Officer of the Kenya National Examinations Council, presents PRIMR results at the official September 2013 launch of the midterm findings report. Key members of the MoEST, PRIMR, DFID and USAID worked together on the event.



Official launch of the PRIMR midterm report by the USAID Deputy Mission Director and the MoEST.

At the county level, PRIMR worked with the County Directors of Education and TSCs for each of the six 2012–2013 PRIMR counties. This meant jointly setting training dates, observing classrooms, and holding reading contests and zonal meetings.

Meetings with Program Development and Implementation Team (PDIT)

This section elaborates PRIMR’s involvement with the Program Development and Implementation Team. The PDIT consists of education officials from each of the Directorates within the Ministry of Education, such as Basic Education; Field and Other Services; Quality Assurance and Standards; and Policy, Planning, and East Africa Community Affairs. The PDIT also includes the key SAGAs (see previous subsection), which meet with the PDIT to receive direction from the MoEST and SAGAs on how best to implement the PRIMR Initiative and to make recommendations based on the impact evaluation data and lessons learned. The PDIT for PRIMR met several times during the year, during the May meeting, the PDIT resolved to conduct the meetings more consistently. The PDIT members also held a special meeting on 26th November to review the 2012–2013 work plan.

Throughout the course of the project, the PDIT members have been instrumental in supporting the PRIMR Initiative and have been involved at every stage in sharing the work plans and next steps for PRIMR. During the November meeting, suggestions were made about the need to communicate further in advance the timing of activities, especially where PDIT involvement was needed. This is because the PDIT team always requests a few of its members to attend meetings, trainings, and even fieldwork during assessments.



Working meeting of the PDIT in August 2013.

VII. PROGRESS ON USAID FORWARD

In 2012–2013, PRIMR remained committed to developing the skills of local organizations in Kenya.

For example, PRIMR worked with data collectors, supervisors, and assessors, typically hired by Decisions Management Consultants (DMC), a local research firm. Although DMC did not directly implement the PRIMR assessments, the project technical team worked to support them.

In addition, several of the low-cost private schools that the project supports in the nonformal areas of Nairobi are parts of chains of private schools. Therefore, support for those schools is contributing to the development of local organizations.

PRIMR staff were able to meet with the Executive Director of Dignitas Project on several occasions to suggest some strategic initiatives.

With African Population and Research Health Center (APHRC), a local research firm, PRIMR made connections and shared advice on how best to get involved in USAID-funded programs.

VIII. SUSTAINABILITY AND EXIT STRATEGY

The PRIMR Initiative is focused on scalability, cost, and the policy environment conducive to large-scale literacy programs in Kenya. As a result, sustainability issues are at the forefront of the research. The 2012–2013 academic year provided many opportunities to focus on sustainability.

Critically, PRIMR worked through the TAC Tutors, who will be in place long after PRIMR has ended. These advisors will continue to be available to support teachers and to help them implement quality improvement programs.

The policy studies undertaken by PRIMR in 2012–2013 also were critical to helping ensure sustainability. With PRIMR support, the Education Act of 2012, the Sessional Paper of 2012, and the NESSP draft documents all incorporated specific mentions of the importance of high-quality education at the early levels, and early grade reading, as essential to improving the quality of education in Kenya. The current version of NESSP designates early grade reading as a specific investment program, making it much more likely that the program can be sustained after the end of PRIMR. The strong results from PRIMR have combined with the demand for the program at the county level to make improving quality of literacy instruction a priority going forward.



Pupil reading PRIMR text, provided at a 1 to 1 ratio due to USAID support.

X. SUBSEQUENT QUARTER'S WORK PLAN

In the next quarter, the PRIMR team will undertake the following activities in partnership with the MoEST and the SAGAs (see also **Annex C**):

1. Undertaking the **endline evaluation** in October 2013: As the quarter begins, the PRIMR team will engage in an endline EGRA/EGMA/SSME survey in the counties of Kisumu, Nakuru, Nairobi, Kiambu, and Murang'a. The exercise will require hiring approximately 68 assessors. Recall that during the PRIMR baseline data collection, the team widely used paper assessments. By contrast, during the ICT baseline in Kisumu in January 2012, the June–July mini-EGRA, and the project midterm evaluation, the PRIMR team used Kindle Fires and Google Nexus or Samsung tablets loaded with the RTI-developed Tangerine® software. Early versions of Tangerine® had some problems with higher than expected data loss, but the programming team was able to overcome those challenges. The content for the electronic instruments to be used in the upcoming endline assessment was developed by the PRIMR team, and a one-day tools adaptation workshop was held with the participation of several MoEST officers. The tools were piloted in non-PRIMR schools and then equated to ensure the validity of the final round of program evaluation results.
2. **Longitudinal study**: During the endline assessment, the PRIMR team will follow up the nearly 900 specific pupils previously assessed at baseline and at midterm who were embedded within the PRIMR research design. Their reading and numeracy competency levels will be compared from baseline to midterm and endline. A report on the longitudinal study will be part of the PRIMR impact evaluation submitted in early 2014.
3. **PRIMR endline data analysis and report writing**: Immediately after data collection in October 2013, the PRIMR team will embark on data entry from the classroom observation tools that were administered on paper rather than using Tangerine® on tablets. The completed database then will be ready for analysis and writing of a draft report, which may continue until approximately February 2014.
4. Leading Cohort 3 sensitization workshops and implementing PRIMR in **control schools** in parallel with the existing treatment schools: In school year 3 (2014), PRIMR will focus on mobilizing various support personnel for Cohorts 2 and 3 who will be brought on board as part of the implementing teams alongside the Cohort 1 team. In November–December 2013, directors of Cohort 3 nonformal schools and Cohort 3 public school head teachers will attend a sensitization workshop for a half-day each, covering Kisumu, Nairobi, Kiambu, Murang'a, and Nakuru counties. These workshops will explain to DQASOs, TAC Tutors, head teachers, and directors of nonformal schools the key PRIMR activities, expectations, and roles.
5. **PRIMR materials revision and improvement**: In the coming quarter, the PRIMR team will continue improving the existing learner books and teachers' guides for English, Kiswahili, and math. This effort will involve teachers, TAC Tutors, MoEST officials under the PDIT (with its representation from various SAGAs), consultants from academia, and PRIMR technical staff. This activity will involve writing stories; developing comprehension questions; creating writing, listening, and speaking exercises; and enhancing various other components of the reading and math materials. Due to DFID funding, the revised pupil books will incorporate color pictures.
6. **Text formatting, printing, and distribution of the materials** to respective schools: This will be a major activity from December 2013 to January 2014, and may run into February 2014. The numbers of schools and pupils will have substantially increased to a total of 492, with the Kisumu ICT program incorporating two more zones of 20 schools each,

