



USAID
FROM THE AMERICAN PEOPLE

MALAWI

ABE/LINK MALAWI TEACHER PROFESSIONAL DEVELOPMENT SUPPORT

PROJECT M&E REPORT

JUNE 2013

Contract No.: EDH-I-00-05-00026-02

Task Order No: EDH-I-04-05-00026-00

This report was prepared for review by the United States Agency for International Development. It was submitted to the COR, Malawi Teacher Professional Development Support activity, by Creative Associates International, RTI International, and Seward Inc. The authors of this report are Elizabeth Randolph, Mike Nkhoma and Steve Backman (Chief of Party).

ABE/LINK
Malawi Teacher Professional Development Support
(MTPDS)

M&E Report
February 2010- June 2013
(To be read in conjunction with the MTPDS Final Report)

Prepared by

Elizabeth Randolph, Mike Nkhoma and Steve Backman (Chief of Party)

Submitted by:

Creative Associates International, RTI International, and Seward Inc.

under

Contract No.: EDH-I-00-05-00026-02

Task Order No: EDH-I-04-05-00026-00

Creative Associates International
5301 Wisconsin Avenue, NW, Suite 700
Washington, DC 20015

Date Submitted: June 13, 2013

Disclaimer

This report is made possible with the support of the American People through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of the author and do not necessarily reflect the views of USAID or the United States Government.

Table of Contents

List of Figures	iv
List of Tables	v
Abbreviations	vii
Section 1. Introduction and Background	1
Section 2. Overview of MTPDS.....	2
Result Area 1 – Strengthened Teacher Policy, Support, and Management Systems	3
Result Area 2 - Enhanced Teacher Performance	3
Result Area 3 - Improved Early Grade Literacy	4
Result Area 4 - Enhanced Quality of Primary Teaching and Learning Materials	4
Result Area 5 - Improved M&E Systems, focusing on teacher competencies and learner outcomes.....	4
Section 3. Overview of the MTPDS Performance Management Plan.....	4
Section 4. Measurements of Performance Indicators against Targets.....	10
Section 5. Study of Learning Outcomes	16
Outcome Indicator 1a: 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.....	16
Outcome Indicator 1b: Learning gains on regularly administered classroom literacy assessments compared to baseline	17
Findings from the National EGRA Study	18
Analysis of Learning Gains from the National EGRA Study Data	18
Findings from the National EGRA Intervention Study	23
Standard 1 Learning Thresholds: Analysis of Shifts from Zero Scores to Measurable Reading.....	28
Findings from EGRA-Lite Studies.....	29
Learning Outcomes for Coached, Non-coached, and Control Schools	30
Learning Outcomes According to the Period of the Interventions: Two Years, One Year, and Control Schools.....	35
Section 6. Study of Teacher Performance Improvements	39
Outcome Indicator 2.a Percentage of teachers demonstrating essential skills in teaching compared to baseline	41
Outcome Indicator 2.b. Percentage of teachers implementing core literacy CPD content in the classroom compared to baseline	41
Findings from the National Classroom Observation Study.....	41
Improvements on specific reading instructional practices	42
Findings from the Monthly Classroom Observation Study.....	44
Section 7. Evaluation of Performance on the Output Indicators.....	51
Intermediate Result A: Strengthened systems and enhanced capacity across the education sector.....	51
Output Indicator A.1 Number of laws, policies, regulations, or guidelines developed or modified to improve equitable access to or the quality of education services	51
Output Indicator A.2 Number of administrators and officials trained (number of women; number of men).....	52
Output Indicator A.3 Number of host country institutions that have used USG-assisted MIS to inform administrative/management decisions	53

Output Indicator A.4 Number of host country institutions with improved MIS as a result of USG decision	53
Output Indicator A.5 Number of people trained in strategic information management with USG assistance.....	53
Output Indicator A.6 Number of learners' books and teachers' guides revised for Standard 1-4	53
Output Indicator A.7 Number of textbooks and other teaching and learning materials provided with USG assistance.....	53
Output Indicator A.8 Number of people trained in monitoring and evaluation with USG assistance	55
Output Indicator A.9 Number of SMCs trained on how to monitor performance of learners	55
Intermediate Result B: Teachers and education managers supported through continuous professional development	55
B.1. Number of teachers/educators trained with USG support (number of women; number of men).....	55
B.2. Number of learners enrolled in USG-supported primary schools or equivalent non-school-based settings (number of girls; number of boys)	56
B.3. Number of standardized learning assessments supported by USG	57
School Report Card Pilot	57
Conclusions	57
Annex A: Learning Gains on EGRA-Lite Subtasks by Standard.....	60
Annex B National Reading Benchmarks and Targets	62
Annex C Performance of Learners against National Reading Benchmarks	63

