



SCIOAL IMPACT

IMPACT EVALUATION OF THE EARLY GRADE READING ACTIVITY (EGRA) FINAL REPORT

May 2018

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ACRONYMS

ASPIRE	The Malawi Girls' Empowerment through Education and Health Activity
CDCS	Country Development Cooperation Strategy
COR	Contracting Officer's Representative
cwpm	Correct Words Per Minute
DAI	Development Alternatives, Inc.
FEWEMA	Forum for African Women Educationists in Malawi
GoM	Government of Malawi
IE	Impact Evaluation
IKI	Invest in Knowledge, Inc.
INVC	Integrating Nutrition in Value Chains
IRB	Institutional Review Board
MERIT	Malawi Early Grade Reading Improvement Activity
MoEST	Ministry of Education, Science, and Technology
MoH	Ministry of Health
MTPDS	Malawi Teacher Professional Development Support
NRP	National Reading Program
PEA	Primary Education Advisor
PEPFAR	President's Emergency Plan for AIDS Relief
PRIMR	Primary Math and Reading Initiative in Kenya
PTA	Parent-Teacher Association
SI	Social Impact, Inc.
SSDI	Support for Service Delivery Integration Services
VRC	Village Reading Center
VRCF	Village Reading Center Facilitators

ABSTRACT

The Early Grade Reading Activity (EGRA) that targeted Standard 1 to 3 learners in Malawi was implemented through funding from USAID/Malawi from June 2013 to September 2016 in 11 education districts reaching 1,610 schools. An impact evaluation that measured EGRA's impact on reading performance of Standard 2 and 4 learners in Chichewa showed that overall impacts were not significantly large to clearly attribute the improvements in oral reading fluency scores over time in EGRA treated schools. But, there were indications of significantly positive impact for Standard 2 learners that scored at the bottom of the distribution to move to higher scores over time. Integration of EGRA with other USAID projects was not a consistently significant factor in impacting oral reading fluency scores. Oral reading fluency scores were higher when learners could take books home to read, readers were read to at home, and with teachers use of essential teaching practices. It could cost around US\$140 in direct costs per learner in an EGRA-type intervention to improve oral reading fluency scores over time by one unit.

EXECUTIVE SUMMARY

To improve reading performance of Malawian primary learners, USAID funded the Early Grade Reading Activity (EGRA), implemented by Research Triangle International (RTI), from June 2013 to October 2016 in 11 education districts reaching 1,610 schools. EGRA produced and distributed pedagogical materials for early grade reading; provided continuous professional development training to Standard 1 to 3 teachers and school administrators; equipped parents and communities with knowledge and tools to support school-based reading programs including organizing reading fairs; and supported the efforts of the Ministry of Education, Science, and Technology (MoEST) and USAID to build a policy environment conducive to improving early grade reading in Malawi.

In 2013, USAID contracted Social Impact, Inc. (SI), to conduct an impact evaluation (IE) to address the following questions:

- What is the Impact of EGRA on Chichewa reading outcomes of Standards 2 and 4 learners in terms of ability to read a text and comprehend it at the end of school year?
- Does integrating USAID interventions in education, agriculture, and health in the same community results in increased learner reading outcomes in Chichewa, as described in the USAID Malawi CDCS?

SI designed the IE as a quasi-experiment carried out in 320 randomly selected treatment and comparison schools that were followed at baseline in 2013, midline in 2015, and endline in 2017, under four treatment levels:

1. Treatment Level 1 in the four education districts of Machinga, Balaka, and Lilongwe Rural West and Lilongwe Rural East, where EGRA was implemented with a major health sector activity (Support for Service Delivery Integration Services [SSDI]) and a major economic growth sector activity (Integrating Nutrition in Value Chains [INVC])—these districts are also called *full integration districts* under Malawi's Country Development Cooperation Strategy (CDCS);
2. Treatment Level 2 in the district of Salima, where EGRA overlapped only with SSDI;
3. Treatment Level 3 in the district of Ntcheu, where EGRA overlapped only with INVC; and
4. Treatment Level 4 in the five districts where only EGRA operated (Blantyre Rural, Mzimba North, Ntchisi, Thyolo, and Zomba Rural).

At each level except Level 2, the design incorporated comparison schools (non-EGRA treatment schools) from the same districts. To assess Standards 2 and 4 at all three rounds, the same 320 schools selected at baseline were followed longitudinally at midline and endline, but with a cross-section of randomly chosen Standard 2 and 4 learners and teachers within these schools. SI randomly selected an average of 12 learners, equally split by learner sex, from each standard for the reading assessment and interviewed their households at all three rounds. In all three rounds, SI partnered with the MoEST and Invest in Knowledge, Inc. (IKI), a Malawian data collection firm, to gather data for the evaluation at the end of the school year. This report presents SI's findings, conclusions and recommendations from the final evaluation of EGRA.

MAJOR FINDINGS AND CONCLUSIONS

Learners improved in their oral reading fluency scores from baseline to endline in both standards and in both treatment and comparison groups. The rate of change was greater in treatment schools than in comparison schools for Standard 4, while it was the opposite for Standard 2. Girls outperformed boys in both groups in both standards. Standard 4 treatment schools improved more than comparison schools probably in part because learners were exposed to EGRA longer—three years of consecutive treatment. But even after four years of schooling and longer exposure to EGRA, one fifth of learners in treatment schools still scored zero, and 85 percent of learners could not meet the MoEST benchmarks, performing only slightly better than those in comparison schools.

But, EGRA's impact on oral reading fluency was negligible for both standards at four years since EGRA was initiated. The evaluation obtained a negligible effect size in standard deviation of -0.0197 for Standard 2 and 0.0588 for Standard 4. The impact results were also statistically insignificant and indicate that SI could not attribute improvements in reading scores to EGRA. However, there were some indications of significantly positive impacts of EGRA helping Standard 2 learners who scored at the bottom of the distribution to move to higher scores over time, indicating potentially positive distributional effects of EGRA at lower primary standards.

Integration of EGRA with other USAID projects was not a consistently significant factor in impacting learner scores. For Standard 2, in the fully integrated areas where EGRA operated with SSDI and INVC, the impact of EGRA was positive and notable two years into EGRA implementation, but that did not sustain a year after EGRA ended. For Standard 4, while the impacts were positive at both two and four years since initiation of EGRA, they were too insignificant to conclude that full integration of EGRA with other projects across sectors was effective in improving the scores. SI did not discern clear impacts from partially integrating EGRA, either with SSDI or INVC, to help infer whether a specific type of integration facilitated positive and significant impacts.

EGRA coaching and in-service professional development training was effective. Training and coaching, one of the four major EGRA interventions, appears to have significantly induced more use of the 13 essential teaching practices in treatment schools. In Standard 2, oral reading scores were significantly higher where teachers followed as many of the 13 essential teaching practices as possible. In Standard 4, although no similar association was found, the rate of repetition was lower when class teachers used more essential teaching practices; in turn, lower repetition rates were associated with higher oral reading scores. This indicates that the pathways in the theory of change may differ by standard for achieving desired impacts through teacher training activities aimed at inducing more use of essential practices and thereby improving teaching quality. Furthermore, at endline, only 64 percent of treatment school teachers used all 13 essential practices, though this was an improvement from baseline. The use of lesson plans, an essential practice that is probably more important in higher standards, could still be improved. These results indicate that there is room for further improvements

in teaching practices that could perhaps be effected through teacher training and coaching, thereby helping to improve reading scores.

Reading scores were higher when learners could take books home to read, and readers were read to at home. Nearly one fifth of teachers in EGRA schools, however, did not hand out books to learners to take home because there were not enough text books for all learners, despite EGRA's distribution of textbooks. Also, only 34 percent of treatment school teachers reported having adequate teaching resources, despite EGRA's distribution of textbooks and teaching and learning materials. This intimates bottlenecks and challenges in implementing these EGRA activities and thus could explain some of the observed impacts on reading scores.

It could cost over \$140 in direct costs per learner in an EGRA-type intervention to improve oral reading fluency scores by one unit at four years of implementation.¹ There was an impact effect size of 0.059 standard deviation for Standard 4 at endline in 2017. With the direct costs incurred in implementing technical components of EGRA for three years and this endline effect size, SI estimates that it would cost about \$146 in average direct costs per learner in an EGRA-type intervention to improve oral reading fluency scores by one unit. The average direct cost of \$8.63 per learner incurred in the project could only cause an effect size of 0.0068 in Standard 4, which is a negligible/null impact in comparison to effects noticed across the developing world in such interventions.²

Several factors could have contributed to the modest EGRA impacts, including less-than-expected effects from USAID activities like the Country Development Cooperation Strategy (CDCS) that promotes cross-sector integration and other education sector activities in the districts. Furthermore, EGRA-like support from other organizations and donors to comparison schools could have improved scores in those schools. In addition, severe natural disaster events that affected many districts, especially in fully integrated CDCS districts, during EGRA implementation could have played a role in reducing EGRA effectiveness. It is also likely that implementation challenges could have limited realizing the EGRA outcomes that were anticipated in the EGRA theory of change. Some sample selection bias due to evaluation design limitations could have also affected results, although the evaluation team took great care to reduce the bias.

RECOMMENDATIONS

Highlight the importance of using all essential teaching practices during teacher trainings and coaching. Especially since the use of lesson plans could still be improved, focus on use of scripted lessons more during trainings. By using scripted lesson plans more, teachers could efficiently and effectively conduct and manage classes within the allocated instructional time. To that end, incorporate more opportunities to practice use of scripted lessons and teachers guide and class preparation during in-service trainings and coaching.

¹ Due to data limitations, the evaluation team only used direct costs without staff salaries. Therefore, cost effectiveness could be underestimated if total costs far exceed the direct costs used here.

² Impact effects in each country / region depend, among a variety of factors, on geographic features, baseline conditions, scale, project components, implementation effectiveness, language of instruction, length of implementation etc., But, a systematic review of more than 200 impact evaluations in developing countries of primary level interventions indicate a positive and an average of at least 0.15 standard deviation impacts after three years of implementation (McEwan, P. (2015). Snilstveit, B. et al., (2015)).

Provide more reading practice at school. Ensure that teachers provide more reading practice for learners, and that Primary Education Advisor (PEAs), Head Teachers and Section Heads provide coaching and mentoring to teachers for them to help learners to read. Scripted lessons and teacher guides developed under NRP include activities for reading practices and learner books contain text for reading practice. Also, nationwide trainings were provided under NRP on use of the teacher guides for remediation classes. Adherence to teacher guides and scripted lesson plans would help provide more reading practice at school for both regular and remedial classes.

Assess reasons for any differences in reading skills by sex to improve reading skills of both girls and boys. SI consistently found in various assessments in Malawi and in this evaluation that boys slightly underperformed girls. Early reading skills are the most basic learning skills that help learners in their later educational attainments. Therefore, any gender- based differences in reading skills should be identified at early stages and addressed. Reading promoted through afterschool clubs staffed by local mentors in some African countries have been shown to improve reading skills. To that end, future studies should include mixed methods evaluations/assessments that incorporate qualitative inquiry to understand factors that could contribute to differences in scores by learner sex, and how the program affected reading performance by learner sex.

Work with schools and communities to ensure there are enough books available for learners to take books home to read. We found that teachers worried about giving out books for learners to take home because of damaged or lost books. Future projects may work with the parents and communities to provide assurance for the books taken home and arrange for protective covers to minimize damage. Adequate text books and appropriate reading materials including curriculum aligned supplementary reading materials should be made more readily available for children to take home to be read to and with their family. Further, learners could be encouraged to take books home to read, possibly through reading incentive programs that provide small non-financial rewards for learners who read multiple books over school break periods or even throughout the academic year. Furthermore, relevant books to read to children should be distributed regularly.

Encourage parents and guardians to read more often to the learners. Recent USAID activities in Malawi such as ASPIRE and MERIT under the National Reading Program (NRP) have started building community programs to encourage parents and household members to read to learners more frequently and are a step in the right direction. Such programs that focus on household member involvement in learners' reading need to continue and be made sustainable, since reading skills are clearly shown to improve and class repetition tends to decline with such practices, among other factors. Moreover, demonstrations at reading camps and reading fairs can be held to promote practices such as parental behavior of reading to and also reading with learners at home such that learners can also practice reading in addition to listening to reading at home. In areas where parent/caretaker literacy is low, afterschool reading activities staffed by community volunteers may offer an alternative option to ensure that learners are read to more regularly and also could practice reading outside of the classroom. Public media, radio, and television can also be effectively used to inform parents and community members of practical ways to support their children at home and within the community to develop and practice reading skills.

Improve cost effectiveness of EGRA-type interventions. Lessons on the impacts of EGRA-type interventions are now emerging through various evaluations in Malawi and comparable countries (Graham and Kelly, 2018). USAID should carefully examine these lessons to learn what worked and what did not in each intervention. These studies could also shed light on how different project components, either by themselves, combined with other EGRA components, or combined with complementary projects, may impact early grade reading skills through various pathways.

Furthermore, USAID should examine studies on costs associated with EGRA activities to draw lessons to improve the cost effectiveness of EGRA-type interventions. To that end, implementers of EGRA-type interventions, especially those evaluated for impacts, should plan to develop appropriate tracking and reporting formats for all costs incurred at various output levels, including direct and indirect costs and salaries, and use them from the beginning. By improving how they track cost data, implementers could pave the way to comprehensively analyze cost effectiveness. Implementers may also coordinate and share the data with evaluators periodically to facilitate better cost effectiveness analysis for drawing effective policies.³

Update benchmarks based on observed trends for Standards 1 to 4 to examine trends over time in reading performance. Currently, benchmarks developed for Chichewa in 2014 for Standards 1 to 3 are the only official benchmarks available to understand the extent of reading skills acquired by primary learners. These benchmarks need to be updated for Standards 1 to 4. The extensive and longitudinal reading assessment data for Chichewa now available through multiple nationwide assessments and this assessment could be used for such purposes. These actions are essential to build a robust database with realistic and relevant data that can be analyzed to track progress and make programmatic policy decisions to improve primary education quality in Malawi. In doing so, it is important for the all technical stakeholders to periodically review the benchmarks and adjust them given the general quality of teaching in the country.

Embed a process evaluation to also examine the links between project activities and reading performance. Future data collection activities may include assessing fidelity of EGRA implementation alongside learner assessments to understand how EGRA achieved its intended targets in outcomes.

Improve coordination among various assessments with similar objectives. Implementers and external evaluators typically hold consultations at evaluation inception. Implementers also perform periodic assessments for their own monitoring and evaluation purposes. Implementers and evaluators should coordinate these assessments' timelines, tools, and sampling methodologies so they can cross validate results. Also, when evaluators use multiple versions of assessment tools across time, they should conduct pilots with adequate sample sizes to disaggregate analysis by sex and standard, especially for subtasks such as oral reading fluency that record many zero scores, to arrive at conversion factors to confidently compare results across time.

³ Recent activities rolled out by USAID/Malawi (MERIT and YESA) under the National Reading Program (NRP) have explicit cost reporting data requirements for the first, third, and final years, so costs can be compared with baseline, midline, and endline reading assessment results to learn about cost effectiveness.

INTRODUCTION

The Early Grade Reading Activity (EGRA) in Malawi, with funding from USAID, supported the Ministry of Education, Science, and Technology (MoEST) in its efforts to improve reading performance of Malawian learners in Standards 1 to 3. The activity was implemented from June 2013 to October 2016 by Research Triangle Institute, International (RTI), in 11 educational districts across Malawi, reaching 1,610 schools located in 134 zones.⁴

The goals of EGRA included: (1) improving the quality and availability of pedagogical materials for early grade reading, (2) providing training to teacher trainers and continuous professional development training to Standard 1 to 3 teachers and school administrators in the effective use of those materials, (3) equipping parents and communities with the knowledge and tools to support school-based reading programs including by organizing reading fairs, and (4) supporting efforts to build a policy environment conducive for improving early grade reading in Malawi.

In May 2013, USAID awarded Social Impact, Inc. (SI), a U.S.-based development consulting firm, a five-year contract to conduct an impact evaluation (IE)⁵ to provide USAID/Malawi and the MoEST with information on improvements in Chichewa reading outcomes of Standard 2 and 4 public school learners due to EGRA and the effects of multi-sector USAID interventions along with EGRA on primary learner reading outcomes in Malawi.⁶ The IE, by design, comprised three rounds of data collection—baseline in 2013, midline in 2015, and endline in 2017. In this final report, SI discusses the impact of EGRA on reading performance of Standard 2 and 4 learners and provides recommendations to USAID and MoEST for improving early grade reading skills in Malawi.

EVALUATION BACKGROUND

In 2013, USAID/Malawi commenced its five-year Country Development Cooperation Strategy (CDCS) with an aim to improve the quality of life of Malawians by improving the quality of essential services through integrated delivery of services in targeted areas. In line with the CDCS strategy, USAID's education sector initiated EGRA in 2013 in 11 education districts in Malawi. The CDCS focuses on the interconnectedness of development interventions and Malawi's ownership of the development process. To that end, USAID implemented the EGRA project alongside the Integrating Nutrition in Value Chains (INVC) activity, an agricultural livelihood and nutrition initiative, and the Support for Service Delivery Integration (SSDI), a global health initiative, in many of the districts where EGRA operated, to affect the success of primary school learners. Through the interconnection strategy, USAID/Malawi hoped to have a greater impact on outcomes of interest, such as learners' reading scores, than would otherwise be possible through one project alone. Of the 11 EGRA districts, both INVC and SSDI operated in four, SSDI operated in one, and INVC operated in one. EGRA operated alone in five districts.

⁴ EGRA was introduced in two phases: 1,188 schools in 2013 (Cohort A) and 422 schools in 2014 (Cohort B).

⁵ SI's contract also included conducting two national reading assessments (in 2014 and 2016) and a baseline in 2017 for the National Reading Program (NRP). Learners in Standard 2 and 4 were assessed for their Chichewa reading skills under all these activities except the 2014 national reading assessment, which focused on Standard 1 to 3 learners. The NRP baseline also assessed English reading skills.

⁶ The multi-sector interventions are part of the Country Development Cooperation Strategy (CDCS) initiated in 2013.

EVALUATION OBJECTIVES AND QUESTIONS

Per the scope of work (see Annex I), the objectives of the impact evaluation were to

1. measure the effect of EGRA on learner reading outcomes (versus a comparison group); and
2. test the hypothesis that integrating USAID interventions in education, agriculture, health, and community strengthening in the same community results in increased learner reading outcomes, as described in the USAID Malawi CDCS.

The following three tasks were required for the IE under the contract:⁷

- Task 1: A baseline assessment for an impact evaluation (IE) of EGRA, addressing learner reading outcomes in Standards 2 and 4.
- Task 2: A survey of the households of the Standard 2 and 4 learners selected for the IE sample.
- Task 4: A final IE of EGRA and the Country Development Cooperation Strategy (CDCS) hypothesis that learner reading outcomes will improve even more from EGRA combined with INVC and SSDI than they will from EGRA alone. The final impact evaluation should draw from the data collected over the entire contract.

The evaluation questions in the scope of work include the following:⁸

1. What proportion of learners in Standards 2 and 4 could read grade-level text and comprehend the text at the end of school year?
2. What is EGRA's impact on learners' reading abilities? How does the level of EGRA's integration with agricultural intervention (INVC) and health intervention (SSDI) impact the reading outcomes?
3. What household, community, and school factors correlate with learners' reading outcomes?
4. What is EGRA's cost effectiveness?

In addition, as per the scope of work, SI reports on the following indicators by standard and treatment status: (1) average length of school day in hours, (2) proportion of learners who take home and use a book or other reading materials at home, and (3) proportion of teachers demonstrating essential skills in teaching reading.

FIGURE 1. TIMELINE OF ACTIVITIES IN MALAWI



⁷ The contract from USAID/Malawi to SI (2013 to 2018) also included Task 3, which required a national reading assessment (NRA) of Standard 1 and 3 learners in 2014 and Standard 2 and 4 learners in 2016, and Task 5, which was a baseline assessment in 2017 of Standard 2 and 4 learners for the National Reading Program (NRP), which started nationwide in September 2016. SI delivered separate reports for Task 3 in 2014 and 2016 and for Task 5 in 2017. While these two tasks were part of SI's contract, they were not part of the IE, which related only to Tasks 1, 2, and 4.

⁸ See Annex I on Scope of Work for sub-questions.

EARLY GRADE READING ACTIVITY (EGRA)

EGRA Components	EGRA Tasks
1. Provide Quality Reading Instruction for Early Grade Learners	Continuous training to teachers & school administrators; Teaching Practicum; Provide scripted Lesson Plans & Related Reading Materials; Teacher Support and Mentoring
2. Provide Teaching & Learning Materials for Reading	Develop and Distribute Decodable & Leveled Books, Story & letter cards for home use
3. Increase Parental & Community Engagement to Support Reading	Reading Fairs, Increase household & community Support, and classroom Level & School Support for Reading
4. Improve Policy Environment to Support Early Grade	Develop MoUs, Facilitate Extension of Reading Instruction Time, Participate in MoEST Tech. Working Groups

EGRA was implemented by RTI. Since the inception of EGRA in 2013, RTI rolled out four major components in project schools according to a schedule based on learner standard and two project cohorts in 11 education districts in Malawi.⁹ Cohort A comprised 1,188 schools selected to participate in EGRA in 2013, and Cohort B included 422 additional schools in 2014 to ensure more

widespread access to EGRA support. Table 1 shows an overview of the support provided by EGRA for each academic year for Chichewa in the project schools.¹⁰ In addition, RTI also signed several Memoranda of Understanding (MOUs) with schools, parents, and community leaders to encourage local ownership and foster local efforts to promote reading.

TABLE 1. CHICHEWA LANGUAGE TRAINING AND DISTRIBUTION OF TEACHING MATERIALS, 2013 TO 2016

COHORT	ACADEMIC YEAR		
	2013–14	2014–15	2015–16
A	Standard 1 to 3 teachers trained in Standard 1 reading	Standard 2 teachers trained in Standard 2 reading	Standard 3 teachers trained in Standard 3 reading
	Standard 1 textbooks and readers distributed	Standard 2 textbooks and readers distributed	Standard 3 textbooks and readers distributed
B	None	Standard 1 to 3 teachers trained in Standard 1 reading	Standard 2 and 3 teachers trained
	None	Standard 1 textbooks and readers distributed	Standard 2 and 3 textbooks and readers distributed

RTI, 2016.

According to the final EGRA implementation report submitted by RTI to USAID in December 2016, over the three-year implementation of the activity, a total of 1,610 schools were supported, and RTI trained an average of 12,000 Standard 1 to 3 teachers, head teachers, and teaching assistants per year in quality reading instruction, benefitting an average of 520,000 learners a year. EGRA also distributed over 8.8 million teaching, reading, and learning materials (learner books, decodable readers, story cards, etc.), scripted lesson plans, and related reading materials to schools to benefit teachers and learners. RTI also trained 134 Primary Education Advisors (PEAs) who made over 14,000 coaching visits over the course of the activity. As part of community engagement, 9,000 village reading centers were established and staffed by 16,000 volunteer village reading center facilitators (VRCFs), for

⁹ The 11 education districts are: Balaka, Blantyre Rural, Lilongwe Rural East, Lilongwe Rural West, Machinga, Mzimba North, Ntchisi, Ntcheu, Salima, Thyolo, and Zomba Rural.

¹⁰ Table 1 shows only the Chichewa-language-based activities. RTI followed a similar schedule for Cohorts A and B in English language instruction and materials, exactly one year behind rollout of the Chichewa activities in Cohort A schools (Cohort B schools got Chichewa and English trainings at the same time).

learners to have structured extracurricular opportunities to practice their reading skills. Also, over 3,500 reading fairs were organized where the abilities of learners were showcased through oral reading demonstrations by learners using both standard-appropriate and higher-level materials, performance of poems and dramatic skits, tours of reading centers, lesson demonstrations, and exercises in writing and reading comprehension.

INTEGRATING NUTRITION IN VALUE CHAINS (INVC)

The INVC activity, implemented by Development Alternatives, Inc. (DAI), from April 2012 to April 2017, was USAID/Malawi's flagship economic growth and agriculture activity under the Feed the Future global initiative to reduce poverty and hunger. INVC aimed to create and strengthen soy and groundnut value chains, improve the nutritional status of women and children, and build the capacity of Malawian agriculture and nutrition organizations. INVC operated in seven districts,¹¹ including the treatment zones of four EGRA IE districts—Lilongwe Rural, Machinga, Balaka, and Ntcheu. In line with CDCS requirements, EGRA and INVC collaborated to produce local radio shows, low-literacy reading materials, and a community garden activity that also encouraged attendance at adult literacy classes (RTI, 2016).¹²

SUPPORT FOR SERVICE DELIVERY INTEGRATION SERVICES (SSDI)

SSDI, USAID/Malawi's five-year flagship health activity, was implemented by Jhpiego from November 2011 to November 2016 in close collaboration with the Ministry of Health (MoH) to support the Government of Malawi (GoM) in the areas of health communications, service delivery, and systems strengthening. Jhpiego worked closely with a network of local and international partners to implement activities in 15 districts.¹³ SSDI aimed to provide the following services: maternal/neonatal care, nutrition, Human Immunodeficiency Virus Prevention of Mother-to-Child Transmission (HIV/PMTCT), family planning, and malaria. The activity included both facility-based and community-based activities. Four of the EGRA IE study districts—Lilongwe Rural, Machinga, Balaka, and Salima—were fully covered by SSDI activities. In line with CDCS, EGRA collaborated with SSDI to distribute 6,000 copies of an informational leaflet on malaria in the districts of Balaka, Blantyre Rural, Lilongwe Rural, Machinga, Salima, Thyolo, and Zomba Rural, which have high malaria rates. EGRA's Literacy Team also assisted SSDI in revising a malaria comic book in 2014 for younger readers to distribute through EGRA reading centers and schools (RTI, 2016).¹⁴

In addition, through the support of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and USAID, a Girls' Empowerment through Education and Health Activity (ASPIRE) has been functioning since December 2014 through Save the Children in the districts of Balaka, Machinga, and Zomba, three of the districts included in this study. The activity will end in December 2018. ASPIRE focuses on upper primary girls and builds on the work done in EGRA schools in Standards 1 to 3. In addition to developing literacy skills, ASPIRE encourages girls ages 10 to 19 to adopt positive sexual and healthcare-seeking behaviors. It also aims to decrease structural and cultural barriers for girls' access to education. It is likely that ASPIRE activities could potentially affect some of the learners assessed in this IE through their parents, who could have been targeted by ASPIRE, since many ASPIRE activities

¹¹ INVC operated in the districts of Mchinji, Lilongwe Rural, Dedza, Ntcheu, Balaka, Machinga, and Mangochi.

¹² See RTI (December 2016). Malawi Early Grade Reading Activity (June 17, 2013–October 17, 2016). Final Report Submitted to USAID/Malawi.

¹³ SSDI operated in the districts of Dowa, Kasungu, Salima, Lilongwe, Chitipa, Karonga, Machinga, Mangochi, Mulanje, Balaka, Zomba, Phalombe, Chikhwawa, Nsanje, Nkhosakota.

¹⁴ See RTI (December 2016). Malawi Early Grade Reading Activity (June 17, 2013–October 17, 2016). Final Report Submitted to USAID/Malawi.

are focused on parents and the community. As part of USAID/Malawi's CDCS, EGRA reports having collaborated with ASPIRE on the use of village reading centers, training of VRCFs, training of and disbursement of coaching funds to PEAs, and in holding joint monthly planning meetings about collecting monitoring data (RTI, 2016).

IMPACT EVALUATION METHODOLOGY¹⁵

To examine the impact of EGRA on children's reading abilities, SI used a quasi-experimental design with treatment and comparison groups. SI carefully selected comparison groups to estimate the counterfactual, or the level of change in outcomes expected in the absence of EGRA. To test possible complementary effects of EGRA and the INVC and SSDI activities, SI carried out the evaluation under four distinct treatment levels in 11 education districts:

TREATMENT LEVEL 1 consisted of the CDCS focus districts (Balaka, Machinga, Lilongwe Rural West, and Lilongwe Rural East) that provided an opportunity to evaluate the impact of a fully-integrated development approach with multiple activities across sectors, including EGRA, INVC, and SSDI, on early grade reading outcomes.

TREATMENT LEVEL 2 included the district of Salima, where EGRA overlapped with only the SSDI intervention. This served as a test ground for the hypothesis that synergies between education and health initiatives catalyze changes that are greater than the sum of their parts.

TREATMENT LEVEL 3 comprised the district of Ntcheu, where EGRA overlapped with only the INVC intervention. This served as a test ground for the development hypothesis that synergies between education and agricultural livelihood and nutrition initiatives catalyze changes that are greater than the sum of their parts.

TREATMENT LEVEL 4 included five districts (Blantyre Rural, Mzimba North, Ntchisi, Thyolo, and Zomba Rural) that only received EGRA support. These districts were used to test the hypothesis that EGRA's education support leads to improved literacy and general education outcomes.

To infer impacts, SI included comparison schools within the same districts at each treatment level, instead of having some districts as treatment and some as comparison, in order to increase the likelihood of attributing identified changes to EGRA, SSDI, and/or INVC rather than to non-project-related differences among the districts. But, in Level 2, there was no comparison group in the same district, since SSDI was implemented across the entire district rather than just in treatment areas, and therefore, the comparison group for Level 2 was drawn from Level 4. It was possible to randomize treatment and comparison schools in Level 4 but not in other levels, since SSDI and INVC were already underway prior to the IE baseline in all the study districts. The IE included comparisons of the four types of treatment with one another, although it was more difficult to isolate the effects of the different types of treatment from district-level effects in such a comparison, since each treatment type was rolled out in separate districts.

The evaluation team followed the same schools longitudinally at baseline, midline, and endline. But a cross section of Standard 2 and 4 learners was used at each round because USAID was interested in tracking results across the same standards rather than following cohorts of learners across time.¹⁶

¹⁵ See Annex 2 for more details

¹⁶ There were some demographic differences found across the learners assessed at the three rounds. Therefore, SI included some factors that help explain the quality of learners as controls in the impact analysis regressions.

EGRA ended in September 2016. The baseline was carried out in May–June of 2013, prior to EGRA rollout, and the midline was in June 2015, two years after EGRA was rolled out. The endline data collection occurred in July 2017, four years after EGRA was rolled out and almost one academic year after project closure, so it could also capture to the extent possible the sustainability of EGRA's effects.¹⁷

SAMPLE SIZE

SI conducted power calculations prior to baseline, midline, and endline data collection to estimate the number of schools and learners per school to be included in the study. A total of 320 schools were estimated to be required at each baseline, midline, and endline.¹⁸ As planned for in the design, at each of baseline, midline, and endline, the same schools were surveyed but with a new set of learners tested from Standards 2 and 4. Sample sizes used at baseline, midline, and endline are shown in Table 2.

TABLE 2. SAMPLE SIZE REALIZED AT BASELINE, MIDLINE, ENDLINE BY TREATMENT STATUS

		BASELINE		MIDLINE		ENDLINE	
		NUMBER OF SCHOOLS	NUMBER OF LEARNERS	NUMBER OF SCHOOLS	NUMBER OF LEARNERS	NUMBER OF SCHOOLS	NUMBER OF LEARNERS
Level 1	Treatment	40	1,171	42	1,264	42	1,007
	Comparison	38	1,104	38	1,141	38	912
Level 2	Treatment	33	916	40	1,199	40	962
Level 3	Treatment	40	1,180	41	1,229	41	984
	Comparison	27	748	27	812	27	648
Level 4	Treatment*	40	1,391	84	2,519	84	2,014
	Comparison*	92	2,365	48	1,426	48	1,147
Total	Treatment	153	4,658	210	6,211	210	4,967
	Comparison	157	4,217	110	3,379	110	2,707
Grand Total		310	8,875	320	9,590	320	7,674

EGRA data 2013, 2015, and 2017.

* The sample sizes for number of schools at midline and endline between treatment and comparison groups differs from baseline because Cohort B in 2014 phased some comparison schools into EGRA treatment schools. Sample sizes for number of learners for each round was based on power calculations carried out before data collection.

DATA COLLECTION TOOLS

At all three rounds, SI gathered data at school and household levels. At the school level, learners were assessed for reading skills, teachers were observed for teaching quality, head teachers were

¹⁷ At each round, data collection occurred at the end of the academic year in order to capture reading skills acquired by the learner throughout the year.

¹⁸ The required sample size was achieved at both midline and endline but was short by ten schools at baseline due to unavoidable logistical issues such as longer time to administer reading assessments, shorter school days due to schools letting out early or starting late, and 10 schools lost due to two data collection supervisors leaving their teams near the end of data collection to take up new jobs.

interviewed for school-level administrative and demographic details, and the school environment was observed. Households of the learners assessed at the school were then interviewed for household demographics, access to education services, perceptions on schools, learner environments, household support to learners, and parental aspirations for learners.

SI used seven tools to gather data (see Annex 3 for the tools). SI used three versions of the EGRA assessment tool developed by RTI in 2011 to test learners' reading skills, one each at baseline, midline, and endline. The EGRA assessment tool administered to the learners at endline was the same as the baseline tool with only a very slight modification, but the midline tool was different. SI ran pilots prior to data collection at both midline and endline to equate the tools used in these rounds to the baseline tool so that scores could be compared across the three rounds (see Annex 4 for more details).

DATA COLLECTION TOOLS

1. Chichewa Early Grade Reading Assessment Tool
2. Learner Survey
3. Teacher Survey
4. Head Teacher Survey
5. Classroom Observation Protocol
6. School Climate Protocol
7. Household Survey

All seven tools used in the evaluation were approved at each round by the Contracting Officer's Representative (COR) and SI's Institutional Review Board (IRB). All tools were programmed into tablets, and enumerators collected data electronically for each tool. Since the sampled schools remained the same across all three rounds, in order to reduce interviewee fatigue and quickly verify school-level data collected from head teachers, certain information from baseline and midline were also pre-populated in relevant places, and the respondents were only asked to confirm whether the information had changed.

SI collaborated with Invest in Knowledge, Inc. (IKI), a local data collection firm, and MoEST to gather data at the end of the academic year. Enumerators were sourced from MoEST for school-level data collection, while IKI enumerators collected all household-level data. Before data collection at each round, SI thoroughly trained all enumerators.

DATA ANALYSIS¹⁹

After cleaning all the data and merging endline with baseline and midline data, SI started data analysis for this report. The evaluation team used summary statistics, cross tabulations, and classical statistical tests to understand survey sample demographics and determine results on learners' reading performance. For Task 1 questions, SI included summary statistics for discussing reading scores and the percentage of learners meeting benchmarks. To answer Task 2 evaluation questions, SI used measures of statistical correlation to examine relationships between oral reading fluency and potential prediction variables using data gathered at endline in 2017 from the head teacher, teacher, and household and learner questionnaires, as well as the school climate and classroom observation tools. The evaluation team specified multiple Tobit regression models to examine the data for prediction factors, since there was clustering around the lower score bounds (flooring effects), and used a Logit model for estimating binary outcome of learner repetition. SI then compared the endline predicting factors with baseline and midline predictors to discuss any changes over time. To address Task 4 questions, SI used data from baseline, midline, and endline. The evaluation team applied Tobit and Ordinary Least Squares regression analyses with controls from baseline to examine treatment effects

¹⁹ See Annex 5 for more details.

attributable to the EGRA intervention. SI carried out cost effectiveness analysis using total direct costs for the entire project period and the final impact estimates.

LIMITATIONS OF THE EVALUATION

DESIGN. SSDI and INVC activities were already initiated prior to baseline for this evaluation. Therefore, SI was unable to use a completely randomized evaluation design except in EGRA-only districts (Level 4), where activities were rolled after the baseline. A quasi-experimental design was used in Levels 1, 2, and 3, and a randomized design was used in Level 4. Within each level, to the extent possible, the design included comparison groups. But, the effects of the different types of treatment from district-level effects could not be isolated in such a comparison, since each of the treatment types was rolled out in separate districts.

ABSENTEEISM. Since learning assessments were conducted at schools, some learners were not present at school on the day of the assessments. It is likely that the absentee population may differ from the population present at schools.²⁰ So, the results of the study could be skewed slightly toward the positive when considering all enrolled learners in the sampled schools.

COMPARABILITY OF CONTEXTS. As is common in IEs, the conclusions in this report may not hold true for all of Malawi or outside Malawi, or sub-populations within the sampled districts that differ significantly from the general norms and trends of sampled areas. Therefore, the study conclusions should only be taken to hold true in contexts that resemble the characteristics of the sample. But, having extensive data about the learners, their schools, their households, and their communities over the three rounds would help users of this study to assess how similar the context of the learners sampled is to other contexts into which these results may be extrapolated and allow USAID and other stakeholders to make an informed determination about how appropriate it would be to apply the findings of this study to other contexts. Even though SI could not include beneficiaries from each of the four treatment types within each study district, SI could examine whether EGRA plus INVC and SSDI is better than EGRA alone, and whether EGRA alone or in combination with INVC and SSDI was better than no treatment.

USE OF GOVERNMENT EMPLOYEES AS SUPERVISORS AND ENUMERATORS. SI collaborated with the MoEST and engaged its staff in training and data collection in order to capitalize on their existing experience and expertise, increase their ownership over study results, and build the capacity of the MoEST. There is always a risk when the same actors who are responsible for overseeing or implementing a project are asked to evaluate the project. However, GoM personnel, and in particular, MoEST staff, had been involved in data collection for evaluations of other activities in the past and conducted themselves professionally and objectively. Also, these data served an important purpose for the GoM and especially the MoEST. As such, to help inform their decisions related to reading, teaching, and learning, the MoEST had a vested interest in obtaining accurate information from these evaluations. To help avoid issues of potential enumerator bias, SI made sure that no enumerators were assigned to gather data in the region in which they worked. Therefore, there is reason to believe that the risk of MoEST enumerator bias is very low.

²⁰ In 2014, an average of 25 percent of absenteeism rate among learners in lower primary standards was reported by GoM. Absentee population could include lower-performing population of learners. Indeed, SI found through a qualitative study in 2013 that some learners tend to miss school more often than others and that these learners tend to perform worse on tests and in school because of this, and they often drop out.

GENERALIZABILITY AT SCHOOL LEVEL. During school visits, enumerators sampled learners from only one class per standard (implementing the Reading Assessment tool and learner questionnaire with those learners) along with the main teacher for that class, who was observed up to three times using the class observation protocol and was interviewed using the teacher survey. This could reduce the ability to generalize or reach conclusions for the school itself. However, to mitigate any potential bias from this approach, enumerators chose each class at random, so no profile of class or teacher was sought (other than targeting classes where the teacher was present that day and had been at the school for at least one year). Further, it is likely that learners are randomly assigned to classes such that the selection of learners from one class does not bias average reading outcomes. There were indeed some advantages in sampling one class per standard at each school since it gave the study team the ability to establish links between teaching practices and learner reading outcomes. Limiting the survey group to one class per standard ensured that a teacher's choices and behaviors were direct inputs into learner outcomes. As one important goal of this study was to identify and report on effective teaching practices, the study team and USAID decided that this advantage outweighed the limitations related to overall school generalizability. In addition, while the sample size was adequate to detect differences in reading performance by sex and standard, it was not for testing for any differences within a sampled district and within each level.

RESPONSE BIAS. Response bias is a common issue with in-person surveys and may skew the data to suggest, for example, better teaching practices, more diligent study habits, better household help to learners, and more community involvement in schools than are the case. It is difficult to measure the extent of this bias at work without more costly follow-up procedures. While this study could likely be affected by response bias, there is no reason to suspect that it would not be uniform across respondents. So, SI believes that comparisons (including between treatment and comparison groups) will remain valid even if such bias is present. Further, SI took several precautions to reduce such biases by carefully training enumerators on appropriate reactions to correct/incorrect answers and general attitudes when interviewing respondents. The SI team also made sure not to notify schools too far in advance (just calling the head teacher the night before the visit) of the team's visit specifically to avoid them only selecting the best teachers to observe that day or changing lesson plans or practices.

BENCHMARKS. The 2014 MoEST benchmarks used in this report to compare the performance of the learners were to be reached in 2018. Ideally, intermediate targets should have been set for each year to indicate whether learners were on their way to meeting the benchmarks expected for 2018. Since no intermediate targets were available, SI did not apply any prorated benchmarks for 2017. Approximate allocation of benchmark result by years using the final benchmark assumes a linear change, and SI considers such linear change to be unlikely, as shown in some evaluations of EGRA type activities. In addition, when benchmarks were not available for Standard 2 or Standard 4, SI compared Standard 2 performance against Standard 1 benchmarks, and Standard 4 learner performance against Standard 3 benchmarks. Therefore, while the results could overestimate the reading skills appropriate for that grade, with annual measures of learner performance through various assessments carried out under this contract, one could understand the trends in learning performance over time.

READING ASSESSMENT TOOLS. SI used two versions of reading assessment tools developed in 2011 by RTI in this evaluation.²¹ The baseline and endline reading assessment tools were almost the same, but the midline tool was different. Pilots were conducted prior to data collection at both midline and endline. Midline and endline pilots tested learners on both the baseline tool and the newer tool

²¹ As a best practice, multiple versions of reading assessments are used when assessments are conducted at regular intervals, especially in the same schools, with same learners, or both.

so that reading scores gathered using multiple tools could be compared across time. Due to high levels of zero scores, there was a small pilot sample available for statistical equating procedures to arrive at conversion factors for analysis.²² This could have affected conversion factors applied in the evaluation. The EGRA implementer RTI conducted over 10 reading assessments during implementation using similar reading assessment tools, but cross validation of SI's conversion factors calculated from the pilots with RTI's findings was limited due to less synchronized assessment timelines, tools used, methodology, and RTI's data availability to SI.

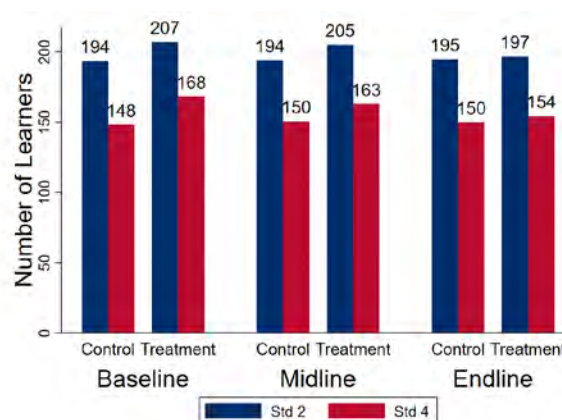
SAMPLE FEATURES AND PERFORMANCE INDICATORS

This section discusses key school and household sample characteristics and key performance indicators based on those characteristics. Data gathered during three rounds of data collection—baseline in 2013, midline in 2015, and endline in 2017—are used for the discussion.²³

LEARNER ENROLLMENT

On average, enrollment was close to 200 learners in Standard 2 and 155 in Standard 4. As shown in Figure 2, based on data reported by head teachers in all three rounds, more learners were enrolled in treatment than in comparison schools. When disaggregated by sex, the trend was similar to the overall trend in enrollment for both sex and standard, in both treatment and comparison schools, across the three rounds. Girls' enrollment on average was slightly higher or at least equal to that of boys in both standards across time, although the difference was not statistically significant.

FIGURE 2. AVERAGE ENROLLMENT



Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.

NUMBER OF TEACHERS AND LEARNER-TO-TEACHER RATIO

An average of eight teachers were reported to be teaching in Standards 2 and 4, as shown in Table 3. There were no significant differences noted between comparison and treatment schools across all three rounds. It is to be noted that while the average number of teachers decreased from baseline to midline in both treatment and comparison schools, it climbed up at endline, surpassing the baseline figures for reasons unknown to SI.

²² The midline pilot included more than 600 Standard 2 and 4 learners drawn from 22 schools adjacent to the sampled schools in two study districts. Due to high levels of zero scores, the sample reduced to less than 300 across sex and standard.

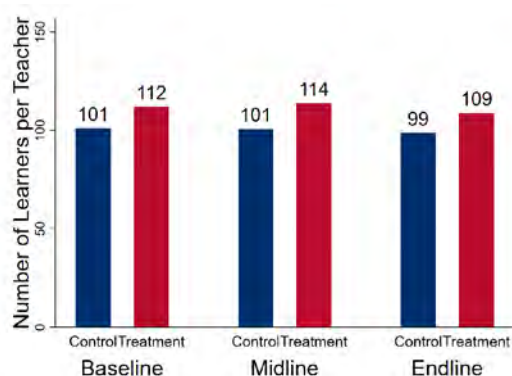
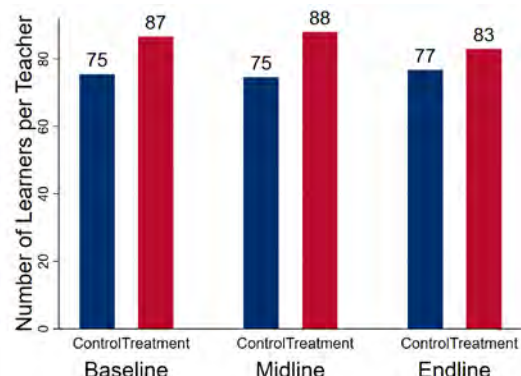
²³ School-level data were gathered from surveying head teachers, teachers, and Standard 2 and 4 learners, and household data were gathered from households of Standard 2 and 4 learners selected for the learning assessments. The evaluation team also triangulated many of the school-level findings with data from household interviews to verify the results. All data at each round were weighted appropriately.

TABLE 3. AVERAGE NUMBER OF TEACHERS

	STANDARD 2			STANDARD 4		
	TREATMENT	COMPARISON	ALL	TREATMENT	COMPARISON	ALL
Baseline	8.6	7.7	8.2	8.5	7.8	8.2
Midline	7.7	6.8	7.3	7.7	6.8	7.3
Endline	9.1	7.8	8.6	9.2	7.7	8.6

Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.

On average, there were eighty learners per teacher in both groups. The learner-to-teacher ratio in both comparison and treatment schools in both standards increased slightly from baseline to midline but declined at endline. The average number of teachers reported by headteachers at endline increased from base and midline while enrollment tended to decrease during the same period, and therefore the declining ratio at endline was likely driven by a combination of the two.

FIGURE 3. NUMBER OF LEARNERS PER TEACHER**STANDARD 2****STANDARD 4**

Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.

LEARNER AGE

Learners were on average 9.5 years old in Standard 2 and 11.5 years in Standard 4, as shown in Figure 4. There were no statistically significant differences in average age of learners across the three rounds and across comparison and treatment school learners in both standards. Also, SI did not find any statistically significant differences when disaggregating average age by sex in both standards and across the three rounds.

FIGURE 4. AVERAGE LEARNER AGE IN YEARS

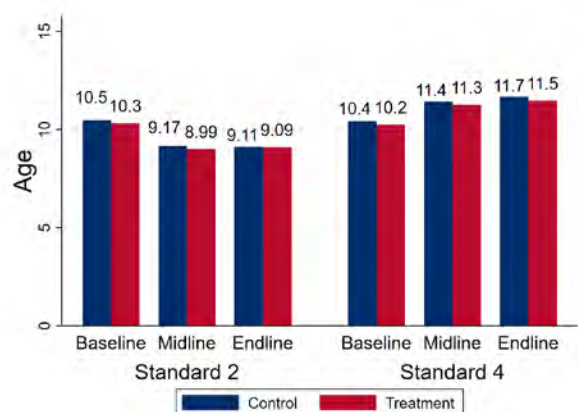
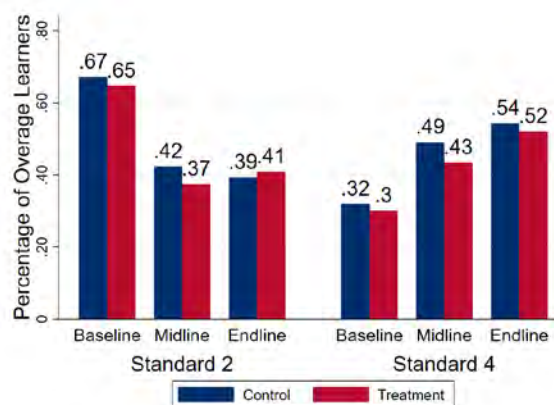


FIGURE 5. PERCENTAGE OF OVER-AGE LEARNERS



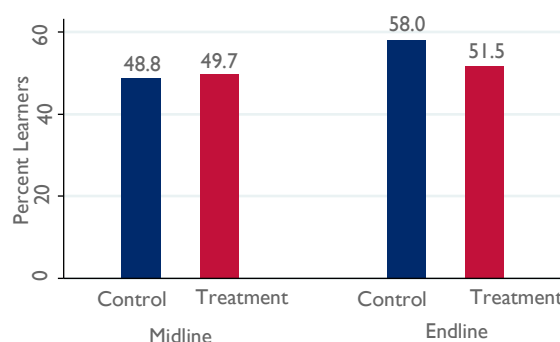
Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline. Note: Read data labels on Fig. 5 as follows: 0.67 as 67%, 0.65 as 65%.