Nakuru county incorporating one more zone, Kiambu county adding one more zone, and Nairobi county adding four nonformal school clusters and one public school zone. All the zones and schools will be provided with a book each per pupil for English, math, and Kiswahili. The PRIMR team has also embarked on videography work that will enable the team to share video lesson clips that teachers can use for reference, to enhance their teaching skills. The clips will become part of the content within the TAC Tutor tablets in the Kisumu ICT experiment.

7. **Training for Cohort 3 implementation:** A key deliverable in the second school year of PRIMR was the training of coaches/tutors on supervising the instructional approach, and shortly thereafter, training by coaches/tutors of the first and second cohort of teachers and head teachers (see Section I). In Kisumu, the training specifically addressed how to use the ICT materials to improve outcomes. Cohort 3 TAC Tutors coming on board into the PRIMR program will undergo their first technical training in literacy and numeracy instruction in January 2014. This group will consist of five new TAC Tutors (Kisumu – two zones, Nairobi – one zone, Nakuru – one zone and Kiambu – one zone). There will be four new control clusters of nonformal schools will enter the program in January 2014.
8. **Policy studies and policy support.** The MoEST has requested follow-up support from the PRIMR technical team related to several of PRIMR's recommendations. Three policy studies requested by the MoEST as part of the upcoming 2014 *Education Policy Study Report* were the textbook policy, pre-service teacher professional development, and low-cost private schools. These will be the main policy focus for year 3 of PRIMR implementation, particularly from November 2013 to March 2014.

XII. PROJECT ADMINISTRATION

Constraints and Critical Issues

Teacher strike

The teacher strike in June and July of 2013 was a major difficulty for PRIMR. The timing of the strike was particularly problematic for the PRIMR design, as it occurred just as pupils were to report for the third term, and immediately before the PRIMR midterm assessment was scheduled to be undertaken. This was a concern for a variety of reasons, but from the research perspective, the strike could not have occurred at a worse time, due to the consistent adverse effects of term breaks on reading practice and outcomes.

It is important to note, however, that the nonformal schools were not affected since the teachers are not employees of the Kenyan government. Because public-school pupils and teachers were not in school during the last several weeks of the quarter, however, for them the affected activities were:

- Instruction time for pupils;
- Instructional support by TAC Tutors;
- Mini-EGRA exercise;
- Monthly cluster reflection meetings for teachers;
- Reading and math contests;
- Participation of MoEST officials in PRIMR activities.

Nonetheless, the strong preliminary midterm results showed that PRIMR is likely a very effective program since it was able to overcome the poor timing of the teachers' strike.

Election season and voting week

The general election in March 2013 proved to be a challenge for the PRIMR team to work around. As many schools served as election sites, the one-week holiday was in fact slightly longer, as pupils and teachers were less focused on learning during the weeks before and after the election. Uncertainty and concerns about potential violence in many of the nonformal settlements meant that many pupils left Nairobi for the period around the election, which adversely affected attendance and instructional time.

Other key difficulties

- In Kisumu County, some teachers found it difficult to teach Kiswahili due to limited knowledge of the spoken and/or written language. The Kisumu Education Officer worked diligently to address this problem in the PRIMR-supported schools, and the project team retrained teachers using modeling.
- Some teachers initially struggled with the tablets and e-readers due to a lack of familiarity with technology. Their comfort in using the devices improved with time and practice.
- Continuous assessment of learners was not carried out satisfactorily by some of the teachers. Future iterations of PRIMR will not emphasize this activity as a result.

Personnel

The PRIMR team continued to expand in order to improve outcomes. George Olemba was replaced as Finance Assistant in Kisumu. In Nairobi, Caroline Ondeng' became full-time Administrative Coordinator, and Linda Ambasa was hired as an Administrative Assistant. For the Kisumu County office, PRIMR hired an Administrative Assistant, Pamela Akoth; and a Finance Assistant, Fredrick Otieno. PRIMR hired Francis Njagi as the Senior Education Policy Specialist and promoted Isaac Cherotich as the Senior Education Specialist for PRIMR.

Changes in the Project

No changes to the project took place in FY2013. However, due to project savings, PRIMR will go beyond the Scope of Work of the program and provide technical support to existing zones (Cohort 1 and 2) as well as new zones (Cohort 3) during the first term of 2014. Only the new zones were expected to receive support in 2014 academic year.

Subawards

The status of the PRIMR subcontractors' efforts is summarized in **Table 6**.

Table 6. Status of Subawards

Partner name	Sub-awardee name	Start date for this sub-awardee	End date for this sub-awardee	Amount for this sub-awardee (US\$)	Date last audit conducted	Names of counties of implementation
Worldreader	Worldreader E-reader Experimental Pilot	05 October 2012	30 November 13	314,592	None	Kisumu
CfBT	Instructional Coaches Support	31 October 2011	30 June 2014	476,681	None	Nairobi

Deliverables

For a list of this year's deliverables, see Annex D.

Summary of Non-U.S. Government Funding

As mentioned above, based on the encouraging results from the first year of PRIMR, DFID/Kenya awarded RTI an accountable grant in the amount of US \$6,598,835 to expand PRIMR to two rural counties, Bungoma and Machakos. In addition, DFID granted RTI US \$915,825 for a national tablet program to build on the PRIMR ICT program in Kisumu, and to develop ICT in preparation for a national training program. All of these leveraged funds (see **Table 7**) will help PRIMR to improve the understanding of how to improve literacy outcomes at large scale and at a low cost.

Table 7. Status of PRIMR Leveraging in FY2013

Program	Donor	Item	Leveraged Amount (US\$)
PRIMR Rural Expansion	DFID	Accountable grant to support 810 rural schools with PRIMR instructional methods	6,598,835
National Tablet Program	DFID	Technical support to prepare for and implement national table program	915,825

Type of Accounting System Used During Reporting Period

During this year, PRIMR used Quickbooks for accounting, as is standard for RTI International.

Annex A: Success Stories

The stories in this annex were contributed by coaches, tutors, and various members of PRIMR's technical staff.

Story 1: PRIMR improves pupil transitions from one grade to the next in a nonformal Nairobi school

This story is about the experiences of two pupils, Lucy and Cheptoo, of the Daylight Education Center, a PRIMR nonformal school in Kayole school cluster, Nairobi.

At the time this story begins, Lucy was 9 years old, an adopted child who had joined Daylight's pre-unit at the beginning of September 2012. She was introduced to PRIMR instructional methods in January 2013, as a Class 1 pupil. Since then she has been keen, motivated to learn, and curious about every detail of the content taught. During a cluster reading contest in 2013 in which Daylight school participated, she was the overall winner in Class 1 among the 15 schools. At the beginning of October 2013, the head teacher, the class teacher, and her guardian came to a decision to promote her to Class 2. In fact, an assessment conducted by the coach revealed that she was doing much better even than the current Class 2 pupils. She was able to read 113 words per minute (wpm), with fluency and understanding. In math, she was among the fast ones to complete the independent activities. This is great! PRIMR has touched this child and motivated her to study and accelerate with speed from one grade to the next. PRIMR, in the words of Lucy's teacher, "is the best methodology in teaching reading and math."

At the same school, the PRIMR team came to interact with Cheptoo. She was rescued from West Pokot by a group of pastors and Christian missionaries. She was to undergo female genital mutilation (FGM) and thereafter be married off at an early age. Instead, she now lives with a guardian whose friends in West Pokot were instrumental in removing Cheptoo from her situation. Besides Cheptoo, Mrs. Susan (the guardian) takes care of 18 other vulnerable children in her own house. She has a self-initiative of assisting young vulnerable children, and Cheptoo is lucky to be one of them. At the time of her rescue, Cheptoo could neither write nor read and even her eating style was by mouth directly to the plate, without using her hands. It was hard for the guardian to mentor her.



Cheptoo and her mother at Daylight school.

In mid-2011, Cheptoo's guardian enrolled her in Daylight school. She started in pre-unit, and even in 2012 she was still in Class 1 and struggling with reading. In 2013, now in Class 2, she was introduced to the learning techniques of the PRIMR Initiative. It took only four months before her reading abilities were triggered. With improved reading skills, her performance became better and better. After realizing how much she had achieved, the head teacher and her classroom teacher discussed with the guardian the option to promote her to Class 3 in second term, at the beginning of September 2013. Her performance in Class 3 has been very good—in fact, Cheptoo is among the best in English, Kiswahili, and mathematics in Class 3.

Experiences such as those of Lucy and Cheptoo and the Daylight nonformal school are opening the eyes of educationists in Kenya.



Lucy learning to read.

Story 2: ICT integration enhancing teacher impact on pupils' learning

Teacher Jane Oturi of Omuya Primary school in Barkorwa zone, Kisumu County, is one of the implementers of the PRIMR ICT intervention. Her zone implements the teacher tablets treatment, while other zones within the same county are implementing the pupil e-reader and TAC Tutor tablet interventions.

When the PRIMR Initiative's ICT program was introduced at her school in 2012, Teacher Jane could not successfully put a password on her teacher tablet, even with several attempts, and even with support from PRIMR trainers. However, with more training, determination, and consistent use of the ICT equipment to support improvement of reading competencies among pupils in the lower grades, Teacher Jane has emerged among the very best teachers in the program. She has found many uses for the teacher tablet, which is loaded with the pupils' books, teacher guides, the Papaya™ program (which pronounces letter sounds and words), and the Tangerine:Class™ software for pupils' mastery assessments. These programs have made her enjoy teaching pupils more than ever before, especially with the excitement of seeing the pupils increase their reading competencies substantially.



Teacher Jane now has a remarkable record of manipulating the teacher tablet as she teaches. She is known as one of the very best teachers in the county. She confesses to a new beginning in her teaching career, where she now enjoys teaching Kiswahili. This is one subject that was a struggle for Teacher Jane since she started practicing as a trained teacher in 1987.



In 2013, Jane was given a chance to be the teacher to host Professor George Godia—the then Permanent Secretary (PS) for the Ministry of Education, Science and Technology—and other distinguished guests. She displayed competency in manipulating the teacher tablet, for the benefit of the pupils she teaches. All eyes were on Teacher Jane as she explained to the PS the benefits of using teacher tablets in her lessons and the impact on the learning outcomes to her pupils. Teacher Jane has been completely transformed, courtesy of the generous contribution and support by USAID/Kenya.

Annex B: KNEC Workshop Report



THE
KENYA NATIONAL EXAMINATIONS COUNCIL

**NATIONAL LAUNCH OF
PRIMARY MATH AND READING (PRIMR)
MIDTERM IMPACT EVALUATION AND COUNTY DISSEMINATION
REPORT**



OCTOBER 2013
VENUE: INTERCONTINENTAL HOTEL AND REGIONAL CENTERS

Primary Math and Reading (PRIMR) Initiative _____

FOREWORD

Education is the driver of Kenya Vision 2030, and therefore there is a clear need to improve the quality of education. One of the core mandates of the Kenya National Examinations Council (KNEC) is to undertake research on educational assessment. KNEC has over the years initiated that support the implementation of the research mandate, including the National Assessment System for Monitoring Learner Achievement (NASMLA) study conducted in 2006, UWEZO Kenya studies of 2010, 2011 and 2012, Southern and Eastern Africa Consortium for Monitoring Quality Education (SACMEQ) and the Primary Maths and Reading (PRIMR) Initiative, from 2011-2014.

These studies demonstrate KNEC's role in measuring improvement in the quality of education, especially following the introduction of Free Primary Education (FPE) that saw the Kenyan government increased access to primary education. It is very important to empirically assess how children are learning at school with a view to proposing strategies that can help enhance learning outcomes for the Kenyan child. The National Assessment Centre (NAC) within KNEC helps with co-ordination and advice on how to use the results of assessments carried out.