In Malawi, learners are considered over-age if they are two years older than the expected age for their standard. Based on national norms, the assessment team expected Standard 2 learners to be between 7 and 8 and Standard 4 learners to be between 9 and 10. As such, Standard 2 learners were over-age if they were 10 or older, and Standard 4 learners were over-age if they were 12 or older. At endline in 2017, over-age learners represented nearly 40 percent of the sample in Standard 2 and over 50 percent in Standard 4.²⁴ Overall, the percentage of learners in Standard 2 above the average age for their standard decreased from baseline to endline, as shown in Figure 4. But, for Standard 4, the percentage of learners who were over-age consistently increased from baseline to endline.²⁵ By learner sex, there were no statistically significant differences in overage in both standards and across all three rounds.

LEARNER ATTENDANCE IN PRESCHOOL

Nearly half of the learners attended preschool. The learners' attendance in pre-schools appears to have improved over time, as shown in Figure 6, especially in the comparison group. Preschool attendance was not statistically significant by sex at endline in both groups.²⁶ The length of attendance in preschools ranged from a few months to three years, with a little over 19 percent, 13 percent, and 7 percent attending for one, two, and three years at both midline and endline in both groups.

FIGURE 6. PERCENTAGE OF LEARNERS WHO WENT TO PRESCHOOL



Household questionnaire: 2015 and 2017 weighted data; 320 schools.

²⁴ As per the Malawian education specialists, the high percentages of over-age learners could likely be due to class repetition or late enrollment. As discussed later in this report, data collected from head teachers in 2017 revealed 42 percent of learners in Standard 2 and 26 percent in Standard 4 as repeaters.

²⁵ Across all three rounds and standards, very few learners were below age.

²⁶ Such data were not collected at baseline.

TABLE 4. AVERAGE LENGTH OF SCHOOL DAY IN HOURS

	COMPARISON	TREATMENT
BASELINE		
Standard 2	4.23	4.39
Standard 4	5.44	5.48
MIDLINE		
Standard 2	4.21	4.44
Standard 4	5.42	5.51
ENDLINE		
Standard 2	4.33	4.44
Standard 4	5.46	5.51

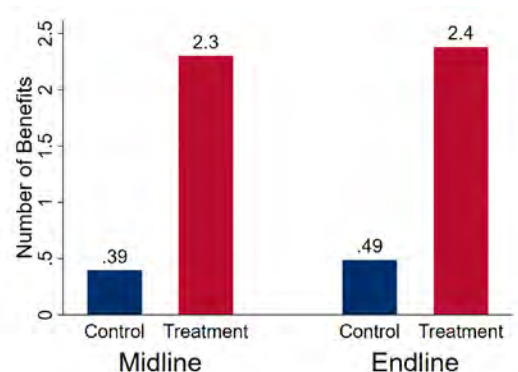
Head Teacher Questionnaire 2013, 2015, and 2017
Weighted data 30 schools at baseline, and 320 at midline
and endline

LENGTH OF SCHOOL DAY²⁷

The average length of school day in Standard 4 relative to Standard 2 was higher by an hour in both comparison and treatment schools (Table 4). Since EGRA worked with MoEST to extend school hours to allow for more time on tasks, the difference in length of school day between treatment and comparison schools slightly widened from baseline to endline for both standards. RTI staff reported that the MoEST was quicker to lengthen the school day for Standards 1 and 2 than for the higher standards because typically these standards have the shortest school day in Malawi. So, extending their school day by an hour did not cause major disruptions in the planning or scheduling of breaks, lunches, and so on.

SCHOOL FEEDING

Less than half of the schools participated in school feeding programs. A total of 37.5 percent of head teachers in treatment schools and 28 percent in comparison schools at endline reported the presence of school feeding programs. The figures almost remained steady from baseline to endline in both groups. Generally, school feeding programs tend to be offered in poorer areas. But, correlation between school feeding and average household assets was not strong at either midline or endline. Also, correlation between schools with higher levels of school resources and school feeding programs was strong and positive. These results suggest that the idea that schools have school feeding programs because they are worse off may not hold in the study areas.

FIGURE 7. AVERAGE NUMBER OF BENEFITS FROM EGRA (TOTAL BENEFITS=9)

Head teacher questionnaire: 2015 and 2017, weighted data; 320 schools.

EGRA SUPPORT

All treatment schools received support from EGRA, at both midline and endline. This is to be expected, as these are the schools where the EGRA intervention took place. But, about one third of head teachers in comparison schools at both mid and endline said that their schools received support from EGRA.²⁸ In fact, when SI looked at EGRA implementation fidelity, there did not appear to be any EGRA implementation effects in comparison schools.

When asked about the types of support received from EGRA, two thirds of the head teachers in

²⁷ A key policy area that EGRA worked with MoEST involved extension of the school day by an hour in order to increase the time allocated for reading lessons.

²⁸ This high percentage of comparison schools reporting that they received EGRA support is likely due to head teachers misunderstanding where their support came from, given that all donor and MoEST activities focused on improving reading

treatment schools listed receiving text books for use in classes and for learners to take home, extension of the school day, or reading classes. About half of them also listed teacher trainings and coaching visits. Fewer than five percent of head teachers mentioned signing MOUs²⁹ and receiving some grants,³⁰ one of the EGRA components to improve policy environment, perhaps since these were only implemented for a year.

Head teachers were also asked about benefits they perceived from EGRA. There was a total of nine types of EGRA benefits reported by the head teachers, including better school facilities, more resources for teachers and learners, more motivation for teachers and learners, better quality of teaching, longer school days, learners able to read better, and learners able to learn better in other subjects. Treatment schools reported an average of receiving about 2.5 benefits from EGRA, while comparison schools perceived an average of 0.5 benefits. No treatment schools reported that EGRA support did not provide any benefit.

SUPPORT FROM OTHER ORGANIZATIONS AND PROJECTS

More than half of the schools received support from several individuals, organizations, or businesses. As per the head teachers, across both comparison and treatment schools at both midline and endline, more than half of the sampled schools have received support from several other donors. Support appears to have increased in treatment schools from 57 percent of head teachers reporting affirmatively at midline to 64 percent at endline, while it remained steady at 56 percent in comparison schools. When asked at endline about the specific organizations or projects their schools received support from, head teachers in both groups mentioned ASPIRE, Save the Children, and World Vision among the top five. Treatment schools also reported receiving help from Forum for African Women Educationists in Malawi (FEWEMA), while head teachers in comparison schools reported that they received support from Mary's Meals.

COMMUNITY INVOLVEMENT IN SCHOOLS

Nearly all head teachers reported having a parent-teacher association (PTA) in their schools. This was the case in all three rounds and in both groups. This was also corroborated through class teacher interviews. Most head teachers reported that their school's PTA meets once a month or once every two to three months. A total of 37 percent and 39 percent, respectively, of comparison schools stated meeting once a month or once every two to three months, while the corresponding figures in treatment schools were 42 percent and 37 percent, respectively. These figures did not change across time in both groups. The data indicates that number of PTA meetings per year in treatment schools was slightly higher than in comparison schools.

Class teachers met with parents outside of the PTA meetings in both groups. Three fourths of class teachers in both comparison and treatment schools across all three rounds reported that they met with parents outside of the PTA meetings. When asked about frequency of such meetings, teachers met with parents more often at midline and endline than at baseline in both groups. Teachers meeting with

in primary school are often considered early grade reading activities, especially the MTPDS project. Thus, head teachers may have reported receiving support from EGRA when they in fact received support from another donor or the MoEST.

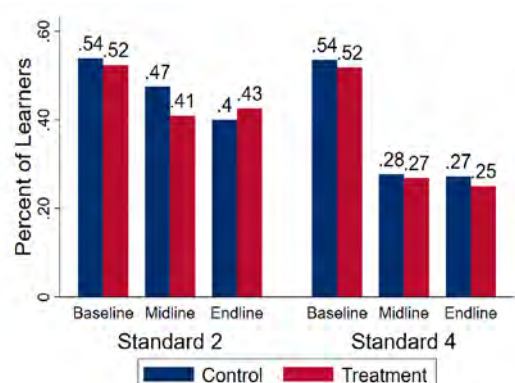
²⁹ In 2014, EGRA developed and signed MOUs with District Education Managers, schools and school management committees, and PTAs that outlined the roles and responsibilities of each party in the implementation of EGRA, including extension of school days and support of early grade reading in their respective areas (RTI, 2016).

³⁰ EGRA distributed 134 small grants in 2016 (in the range of \$1,000 to \$1,500) to high performing schools identified through a grant process. The grants were used to paint classroom walls with letters and words, construct libraries, create reading shelters, renovate libraries, and buy teaching learning materials (RTI, 2016).

parents four or more times per school year increased from 16 percent at baseline to 32 percent at midline to 40 percent at endline in treatment schools, while it increased from 19 percent to 29 percent to 32 percent in comparison schools.

Over two thirds of the head teachers also reported inviting parents to learners' classes in both treatment and comparison groups. This data remained steady at 73 percent and 66 percent, respectively, in treatment and comparison schools across the three rounds.³¹ As part of project components, EGRA encouraged greater community involvement in support of primary education.

FIGURE 8. PERCENTAGE OF LEARNERS REPEATING A STANDARD



Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.

Note: Read data labels as follows: 0.54 as 54%, 0.52 as 52%, 0.52% etc.

LEARNER REPETITION

Learners repeating the same standard on average was generally higher in Standard 2 compared to Standard 4. Overall, repetition at baseline was similar in both standards at 53 percent. And it steadily declined to 42 percent and 26 percent, respectively, in Standards 2 and 4 at endline across both treatment and comparison groups.³² Repetition among Standard 4 learners was slightly lower in treatment relative to comparison schools in all three rounds. By sex, girls and boys repeated classes at similar numbers in both treatment and comparison schools. At endline, more than half of the class teachers in both groups mentioned learners' lack of attention in classes followed by learner absenteeism as major reasons for repetition. Teacher absenteeism was

also mentioned by 10 percent of teachers, with larger class sizes, which can affect teachers' ability to provide adequate support to learners and thus lead to lack of attention by learners in classes, and lack of parental support each by about 8 percent of teachers. There was no difference noticed in reasons between comparison and treatment schools and by learner sex or standard.

SI examined the endline data for factors associated with repetition using a logit regression model. SI used the binary learner-reported (and verified with the head-of-household) information on whether learners repeated their standard in the 2016–17 academic year against learner, household, classroom, and school-level explanatory variables. The factors that were found to be significantly associated are shown in Table 5 (see Annex 6 for the full model). The results show that, among Standard 2 learners, the higher the level of education of at least one member of the household, the lower the odds of a learner repeating a class. Also, the odds of learners in Treatment Level 3 (INVC) to be repeating Standard 2 were low, whereas learners in CDCS full integration districts (Treatment Level 1) repeating Standard 2 were high. Among Standard 4 learners, the odds of repetition were lower when someone read to the learners at home, with more use of essential teaching practices by the class teachers, and

³¹ EGRA project encouraged schools to allow for community members, including school management committees and PTAs, to visit, monitor, and support schools to see what is happening in the classroom and thereby cultivate a positive relationship between communities and schools.

³² Similar rates of repetition were also found in a parallel reading assessment conducted by SI in 2017 of 10,131 Standard 2 and 4 learners drawn from 318 schools located in 34 education districts. The assessment was conducted to establish a baseline for the National Reading Program launched in 2016. The baseline study found repetition rates of 36 percent in Standard 2 and 22 percent in Standard 4.

when learners could take the books home and read them. But, learners in Treatment Level 3 (INVC) were more likely to be repeating Standard 4.

TABLE 5. FACTORS THAT PREDICT LEARNER REPETITION AT ENDLINE (LOGIT REGRESSION)

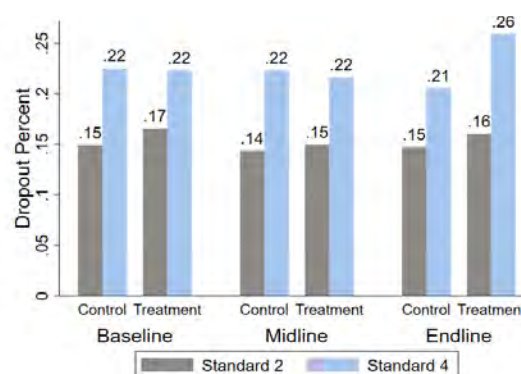
STANDARD 2		STANDARD 4	
VARIABLE	COEFFICIENT	VARIABLE	COEFFICIENT
Household's highest education level (in years)	-0.0227*	Someone at home reads to learner (dummy)	-0.1962*
Level 3: EGRA+INVC (dummy)	-0.3155**	Teacher use of essential teaching practices (index)	-0.0578**
Level 1: EGRA+SSDI+INVC (dummy)	0.5689**	Learner reads at home the books taken home (dummy)	-0.6282***
		Level 3: EGRA+INVC (dummy)	0.2808

Learner and Household Questionnaires and classroom observations: 2017 weighted data. ***, **, and * indicate 1%, 5%, and 10% levels of significance.

LEARNER DROPOUTS³³

Learner dropout rates on average across time were around 14 percent in Standard 2 and 17 percent in Standard 4, and higher in treatment than in comparison schools (Figure 9). The difference in dropout rates between the two groups was similar in all three rounds, although was not statistically significant. At endline, when class teachers were asked for reasons for dropouts, more than three fourths mentioned lack of parental encouragement or support to attend school, followed by learners' lack of interest in school by one third of teachers. Migration and poverty were each mentioned as reasons only by less than ten percent of the teachers.³⁴ There was no difference noticed in reasons between comparison and treatment schools and by learner sex or standard. There were no specific reasons mentioned that were directly associated with the EGRA project in minimizing dropout rates.

FIGURE 9. DROPOUT RATES



Head Teacher Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.

Note: Read data labels as follows: 0.15 as 15%, 0.17 as 17%.

³³ For each standard, dropout rates were calculated as a proportion of number of dropouts at the end of the year to number of learners enrolled at the beginning of that year, as reported by the head teacher.

³⁴ For a long time, migration and poverty have been considered as major factors that affect learner dropouts in developing countries, including in Malawi. Of late, however, lack of parental support and learners' interest in schools appear to have been recognized in many African countries as top reasons. These dropout causes could be more easily mitigated, compared to poverty and migration, through designing focused interventions, thus helping reduce dropouts.

TABLE 6. FACTORS ASSOCIATED WITH TOTAL ANNUAL STANDARD 1 TO 4 DROPOUTS AT ENDLINE (TOBIT REGRESSION)

VARIABLES	COEFFICIENT
Learners attended preschool (dummy)	-0.0763***
School has a feeding program (dummy)	-0.0394**
Level 1: EGRA+INVC+SSDI (dummy)	-0.0133
Level 2: EGRA+SSDI (dummy)	-0.046**
Level 3: EGRA+INVC (dummy)	-0.0094
Level 4: EGRA only (dummy)	-0.0306*
Sigma	0.1152***

Learner and Household Questionnaires and classroom observations: 2017 weighted data. ***, **, and * indicate 1%, 5%, and 10% levels of significance.

that they attended preschool; this was also verified by heads of household. Around 28 percent and 38 percent of head teachers in comparison and treatment schools, respectively, reported having school feeding programs for at least the past two years. Dropout rates were also significantly lower when learners resided in districts where only the EGRA project was implemented or when learners resided in areas where the SSDI program operated along with EGRA, perhaps due to better access to health care facilities when learners got sick.

SI also examined for the factors associated with dropout rates using endline data using Tobit regression model; results are shown in Table 6. Dropout rates were constructed using the data reported by the head teachers as a proportion of the number of dropouts at the end of the academic year to enrollments at the beginning of the academic year across Standards 1 through 4. School averages across household, classroom, and school-level variables were used as explanatory variables. At endline, the average dropout rate in Standards 1 to 4 was about 12 and 13 percent, respectively, in treatment and comparison schools.

Lower dropout rates were significantly associated with learners' attendance in preschool or operation of school feeding programs, as shown in Table 6. About 55 percent of learners, regardless of sex, surveyed at endline in Standards 2 and 4 reported

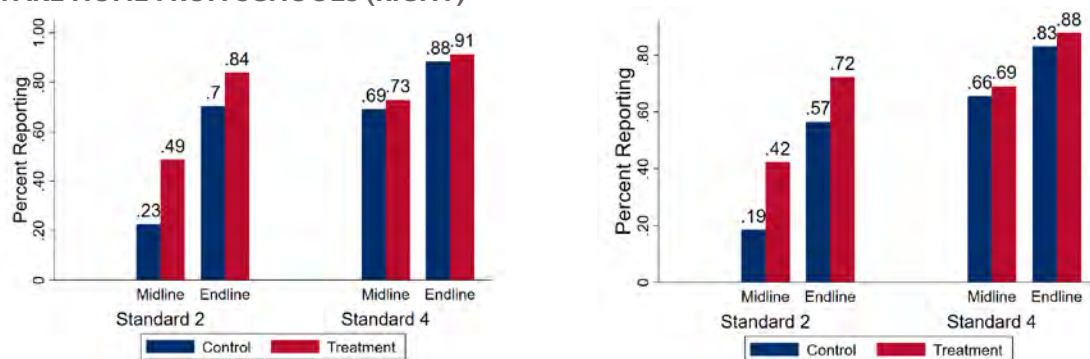
ACCESS TO READING MATERIALS FOR LEARNERS AT HOME

As one of its components, the EGRA printed and distributed text books to use in schools and for learners to take home to read.

Learners in treatment schools were more likely to take books home and read them across both standards than those in comparison schools. Learners in Standard 4 were more likely to take books home than learners in Standard 2 across both standards at both midline and endline, and learners in treatment schools were more likely to take books home across both standards and rounds than those in comparison schools, as shown in Figure 10. Of those learners who reported that they do take books home, as illustrated in Figure 10, learners who said that they read them at home increased in both treatment and comparison schools in both standards from mid to endline.³⁵ In Standard 2, at endline about 58 percent and 75 percent of learners in comparison and treatment schools, respectively, reported that they read the books they took home, and in Standard 4, this was 82 and 86 percent, respectively, in comparison and treatment schools. There was no statistically significant difference by learner sex in both standards and treatment groups in taking books home or reading the books they take home.

³⁵ These questions were not asked at baseline to compare with midline and endline results.

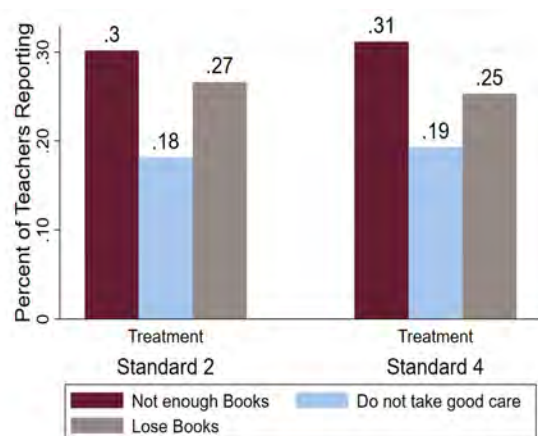
FIGURE 10. LEARNERS TAKING BOOKS HOME (LEFT) AND READING BOOKS AT HOME THAT THEY TAKE HOME FROM SCHOOLS (RIGHT)



Learner Questionnaire: 2015 and 2017 weighted data; 320 schools.

Note: Read data labels as follows: 0.23 as 23%, 0.49 as 49%. etc.

FIGURE 11. REASONS FOR NOT HANDING OUT TEXTBOOKS TO TAKE HOME (PERCENT TEACHERS REPORTING)



Teacher Questionnaire: 2017 weighted data; 320 schools.

Note: Read data labels as follows: 0.3 as 30%, 0.18 as 18%.

Access to books to take home likely affects whether learners take books home with them. About 80 percent of teachers at endline, slightly more in treatment than in comparison schools, reported handing books to learners to take home. Teachers at both midline and endline, however, said they do not hand out all the textbooks they have been provided for the following three reasons: there are not enough for each learner to have one, they are worried that learners will not take good care of them, and they are worried that learners will lose them. At endline, about 34 percent and 45 percent of teachers, respectively, from treatment and comparison schools also reported not having enough textbooks for each learner to hand them to take home (see Figure 11 for results from treatment schools). These figures indeed increased by about nine percentage points from midline in both groups.³⁶ Such reasons could have affected learners' access to books to take home.

HOUSEHOLD HELP TO LEARNERS AT HOME

As one of its components, the EGRA encouraged household and community involvement in primary education.

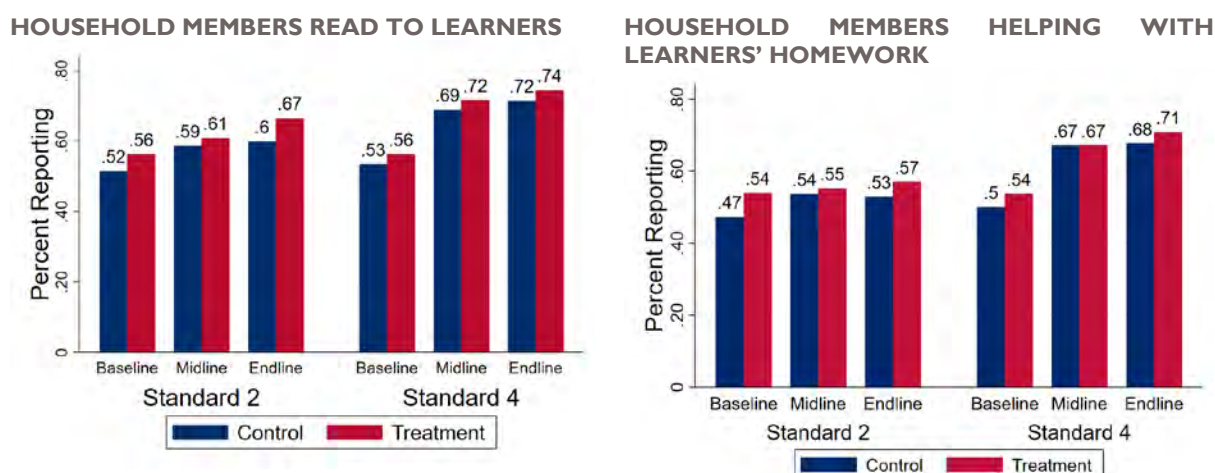
More than two thirds of the households in both groups reported helping the learners with their studies. This was noticed across all the three rounds. When asked to elaborate, more than two thirds of household heads or caretakers responded that they encouraged the child to read, and nearly one third of household members reported that they worked to communicate high expectations to their child.

³⁶ The EGRA project also found that some teachers did not allow learners to take books home to read or loaned them out to the village reading centers (VRCs) since they were worried that they may not get the books or they may be destroyed and schools may not get more books to replace them. EGRA assured the schools that books will be replaced and asked the parents and communities to take responsibility for the books loaned out and reported to improve the situation (RTI, 2016).

Close to 20 percent of households bought or borrowed books for their child to read. The difference between comparison and treatment groups in either of Standard 2 and 4 was not statistically significant for ways in which households helped learners across baseline, midline, and endline.

The percentage of learners reporting to being read to at home by someone in the household increased from baseline to endline in both groups and standards, as shown in Figure 12. Across time and in both treatment and comparison groups, more learners in Standard 4 were read to at home compared to Standard 2 learners. By sex, slightly more girls were read to at home in the treatment group than in the comparison group in both standards, based on data from the endline. Slightly more girls in Standard 2 were read to at home among treatment schools versus comparison schools, but no difference was noticed for boys. For Standard 4, boys were read to at home equally (73 percent) in both treatment and comparison schools, but more girls in treatment (73 percent) than in comparison schools (67 percent) were read to at home.

FIGURE 12. HOUSEHOLD HELP AT HOME FOR LEARNERS AT BASELINE, MIDLINE, AND ENDLINE, BY TREATMENT GROUP



Learner Questionnaire: 2013, 2015, and 2017 weighted data; 310 schools at baseline, and 320 at midline and endline.
Note: Read data labels as follows: 0.52 as 52%, 0.56 as 56%.

More than half of the learners in both standards in all three rounds reported receiving help with their homework from a household member, with slightly more learners in treatment schools receiving help than learners in comparison schools, as shown in Figure 12. More learners in Standard 4 reported receiving help relative to Standard 2 learners in both groups across all three rounds. Furthermore, the percentage of learners reporting help from household members steadily increased from baseline to endline in both groups and in both standards.

HOUSEHOLD SUPPORT FOR GIRLS AND BOYS AND INVOLVEMENT IN SCHOOL

Nearly all households (more than 96 percent) reported that it is important for girls and boys to go to school. This was noted at both midline and endline based on data reported by the heads of households. There was no significant difference across comparison and treatment schools. The figures indeed increased from baseline, where about 90 percent of households reported that it was important for girls and boys to go to school across treatment and comparison groups.

Over three fourths of households in both groups at all three rounds reported being involved in their children's school activities. When compared to baseline, the figures slightly but steadily increased in both groups.

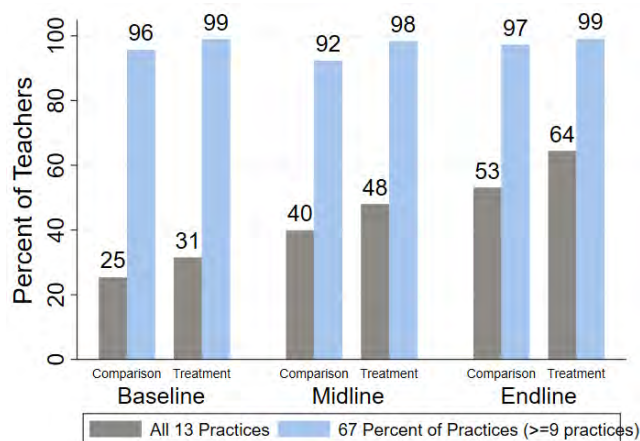
The difference at each round between treatment and comparison groups or by learner sex or by standard was not statistically significant.

TEACHING PRACTICES OF OBSERVED TEACHERS

EGRA's first component was to provide quality reading instruction for early grade learners, and the tasks under the component included providing continuous training to teachers and school administrators, teaching practicum, lesson plans and related reading materials, and supporting and mentoring teachers.

Enumerators conducted classroom observations of Chichewa or English classes at each round to measure teacher practices in the classroom in order to explain learning outcomes for learners.³⁷ Enumerators observed a total of 1,216, 1,246, and 1,750 classes, respectively, at baseline, midline, and endline.³⁸ Over 88 percent of the classes observed in each of the three rounds in both standards and groups were taught by a single teacher, while the rest were co-taught with an adult part-time teacher. More female than male teachers in Standard 2 and more male than female teachers in Standard 4 were observed at each round in each of treatment and comparison groups, reflecting the general composition of teachers by sex teaching reading classes in these standards. Enumerators were instructed to observe many aspects of teacher behavior and record their observations.

FIGURE 13. PERCENT OF TEACHERS USING ESSENTIAL PRACTICES



Classroom Observations 2013, 2015, 2017 weighted data 310 in 2013; 320 in 2015 and 2017.

Over 90 percent of teachers in both treatment and comparison groups used at least 67 percent of the essential practices as shown in . Based on the literature, the evaluation team considers 13 practices as essential teaching practices. The proportion of teachers using two thirds of the 13 essential practices remained steady across all three rounds and was always higher in treatment schools than in comparison schools.

Slightly over two thirds of teachers in treatment schools and a little over one half of the teachers in comparison schools used all 13 essential practices at endline. The proportion of teachers using all 13 essential practices indeed improved

across time in both groups: from one quarter at baseline to little over one half of teachers at endline in comparison schools, and from one third at baseline to two thirds of the teachers at endline in treatment schools.

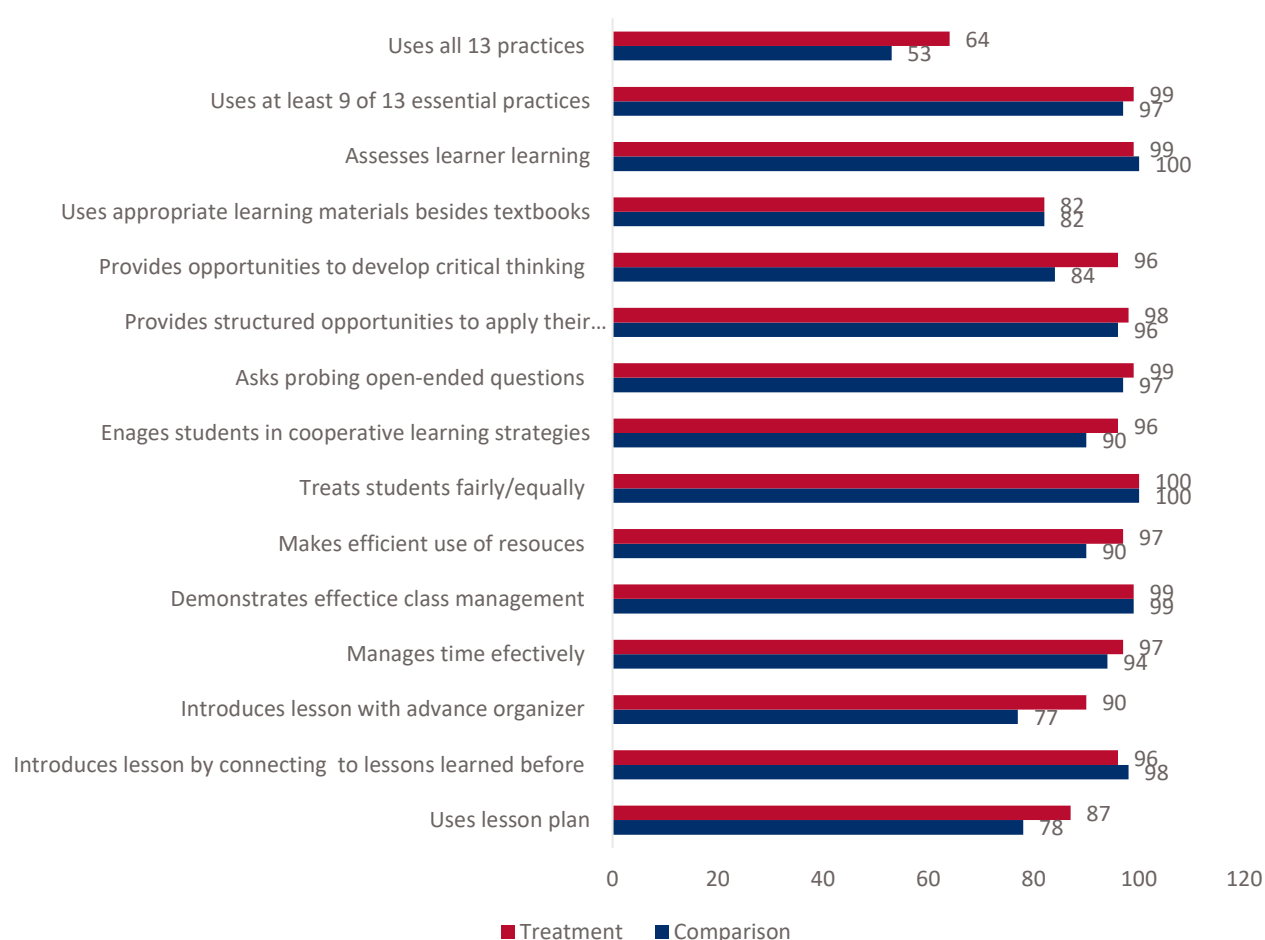
Use of teacher practices, especially in treatment schools, appears to have improved from baseline to endline in most of the 13 essential practices. Performance of teachers in comparison and treatment schools at

³⁷ While the same set of schools were followed at each of baseline, midline and endline, the teachers observed at each round were not the same. Therefore, comparisons across the three rounds should be interpreted cautiously.

³⁸ While the observations were conducted in the same schools across all three rounds, the teachers observed were not. But, observations were always made of the Chichewa and English reading classes in Standard 2 and Standard 4. Thus, comparisons of teaching practices across time only reflect trends over time

endline by each of the 13 essential practices is shown in Figure 14. More teachers in treatment than in comparison schools at endline used each of the 13 essential practices. Also, teachers in treatment schools appear to have improved notably at endline from baseline in providing learners with opportunities to develop critical thinking skills (from 40 percent at baseline to 96 percent at endline in treatment schools), effectively using a variety of instructional resources including textbooks (from 55 percent at baseline to 82 percent at endline in treatment schools), and asking open-ended questions to encourage learning (from 55 percent at baseline to 99 percent at endline in treatment schools). Teachers observed in all three rounds across both groups treated all learners equally, and nearly 96 percent demonstrated effective classroom management skills. However, while use of lesson plans by teachers improved across time in both groups from 78 percent at baseline to 87 percent at endline in treatment group and slightly from 77 percent at baseline to 78 percent at endline in comparison group, use of the practice still remained below 90 percent, even in the treatment group despite EGRA's including scripted lesson plans, and thus indicates room for improvement in the practice.³⁹

FIGURE 14. USE OF ESSENTIAL TEACHING PRACTICES BY THE OBSERVED TEACHERS (PERCENT OF TEACHERS USING THE PRACTICE)



Classroom Observations: 2017.

³⁹ During teacher training workshops, EGRA conducted one-day practicum sessions on the final day of each training. During these practicum sessions, a classroom with about 20 learners was organized in each training center, which allowed for participants to model and practice skills acquired in as close to a classroom situation as possible (RTI, 2016). The practicum included several topics and was probably short to allow teachers to practice lesson planning and modifying scripted lessons to suit local context.

EGRA coaching and in-service professional development training was positively associated with higher use of essential practices.⁴⁰ At endline, about half of the head teachers in treatment schools reported to have received teacher trainings and coaching visits from PEAs in the past three years.⁴¹ A total of 67 percent of the class teachers in treatment schools who reported to have received EGRA coaching in the past three years rated the coaching as a 5 (most useful), and only 2 percent rated the coaching at 1 (least useful). SI estimated through ordinary least squares regression model for the association between EGRA coaching and teacher performance, which was captured by an index of the observed teacher use of the 13 essential practices. As shown in Table 7, both EGRA coaching and length of EGRA in-service professional development training were significantly associated with higher levels of use of essential teaching practices among Standard 4 teachers, while EGRA coaching probably affected Standard 2 teachers positively.⁴²

TABLE 7. ASSOCIATION BETWEEN EGRA COACHING AND TEACHERS' CLASSROOM TEACHING PERFORMANCE (OLS REGRESSION)

VARIABLE	TEACHER USE OF ESSENTIAL PRACTICES	
	STANDARD 2	STANDARD 4
Teacher got EGRA coaching (dummy)	0.5026***	0.6910***
Number of days teacher got in-service EGRA professional development in last 3 years	0.0013	0.0090***

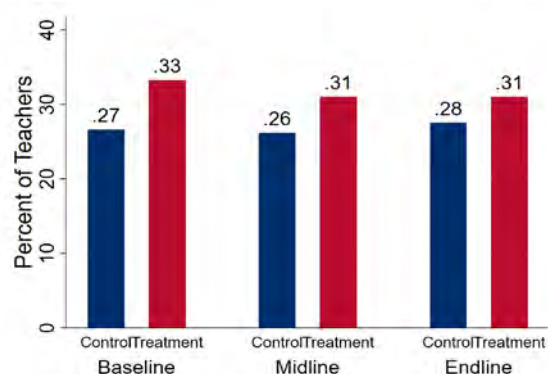
Classroom Observations and Teacher Questionnaire: 2017. ***, **, and * indicate 1%, 5%, and 10% levels of significance.

⁴⁰ During the implementation period of three years, the EGRA project provided several training workshops for teachers engaged in teaching Standards 1 to 3 to effectively teach Chichewa and English. To provide ongoing teacher support and mentoring, EGRA also trained 134 PEAs, who made over 14,000 coaching visits over the three years. The PEAs were expected to visit all the EGRA project schools at least once a term to conduct classroom observations of a Chichewa or English class and provide feedback to the teachers, including by demonstrating good teaching practices when needed, and identifying where further support was needed (RTI, 2016).

⁴¹ The EGRA project expected PEAs to at least visit the schools three times a year or once a term, but that did not happen owing to many reasons including being involved in a lot of different types of activities unrelated to teacher support, allowing less time for coaching, and their lower preference to visit schools in remote areas. For example, in the 2015–16 school year, only 77 percent of schools had a coaching visit by PEAs, compared to the target of 95 percent. At closing, RTI reported that more than one third of EGRA schools were never visited by the PEAs in the entire three years of EGRA. As per RTI, a major lesson learned is that training PEAs and providing tools such as tablets and fuel are not enough to get coaches to visit schools as targeted, especially in remote areas, and more incentives such as career advancement opportunities need to be in place for them to engage in coaching teachers (RTI, 2016).

⁴² A study by the EGRA project implementer, RTI, using a sample of 1,660 teachers trained by EGRA, showed that teachers who received more monitoring and mentoring visits from EGRA/MoEST personnel tended to perform better in use of essential teaching practices (RTI, 2016).

FIGURE 15. SUFFICIENCY OF RESOURCES TO TEACH IN CLASSES (PERCENT OF TEACHERS REPORTING YES)



Teacher survey: 2013, 2015, and 2017 weighted data; 310 at baseline, 320 at midline and endline.

Read data labels as follows: 0.27 as 27%, 0.33 as 33%.

More teachers in treatment than in comparison schools perceived having adequate teaching resources across all three rounds. Teaching resources include adequate number of text books, teaching materials such as wall hangings, and chalk boards in a class. At endline, 31.5 percent and 28 percent of teachers, respectively, from treatment and comparison schools perceived having enough resources to teach their classes, as shown in Figure 15. Endline data gathered through school environment observations conducted by the enumerators, however, differed from the above finding in that more comparison schools (45 percent) were assessed to have sufficient resources for teachers to teach classes relative to treatment schools (37 percent). The data also indicated that an equal proportion of schools (17

percent) in both groups required immediate improvements in the availability of resources to teachers.⁴³

FINDINGS

LEARNER READING PERFORMANCE

This section discusses learner performance in terms of zero scores, average scores, and percentage of learners meeting MoEST-established benchmarks for oral reading fluency and reading comprehension subtasks.⁴⁴ For oral reading fluency, learners were asked to loudly read a Chichewa passage of 56 words. After one minute elapsed, the enumerator recorded the number of words read correctly (cwpm) and then asked learners to answer comprehension questions about the story. The number of questions that enumerators asked to assess comprehension varied according to how much of the story the learner could read in the minute. There was a question for every two lines or so of text completed by the learner, with a total of five possible questions. The reading comprehension score reflects the number of questions answered correctly out of the total possible five.⁴⁵

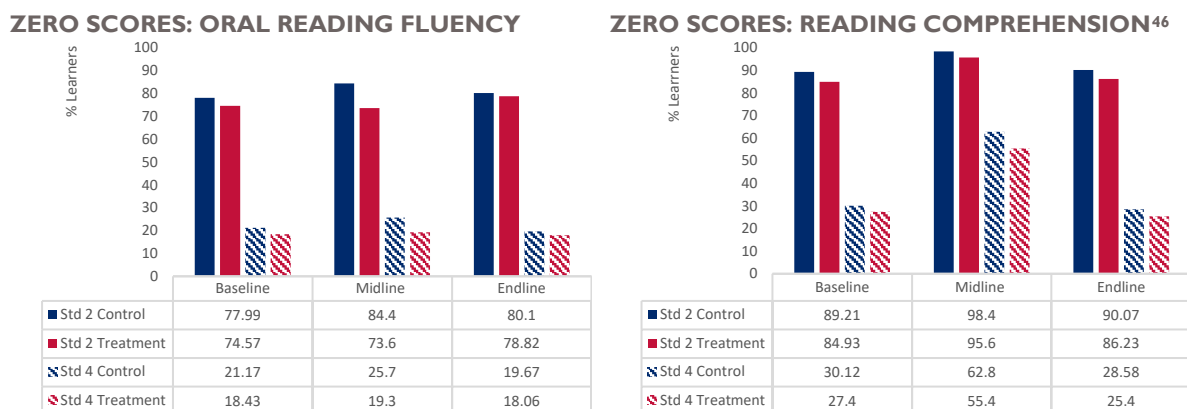
⁴³ SI did not gather quantitative data from sampled schools on teaching resources. It is likely that motives of sampled teachers in treatment and comparison groups in response to a categorical (yes/no) question could have led to this result.

⁴⁴ See Annex 8 for results related to four other subtasks that were also assessed for this study: listening comprehension subtask categorized as a pre-reading skill, and letter name knowledge, syllable reading, and familiar word reading subtasks categorized as initial reading skills.

⁴⁵ The comprehension questions consisted of four direct, fact-based questions and one inferential question. The number of questions asked depended on the point at which the learner stopped reading within one minute. If the learner only read half of the passage, he or she was only asked two or three questions; if the learner did not read one word at all, he or she was not asked any questions; and, if the learner completed the passage within one minute, he or she was asked all five questions.

LEARNERS SCORING ZERO IN READING ASSESSMENTS

FIGURE 16. PERCENTAGE OF LEARNERS SCORING ZERO BY TREATMENT STATUS AT BASELINE, MIDLINE, AND ENDLINE FOR ORAL READING FLUENCY AND READING COMPREHENSION



Learner Reading Assessments: 2013, 2015, and 2017 weighted data.

ORAL READING FLUENCY. *The proportion of learners scoring zero in treatment schools was consistently lower than in comparison schools across all three rounds in both Standards 2 and 4 (Figure 16).⁴⁷ For Standard 2, the proportion of learners scoring zero at endline was also significantly lower in treatment than in comparison schools. At midline, the percentage of learners scoring zero in Standard 2 increased from baseline in comparison schools. In Standard 4, percentage of learners scoring zero increased from baseline to midline in both treatment and comparison schools. Indeed, a lower percentage of Standard 4 learners compared to Standard 2 learners scored zero by at least reading one word correctly. But, nearly 20 percent of Standard 4 learners scored zero at endline for oral reading fluency in both treatment and comparison groups, indicating that even at the end of four years of schooling, one fifth of learners were not acquiring the required early grade reading skills to read a single word in a passage correctly in a minute.⁴⁸*

READING COMPREHENSION⁴⁹ *Proportion of learners scoring zero in treatment schools was consistently lower than in comparison schools across all three rounds in both Standards 2 and 4 (Figure 16). In all three rounds, more than 85 percent of Standard 2 learners could not answer any question correctly. In*

⁴⁶ As discussed earlier, reading assessment tools used at baseline and endline were similar, but the midline tool was different. Pilots were run at both midline and endline to calculate conversion rates to statistically equate all the tools to ensure comparability. Such conversion rates are relevant for timed subtasks such as oral reading fluency than for the untimed subtask of reading comprehension, which depends on the extent of passage read by a learner in a minute. Therefore, conversion rates were calculated and applied for oral reading fluency scores only. So, comparability across time for reading the comprehension subtask could be limited and should be interpreted with caution.

⁴⁷ A comparison of the characteristics of learners scoring zero with those scoring above zero showed no marked differences in learners' age, language spoken by the learner with friends, in learner taking and using books at home, and in learner household's involvement in school. But, the proportions of learners getting help from household members to do homework, and learners having some household members reading to them were slightly higher among those that scored above zero than those that scored zero. Although, overall, the learners scoring zero were not considerably different from those that scored above zero at baseline, midline, and endline.

⁴⁸ This is likely correlated with their scores on the initial reading skills that are the building blocks for learners to acquire reading fluency skills. Early grade literature (EGRA Toolkit 2.0, 2015) shows that learners scoring zero on the initial reading subtasks are likely deficient in using reading strategies to interpret meaning from text (e.g., decoding, inferring, predicting, etc.). Indeed, the evaluation team found a strong and positive correlation between zero scores in oral reading fluency and zero scores in familiar words for both groups.

⁴⁹ See earlier footnote on limited comparability across time for the reading comprehension subtask and hence a need for caution in interpreting results across time.

Standard 4, the percentage of zero scores at each round in the treatment group was also significantly different from the comparison group.

AVERAGE READING SCORES OF LEARNERS

TABLE 8. AVERAGE ORAL READING FLUENCY SCORES (CWPM), BASELINE TO ENDLINE

STANDARD		BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	2,283	3.22	0.34	1,684	1.84	0.3	1,356	4.92	0.98
	Treatment	2,139	3.89	0.71	3,110	3.52	0.3	2,484	4.43	0.37
Standard 4	Comparison	2,268	26.21	0.94	1,693	20.28	0.75	1,351	27.18	1.06
	Treatment	2,184	26.68	1.15	3,101	22.27	0.68	2,481	29.58	0.80

Learner Assessments: 2013, 2015, and 2017 weighted data. N = Number of Learners, AVG = Average, SE = Standard Errors

ORAL READING FLUENCY. *The treatment group in Standard 4 scored consistently slightly higher than the comparison group from baseline to endline. But, the Standard 2 treatment group score was higher at baseline and midline but was lower at endline relative to the comparison group (Table 8). At endline, the average Standard 4 score was significantly different between the treatment and comparison groups, while the difference was not significant for Standard 2. For Standard 2, the average score in correct responses for the comparison group declined drastically from 3.22 at baseline to 1.84 at midline but increased to 4.92, while for the treatment group scores declined slightly from 3.89 at baseline to 3.52 at midline and climbed to 4.43 at endline, albeit slightly lower at endline relative to the comparison group. For Standard 4 learners, while the average score fluctuated little over time for both treatment and comparison groups, the treatment group consistently scored higher than the comparison group even when the score dipped slightly at midline. Standard 4 average scores at baseline, midline, and endline, respectively, were 26.21, 20.28, and 27.18 cwpm for the comparison group whereas they were 26.68, 22.27, and 29.58 for the treatment group.*

TABLE 9. AVERAGE READING COMPREHENSION SCORES (NUMBER OF QUESTIONS RESPONDED CORRECTLY), BASELINE TO ENDLINE

STANDARD		BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	1,622	0.13	0.02	1,684	0.03	0.01	1,356	0.15	0.03
	Treatment	2,800	0.21	0.05	3,110	0.06	0.01	2,484	0.20	0.02
Standard 4	Comparison	1,620	1.39	0.07	1,693	0.58	0.04	1,351	1.54	0.08
	Treatment	2,832	1.48	0.07	3,101	0.68	0.04	2,481	1.72	0.05

Learner Assessments: 2013, 2015, and 2017 weighted data. N = Number of Learners, AVG = Average, SE = Standard Errors

READING COMPREHENSION. *The treatment group in both standards scored consistently slightly higher than the comparison group from baseline to endline. Standard 2 scores changed little from baseline to endline in both groups, but Standard 4 scores in the treatment group were higher at endline than at baseline (Table 9). At endline, average score was significantly different for both standards between the treatment and comparison groups. For Standard 2, the average scores in the treatment and comparison groups at endline were similar to those found at baseline, although the treatment group scored consistently higher than the comparison group at both baseline and endline. For Standard 4, the treatment group relative to the comparison group not only scored higher at endline, but also improved from 1.50 questions answered correctly at baseline to 1.72 at endline.*

PROPORTION OF LEARNERS MEETING BENCHMARKS

The MoEST-established benchmarks in 2014 requires that learners in Standards 2 and 4, respectively, read at least 40 and 50 words correctly in a minute, and answer at least 80 percent of questions correctly after reading the passage.