The RTI International Class 3 literacy and numeracy study in Kenya that began in Malindi in 2007 was an interesting analysis of the surprisingly low skills in literacy and numeracy amongst pupils. This resulted in the Ministry of Education Science and Technology (MoEST) requesting RTI to extend the research to two other provinces – Central and Nyanza in 2010. Following the 2010 studies which included mother tongue literacy, the MoEST requested USAID/Kenya to begin PRIMR Initiative in 2011.

The impressive findings of the PRIMR initiative midterm report clearly show that Kenyan children can learn literacy skills quickly. Children in PRIMR schools were 2 or 3 times more likely to read than those in Non PRIMR schools. These impressive results provided the impetus to further examine the PRIMR programme with the Kenya policy environment, including curriculum development, the textbook policy and the system of instructional support. The report presented here gives the key findings from the national launch of the PRIMR midterm report and the subsequent County dissemination of SACMEQ III and PRIMR findings.

Thank you,



Paul M. Wasanga, MBS

Council Secretary/Chief Executive Officer,

Kenya National Examinations Council

THE PRIMR NATIONAL LAUNCH – 9TH SEPTEMBER 2013

MORNING SESSION:

CHAIR: MR. MUKHTAR OGLE, NATIONAL ASSESSMENT CENTRE

The meeting began at 9:30 a.m. with introductions of all invited guests.

Introductory Remarks by Ms. Margaret Murage, MoEST

Madam Murage welcomed those in attendance adding that this was an important occasion for the PRIMR initiative and Kenya to note the existence of successful literacy interventions. She acknowledged the parties who have been instrumental in propelling the implementation of the programme. These included:

- ✓ Directorate of Quality Assurance and Standards – MoEST.
- ✓ Directorate of Field and Other Services – MoEST.
- ✓ Directorate of Basic Education – MoEST
- ✓ Directorate of Policy and East African Community Affairs - MoEST
- ✓ The Teachers Service Commission (TSC)
- ✓ The Kenya National Examinations Council (KNEC)
- ✓ The Kenya Education Management Institute (KEMI)
- ✓ The Kenya Institute of Curriculum Development (KICD) and
- ✓ The Kenya Institute of Special Education (KISE)

She further gave a brief overview of the PRIMR initiative emphasizing the importance of the quality of education with the focus on numeracy and literacy skills, training of teachers/head teachers and Teachers Advisory Center (TAC) Tutors who have been trained from the sampled schools and zones. Those in attendance were informed that the PRIMR objective was to bring about quality improvement as an intervention within the education sector under the leadership of the MoEST. It was also highlighted that the project whose research findings were about to be launched was launched in the year 2011 by the then Permanent Secretary for Education Prof. Kiyiapi, who also appointed a Programme Design and Development Team (PDIT) from various Ministry directorates and SAGAs.

It was noted that apart from the four counties (Nairobi, Kiambu, Kisumu & Nakuru) that had been supported in Mathematics, English and Kiswahili, the PRIMR research extended its scope in 2013 to assess mother tongue in Bungoma and Machakos Counties with funding from DFID/Kenya.

Winding up her welcome speech, Mrs Murage added that the most significant achievement was based on the coordination of the research team and stakeholders. These stakeholders and technical teams including the MoEST team, development partners, the PRIMR technical team, and critically, teachers, head teachers and parents, and the very capable pupils.

She then reminded participants that the PRIMR initiative relies on research which is critical to achieving Vision 2030. She noted that the research findings were very important for engagement on policy issues for the success of the Education sector with the goal of improving the quality of education.

Address by Mr. Paul M. Wasanga, CS/CEO, KNEC

Mr. Paul Wasanga, the Council Secretary and the Chief Executive Officer of the Kenya National Examinations Council (KNEC), thanked those in attendance for their attendance. He also appreciated the PRIMR research team for the high quality work undertaken since 2011. He said that since this program was launched, KNEC has collaborated closely with PRIMR. He mentioned that the government realized that there were many initiatives of

monitoring learning assessments. It is due to the many research initiatives that the government realized the need to create a National Assessment Centre (NAC) that would coordinate and advise how to use the results of learning assessments. He introduced Mr. Ogle Mukhtar to the participants as the coordinator of the NAC. He further explained that KNEC conducted a learning assessment in class 3 in 2006 entitled NASMLA. NASMLA indicated that only 48% and 52% of the pupils could reach the benchmark in numeracy and literacy respectively. The research findings for Class 3 including recommendations that the levels need to be increased so that when they reach Class 8, they will be able to do well in the KCPE exams.



He highlighted the importance of parents' interest in their children's learning in terms of checking their homework as one key motivator in improving performance. He also mentioned that the teacher's role is very important and therefore, there is a need for participation by all stakeholders.

He emphasized the need to determine literacy norms which will help to address related challenges and stated that KNEC will continue to collaborate with RTI international, Uwezo and other likeminded organizations. Finally, the CEO noted that there is need to analyze and adopt what has worked in PRIMR and address any challenges that have been mentioned.

Highlights of the PRIMR Research Design by Dr. Abel Mugenda, PRIMR

Dr. Abel Mugenda started by thanking the following individuals and organizations for their heavy participation since 2011:

- MoEST (Past Ministers of Education, Past Permanent Secretaries, current Cabinet Secretary, current Principal Secretary, both past and current Education Secretaries, and Directors at the MoEST)
- Senior Ministry of Education Officers and PDIT members
- Directors of SAGAs (KNEC, KICD, TSC, KISE, KEMI)
- Head teachers, teachers and the pupils.
- All other education stakeholders

He mentioned that the PRIMR Initiative design focused on three groups of schools, namely public schools, low-cost private schools (nonformal learning institutions), and the public schools implementing the ICT programme.

Dr. Mugenda then explained the process the MoEST and PRIMR team undertook in choosing the locations for PRIMR implementation and that the MoEST advised PRIMR team to implement the initiative in the counties of Nairobi, Nakuru, Kiambu, Machakos, Bungoma and the ICT intervention in Kisumu County. The public schools zones were then randomly selected and assigned and eligible low-cost private schools were grouped into clusters and randomly selected and assigned. He further mentioned that over 1000 non-formal schools were initially surveyed.