TABLE 10. ORAL READING BENCHMARK FROM MIDLINE TO ENDLINE

STANDARD		MIDLINE RESULTS (CWPM)	% REACHING BENCHMARKS	ENDLINE RESULTS (CWPM)	% REACHING BENCHMARKS
Standard 2	Comparison	1.84	0.37	4.92	4.5
	Treatment	3.52	0.92	4.43	1.9
Standard 4	Comparison	20.28	4.2	27.18	11.6
	Treatment	22.27	4.5	29.58	13.7

Learner Assessments: 2015 and 2017 weighted data.

ORAL READING FLUENCY. *The proportion of learners meeting the benchmark increased considerably from midline to endline in both groups and in both standards (Table 10). For Standard 2, improvements in the proportion of learners meeting the benchmark in the comparison group was greater than in the treatment group. The proportion in the treatment group increased from 0.9 percent at midline to 1.9 percent at endline, and in the comparison group, it increased from 0.4 percent at midline to 4.5 percent at endline. For Standard 4, both groups displayed a notable increase from midline to endline, slightly more in the treatment group than in the comparison group. The proportion of learners meeting the benchmark in the treatment group increased from 4.5 percent at midline to 13.7 percent at endline, whereas it increased in the comparison group from 4.2 percent at midline to 11.6 percent at endline.*

TABLE 11. READING COMPREHENSION BENCHMARK FROM MIDLINE TO ENDLINE

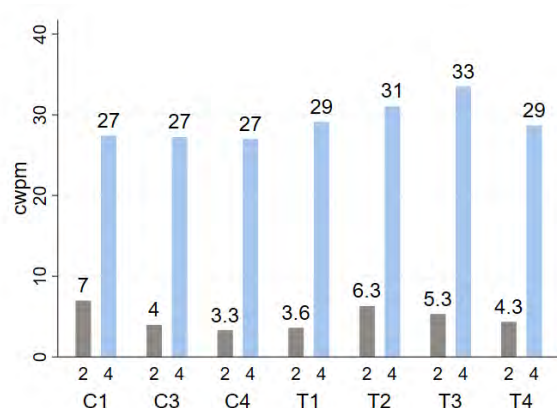
STANDARD		MIDLINE RESULTS (%)	% REACHING BENCHMARKS	ENDLINE RESULTS (%)	% REACHING BENCHMARKS
Standard 2	Comparison	0.6	0.1	0.15	0.2
	Treatment	1.2	0.0	0.20	0.3
Standard 4	Comparison	11.6	0.8	1.54	8.3
	Treatment	13.7	1.1	1.72	11.1

Learner Reading Assessments: 2015 and 2017 weighted data.

READING COMPREHENSION. The proportion of learners in Standard 4 meeting the benchmarks increased considerably from midline to endline in both groups, whereas the proportion of learners in Standard 2 increased slightly (Table 11). Among Standard 2 learners, the proportion in the comparison group meeting the benchmark increased from 0.1 percent at midline to 0.2 percent at endline, while in the treatment group, it increased from none at midline to 0.3 percent at endline. Among Standard 4 learners, the proportion in the comparison group meeting the benchmark increased from 0.8 percent at midline to 8.3 percent at endline, while in the treatment group, it increased from 1.1 percent at midline to 11.1 percent at endline. For both standards, the increase from midline to endline was greater in the treatment group than in the comparison group, especially in Standard 4.

ORAL READING FLUENCY BY FOUR TREATMENT LEVELS AT ENDLINE

FIGURE 17. AVERAGE ORAL READING FLUENCY AT ENDLINE, BY TREATMENT LEVELS



Learner Assessments: 2017 weighted data.
C = Control; T = Treatment; 1, 2, 3, 4 = Levels

Since the evaluation design included four treatment levels, SI also disaggregated oral reading performance results by the four levels of treatment. Average oral reading fluency by levels of treatment at endline in 2017 are shown in **Error! Reference source not found.**^{50 51} For both standards, when EGRA was combined with INVC and SSDI (Level 1 treatment area, also called a CDCS full integration focus area), learner scores in treatment schools (T1) were lower to scores in each of T2, T3 and T4. The result may be surprising to USAID and may not match expectations. This was also the case at midline, and the situation appears to have not improved since then⁵². But, when EGRA operated along with SSDI (T2) or

INVC (T3), scores were higher in both standards relative to T1 and T4 where EGRA operated alone.⁵³ More discussion by treatment levels are included in later sections.

⁵⁰ Recall that the four treatment levels are: T1 = EGRA+INVC+SSDI; T2 = EGRA+SSDI; T3 = EGRA+INVC; T4 = EGRA Only. C1 = SSDI OR INVC; C3 = INVC only; C4 = None. EGRA treatment was randomized only in Level 4 and not in any other levels, including in Level 1, and some selection bias may remain. The comparison group for Level 2 was not drawn from the Level 2 districts, but from Level 4, rendering the results less robust for this level relative to other levels.

⁵¹ At baseline, there were no significant differences in oral reading fluency scores by treatment assignment across the treatment levels/types in the sampled schools.

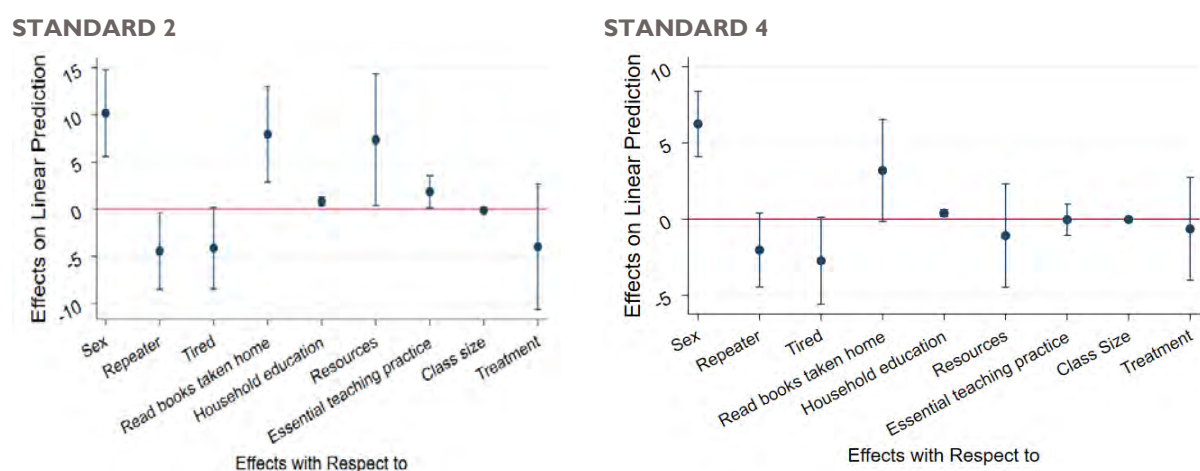
⁵² In 2015 and 2016, 24 districts were severely affected by severe and prolonged drought, and they include: Balaka, Blantyre, Chikhwawa, Chiradzulu, Dedza, Dowa, Kasungu, Lilongwe, Machinga, Mangochi, Mchinji, Mulanje, Mwanza, Mzimba, Neno, Nkhatakota, Nsanje, Ntcheu, Ntchisi, Phalombe, Rumphu, Salima, Thyolo, and Zomba. Of these, the worst affected districts were: Balaka, Machinga, Blantyre, Chiradzulu, Chikhwawa, and Nsanje (Social Impact, 2017). Note that all Level 1 districts were among the affected districts, especially Balaka and Machinga in level 1 where 88% and 77% of the district's population was affected by the drought, respectively (GoM 2016), and one district in Level 4 were among the four worst affected districts. The severe drought in all the CDCS focus districts could have reduced the effectiveness of EGRA in these districts.

⁵³ These results should be interpreted with caution since they do not control for baseline characteristics. See later discussions under EGRA impacts where controls are used from baseline for school level features, and for district level features.

FACTORS ASSOCIATED WITH ORAL READING FLUENCY SCORES

SI used the endline data gathered in 2017 from the households, learners, and teachers for identifying factors that could help predict learners' oral reading fluency with high probabilities.⁵⁴ The evaluation team estimated a Tobit model for each Standard. In the model, EGRA treatment, irrespective of the four levels of treatment, was included to examine the effect of EGRA treatment in general. SI conducted regressions for each standard, since earlier discussions showed variations in learner characteristics and scores by standard, possibly because some factors could differentially affect learners of different ages. Also, EGRA may affect current Standard 4 learners more, especially if these learners enrolled in the study schools in Standard 1 in the 2013–14 academic year and progressed to Standard 4 in the 2016–17 academic year. If so, these learners in treatment schools would have been exposed more directly to EGRA when it was in operation from 2013 to 2016 and targeted Standard 1 to 3 learners.⁵⁵ The results presented below indicate the marginal effects of the factors on oral reading scores measured in correct words per minute.⁵⁶

FIGURE 18. FACTORS PREDICTING ORAL READING FLUENCY FOR STANDARDS 2 AND 4 WITH 95% CONFIDENCE INTERVAL



In paragraphs below, based on Figure 18 results are discussed for each of the significant factors found to be associated in predicting oral reading fluency scores at endline.

TIRED AT SCHOOL. Standard 2 learner scores were predicted to significantly decrease at a rate of 4.2 points if learners felt tired at school than otherwise. On average, 32 percent of learners in Standard 2 reported feeling tired at school, slightly more in treatment than in comparison schools. More girls than boys in both standards reported being tired at school, with 34 and 29 percent in Standard 2,

⁵⁴ The evaluation team examined several variables from the school environment checklist, surveys of learners, head teachers, class teachers, households, and class observations to select those that remained stable across various regression specifications.

⁵⁵ In Annex 9, SI also presents results disaggregated by learner sex since factors may differ by learner sex. For instance, whether someone in the household reads to the learner may matter less for girls than boys since household members are more likely to read to girls than boys (a finding in SI's previous reading assessment study).

⁵⁶ *Marginal effect* refers to changes in oral reading fluency for a change in a factor; it is calculated as dy/dx in Stata 13. The results can be interpreted as shown in these examples: if Y = reading scores in cwpm and X = age in years, a marginal effect of 0.5 indicates that reading scores increase with age at a rate such that, if the rate were constant, scores would increase by 0.5 cwpm if age increased by a year. If Y = reading score and X = repeater (dummy variable), a marginal effect of - 0.25 indicates that reading scores decrease with repetition at a rate such that, if the rate were constant, scores would decrease by 0.25 cwpm if the learner is a repeater than otherwise. Factors that significantly predict reading fluency with high probabilities (95 percent confidence level) are indicated in the figures as those with confidence interval bands solidly above or below the horizontal reference line in red.

respectively, and 22 and 21, respectively, in Standard 4. Based on household surveys, more girls than boys were found to be engaged in household chores such as fetching water and caring for siblings that perhaps led to their feeling tired at school. However, none of the predictors of learner health and nutrition⁵⁷ were able to explain much of the variation in oral reading fluency scores at endline for learners in Standard 2 or Standard 4.⁵⁸

CLASS REPETITION. Standard 2 learner scores were predicted to significantly decrease by 4.4 points if learners repeated a class than otherwise. At endline, repetition in Standard 2 was slightly higher in treatment than in comparison schools, respectively, with 43 percent and 40 percent of learners repeating the class, but the difference was not significant. By sex, slightly more boys than girls repeated the class in both treatment and comparison groups, but the difference was not significant. More than half of the class teachers mentioned that learners' lack of attention in classes followed by absenteeism by learners as major reasons for learners repeating a class. There was no difference noticed in reasons between comparison and treatment schools and by learner sex or standard.

CLASS SIZE. Standard 2 learner scores were predicted to significantly decrease by 0.12 points with increase in the class size. Similar results were also noticed at midline with class size. Class size in the treatment group in both standards were larger than in the comparison group, and the differences between the two groups in both standards were statistically significant. The average class size at endline was 125 and 132, respectively, in Standard 2 in comparison and treatment groups. It was 125 and 129 for Standard 4, respectively, in comparison and treatment groups.

LEARNER SEX. In both standards, reading scores were predicted to significantly increase by 10.2 points and 6.3 points, respectively, for Standard 2 and Standard 4 girls relative to boys. On average, girls scored 6.1 cwpm, while boys scored 3.9 cwpm in Standard 2. In Standard 4, girls scored 31.4 cwpm, while boys scored 26.2 cwpm on average.⁵⁹

LEARNERS TAKING BOOKS HOME AND READING THEM. For Standard 2, reading scores were predicted to be significantly higher by 8 points if learners took books home and read them than otherwise. Similar results were also found at midline. At endline, 91 and 87 percent of learners, respectively, from treatment and comparison schools, reported taking books home and reading them at home. Equal numbers of girls and boys in Standard 2 in both treatment and comparison groups reported taking books home and reading them. Furthermore, slightly less than half of the learners in both groups reported also having access to other reading materials at home. These numbers were up

⁵⁷ SI also estimated some models with the number of days in the past week a learner has not eaten (the more days, the lower the reading score) and the number of weeks the child was sick in the past month (the more weeks sick, the lower the scores) and found them to be correlated with learner reading scores. However, when other variables were added into the regressions or taken out, these factors became less significant, suggesting that they were not robust. This lack of a strong relationship between health and nutrition does not mean that health and nutrition are not important predictors of learner performance, but only that the evaluation team cannot be certain of their level of significance. This could be due to poor recall by learners and households when it comes to the health and nutrition variables (it should be noted that the team found very little correlation between answers for questions asked of both learners and households, providing evidence of this poor recall). Or, it could be due to the strong relationship between household education and health. Follow-up studies should look more closely at this relationship.

⁵⁸ Similarly, at both baseline and midline, feeling tired at school was significantly and negatively correlated with lower scores among Standard 2 learners, but not the predictors of learner health and nutrition in either Standard 2 or Standard 4. Nutrition and health information was largely gathered through the household survey using food security and nutrition modules from the Feed the Future Population Survey instrument as well as questions related to learner health. The one exception to this rule is the variable about the number of days a learner did not eat in the week prior to the survey, which is derived from self-reported data from learners gathered during the reading assessment in schools.

⁵⁹ See Annex 9 for results disaggregated by learner sex.

from those at baseline by about ten percentage points, suggesting improvement in learner access to reading materials.

YEARS OF HIGHEST LEVEL OF EDUCATION OF ANY HOUSEHOLD MEMBER. Reading scores were predicted to be significantly higher by 0.8 points and 0.39 points, respectively, for Standard 2 and Standard 4 learners, with an increase in the years of education among the highest educated in the household. The average years of schooling was about eight among the highest educated in a household at endline, and this remained steady across all three rounds in both groups. Level of education of a household member could play a role in learners receiving help with homework or someone reading to them at home. Indeed, whether a household member helps learners with their homework was positively correlated with higher scores, although it was not a significant predictor at endline for either standard. Both sexes received equal support in terms of help with homework.⁶⁰ Also, whether learners reported being read to at home was not a significant factor associated with higher scores due in part to the possibility of EGRA programming in general, most households are focusing more on reading to their learners.⁶¹ Over 90 percent of the households reported in both standards reported reading to learners, while 64 percent and 73 percent of learners, respectively, in Standard 2 and 4 reported someone reading to them at home.

SUFFICIENCY OF CLASSROOM RESOURCES FOR TEACHERS. Standard 2 reading scores were predicted to be significantly higher by 7.6 points when teachers had sufficient resources to teach than otherwise. At endline, 32 percent and 28 percent of teachers, respectively, from treatment and comparison school perceived having enough resources to teach their classes; the difference was statistically significant between treatment and comparison schools.

TEACHER USE OF ESSENTIAL PRACTICES. Standard 2 reading scores were predicted to be significantly higher by 1.8 points when teachers followed as many of the 13 essential teaching practices as possible. At endline, 64 and 53 percent of Standard 2 teachers, respectively, in treatment and comparison schools were observed to have used all 13 essential practices, with 98 percent on average using at least 9 out of 13 essential practices.

EGRA TREATMENT. Average oral reading fluency for comparison and treatment groups at endline are shown in Table 8. In the Tobit model results shown in Figure 18, EGRA treatment variable was positive but not significant for learners in both standards, indicating that EGRA treatment could not predict scores with high probabilities.

⁶⁰ At both baseline and midline, they were both positively and significantly correlated with higher reading scores for Standard 2 learners. Both sexes received equal support in terms of help with homework at midline, while at baseline, girls were significantly more likely than boys to receive help on their homework.

⁶¹ Whether learners reported being read to at home was one of the significant factors that was most consistently correlated with high predicted value of reading fluency at baseline in 2013 but not at midline. Also, while girls and boys were equally likely to be read to at midline, this was not the case at baseline, at which time girls were more likely to be read to. This may be related to household beliefs that girls need more support than boys and that the lower performing girls need even more support (suggesting that the low scores or weaker reading skills likely lead to learners being read to rather than vice-versa). A qualitative study consisting of ten focus group discussions conducted by SI in May 2014 in the study areas suggested that parents may have been more likely to read to girls than boys because they suspected that girls needed more assistance than boys. There was a common belief that girls are more likely to drop out of school than boys because they may become pregnant or get married young. Furthermore, fathers reported believing that girls are weaker than boys and, thus, require more coddling and support in school.

SI also found an impact effect size at endline of -0.0197 and 0.0588 standard deviations, respectively, for Standard 2 and Standard 4.⁶² Both these effect sizes are negligible relative to results found in several other EGRA-type interventions in developing countries.⁶³

In summary, as shown above, Standard 2 oral reading fluency scores were predicted to be significantly higher for girls than boys, if learners took books home and read them, when teachers had sufficient resources to teach, when teachers followed as many essential teaching practices as possible, and with an increase in years of education among the highest educated in the household. But, learner oral reading fluency scores were predicted to significantly decrease if learners repeated a class, if learners felt tired at school, and when size of the class increased. Standard 4 oral reading fluency scores were predicted to be significantly higher for girls than boys and with increase in years of education among the highest educated in the household.

IMPACT OF EGRA ON ORAL READING FLUENCY⁶⁴

This section discusses EGRA program impacts by comparing the oral reading fluency scores measured in correct words per minute across time and treatment status for each standard by the following items: (1) overall EGRA treatment effect and (2) treatment effects by the four levels of EGRA treatments. Under each of the items, SI also discusses two-year impacts based on comparison between baseline data gathered in 2013 prior to EGRA rollout and midline data collected two years into EGRA implementation in 2015, and four-year impacts based on comparison between baseline in 2013 and endline data gathered in 2017, a year after EGRA ended.

OVERALL EGRA IMPACT

In summary, overall, for both Standards 2 and 4, two years into its implementation, EGRA significantly helped improve oral reading fluency scores, and the evaluation team could not reject the null hypotheses that there were no significant impacts of EGRA across the distribution of scores. After four years since the initiation of EGRA, while the positive effect was still intact in terms of improved scores, it was not consistently significant across the distribution. Sustainability of impacts have been found to be an issue in many EGRA-type interventions. A systematic review of over 18 EGRA-type interventions showed that over a short period of time, EGRA could help with significant improvements in basic literacy, but rarely could it lead to any significant impact on improving reading fluency on a sustainable basis (Graham and Kelly, 2018).⁶⁵

⁶² The effect sizes were obtained from estimates of ordinary least squares regression of endline data with oral reading fluency scores as dependent variable and treatment status across all levels as explanatory variable.

⁶³ A study of 216 primary education interventions in developing countries showed that the average effect size for oral reading fluency scores was around 0.23 standard deviation among interventions such as structured pedagogy (teacher trainings, new teaching approaches, and teaching materials), and around an average effect size of 0.04 among multiple component projects aimed at improving primary school education that focus on child, school, teacher, household, and community levels (3ie, September 2016). A recent review of 12 EGRA-type interventions found an effect size for oral reading fluency at 0.44 on average, with effect size ranging from 0.13 in Democratic Republic of Congo to 0.81 in each of South Africa and Liberia (Graham and Kelly, The World Bank, January 2018).

⁶⁴ See Annex 5 for details on the analysis methodology.

⁶⁵ In the Philippines, the Abdul Latif Jameel Poverty Action Lab (JPAL) carried out a randomized controlled trial-based impact evaluation in 2009 of the *Sa Aklat Sisikat* Reading Program, a 31-day reading program targeted at Grade 4 learners, and found modest reading performance gains of 0.13 standard deviation for treatment learners relative to control immediately after the intervention, though the effect diminished over time to 0.06 standard deviation three months after conclusion of the intervention (Abeberese, A. B., Kumler, T. J., & Linden, L.L. 2013). Similarly, an impact evaluation in India of the *Nali Kali* program, an Activity Based Learning pedagogical change program, also found strong, significant effects on literacy scores, although these achievements in early grades did not persist in later grades (Gowda, K., Kochar, A., Nagabhushana, C., &

STANDARD 2 LEARNERS

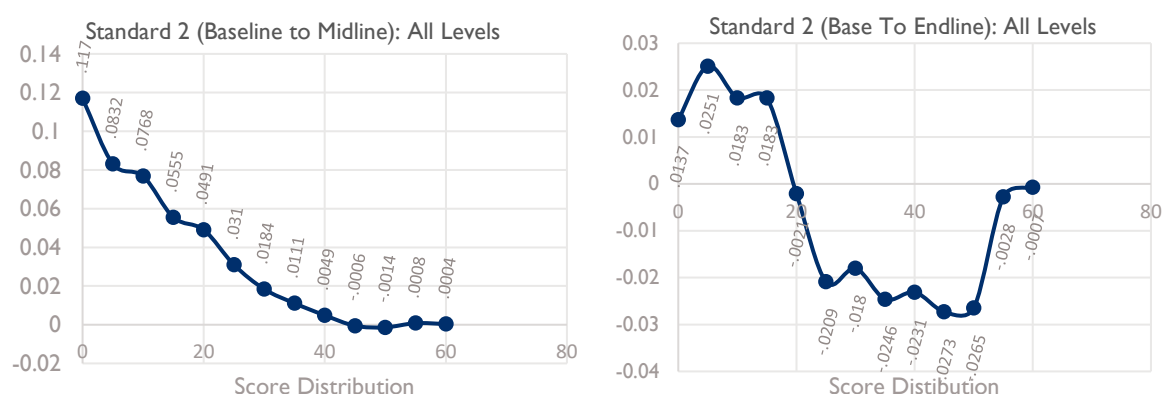
Table 12 shows EGRA impacts on oral reading fluency scores, using the Tobit model. EGRA has had significantly positive impacts two years into EGRA implementation with nine points, and small positive albeit insignificant impacts at endline, a year after EGRA ended. SI's estimates suggest that the EGRA intervention was especially successful in Standard 2 at midline.

TABLE 12. IMPACT OF EGRA ON ORAL READING FLUENCY OF STANDARD 2 LEARNERS, TOBIT ESTIMATES

	TWO YEAR IMPACTS (2013 TO 2015: BASELINE TO MIDLINE)			FOUR YEAR IMPACTS (2013 TO 2017: BASELINE TO ENDLINE)		
	ALL LEARNERS	BOYS	GIRLS	ALL LEARNERS	BOYS	GIRLS
EGRA treatment (dummy)	9.007***	8.279***	10.20***	1.483	1.471	0.912
	(0.489)	(0.492)	(0.634)	(0.989)	(1.073)	(4.883)
Sample size	4,412	2,073	2,379	3,504	1,643	1,907

Standard errors in parentheses; ***, ** and * indicate significance at 1%, 5%, and 10%, respectively.

FIGURE 19. DISTRIBUTIONAL ANALYSIS FOR STANDARD 2



Since the majority of the learners scored zeros at both midline and endline, SI also examined the EGRA impacts across the distribution of scores using OLS, as displayed in Figure 19.⁶⁶ The results confirm the findings shown in Table 12. At midline, the largest impacts were at the bottom of the distribution in that EGRA induced a significant proportion of learners to move from zero to positive scores, while impacts declined as one moves up in the distribution of scores. At endline, the positive and largest

Ragunathan, N. 2013). A recent impact evaluation in the Philippines of Basa Pilipinas also showed that the EGRA-type activity resulted in some short-term gains in oral reading fluency for treatment learners in grades 1 and 2, but they became null over time in grade 4 that had received Basa support in prior grades, with comparison learners reaching parity with and in some cases surpassing treatment learners (Robinson, Jordan, Mike Duthie, and Andrea Hur, 2017).

⁶⁶ The estimates by distribution of scores are more robust than Tobit since they do not require a normality assumption on the residuals. Each point in the figures show impacts of EGRA on the proportion of learners attaining at least a given score at midline or endline. The bins on the X axis show the distribution of learners across the reading scores with an equal interval of five points. As a rule of thumb, for impacts to be significant to verify the null hypothesis that there was no impact, the points displayed in the figures should be consistently above or below the line in the X axis where zero on the Y axis crosses the X axis.

impact was found for the proportion of learners scoring five points in the distribution, but began to decline after that, hitting negative impacts beyond 20 points in the distribution, although it appeared to improve for learners at the highest level of the distribution. Overall, SI could not reject the null hypothesis that there were no significant impacts of EGRA across the distribution.

The above results establish that for Standard 2, there was strong enough evidence to suggest that EGRA had positive impacts on oral reading fluency scores two years into EGRA implementation, and impacts were positive and could not be rejected as no impacts after EGRA ended.

STANDARD 4 LEARNERS

Table 13 shows EGRA impacts on Standard 4 oral reading fluency scores, using the Tobit model. Estimates indicate that EGRA had significantly positive impacts two years into EGRA implementation, and positive but insignificant impact at endline, a year after EGRA ended. The estimates, albeit small, also suggest that EGRA was especially effective in impacting boys.

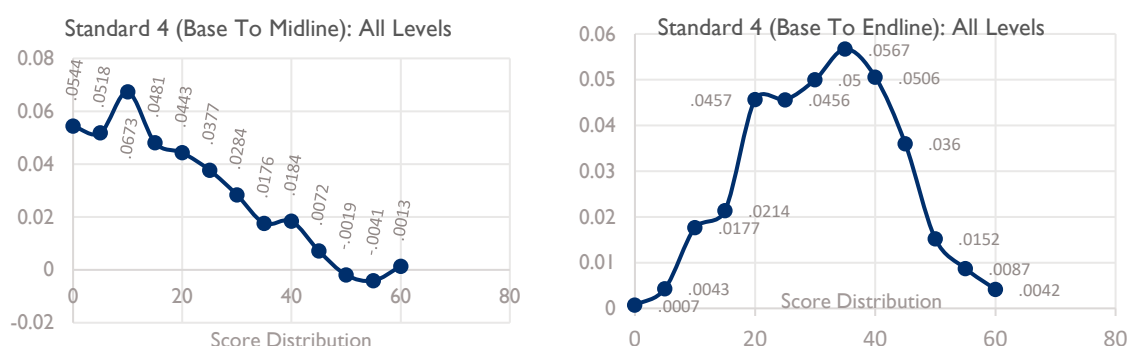
TABLE 13. IMPACT OF EGRA ON ORAL READING FLUENCY OF STANDARD 4 LEARNERS, TOBIT ESTIMATES

	TWO YEAR IMPACTS (2013 TO 2015: BASELINE TO MIDLINE)			FOUR YEAR IMPACTS (2013 TO 2017: BASELINE TO ENDLINE)		
	ALL LEARNERS	BOYS	GIRLS	ALL LEARNERS	BOYS	GIRLS
EGRA treatment (dummy)	2.494***	2.413*	2.049	1.964	2.582***	1.614
	(0.942)	(1.413)	(1.503)	(1.727)	(0.601)	(2.004)
Sample Size	4,487	2,125	2,387	3,533	1,671	1,904

Standard errors in parentheses; ***, ** and * indicates significance at 1, 5 and 10%, respectively.

Distributional analysis results are displayed in Figure 20 and confirm the findings shown in Table 13 that EGRA had a positive impact at both midline and endline for the majority of learners.

FIGURE 20. DISTRIBUTIONAL ANALYSIS FOR STANDARD 4



At midline, the largest impacts were found for the proportion of learners scoring at least ten points, in that EGRA induced a significant proportion of learners to move from ten points at baseline to higher scores, while impacts declined as one moved up in the distribution of scores. At endline, scores tended

to improve as one moved up the distribution, until it reached 35 points, but declined thereafter. Overall, SI could not reject that there were no significant impacts of EGRA across the distribution.

Similar to Standard 2, the above results establish that for Standard 4, there was enough evidence to suggest that EGRA had positive impacts on oral reading fluency scores two years into EGRA implementation and that impacts were positive and could not be rejected as no impacts after EGRA ended.

TREATMENT LEVEL IMPACTS

In summary, for Standard 2 learners at midline, overall there were significant positive impacts of EGRA at all four treatment levels, with the largest impact in Level 1. Especially, in all levels except Level 3, EGRA impact was positive and significant for learners at the bottom of the distribution. At endline, overall the impacts were still positive and significant, except in Level 1 where a negative but only small and marginally statistically significant impact was observed, and the results also held across the distribution of scores.

For Standard 4, at midline, small positive and significant impacts of EGRA were seen at Level 4, especially at the bottom of the distribution. At endline, small positive and significant impacts were noticed for Level 3 across the distribution of scores. At both midline and endline, impacts in Level 1 were positive but insignificant.

STANDARD 2 LEARNERS⁶⁷

TABLE 14. IMPACTS OF EGRA ON ORAL READING FLUENCY OF STANDARD 2 LEARNERS, TOBIT ESTIMATES BY TREATMENT LEVEL AT MIDLINE AND ENDLINE

	LEVEL 1 (EGRA+INVC+SSDI)	LEVEL 2 (EGRA+SSDI)	LEVEL 3 (EGRA+INVC)	LEVEL 4 (EGRA ONLY)
TWO YEAR IMPACT: 2013 BASELINE to 2015 MIDLINE IN STANDARD 2				
EGRA Treatment (dummy)	11.61***	2.389***	5.035***	8.335***
	(0.792)	(0.536)	(1.264)	(0.511)
Sample Size	1,165	2,397	948	1,848
FOUR YEAR IMPACT: 2013 BASLINE TO 2017 ENDLINE IN STANDARD 2				
EGRA Treatment (dummy)	-3.988*	9.556***	5.691***	3.452***
	(2.367)	(0.664)	(1.778)	(1.208)
Sample Size	936	2,307	744	1,463

Standard errors in parentheses; ***, ** and * indicates significance at 1%, 5%, and 10%, respectively.

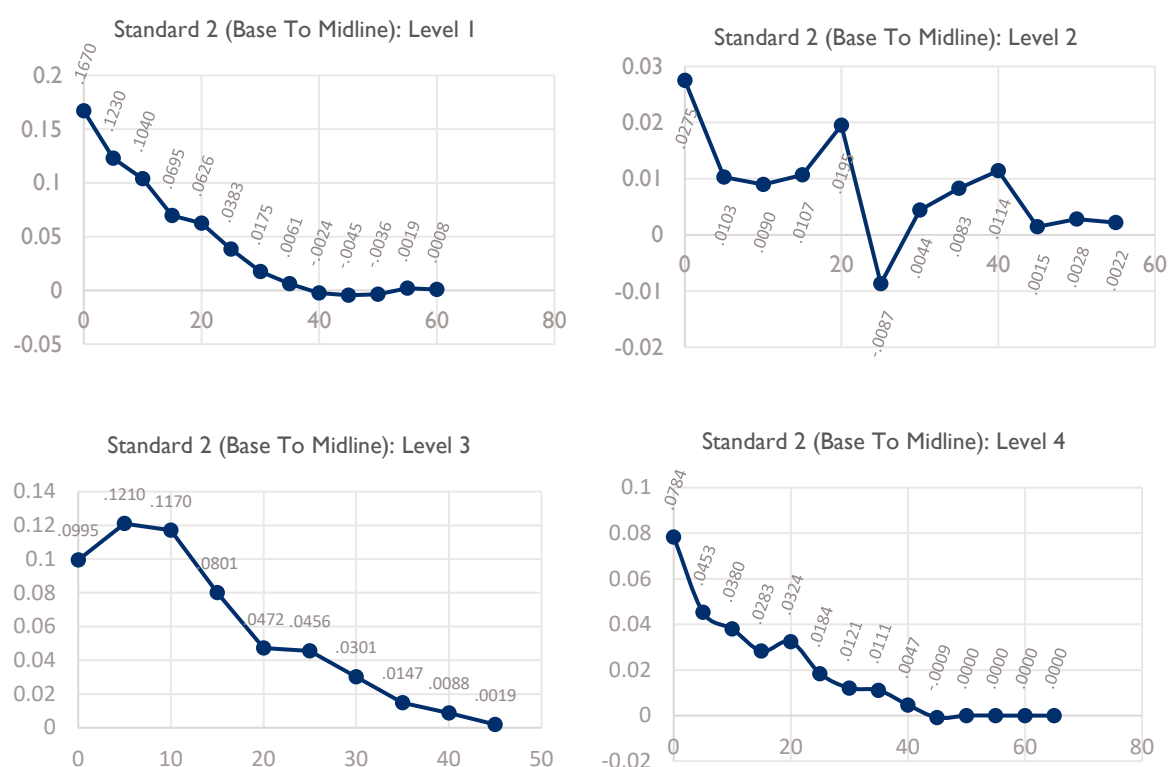
At two year impacts at midline, as shown in Table 14, there were significant positive impacts of EGRA across all treatment levels, ranging from two points in Level 2 where EGRA operated alongside SSDI to close to 12 points in Level 1 where EGRA operated along with SSDI and INVC in an integrated

⁶⁷ See Annex 10 for treatment level impacts for Standard 2 and Standard 4 by learner sex.

fashion.⁶⁸ The impacts were estimated to be larger in Levels 1 and 4 than in Levels 2 and 3. Indeed, the impact was the highest in Level 1, a fully integrated area,⁶⁹ suggesting that the EGRA intervention was especially successful at midline in fully integrated districts. Four year impacts at endline, however, differed from results at midline. The impact was the highest in Level 2 and in Level 4, where positive impact on endline scores were found, albeit smaller than reported at midline. In Level 1, a negative but only small and marginally statistically significant impact was observed.

As before, SI examined the impact of EGRA across the distribution of scores for each treatment level, and results are displayed in Figure 21.

FIGURE 21. MIDLINE IMPACT OF EGRA ACROSS STANDARD 2 DISTRIBUTION OF SCORES, BY TREATMENT LEVEL

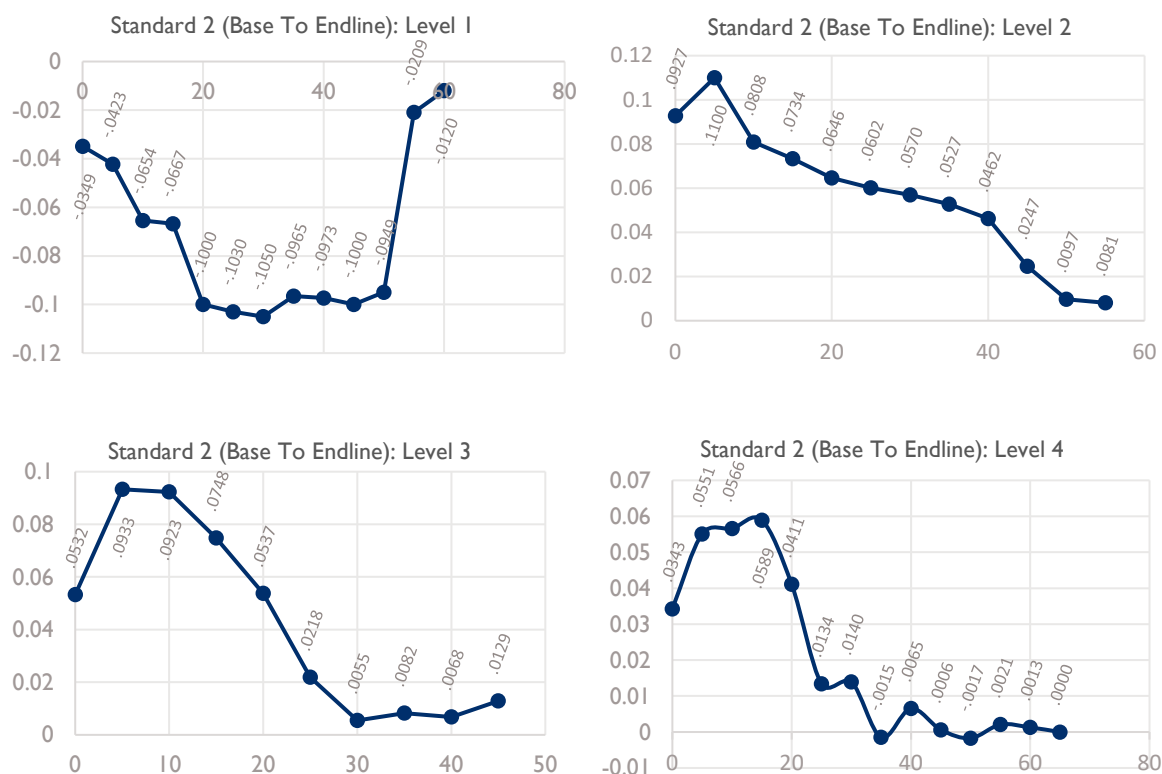


At midline, the distributional analysis results confirmed the overall finding by treatment levels reported in Table 14 that there were positive impacts of EGRA for reading scores of Standard 2 learners, although they were not statistically significant in Levels 2 and 3. The largest impacts were found to occur consistently at the bottom of the distribution at all levels, in that EGRA induced a significant proportion of learners to move from zero at baseline to positive scores at midline. But, impacts declined when learners moved up in the distribution of scores.

⁶⁸ Recall that the comparison group for Level 2 was not drawn from the Level 2 districts but from Level 4, rendering the results to be less robust for this level relative to other levels.

⁶⁹ Recall that EGRA treatment was randomized only in Level 4 and not in any other levels, including Level 1. Therefore, the estimates could be biased should the baseline controls not be strong enough to fully account for unobserved differences between treatment and comparison schools.

FIGURE 22. IMPACT OF EGRA AT ENDLINE ACROSS STANDARD 2 DISTRIBUTION OF SCORES, BY TREATMENT LEVEL



Endline distributional analysis results suggest a negative impact for learners in Level 1 across the distribution of scores. The highest positive impacts were obtained for the proportion of learners scoring at 5 to 15 points in all the levels except Level 1, and impacts declined as the learners moved up in distribution of scores. Overall, the results confirm the direction of impacts reported in Table 14, but the distributional estimates could not confirm a strong statistically significant impact noted in Table 14 for any level likely due to uneven distribution of scores, underscoring the variations in impacts at various distributional bins.

STANDARD 4 LEARNERS

TABLE 15. IMPACTS OF EGRA ON ORAL READING FLUENCY OF STANDARD 4 LEARNERS, TOBIT ESTIMATES BY TREATMENT LEVEL AT MIDLINE AND ENDLINE

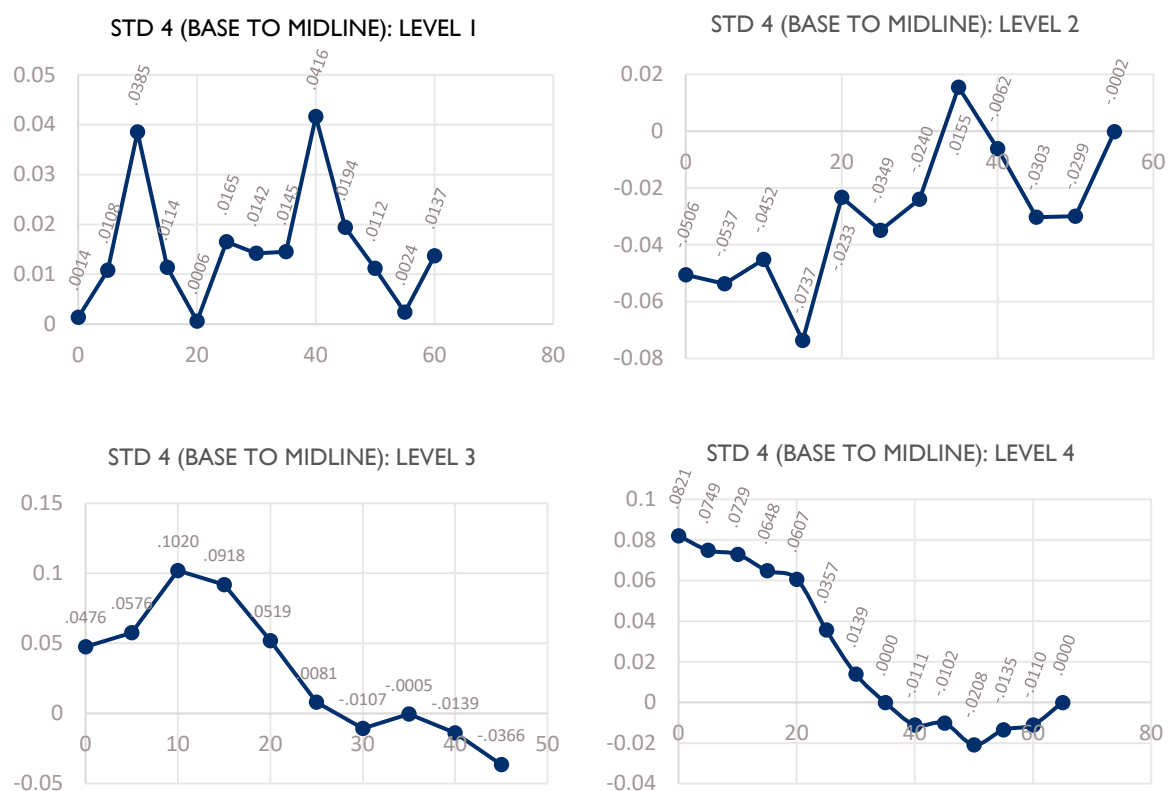
	LEVEL 1 (EGRA+INVC+SSDI)	LEVEL 2 (EGRA+SSDI)	LEVEL 3 (EGRA+INVC)	LEVEL 4 (EGRA ONLY)
TWO YEAR IMPACT: 2013 BASELINE to 2015 MIDLINE FOR STANDARD 4				
EGRA Treatment (dummy)	2.106	-4.288***	1.428	2.971**
	(1.539)	(0.269)	(1.706)	(1.469)
Sample Size	1,172	2,433	948	1,873
FOUR YEAR IMPACT: 2013 BASELINE to 2017 ENDLINE FOR STANDARD 4				
EGRA Treatment (dummy)	0.0341	3.235***	4.790**	2.266
	(1.076)	(0.342)	(1.967)	(2.301)
Sample Size	935	2,324	744	1,469

Standard errors in parentheses; ***, ** and * indicates significance at 1%, 5% and 10%, respectively.

As shown in Table 15, at midline, the results show small impacts of EGRA on Standard 4 scores, which were only significant in Levels 2 and 4. At endline, positive and statistically significant impacts were noticed for Levels 2 and 3, although they were small. Interestingly, impacts in Level 2 were significant at both midline and endline but with impacts occurring in opposite directions.⁷⁰ The impacts were positive but insignificant in Level 1, the fully integrated area,⁷¹ at both midline and endline.

As before, SI examined the impact of EGRA across the distribution of scores for each treatment level; and results are displayed in Figure 23 and Figure 24.

FIGURE 23. MIDLINE IMPACT OF EGRA ACROSS THE DISTRIBUTION OF ORAL FLUENCY SCORES OF STANDARD 4 LEARNERS

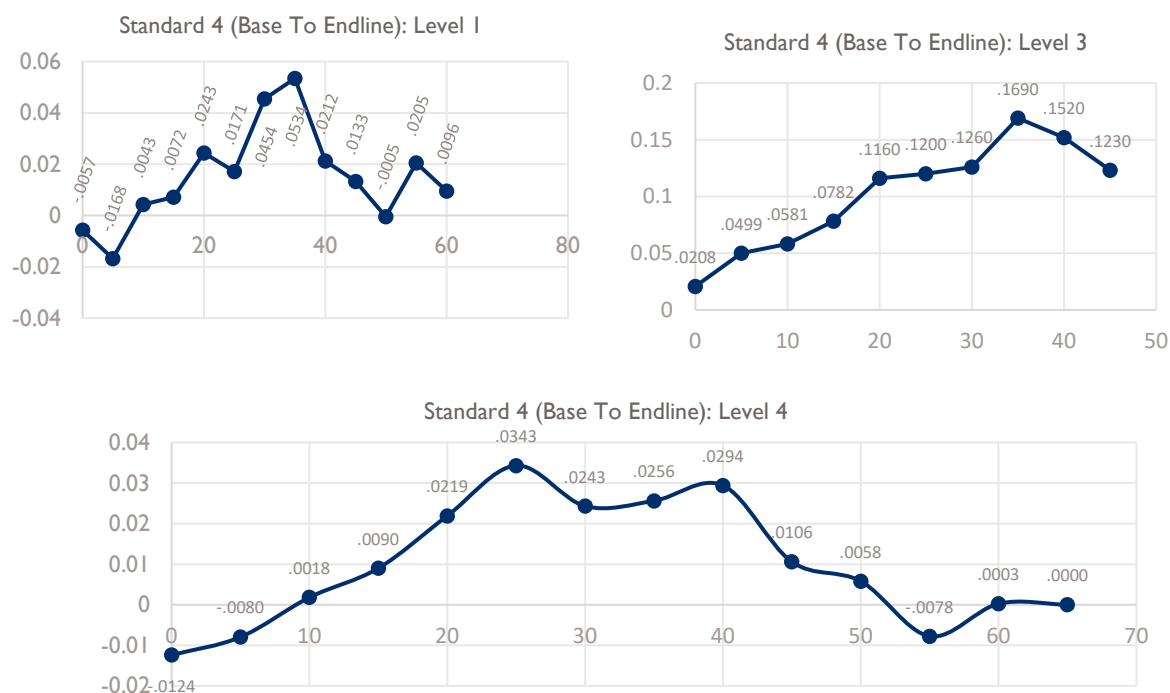


At midline, for Levels 1 and 2, impacts were statistically insignificant for all learners across the distribution. In Level 4, the highest and positive level of impacts was noted only at the bottom of the distribution.

⁷⁰ Recall that the comparison group for Level 2 was not drawn from the Level 2 districts but from Level 4 rendering the results to be less robust for this Level relative to other levels.

⁷¹ Recall that EGRA treatment was randomized only in Level 4 and not in any other levels, including Level 1. Therefore, the estimates could be biased should the baseline controls were not strong enough to fully account for unobserved differences between treatment and comparison schools.

FIGURE 24. ENDLINE IMPACT OF EGRA ACROSS THE DISTRIBUTION OF ORAL FLUENCY SCORES OF STANDARD 4 LEARNERS



At endline, there were no statistically significant impacts in levels 1 and 4, and there seem to be only positive impacts in Level 3.⁷² The consistency of results for Level 3 shown in Table 15 and in the distributional analysis results shown in Figure 24 suggest that EGRA likely impacted learner scores when implemented with INVC.

COST EFFECTIVENESS OF EGRA⁷³

For this analysis, SI used the total direct costs (excluding labor) for the four EGRA components.⁷⁴ The direct cost data were obtained from RTI for the entire period of project implementation from 2013 to 2016. Also, SI used results from the Chichewa oral reading fluency subtask since it is the major indicator of progress for USAID/Malawi and the main focus of EGRA. The cost effectiveness estimates presented here, however, only provide some broad insights and should be interpreted with caution

⁷² It was difficult to find comparable treatment and comparison schools in Level 2 for Standard 4 scores when we compared them on the basis of baseline standard 4 scores. Therefore, the Tobit results for Level 2 for Standard 4 should be read with caution.