He explained that PRIMR is a Randomized Control Trial (RCT) design and provided brief details as follows:

- Cohort 1: Two year treatment (2012-2013)
- Cohort II: One year treatment (2013)
- Control/Cohort III: Treatment in 2014 after the endline for ethical reasons
- PRIMR ICT study in 8 zones in Kisumu county which comprises of three treatments and two control zones.

He mentioned that the surveys were carried out as follows: Baseline: January 2012, Mid-term October 2012 and an End-line had been planned for October 2013. He explained to the participants the process that led to the decision on tools used for data collection which comprised of the following:

- EGRA/EGMA tools have been used in 50+ countries and 90+ languages.
- PRIMR along with KNEC and the MoEST technical teams adapted Kenya-specific EGRA and EGMA tools for PRIMR
- Tool adaptation workshop held in October 2011 with MoEST, SAGAs and other stakeholders;
- Developed 3 EGRA and EGMA tools (Baseline, Mid-term and End-line);
- Piloted the tools twice in October 2011 and in 2012;
- Conducted equating procedure based on pilot data.

Dr. Mugenda informed the audience that all the above mentioned tools are available on www.eddataglobal.org. He concluded by mentioning that it was a sophisticated research study where the tools are specific to Kenya and has been created with the MOEST and KNEC. He stressed that the results are reliable and valid and that RTI was proud of the technical rigor of the PRIMR midterm report.

Address by Dr. Benjamin Piper, Chief of Party - PRIMR

Dr. Piper began with mentioning that Kenya has the best education system in this region and wished all present a Happy International Literacy day, which was celebrated on September 8, 2013. However, he mentioned that the critical problem is at the early level in primary (Class 1, 2 and 3). He mentioned that the PRIMR programme has been funded by USAID/Kenya for the period between August 2011 to August 2014. The funding supports 500 schools in four counties with a concentration in English, Kiswahili and Math. The programme is focused on improving outcomes and the research tools, including materials,

being used can be downloaded at www.eddataglobal.org. The key elements of the PRIMR Initiative are Lesson Plans, Pupil Books, Teacher Training and Instructional Support.

The Initiative has had a positive impact on the proportions of pupils who could read with fluency and comprehension. The gains were very large compared to control groups. Specifically, PRIMR had a causal increase in 9.7% and 12.5% in Class 1 and Class 2 respectively in Kiswahili; 10% and 18.6% in class 1 and class 2 respectively in English. PRIMR has had significant gains in the mean fluency rates for pupils as depicted in the table below:

	Baseline Survey January 2012	Midterm Survey October 2012	Mini EGRA June 2013
Class 1	5.2 wpm	16.5 wpm	27.8 wpm
Class 2	19.8 wpm	36.8 wpm	56.6 wpm

*WPM = correct words read per minute

Dr. Piper also spoke about the PRIMR ICT Randomized Control Trial in Kisumu County working with three ICT treatment groups. This involves testing three ICT interventions in a randomized control trial for teacher tablet, TAC Tutor tablet and pupils e-readers. The results of the three treatment groups were impressive with the average gains on letter fluency between January and July 2013 being 4.9 and 6.3 letters pm. The gains are much higher in TAC tutor tablet, teacher tablet, and pupil e-reader than in the control group.

The following are the recommendations given by Dr. Piper:

- PRIMR program shows that there is benefit to having pilots test various cost elements to maximize resources
- There is need to look at how the program can maximize on existing funding and;
- The pilot analysis shows that some elements to the program are not as essential, so that the program can maximize on what is important

He then concluded his presentation with factors that are unique to PRIMR which are:

- It is a pilot designed to test costs
- Use of limited teaching aids e.g. pocket chart
- No cost and low cost travel incentives
- Focus on teacher change

Address by Dr. Wambui Gathenya, USAID/Kenya



Dr. Wambui informed those in attendance that her role was to put a human face to the research, which was the face of the child. She mentioned that she had observed the child in the classroom and the glow on a child's face when she or he discovers they can read. She emphasized that "Our goal is to make a child be able to read. It is important to have a culture of reading and if PRIMR initiative can do this, this is the best option". She also requested the research team was to include the children who are out of school – in the slums, pastoral communities, etc. to find a way to read from wherever they are as she referred to the process as "taking the magic to the pupils without an ideal school."

Address by Mercy Karogo – the Kenya Institute of Curriculum Development (KICD)

Ms. Karogo acknowledged that PRIMR adopts an experimental design and has conducted capacity building for teachers. She then presented several areas where there could be improvement for PRIMR, which included:

- ✓ The format of lesson plans
- ✓ Issue teachers with lesson guides/plans which are too restrictive for teachers
- ✓ Book policy in this country – need to have PRIMR books vetted by KICD.
- ✓ Need to look at the format for lesson plans – introduction, lesson development and conclusion and remarks, resources
- ✓ Lesson plans are done in 10 weeks and the term is 16 weeks. What happens to the 6 weeks?
- ✓ Some grammatical errors
- ✓ Reference materials to be given
- ✓ Reorganize the reading approach
- ✓ Piloting taking two years which may be too long
- ✓ KICD Act to be checked and fit well within the programme

She hoped the above issues will be addressed in the scale up and going forward.

Address by Dr. Wainaina Gituro – Kenya Vision 2013

Dr. Gituro mentioned that it was important to be competitive by relying on evidence based research. He mentioned that with Vision 2030, Kenya would be globally competitive. He mentioned the following as the service delivery indicators:

- Initiative by MOEST, USAID and World Bank Service Delivery
- Indicators (SID) and Uwezo
- PC for Cabinet Secretary – Interactive E-Learning (laptop)
- Curriculum Review and Reform

He shared statistics on the quality of the education systems from the World Economic Forum with the audience. The statistics had a range from 1-7 with 7 as the best in the world and 1 is poor:

- Kenya 3.9
- Botswana 4.1
- Malaysia 4.8
- Tunisia 4.9
- Singapore 6.2

This suggests that the quality of education in Kenya can be improved. He mentioned that the following parties needed to work together: curriculum and examination bodies. He concluded by mentioning that a needs assessment in curriculum, differences for national examinations, curriculum development need to be integrated and addressed.

Address by Sandra Barton – DFID Kenya

Mrs. Barton began with appreciating the work of PRIMR and emphasized that it was not only about helping children to read and do maths but the bigger picture on the overall impact of the system. She mentioned that she was excited on the impact of the program and acknowledged fantastic collaboration that has been ongoing so far. She challenged the audience with the following question: **Are we doing the very best we can for every child in every classroom in every school?** She further mentioned that anything that offers the promise of improving learning is something to celebrate, sustain and scale up.

She gave her experience while working in Malawi when she visited a remote rural school with a senior decision-maker from the Ministry of Education headquarters. The school was not the best school in the region - it didn't have shiny new classrooms or the best performing pupils - in fact most came from some of the poorest villages in Malawi - but it had a story she thought was worth hearing. When they arrived, the head teacher took them to his Year 2 and 3 classrooms and proudly pointed out all the teaching and learning aids that decorated the rooms. They were unlike almost any other classroom you could visit in Malawi. He explained that the school had participated in a DFID-funded programme to improve reading and writing in the early grades many years prior to the visit. The funding for this programme had since dried up but the school had continued to apply the same methods and techniques because they had been so thrilled with the results it had yielded in terms of children's progress in reading and writing. They were then taken to another classroom where a small group of older children were quietly working and explained that this was the first cohort of children who had benefitted from the reading and writing programme in the early grades. She explained that the school expected their best exam results ever from this group of children. She concluded by mentioning that this was the real prize. Not just that here is an opportunity to introduce reforms that will accelerate progress in teaching children

to read and write in the early grades but that in doing so we will give these children a much better chance of success throughout their education.

She then concluded by thanking all for the opportunity for DFID to join all stakeholders in thinking through the implications of PRIMR findings. She retaliated that DFID Kenya is committed to supporting MoEST to improve learning outcomes and get every child into school in Kenya, including through the funding of over 50 million pounds in the coming three years.

Address by Dr. Tina Dooley-Jones, Deputy Mission Director, USAID/Kenya

Tina mentioned the importance of an evidenced-based strategy and learning for policy decision making. She stated that the US Government had committed to providing USD 8M in PRIMR research since 2011 for improvement of reading in Kenya and that they are glad that it is working by improving pupil's capability to read, leading to added funding by DFID to extend the initiative to 800 more schools.



Address by Mr. Robert Masese, the Ag. Education Secretary, MoEST

Mr. Masese was represented by Mr. Albert Ekirapa in the forum. He began with mentioning that it was his pleasure to participate in the PRIMR findings launch. He stated that with the onset of Free Primary Education (FPE), pupil enrolment increased from 5.9 million in 2003 to 8.5 million in 2010. He underscored the interventions the Ministry has put in place to ensure that quality of education, by improving pupils' reading, is addressed. These were:

- i. The Kenya Language Policy in Classes 1 to 3 stipulates that the language to be used for instruction is the language commonly used in the catchment area. In rural areas that is the mother tongue, in peri-urban areas and areas with mixed communities that is Kiswahili, and in urban areas of some affluence that is English. English is the medium of instruction beyond Class 3, with Kiswahili as a national language.
- ii. The English Radio Project implemented in the 1970s in Kenya.
- iii. The School Based Teacher Development (SbTD) course rolled out in 2000.

- iv. Kenya's participation in the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) study.
- v. The National Book Development Council of Kenya (NBDCK) programme has also been implemented in Kenya since 2008 with a vision to enhancing reading for life.
- vi. The Kenya Early Grade Reading Assessment (EGRA) and Early Grade Maths Assessment (EGMA), in partnership with USAID and technical support by RTI since 2007. With RTI, the MOEST conducted baseline surveys in Coast, Nyanza and Central Provinces, including mother tongue assessments in Kikuyu and Dholuo languages. From the presentations already given, you all can attest that the PRIMR programme is presenting innovative ways of addressing the literacy and numeracy challenge for the Kenyan child, gaps that have been identified through the UWEZO Kenya reports, the NASMLA studies, and the SACMEQ reports.

He mentioned that that the several programmes and initiatives have had measurable impacts on learning achievement in Kenya and this is still not enough. He said that the MoEST had designed the PRIMR program with USAID and DFID to help us develop additional evidence of the way to improve educational quality at scale. He further said that PRIMR was organized to think through how to allocate our resources in lower primary and how to ensure that the very talented learners in Kenya can maximize their potential in early primary, rather than waiting to the end of primary school.

He acknowledged that from PRIMR pupils can learn to read, comprehend and do maths by the end of Class 2. Mr. Masese said that the MOEST is focused on expanding the gains achieved in previous work with PRIMR and the other quality improvement programmes at a larger scale and welcomed the use of evidence to improve education policymaking. He specifically mentioned that based on the findings PRIMR's research is important in helping us decide how to improve literacy and numeracy under NESSP. He said that MoEST's hope is that the gains found in PRIMR can be achieved by the millions of young learners in Kenya who deserve the chance to be literate and numerate and this is possible with support and hard work. He concluded by welcoming the representative of Dr. Belio Kipsang', the Principal Secretary MoEST, to officially launch the PRIMR research report.

Address by Dr. Belio R. Kipsang, the Principal Secretary, State Department of Education, MoEST

Dr. Kipsang's speech was presented to the participants by Madam Khaoya. Dr. Kipsang was delighted to be the Chief Guest during the launch of PRIMR midterm research report. He noted with appreciation that the forum comprised various stakeholders from the Government and its agencies and partners interested in educational development and that the forum will no doubt go a long way into supporting the quality of education in our learning institutions.

He further noted that the Government had ratified international and 21 regional instruments such as the Millennium Development Goals (MDGs), Education for All (EFA) goals, United Nations Convention on the Rights of the Child (UNCRC) and the African Charter on the Rights and Welfare of the Child (ACRWC). Dr. Kipsang said that the attainment of Universal and Quality education was central to the achievement in particular of EFA Goals and also said that the post 2015 period on EFA and MDGs will focus on the quality of education as issues of access have largely been addressed.

He further mentioned that Kenya was currently operating within the Constitution and Vision 2030 which is the development blue print meant to transform the country into a middle

income economy by 2030 and position us on a competitive edge across the global divide. The Ministry has come up with policies and programmes related to EFA and MDGs, which according to the United Nations are expected to be achieved by 2015.