⁷³ Cost effectiveness ratios typically provide a measure of a program's cost-effectiveness, irrespective of the significance of the impact effect and helps compare across various programs for their relative effectiveness towards achieving similar outcomes to help with policy making. Generally, a very high ratio indicates either the average costs are high or the impact effects are small, and a low ratio could be due to low costs or high impacts. Since we only evaluated EGRA, we only present the results for this project and could not assess the relative effectiveness of EGRA over other similar projects. Therefore, the results here are limited in their relevance for policy-making. But, the results here can be compared with results from other similar education projects, if they are available, to help with policy decisions.

⁷⁴ While the evaluation question asks for cost effectiveness by component, in order to improve learner reading abilities, the project needed to simultaneously provide teacher training, improvement of facilities and provision of instructional materials, promote community and parental engagement, and engage in improving the policy environment. Each component, while it may incur separate costs, may also reinforce the others for a total effect. Therefore, the team did not disaggregate the costs by components.

for the following reasons: SI only used direct costs (excluding salaries),⁷⁵ aggregated costs across all EGRA components, assumed equal costs per Standard, and used impact results four years since initiation of EGRA based on Chichewa reading assessments.⁷⁶ The steps SI followed are:

STEP 1 Using endline data gathered through reading assessments on oral reading fluency from treatment and comparison schools, SI calculated effect size of EGRA.

STEP 2 Using the data provided by RTI on total direct costs and project outputs at project closing in 2017, SI calculated average cost per learner in a school, irrespective of standard.

STEP 3 Using the average cost per learner and impact effect size, SI calculated cost effectiveness in U.S. dollars required per learner for producing one unit improvement in words read correctly per minute and showed the impact effect size of EGRA that could be obtained from the average direct cost (excluding salaries) per learner incurred in the project.

Table 16 and Table 18 show the data obtained from RTI in 2017 on direct costs and EGRA outputs throughout the project's life and average costs calculated by SI per school, teacher, and learner. RTI reported that a total of US \$13,959,044 was spent during the three years of operation on direct costs, excluding labor, to carry out EGRA during the entire project in the implementation area of 11 education districts that included 134 zones. During the three years of EGRA implementation, a total of 1,610 schools were supported through the intervention, where RTI trained an average of more than 12,000 teachers, head teachers, and teaching assistants in reading instruction a year, distributed over 8.8 million reading materials including text books to schools, trained 134 PEAs that made over 14,000 coaching visits to project schools, and benefitted over 1.5 million learners. In addition, 9,000 village reading centers were established, and over 3,500 reading fairs were organized by the communities.

TABLE 16. DIRECT COSTS INCURRED BY RTI FOR EGRA IMPLEMENTATION, JUNE 17, 2013, TO OCTOBER 17, 2016

COMPONENTS		FUNDS SPENT (USD)
Component 1	Quality reading instruction for early grade learners	\$6,503,894.07
Component 2	Teaching and learning materials on reading	\$2,500,643.64
Component 3	Parental and community engagement to support learner reading	\$3,673,047.99
Component 4	Policy environment to support early grade reading	\$1,281,458.79
Total direct costs (excluding labor and indirect costs)		\$13,959,044.49

RTI, December 2017.

⁷⁵ Due to data limitations, SI only used direct costs, excluding staff salaries. Therefore, cost effectiveness estimates could be an underestimate if total costs far exceed the direct costs used here.

⁷⁶ As per the scope of work for the evaluation, SI only focused on the Chichewa language, although the EGRA intervention also included English. Therefore, this report only includes impact results for Chichewa. Also, it was not possible to disaggregate cost data used here by Chichewa- and English-language focused activities, since they were inseparable. Therefore, cost effectiveness estimates presented here could vary if Chichewa language focused per unit costs were considerably different than the unit costs used in the analysis.

TABLE 17. EGRA: AREA COVERED, OUTPUTS, AND AVERAGE COSTS, 2013–2016

INTERVENTION ITEM	COUNT	AVERAGE COSTS (USD)
Education District	11	1,269,004
Zone	134	104,172
School	1,610	8,670
Total teacher beneficiaries	35,634	392
Total learners in EGRA schools	1,616,750	8.63 ⁷⁷

RTI, 2017.

Cost effectiveness results are presented in Table 18.

TABLE 18. COST EFFECTIVENESS OF EGRA PER LEARNER OF UNIT CHANGE IN ORAL READING FLUENCY

ITEMS	EGRA EFFECT SIZE ⁷⁸		AVERAGE COSTS PER LEARNER (USD)	COST EFFECTIVENESS	
	STANDARD 2	STANDARD 4		STANDARD 2	STANDARD 4
USD to produce one unit (cwpm) increase in oral reading fluency				N/A	146.68
Effect size that could be obtained per \$8.63 per learner	-0.0197	0.0588	8.63	N/A	0.0068

As discussed earlier, SI found an impact effect size of -0.0197 and 0.0588 standard deviation, respectively, for Standard 2 and Standard 4. Cost effectiveness analysis becomes irrelevant when reading impacts are null or negative and for impacts that are not sustainable overtime. Nonetheless, to obtain a notion of cost effectiveness, the team used the positive albeit negligible effect size obtained for Standard 4 and average direct cost estimates excluding salaries. Estimates show that with three years of EGRA implementation, it would cost about \$146 for each learner in Standard 4 in an EGRA type intervention to improve oral reading fluency scores by one unit.⁷⁹ Conversely, an average direct cost of \$8.63 per learner incurred in the project could cause an effect size of 0.006 in Standard 4, which is inconsequential or null impact in comparison to effects noticed across the developing world in such interventions.⁸⁰

⁷⁷ Average costs apply to all learners in the school across all Standards.

⁷⁸ The effect sizes were obtained from estimates of ordinary least squares regression of endline data with oral reading scores as dependent variable and treatment status across all levels as explanatory variable.

⁷⁹ Graham and Kelly (2018) showed that costs of EGRA interventions vary widely due in part to scale, length of intervention and types of components/activities included in the intervention. The various components could influence the implementation costs of EGRA interventions. EGRA Plus in Liberia (cost \$387 / learner) and PEARL in Tonga (cost \$183/learner) were found to be the most expensive and had the fewest learners enrolled, but MTPDS in Malawi (cost of \$2.8/learner) and PRIMR (cost \$7.64/learner) in Kenya were among the cheapest due in part to very large learner enrollments. But, high enrollments also led to larger class sizes in Malawi with 113 learners per class taught by a single teacher likely leading to low quality of teaching and negligible grade level learning performance improvement. But, low per learner costs in part facilitated scaling interventions to nationwide programs in Kenya and Jordan (cost \$39.8 per learner).

SUMMARY AND CONCLUSIONS

This section summarizes the impacts of EGRA on oral reading fluency skills of Standard 2 and 4 learners in Malawi and draws conclusions. EGRA was implemented from 2013 to 2016 in 11 education districts in Malawi, and the activities broadly included improving the quality of and access to books and teaching materials, training and coaching of teachers to improve quality of teaching, and facilitating several activities to improve community and household support for learners. In order to assess the effectiveness of EGRA on learners' reading skills, this impact evaluation using a quasi- experimental design was conducted in three rounds: baseline in 2013, midline in 2015, and endline in 2017. During the evaluation, in a panel of 320 EGRA treatment and comparison schools located in the 11 districts, Standard 2 and 4 learners at each round were randomly drawn and assessed for their reading skills, their households were interviewed, and their class teachers were observed for teaching practices.

WHAT PROPORTION OF LEARNERS IN STANDARD 2 AND 4 COULD READ A TEXT AND COMPREHEND IT? HAS IT IMPROVED OVER TIME?

Learners improved in their oral reading fluency from baseline to endline in both standards. The rate of change was greater in treatment schools than in comparison schools for Standard 4, while it was the opposite for Standard 2.



For Standard 2, average scores in cwpm in the treatment group was 4.43 at endline and 3.89 at baseline, with a rate of change of 14 percent. In the comparison group, the scores were 4.92 at endline and 3.22 at baseline, with a rate of change of 53 percent. Learners' reading comprehension, a reading skill closely related to oral reading fluency, in terms of average number of questions answered correctly at endline among treatment and comparison schools, respectively, were 0.20 and 0.15, while they were 0.21 and 0.13 at baseline. For Standard 4, the scores in the treatment group were 29.58 at endline and 26.68 at baseline, with a rate of change of 11 percent. In the comparison group, the scores were 27.18 at endline and 26.21 at baseline, with a rate of change of 4 percent. Reflecting the oral reading fluency skills, the average scores for reading comprehension at endline among treatment and comparison schools, respectively, were 1.72 and 1.54, up from 1.48 and 1.39 at baseline.

Girls outperformed boys in both groups in both standards.



At endline, in both standards the average scores among girls were significantly higher than boys in both groups. Nearly all households in both treatment and comparison groups (more than 96 percent) reported that it was important for girls and boys to go to school, improving by six percentage points from baseline, indicating a lack of bias toward primary education for girls in Malawi. SI also found that slightly more boys than girls repeated a standard. Repetition was strongly and negatively correlated with higher scores, so it is likely that the generally lower scores among boys than girls led to the result.

The proportion of learners scoring zero declined slightly over time in both groups and in both standards.



For Standard 2, the reduction in proportion of learners scoring zeros for oral reading scores was slightly greater in treatment schools than in comparison schools. The proportions at endline and baseline, respectively, in the treatment group were 78.82 percent and 74.57 percent, while in the comparison group were 80.1 percent and 77.9 percent. For reading comprehension, the percentages of learners scoring zero at endline in treatment and comparison groups were 86.2 and 90.1, with the difference being statistically significant,

and the proportions at baseline were slightly below endline, at 84.9 percent and 89.2 percent in treatment and comparison groups, respectively.

For Standard 4, the proportion of learners scoring zero for oral reading fluency almost remained steady across time in both groups. At endline and baseline, respectively, in the treatment group the proportions were 18.1 percent and 18.5 percent, while in the comparison group, they were 19.7 percent and 21.2 percent. For reading comprehension, the percentage of learners scoring zero at endline in treatment and comparison groups were 25.4 and 28.6, with the difference being statistically significant, and the proportion at baseline was only slightly above endline at 27.4 percent and 30.1 percent in treatment and comparison groups, respectively.

The proportion of learners meeting the benchmarks slightly improved over time, although a large proportion of learners scored below the benchmarks in both groups.⁸¹

The proportion of learners meeting the MoEST benchmark increased considerably from midline to endline in both groups and in both standards. For Standard 2, improvements in the proportion of learners meeting the benchmark in the comparison group was greater relative to the treatment group. The proportion in the treatment group increased from 0.9 percent at midline to 1.9 percent at endline, and in the comparison group it increased from 0.4 percent at midline to 4.5 percent at endline. For Standard 4, both groups displayed notable increases from midline to endline, slightly more in the treatment group than in the comparison group. The proportion of learners meeting the benchmark in the treatment group increased from 4.5 percent at midline to 13.7 percent at endline, whereas it increased in the comparison group from 4.2 percent at midline to 11.6 percent at endline.

For reading comprehension, the proportion of learners in Standard 4 meeting the benchmarks increased considerably from midline to endline in both groups, whereas the proportion in Standard 2 only increased slightly in both groups. For Standard 2, the proportions among treatment and comparison groups, respectively, were 0.3 and 0.2 at endline and zero and 0.1 at midline. For Standard 4, the proportions for treatment and comparison groups, respectively, were 11.1 and 8.3 at endline and 1.1 and 0.8 at midline.

WHAT IS EGRA'S IMPACT ON LEARNERS' READING ABILITIES? HOW DOES THE LEVEL OF EGRA'S INTEGRATION WITH AGRICULTURAL INTERVENTION (INVC) AND HEALTH INTERVENTION (SSDI) IMPACT THE READING OUTCOMES, AND WHEN OPERATING ALONE WITH NO INTEGRATION?

At two years of implementation, impact of EGRA was positive in both standards. Impact was mixed at the various integration levels of EGRA with INVC and SSDI for both standards.



SI compared results between baseline and midline to examine EGRA's impacts on learners' oral reading fluency at two years of EGRA implementation.

For Standard 2 overall, the project significantly improved scores. By distribution of scores, EGRA especially induced a large proportion of learners that scored zero at baseline to move to positive scores at midline. Disaggregated by the four treatment levels, overall EGRA led to significant positive impacts across all four levels, ranging from improvements by 8.4 points when EGRA operated alone, 2.3 points when EGRA operated with SSDI, 5.1 points when EGRA operated with

⁸¹ SI compares endline with midline results for this discussion since the latest MoEST-ratified benchmarks used in the report were established in 2014.

INVC, and 11.6 points when EGRA operated with both SSDI and INVC in an integrated fashion. The results suggest that the EGRA intervention was especially successful at midline in the CDCS fully integrated districts followed by areas where EGRA operated alone. By distributional analysis at the four treatment levels, EGRA impacts were positive at all four treatment levels, albeit not statistically significant when EGRA operated with SSDI or INVC. The largest impacts were found to occur consistently at the bottom of the distribution at all four levels, indicating that EGRA likely induced a large proportion of learners to move from zero at baseline to positive scores at midline. But, impacts tend to decline when learners moved up in the distribution of scores.

For Standard 4, overall the project significantly improved scores. By distribution of scores, the largest impacts were found for learners scoring between non-zero and ten points at baseline to move to higher scores at midline. By the four treatment levels, overall a positive but small impact of EGRA was noticed at all levels, although the impact was only significant when EGRA operated with SSDI or alone. But, by treatment levels and distribution of scores, impacts became insignificant for all four levels across all the distribution of scores. Nonetheless, the highest and positive level of impact was noted when EGRA operated alone at the bottom of the distribution. When EGRA operated in the fully integrated area, the impact was positive but insignificant overall and across the distribution of scores.

Even a year after EGRA ended, impacts were positive albeit with less consistency across the distribution of scores relative to impacts at two years of implementation. Impact was mixed at the various integration levels of EGRA with INVC and SSDI for both standards.



SI compared results between baseline and endline to examine EGRA's impacts on learners' oral reading fluency a year after EGRA ended, or four years since EGRA was initiated.

For Standard 2, results indicated that the overall positive effect of EGRA was still intact even after the project ended. The largest and significant impact occurred for the proportion of learners scoring between five and ten points at baseline to move to higher scores, while the impacts across all the other distribution of scores were insignificant. Therefore, SI could not reject that there were no significant impacts of EGRA across the entire spectrum of the distribution of scores. By the four treatment levels, the overall impact was positive and was the highest when EGRA operated with SSDI or alone—similar to impacts noted at midline but with a smaller magnitude. However, when EGRA operated in the fully integrated area, contrary to impacts seen at midline, a negative albeit only small and marginally statistically significant impact was observed. By both treatment levels and distribution of scores, overall a negative impact was noticed at all four levels for most of the distribution of scores. Nonetheless, the highest level of positive impacts was obtained for the proportion of learners scoring at five to 15 points in all levels, except in the integrated areas, although impacts declined as the learners moved up in distribution of scores, underscoring the variations in impacts at various points in the score distribution.

For Standard 4, overall EGRA showed small but positive impacts. Indeed, scores improved as the learners moved up the distribution of scores until they reached 35 points, but dwindled thereafter. Therefore, SI could not reject that there were no significant impacts of EGRA across the entire spectrum of the distribution of scores. By the four treatment levels, small but positive and statistically significant impacts were noticed when EGRA operated with SSDI or INVC. In the fully integrated areas, the impacts were positive but insignificant. By both treatment and distribution levels, positive and significant impacts were noticed when EGRA operated with INVC. These results indicate that impact for Standard 4 learners was positive, consistent, and the most robust when EGRA operated with INVC.

WHAT HOUSEHOLD AND SCHOOL FACTORS CORRELATE WITH LEARNER READING OUTCOMES?

Oral reading fluency scores could be improved through higher access to books for learners to take home.



Analysis of cross-section midline and endline data showed that Standard 2 oral reading fluency scores were significantly higher when learners took books home and read them, by nearly 8 points at endline. At both midline and endline, learners in treatment schools were more likely to take books home and also read them across both standards than those in comparison schools. Access to books to take home probably affected whether learners took books home with them. About 80 percent of teachers at endline, slightly more in treatment than in comparison schools, reported handing books to learners to take home. Teachers at both midline and endline, however, said they do not hand out all the textbooks they have been provided since they were worried that learners would not take good care of them or lose them. At endline, about 34 percent and 45 percent of teachers, respectively, from treatment and comparison schools also reported not having enough textbooks for each learner to hand them to take home. When learners could not take books home to read, especially among Standard 4 learners, the odds of repetition were also found to be higher. These results highlight the importance of improving access to books for learners to take home to read.

Learners' oral reading fluency scores could be improved through household support to learners with their studies.



In both standards, oral reading fluency scores of learners were significantly higher in households with more years of education of at least one member, likely because they could read to the learner or help with homework, or at least motivate the learner. At endline, more than two thirds of the households in both groups reported helping learners with their studies, and over three fourths of households in both groups reported being involved in their children's school activities, which indeed improved slightly from baseline in both groups. This was also confirmed by learners in that more than half of learners in all three rounds in both standards reported that they received help with their homework from a household member, with slightly more learners in treatment schools than in comparison schools. The percentage of learners who reported being read to at home by someone in the household increased from baseline to endline in both groups and standards. Among Standard 4 learners, the odds of repetition were lower when someone read to the learners at home.

Learners' oral reading fluency scores could be improved with use of more essential teaching practices by the class teachers.



Standard 2 endline reading scores were significantly higher by 1.8 points when teachers followed as many of the 13 essential teaching practices as possible, while the association was not significant in Standard 4. But, among Standard 4 learners, the odds of repetition were lower with more use of essential teaching practices by the class teachers, and in turn lower levels of repetition were significantly associated with higher scores.

Use of essential practices improved over time, more so in treatment than in comparison schools. At endline and baseline, respectively, 64 percent and 31 percent of teachers in treatment schools, and 53 percent and 25 percent in comparison schools, used all 13 essential practices. Over 90 percent of teachers in both groups used at least 67 percent of the 13 essential practices, remaining almost steady across all three rounds and slightly higher in treatment schools than in comparison schools. In terms

of individual essential practice, teachers in treatment schools specifically appear to have improved notably at endline from baseline in providing learners with opportunities to develop critical thinking skills (from 40 percent to 96 percent), in effectively using a variety of instructional resources including textbooks (from 55 percent to 82 percent) and in asking open-ended questions to encourage learning (from 55 percent to 99 percent). However, while use of lesson plans by teachers improved from 78 percent to 87 percent, it remained below 90 percent, unlike the other essential practices, even though one of the EGRA activities included use of lesson plans. Nonetheless, EGRA coaching and in-service professional development training provided under EGRA were shown to be positively and significantly associated with higher use of essential practices by teachers in treatment schools at endline. Also, sufficiency of teaching resources such as number of textbooks, teaching materials including wall hangings, and chalkboards, appear to affect the extent of use of essential practices. While more teachers in treatment than in comparison schools at endline perceived having adequate teaching resources, this only stood at 34 percent in treatment and 26 percent in comparison groups.

Learners' oral reading fluency scores could be improved by reducing class repetition.



At endline, a strong negative correlation was noticed between standard repetition and oral reading scores in both standards, and slightly more boys than girls tend to repeat a standard. More than half of the class teachers mentioned, regardless of sex, that learners' lack of attention in classes followed by absenteeism by learners contributed to learners repeating a standard. Further analysis showed that the odds of repetition in areas where EGRA operated with INVC was lower for Standard 2 learners while it was higher for Standard 4 learners. It is likely that employment opportunities for both parents and older children are high in these areas leading to some income effect. Standard 2 learners are on average 9.5 years old and therefore could be ineligible to be employed in income-earning activities and therefore fully enrolled in schools and supported by their parents. But, Standard 4 learners are on average 11.5 years old and above and could be partly employed to earn incomes, take care of their younger siblings, or engage in household chores, thus limiting their full-time attendance in schools. Over time, a recurring repetition resulting from learners' scoring consistently lower scores could lead to the learner dropping out of school. Nonetheless, learners' attendance in preschools tends to lower repetition and dropout rates, as indicated by the midline and endline data, especially among Standard 2 learners. At endline, about half of the learners reported having attended preschool across both the treatment and comparison groups.

WHAT IS EGRA'S COST EFFECTIVENESS?

It could cost over US\$140 in direct costs per learner in an EGRA-type intervention to improve oral reading fluency scores by one unit at four years since EGRA implementation.



After three years of EGRA implementation, with a realization of an impact effect size of 0.059 standard deviation for Standard 4, SI estimated that it would cost about \$146 in average direct costs per learner in an EGRA-type intervention to improve oral reading fluency scores by one unit. Conversely, an average direct cost of \$8.63 per learner incurred in the project could only cause an effect size of 0.0068 in Standard 4, which is negligible or null impact in comparison to effects noticed across the developing world in such interventions.⁸²

⁸² Due to data limitations, SI only used direct costs without staff salaries, and therefore cost effectiveness estimates could be an underestimate if total costs far exceed the direct costs used here.

MAJOR CONCLUSIONS

Oral reading fluency scores improved from baseline to endline in EGRA-treated schools, especially in Standard 4 owing in part to longer exposure to EGRA for three complete years of consecutive treatment. But even after four years of schooling and longer exposure to EGRA, one fifth of learners still scored zero, and 85 percent of learners could not meet the MoEST benchmarks. A similar trend was also noticed in non-EGRA-treated schools. Reflecting the trends in both groups and the rate of improvements in EGRA-treated schools relative to non-EGRA-treated schools, the overall impact of EGRA on oral reading fluency was positive but not significant in order to clearly attribute the improvements noticed in learner scores to EGRA. However, there were some indications of significantly positive impacts of EGRA for Standard 2 learners scoring at the bottom of the distribution to move to higher scores over time.

Integration of EGRA with other USAID projects was not a consistently significant factor in impacting learner scores. For instance, for Standard 2 in the fully integrated areas where EGRA operated with SSDI and INVC, the impacts of EGRA were positive and notable two years into EGRA implementation, but that did not sustain a year after EGRA ended. For Standard 4, while the impacts were positive at both two and four years since initiation of EGRA, they were insignificant to conclude that full integration of EGRA with other projects across sectors was effective in improving the scores. No clear impacts were discernable for partial integration of EGRA with SSDI or INVC either to help infer on any specific type of integration to facilitate positive and significant impacts.

EGRA coaching and in-service professional development training, a major EGRA intervention, appears to have significantly induced more use of the 13 essential practices by class teachers in treatment schools. Indeed, in Standard 2, oral reading scores were significantly higher when teachers followed as many of the 13 essential teaching practices as possible. Although a similar association was not found in Standard 4, the odds of repetition were lower with more use of essential teaching practices by the class teachers, and in turn lower levels of repetition were associated with higher oral reading scores. This indicates that the pathways in the theory of change may differ by standards for achieving desired impacts through teacher training activities aimed at inducing more use of essential practices and thereby improving teaching quality. Furthermore, only 64 percent of treatment school teachers used all 13 essential practices, even though there were improvements from baseline. Also, use of the essential practice of lesson planning, which is probably more important in higher standards, can still be increased. These results indicate that there is plenty of room for improvements to be made in teacher training and coaching for effecting notable impacts.

Reading scores were higher when learners could take books home to read. However, nearly one fifth of teachers in EGRA schools did not hand out books to learners to take home because there were not enough textbooks for all learners. This was reported despite EGRA's distribution of textbooks as one of its activities. Also, only 34 percent of treatment school teachers reported having adequate teaching resources, despite EGRA's distribution of teaching and learning materials.⁸³ This indicates the presence of bottlenecks and challenges in implementation of such EGRA activities and thus explains some of the observed impacts on reading scores.

As discussed in the report, several factors could have contributed to the modest EGRA impacts, including less-than-expected effects from USAID activities like the Country Development Cooperation Strategy (CDCS) that promotes cross-sector integration and other education sector activities in the

⁸³ This low level of resource availability to teach, as reported by the teachers, was also corroborated through school environment observations that were independently conducted by the enumerators.

districts. Furthermore, EGRA-like support from other organizations and donors to comparison schools could have improved scores in those schools, and any spill over effects from EGRA. In addition, severe natural disaster events that affected many districts, especially in fully integrated CDCS districts, during EGRA implementation could have played a role in reducing EGRA effectiveness. It is also likely that implementation challenges could have limited realizing the EGRA outcomes that were anticipated in the EGRA theory of change. Some sample selection bias due to evaluation design limitations could have also affected results, although the evaluation team took great care to reduce the bias.

RECOMMENDATIONS

Highlight the importance of using all essential teaching practices during teacher trainings and coaching. Especially since the use of lesson plans could still be improved, focus on use of scripted lessons more during trainings. By using scripted lesson plans more, teachers could efficiently and effectively conduct and manage classes within the allocated instructional time. To that end, incorporate more opportunities to practice use of scripted lessons and teachers guide and class preparation during in-service trainings and coaching.

Provide more reading practice at school. Ensure that teachers provide more reading practice for learners, and that Primary Education Advisor (PEAs), Head Teachers and Section Heads provide coaching and mentoring to teachers for them to help learners to read. Scripted lessons and teacher guides developed under NRP include activities for reading practices and learner books contain text for reading practice. Also, nationwide trainings were provided under NRP on use of the teacher guides for remediation classes. Adherence to teacher guides and scripted lesson plans would help provide more reading practice at school for both regular and remedial classes.

Assess reasons for any differences in reading skills by sex to improve reading skills of both girls and boys. SI consistently found in various assessments in Malawi and in this evaluation that boys slightly underperformed girls. Early reading skills are the most basic learning skills that help learners in their later educational attainments. Therefore, any gender- based differences in reading skills should be identified at early stages and addressed. Reading promoted through afterschool clubs staffed by local mentors in some African countries have been shown to improve reading skills. To that end, future studies should include mixed methods evaluations/assessments that incorporate qualitative inquiry to understand factors that could contribute to differences in scores by learner sex, and how the program affected reading performance by learner sex.

Work with schools and communities to ensure there are enough books available for learners to take books home to read. We found that teachers worried about giving out books for learners to take home because of damaged or lost books. Future projects may work with the parents and communities to provide assurance for the books taken home and arrange for protective covers to minimize damage. Adequate text books and appropriate reading materials including curriculum aligned supplementary reading materials should be made more readily available for children to take home to be read to and with their family. Further, learners could be encouraged to take books home to read, possibly through reading incentive programs that provide small non-financial rewards for learners who read multiple books over school break periods or even throughout the academic year. Furthermore, relevant books to read to children should be distributed regularly.

Encourage parents and guardians to read more often to the learners. Recent USAID activities in Malawi such as ASPIRE and MERIT under the National Reading Program (NRP) have started building community programs to encourage parents and household members to read to learners more frequently and are a step in the right direction. Such programs that focus on household member

involvement in learners' reading need to continue and be made sustainable, since reading skills are clearly shown to improve and class repetition tends to decline with such practices, among other factors. Moreover, demonstrations at reading camps and reading fairs can be held to promote practices such as parental behavior of reading to and also reading with learners at home such that learners can also practice reading in addition to listening to reading at home. In areas where parent/caretaker literacy is low, afterschool reading activities staffed by community volunteers may offer an alternative option to ensure that learners are read to more regularly and also could practice reading outside of the classroom. Public media, radio, and television can also be effectively used to inform parents and community members of practical ways to support their children at home and within the community to develop and practice reading skills.

Improve cost effectiveness of EGRA-type interventions. Lessons on the impacts of EGRA-type interventions are now emerging through various evaluations in Malawi and comparable countries (Graham and Kelly, 2018). USAID should carefully examine these lessons to learn what worked and what did not in each intervention. These studies could also shed light on how different project components, either by themselves, combined with other EGRA components, or combined with complementary projects, may impact early grade reading skills through various pathways. Furthermore, USAID should examine studies on costs associated with EGRA activities to draw lessons to improve the cost effectiveness of EGRA-type interventions. To that end, implementers of EGRA-type interventions, especially those evaluated for impacts, should plan to develop appropriate tracking and reporting formats for all costs incurred at various output levels, including direct and indirect costs and salaries, and use them from the beginning. By improving how they track cost data, implementers could pave the way to comprehensively analyze cost effectiveness. Implementers may also coordinate and share the data with evaluators periodically to facilitate better cost effectiveness analysis for drawing effective policies.⁸⁴

Update benchmarks based on observed trends for Standards 1 to 4 to examine trends over time in reading performance. Currently, benchmarks developed for Chichewa in 2014 for Standards 1 to 3 are the only official benchmarks available to understand the extent of reading skills acquired by primary learners. These benchmarks need to be updated for Standards 1 to 4. The extensive and longitudinal reading assessment data for Chichewa now available through multiple nationwide assessments and this assessment could be used for such purposes. These actions are essential to build a robust database with realistic and relevant data that can be analyzed to track progress and make programmatic policy decisions to improve primary education quality in Malawi. In doing so, it is important for the all technical stakeholders to periodically review the benchmarks and adjust them given the general quality of teaching in the country.

Embed a process evaluation to also examine the links between project activities and reading performance. Future data collection activities may include assessing fidelity of EGRA implementation alongside learner assessments to understand how EGRA achieved its intended targets in outcomes.

Improve coordination among various assessments with similar objectives. Implementers and external evaluators typically hold consultations at evaluation inception. Implementers also perform periodic assessments for their own monitoring and evaluation purposes. Implementers and evaluators should coordinate these assessments' timelines, tools, and sampling methodologies so they can cross

⁸⁴ Recent activities rolled out by USAID/Malawi (MERIT and YESA) under the National Reading Program (NRP) have explicit cost reporting data requirements for the first, third, and final years, so costs can be compared with baseline, midline, and endline reading assessment results to learn about cost effectiveness.

validate results. Also, when evaluators use multiple versions of assessment tools across time, they should conduct pilots with adequate sample sizes to disaggregate analysis by sex and standard, especially for subtasks such as oral reading fluency that record many zero scores, to arrive at conversion factors to confidently compare results across time.

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ANNEX I. SCOPE OF WORK

The following is the statement of work (SOW) section, section C.3, from Contract number AID-612-C-13-00001, as related to only the tasks for the impact evaluation.

The Contractor shall provide evaluation services that will include data collection, data analyses, and report writing. The contractor shall conduct evaluations, assessments and surveys in accordance to the Statement of Work (SOW) and Contract Performance Standards reflective of the Contractor's proposed approach. The evaluation services shall include baseline data collection, tracking of key indicators on an annual /bi-annual basis and report findings through the life of the five year EGRA and CDCS period as necessary. The data collected and analyzed will measure the impact of the USAID/Malawi Early Grade Reading Activity (EGRA), with a corresponding baseline (2013), mid-line (2015), and end-line (2017). Additional assessments and surveys conducted by the contractor of reading abilities will examine additional factors that are assumed to effect reading outcomes in Malawi. The Contractor shall provide the results of these evaluations, assessments and surveys to USAID/Malawi to inform EGRA implementation, contribute to USAID Malawi's collaborative learning approach under the CDCS, and improve the ability of USAID to adapt to changing program needs based on data.

C.3.1 Objectives

The Early Grade Reading Activity (EGRA) Impact Evaluation has two main objectives:

1. To measure the impact of USAID/Malawi's EGRA efforts in target districts on student reading outcomes, and
2. To assess the hypotheses of **integration** and **community strengthening** related to student learning in the USAID/Malawi CDCS:
 - A. to measure how **integration** of USAID programming across sectors (education, health, agriculture) working in the same geographic areas impacts student reading outcomes; and
 - B. to measure how **community strengthening** through capacity-building of local institutions, and promotion of citizen participation impacts sustainable of reading interventions.

C.3.2 Tasks

The Contractor shall provide evaluation services of five major tasks:

Required Tasks	May 2013	May 2014	May 2015	May 2016	May 2017
1. Evaluation of the USAID/Malawi Early Grade Reading Activity (EGRA) on Standard 2 and 4 Students Reading Outcomes	X		X		X
2. Household Survey of Sub-Sampled Standard 2 and 4 Students	X		X		X
3. National Reading Assessment for Standards 1 and 3 students in 2014; Standards 2 and 4 in 2016		X		X	
4. Final Impact Evaluation of EGRA and CDCS Hypotheses					X
5. National Reading Assessment Baseline					X

Task 1: Evaluation of the USAID/Malawi Early Grade Reading Activity (EGRA) on Standard 2 and 4 Students Reading Outcomes.

I.1 Overview

The Contractor shall collect data, prepare analyses, and reports of Standard 2 and 4 reading outcomes. The Contractor shall conduct all the necessary data collection, data analysis and report writing. The Contractor shall measure the impact of the USAID/Malawi Early Grade Reading ActivityI in treatment zones compared to control zones. The Contractor shall have all data collected for Task 1 Evaluation by May 2013, May 2015, and May 2017, respectively.

1.2 General Approach

The contractor will implement activities under this Task in accordance with USAID principles and requirements, including those outlined in the USAID's Evaluation Policy and ADS 203.

Prior to carrying out the evaluation, the contractor shall submit to the USAID Contracting Officer's Representative (COR) an annual Work Plan that details the work to be conducted. The Contractor will use an evaluation design that best meets USAID evaluation policy standards and principles. The design will ensure reliability and validity of the data collected and allow disaggregation by sex. The design will enable analysis of USAID/Malawi's CDCS hypotheses of integration and community strengthening focus on geographic regions as outlined in Section C2.1.

The design shall enable analysis to determine variation in outcomes based on level of integration of USAID/Malawi sectoral and geographic integration (Level I: those in Mission integrated treatment districts (Lilongwe, Balaka, and Machinga); Levels II and III: districts/zones where education intervention overlaps with either FtF or GHI; and Level IV: education only treatment districts/treatment zones). The contractor will assess Standard 2 and 4 students to determine their reading ability. The samples will include sufficient numbers of students disaggregated by Standard and by sex.

The Contractor will conduct classroom observations in at least one Standard 2, and 4 classroom and interview the head teacher of each school. The classroom based assessment shall be developed in close collaboration with the Malawi National Examination Board and the Department of Inspection and Advisory Services (DIAS) to ensure that it is grade and curriculum appropriate and will at a minimum measure early grade reading skills. Data on number of students in the class (classroom size) and its relationship to reading outcomes must be included in the assessment.

The Contractor will disseminate the annual results generated from the data collection to key stakeholders, including USAID and its implementing partners, the MoEST, Development Partners, and the larger early grade reading community of practice. These reports will be due to USAID/Malawi by July 31 of each year. This information will provide the basis for learning and adaptive programming decisions to ensure that the program remains flexible to changing needs learned throughout the course of the evaluation.

The contractor shall further match schools in the treatment districts with schools in the non –intervention or control zones to allow for comparability. In matching the schools, the contractor shall use scientific matching methods such as propensity score matching or other scientifically rigorous methods. Baseline data collection may require oversampling to determine appropriate control zones.

The following are illustrative examples that could be used:

Student Level Data such as:

- a. Participation in early childhood development (ECD) program
- b. Participation in a school feeding program
- c. Time spent in the classroom on reading instruction

School Level Data such as:

- a. Student to qualified teacher ratio,
- b. Dropout rate
- c. Repetition rate
- d. Average number of students per class
- e. Timing of school feeding in the school timetable
- f. Absenteeism rates, and
- g. Average number of teacher supervision/coaching visits to the teacher
- h. Other interventions including: classroom block and teacher housing construction, disability education interventions, complementary basic education, child-friendly schools.
- i. Text availability: textbook to student ratio
- j. Level of print rich environment found in the classroom.
- k. Language of instruction in the classroom

Community Level Data such as:

- a. Beneficiary of GHI programming (note: will need to be triangulated with USAID health team data as households may not be aware of GHI investments they are benefitting from)
- b. Beneficiary of FtF programming (note: will need to be triangulated with USAID FtF team data as households may not be aware of FtF investments they are benefitting from)
- c. If secondary data source is available:
- d. Prevalence of stunting, wasting, or underweight

I.3 Evaluation Questions

At a minimum, the classroom-based assessment will report on how the USAID/Malawi EGRA impacts, at a minimum, the following indicators:

- (i) Proportion of primary school students who are able to read with comprehension, according to their countries' curricular goals, by the end of lower primary school (Standard 4).
 - a. The proportion of students who by the end of the fourth school year (Standard 4) are able to read grade level text, as measured by the number of correct words per minute
 - b. The proportion of students who by the end of the fourth school year (Standard 4) are able to answer comprehension questions after reading grade level text, as measured by the number of correct comprehension questions answered correctly.
- (ii) Proportion of students, who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text (Standard 2).
 - a. The proportion of students who by the end of the second school year (Standard 2) are able to read grade level text, as measured by the number of correct words per minute
 - b. The proportion of students who by the end of the second school year (Standard 2) are able to answer comprehension questions after reading grade level text, as measured by the number of correct comprehension questions answered correctly.

I.4 Sampling Frame

The Evaluation sampling will be of sufficient size to disaggregate by district, by sex, and by Standard. The sampling framework will enable analysis to examine how levels of integration of Mission programming across sectors in various districts impacts learning outcomes differently. The schools shall be selected between control and treatment schools that ensures comparability and disaggregation by the various levels of geographic integration: Level I: those in Mission integrated treatment districts; Levels 2 and 3: districts/zones where education intervention overlaps with either FtF or GHI; and 4: education only treatment districts. This sample shall be of a sufficient size to allow for attribution of results. From the sampled schools (control and treatment), the contractor shall randomly draw a sample of sufficient size to allow for attribution of results. The Contractor will at a minimum draw from all four levels of USAID/Malawi geographic integration for analysis of the USAID/Malawi EGRA and to test the CDCS hypothesis. The levels include: Level I: Mission integrated districts and zones in Lilongwe, Balaka, and Machinga. The sample will also draw from Levels 2 and 3: zones within Salima and Ntcheu to examine where the Early Grade Reading intervention has overlap with either FtF or Health interventions. The sample will be required to draw on two districts from Level 4: education intervention only districts (these include Mzimba North, Ntchisi, Zomba Rural, Blantyre Rural, and Thyolo).

The Contractor will at a minimum draw from all four levels of USAID/Malawi geographic integration for analysis of the USAID/Malawi EGRA and to test the CDCS hypothesis. The levels include: – Level I: those in Mission integrated treatment districts (Lilongwe, Balaka, and Machinga); Levels II and III: districts/zones where education intervention overlaps with either FtF or GHI; Level IV: education only treatment zones).

Where possible for data on community and household-level variables, the Contractor shall utilize secondary data sources such as national or population-level demographic and economic surveys, data from Education Management Information System collected by the Ministry of Education, Science and Technology (MoEST) annually or other USAID or donor-supported household surveys. Specifically, the USAID SSDI activity is a potential source for health-related data in target areas, and the USAID FtF impact evaluation is a potential source of data on agriculture and socioeconomic variables in target communities. To enhance comparability of study data with other USAID data analyses, all questionnaires shall include appropriate geo-referenced data.

The Contractor will disseminate the annual results generated from the data collection to key stakeholders, including USAID and its implementing partners, the MoEST, Development Partners, and the larger early grade reading community of practice. These reports will be due to USAID/Malawi by August 31 of each year. This information will provide the basis for learning and adaptive programming decisions to ensure that the program remains flexible to changing needs learned throughout the course of the evaluation. Additionally, the final impact evaluation report will be presented to key stakeholders and disseminated widely to encourage sharing of results, lessons learned and best practices and identify USAID achievements under the CDCS targets.

Task 2: Household Survey of Sub-Sampled Standard 2 and 4 Students.

2.1 Overview

The Contractor shall collect data, prepare analyses, and reports of a randomly selected sub-sample of students assessed in Task 1. The student's sub-sample will equally represent male and female students. The contractor will conduct a household survey of a sub-sample of children assessed in Task 1 to understand the dynamics and effects of other factors that contribute to children reading outcomes. The Contractor will use data collected from the household survey to isolate household and socio-economic related factors. The Contractor will collect data at the household level to reduce external bias and measure potential multiplier effects of complementary Mission interventions at the community and household level of USAID's programming under the Global Health Initiative (GHI) and Feed the Future (FtF). The Contractor shall incorporate data on relevant multiplier, socioeconomic and household factors and select appropriate control/comparison districts and communities to detect differential effects. The Contractor shall utilize secondary data sources from the GoM, USAID, or other sources to the greatest extent possible.

2.2 General Approach

The contractor will implement activities under this Task taking into account USAID principles and requirements, including those with USAID's Evaluation Policy and ADS 203. The Contractor will measure the Early Grade Reading Activity's efforts to increase parental and community engagement in supporting student reading. The Contractor will assess how social mobilization of parents, guardians, communities and other relevant stakeholders for supporting children reading has changed household behaviors and student learning outcomes. The Contractor will account for activities within the community that bridge schools and communities around reading or provide alternatives sources of reading support to students. The Contractor will examine the dynamics and effects of other factors that contribute to children learning outcomes within the household and community. The household survey of sampled Standard 2 and 4 children will isolate households and socio-economic related factors, enabling the analysis to linking children's reading performance to household factors and community factors. The Contractor will include appropriate geo-referenced data to enhance comparability of study data with other USAID data analyses.

"The Contractor will disseminate the annual results generated from the data collection to key stakeholders, including USAID and its implementing partners, the MoEST, Development Partners, and the larger early grade reading community of practice. These reports will be due to USAID/Malawi by August 31 of each year. This information will provide the basis for learning and adaptive programming decisions to ensure that the program remains flexible to changing needs learned throughout the course of the evaluation."

Prior to carrying out the household survey, the contractor shall submit to the USAID Contracting Officer's Representative (COR) a detailed annual Work Plan describing the work to be conducted. The Contractor will use an evaluation design that best meets USAID evaluation requirements and is robust enough to measure the complexity of integration.

2.3 Evaluation Questions

1. *What household and community factors relate to student reading outcomes?*
2. *What level of household and community resources/factors are dedicated to schooling and reading?*
3. *How have Health and Agricultural interventions at the household and community level affected schooling and reading outcomes?*
4. *What factors at the household and community level have been identified that relate to repetition and drop out and are there sex differences at the household level?*

Illustrative indicators of interest include:

- Participation in early childhood development (ECD) program
- Participation in a school feeding program
 - Timing of school feeding in the school timetable
- Family/household level variables for sub-group
 - Parental literacy
 - Household size
 - Food security
 - Number of times child ate breakfast before school or the number of missed meals in the past week
 - Incidence of diarrhea in past 2 weeks
 - Number of days of school missed due to illness
 - Number of days of school missed due to family/farm responsibilities
 - Health factors
 - Practice of key nutrition, water, sanitation and hygiene (WASH) behaviors related to school access (particularly hand washing, latrine use, micronutrient supplementation, and malnutrition)
 - Water access and quality, including access to a protected water source, and time required to access water
 - Access to child health services targeted by USAID programs
 - Access to de-worming
 - Other relevant health factors which may be related to early grade reading
 - Socio-economic variables
- School infrastructure, including water, sanitation, and hygiene facilities, which are particularly factors relevant to access and retention of girls and people with disabilities
- Average household time spent supporting child reading, and
- School level related data such as:
 - Student to qualified teacher ratio,
 - Dropout rate
 - Repetition rate
 - Classroom size,
 - Absenteeism rates, and
 - Average number of teacher supervision/coaching visits to the teacher
 - Other interventions including: classroom block and teacher housing construction, disability education interventions, complementary basic education, child-friendly schools.
- Community-level variables
 - Beneficiary of GHI programming (note: will need to be triangulated with USAID health team data as households may not be aware of GHI investments they are benefitting from)
 - Beneficiary of FtF programming (note: will need to be triangulated with USAID FtF team data as households may not be aware of FtF investments they are benefitting from)
 - If secondary data source is available:
 - Prevalence of stunting, wasting, or underweight
 - Proportion (%) of students in intervention districts and targeted grades receiving extra 1-hour time-on-task reading instruction per day
 - Proportion (%) of students in intervention districts and target grades that take home and use a book or other reading materials at home
 - Proportion (%) of schools receiving at least one coaching/support visit per term; and
 - Proportion (%) of teachers demonstrating “essential” skills in teaching reading

2.4 Sampling Frame

The Contractor will sample a sub-group of the students assessed in Task 1 to understand the dynamics and effects of other factors that contribute to children’s learning outcomes. The contractor will select Standard 2 and 4 students and their households to participate in the household survey. The sample will link children and households within communities to isolate household and community socio-economic related factors. The sample will link children’s reading performance to household and community factors. The Contractors sample size must adhere to criteria determined to have sufficient power and confidence of estimation. The sub-sample should come directly from the sampled schools and students being assessed under Task 1 of this Contract.

In determining the sampling framework, the Contractor will take into account the Mission's CDCS development hypothesis on education interventions and outcomes – including integrating USAID FtF, GHI, and education programs in the same geographic regions. The Contractor's sampling framework will enable USAID to examine its investments in community participation and institutional capacity development within education programs to test the validity of the CDCS hypothesis related to the education sector in Malawi.

Where possible for data on community and household-level variables, the Contractor shall utilize secondary data sources such as national or population-level demographic and economic surveys, data from Education Management Information System collected by the MoEST annually or other USAID or donor-supported household surveys. Specifically, the USAID SSDI activity is a potential source for health-related data in target areas, and the USAID FtF impact evaluation is a potential source of data on agriculture and socio-economic variables in target communities. To enhance comparability of study data with other USAID data analyses, all questionnaires shall include appropriate geo-referenced data.

Task 4: Final Impact Evaluation of EGRA and CDCS Hypotheses

4.1 Overview

The Contractor shall collect data, prepare analyses, and reports that provide an overall analysis of the USAID Early Grade Reading Activity and the USAID/Malawi CDCS hypotheses related to education. The Contractor shall measure the impact of the USAID/Malawi Early Grade Reading Activity in target districts and the Hypotheses of the USAID/Malawi CDCS as outlined in Section C2.1. The Final Impact Evaluation will draw from the data collected over the life of the contract to answer the evaluation questions below.

4.2 General Approach

The contractor will implement activities under this Task taking into account USAID principles and requirements, including those outlined in USAID's Evaluation Policy and ADS 203.

Prior to carrying out the assessment, the Contractor shall receive approval of the Annual Work Plan from the USAID Contracting Officer's Representative (COR) that provides detailed description of the work to be conducted. The Contractor's evaluation design will be in compliance with USAID evaluation policy standards and principles. The Contractor's approach will evaluate the impact of the USAID Early Grade Reading Activity and the hypotheses of the USAID/Malawi CDCS related to integration and community engagement as outlined in Section C2.1.

The design shall enable analysis to determine variation in outcomes based on level of integration of USAID/Malawi sectoral and geographic integration (Level I: those in treatment zones within Mission-integrated treatment districts (Lilongwe, Balaka, and Machinga); Levels II and III: districts/zones where education intervention overlaps with either FtF or GHI; Level IV: education only treatment zones;). The contractor will assess Standard 2 and 4 students to determine their reading ability. The samples will include sufficient numbers of students to disaggregate by Standard and by sex.

The Contractor will conduct classroom observations in at least one Standard 2, and 4 classroom and interview the head teacher of each school. The classroom based assessment shall be developed in close collaboration with the Malawi National Examination Board and the Department of Inspection and Advisory Services (DIAS) to ensure that it is grade and curriculum appropriate and will at a minimum measure early grade reading skills. Data on number of students in the class (classroom size) and its relationship to reading outcomes must be included in the assessment.

The Contractor will disseminate the annual results generated from the data collection to key stakeholders, including USAID and its implementing partners, the MoEST, Development Partners, and the larger early grade reading community of practice. This information will provide the basis for learning and adaptive programming decisions to ensure that the program remains flexible to changing needs learned throughout the course of the evaluation.