He mentioned that MoEST had undertaken reforms to improve the education sector with a view to making it globally competitive. Some of these reforms included development and implementation of the following:

- Sessional Paper No. 1 of 2005 on Policy Framework for Education and Training Sectors providing direction from the Early Childhood Education to the University level;
- The Basic Education Act 2013, Science, Technology and Innovations Act 2013, Universities Act 2013 and the Technical Vocational Education and Training Act 2013 progressively address the issue of quality in education
- The National Education Sector Support program (NESSP) which is the implementing programme of the Sessional Paper and has embedded the Early Grade Reading and Mathematics Programme as one of the Investment Programmes in the improvement of the quality in education.

He further noted that:

1. The PRIMR intervention was designed jointly at the request of the Ministry by the MoEST and USAID/Kenya, and from the very beginning was led by the thinking and energy of a team comprised of the Education Secretary, MoEST directorates, KNEC, KICD, TSC, and the other SAGAs to design the programme. The intervention has also been an example of collaboration at the county level with strong support from both the County Directors of Education and the TSC County Directors. Now the partnership continues with support from both DFID and USAID.
2. Prior to the PRIMR intervention, in schools assessed across Kenya, 19.8% of learners in Class 2 could read English with fluency and comprehension to the required Ministry of Education set benchmark of 65 words per minute while 15.7% could read Kiswahili fluently with comprehension at the minimum 45 words per minute.
3. In less than one year of the PRIMR intervention, pupils in treatment schools were two or three times more likely to be able to read at the minimum in both English and Kiswahili. This effect held in both rural and peri-urban schools, and in both Class 1 and 2. Significant gains were noticed in their ability to read letters, read words, read stories, and understand what they read in both English and Kiswahili. In other words, pupils are learning to read and comprehend, and even do maths, in efficient ways across the six counties that PRIMR is working.
4. The PRIMR initiative has put in place various interventions that have led to these very large improvements. These strategies include:
 - a. Using the KICD English and Kiswahili curriculum to emphasize reading skills while continuing to teach all of the literacy skills in the syllabus, namely listening, speaking, reading and writing.
 - b. Providing one low-cost and enhanced text book per child in Classes one and two in English, Kiswahili and Maths. It is noteworthy that the English and Kiswahili text books have been enhanced to include all the components of literacy.
 - c. Providing instructional support to teachers through the TAC tutor system. This means that the TAC tutors provided the initial and refresher trainings, but also spent significant time in classrooms observing teachers and giving them feedback on the quality of instruction in classrooms. This led to dramatic improvements in time on task and a real focus on pedagogical improvements. As

a result, pedagogical skills improved and teachers utilized more teaching and learning materials in classrooms. More importantly, this shows that Kenya has the expertise and human capacity to continue these gains.

5. The PRIMR initiative also introduced an ICT intervention in 60 schools in Kisumu. The intervention shows that when integrated in to daily teaching and learning and coupled with the enhanced support of the TAC tutor, ICT can tremendously improve learning outcomes.

He ended by applauding the strategic partnership that the MoEST has with USAID and DFID in facilitating high quality and modern survey research evidence to prompt intense debates, public conversation and dialogue that will hopefully generate commitment to action amongst policy makers, parents and teachers at all levels in the sector.

He stressed that such initiatives will continue to receive all the required support from the Ministry and look forward to continued partnership in more credible and relevant action-research undertakings. In fact, we plan to use the results of this research to scale up quality improvements at the national level alongside our partners USAID and DFID.

He concluded by extending his sincere gratitude to USAID/Kenya, DFID/Kenya, the PRIMR team of RTI International and the Project Design and Implementation Team in the Ministry for ably steering the study with impressive learning outcomes. He also wished all the participants in the forum a participatory and fruitful engagement and discussion on the policy proposals arising from PRIMR report. He then declared the **PRIMR** midterm research report and recommendations officially launched.



Overview of Policy Proposals

The participants then explained the need to use the PRIMR research findings to establish assessment gaps and advice on policy decisions. This session was led by representatives of the TSC, the National Parents Association, and PRIMR team. The need to have research findings inform policy decision in the Kenyan education system was emphasized. Some issues discussed included:

- Poor performance in Maths at KCPE level – PRIMR can help to address this;

- How Maths lessons are slotted on the timetable in schools – which hours are best and can there be an adjustment?
- Teacher training – some of the teachers teach subjects they failed in hence cannot make an impact in the learning of pupils;
- 2nd specialization – very few teachers are choosing maths as a subject;
- Segregation of duties TAC Tutors to perform better – the need to have them focus on instruction support;
- Need to support the CEO KNEC recommendations by disseminating and implementing the PRIMR research findings;
- Innovative teaching strategies should be embraced

Presentation by Grace Ngaca, MoEST on Text Books development, evaluation and vetting

Ms. Ngaca informed the participants that PRIMR is an initiative and intervention that has produced results. She went further to state that learning and teaching materials are very important. In the current text book policy, private publishers develop the same for us. The recommended books are listed in the range book and schools and teachers choose the most preferred option. It is therefore not easy to attain the ratio of 1:1 because of the number of approved/recommended books as they are several titles. She asked the participants to think through the following questions:

- What is the cost effectiveness of these materials?
- Are we basing production on any given research? What should the children be able to do? Are they reading? How can we work towards having the required course books and instructional materials in our schools?

She explained that the current PRIMR status on text books is:

- English, Kiswahili and Maths text books are provided at the ratio 1:1
- Maths books are provided as workbooks for each student
- Children are enthusiastic because they have the books

She applauded the need to change our approach to research based development books.

Presentation by Charles Kanja – MoEST on Teacher Support and professional development

Mr. Kanja began with mentioning that PRIMR has worked to improve learning. He stated that with respect to the overall quality of education text books contribute 15%, environment 9%, and teacher 75%, and education officers contribute 1%. He further posed this question to the audience, are the TAC Tutors enough to help us reach the teachers? He acknowledged that the TAC Tutors need training and a lot of support. He then mentioned that the TAC Tutor's place is in the classroom and not any other office. He acknowledged that there have been cases of them performing additional roles and missing out on their key role/function. He then suggested that TSC/MoEST could work with key resource teachers in areas where we have limited number of TAC Tutors.