The contractor shall further match schools in the treatment zones with control zones to allow for comparability. In matching the schools, the contractor shall use scientific matching methods such as propensity score matching or other

scientifically rigorous methods. Baseline data collection may require oversampling to determine appropriate control zones. The following are illustrative examples that could be used:

Student Level Data such as:

- a. Participation in early childhood development (ECD) program
- b. Participation in a school feeding program
- c. Time spent in the classroom on reading instruction

School Level Data such as:

- a. Student to qualified teacher ratio,
- b. Dropout rate
- c. Repetition rate
- d. Average number of students per class
- e. Timing of school feeding in the school timetable
- f. Absenteeism rates, and
- g. Average number of teacher supervision/coaching visits to the teacher
- h. Other interventions including: classroom block and teacher housing construction, disability education interventions, complementary basic education, child-friendly schools.
- i. Text availability: textbook to student ratio
- j. Level of print rich environment found in the classroom.
- k. Language of instruction in the classroom

Community Level Data such as:

- a. Beneficiary of GHI programming (note: will need to be triangulated with USAID health team data as households may not be aware of GHI investments they are benefitting from)
- b. Beneficiary of FtF programming (note: will need to be triangulated with USAID FtF team data as households may not be aware of FtF investments they are benefitting from)
- c. If secondary data source is available:
- d. Prevalence of stunting, wasting, or underweight

4.3 Evaluation Questions

The Contractor must at a minimum, address the following questions over the life of the award:

- i. What is the USAID/Malawi Early Grade Reading Activity's impact on children's (disaggregated by sex) reading abilities in terms of the following:
 - a. Level of effort of reading instruction's impact on children reading abilities
 - b. Effect of extra-curricular reading activities
- ii. What is the cost effectiveness of the USAID/Malawi Early Grade Reading Activity?
- iii. How does teachers' classroom behavior and practices impact on the ability of children to read?
 - a. How did the level of coaching impact teacher behavior and student reading outcomes?
- iv. How does the level of integration with other USAID/Malawi FtF and GHI programs, and other related DP interventions in the target districts, impact the reading outcomes of students?
- v. What secondary effects can be attributed to the Early Grade Reading Activity?
 - a. Impact on repetition rate
 - b. Impact on dropout rate
- vi. What is the effect of USAID/Malawi investments in institutional capacity-building and community engagement to improve community participation on the effectiveness of learning outcomes?

The Contractor's approach will adequately answer these evaluation questions at baseline (2013), two years after baseline (2015), and four years after baseline (2017), with a detailed methodological approach that uses impact evaluation methodologies be it quantitative, qualitative, or mixed methods. The Contractor will use existing data to the greatest extent possible using impact evaluation methodology where appropriate. The Contractor will use primary and secondary data to answer evaluation questions. Where existing data is insufficient, the Contractor will purposefully sample districts and schools (and their surrounding communities) via based on sampling methods that draw conclusions

to inform the evaluation questions The Contractor shall use a quasi-experimental design to clearly demonstrate the impact of program interventions on reading outcomes, and to test the CDCS hypotheses and enable identification of differential impacts that result from geographic integration with GHI and FtF programming. The Contractor shall address evaluation questions related to integration, capacity-building and community participation, as well as identifying best practices and lessons learned. The Contractor's research design will be conducted over a five year period. The Contractor will provide a baseline, mid-line, and end-line data points. USAID/Malawi reserves the right to have the ultimate authority to approve the evaluation design prior to the roll out of the evaluation.

4.4 Sampling Frame

The Contractor will use a sampling framework that is of sufficient size to disaggregate by district, by sex, and by Standard. The Contractor's sampling framework will enable analysis to examine how levels of integration of Mission programming across sectors in various districts impacts learning outcomes differently. The sample will include a minimum of 30 schools randomly selected per district. The schools shall be selected between control and treatment schools that ensures comparability and disaggregation by the various levels of geographic integration: Level 1: those in Mission integrated treatment districts; Levels 2 and 3: districts/zones where education intervention overlaps with either FtF or GHI; Level 4: education only treatment zones. This sample shall be scientifically representative. From the sampled schools (control and treatment), the contractor shall randomly draw a representative sample of children per Standard 2 and Standard 4. From each selected school, at a minimum, a random selection of 10 students, equal numbers of boys and girls, will be selected from Standard 2 and 4 for inclusion in the assessment. The Contractor will at a minimum include a classroom observation of a Standard 2 and 4 classroom and conduct interviews with a Standard 2 and 4 teacher and the head teacher for each school visited. The Contractor will sample a sub-group of the students assessed to understand the dynamics and effects of other factors that contribute to children's learning outcomes. The contractor will select Standard 2 and 4 students and their households to participate in the household survey. The sample will link children and households within communities to isolate household and community socio-economic related factors. The sample will link children's reading performance to household and community factors. The Contractors sample size must adhere to criteria determined to have sufficient power and confidence of estimation. The sub-sample should come directly from the sampled schools and students being assessed under Task 1 of this Contract. If a different sample size is needed to achieve the requirements of this SOW, the Contractor shall provide justification based on power and confidence of estimation to the COR for approval.

In determining the sampling framework, the Contractor will take into account the Mission's CDCS development hypothesis on education interventions and outcomes – including integrating USAID FtF, GHI, and education programs in the same geographic regions. The Contractors sampling framework will enable USAID to examine its investments in community participation and institutional capacity development within education programs to test the validity of the CDCS hypothesis related to the education sector in Malawi. The Contractor will at a minimum draw from all four levels of USAID/Malawi geographic integration for analysis of the USAID/Malawi EGRA and to test the CDCS hypothesis. The levels include: Level 1: Mission integrated districts and zones in Lilongwe, Balaka, and Machinga. The sample will also draw from Levels 2 and 3: zones within Salima and Ntcheu to examine where the Early Grade Reading intervention has overlap with either FtF or Health interventions. The sample will be required to draw on at least two districts from Level 4: education intervention only districts (these include Mzimba North, Ntchisi, Zomba Rural, Blantyre Rural, and Thyolo). To determine the control zones, the sample will draw upon zones receiving no early grade reading interventions from within each of the Level 1-4 districts using a matched pair approach that enables the comparison of effects across intervention and treatment districts.

Where possible for data on community and household-level variables, the Contractor shall utilize secondary data sources such as national or population-level demographic and economic surveys, data from Education Management Information System collected by the MoEST annually or other USAID or donor-supported household surveys. Specifically, the USAID SSDI activity is a potential source for health-related data in target areas, and the USAID FtF impact evaluation is a potential source of data on agriculture and socio-economic variables in target communities. To enhance comparability of study data with other USAID data analyses, all questionnaires shall include appropriate geo-referenced data.

The Contractor will disseminate the annual results generated from the data collection to key stakeholders, including USAID and its implementing partners, the MoEST, Development Partners, and the larger early grade reading

community of practice. These reports will be due to USAID/Malawi by August 31 of 2017. This information will provide the basis for learning and adaptive programming decisions to ensure that the program remains flexible to changing needs learned throughout the course of the evaluation. Additionally, the final impact evaluation report will be presented to key stakeholders and disseminated widely to encourage sharing of results, lessons learned and best practices and identify USAID achievements under the CDCS targets.

ANNEX 2. EVALUATION DESIGN AND IMPLEMENTATION

Impact Evaluation Design Overview

Answering causal questions such as “What is USAID/Malawi EGRA’s impact on children’s reading abilities?” and attributing the impact to a specific program requires ruling out alternative possible causes for impacts or changes in outcomes. The 2011 USAID Evaluation Policy (EP) requires that IEs use a carefully-selected comparison group to rule out possible alternative causes for key outcomes through estimating the counterfactual, or the level of change in project participant outcomes expected in the absence of the project. By comparing project participants with a comparison group, it is possible to “subtract away” the contextual changes (or those caused by other interventions or natural changes such as time) that affect both activity participants and non-activity participants (the comparison group). If activity participation is the only substantive difference between participants and the comparison group, then any differences in outcomes between the two groups can be attributed to the activity.

Recognizing the multitude of causes such as other complimentary programs by USAID on changes in reading performance, in addition to assessing overall impacts of EGRA on students’ reading performance, the impact evaluation also required examining the impacts of EGRA alongside other USAID activities such as SSDI and INVC on students’ learning performance. Since INVC and SSDI were already functioning in districts at the inception of this evaluation in 2013, this impact evaluation used a quasi-experimental design to establish comparison groups. In order to test possible effects of EGRA alongside the INVC and SSDI activities, this evaluation was designed with four distinct treatment levels:

Treatment Level 1. Four focus districts (Balaka, Machinga, and Lilongwe Rural West, Lilongwe Rural East) that provide an opportunity to evaluate the impact of a fully-integrated development approach with multiple activities across sectors, including EGRA, INVC, and SSDI, on early grade reading outcomes.

Treatment Level 2. The district (Salima) where EGRA overlaps with only the SSDI intervention. This serves as a test ground for the hypothesis that synergies between education and health initiatives catalyze changes that are greater than the sum of their parts.

Treatment Level 3. The district (Ntcheu) where EGRA overlaps with only the INVC intervention. This serves as a test ground for the development hypothesis that synergies between education and agricultural livelihood and nutrition initiatives catalyze changes that are greater than the sum of their parts.

Treatment Level 4. Five districts (Blantyre Rural, Mzimba North, Ntchisi, Thyolo, and Zomba Rural) that only receive the EGRA initiative. These districts are used to test the EGRA theory of change that education support leads to improved literacy and general education outcomes.

The evaluation team followed the same schools longitudinally at baseline, midline, and endline, but not the same set of learners longitudinally, due to the evaluation need to assess the same standards — Standards 2 and 4 — at baseline, midline and endline, but not the same students.⁸⁵

Treatment Assignment

In order to infer impacts, SI compared learner reading scores in each of these four levels between treatment and comparison group to determine the effectiveness of each type of treatment. However, in the Level 2 district (Salima), it was impossible to select comparison zones that were not already contaminated with the SSDI intervention because SSDI was already working across the entire district. Therefore, no comparison schools were assigned at Level 2. SSDI was also already working across all of the Level 1 districts. So, despite still including comparison schools at Level 1, SI’s estimation of treatment effects at this level are likely somewhat underestimated because SI is unable to measure the effects of the SSDI Activity in addition to the EGRA and INVC Activity. For that reason, in addition to comparing treatment schools in one level against comparison schools in the same level, the evaluation team also compares the

⁸⁵ The differences found between baseline and midline could be affected by the quality of students assessed each year. Therefore, we checked for similarity/differences between the two samples, and included some factors that help explain the quality of students as controls in the regressions. Further, by comparing treatment against comparison schools - both with different sets of learners - we minimize any effects on students that might come from trends in changes in learners. Also, we have included analysis of implementation factors to look at treatment fidelity in the regressions.

treatment schools for each level against the comparison schools in Levels 3 and 4 only, since these comparison schools represent the only “true comparisons.”

Since EGRA is implemented at the zonal level, at baseline in 2013, SI randomly selected zones in each of the four levels described above to implement the EGRA intervention (taking into account areas where INVC and SSDI were already working). However, since INVC and SSDI were not randomly assigned at baseline, the evaluation team is only able to determine whether EGRA is better than no EGRA and whether EGRA plus INVC and SSDI is better than no treatment. For more details on sample selection at the district level, see the 2014 IE baseline report prepared by SI and approved by USAID.

In Level 1 districts, in order to designate treatment and comparison zones as well as schools, at baseline in 2013 SI worked with the INVC implementers to determine in which Extension Planning Areas (EPAs) it is being implemented and in which EPAs it will be implemented within the next five years. Using the geospatial coordinates for the schools in each district, based on a 2008 GoM National Statistical Office dataset, SI was then able to determine which schools fell inside of the EPAs where INVC was or would be implemented. With this information and with assistance from the Department of Inspection and Advisory Services (DIAS), the Education Management Information Systems (EMIS) office, and the District Education Offices in Lilongwe, Balaka, and Machinga, the SI evaluation team was able to identify some educational zones where no schools were expected to be exposed to INVC and others where all schools were expected to be exposed to INVC, or, in other words, zones that fell completely inside or completely outside of the EPAs where INVC was or would be operating. This process resulted in 18 educational zones outside of the INVC treatment areas, which could be called INVC control zones, and 21 educational zones inside the INVC treatment areas, or INVC treatment zones. Combined, these 39 zones contained 342 schools, which became the sample frame for Level 1. SI randomly selected 40 schools within the 18 designated INVC treatment areas to serve as treatment schools, meaning that they would receive all three interventions (EGRA, INVC, and SSDI), and 40 schools within the 21 designated INVC control zones to serve as comparison schools, meaning that they would receive only SSDI intervention, not EGRA or INVC.

The Level 2 district, Salima, has 10 zones, all of which were exposed to the SSDI intervention in 2013. As such, there was no possibility to select comparison zones within Level 2. For this reason, four schools from each of the 10 zones were randomly selected at baseline as treatment schools for inclusion in the sample, for a total of 40 treatment schools in Level 2. The 40 comparison schools originally intended for selection within Level 2 were reallocated to the Level 4 districts, so that they could serve as “pure” comparison schools (those not exposed to any of the three interventions). Doing so increased the size of the pool of comparison schools available for the study.

The Level 3 district, Ntcheu, has 18 zones. Using a process similar to the one described above for Level 1, SI at baseline was able to determine which educational zones fell inside of and outside of the EPAs in which INVC was being or would be implemented, resulting in three INVC control zones and nine INVC treatment zones. (Six zones contained both INVC and non-INVC schools and so were omitted from the sample.) These 12 zones had 96 schools, and these schools formed the Level 3 sample frame. From the nine INVC treatment zones, 40 treatment schools were randomly selected for the Level 3 treatment sample. The three INVC control zones, however, contained only 27 schools, all of which were selected for inclusion in the comparison group. The remaining 13 schools, which would be needed in order to reach the total of 40 control schools, were reallocated to the Level 4 districts in order to maintain the intended sample size. As noted above with regard to Level 2, doing so increased the total size of the pool of “pure” comparison schools.

Level 4 includes the districts of Mzimba North, Blantyre Rural, Zomba, Thyolo, and Ntchisi, which together include 79 zones. From these 79 zones, 41 control zones and 38 treatment zones were selected at baseline based on a pair-wise random sampling technique using learner-teacher ratio for each school. Learner-to-teacher ratio was one of the only factors for which the evaluation team had data by zone prior to baseline data collection. This is the reason that the team chose to use this particular variable for pair-wise sampling. All zones were ranked, from highest average learner-teacher ratio to lowest. Zones that were adjacent to each other on the ranked list were then formed into pairs, so that #1 and #2 formed one pair, #3 and #4 formed another pair, and so on. The zones were then assigned to the treatment and comparison groups randomly: for example, the #1 school was assigned to the treatment group and the #2 school to comparison, with the decision whether #1 or #2 was assigned to the treatment group being random. This method maintained the benefits of random selection while increasing the likelihood that the comparison and treatment groups are comparable, at least according to learner-teacher ratio. From the 38 treatment zones, SI selected 40 EGRA-only treatment schools. From among the 41 control zones, SI selected 92 total comparison schools, which would not be exposed to any of the interventions. Forty of these 92 control schools were the originally intended

comparison schools in Level 4, and 40 were reallocated from Level 2 (as described above), and 12 were reallocated from Level 3 to make up for the smaller number of comparison schools available in Level 3.

Phased Treatment Design

For at least one year after baseline, none of the comparison zones received any EGRA. However, RTI, MoEST, and USAID wanted to offer the EGRA intervention to as many learners as possible. Thus, beginning in the 2014-2015 academic year, RTI began to phase in support for some of the comparison zones in Level 4, essentially turning those zones into treatment zones to ensure more wide-spread access to support through the project. SI worked with RTI and USAID in 2014 to ensure the zones that were phased into EGRA treatment were randomly selected from the comparison zones from Level 4. RTI used a public lottery to select 20 out of the 41 comparison zones in the five Level 4 districts to be phased into EGRA treatment (Cohort B). No zones in the other three levels (Levels 1, 2, or 3) were converted from comparison to treatment in 2014. Also, USAID decided the conversion in 2014 was the only phasing in that would occur until the evaluation ends in 2017. Therefore, RTI did not phase in other zones or schools within any other zones before the end of this IE. The rest remained as comparison zones and schools, as per the baseline assignment. The conversion of some Level 4 schools to treatment did not have a major effect on power calculations for this evaluation. Also, the phased rollout did not affect Standard 2 and 4 (focus of this evaluation) in terms of total implementation length since activities specific to these standards started only in 2014.

Data Collection

At the school level, in all three rounds – baseline, midline and endline - SI worked closely with MoEST and local data collection subcontractor firm, IKI, to gather data at the end of school year. Six tools were administered in schools – Chichewa reading assessment, learner survey, head teacher survey, class teacher survey, class room observation tool, and school environment checklist. Prior to data collection, at each round, the MoEST, IKI, and SI trained over 70 MoEST staff to contribute to the school level data collection in 320 schools across eleven education districts as enumerators and technical managers. The training included a one-day field test to pilot the instruments and protocols in the field. Following this field test, instruments were revised and updated, and the tablets were reprogrammed to ensure ease of use. In addition, an intra-rater reliability assessment and debrief was conducted to ensure that enumerators understood the learner assessment and questionnaire. At household level, at each round, data were collected by more than 85 enumerators from IKI after they were trained by SI. Training included tracking learner households, and piloting of the survey instrument.

Data Quality Assurance and Cleaning

At each round, during field work, a separate team of enumerators revisited respondents with a sub-sample of the original questions to ensure responses matched the earlier, original survey. IKI and SI conducted these traditional back checks as well as random audio audits for more than 10 percent of the schools and survey respondents. These back checks and audits involved verifying responses by either revisiting respondents and asking a subset of questions or randomly activating the microphones on the tablets while surveys were in progress. SI then compared these back checks and audits with actual data collected to reconcile results. Upon completion of data collection, SI and IKI collaborated to review the data sets for their completeness. SI also checked the data for accuracy, with an emphasis on student and school identifiers that are essential to connect a learner's information with that of his/her school and household. Reviewers prioritized these errors by analytic importance and collaboratively addressed them between IKI and SI.

ANNEX 3. TOOLS



Malawi Early Grade Reading Assessment: Student Response Form Administrator Instructions and Protocol, May – June 2013 Chichewa

Malangizo:

Muyenera kukhazikitsa ubwenzi wabwino ndi wophunzira amene mukumuyesa kudzera mu nkhani zifupizifupi komanso zosangalatsa kuti aone mafunsowa ngati sewero chabe osati ntchito yovuta. Nkoyenera kuwerenga zigawo zokhazo zomwe zili mumabokosi mokweza, momveka bwino ndi modekha.

Uli bwanji? Dzina langa ndi _____ ndipo ndimakhala ku _____. (Chezani ndi wophunzira munjira yomwe ingathandize kuti amasuke).

Kupempha chilolezo

- Ndikuuze chifukwa chimene ndabwerera kuno. Ndimagwira ntchito ku Unduna wa za Maphunziro, za Sayansi ndi Luso. Ndikufuna kudziwa m'mene inu ophunzira mumaphunzirira kuwerenga. Mwa mwayi iwe wasankhidwa kuti ndicheze nawe.
- Tichita sewero lowerenga. Ndikufunsa kuti undiwerengere malembo, mawu ndi nkhani mokweza.
- Ndigwiritsa ntchito wotchi iyi kuti ndiwone nthawi yomwe utenge powerenga.
- Awa simayeso, ndipo sizikhudzana ndi zotsatira za maphunziro ako.
- Ndikufunsanso mafunso ena okhudzana ndi banja la kwanu monga, chiyanikhulo chomwe mumayankhula kunyumba kwanu ndi zinthu zina zomwe muli nazo kwanu.
- Palibe amene adziwe zimene tikambirane.
- Uli ndi ufulu woyankha mafunso kapena ayi. Ngakhale tili mkati mwa kucheza uli ndi ufulu kukana kuyankha mafunso.
- Ngati sukufuna kuti ndicheze nawe utha kubwerera m'kalasi.
- Uli ndi funso tisanayambe? Tikhoza kuyamba?

Chongani mukabokosika ngati ophunzira wavomereza kuyesedwa: ☐ INDE

(Ngati wophunzira sanavomereze kuyesedwa, muthokozeni ndi kuitana ophunzira wina pogwiritsa ntchito chi pepala chomwechi.)

A. Tsiku la Mayeso	Tsiku : _____		H. Kalasi	☐ 1 = Sitandade 1 ☐ 2 = Sitandade 2 ☐ 3 = Sitandade 3 ☐ 4 = Sitandade 4
	Mwezi : _____			
B. Dzina la Woyesa				
C. Dzina la Sukulu			I. Dzina la Mphunzitsi	
D. Dera			J. Sitilimu	
E. Boma			K. Dzina la ophunzira L. Nambala yachinsinsi ya ophunzira	
F. Chigawo			M. Zaka zakubadwa	
G. Mtundu wa Sukulu :	☐ 1 = Tsiku lonse ☐ 2 = M'mawa ☐ 3 = Masana		N. Mwamuna kapena Mkazi O. Dzina la mudzi P. Dzina la mkulu wa pakhomu	☐ 1 = Mwamuna ☐ 2 = Mkazi
			N. Nthawi Yoyambira	5710 ____ : ____

Gawo 1. Kudziwa Dzina la Lembo

Onetsani ophunzira pepala la malembo mu buku la ophunzira. Nenani:

Ili ndi tsamba la malembo a m'Chichewa. Ndiuze maina a malembo amene ungathe.

Mwachitsanzo, dzina la lembo ili [lozani lembo la 'S'] ndi 'S'.

Tiye tiyesere: Ndiuze dzina la lembo ili [lozani lembo la 'U']

Ngati ophunzira ayankhe bwino nenani: **Wakhoza dzina la lembo ili ndi 'U':**

Ngati ophunzira alephere kuyankha molondola, nenani: **Dzina la lembo ili ndi 'U'**

Tsopano yesera lembo lina: Ndiuze dzina la lembo ili [lozani lembo la 'P']:

Ngati mwana wayankha molondola, nenani: **Wakhoza, dzina la lembo ili ndi 'P'**

Ngati mwana walephera kuyankha molondola, nenani: **dzina la lembo ili ndi 'P'**

Kodi ukudziwa chomwe ukuyenera kuchita?

Ndikanena kuti "Yamba" Chonde tchula dzina la lembo lili lonse mofulumira ndi mosamala. Yamba pano ndipo ndi kupitiriza motere [Lozani lembo loyamba mu mndandanda woyamba pamathero a chitsanzo ndipo lozetsani chala pa mzere woyamba. Ngati wafika pa lembo lomwe sukulidziwa, ndikuza dzina lake. Ndikakuwiza udzipitiriza. Wakonzeka? Yamba tsopano.



Yambani kuwerengera nthawi pamene ophunzira wawerenga lembo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (I). Werengerani lembo limene walikonza yekha ngati lolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembolo ndi kupitirira. Khalani chete pokhapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekandi atatu, Perekani dzina la lembo, lozani lembo lotsatira ndi kunena, Pitiriza. Chongani lembo lomwe mwapereka kwa mwana. Ngati ophunzira apereke liwu la lembo osati dzina lalembo, mpatseni dzina lalembo ndi kunena: Tandiuze dzina lalembo ili. Izi ziyenera kuchitika kamodzi kokha.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60) nenani "Ilekeza pomwepo." Lozerani lembo lomalizira kuwerenga ndi chizindikiro ichi (J).

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani "Zikomo" siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo: S u P

1	2	3	4	5	6	7	8	9	10	
D	i	t	i	O	T	g	C	T	m	(10)
H	t	O	A	r	C	n	e	h	R	(20)
L	e	H	p	e	A	i	o	z	U	(30)
h	f	i	N	T	o	o	F	d	E	(40)
e	r	P	H	r	d	T	K	t	a	(50)
y	w	e	L	e	E	U	N	o	d	(60)
W	e	A	A	S	E	n	i	m	R	(70)
s	t	C	V	S	N	D	t	i	L	(80)
A	s	J	G	e	E	i	A	C	n	(90)
N	a	H	S	t	U	B	y	S	o	(100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi) :

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

GAWO 2. MAPHATIKIZO A MALEMBO

Ntchito iyi ndiyongomvera chabe. Ndikuuza mawu ndipo undiuz maphatikizo omwe ali m'mawuwo. Mwachitsanzo, m'mawu oti "nguluwe" muli maphatikizo awa: "ngu-lu-we". Mu ntchito imeneyi ndikufuna kuti undiuz maphatikizo amene uwamve m'mawu. Nditchula mawuwa kawiri. Umvetsere kenako undiuz maphatikizo omwe ali m'mawuwo.

Tiye tiyesere. Kodi maphatikizo omwe ali m'mawu oti "mayi", "mayi" ndi chiyani?

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, maphatikizo a mawu oti "mayi" ndi "ma – yi".

Ngati mwana walephera kuyankha molondola, nenani: Mveranso kachiwiri: "mayi". Maphatikizo omwe ali m'mawu oti "mayi" ndi "ma-yi."

Tsopano yesera ena: Kodi maphatikizo omwe ali m'mawu oti "khwanya", "khwanya" ndi chiyani?.

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, maphatikizo a mawu oti "khwanya" ndi "khwa - nya".

Ngati mwana walephera kuyankha molondola, nenani: Mveranso kachiwiri: "khwanya". Maphatikizo omwe ali m'mawu oti "khwanya" ndi "khwa" ndi "nya."

Kodi ukudziwa chomwe uyenera kuchita?

[Ngati ophunzira anene kuti ayi, muuzeni kuti]: **Yesetsa m'mene ungathere.**

Werengani ndi kutchula mawu oyenera kachiwiri. Lolani yankho lokhalo lili ndi liwu lolondola. Ngati ophunzira akanike kuyankha m'masekondi atatu, chongani "Palibe yankho" ndipo pitirizani kutchula mawu otsatira. Tchulani momveka bwino koma musatsindike kwambiri paphatikizo loyamba la mawu ena aliwonse.

Langizo loyamba : Ngati ophunzira alephera kuyankha molondola kapena kulephera kuwerenga mawu asanu oyambirira, nenani kuti "Zikomo", ndipo musapitirize ntchiyoyi ndipo mukatero chongani m'kabokosi kali pamapeto a tsamba lino ndi kuyamba ntchito yotsatirayo.

Kodi ndi maphatikizo ati omwe ali mmawu awa? [Bwerezani mawuwo kawiri]					
Ana	A – na	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Boola	Bo-o – la	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Mwamuna	Mwa – mu na	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Bola	Bo – la	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Mkaka	Mka – ka	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Nama	Na – ma	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Kakamiza	Ka – ka – mi – za	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Mbola	Mbo – la	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Mnkhwani	Mnkhwa–ni	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Kankha	Ka – nkha	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho

Gawo 3. Kutchula liwu loyamba

Ntchito iyi siyofunika kuwerengera nthawi ndipo **PALIBE TSAMBA LA WOPHUNZIRA**. Werengani mawu aliwonse kawiri ndipo mufunse ophunzira kuti atchule liwu loyamba m'mawu amenewa. kumbukirani kutchula maliwu moyenera : /p/ osati /pu/ monga: /p/, ---- “puh” kapena “pe.” Nenani:

Ntchito iyi ndiyomvera chabe. Ndikufuna kuti undiuze liwu loyamba m'mawu ena aliwonse. Mwachitsanzo, m'mawu oti 'galu', liwu loyamba ndi “/g/”. Mu ntchito imeneyi, ndifuna undiuze liwu loyamba limene ukulimva m'mawu ena aliwonse. Nditchula mawuwo kawiri. Umvetsera mawuwo, kenaka undiuze liwu loyamba lomwe likumveka m'mawuwo.

Tiye tiyesere. Kodi liwu loyamba m'mawu oti “mayi”, “mayi” ndi chiyani?

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, liwu loyamba m'mawu oti “mayi” ndi /mmmmm/

[Ngati ophunzira sanayankhe molondola, nenani]: mvetsera kawiri: “mmmayi”. Liwu loyamba m'mawu oti “mayi” ndi /mmmmm/.

Tsopano yesera mawu ena: Kodi ndi liwu loyamba m'mawu oti “nzimbe”, “nzimbe” ndi chiyani?

Ngati mwana wayankha molondola, nenani: **Wakhoza**, liwu loyamba m'mawu oti “nzimbe” ndi “/n/”

Ngati mwana walephera kuyankha molondola, nenani: mveranso kaciwiri: **liwu loyamba la m'mawu oti “nzimbe” ndi /n/**

Kodi ukudziwa chomwe uyenera kuchita?

[Ngati wophunzira anene kuti ayi, muzeni kuti]: **Yesetsa m'mene ungathere.**

Werengani ndi kutchula mawu oyenera kawiri. Lolani yankho lokhalo lili ndi liwu lolondola. Ngati ophunzira akanike kuyankha m'masekondi atatu, chongani “Palibe yankho” ndipo pitirizani kutchula mawu otsatira. Tchulani momveka bwino koma musatsindike kwambiri liwu loyamba la mawu ena ali wonse.

Langizo loyamba: Ngati ophunzira alephere kuyankha molondola kapena kulephera kuwerenga mawu asanu oyambirira, nenani kuti “Zikomo”, ndipo musapitirize ntchiyoyi ndipo mukatero chongani m'kabokosi kali pamapeto a tsamba lino ndi kuyamba ntchito yotsatirayo.

Tchula liwu loyamba m'mawu awa ndi chiyani [Tchulani mawuwo]					
Kala	/k/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Dona	/d/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Khala	/kh/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Atate	/a/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Bala	/b/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Mana	/mmm/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Gada	/g/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Wada	/www/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Nola	/n/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho
Gwada	/g/	☐ wakhoza	☐ walakwa	☐ sakudziwa	☐ palibe yankho

GAWO 4. KUWERENGA MAPHATIKIZO

Onetsani wophunzira pepala la maphatikizo kuchokera m'buku la ophunzira. Nenani,

Awa ndi maphatikizo a malembo. Ndikufunsa kuti uwerenge maphatikizo ochuluka mmene ungathere. Mwachitsanzo, phatikizo ili ndi: “jo”.

Tiye tiwerenge phatikizo ili: [lozani phatikizo loti “bwe”]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, phatikizo ili ndi “bwe”

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “bwe”**

Yesa phatikizo lina: werenga phatikizo ili [lozani phatikizo loti “nu”]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, phatikizo ili ndi “nu”

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “nu”**

Ndikanena kuti yamba, uwerenge maphatikizo mofulumira ndi mosamala. Werenga maphatikizo ali pa mzere uli wonse. Ndikhala chete kukumvetsera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe ukuyenera kuchita? Ngati wakonzeka tiye tiyambepo.



Yambani kuwerengera nthawi pamene ophunzira wawerenga phatikizo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani phatikizo lomwe wazikonza yekha ngati lolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa phatikizolo ndi kupitiriza. Khalani chete pokapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, lozani phatikizo lotsatira ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani phatikizo lomwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI nenani “lekeza pomwepo.” Lozerani phatikizolomalizira kuwerenga ndi chizindikiro ichi.

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani “Zikomo” siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito

Chitsanzo : jo bwe nu

1	2	3	4	5	6	7	8	9	10	
ka	mi	po	ra	bwa	Dza	mnya	na	da	li	(10)
nja	thu	da	ki	fu	Ngi	ko	tsi	i	mphu	(20)
mfu	fa	o	se	pi	Lu	mda	mse	dzi	tsa	(30)
ma	ye	re	na	me	Pa	mkha	wo	si	ntha	(40)
dya	nyu	u	wa	ri	Ka	mwa	ba	ku	go	(50)
e	le	tu	sa	nkho	Nga	fi	wi	la	nda	(60)
te	mba	ndi	ti	zi	Zo	va	ya	no	mu	(70)
phu	mbo	Be	cha	kwa	Mbi	tho	za	ne	chi	(80)
yo	yi	pe	ke	mle	Kwe	ndo	wu	nkha	ta	(90)
tso	ngo	ni	A	kho	Bwi	lo	nzi	ndu	mo	(100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekondi:)

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

Gawo 5. Kuwerenga Mawu Odziwika

Onetsani ophunzira pepala la malembokuchokera m'buku la ophunzira. Nenani,

Awa ndi mawu a m'Chichewa. Ndipo ndikufuna iwe undiwerengere mawu ambiri omwe ungate. Mwachitsanzo, mawu awa: “khama”.

Tiye tiwerenge mawu awa: [lozani mawu oti “ona.”]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, mawu awa ndi “ona”

[Ngati ophunzira alephere kuyankha molondola, nenani]: mawu awa ndi “ona”.

Yesa mawu ena: werenga mawu awa [lozani mawu oti “bakha”]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, mawu awa ndi “bakha”

[Ngati ophunzira alephere kuyankha molondola, nenani]: mawu awa ndi “bakha”

Ndikanena kuti yamba, uwerenge mawu mofulumira ndi mosamala. Werenga mawuwo pa mzere uli wonse. Ndikhala chete kukumvetsera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe uchite? Ngati wakonzeka tiye tiyambepo.

 Yambani kuwerengera nthawi pamene ophunzira wawerenga mawu woyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwika pogwiritsa ntchito pensulo polemba chizindikiro ichi (I). Werengerani mawu odzikonza yekha ngati olondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembola ndi kupitiriza. Khalani chete pokhapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, werengani mawuwo ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani mawu omwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60)nenani “lekeza pomwepo.” Lozerani mawu omalizira kuwerenga ndi chizindikiro ichi (I).

Lamulo loyamba: Ngati ophunzira alephere kuwerenga mawu amodzi mu mzere woyamba, nenani “Zikomo”siyilani pomwepo ntchitoyi ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : khama ona bakha

1	2	3	4	5	
Atate	chiwala	Amayi	zovala	chakudya	(5)
Zina	atate	nyumba	lata	ndi	(10)
Fisi	malangizo	Mutu	mbalame	mnyamata	(15)
Pamanda	agogo	Tsiku	chimanga	bwino	(20)
Monga	mbewu	Zinthu	anthu	mitengo	(25)
Kalulu	ambiri	kwambiri	ana	abambo	(30)
Mbozi	kwa	zakudya	mphunzitsi	koma	(35)
Izi	kudziwa	Lina	mlonda	kusamala	(40)
Kuti	zipatso	nkhalango	iwo	zambiri	(45)
Mlendo	ena	mbatata	lye	akulu	(50)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:)

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

GAWO 6. KUWERENGA MAWU OPEKA

Onetsani wophunzira pepala la malembo kuchokera m'buku la ophunzira. Nenani,

Awa ndi mawu ongopeka m'Chichewa. Ndipo ndikufuna undiwerengere mawu omwe ungathe. Mwachitsanzo, “biva”.

Yesera kuwerenga mawu awa: [lozani mawu oti “lufa”]:

[Ngati wophunzira anene kuti “aga” nenani]: **Wakhoza**, mawu awa ndi “aga”

[Ngati wophunzira alephere kuwerenga mawu woti “aga”nenani] Mawu awa timatchula kuti “aga”

Yesera mawu ena: werenga mawu awa [lozani mawu woti “kete”].

[Ngati wophunzira anene kuti “kete” molondola, nenani]: **Wakhoza**, mawu awa ndi “kete”

[Ngati wophunzira alephere kutchula “kete” molondola nenani]: “Mawu awa timatchula kuti “kete”

Ndikanena kuti yamba, uwerenge mawu mofulumira ndi mosamala. Uwerenge mawuwo kuyambira mzere woyamba.

Ndikhalala chete kumvera pamene ukuwerenga, ukalephera kuwerenga mawu ena ndikuthandiza. Ngati wakonzeka yamba.



Yambani kuwerengera nthawi pamene ophunzira wawerenga lembo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani ngati cholondola pamene wophunzira wadzikonza yekha. Ngati munachonga kale mayankho wodzikonza yekha ngati olakwa, zunguzani mzere pa mawuwo ndi kupitirira. Khalani chete wophunzira akamawerenga, ngati wophunzira wadodoma kuwerenga mawu pa masekondi atatu, werengani mawuwo ndipo lozani mawu otsatira ndikumuuza kuti “pitiriza”. Izi ziyenera kuchitika kamodzi kokha Chongani mawu omwe mwapereka kwa wophunzira. Ngati wophunzira awerenga mawu asanu molakwitsa, asapitilize ndipo chongani mkabosi komwe kali patsamba lotsatira.

PAKATHA MASEKONDI MAKUMI ASANU (60)NDI LIMODZI NENANI “lekeza pomwepo.” Lozerani mawu omalizira kuwerenga ndi chizindikiro ichi ()

Lamulo loyamba: Ngati wophunzira walephere kuwerenga mawu a mumzere woyamba, nenani “Zikomo”siyilani pomwepo ntchitoyi ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : lufa aga kete

1	2	3	4	5	
Aza	Leta	geba	upa	atu	(5)
Omo	Mnkhawi	mvuvu	bwazo	goju	(10)
Nthibe	Aza	Suule	mpholi	nkhiki	(15)
Tcheffe	Juje	udo	mng'ene	nkhwenana	(20)
Booli	Chizi	thyata	eze	ngogo	(25)
zefa	Mnapa	mphwika	pwika	sati	(30)
thobi	Uto	khuda	tapuli	ono	(35)
ndwigo	Faano	Fese	bzyata	nyanu	(40)
zeepi	Iso	Patu	ilu	deeni	(45)
popo	Phena	Laafi	tetu	ntchuka	(50)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa wophunzira analibe mayankho olondola mu mzere woyamba.

GAWO 7A. KUMVETSERA NKHANI

Iyi ndi nkhani yayifupi. Ndifuna iwe undiwerengere mokweza, mofulumira koma mosamala. Ukatha kuwerengako ndikufunsa mafunso pa zomwe wawerenga. Yamba kuwerenga.



Yambani kuwerengera nthawi pamene wophunzira wawerenga mawu oyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani ngati cholondola pamene wophunzira wadzikonza yekha. Ngati munachonga kale mawu wodzikonza yekha ngati olakwa, lembani mzere mozungulira mawuwa ndi kupitirira. Khalani chete wophunzira akamawerenga, ngati wophunzira wadodoma kuwerenga pa mphindi zitatu, muwerengereni mawuwo kenak lozani mawu otsatira ndikumuuza kuti “ pitiriza”.Izi ziyenera kuchitika kamodzi kokha Chongani mawu omwe mwapereka kwa wophunzira.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60) NENANI “lekeza pomwepo.” Lozerani mawu omalizirakuwerenga ndi chizindikiro ichi (1)

Lamulo loyamba: Ngati wophunzira walephera kuwerenga mawu a mumzere woyamba, nenani “Zikomo”siyira pomwepa kuwerenga. Ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

GAWO 7B. KUWERENGA NDI KUMVETSA NKHANI

PAKATHA MASEKANDI 60 KAPENA WOPHUNZIRA AKATSIRIZA KUWERENGA NDIME M'MASEKANDI OSAPOSERA 60, CHOTSANI NDIMEYO PATSOGOLO PA OPHUNZIRA NDIPO WERENGANI FUNSO LOYAMBA.

MPATSENI WOPHUNZIRA MASEKANDI 15 KUTI AYANKHE FUNSOLO.CHONGANI YANKHO LA WOPHUNZIRA NDI KUMUWERENGA FUNSO LOTSATIRA.

WERENGANI MAFUNSO A MZERE ULIWONSE MPAKA PAMENE OPHUNZIRA WALEKEZA KUWERENGA.

		Tsopano ndikufunsa mafunso angapo okhudza nkhani yomwe wawerenga.			
		wakhoza	walakwa	sakudziw a	Palibe yankho
Lachisanu m'mawa Mada anakonzeka kupita ku sukulu.	6	Kodi nkhaniyi inachitikira kuti ? <i>[Nkhaniyi imachitikira ku sukulu. Tsiku lotsekera sukulu]</i>			
Tsikuli lidali lotsekera sukulu. Mafumu ndi makolo anafika ku sukulu ya Kaliza kuti adzawonerere luso lowerenga.	22	Nanga chimachitikira pa tsikuli ndi chiyani? <i>[Ophunzira a Sitandade 1 amawonetsa luso lowerenga.]</i>			
Iyeyu adali ndi nkawa chifukwa adali mtsikana wamng'ono ndipo anali kuyamba kumene sitandade 1.	36	Kodi n'chifukwa chiyani Mada anali ndi nkawa? <i>[Mada anali ndi nkawa chifukwa anali mtsikana wamng'ono. Kunali kuyamba kumene sitandade 1]</i>			
MADA ANAWERENGA MOPATSA CHIDWI POYEREKEZA NDI MSINKHU WAKE. ANTHU ADASANGALALA KWAMBIRI NDIPO ANAMUSUPA NDALAMA.	49	Tchulani chifukwa chimene mbiri ya Mada inapita patali? <i>[Mada amawerenga mopatsa chidwi poyerekeza ndi msinkhu wake.]</i>			
MBIRI YA MADA IDAPITA PATALI.	54	Kodi anthu amamusupa chiyani Mada ? <i>[Anthu adamusupa Mada ndalama]</i>			
Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi) :					
Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa wophunzira analibe mayankho olondola mu mzere woyamba					

GAWO 8. KUMVETSA NKHANI

Ntchito iyi siyofunika kugwiritsa ntchito TSAMBA LA WOPHUNZIRA. (Werengani ndimeyi mokweza kawiri mopatsa chidwi.)

Ndiwerengera ndime yayifupi kawiri kenaka ndidzakufunsa mafunso angapo. Chonde umvetsere bwino pamene ndikuwerenga nkhaniyi. Uyenera kuyankha mafunsowa m'mene ungathere. Kodi ukudziwa chomwe ukuyenera kuchita? Kodi uli wokonzeka? Tiyeni tiyambe tsopano.

Tsiku lina ndimapita ku mtsika kukagula nyama. Mphepete mwamsewu ndinaona chikwama ndipo ndinachitola. Mkati mwa chikwamacho munali ndalama ndi makadi a ku banki. Nditawauza mayi anga iwo anandilangiza kukapereka chikwamacho kwa Mfumu. Tsiku lina mayi anga anayitanidwa kwa Mfumu. Kumeneku tinakumana ndi abambo ena omwe anali mwini chikwama chija. Bambowa anathokoza ndi ndalama zokwana K5000.00 ndi kulonjeza kupereka chithandizo pa maphunziro anga.

Tsopano ndikufunsa mafunso angapo okhudza nkhani yomwe ndawerenga.				
	wakhoza	walakwa	sakudziw a	palibe yankho
Kodi nkhanayi idachitika kuti? [Inachitika kumudzi, mphepete mwa msewu, popita ku mtsika]				
Kodi mkati mwa chikwama munali chiyani? [munali ndalama ndi makadi a ku banki]				
Chifukwa chiyani chikwama anakachipereka kwa Mfumu? [kuti chisungike chinthu a mfumu amayenera kudziwa]				
Kodi kwa mfumu kunabwera ndani? [Kunabwera, mwini wa chikwama]				
Ndi mphatso yanji yomwe mwini chikwama uja anapereka? [mphatso ya ndalama zokwana K5000.00 ndi chithandizo pa maphunziro]				

Nthawi yomaliza kuyesa ophunzira:	____ : ____ (maola 24)
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Malawi Early Grade Reading Assessment: Student Response Form
Administrator Instructions and Protocol, April – May 2015
Chichewa

Malangizo:

Muyenera kukhazikitsa ubwenzi wabwino ndi wophunzira amene mukumuyesa kudzera mu nkhani zifupizifupi komanso zosangalatsa kuti aone mafunsowa ngati sewero chabe osati ntchito yovuta. Nkoyenera kuwerenga zigawo zokhazo zomwe

Uli bwanji? Dzina langa ndi _____ ndipo ndimakhala ku _____. (Chezani ndi wophunzira munjira yomwe ingathandize kuti amasuke).

zili mumabokosi mokweza, momveka bwino ndi modekha.

Kupempha chilolezo

- **Ndikuuze chifukwa chimene ndabwerera kuno. Ndimagwira ntchito ku Unduna wa za Maphunziro, za Sayansi ndi Luso. Ndikufuna kudziwa m'mene inu ophunzira mumaphunzirira kuwerenga. Mwa mwayi iwe wasankhidwa kuti ndicheze nawe.**
- **Ndikufuna kuti tikambirane pa zimenezi koma ngati sukufuna utha kubwerera m'kalasi.**
- **Tichita sewero lowerenga. Ndikufunsa kuti undiwerengere malembo, mawu ndi nkhani mokweza.**
- **Ndigwiritsa ntchito wotchi iyi kuti ndiwone nthawi yomwe utenge powerenga.**
- **Awa simayeso, ndipo sizikhudzana ndi zotsatira za maphunziro ako.**
- **Ndikufunsanso mafunso ena okhudzana ndi banja la kwanu monga, chiyankhulo chomwe mumayankhula kunyumba kwanu ndi zinthu zina zomwe muli nazo kwanu.**
- **Sindilemba dzina lako ndipo palibe amene adziwe zimene tikambirane.**
- **Ndibwerezanso kuti uli ndi ufulu woyankha mafunso kapena ayi. Ngakhale tili mkati mwa kucheza uli ndi ufulu kukana kuyankha mafunso.**
- **Uli ndi funso tisanayambe? Tikhoza kuyamba?**

Chongani mukabokosika ngati ophunzira wavomereza kuyesedwa: INDE

(Ngati wophunzira sanavomereze kuyesedwa, muthokozeni ndi kuitana ophunzira wina pogwiritsa ntchito chipepala chomwechi.)

A. Tsiku la Mayeso	Tsiku : _____ Mwezi : _____		H. Kalasi	○ 1 = Sitandade 2 ○ 2 = Sitandade 4
B. Dzina la Woyesa				
C. Dzina la Sukulu			I. Dzina la Mphunzitsi	
D. Dera			J. Sitilimu	
E. Boma			K. Nambala ya Chinsinsi ya Ophunzira	
F. Chigawo			L. Zaka zakubadwa	
G. Mtundu wa Sukulu:	○ 1 = Tsiku lonse ○ 2 = M'mawa ○ 3 = Masana		M. Mwamuna kapena Mkazi	○ 0 = Mwamuna ○ 1 = Mkazi
			N. Nthawi Yoyambira	5710 _____ :

Wachita bwino. Tsopano tiye tipite ku gawo

Gawo I. Kudziwa Dzina la Lembo

Ili ndi tsamba la malembo a alifabeti. Ndiuze maina a malembo amene ungathe.

Mwachitsanzo, dzina la lembo [lozani lembo la 'F'] ndi F

Tiye tiyesere: ndiuze dzina la lembo ili [lozani lembo la 'V']

Ngati ophunzira ayankhe bwino nenani: **Wakhoza dzina la lembo ili ndi 'Vii':**

Ngati ophunzira alephere kuyankha molondola, nenani: **Dzina la lembo ili ndi 'Vii'**

Tsopano yesera lembo lina: ndiuze dzina la lembo ili [lozani lembo la L]:

Ngati mwana wayankha molondola, nenani: **Wakhoza, dzina la lembo ili ndi "ELL"**

Ngati mwana walephera kuyankha molondola, nenani: **dzina la lembo ili ndi "ELL"**

Kodi ukudziwa chomwe ukuyenera kuchita?

Ndikanena kuti "Yamba" Chonde tchula dzina la lembo lili lonse mofulumira ndi mosamala. Yamba pano ndipo ndi kupitiriza motere [Lozani lembo loyamba mu mndandanda woyamba pamathero a chitsanzo ndipo lozetsani chala pa mzere

Yambani kuwerengera nthawi pamene ophunzira wawerenga lembo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani lembo limene walikonza yekha ngati lolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembolo ndi kupitirira. Khalani chete pokhapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekandi atatu, Perekanani dzina la lembo, lozani lembo lotsatira ndi kunena, Pitiriza. Chongani lembo lomwe mwapereka kwa mwana. Ngati ophunzira apereke liwu la lembo osati dzina lalembo, mpatseni dzina lalembo ndi kunena: Tandiuze DZINA lalembo ili. Izi ziyenera kuchitika kamodzi kokha.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI nenani "lekeza pomwepo." Chongani lembo lomalizira ndi chizindikiro ichi (I) **PAKUTHA PA MASEKONDI 60 NENANI "lekeza pomwepo")**.

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani "Zikomo" siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : F v L

1 2 3 4 5 6 7 8 9 10

T i J N S n A t e h (10) l z a V B o H r N A (20) A C f C S a S o E U (30) e
N t O a e C t o O (40) d L E d G E N o m t (50) h e K w T i L g y H (60) e i
e t H I S e T f (70) R y W p U s i l e l (80) R o a E d n D a s l (90) r C n
U r T P t m h (100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi):

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola

mu mzere oyamba.

Wachita bwino. Tsopano tiye tipite ku gawo

Ntchito iyi ndiyongomvera chabe. Ndikuuza mawu ndipo undiuze maphatikizo omwe ali mu mawuwo. Mwachitsanzo, mu mawu oti "ola" muli maphatikizo awa: "o – la". Mu ntchito imeneyi ndikufuna kuti undiuze maphatikizo amene uwamve m'mawu. Nditchula mawuwa kawiri. Umvere kenako undiuze maphatikizo omwe ali mu mawuwo.

Tiye tiyesere. Undiuze maphatikizo omwe ali m'mawu oti "mayi"? "mayi."

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, maphatikizo a mawu oti "mayi" ndi "ma – yi".**

Ngati mwana walephera kuyankha molondola, nenani: Mveranso kachiwiri: **"mayi". Maphatikizo omwe ali mu mawu oti "mayi" ndi "ma-yi."**

Tsopano yesera ena: kodi ndi maphatikizo ati amene ali m'mawu oti "khwanya"? "khwanya".

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, maphatikizo a mawu oti "khwanya" ndi "kwa - nya". Ngati mwana walephera kuyankha molondola, nenani: Mveranso kachiwiri: "khwanya". Maphatikizo omwe ali mu mawu oti "khwanya" ndi "kwa - nya."**

Kodi ukudziwa chomwe uyenera kuchita?

[Ngati ophunzira anene kuti ayi, muuzeni kuti]: **Yesetsa mmene ungathere.**

Werengani ndi kutchula mawu oyenera kachiwiri. Lolani yankho lokhalo lili ndi liwu lolondola. Ngati ophunizra akanike kuyankhe mumasekondi atatu, onetsani kuti “Palibe yankho” ndipo pitirizani kutchula mawu otsatira. Tchulani momveka bwino koma musatsindike kwambiri paphatikizo loyamba la mawu ena ali wonse.

Langizo loyamba: Ngati ophunzira alephere kuyankha molondola kapena kulephera kuwerenga mawu asanu oyambirira, nenani kuti “Zikomo”, ndipo musapitirize ntchiyoyi ndipo mukatero chongani m’kabokosi kali pamapeto a tsamba lino ndi kuyamba ntchito yotsatirayo.

Kodi ndi maphatikizo ati amene ali mu mawu awa “_____”? [bwerezani mawuwo kawiri]				
		Wakhoza = 2	Walakwa/ sakudziwa = 1	Palibe yankho = 0
Bola	Bo –la	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Mkaka	Mka – ka	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Mwamuna	Mwa – mu – na	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Ana	A – na	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Boola	Bo-o – la	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Kakamiza	Ka – ka – mi – za	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Mnkhwani	Mnkhwa – ni	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Kankha	Ka-nkha	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Nama	Na – ma	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Mbola	Mbo - la	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mawu asanu oyamba:

Gawo 3. Kutchula liwu loyamba

Ntchito iyi siyofunika kuwerengera nthawi ndipo PALIBE TSAMBA LAWOPHUNZIRA. Werengani mawu aliwonse kawiri ndipo mufunse ophunzira kuti atchule liwu loyamba m'mawu amenewa. kumbukirani kutchula maliwu moyenera : /p/ osati /pu/ monga: /p/, — “puh” kapena “pe.” Nenani: Werengani ndi kutchula mawu oyenera kawiri. Lolani yankho lokhalo lili ndi liwu lolondola. Ngati ophunzira akanike kuyankha mu masekondi atatu, onetsani kuti “Palibe yankho” ndipo pitirizani kutchula mawu otsatira. Tchulani momveka bwino koma musatsindike kwambiri liwu loyamba la mawu ena ali wonse.

Ntchito iyi ndiyomvera chabe. Ndikufuna kuti undiuze liwu loyamba m'mawu ena aliwonse. Mwachitsanzo, m'mawu oti 'galu', liwu loyamba ndi “/g/”. Mu ntchito imeneyi, ndifuna undiuze liwu loyamba limene ukulimva mu mawu ena aliwonse. Nditchula mawuwo kawiri. Umvere mawuwo, kenako undiuze liwu loyamba lomwe likumveka m'mawuwo.

Tiye tiyesere. Kodi liwu loyamba m'mawu oti “mayi”? “mayi” ndi chiyani?

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza**, liwu loyamba mu mawu oti “mayi” ndi /mmmmm/ [Ngati ophunzira sanayankhe molondola, nenani]: **mvetsera** kawiri: “mmmayi”. Liwu loyamba mu mawu oti “mayi” ndi /mmmmm/.

Tsopano yesera mawu ena: Kodi ndi liwu liti lomwe lili mmawu oti “nzimbe”? “nzimbe”. (mawu 5)

Ngati mwana wayankha molondola, nenani: **Wakhoza**, liwu loyamba mu mawu oti “nzimbe” ndi “/n/”

Ngati mwana walephera kuyankha molondola, nenani: **mveranso** kaciwiri: **liwu loyamba la mu mawu oti “nzimbe” ndi /n/**

Kodi ukudziwa chomwe uyenera kuchita?

Langizo loyamba: Ngati ophunzira alephera kuyankha molondola kapena kulephera kuwerenga mawu asanu oyambirira, nenani kuti “Zikomo”, ndipo musapitirize ntchitoyi ndipo mukatero chongani m'kabokosi kali pamapeto a tsamba lino ndi kuyamba ntchito yotsatirayo.

Tchula liwu loyamba mu mawu awa: Kodi liwu loyamba “ ”? “ ”? [Tchulani mawuwo]				
		Wakhoza = 2	Walakwa/ sakudziwa = 1	Palibe yankho = 0
Atate	/a/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Bala	/b/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Dona	/d/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Kala	/k/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Khala	/kh/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Wada	/www/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Gwada	/g/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Gada	/g/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Mana	/mmm/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho
Nola	/n/	o wakhoza	o Walakwa/ sakudziwa	o palibe yankho

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mawu asanu oyamba:



Gawo 4. Kuwerenga Maphatikizo

Onetsani ophunzira pepala la maphatikizo mu buku la ophunzira. Nenani,

Awa ndi maphatikizo a malembo. Ndikufunsa kuti uwerenge maphatikizo ochuluka mmene ungathere. Mwachitsanzo, phatikizo ili ndi: “go”.

Tiye tiwerenge phatikizo ili: [lozani phatikizo loti “kwa”]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, phatikizo ili ndi “kwa”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “kwa”**

Yesa phatikizo lina: werenga phatikizo ili [lozani phatikizo loti “se”]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, phatikizo ili ndi “se”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “se”**

Ndikanena kuti yamba, uwerenge maphatikizo mofulumira ndi mosamala. Werenga maphatikizo ali pa mzere uli wonse. Ndikhala chete kukumvetsera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe ukuyenera kuchita? Ngati wakonzeka tiye tiyambepo.

Yambani kuwerengera nthawi pamene ophunzira wawerenga phatikizo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizikiro ichi (/). Werengerani yozikonza yekha ngati yolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa phatikizolo ndi kupitiriza. Khalani chete pokapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, lozani phatikizo lotsatira ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani phatikizo lomwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI nenani “lekeza pomwepo.” Chongani phatikizolomalizira ndi chizindikiro ichi (/) PAKUTHA PA MASEKONDI 60 NENANI “lekeza pomwepo”).

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani “Zikomo” siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito

Chitsanzo : go kwa se

1 2 3 4 5 6 7 8 9 10

pe ye da ngi mbe yi ti no pa le (10) chi ka ni dya zo li ku ngo dzi ndo (20) e
wu lo kwa si wi phu ri se nzi (30) nkho fa go mi zi ra mfu mse po ya (40) sa
tho la mbo mda fi mo ta te na (50) nda nja mu pi nthu u na wa mnya lu (60) va
tsa i kho tu tsi da tso nga za (70) mle me ko yo ne cha mkha mwa bwa thu (80) ndu
mba A mbi fu wo dza nkha mphu ba (90) ndi ke re Be ma ki nyu kwe bwi o (100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu

mzere oyamba.

Gawo 5. Kuwerenga Mawu Odziwika

Onetsani ophunzira pepala la malembo m'buku la ophunzira. Nenani,

Yambani kuwerengera nthawi pamene ophunzira wawerenga mawu woyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwika pogwiritsa

Awa ndi mawu a m'Chichewa. Ndipo ndikufuna iwe undiwerengere mawu ambiri omwe ungathe. Mwachitsanzo, mawu awa: "gona".

Tiye tiwerenge mawu awa: [lozani mawu oti "chili."]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, mawu awa ndi "chili"**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **mawu awa ndi "chili."**

Yesa mawu ena: werenga mawu awa [lozani mawu oti "fodya"]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, mawu awa ndi "fodya"**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **mawu awa ndi "fodya"**

Ndikanena kuti yamba, uwerenge mawu mofulumira ndi mosamala. Werenga mawuwo pa mzere uli wonse. Ndikhala chete kukumvera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe uchite? Ngati wakonzeka tiye tiyambepo.

ntchito pensulo polemba chizikiro ichi (I). Werengerani yodzikonza yekha ngati yolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembola ndi kupitiriza. Khalani chete pokapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, werengani mawuwo ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani mawu omwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI nenani "lekeza pomwepo." Chongani mawu omalizira ndi chizindikiro ichi (I) **PAKUTHA PA MASEKONDI 60 NENANI** "lekeza pomwepo").

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani "Zikomo" siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : gona chili fodya

1	2	3	4	5					
ena	chimanga	fisi	kalulu	pamanda (5)	kusamala	Mutu	mnyamata	malangizo	nyumba
(10) atate	zina	ndi	kudziwa	nkhalango (15)	koma	izi	akulu	agogo	mlendo
(20) tsiku	kwambiri	mbalame	mbatata	ana (25)	lata	mbewu	chakudya	mbozi	
anthu (30)	iwo	amayi	zinthu	zambiri	zakudya (35)	zovala	lye	lina	bwino
chiwala (40)	ambiri	abambo	adali	mlonda	kuti (45)	kwa	monga	mphunzitsi	mitengo
zipatso (50)									

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

Gawo 6. Kuwerenga Mawu Opeka

Onetsani wophunzira pepala la malembo m'buku la ophunzira.Nenani,

Awa ndi mawu ongopeka m'Chichewa. Ndipo ndikufuna undiwerengere mawu omwe ungathe. Mwachitsanzo, “yono”.

Yesera kuwerenga mawu awa: [lozani mawu oti “ndodi”]:

[Ngati wophunzira anene kuti “ndodi” nenani]: **Wakhoza, mawu awa ndi “ndodi”**

[Ngati wophunzira alephere kuwerenga mawu woti “ndodi”nenani] **Mawu awa timatchula kuti “ndodi”**

Yesera mawu ena: werenga mawu awa [lozani mawu woti “biva”].

[Ngati wophunzira anene kuti “biva” molondola, nenani]: **Wakhoza, mawu awa ndi “biva”**

[Ngati wophunzira alephere kutchula “biva” molondola nenani]: **“Mawu awa timatchula kuti “biva”**

Ndikanena kuti yamba, uwerenge mawu mofulumira ndi mosamala. Uwerenge mawuwo kuyambira mzere woyamba. Ndikhala chete kumvera pamene ukuwerenga, ukalephera kuwerenga mawu ena ndikuthandiza. Ngati wakonzeka yamba.

Yambani kuwerengera nthawi pamene ophunzira wawerenga lembo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani ngati cholondola pamene wophunzira wadzikonza yekha. Ngati munachonga kale mayankho wadzikonza yekha ngati olakwa, zunguzani mzere pa mawuwo ndi kupitirira.. Khalani chete wophunzira akamawerenga, ngati wophunzira wadodoma kuyankha pa masekondi atatu, werengani mawuwo ndipo lozani mawu otsatira ndikumiza kuti “ pitiriza”. Chongani mawu omwe mwapereka kwa wophunzira. Ngati wophunzira awerenga mawu asanu molakwitsa,asapitilize ndipo chongani mkabosi komwe kali patsamba lotsatira .

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI NENANI “lekeza pomwepo.” Chongani mawu omalizira ndi chizindikiro ichi (/)

Lamulo loyamba: Ngati wophunzira walephere kuwerenga mawu a mumzere woyamba, nenani “Zikomo”siyilani pomwepo ntchitoyi ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : yono ndodi biva

1	2	3	4	5					
iso	tapuli	patu	omo	udo (5) popo	eze	mphwika	ilu	nkhiki (10)	
phena	uto	bwazo	ntchuka	ngogo (15) soola	ndwigo	mng'ene	sati	goju (20)	
thyata	nthibe	pwika	nkhweni	faano (25) upa	tetu	bzyata	mnkhawi	leta (30)	
booli	fese	juje	geba	khuda (35) atu	ono	chizi	laafi	mpholi (40)	
tcheke	nyanu	aza	thobi	zeepi (45) Suule	mvuvu	mnapa	deeni	zefa (50)	

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:
Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa wophunzira analibe mayankho
olondola mu mzere woyamba.

Gawo 7a. Kumvetsera nkhani

Yambani kuwerengera nthawi pamene wophunzira wawerenga mawu oyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa

Iyi ndi nkhani yayifupi. Ndifuna iwe undiwerengere mokweza, mofulumira koma mosamala. Ukatha kuwerengako ndikufunsa mafunso pa zomwe wawerenga. Yamba kuwerenga.

ntchito pensulo polemba chizindikiro ichi (/). Werengerani ngati cholondola pamene wophunzira wadzikonza yekha. Ngati munachonga kale mawu wodzikonza yekha ngati olakwa, lembani mzere mozungulira mawuwa ndi kupitirira. Khalani chete wophunzira akamawerenga, ngati wophunzira wadodoma kuwerenga pa mphindi zitatu, muwerengereni mawuwo kenak lozani mawu otsatira ndikumuuza kuti “ pitiriza”. Chongani mawu omwe mwapereka kwa wophunzira. Izi ziyenera kuchitika kamodzi kokha.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI NENANI “lekeza pomwepo.” Chongani mawu omalizira ndi chizindikiro ichi (/)

Lamulo loyamba: Ngati wophunzira walephere kuwerenga mawu a mumzere woyamba, nenani “Zikomo”siyila pomwepa kuwerenga. Ndipo chongani m’kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Gawo 7b. Kuwerenga ndi kumvetsera nkhani

Pakatha masekandi 60 kapena wophunzira akatsiriza kuwerenga ndime m’masekandi zosaposera 60, chotsani ndimeyo patsogolo pa ophunzira ndipo werengani funso loyamba.

Mpatseni wophunzira masekandi 15 kuti ayankhe funsola, chongani yankho la wophunzira ndi kumuwerenga funso lotsatira.

Werengani mafunso a mzere uliwonse mpaka pamene ophunzira walekeza kuwerenga.

	Tsopano ndikufunsa mafunso angapo okhudza nkhani yomwe wawerenga.			
		Wakhoza = 2	Walakwa = 1	Palibe yankho = 0
Lidali tsiku lachisanu pamene sukulu yathu ya Kapeni idasewera mpira ndi ya Chimutu. 13	Kodi ndi sukulu ziti zinkasewera mpira? (Kapeni ndi Chimutu)			
Tidakonzekera kwambiri ndi cholinga choti tipambane. Nawonso ochemelera sadalekelere 22	Chifukwa chiyani a Kapeni anakonzekera kwambiri? (kuti apambane)			
Mpira udayamba. Mwadzidzidzi, oyimbira mpira adayimba wezulo ndipo nthawi yomweyo ochemelera a Chimutu adalowa m’bwalo akuvina ndi kuimba. 40	Kodi chidachititsa a Chimutu kuti alowe m’bwalo akuvina ndi kuimba ndi chiyani? (amasangalalira chigoli, sukulu yawo idagoletsa chigoli, oyimbira adayimba wezulo)			
Osewera athu sadakhutire ndi chigolicho chifukwa adaona kuti oyimbirayo sadatsatire malamulo. 51	Kodi oyimbira mpira adaonetsa khalidwe lanji? (lokondera, losadziwa)			
Ngakhale zidali choncho masewero adapitilira ndipo	Ukuganiza kuti ndi chifukwa chiyani mpira udapitilira? (A Kapeni amadzidalira, a			

WACHITA BWINO. TSOPANO TIYE TIPITE KU GAWO LOTSATIRA.

potsiriza sukulu yathu idapambana. 6l	Kapeni adakonzekera kwambiri, aphunzitsi adawalimbikitsa)			
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Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi) :

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa wophunzira analibe mayankho

olondola mu mzere woyamba

Gawo 8. Kumvetsa Nkhani

Ntchito iyi siyofunika kugwiritsa ntchito TSAMBA LA WOPHUNZIRA. (Werengani ndimeyi mokweza kawiri mopatsa chidwi.)

Dzina langa ndine Madalitso. Ndimaphunzira ku Kwerani pulayimale sukulu. Kuyambira Lolemba mpaka Lachisanu ndimayenera kuvala yunifolomu. Tsiku lina ndikusewera chipako ndi anzanga, ananding'ambira yunifolomu. Ndinadandaula

Ntchito iyi siyofunika kugwiritsa ntchito TSAMBA LA WOPHUNZIRA. Ndiwerengera ndime yayifupi kawiri kenaka ndidzakufunsa mafunso angapo. Chonde umvetsere bwino pamene ndikuwerengera nkhanayi. Uyenera kuyankha mafunsowa mmene ungathere. Kodi ukudziwa chomwe ukuyenera kuchita? Kodi uli wokonzeka? Tiye tiyambe tsopano.

kwambiri. Ndinadzimvera chisoni ndipo ndinapita kunyumba ndikulira. Nditafika kunyumba, ndinafotokoza zomwe zinachitika ndipo anandilonjeza kuti andigulira ina

Tsopano ndikufunsa mafunso angapo okhudza nkhanu yomwe wawerenga.			
	Wakhoza = 2	Walakwa = 1	palibe yankho = 0
Kodi ndi sukulu yiti yomwe Madalitso amaphunzira? [Madalitso amaphunzira ku Kwerani pulayimale sukulu]			
Ndi chifukwa chiyani Madalitso akudandaula? [Yunifolomu yake yang'ambidwa, azivala chiyani popita ku sukulu, a phunzitsi akamubweza.]			
Kodi Madalitso akulirani? [Madalitso amaopa kuti makolo ake akamukalipira]			
Madalitso anamva bwani ndi zomwe makolo analonjeza? [Anakondwera, anavinavina]			
Kodi ubwino wa yunifolomu ndi chiyani? [Imadziwitsa komwe mwana akuphunzira, amaoneka okongola.]			

Chongani mukabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mawu asanu oyamba:

Gawo 9. Kucheza ndi ophunzira

Funsani ophunzira funso lililonse momveka bwino monga mmene amachitira pocheza. Musawerenge mayankho onse kwa ophunzira mokweza. Dikirani ophunzira kupereka yankho ndipo mulilembe pa mpata womwe waperekedwa kapena kulemba mzere wozungulira chizindikiro cha yankho lomwe wophunzira wapereka. Ngati palibe malangizo ena otsutsana, yankho limodzi ndi limene likuloleledwa.

Ia	Kodi chiyankhulo chomwe umaphunzira kusukulu ndi chimenenso mumayankhula kunyumba?	Ngati ayi, pitani ku funso Ib 0 Inde 1 Sakudziwa/Palibe yankho.....9
Ib	[Ngati yankho Ia funso Ia likhale Ayi] kodi ndi chiyankhulo chiti	Chichewa 1 Tumbuka 2 Yao 3

WACHITA BWINO. TSOPANO TIYE TIPITE KU GAWO LOTSATIRA.

	chimene umayankhula kunyumba? [Mayankho angapo ndi oloedwa]	Chingelezi 4 zina (fotokozani): 5 Sakudziwa/Palibe yankho 9		
Kodi kunyumba kwanu kuli zinthu ngati izi:		Inde	Ayi	Sakudziwa
2	wailesi?	2	1	9
3	telefoni kapena telefoni ya m'manja?	2	1	9
4	magetsi?	2	1	9
5	televiziyoni?	2	1	9
6	filiji?	2	1	9
7	chimbudzi cha mnyumba ?	2	1	9
8	njinga ?	2	1	9
9	njinga ya moto ?	2	1	9
10	galimoto, galimoto ya lole, thilakita kapena bwato la injini, ngolo, golosale, chigayo?	2	1	9
11	Kodi unapitapo kusukulu ya mkaka usalowe kalasi yoyamba?	Ayi 0 Inde 1 Sakudziwa/Palibe yankho.....99		
12	Kodi unali kalasi iti chaka chatha?	Sindinali pa sukulu 0 Sitandade 1 2 Sitandade 2 3 Sitandade 3 4 Sitandade 4 5 Sakudziwa/Palibe yankho 99		
13	Kodi chaka chatha unajombapo kusukulu kupyola sabata imodzi?	Ayi 0 Inde 1 Sakudziwa/Palibe yankho 99		
14	Kodi uli ndi mabuku owerenga a sukulu?	Ayi 0 Inde 1 Sakudziwa/Palibe yankho 99		
15	Kupatula mabuku a kusukulu, kodi pali mabuku ena, nyuzipepala kapena zinthu zina zowerenga kunyumba kwanu?	Ayi 0 Inde 1 Sakudziwa/Palibe yankho 99		
	[Ngati inde, Funsani funso 15] chonde Perekani zitsanzo.	(sikoyenera kulemba mayankho)		
16	[Ngati inde kufunso 6] kodi mabuku amenewa kapena zinthu zimenezi zili mu chiyankhulo kapena ziyankhulo zANJI ?	Chingelezi 1 Chichewa 2 Tumbuka 3 Zina (fotokozani): 8 Sakudziwa/Palibe yankho 99		

	<i>[lolani mayankho ochuluka]</i>	
17	Kodi kunyumba kwanu umakhala ndi yani ?	Makolo anga 0 Amayi anga 1 Atate anga 2 Agogo 3 Amalume 4 Azakhali 5 Achimwene 6 Achemwali 7 Ena (fotokozani) 8
18	Kodi amayi ako kapena okuyang'anira ako analekezera pati sukulu?	Palibe 0 Sukulu ina 1 Anatsiriza sukulu ya pulaimale 2 Anafika ku sukulu ya sekondale 3 Anatsiriza sukulu ya sekondale 4 Sukulu ya za umisili 5 Sukulu ya ukachenjede 6 Zina (fotokozani) 8 Sakudziwa/Palibe yankho 99
19	Kodi abambo ako kapena okuyang'anira ako analekezera pati sukulu?	Palibe 0 Sukulu ina 1 Anatsiriza sukulu ya pulaimale 2 Anafika ku sukulu ya sekondale 3 Anatsiriza sukulu ya sekondale 4 Sukulu ya za umisili 5 Sukulu ya ukachenjede 6 Zina (fotokozani): 8 Sakudziwa/Palibe yankho 99

Nthawi yomaliza kuyesa ophunzira:	____ : ____ (maola 24)
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**Malawi Early Grade Reading Assessment
2017 EGRA Impact Evaluation Endline
Administrator Instructions and Protocol for CHICHEWA**

MALANGIZO:

Muyenera kukhazikitsa ubwenzi wabwino ndi wophunzira amene mukumuyesa kudzera mu nkhani zifupizifupi komanso zosangalatsa kuti aone mafunsowa ngati sewero chabe osati ntchito yovuta. Nkoyenera kuwerenga zigawo zokhazo zomwe zili mumabokosi mokweza, momveka bwino ndi modekha.

Uli bwanji? Dzina langa ndi _____ ndipo ndimakhala ku _____. (Chezani ndi wophunzira munjira yomwe ingathandize kuti amasuke).

KUPEMPHA CHILOLEZO

- Ndikuuze chifukwa chimene ndabwerera kuno. Ndimagwira ntchito ku Unduna wa za Maphunziro, za Sayansi ndi Luso. Ndikufuna kudziwa m'mene inu ophunzira mumaphunzirira kuwerenga. Mwa mwayi iwe wasankhidwa kuti ndicheze nawe.
- Tichita sewero lowerenga. Ndikufunsa kuti undiwerengere malembo, mawu ndi nkhani mokweza.
- Ndigwiritsa ntchito wotchi iyi kuti ndiwone nthawi yomwe utenge powerenga ndipo ndikufunsa mafunso.
- Awa simayeso, ndipo sizikhudzana ndi zotsatira za maphunziro ako.
- Ndikufunsanso mafunso ena okhudzana ndi banja la kwanu monga, chiyanikhulo chomwe mumayankhula kunyumba kwanu ndi zinthu zina zomwe muli nazo kwanu.
- Palibe amene adziwe zimene tikambirane.
- Uli ndi ufulu woyankha mafunso kapena ayi. Ngakhale tili mkati mwa kucheza uli ndi ufulu kukana kuyankha mafunso.
- Ngati sukufuna kuti ndicheze nawe utha kubwerera m'kalasi.
- Uli ndi funso tisanayambe? Tikhoza kuyamba?

Chongani mukabokosika ngati ophunzira wavomereza kuyesedwa: ☐ INDE

(Ngati wophunzira sanavomereze kuyesedwa, muthokozeni ndi kuitana ophunzira wina pogwiritsa ntchito chi pepala chomwechi.)

A. Tsiku la Mayeso	Tsiku : _____		H. Kalasi	☐ 2 = Sitandade 2 ☐ 4 = Sitandade 4
	Mwezi : _____			
B. Dzina la Woyesa				
C. Dzina la Sukulu			I. Dzina la Mphunzitsi	
D. Dera			J. Sitilimu	
E. Boma			K. Dzina la ophunzira	
			L. Nambala yachinsinsi ya ophunzira	
F. Chigawo			M. Zaka zakubadwa	
R. Location :	☐ 1 = Urban ☐ 2 = Rural		N. Mwamuna kapena Mkazi O. Dzina la mudzi P. Dzina la mkulu wa pakhomu	☐ 1 = Mwamuna ☐ 2 = Mkazi
G. Mtundu wa Sukulu :	☐ 1 = Tsiku lonse ☐ 2 = M'mawa ☐ 3 = Masana		Q. Nthawi Yoyambira	____ : ____

GAWO I. KUDZIWA DZINA LA LEMBO (Letter Name Knowledge)

Onetsani ophunzira pepala la malembo mu buku la ophunzira.Nenani:

Ili ndi tsamba la malembo a m’Chichewa. Ndiuze maina a malembo amene ungathe.

Mwachitsanzo, dzina la lembo ili [lozani lembo la ‘S’] ndi ‘S’.

Tiye tiyesere: Ndiuze dzina la lembo ili [lozani lembo la ‘U’]

Ngati ophunzira ayankhe bwino nenani: **Wakhoza dzina la lembo ili ndi ‘U’:**

Ngati ophunzira alephere kuyankha molondola, nenani: **Dzina la lembo ili ndi ‘U’**

Tsopano yesera lembo lina: Ndiuze dzina la lembo ili [lozani lembo la ‘P’]:

Ngati mwana wayankha molondola, nenani: **Wakhoza, dzina la lembo ili ndi ‘P’**

Ngati mwana walephere kuyankha molondola, nenani: **dzina la lembo ili ndi ‘P’**

Kodi ukudziwa chomwe ukuyenera kuchita?

Ndikanena kuti “Yamba” Chonde tchula dzina la lembo lili lonse mofulumira ndi mosamala. Yamba pano ndipo ndi kupitiriza motere [Lozani lembo loyamba mu mndandanda woyamba pamathero a chitsanzo ndipo lozetsani chala pa mzere woyamba. Ngati wafika pa lembo lomwe sukulidziwa, ndikuuza dzina lake kamodzi kokha basi. Ndikakuwuzza udzipitiriza. Wakonzeka? Yamba tsopano.



Yambani kuwerengera nthawi pamene ophunzira wawerenga lembo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani lembo limene walikonza yekha ngati lolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembolo ndi kupitirira. Khalani chete pokhapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekandi atatu, Perekani dzina la lembo, lozani lembo lotsatira ndi kunena, Pitiriza. Chongani lembo lomwe mwapereka kwa mwana. Ngati ophunzira apereke liwu la lembo osati dzina lalembo, mpatseni dzina lalembo ndi kunena: Tandiuze dzina lalembo ili. Izi ziyenera kuchitika kamodzi kokha.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60) nenani “lekeza pomwepo.” Lozerani lembo lomalizira kuwerenga ndi chizindikiro ichi ().

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani “Zikomo”siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : S u P

1	2	3	4	5	6	7	8	9	10	
D	i	t	i	O	T	g	C	T	m	(10)
H	t	O	A	r	C	n	e	h	R	(20)
L	e	H	p	e	A	i	o	z	U	(30)
h	f	i	N	T	o	o	F	d	E	(40)
e	r	P	H	r	d	T	K	t	a	(50)
y	w	e	L	e	E	U	N	o	d	(60)
W	e	A	A	S	E	n	i	m	R	(70)
s	t	C	V	S	N	D	t	i	L	(80)
A	s	J	G	e	E	i	A	C	n	(90)
N	a	H	S	t	U	B	y	S	o	(100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi):

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

☐

GAWO 2. KUWERENGA MAPHATIKIZO (SYLLABLE READING)

Onetsani wophunzira pepala la maphatikizo kuchokera m'buku la ophunzira. Nenani,

Awa ndi maphatikizo a malembo. Ndikufunsa kuti uwerenge maphatikizo ochuluka mmene ungathere. Mwachitsanzo, phatikizo ili ndi: “jo”.

Tiye tiwerenge phatikizo ili: [lozani phatikizo loti “bwe”]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, phatikizo ili ndi “bwe”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “bwe”**

Yesa phatikizo lina: werenga phatikizo ili [lozani phatikizo loti “nu”]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, phatikizo ili ndi “nu”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **phatikizo ili ndi “nu”**

Ndikanena kuti yamba, uwerenge maphatikizo mofulumira ndi mosamala. Werenga maphatikizo ali pa mzere uli wonse. Ndikhala chete kukumvetsera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe ukuyenera kuchita? Ngati wakonzeka tiye tiyambepo.



Yambani kuwerengera nthawi pamene ophunzira wawerenga phatikizo loyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani phatikizo lomwe wazikonza yekha ngati lolondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa phatikizolo ndi kupitiriza. Khalani chete pokapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, lozani phatikizo lotsatira ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani phatikizo lomwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI nenani “lekeza pomwepo.” Lozerani phatikizolomalizira kuwerenga ndi chizindikiro ichi.

Lamulo loyamba: Ngati ophunzira alephere kupereka yankho lolondola limodzi mu mzere woyamba, nenani “Zikomo” siyilani pomwepo ntchitoyi ndipo chongani mu kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito

Chitsanzo : jo bwe nu

1	2	3	4	5	6	7	8	9	10	
ka	mi	po	ra	bwa	Dza	mnya	na	da	li	(10)
nja	thu	da	ki	fu	Ngi	ko	tsi	hi	mphu	(20)
mfu	fa	fo	se	pi	Lu	mda	mse	dzi	tsa	(30)
ma	ye	re	na	me	Pa	mkha	wo	si	ntha	(40)
dya	nyu	nu	wa	ri	Ka	mwa	ba	ku	go	(50)
de	le	tu	sa	nkho	Nga	fi	wi	la	nda	(60)
te	mba	ndi	ti	zi	Zo	va	ya	no	mu	(70)
phu	mbo	Be	cha	kwa	Mbi	tho	za	ne	chi	(80)
yo	yi	pe	ke	mle	Kwe	ndo	wu	nkha	ta	(90)
tso	ngo	ni	ja	kho	Bwi	lo	nzi	ndu	mo	(100)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekondi):

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

GAWO 3: KUWERENGA MAWU ODZIWIKA (Familiar Word Reading)

Onetsani ophunzira pepala la malembokuchokera m'buku la ophunzira. Nenani,

Awa ndi mawu a m'Chichewa. Ndipo ndikufuna iwe undiwerengere mawu ambiri omwe ungathe. Mwachitsanzo, mawu awa: “khama”.

Tiye tiwerenge mawu awa: [lozani mawu oti “ona.”]:

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, mawu awa ndi “ona”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **mawu awa ndi “ona”.**

Yesa mawu ena: werenga mawu awa [lozani mawu oti “bakha”]

[Ngati ophunzira ayankhe molondola, nenani]: **Wakhoza, mawu awa ndi “bakha”**

[Ngati ophunzira alephere kuyankha molondola, nenani]: **mawu awa ndi “bakha”**

Ndikanena kuti yamba, uwerenge mawu mofulumira ndi mosamala. Werenga mawuwo pa mzere uli wonse. Ndikhala chete kukumvetsera pokhapokha ukafuna chithandizo. Kodi ukudziwa zomwe uchite? Ngati wakonzeka tiye tiyambepo.



Yambani kuwerengera nthawi pamene ophunzira wawerenga mawu woyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwika pogwiritsa ntchito pensulo polemba chizindikiro ichi (I). Werengerani mawu odzikonza yekha ngati olondola. Ngati mwachonga kale mayankho odzikonza yekha ngati olakwa, zunguzani mzere pa lembolo ndi kupitiriza. Khalani chete pokhapokha akamapereka mayankho motere: ngati ophunzira adodoma kuyankha pa masekondi atatu, werengani mawuwo ndi kunena, pitiriza. Izi ziyenera kuchitika kamodzi kokha. Chongani mawu omwe mwapereka kwa mwana.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60) nenani “lekeza pomwepo.” Lozerani mawu omalizira kuwerenga ndi chizindikiro ichi (I).

Lamulo loyamba: Ngati ophunzira alephere kuwerenga mawu amodzi mu mzere woyamba, nenani “Zikomo” siyilani pomwepo ntchitoyi ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

Chitsanzo : khama ona bakha

1	2	3	4	5	
Atate	chiwala	Amayi	zovala	chakudya	(5)
Zina	atate	nyumba	lata	ndili	(10)
Fisi	malangizo	Mutu	mbalame	mnyamata	(15)
Pamanda	agogo	Tsiku	chimanga	bwino	(20)
Monga	mbewu	Zinthu	anthu	mitengo	(25)
Kalulu	ambiri	kwambiri	ana	abambo	(30)
Mbozi	kwawa	zakudya	mphunzitsi	koma	(35)
Izi	kudziwa	Lina	mlonda	kusamala	(40)
Kuti	zipatso	nkhalango	iwo	zambiri	(45)
Mlendo	ena	mbatata	lye	akulu	(50)

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi:)

Chongani m'kabokosi ngati ntchitoyi sinapitirizidwe chifukwa ophunzira analibe mayankho olondola mu mzere oyamba.

GAWO 4. KUMVETSERA NKHANI (ORAL PASSAGE READING)

Onetsani ophunzira pepala la nkhanu yaifupi kuchokera m'buku la ophunzira. Nenani:

Iyi ndi nkhanu yayifupi. Ndifuna iwe undiwerengere mokweza, mofulumira koma mosamala. Ukatha kuwerengako ndikufunsa mafunso pa zomwe wawerenga. Yamba kuwerenga.



Yambani kuwerengera nthawi pamene wophunzira wawerenga mawu oyamba. Yendetsani pensulo ndi kuchonga moyenera yankho lolakwa pogwiritsa ntchito pensulo polemba chizindikiro ichi (/). Werengerani ngati cholondola pamene wophunzira wadzikonza yekha. Ngati munachonga kale mawu wadzikonza yekha ngati olakwa, lembani mzere mozungulira mawuwa ndi kupitirira. Khalani chete wophunzira akamawerenga, ngati wophunzira wadodoma kuwerenga pa mphindi zitatu, muwerengereni mawuwo kenaka lozani mawu otsatira ndikumuuza kuti “ pitiriza”.Izi ziyenera kuchitika kamodzi kokha Chongani mawu omwe mwapereka kwa wophunzira.

PAKATHA MASEKONDI MAKUMI ASANU NDI LIMODZI (60) NENANI “lekeza pomwepo.”
Lozerani mawu omalizirakuwerenga ndi chizindikiro ichi (1)

Lamulo loyamba: Ngati wophunzira walephera kuwerenga mawu a mumzere woyamba, nenani “Zikomo”siyira pomwepa kuwerenga. Ndipo chongani m'kabokosi komwe kali pamapeto ndi kupitiriza ndi ntchito ina.

GAWO 5. KUWERENGA NDI KUMVETSA NKHANI (READING COMPREHENSION)

Pakatha masekandi 60 kapena wophunzira akatsiriza kuwerenga ndime m'masekandi osaposeera 60, chotsani ndimeyo patsogolo pa ophunzira ndipo werengani funso loyamba.

Mpatseni wophunzira masekandi 15 kuti ayankhe funsola. Chongani yankho la wophunzira ndi kumuwerenga funso lotsatira.

Werengani mafunso a mzere uliwonse mpaka pamene ophunzira walekeza kuwerenga.

Tsopano ndikufunsa mafunso angapo okhudza nkhanu yomwe wawerenga.

			wakhoza	Walakwa	sakudziwa	Palibe yankho
Lachisanu m'mawa Mada anakonzekera kupita ku sukulu.	6	Kodi nkhanu inachitikira kuti? [Nkhanu imachitikira ku sukulu. Tsiku lotsekera sukulu]				
Tsikuli lidali lotsekera sukulu. Mafumu ndi makolo anafika ku sukulu ya Kaliza kuti adzawonerere luso lowerenga.	22	Nanga chimachitika pa tsikuli ndi chiyani? [Tsiku lotsekera school. Ophunzira a Sitandade I amawonetsa luso lowerenga.]				
Iyeyu adali ndi nkhanu chifukwa adali mtsikana wamng'ono ndipo anali kuyamba kumene sitandade I.	36	Kodi n'chifukwa chiyani Mada anali ndi nkhanu? [Mada anali ndi nkhanu chifukwa anali mtsikana wamng'ono. Kunali kuyamba kumene sitandade I]				
	49	Tchulani chifukwa chimene mbiri ya Mada inapitira patali?				

MADA ANAWERENGA MOPATSA CHIDWI POYEREKEZA NDI MSINKHU WAKE. ANTHU ADASANGALALA KWAMBIRI NDIPO ANAMUSUPA NDALAMA.		[Mada amawerenga mopatsa chidwi poyerekeza ndi msinkhu wake.]				
MBIRI YA MADA IDAPITA PATALI.	54	Kodi anthu amamusupa chiyani Mada? [Anthu adamusupa Mada ndalama]				

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi):

Chongani m'kabokosi ngati ntchitoyi sinachitike chifukwa wophunzira analibe mayankho olondola mu mzere woyamba

GAWO 6A. KUMVETSERA NKHANI (ORAL PASSAGE READING: 180 SECONDS / 3MINUTES)

Musafunse gawo 7A ndi gawo 7B ngati wophunzira sanakhonze kenakalikonse mu gawo 5 ndi gawo 6. Ngati wakhonzapo, wonetsaninso wophunzira nkhani yomwe ili mukabukhu kamene kali ndiwophunzira.



Nayinso nkhani ija. Tsopano ukhala ndi mphindi zitatu kuti uwerenge nkhanayi momwe ukufunira, mokweza kaya cha m'mtima. Ukamaliza kuwerenga, ndizakufunsa mafunso okhudzana ndi nkhani wawerenga. Kodi ukudziwa chomwe ukuyenera kuchita? Ndikanena kuti **“yamba”** uwerenge nkhanayi momwe ukufunira. Ine ndikhala chete ndikukumvetsera mpaka mphindi zitatu zitatha. Wakonzeka? Yambapo. **Yambani kuwerenga nthawi ndipo mukhale chete. PAKATHA MASEKONDI 180 NENANI “lekeza pomwepo.”**

Lamulo ngati mwana wamaliza mwachangu kuwerenga: Ngati wophunzira akuti wamaliza kuwerenga mphindi zitatu zisanathe, mutha kuyamba kumufunsa mafunso.

GAWO 6B. KUWERENGA NDI KUMVETSA NKHANI (EXTENDED READING COMPREHENSION: 180 SECONDS / 3MIN)

Pakatha masekandi **180** kapena wophunzira akatsiriza kuwerenga ndime m'masekandi osaposeera **180**. werengani funso loyamba. Siyani ndimeyi yotsegula kuti ophunzira athe kuona pamene akuyankha mafunso.

Mpatseni wophunzira masekandi **30** kuti ayankhe funsolo. Chongani yankho la wophunzira ndi kumuwerenga funso lotsatira.

Werengani mafunso a mzere uliwonse mpaka pamene ophunzira walekeza kuwerenga.

Tsopano ndikufunsa mafunso angapo okhudza nkhani yomwe wawerenga.

		wakhoza	Walakwa	sakudziwa	Palibe yankho
Lachisanu m'mawa Mada anakonzeka kupita ku sukulu.	Kodi nkhanayi inachitikira kuti ? [Nkhanayi imachitikira ku sukulu. Tsiku lotsekera sukulu]				
Tsikuli lidali lotsekera sukulu. Mafumu ndi makolo anafika ku sukulu ya Kaliza kuti adzawonerere luso lowerenga.	Nanga chimachitika pa tsikuli ndi chiyani? [Ophunzira a Sitandade I amawonetsa luso lowerenga.]				
Iyeyu adali ndi nkhuwa chifukwa adali mtsikana wamng'ono ndipo anali kuyamba kumene sitandade I.	Kodi n'chifukwa chiyani Mada anali ndi nkhuwa? [Mada anali ndi nkhuwa chifukwa anali mtsikana wamng'ono. Kunali kuyamba kumene sitandade I]				
MADA ANAWERENGA MOPATSA CHIDWI POYEREKEZA NDI MSINKHU WAKE. ANTHU ADASANGALALA KWAMBIRI NDIPO ANAMUSUPA NDALAMA.	Tchulani chifukwa chimene mbiri ya Mada inapitira patali? [Mada amawerenga mopatsa chidwi poyerekeza ndi msinkhu wake.]				
MBIRI YA MADA IDAPITIRA PATALI.	Kodi anthu amamusupa chiyani Mada ? [Anthu adamusupa Mada ndalama]				

Lembani nthawi yomwe yatsala pa wotchi pamapeto (nambala ya masekandi):

Chongani m'kabokosi ngati ntchitoyi sinachitike chifukwa wophunzira analibe mayankho olondola mu gawo 5 ndi 6

Nthawi yomaliza kuyesa ophunzira: ____ : ____ (maola 24)

GAWO 7. KUMVETSA NKHANI (LISTENING COMPREHENSION)

Ntchito iyi siyofunika kugwiritsa ntchito TSAMBA LA WOPHUNZIRA. (Werengani ndimeyi mokweza kawiri mopatsa chidwi.)

Ndikuwerengera ndime yayifupi kawiri kenaka ndidzakufunsa mafunso angapo. Chonde umvetsere bwino pamene ndikuwerenga nkhanayi. Uyenera kuyankha mafunsowa m'mene ungathere. Kodi ukudziwa chomwe ukuyenera kuchita? Kodi uli wokonzeka? Tiyeni tiyambe tsopano.

Tsiku lina ndimapita ku msika kukagula nyama. Mphepete mwamsewu ndinaona chikwama ndipo ndinachitola. Mkati mwa chikwamacho munali ndalama ndi makadi a ku banki. Nditawauza mayi anga iwo anandilangiza kukapereka chikwamacho kwa Mfumu. Tsiku lina mayi anga anayitanidwa kwa Mfumu. Kumeneku tinakumana ndi abambo ena omwe anali mwini chikwama chija. Bambowa anathokoza ndi ndalama zokwana K5000.00 ndi kulonjeza kupereka chithandizo pa maphunziro anga.

Tsopano ndikufunsa mafunso angapo okhudza nkhanu yomwe ndawerenga.				
	wakhoza	walakwa	sakudziwa	palibe yankho
Kodi nkhanayi idachitika kuti? [Inachitika kumudzi, mphepete mwa msewu, popita ku msika]				
Kodi mkati mwa chikwama munali chiyani? [munali ndalama ndi makadi a ku banki]				
Chifukwa chiyani chikwama anakachipereka kwa Mfumu? [kuti chisungike chinthu a mfumu amayenera kudziwa]				
Kodi kwa mfumu kunabwera ndani? [Kunabwera, mwini wa chikwama]				
Ndi mphatso yanji yomwe mwini chikwama uja anapereka? [mphatso ya ndalama zokwana K5000.00 ndi chithandizo pa maphunziro]				



**Impact Evaluation of USAID/Malawi's EGRA
Head Teacher Questionnaire
June 2017**

The Malawi Ministry of Education, Science and Technology (MoEST) with funding from USAID are conducting an impact evaluation of student reading ability in Standards 2 and 4. Your school was selected through a process of statistical sampling to take part in this study. We would like your help in this. But you do not have to take part if you do not want to, and you are free to opt out of any questions you do not feel comfortable answering. If you decide to take part, your name will not be mentioned anywhere in the survey data or report. The results of our analysis will be used by the Ministry of Education, Science and Technology to help identify additional support that is needed to help ensure that all children in Malawi become good readers. Additionally, your school will receive a report of the results that you can use to help you better address the needs of children in your school. This interview will take approximately one hour to complete.

If you agree to help with this study, please read the consent statement below, sign on the line, and answer the questions I will ask you as completely and accurately as you can.

CONSENT STATEMENT: I understand and agree to participate in this reading research study by filling out this questionnaire as completely and accurately as possible.

HEAD TEACHER SIGNATURE: _____

Please answer all questions truthfully.