Presentation by Isaac Cherotich – PRIMR on Instructional time for lower primary literacy and numeracy

Isaac informed the participants on the research evidence from the PRIMR baseline report of 2012 that found that teachers only use 3.6 minutes to teach reading. He asked the participants to consider the current trend in Africa region where other Countries have

increased the teaching time substantially such as Uganda and Ethiopia. He asked Kenyan MoEST to consider increasing the lesson time in a similar manner.

Presentation by Francis Njagi – PRIMR on curriculum issues

Francis informed the participants on the various language skills covered by PRIMR, namely listening, writing speaking and reading. He further explained the 5 components of reading namely phonemic awareness, alphabetic principle, fluency, vocabulary and comprehension. He suggested that there was need for KICD to consider having the five components of reading incorporated in the current curriculum reforms.

The morning session was graced by the presence of pupils from Lang'ata West Primary school (public) and Kayole Community School (low cost private) who sang and recited poems on the importance and benefits of literacy and numeracy, courtesy of the PRIMR initiative.

AFTERNOON SESSION: GROUP DISCUSSIONS

During the afternoon session participants discussed the implications of the PRIMR report on policy activities in the MoEST. Participants voluntarily chose the groups to belong to from curriculum issues, instructional time, teacher training and TAC tutors, and the text book policy. From this discussion were three main recommendations:

- Text book policy: Low-cost books provided for every pupil. Unlike the existing instructional model in Kenya, where relatively generous textbook funds only achieve a 1:1 book-pupil ratio, PRIMR spends significantly less money on books to achieve a 1:1 book-pupil ratio, while increasing the length of the books by nearly 100%.
- The need for the current curriculum reform process to incorporate the five reading components
- Need to enhance classroom instructional support through a reformed TAC Tutor system

COUNTY DISSEMINATION SESSIONS SEPTEMBER 11TH – 24TH 2013:

The Kenya National Examinations Council (KNEC) in collaboration with PRIMR team organized for County Dissemination forums for PRIMR midterm impact findings alongside SACMEQ III results in the month of September 2013. In attendance were County Directors of Education and TSC County Directors and their technical teams. The dissemination took place in the following locations and with the following county participants

S/No.	Dissemination Location	Represented Counties	Number of participants	Venue
1.	ELDORET	Uasin Gishu, West Pokot, Nandi, Elgeyo Marakwet, Trans Nzoia	20	Cicada Hotel
2.	MOMBASA	Mombasa, Kwale, Taita Taveta	17	Coast Girls School
3.	WAJIR	Wajir, Mandera, Garissa	25	County Commissioner's office
4.	MALINDI	Kilifi, Tana River, Lamu	15	Malindi High School
5.	LODWAR	Turkana	18	Lodwar High School

S/No.	Dissemination Location	Represented Counties	Number of participants	Venue
6.	ISIOLO	Isiolo, Meru, Tharaka Nithi, Embu, Marsabit, Samburu,	39	Bomen Hotel
7.	KISUMU	Kisumu, Homa Bay, Migori, Siaya Nyamira, Kisii	25	Kisumu Girls
8.	MACHAKOS	Machakos, Kajiado, Nairobi, Makueni Kitui, Kiambu	18	Machakos Academy

A total of 33 Counties were reached out of 47. The teams were all quite receptive to PRIMR and SACMEQ findings. They were convinced that the PRIMR report had many implications for policy. Specifically, their recommendations were the following:

- i. **Review the text book policy** to enable ease of access of books by pupils. The cost of buying one text book is currently at KES 380 on average, which is not affordable to most parents and a substantial part of the capitation grant. They are also expected to buy a number of books for each subject. They found it more appropriate to have one main text book per subject that is common, high quality and affordable.
- ii. **Review the curriculum** to focus on research evidence of what improves literacy and numeracy. The teaching of the five components of reading was recommended to help children learn reading by decoding with comprehension strategies. This called for review of the existing curriculum to incorporate these components.
- iii. **Enhanced instructional support.** The teams were keen to see a revolution on how TAC Tutors visit classrooms, provide training, and support teachers to implement classroom instruction. This is the key role of TAC tutors that many other activities have been pushed onto the TAC tutors shoulders. The participants argued that they should help the TAC tutors support instruction as this is the core to improving learning outcomes.

Annex C: Schedule of Future Events

List of important upcoming events to be incorporated into the October 2013 annual work plan

Date	Location	Activity
November 2013	Nairobi and Kisumu	Sensitization workshops for Cohort 3 and control groups
November 2013	Nairobi	Materials review workshop with MoEST and SAGA representatives
December 2013	Nairobi	Materials revision and improvement
December 2013	Nairobi	Printing of revised PRIMR materials
January 2014	Nairobi and Kisumu counties	Cohort 3 and control groups: TAC Tutors and instructional coaches training
January 2014	Nairobi, Nakuru, Kiambu, Kisumu and Murang'a counties	Cohort 3 and control groups: Teacher training
January to April 2014	Nairobi, Nakuru, Kiambu, Kisumu and Murang'a counties	Support for Cohorts 1, 2, and 3 in PRIMR implementation
March 2014	Nairobi, Kiambu, Kisumu, and Murang'a counties	Endline impact evaluation report
March 2014	Nairobi, Nakuru, Kiambu, Kisumu and Murang'a counties	Termly reading contests
May 2014	Nairobi	Policy studies in support of MoEST
July 2014	Nairobi	Formal launch of PRIMR endline report
August 2014	Nairobi, Nakuru, Kiambu, Kisumu and Murang'a counties	Project closure

Annex D: List of Deliverable Products

This is the list of deliverables submitted and accepted by USAID during the year.

1. Final ICT lesson plan, December 2012
2. Year 2 work plan, December 2012
3. Annual report, December 2012
4. Quarterly report #6, January 2013
5. Midterm assessment report, April 2013
6. Quarterly report #7, April, 2013
7. Annual policy study #2, June 2013
8. Findings workshop report, July 2013
9. Quarterly report #8, July 2013
10. Second-term training report, Cohort 2, August 2013
11. Annual work plan #3, October 2013