Date:
Time Started:
Time Ended:
Enumerator Name:
Survey and Logistics Manager Signature:
Technical Manager Signature:
School Name:
EMIS ID:
Questionnaire ID:
Division:
District:
Zone:
Location Type: Urban Rural Peri-Urban (circle one)
Type of School: Coed All Boys All Girls (circle one)
Designation of School: Junior Primary Full Primary (circle one)

Instructions: *The enumerator should read each of the questions to the head teacher as is. He/she can also read the response choices (unless the question specifies that the head teacher should not be prompted). Once the head teacher has selected an option, the letter associated with that option should be circled. Most questions should have only one response. However, in some cases, a question will specify that multiple responses are allowed. In those cases, the enumerator should circle the letters corresponding with all response options that apply. All regular text can be read to the respondents, and all italic text includes instructions to the enumerator.*

RESPONDENT BACKGROUND

- 1a. Respondent name: _____
- 1b. Respondent age: _____
2. What is your position at this school?
 - a. Head Teacher (HT) = 1 (*Skip to QUESTION 2b*)
 - b. Deputy Head Teacher (DHT) = 2
 - c. Other, please specify: _____ = 3
- 2a. Is the Head Teacher male or female?
 - a. Male = 1
 - b. Female = 2
- 2b. What is the sex of the person being interviewed (observe, do not ask)
 - a. Male = 1
 - b. Female = 2
3. How many years have you been in this position (as HT or DHT)? (Don't know/Refuse to answer = 9999): _____ (*please write the number of years*)
4. How many years have you been in this position **at this school**? (Don't know/Refuse to answer = 9999): _____ (*please write the number of years*)
5. What is your highest academic qualification? (*Do not prompt; select the answer that matches the response provided*)
 - a. JCE = 1
 - b. MSCE = 2
 - c. Diploma = 3
 - d. Degree = 4
 - e. Other, please specify: _____ = 5
 - f. Don't know/Refuse to answer = 9999
6. Are you a trained teacher?
 - a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999

SCHOOL BACKGROUND

7. What is the length of the school day for each of the following standards? (Don't know/Refuse to answer = 9999) (*List in hours and minutes; example – 2½ hours = 2 hours 30 minutes*):
 - a. Standard 1: _____ Hours _____ Minutes
 - b. Standard 2: _____ Hours _____ Minutes
 - c. Standard 3: _____ Hours _____ Minutes
 - d. Standard 4: _____ Hours _____ Minutes

- 8a. Does this school operate on shifts?
 - a. No = 0 (*Skip to QUESTION 11*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 10*)

- 8b. Which standards are offered during shift one? (*multiple responses possible*)
 - a. Standard 1
 - b. Standard 2
 - c. Standard 3
 - d. Standard 4
 - e. None
 - f. Don't know/Refuse to answer

- 9. Which standards are offered during shift two? (*multiple responses possible*)
 - a. Standard 1
 - b. Standard 2
 - c. Standard 3
 - d. Standard 4
 - e. None
 - f. Don't know/Refuse to answer

- 10. How many classes are there at this school for each of the following standards? (Don't know/Refuse to answer = 9999):
 - a. Standard 1: _____
 - b. Standard 2: _____
 - c. Standard 3: _____
 - d. Standard 4: _____

- 11. In which standards, if any, does your school teach English? (*Select all that apply; multiple responses possible*):
 - a. We don't teach English in Standards 1-4 (*Skip to QUESTION 13*)
 - b. Standard 1
 - c. Standard 2
 - d. Standard 3
 - e. Standard 4
 - f. Don't know/Refuse to answer

- 12. Does your school teach learners how to read in English in any of the following standards? (*Select all that apply; multiple responses possible*):
 - a. We don't teach learners to read in English in Standards 1-4
 - b. Standard 1
 - c. Standard 2
 - d. Standard 3
 - e. Standard 4
 - f. Don't know/Refuse to answer

- 13. Does your school teach students how to read in Chichewa in the following standards? (*Select all that apply; multiple responses possible*):
 - a. We don't teach learners to read in Chichewa in Standards 1-4
 - b. Standard 1
 - c. Standard 2
 - d. Standard 3
 - e. Standard 4
 - f. Don't know/Refuse to answer

RESOURCES

14. Do all of your learners have the prescribed number of textbooks?
- No = 0
 - Yes = 1 (*Skip to QUESTION 16*)
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 16*)
15. Why not? (*Do not prompt; select all that apply; multiple responses possible*).
- The ministry did not provide more textbooks
 - The donor organization did not provide enough textbooks
 - We have more textbooks, but they are in too poor of condition to hand out
 - We don't like to hand out all textbooks because we want to keep some in good condition
 - Other, please specify _____
 - Don't know/Refuse to answer
16. Has your school received textbooks or materials in the local familiar language (other than Chichewa)?
- No = 0 (*Skip to QUESTION 18*)
 - Yes = 1
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 18*)
17. Who provided/provides learners with textbooks in the local familiar language (other than Chichewa)? (*Do not prompt; select all that apply; multiple responses possible*).
- MoEST = 1
 - EGRA = 2
 - Read Malawi = 3
 - UNICEF = 4
 - Other, please specify _____ = 5
 - Don't know/Refuse to answer = 9999
18. Does your school have a school feeding program?
- No = 0 (*Skip to QUESTION 22*)
 - Yes = 1
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 22*)
19. If yes, what time does the feeding occur in the school day?
- Before school starts = 0
 - In the middle of the day = 1
 - After school = 2
 - Don't know/Refuse to answer = 9999
20. Is school feeding offered every school day?
- No = 0
 - Yes = 1
 - Don't know/Refuse to answer = 9999
21. How long has the school been participating in the school feeding program? (*Do not prompt*)
- Less than one year = 0
 - One year = 1
 - Two years = 2
 - Three years = 3
 - Four years = 4
 - Five years = 5
 - More than five years = 6
 - Don't know/Refuse to answer = 9999

TEACHER INFORMATION

22. How many Standard 1-Standard 4 teachers are there at this school? (Don't know/Refuse to answer = 9999):_____
23. How many of the Standard 1- Standard 4 teachers at this school have had some type of professional training other than pre-service teacher education? (Don't know/Refuse to answer = 9999):_____
24. How many Standard 1-4 teachers from this school have participated in an **EGRA** training on how to teach reading since 2013? (Don't know/Refuse to answer = 9999):_____ (*If the answer is "0," Skip to QUESTION 27*)
25. Among those who participated in this training, on average, how many **EGRA** trainings has each of the Standard 1-Standard 4 teachers participated in the past two years? (Don't know/Refuse to answer = 9999):_____
26. How many of the Standard 1-Standard 4 teachers use the **EGRA** methods in their teaching? (Don't know/Refuse to answer = 9999):_____
27. How many of the Standard 1-Standard 4 teachers do you think need additional training on applying early grade reading methods in the classroom? (Don't know/Refuse to answer = 9999):_____
28. How many of the Standard 1-Standard 4 teachers have participated in training in another approach to teaching reading? (Don't know/Refuse to answer = 9999):_____ (*If the answer is "0," Skip to QUESTION 32*)
29. Which organization(s) organized these trainings? (*Do not prompt; select all that apply; multiple responses possible*):
- a. DTED
 - b. MIE
 - c. Read Malawi
 - d. UNICEF
 - e. World Vision (NASFEM)
 - f. Plan Malawi
 - g. Tikwere
 - h. Save the Children
 - i. SIG (Ministry of Education Program)
 - j. Other, please specify_____
 - k. Don't know/Refuse to answer
30. Among those who have participated in such trainings, on average, how many **non-EGRA** reading trainings has each of the Standard 1-Standard 4 teachers participated in during the past two years? (Don't know/Refuse to answer = 9999):_____
31. How many of the Standard 1-Standard 4 teachers are using these other methods of teaching reading in their classrooms? (Don't know/Refuse to answer = 9999):_____
32. Do you maintain records of teacher absences? (*If yes, ask to see them and provide an estimate of the numbers of absences for all teachers in Standard 1-Standard 4 for the entire year*). (If no, mark with an 8888; Don't know/Refuse to answer = 9999):_____
33. How many Standard 1 to Standard 4 teachers were absent yesterday (or on the last school day)? (Don't know/Refuse to answer):_____

34. How many Standard 1 to Standard 4 teachers often arrive late or after the start of classes? (Don't know/Refuse to answer = 9999):_____
35. How often do you or someone else from your school review teacher lesson plans? (*Do not prompt*)
- Never = 0
 - Once per year = 1
 - Once every 2-3 months = 2
 - Once per month = 3
 - Once every two weeks = 4
 - Every week = 5
 - Once a day = 6
 - Don't know/Refuse to answer = 9999
36. In a term, how many times are teachers provided with supervision or coaching in their classrooms by someone in this school? (*Do not prompt*)
- Never = 0
 - One time = 1
 - Two times = 2
 - Three times = 3
 - Four or more times = 4
 - Other, please specify_____ = 5
 - Don't know/Refuse to answer = 9999

INFORMATION ON LEARNERS

37. Rank the three primary reasons, not including transfers, in this school for the **Standard 2** dropouts? (*Do not prompt; mark the greatest reason with a 1, the second greatest with a 2, and the third greatest with a 3. Leave all other reasons blank after answer first three.*):
- Limited availability of teachers:_____
 - Employment/helping with family work:_____
 - Taking care of siblings or other relatives:_____
 - Fees:_____
 - Long distances travel:_____
 - Marriage:_____
 - Poor school facilities:_____
 - Pregnancy:_____
 - Sickness or Injury:_____
 - Violence:_____
 - Not motivated/Don't see importance of education:_____
 - Difficultly understanding the curriculum/Poor performance:_____
 - Other, please list_____ :_____
 - Don't know/Refuse to answer (Write 9999 if selected):_____
38. Rank the three primary reasons, not including transfers, in this school for the **Standard 4** dropouts? (*Do not prompt; mark the greatest reason with a 1, the second greatest with a 2, and the third greatest with a 3*):
- Limited availability of teachers:_____
 - Employment/helping with family work:_____
 - Taking care of siblings or other relatives:_____
 - Fees:_____
 - Long distances travel:_____
 - Marriage:_____
 - Poor school facilities:_____
 - Pregnancy:_____
 - Sickness or Injury:_____

- j. Violence:_____
 - k. Not motivated/Don't see importance of education:_____
 - l. Difficultly understanding the curriculum/Poor performance:_____
 - m. Other, please list_____:
 - n. Don't know/Refuse to answer (Write 9999 if selected):_____
39. Are dropout rates higher or lower for boys or girls?
- a. Higher for girls = 1 (*Explain in 40*)
 - b. Higher for boys = 2(*Explain in 40*)
 - c. About the same for both sexes = 3 (*Skip to QUESTION 41a*)
 - d. It varies by standard level = 4 (*Explain in 40*)
 - e. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 41a*)
40. Why do dropout rates vary by sex or standard level? _____
- _____
- _____
- 41a. What, if anything has been done (by you, as the head teacher or deputy head teacher, the school as a whole, the Parent-Teacher Association, and the Community) to reduce dropouts at your school?_____
- _____
- 41b. What else would you like to be doing to reduce dropouts in your school if the resources were available?_____
- _____
- _____
42. How many learners with disabilities are there in the school? (Don't know/Refuse to answer = 9999):_____
43. How, if at all, does the school cater to learners with disabilities? (Don't know/Refuse to answer = 9999):_____
- _____
- _____
- _____

COMMUNITY INVOLVEMENT IN THE SCHOOL

- 44. Does the school have a PTA?
 - a. No = 0 (*Skip to QUESTION 47*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 47*)
- 45. How often did the PTA meet in this academic year? (*Do not prompt unless the Head Teacher is struggling with understanding the questions. Then, it is okay to list the answer choices.*)
 - a. Never = 0
 - b. Once a year = 1
 - c. Twice per year - 2
 - d. Once every 2-3 months = 3
 - e. Once a month = 4
 - f. Once a week = 5
 - g. Don't know/Refuse to answer = 9999

46. For which of the following does the PTA have decision making authority and/or responsibility? *(Read each answer choice; select all that apply; **multiple responses possible**):*
- a. School management
 - b. Learner learning challenges and solutions
 - c. Curriculum
 - d. Physical school improvement efforts
 - e. Maintenance of infrastructure/equipment
 - f. Financial issues/fund raising
 - g. Procurement and/or distribution of textbooks
 - h. Reading instruction in after-school programming
 - i. Other, please specify _____
 - h. Don't know/Refuse to answer
47. Does the school have a school management committee?
- a. No = 0 (**Skip to QUESTION 50**)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (**Skip to QUESTION 50**)
48. How often did the school management committee meet in this academic year? *(Do not prompt)*
- a. Never = 0
 - b. Once a year = 1
 - c. Twice per year = 2
 - d. Once every 2-3 months = 3
 - e. Once a month = 4
 - f. Once a week = 5
 - g. Don't know/Refuse to answer = 9999
49. For which of the following does the school management committee have decision making authority and/or responsibility? *(Read each answer choice; select all that apply; **multiple responses possible**):*
- a. School management
 - b. Learner learning challenges and solutions
 - c. Curriculum
 - d. Physical school improvement efforts
 - e. Maintenance of infrastructure/equipment
 - f. Financial issues/fund raising
 - g. Procurement and/or distribution of textbooks
 - h. Don't know/Refuse to answer
50. Do you ever invite parents to participate in their learners' classrooms or become engaged in extra-curricular activities?
- a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999
51. Other than the PTA, school management committee, and parents, is the community (individuals, organizations, or businesses) involved in supporting the school and learner learning?
- a. No = 0 (**Skip to QUESTION 53**)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (**Skip to QUESTION 53**)
 -
 -
52. In what other ways, if any, does the community (including local individuals and businesses) get involved with your school? *(Do not prompt; just select all those that apply)*

	A – Way (<i>see below list for codes; list only one code per box</i>)	B - When did involvement begin (<i>year</i>)	C - Has this support helped the school (<i>No = 0, Yes = 1, Don't know = 9999</i>)	D - If so, in what ways (<i>see below list for codes; multiple selections possible</i>)
1				
2				
3				

Codes for 52A:

- a. Helping with construction (i.e. molding bricks, constructing buildings) = 1
- b. Digging wells/toilets = 2
- c. Donating materials and resources for construction = 3
- d. Cooking = 4
- e. Fundraising = 5
- f. Volunteering at schools; please specify in what way(s) _____ = 6
- g. Other, please list in space above = 7
- h. Don't know/Refuse to answer = 9999

Codes for 52D:

- a. It didn't benefit the school at all = 0
- b. Better facilities = 1
- c. More resources for teachers = 2
- d. More resources for learners = 3
- e. More motivation on the part of staff = 4
- f. More motivation on the part of learners = 5
- g. Better quality teaching = 6
- h. Longer school day = 7
- i. Learners are able to read better = 8
- j. Learners are able to learn better in other learning areas = 9
- k. Learners are getting better scores on their tests = 10
- l. Better or more regular attendance = 11
- m. Other, please list in space above = 12
- n. Don't know/Refuse to answer = 9999

52e. In what ways does the community volunteer with the school? _____

53. How many reading fairs, if any, did your school host in the past three years? (Don't know/Refuse to answer = 9999) _____

54. Has community involvement increased or decreased over the past three years?

- a. It has decreased = 1
- b. It has increased = 2
- c. It has stayed the same = 3
- d. Don't know/Refuse to answer = 9999

SUPPORT FROM OUTSIDE ORGANIZATIONS

55. Has your school received support from EGRA?

- a. No = 0 (*Skip to QUESTION 58*)
- b. Yes = 1
- c. Don't know/Refuse to respond = 9999 (*Skip to QUESTION 58*)

56. What types of support has the school received from the EGRA Project? (*Do not prompt; select all that apply; **multiple responses possible***):

- a. We have received more textbooks for use in class
- b. Our learners have textbooks to take home now
- c. We have received sample lesson plans or help with our lesson plans
- d. EGRA helped to get more parents involved in school
- e. EGRA extended the length of our school day
- f. EGRA extended the length of our reading lessons
- g. EGRA provided me with training
- h. EGRA provided other teachers in my school with training
- i. EGRA provided me with coaching
- j. EGRA sent SMS messages
- k. Other, please specify_____
- l. Don't know/Refuse to answer

57. What effect has the EGRA Project had on your school? (*Do not prompt; select all that apply; **multiple responses possible***):

- a. It didn't benefit the school at all
- b. Better facilities
- c. More resources for teachers
- d. More resources for learners
- e. More motivation on the part of staff
- f. More motivation on the part of learners
- g. Better quality teaching
- h. Longer school day
- i. Learners are able to read better
- j. Learners are able to learn better in other learning areas
- k. Learners are getting better scores on their tests
- l. Better or more regular attendance
- m. Other, please list_____
- n. Don't know/Refuse to answer

58. Has the EGRA Project, or another organization, worked to add an hour to your school day for some Standards in the past 3 years?

- a. Yes, the MTPDS Project added an hour = 1
- b. Yes, the EGRA Project added an hour = 2
- c. Yes, another organization or project added an hour = 3
- d. **Yes, we have added an hour for other reasons (please specify those reasons_____)**
- e. No, our school day has not been extended = 5 (*Skip to QUESTION 60*)
- e. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 60*)

59a. For which Standards has the school day been extended by an hour in the past 3 years? (*Don't prompt; select all that apply; **multiple answers possible**; Don't know/Refuse to answer = 9999*)

- a. Standard 1
- b. Standard 2
- c. Standard 3
- d. Standard 4
- e. Standard 5
- f. Standard 6
- g. Standard 7
- h. Standard 8
- i. Don't know/Refuse to answer

59b. How many days per week does the school day last an extra hour now (from the past 3 years)?

- a. One = 1
 - b. Two = 2
 - c. Three = 3
 - d. Four = 4
 - e. Five = 5
 - f. It varies by standard level = 6
 - g. Don't know/Refuse to answer = 9999
60. Have there been any other individuals, organizations, or businesses involved in providing any kind of support/training/assistance to the school in the past 3 years? Please include support or training received from Airtel, World Vision, UNICEF, FAWEMA, World Bank, and any other organizations.
- a. No = 0 (*Skip to QUESTION 62*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 62*)
61. Which other donor or nonprofit organizations are these, when did they begin providing support for this school, what type of support are they providing, has the support helped, and if so, in what ways (*Do not read options; just mark those that the respondents lists; multiple responses possible*):

A – Donor or Nonprofit Organization	B - Year Support Began	C - Type of Support	D – Has this support helped the school (No = 0, Yes = 1, Don't know = 9999)	E – In what ways (see codes below; multiple responses possible; separate with commas)
1 - ASPIRE				
2 – Concern Universal				
3 – DFID				
4 – FAWEMA				
5 – Mary's Meals				
6 – Plan Malawi				
7 – Save the Children				
8 – UNICEF				
9 – World Vision				
10 – Yonoco				
11 – Other, specify				
12 – Other, specify				
13 – Other, specify				
14 – Other, specify				

Codes for 61E:

- a. It didn't benefit the school at all = 0
- b. Better facilities = 1
- c. More resources for teachers = 2
- d. More resources for learners = 3
- e. More motivation on the part of staff = 4
- f. More motivation on the part of learners = 5

- g. Better quality teaching = 6
- h. Longer school day = 7
- i. Learners are able to read better = 8
- j. Learners are able to learn better in other learning areas = 9
- k. Learners are getting better scores on their tests = 10
- l. Better or more regular attendance = 11
- m. Other, please list _____ = 12

Codes for 61C:

- a. Construction of school buildings = 1
- b. Construction of wells/toilets = 2
- c. Donating materials and resources for construction = 3
- d. Providing textbooks = 4
- e. Providing other learning materials = 5
- f. Providing school feeding = 6
- g. Training teachers in reading methods = 7
- h. Training teachers in other methods = 8
- i. Providing onsite mentoring for teachers = 9
- j. Providing teachers with lesson plans = 10
- k. Working to get the community involved in the school = 11
- l. Providing after-school/extracurricular programs = 12
- m. Reading Fairs/Reading Camps = 13
- n. Providing the school a grant = 14
- o. Other, please list _____

62. What has been the **most helpful** type of support your school has received in the past 3 years? (Don't know/Refuse to answer = 9999): _____

63. What is the **least helpful** type of support your school has received in the past 3 years? (Don't know/Refuse to answer = 9999): _____

64. What additional support, if any, does your school most need in order to increase reading scores? (Don't know/Refuse to answer = 9999): _____

RESPONDENT ROLE AND THOUGHTS

65. For how many hours per week do you provide instructional support to your teachers? (Don't know/Refuse to answer = 9999): _____

66. What are the reasons you don't provide more instructional support? (*Don't prompt; select all that apply; **multiple responses possible***):

- a. I have to teach classes too often
- b. I have too many administrative duties
- c. I don't feel comfortable providing instructional support

- d. The teachers don't like it when I provide instructional support
 - e. Other, please specify_____
 - f. Don't know/Refuse to answer
67. Have you participated in any training on instructional support in past 3 years?
- a. No = 0 (*Skip to QUESTION 70*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 70*)
68. Who provided the training on instructional support? (*Don't prompt; select all that apply; multiple responses possible*):
- a. MoEST DTED (DEMs, PEAs, etc.)
 - b. MIE
 - c. EGRA
 - d. Read Malawi
 - e. UNICEF
 - f. World Vision
 - g. MERIT
 - h. Other, please specify_____
 - i. Don't know/Refuse to answer
-
69. How many days have you participated in instructional support training in the **past three years**? (Don't know/Refuse to answer = 9999):_____
70. Have you participated in training or taken courses in school management in the **past three years**?
- a. No = 0 (*Skip to QUESTION 72*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 72*)
71. Have you participated in any other school management training in the **past three years**?
- a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer
72. Have you received training (training of trainers) or taken courses on how to teach reading **in the past three years**?
- a. No = 0 (*Skip to QUESTION 74*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 74*)
73. How many hours of training on how to teach reading did you receive from each of the following organizations in the past three years? (*Read out each organization; fill in the hours for all that apply or mark "0" if the head teacher did not receive any training from the specified organization*):
- a. DTED_____
 - b. MIE_____
 - c. EGRA_____
 - d. Read Malawi_____
 - e. UNICEF_____
 - f. World Vision_____
 - g. Other, please specify_____
74. Are you satisfied with the reading performance in Standard 2 and 4 in your school?
- a. No = 0
 - b. Yes = 1 (*Skip to QUESTION 76*)
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 76*)

75. Why aren't you satisfied with the reading performance of Standard 2 and 4 in your school?

76. What things would you suggest to improve reading performance in your school for Standard 2 and 4?

QUESTIONS THAT MAY REQUIRE SOME RESEARCH

77. What is the total enrollment at the school for Standards 1-4 from Sep 2016 to now (current school year)? (Don't know/Refuse to answer = 9999):

- a. Standard 1: _____
- b. Standard 2: _____
- c. Standard 3: _____
- d. Standard 4: _____

78. What is the average repetition rate (percent) for learners in the following standards? (Don't know/Refuse to answer = 9999):

- a. Standard 1: _____
- b. Standard 2: _____
- c. Standard 3: _____
- d. Standard 4: _____

•

79a. What is the **main** reason for learners' repetition in Standard 2? (*Do not prompt*)

- a. They don't study = 1
- b. They don't have textbooks = 2
- c. There are too many learners in the class = 3
- d. They don't pay attention = 4
- e. There isn't enough time in the school day = 5
- f. I can't effectively teach this many learners = 6
- g. Some of the learners are too young = 7
- h. They can't study at home because there is no electricity = 8
- i. They can't study at home because they don't have any materials to take home = 9
- j. Other, please specify _____ = 10
- k. Don't know/Refuse to answer = 9999

79b. What is the **main** reason for learners' repetition in Standard 4? (*Do not prompt*)

- a. They don't study = 1
- b. They don't have textbooks = 2
- c. There are too many learners in the class = 3
- d. They don't pay attention = 4
- e. There isn't enough time in the school day = 5
- f. I can't effectively teach this many learners = 6
- g. Some of the learners are too young = 7
- h. They can't study at home because there is no electricity = 8
- i. They can't study at home because they don't have any materials to take home = 9
- j. Other, please specify _____ = 10
- k. Don't know/Refuse to answer = 9999

79c. What, if anything has been done (by you, as the head teacher or deputy head teacher, the school as a whole, the Parent-Teacher Association, and the Community) to reduce repetition at your school

in the past 2 years? _____

79d. What else would you like to be doing to reduce repetition in your school if the resources were available? _____

80. Are boys or girls more likely to repeat a standard?

- a. Boys are more likely to repeat a standard = 1 Why? _____
- b. Girls are more likely to repeat a standard = 2 Why? _____
- c. They are equally likely to repeat a standard = 3
- d. It varies by standard level = 4, Explain _____
- e. Don't know/Refuse to answer = 9999

81. Why do repetition rates vary by sex or standard level? _____

82. What is the learner-teacher ratio across the following standards (including both trained and untrained teachers but not student trainees or substitutes), from Sep 2016 to now (current school year)? Don't know/Refuse to answer = 9999) (*If it is 200 to 1, list 200, etc.*):

- a. Standard 1: _____
- b. Standard 2: _____
- c. Standard 3: _____
- d. Standard 4: _____

•

83a. Have you done anything to reduce the number of learners per class in the past three years?

- e. No = 0 (***Skip to QUESTION 84***)
- f. Yes = 1
- g. Don't know/Refuse to answer = 9999 (***Skip to QUESTION 84***)

•

83b. What have you done to reduce the number of learners per class?

- h. I split large streams between two teachers = 1
- i. I hired additional teachers = 2
- j. I added shifts to the school day = 3
- k. Don't know/Refuse to answer = 9999

•

84. Since the start of the current school year, was this school closed for any days other than holidays?

- a. No = 0 (***Skip to QUESTION 86***)
- b. Yes = 1
- c. Don't know/Refuse to answer = 9999 (***Skip to QUESTION 86***)

•

85. How many days, other than holidays, was the school closed this academic year? (Don't know/Refuse to answer = 9999): _____

•

86. Why was the school closed for days other than holidays this year? (*Do not prompt; select all that apply; multiple responses possible.* Don't know/Refuse to answer = 9999):

- a. Strike by teachers
- b. Examinations
- c. Funeral / Death
- d. Weather
- e. Teacher absences
- f. Elections

- g. Other(s), please specify_____
- h. Don't know/Refuse to answer

87. What has been the average daily absentee rate (percentage) for learners in the following standards this academic year: (Don't know/Refuse to answer = 9999):

- a. Standard 1:_____
- b. Standard 2:_____
- c. Standard 3:_____
- d. Standard 4:_____

88. What is the dropout rate for all students in the following standards this academic year? (Don't know/Refuse to answer = 9999):

- a. Standard 1:_____
- b. Standard 2:_____
- c. Standard 3:_____
- d. Standard 4:_____

•

89. Is the school located in a paternal or maternal lineage area?

- a. Paternal (father based) = 1
- b. Maternal (mother based) = 2
- c. Mixed (both) = 3
- d. Not Applicable = 8888
- e. Don't know/Refuse to answer = 9999

Thank you for your participation! You have been very helpful!



**Impact Evaluation of USAID/Malawi's EGRA
Classroom Observation Protocol
June 2017**

Instructions: Meet with the Head Teacher and tell him/her you want to observe a Standard 2 and Standard 4 classroom where the teacher has been teaching most of the year. For those classes, ask when the Chichewa and English reading classes are and when the breaks/recess and school feeding occurs in each class. You will need to determine your observation schedule based on this information, observing Std. 2 and Std. 4 each for 3 lessons for the same teacher. If a teacher is absent and no other class and teacher is available to be sampled, student teachers may be observed. We do not want to observe caretaker teachers.

Enumerator: COMPLETE A SEPARATE PROTOCOL FOR EACH LESSON

1. Questionnaire ID: _____
 2. Enumerator Name: _____
 3. Survey and Logistics Manager Signature: _____
 4. Technical Manager Signature: _____
 5. Division: _____
 6. District: _____
 7. Zone: _____
 8. School: _____
 9. EMIS ID Number: _____
 10. Teacher name: _____
 11. Teacher gender: _____
 12. Date: _____
 13. Class Standard: _____
 14. Is teacher present when lesson is scheduled to begin? Yes _____ No _____
 15. Time lesson begins: _____
- For 16 and 17, enter the number of boys/girls present when the lesson begins and then add those who come late at the end of the lesson – from #20.
16. Number of boys present: _____
 17. Number of girls present: _____
 18. Number of adults helping in the classroom in addition to the teacher: _____
 19. Subject being taught:
 - a. Reading (in Chichewa)
 - b. English
 - c. Reading in another language, please specify language _____
 - d. Other, please specify _____
 20. Number of learners that come to class late: (Complete table by entering under "minutes" columns a tick in the appropriate cell each time a pupil comes in late, then sum and record an "X" in each appropriate row)

	Time late in minutes
--	----------------------

No. of Learners	A - 1 - 10	B - 11 - 20	C - 21 - 30	D - Total late
1 - Boys				
2 - Girls				

21. Number of textbooks being used by learners:_____

22. Number of reading materials on walls and around classroom (NOT painted walls): _____

23. Number of reading materials on the walls and around the classroom that appear to be recent:_____

24. Language teacher uses	A - Local only	B - Local + Chichewa	C - Local + English	D - Chichewa only	E - English only	F – Chichewa + English
Put X in appropriate box						

NOTES ABOUT THE LESSON:_____

[illegible]

TEACHER BEHAVIOR OBSERVED	1 Opposite of behavior described or do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Not Applicable (Behavior is not relevant to the subject being taught)
25a. Uses a lesson plan				
25b. Uses a scripted lesson plan				
26. Introduces lesson by connecting to what learners have learned previously				
27. Introduces lesson with advance organizer				
28. Manages instructional time effectively				
29. Demonstrates effective classroom management skills				
30. Makes effective use of different instructional resources and strategies				
31. Treats all students equally/fairly				
32. Engages learners in carefully planned cooperative learning strategies				
33. Asks probing, open-ended questions that encourage thinking and helps learners explicate their thinking				
34. Provides learners with structured opportunities to apply their understanding and skills to everyday life and problems				
35. Provides opportunities for learners to develop higher-order and critical thinking skills				
36. Uses appropriate learning materials besides textbooks				
37. Assesses pupil learning				
CLASS RESOURCES				
38. Classroom has desks				

	1 Opposite of behavior described or do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Not Applicable (Behavior is not relevant to the subject being
39. Girls have equal access to desks				
40. Classroom has learning materials (books, supplemental readers, etc.)				
41. Girls have equal access to learning materials (books, supplemental readers, etc.)				
BIAS or MISTREATMENT				
42. Avoids using gender biased language				
43. Avoids using abusive language				
44. Provides positive, encouraging feedback				
45. Does not allow learners to use gender bias				
46. Does not allow learners to use abusive language				
READING PRACTICE May need to mark Option 4 for many of these, if not observing a reading class				
47. Engages learners in reading activities or games appropriate to their reading level				
48. Encourages learners to “ sound it out ” when they don’t know a word				
49. Avoids criticizing learners who don’t answer correctly or read poorly				
50. When teacher or pupil(s) read a story, teacher asks learners pre-reading questions such as “What do you think the story will be about based on the pictures and/or title of the book?”				
	1 Opposite of behavior described or	2 See the behavior sometimes or	3 See the behavior done very well and consistently	4 Not Applicable (Behavior is not

	do not see the behavior described	partially correct	where appropriate	relevant to the subject being
51. When teacher or learners read a story, teacher asks learners to make appropriate sounds or act something out , such as the roar a lion makes or the way a frog hops				
52. Applies multiple methods to support comprehension , including games, group work, etc.				
53. Encourages learners to help each other				
54. Has individual learners read aloud				
55. Provides instructions on how to decode syllables and words				
56. Teaches learners meanings of new words				
57. Asks learners questions to assess their understanding of something the learner(s) or teacher have/has read				
58. Asks learners questions to assess their understanding of stories they hear				
59. Asks learners to recognize letters and say letter names and/or sound				
60. When the teacher is introducing letters he/she names them correctly .				
61. When the teacher is introducing sounds he/she makes them correctly .				
62. Learners retell a story they or the teacher read				
63. Asks learners to recite the alphabet				
64. Assigns reading for learners to do on their own during school time				
65. Provides a variety of methods for learners to establish good writing skills				
PUPIL BEHAVIOR				
66. Most learners are paying attention				

67. Most learners are actively engaged in the lesson				
68. Most learners are actively engaged when working in small groups or in pairs				
69. Learners appear to understand what the teacher is saying				

Time lesson ends: _____

Length of Lesson:_____

Impact Evaluation of USAID/Malawi's EGRA

Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable	Observed Conditions	No improvement	Slight improvement	Much improvement	Urgent or immediate improvement
					School grounds well maintained – without litter				
					Rubbish bins are available to dispose of rubbish				
					School has plantings to make the school more attractive				
					There are no broken windows				
					Buildings and classrooms have functioning locks				
					Classrooms have space for the teacher and students to move around				
					Class schedule for entire school is available in HT's office or Teachers Room				
					A teachers' lounge/room is available				
					Teachers' lounge/room is in good condition				
					Classrooms have sufficient ventilation				
					Classrooms have sufficient light				
					Electricity available (power grid or generator)				
					Clean safe water supply available in the premises				
					Classrooms appear to have a range of learning materials available – not simply years-old posters or paintings on the wall				
					Latrines are available				
					Latrines are clean				
					Latrines are available specifically for girls				
					Latrines are available specifically for boys				
					Latrines are available specifically for teachers				
					Most or all classrooms have enough desks for all students				
					There is a library				
					The library appears to be well stocked				
					The books in the library are in good condition				
					Most textbooks appear to have been distributed to students				
					Resources in this school are adequate for teaching the material				
					Teachers/head teachers appear very engaged and interested in the development of learners				
					The school has school feeding				
					If observed, school feeding functions in an orderly way				

School Climate Observation Protocol June 2017



Impact Evaluation of USAID/Malawi's EGRA
Learner Questionnaire
June 2017

Instructions: *The enumerator should read each of the questions to the learner as is. Once the learner has selected an option, the letter associated with that option should be circled. Most questions should have only one response. However, in some cases, a question will specify that multiple responses are allowed. In those cases, the enumerator should circle the letters corresponding with all response options that apply. All regular text can be read to the respondents, and all italic text includes instructions to the enumerator.*

LEARNER BACKGROUND

1. What is your age? _____
2. For how many years have you been attending school at this school? (*Don't prompt learner; let them answer, and then choose the best response based on their reply – you might need to compare this response to the learner's age to make sure they are old enough to have been there that long.*)
 - a. Less than one year = 0
 - b. One year = 1
 - c. Two years = 2
 - d. Three years = 3
 - e. Four years = 4
 - f. More than four years = 5
 - g. Don't know/Refuse to answer = 9999
3. In which class were you last year?
 - a. Not in school = 0
 - b. Standard 1 = 1
 - c. Standard 2 = 2
 - d. Standard 3 = 3
 - e. Standard 4 = 4
 - f. Don't know/Refuse to answer = 9999
4. Are you repeating your current standard this year?
 - a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999
5. How often did you miss school because you were sick this academic year?
 - a. Almost never = 1
 - b. Occasionally = 2
 - c. A lot = 3
 - d. Don't know/Refuse to answer = 9999
6. Do you usually go to a clinic or hospital when you are sick?
 - a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999

7. How often have you seen the doctor or nurse or visited a health clinic this year?
- a. Almost never = 1
 - b. Occasionally = 2
 - c. A lot = 3
 - d. Don't know/Refuse to answer = 9999

READING

8. Does anyone at home read to you?
- a. No = 0 (*Skip to QUESTION 10*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 10*)
9. How often does someone at home read to you?
- a. Hardly ever = 1
 - b. Only sometimes = 2
 - c. 2-3 times a week = 3
 - d. Every day = 4
 - e. Don't know/Refuse to answer = 9999
10. Do you read on your own at home?
- a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999
11. Does anyone at home help you with your homework?
- a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999
12. Does anyone else in your household know how to read?
- a. No = 0 (*Skip to QUESTION 14*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 14*)
13. Who in your household knows how to read? (*multiple responses possible*)
- a. Brother = 1
 - b. Sister = 2
 - c. Grandmother = 3
 - d. Grandfather = 4
 - e. Uncle = 5
 - f. Aunt = 6
 - g. Cousin = 7
 - h. Mother = 8
 - i. Father = 9
 - j. Don't know/Refuse to answer = 9999
 - k. Other: _____
14. How do you feel about reading?
- a. Happy = 1
 - b. Neutral = 2
 - c. Unhappy = 3
 - d. Don't know/Refuse to answer = 9999

- 14a. Do you ever take books home from school?
- e. No = 0 (*Skip to QUESTION 15*)
 - f. Yes = 1
 - g. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 15*)

- 14b. Do you read the books you take home from school?
- h. No = 0
 - i. Yes = 1 (*Skip to QUESTION 15*)
 - j. Don't know/Refuse to answer = 9999

- 14c. Why do you not read the books you take home from school?
- k. I don't know how to read = 1
 - l. I don't have electricity, so I can't see the books = 2
 - m. I don't have time = 3
 - n. Other, please specify _____ = 4

MEAL INFORMATION

15. Do you eat breakfast every day?
- a. No = 0
 - b. Yes = 1 (*Skip to QUESTION 17*)
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 17*)
16. About how many days per week do you eat breakfast? (*Don't prompt learners; let them answer without reading the answer choices*)
- a. Less than once per week = 1
 - b. One to two times per week = 2
 - c. Three to four times per week = 3
 - d. Five to six times per week = 4
 - e. Don't know/Refuse to answer = 9999
17. Do you eat breakfast at home or at school?
- a. Home = 1
 - b. School = 2
 - c. Both – home and school = 3
 - d. Don't know/Refuse to answer = 9999
18. What do you usually eat at breakfast? (*Don't prompt learners; let them answer without reading the answer choices; **multiple responses possible**; circle all that apply*)
- a. Porridge = 1
 - b. Tea = 2
 - c. Nsima = 3
 - d. Sweet potatoes = 4
 - e. Fruit = 5
 - f. Other, please specify: _____ = 6
 - g. Don't know/Refuse to answer = 9999
19. Do you eat lunch every day?
- a. No = 0
 - b. Yes = 1 (*Skip to QUESTIONS 21*)
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTIONS 21*)

20. About how many days per week do you eat lunch? (*Don't prompt learners; let them answer without reading the answer choices*)
- Less than once per week = 1
 - One to two times per week = 2
 - Three to four times per week = 3
 - Five to six times per week = 4
 - Don't know/Refuse to answer = 9999
21. What do you usually eat for lunch? (*Don't prompt learners; let them answer without reading the answer choices; multiple responses possible; circle all that apply*)
- Rice = 1
 - Nsima/rice and vegetables = 2
 - Sweet potatoes = 3
 - Nsima and chicken = 4
 - Nsima/rice with beef/goat = 5
 - Nsima/rice with usipa = 6
 - Other, please specify: _____ = 7
 - Don't know/Refuse to answer = 9999
22. Do you eat lunch at home, bring lunch from home with you to school, or does the school give you lunch?
- Eat at home = 1
 - Bring lunch to school = 2
 - Eat lunch at school = 3
 - Don't know/Refuse to answer = 9999
23. Are there some days when you don't eat anything all day?
- No = 0 (*Skip to QUESTION 25*)
 - Yes = 1
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 25*)
24. How many days last week did you NOT eat any food all day?
- Once = 1
 - Twice = 2
 - Three times = 3
 - Four times = 4
 - Five times = 5
 - Six times = 6
 - Seven times = 7
25. How often do you feel hungry at school? (*Don't prompt learners; let them answer without reading the answer choices*)
- Never = 0
 - Not very often = 1
 - A few times a week = 2
 - Every day = 3
 - Don't know/Refuse to answer = 9999
26. Do you get tired at school?
- No = 0 (*Skip to QUESTION 28*)
 - Sometimes = 1
 - Yes = 2
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 28*)
27. When are you most tired?

- a. When school starts = 1
- b. In the middle of the school day = 2
- c. When school is finished = 3
- d. Don't know/Refuse to answer = 9999

FEELINGS ABOUT SCHOOL

28. What do you **like** about coming to school? (*Don't read these options to the learner. If the learner is slow to respond, wait up to 8 seconds before asking "Are there things you like about coming to school? If so, what are they?" (The learner may not give these exact responses, but circle all those that are close to what he/she indicates. Select all that apply; **multiple responses possible**):*

- a. Seeing my friends
- b. Learning new things
- c. Seeing my teacher
- d. School meals
- e. I like everything
- f. Other, please specify _____
- g. I don't like anything
- h. Don't know/Refuse to answer

29. What do you **not like** about coming to school? (*Don't read these options to the learner. If the learner is slow to respond, wait up to 8 seconds before asking "Are there things you like about coming to school? If so, what are they?" (The learner may not give these exact responses, but circle all those that are close to what he/she indicates. Select all that apply; **multiple responses possible**):*

- a. Other children are mean
- b. It's boring
- c. I don't understand the lessons
- d. The teacher is mean
- e. There's no latrine or it's too dirty
- f. I have to sit on the floor – no desk
- g. I can't see the textbooks or don't have textbooks
- h. I'm too tired
- i. I'm hungry
- j. It's hard to pay attention
- k. I don't feel well
- l. Other children fight too much
- m. I like everything
- n. Other, please specify _____
- o. Don't know/Refuse to answer

30. How would you describe your Chichewa teacher's character?

- a. Nice/happy = 1
- b. Neutral/neither happy nor unhappy = 2
- c. Mean/unhappy = 3
- d. Don't know/Refuse to answer = 9999

SCHOOL ENVIRONMENT

31. Do you feel comfortable about using the latrine at school?

- a. No = 0
- b. Yes = 1 (***Skip to QUESTION 33***)
- c. Don't know/Refuse to answer = 9999 (***Skip to QUESTION 33***)

32. Why do you not feel comfortable using the latrine? (*Select all that apply; **multiple responses possible***)

- a. It's dirty

- b. It's smelly
 - c. I'm afraid other children/boys/girls will come in while I'm using it
 - d. A snake (any animal/insect) may be in there
 - e. Other, please specify: _____
 - f. Don't know/Refuse to answer
33. How long does it take you to walk to school?
- a. A short time (Less than 30 minutes) = 1
 - b. A medium amount of time (30 minutes to 1 hour) = 2
 - c. A long time (More than an hour) = 3
 - d. Don't know/Refuse to answer = 9999
34. Do you ever get teased at school?:
- a. No = 0
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999
35. Do you feel safe walking to school?
- a. No = 0
 - b. Yes = 1 (*Skip to QUESTION 37*)
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 37*)
36. If you don't feel safe walking to school, what kind of things make you feel unsafe? (*Select all that apply; multiple responses possible*)
- a. Animals
 - b. Snakes
 - c. Difficult-to-walk-on roads/paths (example – muddy, lots of rocks, many cars passing, etc.)
 - d. Bad men or boys
 - e. Other kids who are mean
 - f. I'm afraid of getting lost
 - g. Other, please specify: _____
 - h. Don't know/Refuse to answer
37. Do you ever get punished at school?
- a. No = 0 (*Skip to QUESTION 40*)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to QUESTION 40*)
38. If yes, what do you get punished for? (*Select all that apply; multiple responses possible*)
- a. Making too much noise/talking
 - b. Showing up late
 - c. Fighting with other children
 - d. Answering a question incorrectly
 - e. Not paying attention
 - f. Other, please specify: _____
 - g. Don't know/Refuse to answer
39. If yes, how do you get punished? (*Select all that apply; multiple responses possible*)
- a. Send learner out of classroom
 - b. Sweep or clean the classroom or school grounds
 - c. Corporal punishment
 - d. Kneel or stand on one leg for a long time
 - e. Bring grass or reeds
 - f. Stay after school and do school work
 - g. Other (specify) _____

40. What language(s) do you speak at home?

- a. Chichewa = 1
- b. Yao = 2
- c. Tumbuka = 3
- d. Chingerezi = 4
- e. Don't know/Refuse to answer = 9999
- f. Other _____

Thank you for your participation! You have been very helpful!



**Impact Evaluation of USAID/Malawi's EGRA
Teacher Questionnaire
June 2017**

The Malawi Ministry of Education, Science and Technology (MoEST) with funding from USAID are conducting an impact evaluation of student reading ability in Standards 2 and 4. Your school was selected through a process of statistical sampling to take part in this study. We would like your help in this. But you do not have to take part if you do not want to, and you are free to opt out of any questions you do not feel comfortable answering. If you decide to take part, your name will not be mentioned anywhere in the survey data or report. The results of our analysis will be used by the Ministry of Education, Science and Technology to help identify additional support that is needed to help ensure that all children in Malawi become good readers. Additionally, your school will receive a report of the results that you can use to help you better address the needs of children in your school.

If you agree to help with this study, please read the consent statement below, sign your name, and answer the questions I will ask you as completely and accurately as you can. It should take us no more than one hour.

CONSENT STATEMENT: I understand and agree to participate in this reading research study by filling out this questionnaire as completely and accurately as possible.

TEACHER SIGNATURE: _____

Please answer all questions truthfully. *Ask teacher to have attendance and progress record books for the entire year as well as the inventory book for the class with them for the interview.*

Date:

Time Started:

Time Ended:

Enumerator Name:

Survey and Logistics Manager Signature:

Technical Manager Signature:

School Name:

School EMIS ID:

Questionnaire ID:

Location Type: Urban Rural Peri-Urban (circle one)

Type of School: Coed All Boys All Girls (circle one)

Instructions: *The enumerator should read each of the questions to the teacher as is. He/she can also read the response choices (unless the question specifies that teachers should not be prompted). Once the teacher has selected an option, the letter associated with that option should be circled. Most questions should have only one response. In some cases, a question will specify that multiple responses are allowed. In those cases, the enumerator should circle the letters corresponding with all response options that apply. All regular text can be read to the respondents, whereas all italic text is meant for the enumerator clarification only.*

GENERAL BACKGROUND INFORMATION

2. Division: _____
3. District: _____
4. Zone: _____
5. Teacher's Name: _____
6. Class level:
 - a. Standard 2 = 2
 - b. Standard 4 = 4

TEACHER BACKGROUND INFORMATION

7. How old did you turn on your last birthday (Don't know/Refuse to answer = 9999): _____
8. How many years have you been teaching? (Don't know/Refuse to answer = 9999): _____
9. How many years have you been teaching in this school? (Don't know/Refuse to answer = 9999): _____
10. What is your highest academic qualification? (*Don't prompt*)
 - a. JCE = 1
 - b. MSCE = 2
 - c. Diploma = 3
 - d. Other (specify: _____) = 4
 - e. Don't know/Refuse to answer = 9999
11. Are you a trained teacher?
 - a. No = 0 (***Skip to QUESTION 12***)
 - b. Yes = 1
 - c. Don't know/Refuse to answer = 9999 (*Skip to question 12*)
12. How many years have you been teaching as a trained teacher? (Don't know/Refuse to answer = 9999): _____ (***Skip to QUESTION 13 after this question***)
13. If you are not a trained teacher, what is your teaching status? (*Don't prompt unless the teacher does not understand the question; then you can list*)
 - a. Voluntary teacher = 1
 - b. Learner teacher = 2
 - c. Teaching assistant = 3
 - d. Other, please specify _____ = 4
 - Don't know/Refuse to answer = 9999

CLASS BACKGROUND INFORMATION

Reference period: Current school year (September 2016 - July 2017)

14. How many times each week do you use each of the following methods to measure/assess your learners' reading progress? (Don't know/Refuse to answer = 9999) (Enter 0-5 for each)
- Written evaluations:_____
 - Individual learner oral evaluations:_____
 - Whole class oral evaluations:_____
 - Small group oral evaluations:_____
 - Checking learners' exercise books:_____
 - Checking learners' homework:_____
 - Other methods (please describe):_____ #:_____

14a. In this school, what are the most important things that prevent learners from learning? (*Don't prompt; circle all that apply; **multiple responses possible***):

- Classes too large
- Learners don't have textbooks
- There's not enough time in the school day
- Learners don't understand the classroom instruction
- There are too many languages for learners to learn at one time
- Learners shouldn't have to learn English so early
- Learners don't attend school regularly
- Teachers don't have enough training
- Teachers don't understand English enough to be able to teach it
- Learners do not have enough to eat
- Learners are taking care of younger siblings or helping parents with work
- The distance to school is too far for children to travel
- The school is lacking in other resources, please list_____
- Other, please specify:_____
- Don't know/Refuse to answer

14b. How much classroom time do you spend teaching each week in each of the following languages? (**Report in Minutes; so, if it is 2 hours, write 120 minutes**) (Don't Know/Refused to Answer = 9999)?:

- In Chichewa:_____
- In English:_____
- In Tumbuka:_____
- In Yao:_____
- In another local language:_____

14c. What proportion of all your daily lessons (including reading as well as other subjects such as Math, Social & Environmental Studies, etc) are taught in English? (**Enter a percent (should be 0 - 100%)**)

SCHOOL RESOURCES

15. Does your school or classroom have a library?
- No = 0 (***Skip to QUESTION 18***)
 - Yes, a classroom library = 1 (*check to see if you see books there, and ask a follow up question if not*)
 - Yes, a school library = 2 (***Skip to QUESTION 17***)
 - Yes, both classroom and school libraries
 - Don't know/Refuse to answer = 9999(***Skip to QUESTION 18***)

16. How often do your learners use the classroom library? (*Don't prompt*)
- Every day = 1
 - Every other day = 2
 - Three – Four times a week = 3
 - Once a week = 4
 - Once or twice a month = 5
 - Only occasionally = 6
 - Never = 7
 - Don't know/Refuse to answer = 9999
17. How often do your learners use the school library? (*Don't prompt*)
- Every day = 1
 - Every other day = 2
 - Three – Four times a week = 3
 - Once a week = 4
 - Once or twice a month = 5
 - Only occasionally = 6
 - Never = 7
 - Don't know/Refuse to answer = 9999
18. Excluding textbooks, do you have sufficient teaching and learning resources (TALULAR)?
- No = 0
 - Yes = 1 (*check the room for them, and ask follow-up question if you don't see any*)
 - Don't know/Refuse to answer = 9999
19. How many reading textbooks do you have for your class? (Don't know/Refuse to answer = 9999):
- English = _____ (*count them to verify, if possible*)
 - Chichewa = _____ (*count them to verify, if possible*)
20. How many reading textbooks do you hand out to learners? (Don't know/Refuse to answer = 9999):
- English = _____ (*count them to verify, if possible*)
 - Chichewa = _____ (*count them to verify, if possible*)
- (*if both numbers match those in 19, skip to QUESTION 21b*)
- 21a. Why do you not hand them all out? (*Don't prompt*)
- There are not enough for each learner to have one.
 - Learners do not take good care of the books/destroy them
 - Learners tend to lose the books
 - Other, please specify _____
 - Don't know/Refuse to answer = 9999
- 21b. Do learners from your class ever take textbooks or library books home from school?
- No = 0
 - Yes = 1
 - Don't know/Refuse to answer = 9999
22. In what ways do the staff in your school work together to identify strategies for increasing learner success in learning in school? _____
- _____
- _____
- _____

COMMUNITY INVOLVEMENT IN THE SCHOOL

23. Does your school have a functioning Parent Teacher Association?
- No = 0
 - Yes = 1
 - Don't know/Refuse to answer = 9999
24. How often does it meet?
- On an "as needed" basis = 1
 - Weekly = 2
 - Twice per month = 3
 - Monthly = 4
 - Every other month = 5
 - Quarterly (once per term) = 6
 - Twice per year = 7
 - Annually = 8
 - Less than once/year = 9
 - Don't know/Refuse to answer = 9999
25. What sorts of activities does the PTA do to support the school?
- Manage/help with construction of school buildings = 1
 - Help, manage, or fundraise to construct teacher houses = 2
 - Dig well/toilets or manage this process = 3
 - Donate materials and resources for construction = 4
 - Cook = 5
 - Fundraise = 6
 - Volunteer at schools = 7
 - Mobilize the community to be more involved in the school = 8
 - Encourage parental participation in their learner's education = 9
 - Discuss/implement ways of reducing absenteeism = 10
 - Discuss/implement ways of reducing dropouts = 11
 - School maintenance = 12
 - Don't know/Refuse to answer = 9999
 - Other: _____
26. Do you have meetings with groups of parents of your learners (outside of PTA meetings)?
- No = 0 (*Skip to QUESTION 28*)
 - Yes = 1
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 28*)
27. How often do you have meetings with groups of your learners' parents (outside of PTA meetings)? (*Don't prompt*)
- Once per school year = 1
 - Twice per school year = 2
 - Three times per school year = 3
 - Four or more times per school year = 4
 - Don't know/Refuse to answer = 9999
28. Do you ever invite parents to participate in their learners' classrooms or become engaged in extra-curricular activities?
- No = 0
 - Yes = 1
 - Don't know/Refuse to answer = 9999

29. In what other ways, if any, does the community (including local individuals and businesses) get involved with your school?

	A – Description	B – Year involvement began	C – Has this support helped the school?	D – If so, in what ways?
1 – First Way				
2 – Second Way				
3 – Third Way				

SUPPORT FROM OUTSIDE ORGANIZATIONS

Reference period: Previous School Year: September 2015 – July 2016

30. Has your school received support from the EGRA Project?

- No = 0 (*Skip to QUESTION 32*)
- Yes = 1
- Don't know/Refuse to answer = 9999 (*Skip to QUESTION 32*)

- 30a. What types of support has the school received from the EGRA Project? (*Read through each option and mark with a "Yes," "No," or "9999" for Don't know/Refuse to answer; multiple responses possible*):

- Have you received more textbooks for use in class?:_____
- Do learners have textbooks to take home now?:_____
- Have you received sample lesson plans or help with your lesson plans:_____
- Has EGRA helped to get more parents involved in school?:_____
- Has EGRA extended the length of your school day?:_____
- Has EGRA extended the length of your reading lesson(s):_____
- Has EGRA provided you with training?:_____
- Has EGRA provided other teachers in your school with training?:_____
- Has EGRA provided you with coaching?:_____
- Have you signed any MOUs with EGRA?:_____; Please specify the requirements of the MOUs _____
- Have you received any grants or incentive money from EGRA?:_____; Please specify the condition you had to meet to receive the grant or incentive from EGRA and the purpose of the grant (how you will use the money)

- Has EGRA provided any other support?, please specify_____

31. What effect(s) has the EGRA Project had on your school? (*Don't prompt; circle all that apply; multiple responses possible*):

- It didn't benefit the school at all
- Better facilities
- More resources for teachers
- More resources for learners
- More motivation on the part of staff
- More motivation on the part of learners
- Better quality teaching
- Longer school day
- Learners are able to read better
- Learner are able to learn better in other learning areas
- Learners are getting better scores on their tests
- Better or more regular attendance
- Other, please list_____

n. Don't know/Refuse to answer = 9999

32. Are there any other donor or nonprofit organizations involved in providing any kind of support/training/assistance to the school?
- No = 0
 - Yes = 1
 - Don't know/Refuse to answer = 9999

INSERVICE TRAINING/PROFESSIONAL DEVELOPMENT

Reference period: Last 3 years (2015, 2016 and 2017)

33. How many days of **any type of in-service training** or professional development have you attended during the **last three (3) years**? (Don't know/Refuse to answer = 9999):_____ (*If 0, skip to QUESTION 38*)
34. How many days of **EGRA** in-service training or professional development in teaching reading have you attended during the last **three (3) years**? (Don't know/Refuse to answer = 9999):_____ (*If 0, skip to QUESTION 37*)
35. What were the **most** useful aspects of the **EGRA reading** trainings? (Don't know/Refuse to answer = 9999):
- _____
- _____
- _____
36. What were the **least** useful aspects of the **EGRA reading** trainings? (Don't know/Refuse to answer = 9999):
- _____
- _____
- _____
37. How many days of in-service training or professional development in **another method of teaching reading** have you attended during the last **three (3) years**? (Don't know/Refuse to answer = 9999):_____

CLASSROOM-BASED COACHING

38. Of the following list of possible supervision and/or coaching providers, please indicate the approximate number of hours each provider supervised/coached you **in the past three (3) years** and the last full term and then rate each coaching provider on a scale of 1-5 with **1 being least useful** and **5 being most useful**. (Don't know/Refuse to answer = 9999) (**Codes:** 0 = doesn't apply, 1=hurtful or discouraging, 2=not helpful, 3=somewhat helpful, 4=helpful, 5=very helpful):

Coaching/Supervision provider	A - Approximate number of hours in past 3 years	B - Approximate number of hours in the last full term	C - Rating 1-5
1- Head teacher			

2 - MoEST inspector			
3 - PEAs			
4 - Divisional inspector			
5 – Teacher Training College Staff			
6 – Mentor Teacher			
7 – EGRA staff			
8 - ASPIRE			
9 – Other, please specify			

39. What were the most useful aspects of the coaching sessions? (Don't know/Refuse to answer = 9999): _____

40. What were the least useful aspects of the coaching sessions? (Don't know/Refuse to answer = 9999): _____

41. Was this training **enough** for you to be able to use these methods correctly in your classroom? (*Don't prompt*)
- No = 0
 - Somewhat = 1
 - Yes = 2
 - Don't know/Refuse to answer = 9999
42. Do you feel you need more training?
- No = 0 (*Skip to QUESTION 44*)
 - Yes = 1
 - Don't know/Refuse to answer = 9999 (*Skip to QUESTION 44*)
43. In which topics would you like to receive more training? (Don't know/Refuse to answer = 9999): _____

QUESTIONS THAT MAY REQUIRE SOME RESEARCH

Reference Period: Current School Year (September 2016 – July 2017)

44. How many learners are enrolled in your class? (Don't know/Refuse to answer = 9999): _____
45. How many are girls? (Don't know/Refuse to answer = 9999): _____
46. Is the teacher regularly maintaining an attendance register? (Look at his/her attendance register).
- No = 0 (*Skip to QUESTION 48*)

b. Yes

=

1

47. If the teacher is maintaining an attendance register, make one "X" per column below for the **number** of absences during the Wednesday of the third week of the school year, the third week of January, and the most recent week (For any instances where numbers are not available, write – 9999, and if the school was closed on one of those Wednesdays, go to Thursday in that same week):

Approximate number of absences	A – Wednesday of the Third Week of the School Year	B – Wednesday of the Third Week of January	C – Wednesday of the most recent full week
0 = 0			
1 = 1 – 15			
2 = 16 – 30			
3 = 31 – 50			
4 = 51 – 75			

48. Is the teacher regularly maintaining a progress record book? (Look at his/her grade book).
- No = 0
 - Yes = 1
49. How many learners have stopped attending or dropped out of your class during this academic year (since the third week of school)? (if necessary, count the number of learners at week 3 and count the number that are recorded as somewhat regular attendance during the past two weeks, and subtract) (Don't know/Refuse to answer **and** No attendance records available = 9999):_____ (If 0, Skip to **QUESTION 52**).
50. About how many of the learners who have stopped attending or dropped out have moved or transferred to another school during this academic year? (Don't know/Refuse to answer = 9999):_____
51. Why do you think learners drop out in your class? (Do not prompt; **multiple responses possible**; select all that apply)
- Lack of parental encouragement/support to attend school
 - Need for the learner to earn money/sell things/work outside of the home
 - Need for the learner to work inside of the home (caring for younger siblings or elderly family members or doing other chores)
 - Need for the learner to work on the family farm or tending to family animals
 - Learners live too far away from the school
 - Learners don't do well in school or repeat grades often
 - Learners get married young
 - Learners become pregnant (teen pregnancy)
 - Learners come from poor families and have insufficient food or resources
 - Learners are not interested in school
 - Learners do not have good role models showing them the value of education
 - Learners become ill
 - Learners move/migrate
 - Learners lose their parents/become orphans
 - Other(s), please specify_____
 - Don't know/Refuse to answer = 9999
52. How many of your learners are repeating this standard? (Response of 0-100 should be recorded directly. For values more than 100, enter 101; enter 9999 only for Don't know/Refuse to answer):_____ (If 0, Skip to **END**)

53. How many of your learners have been in this standard level for **more than three years**? (*Any response of 0-100 should be recorded directly. For values more than 100, enter 101; enter 9999 only for Don't know/Refuse to answer*):_____
54. What do you think are the main reasons learners in your class have had to repeat a standard? (*Don't prompt; select all that apply; **multiple responses possible***)
- a. They don't study
 - b. They don't have textbooks
 - c. There are too many learners in the class
 - d. They don't pay attention
 - e. There isn't enough time in the school day
 - f. I can't effectively teach this many learners
 - g. Some of the learners are too young
 - h. They can't study at home because there is no electricity
 - i. They can't study at home because they don't have materials to take home
 - j. Other, please specify:_____
 - k. Don't know/Refuse to answer

Thank you for your participation! You have been very helpful!

ANNEX 4. TOOL CONVERSION FACTORS

Using multiple versions of Early Grade Reading Assessment (RA) are a best practice when learners are tested at multiple time points in an evaluation to measure changes in outcomes, and especially important when there is a risk of leakage of test forms (such as teachers using the test forms as regular class tests or to prepare learners for the assessment), or when learners get familiar with the frequent use of the same RA for the assessment. Therefore, multiple equivalent forms must be created where the tests are as equal as possible in difficulty and can be considered substitutable for one another. In 2011, RTI created two versions of the Chichewa Early Grade Reading Assessment (RA) tool to test learners' reading skills. The structure of these tools was exactly the same, but there were some specific differences in content within the subtasks across the RAs.

SI used three versions of the Chichewa Early Grade Reading Assessment (RA) tool developed by RTI in 2011 to test learners' reading skills, one at each of baseline, midline and endline. The RA tool administered by SI to the learners at endline was the same as the baseline tool with only a very slight modification for testing the sub-tasks of familiar word reading and syllable reading/letter sounds, but the midline tool was different from baseline tool for all subtasks. The slight changes for familiar word and syllable reading were made at endline in consultation with USAID/Malawi and E3 education specialists. The modifications only included changing a couple of syllables to more appropriately reflect how Chichewa is currently taught in schools.

While the RAs developed in 2011 were deemed similar through pilot testing for reliability and validity, it is still important to determine whether the 2011 sample's scores on the tools would have been similar to those of the 2015 and 2017 population. If there were slight differences, those differences could then be adjusted statistically. Therefore, SI ran pilots prior to data collection at both mid and endline to equate the tools used in these rounds to the baseline tool such that scores could be compared across the three rounds. This helped to test for similarity of the multiple RAs in their difficulty levels such that any differences noticed in scores across time were only due to changes in learner reading abilities and not due to the change in the tool used to conduct the assessments. The pilot data, after removing zero scores, were analyzed for reliability, correlation, and differences in scores by subtasks to arrive at a conversion factor that can help equate the two tools. Means equating was used to assign conversion values for the timed sub-tasks based on observed difficulty in midline tool in comparison to the baseline tool.

Midline

At midline in 2015, SI conducted pilot with 603 learners in 21 schools in Lilongwe Urban and Lilongwe Rural districts and the schools were not part of the IE sample. The sample was evenly divided between boys and girls as well as Standard 2 and Standard 4 learners. Each learner was given both baseline and midline RAs, one after the other. Five timed subtasks were tested in the pilots. Enumerators followed the same protocols for the pilot as for the main data collection, so learners were chosen at random for assessment within gender and standard. After removing zero scores, sample reduced to 294.

The correlation between scores in the pilot sample with baseline and midline tools were very strong ranging from 0.89 to 0.98 for the six timed subtasks. To measure reliability within an RA version, SI ran Cronbach's alpha test using non-zero scores. Cronbach's alpha is an estimate of the inter-subtask correlation (of one subtask to another) within the same test. Theoretically, this is a measure of how consistently each individual subtask measures the common, underlying psychometric construct — literacy, in this case. Here, SI found both base and midline versions had alphas at or very close to 0.8 for each of the six subtasks, indicating a high degree of internal consistency both within the baseline and midline RAs. Summary statistics indicated that the null hypotheses that means for each sub-task

are not different between the midline and baseline versions could not be rejected indicating similarity across the two versions.

Endline

The RA used in the pilot only included two timed subtasks (familiar word reading and syllable reading/letter sounds). Contents in baseline tool were slightly modified only for the two subtasks to use at endline, therefore, we did not pilot test for other subtasks since the baseline tool was applied as such for them. Sample size of the pilot data was 239 learners, of which 58 learners were Standard 2 boys and 61 were Standard 2 girls, 61 learners were Standard 4 boys and 59 were Standard 4 girls. Since we created conversion factors at midline to equate the midline tool to baseline tool, we did not run any pilots with midline tool during endline data collection.

In the pilot, for syllable reading using endline tool 68.1% of Standard 2 learners received zero scores and 11.7% of Standard 4 learners received zero scores. For syllable reading that was from the baseline tool, 65.6% of Standard 2 learners received zero scores and 13.3% of Standard 4 learners received zero scores. For familiar word subtask that was tested with endline tool, 79.8% of Standard 2 learners and 20% of Standard 4 learners received zero scores. For familiar word subtask that was from the baseline tool, 74.8% of Standard 2 and 18.3% of Standard 4 learners, respectively, received zero scores.

We excluded learners who had subtask total score of zero for both baseline and endline tool which reduces the observations to 154 for syllable reading subtask and 131 for familiar word subtask. The correlation between scores in the pilot sample with baseline and endline tools were strong at 0.93 for syllable reading, and 0.96 for familiar word subtask. The Cronbach's coefficient was also very strong: it was 0.96 between syllable reading scores from endline and baseline tool, and 0.98 between familiar word scores from endline and baseline tool. Summary statistics are shown in the table below and the results indicated that the null hypotheses that means for each sub-task are not different between the endline and baseline versions could not be rejected.

Summary Statistics for Non-Zero Pilot Sample: Baseline and Endline Tools

	Observations	Mean	Std Dev	Min	Max
Syllable reading (Baseline tool)	154	30.39	23.80	0	89
Syllable reading (Endline tool)	154	26.20	20.65	0	86
	Observations	Mean	Std Dev	Min	Max
Familiar Word (Baseline tool)	131	22.40	14.62	0	51.58
Familiar Word (Endline tool)	131	19.86	13.95	0	48

The above results may indicate that all three tools are equivalent and may not require adjustments through any statistical procedures to compare results across time. However, in such small sized pilots and also with many untimed tasks, the above results do not necessarily indicate that the null hypotheses could be accepted nor the alternative hypotheses of difference in tools can be accepted. Therefore, SI used a conservative approach that calibrated the tools for equivalence with means equating method and obtained the following conversion factors. Pilot data were analyzed further to

calculate conversion factors (equating coefficients) for the midline and endline subtasks. The factors were obtained by dividing the mean baseline score for a subtask by the mean midline/endline score for the subtask (i.e., equating coefficient = baseline mean score ÷ midline/endline mean score).

Conversion Factors to Equate Midline and Endline Tools with Baseline Tool

Sub Tasks	Conversion Factor		
	Midline Scores	Endline Scores – Standard 2	Endline Scores – Standard 4
Letter Name Knowledge	1.015	N/A	N/A
Syllable Reading	0.864	1.229132	1.150275
Familiar Word Reading	1.021	1.2451	1.115776
Oral Reading Fluency	1.032	N/A	N/A
Non-Word Reading	1.046	N/A	N/A

Source: Non-zero pilot data. Data collected by SI during pilots conducted in 2015 and 2017.

Then, the conversion factors, shown in the above table were used to multiply midline or endline scores to form new scores - equated scores. These equated scores were used throughout the report as midline or endline scores and were also used to compare with baseline scores to assess changes across time to infer program effects.

ANNEX 5. ANALYSIS METHODOLOGY

Weighting the data

The evaluation design used stratified sampling method. The learners tested for the evaluation were randomly selected and were clustered within schools, and the selected schools were located within districts. Since every school and learner did not have an equal chance of selection, statistical procedure was needed to adjust for design effects. Weights were constructed based on the probability of selection of each school and learner in the sample. Sampling weights were constructed by SI at both the district level and the school/standard level and used in the analysis in this report. The weights were applied to the dataset as probability weights, or pweights, using STATA version 14's set of survey commands.

Benchmarks

SI used benchmarks developed by USAID, RTI, and MoEST in 2014 for each subtask to compare learner reading scores.

Items	Std. 3	Std. 2	Std. 1
Reading Comprehension			
Recommended benchmark	80%	80%	60%
Recommended objective: % at benchmark in 5 years	50%	40%	35%
Recommended objective: % of zero scores in 5 years	10%	20%	30%
Oral Reading Fluency			
Recommended benchmark	50	40	30
Recommended objective: % at benchmark in 5 years	50%	50%	40%
Recommended objective: % of zero scores in 5 years	5%	10%	20%
Familiar Word Reading			
Recommended benchmark	45	40	30
Recommended objective: % at benchmark in 5 years	50%	50%	40%
Recommended objective: % of zero scores in 5 years	5%	10%	20%
Syllable Reading			
Recommended benchmark	65	60	50
Recommended objective: % at benchmark in 5 years	60%	55%	50%
Recommended objective: % of zero scores in 5 years	5%	10%	15%

Source: MoEST and USAID/Malawi, December 2014: Proposing Benchmarks for EGRA in Malawi.

It is to be noted that the above benchmarks are set to be reached in five years (in 2018; year five of EGRA implementation). Since no intermediate targets were provided in the MoEST benchmarks, SI did not apply any prorated benchmarks for 2017. Approximate allocation of benchmark result by years using the final benchmark assumes a linear change and SI considers that such linear change may not occur in reality, as shown in some EGRA evaluations.

The 2014 benchmarks, however, were only developed for four sub-tasks. Therefore, SI used EGRA-Coordinating-Committee-recommended benchmarks from 2011 for listening, and MoEST benchmarks established in 2011 for letter name knowledge when comparing learner reading scores against benchmarks. These benchmarks from 2011 are shown below:

- **Listening Comprehension:** According to EGRA-Coordinating-Committee-recommended benchmarks, Standard 1 should be able to answer 3 out of the 5 questions correctly (60 percent) and Standard 3 should be able to answer 4 (80 percent).
- **Letter Name Knowledge:** The MoEST benchmarks are 24 clpm for Standard 1 and 50 clpm for Standard 3.

Since no benchmarks were available for Standard 4, SI compared all Standard 4 learner scores against benchmarks set for learner achievement by the end of Standard 3. In the case of Standard 2, SI used Standard 2 benchmarks for the subtasks for which MoEST benchmarks were available and Standard 1 benchmarks for the other subtasks, as the EGRA Coordinating Committee only set benchmarks for Standards 1 and 3. The above benchmarks were used for both the midline and endline scores presented in this report.

Principal Component Analysis

This study used Principal Component Analysis (PCA) to group some variables together and used it regression analysis along with other variables. The team created PCA scores for household wealth using household variables including dwelling features and quality, access to lighting, water, sanitation facilities, consumer durables and assets. The team also created PCA scores for school resources using data from the school climate protocol and head teacher questionnaires on school resources such as library, electricity, desks, teaching materials, ventilation, door locks and clean water. The team also created

PCA scores for teacher use of essential practices in teaching reading. Data were obtained from the classroom observations.

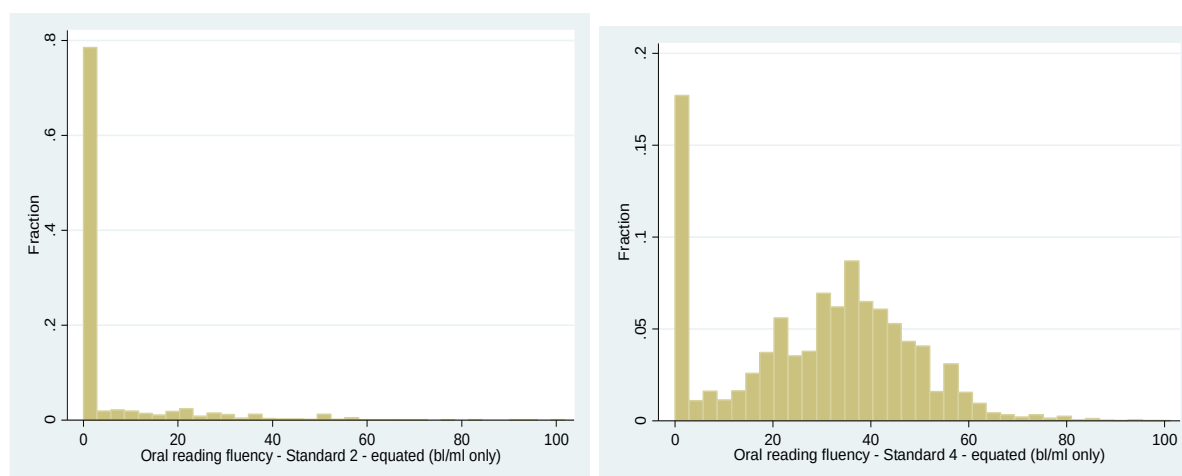
Predictors of oral Reading fluency at endline

In order to predict reading outcomes at end line in 2017, the study used measures of statistical correlation to examine the relationship between oral reading fluency and potential prediction variables.

The levels of oral reading fluency were extremely low among the endline learners as exhibited by the very large proportion of learners scoring zero, and the distribution of test scores clustering heavily at zero, especially in Standard 2. Figures below show the distribution of reading scores at endline, for standards 2 and 4 respectively. In such cases, simple regression models, estimated by ordinary least squares, are not appropriate to deal with variables with such statistical behavior. It is not necessarily true that all zero scores are the same, meaning that learners who scored zero may have differing levels of capability that the assessment tool (the EGRA) simply cannot pick up. To address this problem we estimated Tobit models, that helps to correct for this challenge by predicting the change in oral reading scores for learners whose scores fall above zero, and weighting for the probability of scoring higher than zero. It then reveals the isolated effects of various factors on predicted values of reading scores

while controlling for other factors. Tobit allows results to be examined even when there is clustering around the lower and/or upper score bounds (ceiling and flooring effects).

Histogram of Oral Reading Fluency Scores in Standard 2 and 4 at End line



Data for the predictor variables were obtained from the head teacher, teacher, and learner questionnaires as well as the school climate, classroom observation protocols and the households. The team selected the factors to evaluate through the literature reviews as well as the findings of 2013 and 2015 IE baseline and midline studies, respectively. In its analysis, the SI team sought to capture effects of the following types of factors on learner reading scores:

- Household Resources/wealth
- Household Support/Involvement
- Household Education Levels
- Learner Health and Food Security
- Learner Attitude toward School
- School Resources
- Classroom Resources
- Teacher Experience, Training, and Use of Essential Teaching Practices
- Community Involvement in the School
- School Support from Outside Organizations

The evaluation team examined multiple variables from each of the categories listed above to select those that remained stable across various regression specifications. But, if a factor was found not to be correlated with outcomes, it was not included in the findings section despite the team having looked into the possible effects of that particular factor. For factors such as school resources, household assets and teacher use of essential practices, the study used PCA scores as described earlier.

In order to examine factors that help predict dropout rates, we also used Tobit regression models at the school level. To determine the factors that best predict repetition, the team used a logistic regression model since the outcome of interest—whether a learner has repeated a standard—was a binary variable.

EGRA Program Impacts

Across all three rounds, more than 75 percent of Standard 2 learners scored zero. Therefore, as discussed above, we first used Tobit models to address clustering of scores around zeros. In addition, we also estimated models which use as dependent variables indicators for which an individual attained

at least a score above zero. This allowed us to estimate the impact of EGRA on the whole distribution of reading scores, regardless of its shape.

Recall that randomization of schools into treatment and control study arm was only done in level 4 districts where only EGRA was implemented. Therefore, only in level 4 are treatment and control schools guaranteed to be similar on average. In other districts (level 1, 2 and 3), comparison zones were selected through careful matching with treatment areas since INVC and SSDI were already rolled out prior to our baseline. In order to conduct credible comparisons between treatment and control schools in all districts one needs to account for as many underlying differences between treatment and control schools. Therefore, we controlled for underlying factors through average oral fluency baseline scores in each school, as well as age and gender of the child, and district indicators.⁸⁶

Impact estimation model

Let O_{ist} denote test score of student i in school s at time t . E_{ist} denotes whether the student is an EGRA school, O_{sb} are average scores in the school at baseline, and X_{ist} is a vector of age, gender, and district controls. The Tobit model described above is the following:

$$O_{ist}^* = a + bE_{ist} + f(O_{sb}) + X_{ist}c + u_{ist} \quad (1)$$

$$O_{ist} = \begin{cases} O_{ist}^* & \text{if } O_{ist}^* > 0 \\ 0 & \text{if } O_{ist}^* \leq 0 \end{cases}$$

$$u_{ist} \sim N(0, \Sigma)$$

$f(O_{sb})$ is a fourth order polynomial in O_{sb} . Σ , the variance-covariance matrix of the residual, allows for clustering at the zone level. Since the number of students was roughly the same across schools, independently of school size, all models include weights to obtain results representative at the population level.

As mentioned above, we also estimate impacts of EGRA across the distribution of reading scores. We start by defining the following set of variables.

$$D_{ist}^k = 1 \text{ if } O_{ist} > k, \text{ where } k = \{0, 5, 10, \dots, 65, 70\}$$

Using these as dependent variables we estimate a sequence of linear regression models, which allow us to trace out the impact of EGRA across the distribution of oral scores:

$$D_{ist}^k = a + bE_{ist} + f(O_{sb}) + X_{ist}c + u_{ist} \quad (2)$$

In this case, $f(O_{sb})$ is a linear function of the average values of D_{ist}^k for each school at baseline, with $k = \{0, 5, 10, \dots, 65, 70\}$. Again, all regressions use weights. Standard errors are clustered at the zone level.

All models are estimated level by level, and then with all levels simultaneously.

⁸⁶ Alternatively, we could have estimated differences-in-difference models. They do not have an obvious advantage relatively to the procedure we use. While we can allow for a time invariant school unobservable in these models, in practice we would be comparing within school differences in test scores over time between treatment and control schools. This is not very different from what we are doing with models that control for baseline scores in the regression, with the difference that in the latter specification baseline scores can enter in a flexible way, and with a coefficient which does not have equal 1. In addition, difference-in-difference models are not easily implementable when the dependent variable is censored.

One important advantage of estimating the impact of EGRA across the distribution as in model (2) relative to the Tobit estimate in model (1) is that it does not require a normality assumption. Therefore, we consider the former estimates more robust than the latter. On top of that we have a more complete picture of what happens across the distribution. The disadvantage of course is that estimates from model (2) cannot be easily summarized in a single parameter.

ANNEX 6. FACTORS PREDICTING WHETHER LEARNERS REPEAT A STANDARD (LOGIT REGRESSION) - FULL MODEL RESULTS

Factors Predicting Whether Learners Repeat a Standard (Logit Regression) - Full Model Results			
Standard 2		Standard 4	
Variables	Coefficient	Variables	Coefficient
Someone at Home reads to learner (dummy)	0.0239	Someone at Home reads to learner (dummy)	-0.1962
	-0.1144		(0.1118)*
Household Head's Highest education level (in years)	-0.0227	Household Head's Highest education level (in years)	-0.0186
	(0.0127)*		-0.0128
Someone at Home helps learner with homework (dummy)	-0.081	Classsize (number learners)	0.0005
	-0.1074		-0.0009
Classsize (number learners)	-0.0002	Teacher use of essential teaching practices (PCA)	-0.0578
	-0.0008		(0.0280)**
Teacher use of essential teaching practices (PCA)	0.009	Learner reads at home the books taken home (dummy)	-0.6282
	-0.0267		(0.2240)***
Learner reads at home the books taken home (dummy)	-0.0677	Level 4: EGRA Only area	-0.2011
	-0.1345		-0.1266
Level 4: EGRA Only area	0.0497	Level 2: EGRA + SSDI	0.119
	-0.1178		-0.1716
Level 2: EGRA + SSDI	0.0134	Level 3: EGRA + INVC	0.2808
	-0.1486		(0.1512)*
Level 3: EGRA + INVC	-0.3155	Level 1 (CDCS Full integration area)	-0.3232
	(0.1450)**		-0.2468
Level 1 (CDCS Full integration area)	0.5689	Constant	-0.1664
	(0.2301)**		-0.2685
Constant	-0.1054	N	3213
	-0.2005	Pseudo R2	0.0103
N	2834		
Pseudo R2	0.0058		
Source: Endline, 2017			
Standard errors in parentheses, Weighted data			
*, ** and *** indicates 10, 5 and 1% level of significance			

ANNEX 7. DROP OUTS: FACTORS PREDICTING TOTAL ANNUAL STANDARD 1-4 DROPOUTS (TOBIT REGRESSION)

Variables	Estimates	
Oral reading fluency scores (cwpm)	-0.0002	
	-0.0008	
Learners attended Preschool (dummy)	-0.0763	
	(0.0288)***	
Teacher use of essential teaching practices (Index)	-0.0023	
	-0.0037	
Head teacher Invites Parents to Classes (dummy)	-0.0098	
	-0.0153	
School has feeding program (dummy)	-0.0394	
	(0.0157)**	
Teacher reports Sufficient Resources in classes (dummy)	-0.0088	
	-0.016	
Learners feel good about reading (dummy)	-0.0295	
	-0.0415	
Learners get sick (dummy)	0.0074	
	-0.0345	
Level 4: EGRA Only area	-0.0306	
	(0.0174)*	
Level 3: EGRA + INVC	-0.0094	
	-0.023	
Level 2: EGRA + SSDI	-0.046	
	(0.0229)**	
Level 1 (CDCS Full integration area)	-0.0133	
	-0.0347	
Constant	0.2443	
	(0.0941)***	
Sigma	0.1152	
	(0.0046)***	
N	318	
All variables are school averages; Weighted data		
Standard errors placed under coefficients; * p<0.1; ** p<0.05; *** p<0.01		
Source: Endline Data, 2017		

ANNEX 8. READING PERFORMANCE FOR PRE AND INITIAL READING SUBTASKS

Proportion of Learners Scoring Zero at Baseline, Midline, End line, by Treatment Status and Subtasks

Subtasks		Standard 2		
		Baseline	Midline	Endline
		% Zero scores	% Zero Scores	% Zero Scores
Listening Comprehension (correct responses)	Comparison	4.81	11.90	1.40
	Treatment	4.54	8.40	0.99
Letter Name Knowledge (clpm)	Comparison	42.90	48.10	28.07
	Treatment	40.50	33.20	18.64
Syllable reading (cspm)	Comparison	61.30	77.90	59.75
	Treatment	57.60	66.00	53.27
Familiar Word (cwpm)	Comparison	73.10	79.90	71.24
	Treatment	67.80	69.60	66.68
Subtasks		Standard 4		
		Baseline	Midline	Endline
		% zero scores	% zero scores	% Zero Scores
Listening Comprehension (correct responses)	Comparison	1.36	2.60	0.37
	Treatment	1.20	2.10	0.45
Letter Name Knowledge (clpm)	Comparison	7.47	9.70	2.15
	Treatment	7.39	8.10	2.50
Syllable reading (cspm)	Comparison	12.40	21.00	9.53
	Treatment	11.50	16.40	8.26
Familiar Word (cwpm)	Comparison	16.40	21.50	13.11
	Treatment	13.90	15.60	11.60

Source: Baseline, 2013, Midline, 2015 and Endline 2017 learner assessments

Stage 1: Pre-Reading Skills

Listening Comprehension: Baseline, Midline and Endline Results

Learners' oral language and phonemic awareness skills are assessed through listening comprehension. As shown below, for Standard 2, the average scores in correct responses for the comparison group declined from 2.85 at baseline to 2.67 at midline. But, the scores for the treatment group improved considerably from 2.85 at baseline to 2.98 at midline. For Standard 4 learners, while the average score remained almost the same across time for the comparison group (3.6 at base and 3.7 at midline), it improved considerably in the treatment group, from 3.7 at baseline to 3.84 at midline.

TABLE 1: LISTENING COMPREHENSION RESULTS FROM BASELINE TO ENDLINE

		BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	2283	2.85	0.06	1693	2.67	0.08	1356	3.33	0.06

	Treatment	2139	2.85	0.09	3110	2.98	0.06	2484	3.43	0.05
	Comparison	2268	3.6	0.05	1678	3.66	0.07	1351	4.12	0.05
Standard 4	Treatment	2184	3.7	0.06	3101	3.84	0.06	2481	4.12	0.04

* Avg = weighted mean number of correct responses, N = sampled number of learners; SE = Standard errors. Source: Baseline 2103, Midline, 2015 and Endline 2017 EGRA Learner Assessments.

Stage 2: Initial Reading Skills

The initial reading subtasks measure learners' ability to recognize letters, syllables, and familiar sight words as well as to decode unfamiliar (invented) non-words. Below, the results of learner performance at baseline and midline for treatment and comparison groups on the initial reading subtasks.

Letter Name Recognition: Baseline, Midline and Endline Results

On the Letter Name Recognition subtask for Standard 2 at baseline, there was a 0.02 correct letters per minute (clpm) difference in performance between the treatment group and comparison group. The midline results for Standard 2 illustrated in Table 2 indicate that the comparison group dropped by 2.5 clpm, from correctly reading 8.6 letters at baseline to 6.1 at midline. The treatment group improved by 2.9 points, reading an average of 8.5 letters correct at the baseline compared to 11.4 correct letters per minute at midline. Overall, the difference in scores between midline and baseline was large. Standard 4 learners had the same mean scores at baseline (both groups scored read approximately 38 clpm correctly). Both groups' mean scores dropped from the baseline to midline. The comparison group dropped 10 clpm to identifying 28 clpm at midline. Meanwhile, the treatment group read 38 clpm at baseline compared to 30 at midline. Similar to Standard 2, the difference in Standard 4 scores from midline to baseline was more than 20 percent.

TABLE 2: LETTER NAME RECOGNITION RESULTS FROM BASELINE TO ENDLINE

		BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	2283	8.58	0.59	1684	6.09	0.60	1356	12.99	1.48
	Treatment	2139	8.54	0.90	3110	11.4	0.59	2484	14.16	0.68
Standard 4	Comparison	2268	37.86	0.96	1693	27.79	0.89	1351	37.53	1.15
	Treatment	2184	38.4	1.41	3101	30.16	0.72	2481	40.27	0.84

* Avg = weighted mean number of correct responses, N = sampled number of learners; SE = Standard errors. Source: Baseline 2103, Midline, 2015 and Endline 2017 EGRA Learner Assessments.

Syllable Reading: Baseline, Midline and Endline Results

Overall, there was a decline in performance on the syllable-reading subtask for both Standard 2 and Standard 4 learners, as shown in Table 23. In Standard 2, the comparison group scored 2.2 correct syllables per minute (cspm) lower than the baseline (mean score of 3.1 at midline compared to 5.3 at baseline), while the treatment group decreased by almost 1 cspm (from a mean score of 6.9 at baseline to a mean score of 6 at the midline). Standard 4 trends were similar to those in Standard 2. Learners in both the comparison and treatment groups scored lower at midline than at the baseline. The

comparison group dropped from a mean score of 36 at baseline to 27 at midline, while the treatment group fell from an average of 37 syllables read at baseline to 30 at midline.

TABLE 3: SYLLABLE READING RESULTS FROM BASELINE TO ENDLINE

STANDARD	SCHOOL TYPE	BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	2283	5.31	0.53	1684	3.12	0.48	1356	10.33	1.89
	Treatment	2139	6.88	1.12	3110	5.97	0.46	2484	9.12	0.65
Standard 4	Comparison	2268	35.69	1.16	1693	27.07	0.93	1351	39.62	1.42
	Treatment	2184	36.97	1.48	3101	29.74	0.83	2481	42.51	1.09

* Avg = weighted mean number of correct responses, N = sampled number of learners; SE = Standard errors. Source: Baseline 2103, Midline, 2015 and Endline 2017 EGRA Learner Assessments.

Familiar Word Reading: Baseline, Midline and Endline Results

Learners in both the treatment and comparison groups displayed a decline in their ability to read familiar sight words (Table 25). During the baseline, Standard 2 learners in the comparison group read an average of 3.3 words per minute compared to 2 words per minute at the midline, indicating that they read 1.3 fewer words. The treatment group read an average of 4.3 words per minute during the baseline, but only 3.7 words at midline, representing a decline by 0.6 words. The difference from the baseline is considerable although the decline was steeper in comparison than in treatment schools, as shown in Table 4. (40 percent lower for the comparison group and 16 percent lower for the treatment group). Although there was a decline in scores from baseline in both groups, with larger decline in comparison than in treatment schools, a positive treatment effect could be noted for the subtask. Standard 4 learners also demonstrated a decline at midline from baseline in their ability to read familiar words. Learners in the comparison group could read 3 fewer words at midline, dropping from an average of 24 words per minute during the baseline to reading 21 words correctly at midline. The treatment group fell by 2 points from a mean score of 25 at baseline to a mean score of 23 at the midline.

TABLE 4: FAMILIAR WORD RESULTS FROM BASELINE TO ENDLINE

STANDARD	SCHOOL TYPE	BASELINE			MIDLINE			ENDLINE		
		N	AVG	SE	N	AVG	SE	N	AVG	SE
Standard 2	Comparison	2283	3.27	0.33	1684	1.97	0.31	1356	5.76	1.04
	Treatment	2139	4.25	0.65	3110	3.67	0.32	2484	5.51	0.44
Standard 4	Comparison	2268	24.24	0.78	1693	20.89	0.79	1351	26.99	0.96
	Treatment	2184	25.27	1.04	3101	23.17	0.72	2481	29.75	0.76

ANNEX 9. FACTORS PREDICTING ORAL READING FLUENCY (TOBIT ESTIMATES) AT END LINE, BY LEARNER SEX

Standard 2

Variables	Boys	Boys	Girls	Girls	All	All
Learner Sex (Dummy)					7.05	7.05
					(2.47)***	(2.49)***
Learner reports to repeating class (Dummy)	-4.07	-3.9	-4.33	-3.86	-4.22	-3.96
	-3.07	-3.02	-2.76	-2.75	(2.23)*	(2.22)*
Learner Reports being Tired in School (Dummy)	-2.23	-1.46	-3.49	-2.8	-2.79	-2.04
	-2.97	-3	-3.04	-3.04	-2.26	-2.24
Class Size	-0.11	-0.11	-0.1	-0.1	-0.1	-0.1
	(0.04)***	(0.04)***	(0.06)*	(0.06)*	(0.04)***	(0.04)***
Teacher Reports Sufficient Resources to Teach (dummy)	6.59	7.21	7.9	8.06	7.36	7.75
	-4.61	-4.62	-4.92	(4.88)*	(3.90)*	(3.82)**
Teacher Uses Essential Teaching Practices (Index)	1.9	1.92	2.33	2.59	2.13	2.27
	(1.12)*	(1.13)*	(1.21)*	(1.21)**	(0.94)**	(0.94)**
Learner Read Books taken home (dummy)	8.53	8.63	4.25	4.08	6.51	6.45
	(3.96)**	(3.89)**	-5.55	-5.59	(3.48)*	(3.49)*
Education of Household member with highest education (years)	0.63	0.63	0.98	1.08	0.8	0.84
	(0.32)**	(0.32)**	(0.35)***	(0.34)***	(0.24)***	(0.23)***
EGRA Only (Level 4)_Dummy		-4.52		-3.93		-4.23
		-5.26		-5.74		-4.7

EGRA+SDDI (Level 2)_Dummy		5.08		9.52		7.26
		-5.9		-6.56		-5.44
EGRA+INVC (Level 3)_Dummy		-0.98		-4.86		-2.79
		-6.13		-6.32		-5.23
EGRA+SDDI+INVC (Level 1)_Dummy		-11.45		-7.59		-9.54
		-8.41		-10.15		-7.4
EGRA Treatment (Dummy)	-3.46		-1.48		-2.47	
	-4.65		-4.9		-4.08	
Constant	-22.2	-22.88	-22.18	-22.67	-26.31	-26.79
	(7.44)***	(7.47)***	(11.46)*	(11.47)**	(8.32)***	(8.34)***
Sigma	1,007.24	993.71	1,357.89	1,347.00	1,197.30	1,186.77
	(153.43)***	(147.67)***	(136.84)***	(136.97)***	(119.15)***	(117.02)***
N	1,426	1,426	1,381	1,381	2,807	2,807

Standard 4.

Variables	Boys	Boys	Girls	Girls	All	All
Learner Sex (Dummy)					6.28	6.31
					(1.25)***	(1.25)***
Learner Age (Dummy)	0.67	0.66	-0.03	-0.06	0.32	0.3
	-0.57	-0.57	-0.51	-0.51	-0.35	-0.35
Learner reports to repeating class (Dummy)	-2	-2.05	-1.34	-1.3	-1.59	-1.6
	-1.77	-1.77	-1.87	-1.87	-1.23	-1.23
Learner Reports being Tired in School (Dummy)	-3.09	-3.16	-3.74	-3.89	-3.33	-3.43

	-2.11	-2.1	(2.05)*	(2.03)*	(1.64)**	(1.64)**
Class Size	0	0	-0.01	-0.01	0	-0.01
	-0.02	-0.02	-0.03	-0.03	-0.02	-0.02
Teacher Reports Sufficient Resources to Teach (dummy)	-1.58	-1.78	0.23	0.08	-0.72	-0.9
	-2.01	-2.01	-2.27	-2.24	-1.67	-1.66
Teacher Uses Essential Teaching Practices (Index)	0.15	0.21	-0.22	-0.18	-0.05	0
	-0.49	-0.52	-0.58	-0.56	-0.44	-0.44
Learner Read Books taken home (dummy)	5.79	5.3	11.63	11.4	8.58	8.24
	-3.87	-3.93	(4.59)**	(4.74)**	(3.11)***	(3.24)**
Education of Household member with highest education (years)	0.5	0.52	0.42	0.42	0.45	0.46
	(0.20)**	(0.19)***	(0.17)**	(0.17)**	(0.12)***	(0.11)***
EGRA Only (Level 4)_Dummy		0.85		2.39		1.68
		-2.29		-2.33		-1.85
EGRA+SDDI (Level 2)_Dummy		4.19		4.61		4.44
		-3.31		-4.16		(2.58)*
EGRA+INVC (Level 3)_Dummy		7.84		8.16		7.99
		(2.43)***		(2.53)***		(2.12)***
EGRA+SDDI+INVC (Level 1)_Dummy		-8.29		-7.56		-7.93
		-5.29		-5.41		(3.99)**

EGRA Treatment (Dummy)	2.94		4.14		3.58	
	-1.89		(2.06)**		(1.64)**	
Constant	6.47	7.16	15.31	16.06	7.85	8.55
	-7	-7.02	(8.27)*	(8.43)*	-5.06	-5.2
Sigma	513.88	510.69	512.21	509.67	514.07	511.28
	(35.01)***	(35.05)***	(35.63)***	(35.33)***	(24.28)***	(24.32)***
N	1,519	1,519	1,526	1,526	3,045	3,045
Standard errors placed under coefficients; * p<0.1; ** p<0.05; *** p<0.01						
Weighted data; Source: Endline Data, 2017						

ANNEX 10. TREATMENT LEVELS' EGRA IMPACT ON ORAL READING SCORES, BY LEARNER SEX AND STANDARD

We show Tobit estimates of the impact of EGRA on oral reading fluency scores at midline and endline for boys and girls below:

Standard 2. Impacts of EGRA on Boys and Girls, by Treatment Levels at Midline and Endline

	Level 1 (EGRA+INVC+SSDI)	Level 2 (EGRA+ SSDI)	Level 3 (EGRA+INVC)	Level 4 (EGRA Only)
Midline Standard 2 Boys				
EGRA Treatment (Dummy)	7.647***	2.281***	5.406***	12.49***
	(0.749)	(0.623)	(1.222)	(0.567)
N	549	2110	452	908
Midline Standard 2 Girls				
EGRA Treatment (Dummy)	14.16***	2.920**	9.060***	7.236***
	(1.163)	(1.359)	(1.295)	(0.768)
N	594	2285	510	976
Endline Standard 2 Boys				
EGRA Treatment (Dummy)	6.055**	4.848***	1.778	0.269
	(2.639)	(0.836)	(1.524)	(1.204)
N	444	2079	353	713
Endline Standard 2 Girls				
EGRA Treatment (Dummy)	-11.79***	12.06***	14.24	5.749***
	(2.479)	(1.302)	(8.854)	(1.337)
N	474	2225	402	792

Weighted data;

Source: Midline Data 2015; Endline Data, 2017; Baseline data, 2013 as controls.

Standard errors in parentheses (clustered by zone); * p<0.1; ** p<0.05; *** p<0.01

Standard 4. Impacts of EGRA on Boys and Girls, by Treatment Levels at Midline and Endline

	Level 1 (EGRA+INVC+SSDI)	Level 2 (EGRA+ SSDI)	Level 3 (EGRA+INVC)	Level 4 (EGRA Only)
Midline Standard 4 Boys				
EGRA Treatment (Dummy)	1.982	-4.666***	0.323	3.529***
	(2.533)	(0.444)	(3.192)	(0.534)
N	564	2121	453	926
Midline Standard 4 Girls				
EGRA Treatment (Dummy)	1.306	-11.26***	5.585	1.507
	(2.713)	(0.823)	(4.168)	(1.628)
N	586	2280	518	981
Endline Standard 4 Boys				

EGRA Treatment (Dummy)	4.287***	1.075**	0.938	1.393
	(1.275)	(0.545)	(3.166)	(2.786)
N	442	2084	361	723
Endline Standard 4 Girls				
EGRA Treatment (Dummy)	-2.058	-5.894***	11.06***	1.357
	(4.325)	(1.287)	(2.427)	(2.526)
N	475	2218	402	787

Weighted data;

Source: Midline Data 2015; Endline Data, 2017; Baseline data, 2013 as controls.

Standard errors in parentheses (clustered by zone); * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$