List of Figures

Figure 1: MTPDS Results Framework.....	5
Figure 2: Letter Naming	19
Figure 3: Syllable Reading	19
Figure 4: Familiar Word Reading.....	20
Figure 5: Oral Reading Fluency	20
Figure 6: Reading Comprehension.....	21
Figure 7: Listening Comprehension	21
Figure 8: EGRA 2012 Scores on Measures of Fluency against National Benchmarks*	22
Figure 9: EGRA 2012 Scores on other Measures against National Benchmarks*	23
Figure 10: Percent Zero Scores from Baseline to Endline.....	25
Figure 10.1: Letter Naming	26
Figure 10.2: Syllable Reading	26
Figure 10.3: Familiar Word Reading	27
Figure 10.4: Invented Word Reading	27
Figure 10.5: Oral Reading Fluency	28
Figure 11: Letter Naming – Mean Number of Correct Letters per Minute*	31

Figure 12: Syllable Reading – Mean Number of Correct Syllables per Minute.....	32
Figure 13: Familiar Word Reading – Mean Number of Correct Words per Minute	33
Figure 14: Reading Comprehension – Mean Percent Correct	34
Figure 15: Relationship between Coaching Visits and Oral Reading Fluency	35
Figure 16: Letter Naming – Mean Number of Correct Letters per Minute	36
Figure 17: Syllable Reading – Mean Number of Correct Syllables per Minute.....	37
Figure 18: Familiar Words – Mean Number of Words per Minute.....	38
Figure 19: Reading Comprehension – Mean Percent Correct	39
Figure 20.1 to 20.3: Percent of Core Reading Practices Rated Satisfactory	43
Figure 21: Percent Teachers Achieve 65% Satisfactory	45
Figure 22.1: Percent Satisfactory: All COI Items – Standard 1.....	46
Figure 22.2: Percent Satisfactory: All COI Items – Standard 2	47
Note: In two of the <i>Maziko a Kuwerenga</i> intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection.....	47
Figure 23.1: Percent Satisfactory: Core Reading Items – Standard 1	48
Figure 23.2: Percent Satisfactory: Core Reading Items – Standard 2	48
Figure 24: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 1.....	50
Figure 25: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 2.....	51

List of Tables

Table 1: Sampling for EGRA-Lite Assessments.....	7
Table 2: Sampling for Monthly Classroom Observations.....	8
Table 3: Sampling for EGRA Studies.....	9
Table 4: Sampling for National Classroom Observations.....	10
Table 5: Summary of Targets for Each Indicator.....	11
Table 6: Comparison of 2010 and 2012 EGRA Scores on Oral Reading Fluency and Reading Comprehension.....	17
Table 7: Group Comparisons in Learning Gains on EGRA-Lite subtasks	18
Table 8: Endline Results on Selected EGRA Subtasks by Intervention Group.....	24
Table 9: Learning Thresholds for Standard 1	29
Table 10: Percentage of Teachers Implementing Core Literacy CPD Content.....	41
Table 11: Percentage of Teachers Meeting 65% of Criteria	42
Table 12: Average Percentage of Core Reading Instructional Practices Judged Satisfactory by Standard	42
Table 13: Percentage Improvement on Monthly Teacher Observation	44
Table 14: Percent All Observations Satisfactory	47
Table 15: Percent Core Reading Practices Satisfactory	48
Table 16: Cross-tabulation: Percentage Meeting 65% Criteria – Years of Exposure Compared to Control	49

Table 17: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 1	49
Table 18: Percent Satisfactory on Essential Skills for Teaching Reading -- Standard 2	50
Table 19: Number of Administrators and Officials Trained through CPD since FY 2011-12.....	52
Table 20: Teaching and Learning Materials Printed since FY 2011-12	54
Table 21: Number of Teachers Trained per CPD over duration of MTPDS.....	56
Table A-1: Standard 1 Learning Gains on EGRA-Lite.....	60
Table A-2: Standard 2 Learning Gains on EGRA-Lite.....	60
Table A-3: Standard 4 Learning Gains on EGRA-Lite.....	61
Table B-1: Benchmarks and Targets for EGRA, 2012-2017	62
Table C-1: Percentage of Learners Meeting Benchmarks and Performance Targets.....	63

Abbreviations

COI	Classroom Observation Instrument
CPEA	Coordinating Primary Education Advisor
CPD	Continuous Professional Development
DEM	District Education Manager
DEO	District Education Office
DIAS	Department of Inspection and Advisory Services
DMO	District M&E Officer
DQA	Data Quality Assessment
DTED	Department of Teacher Education Development
DTTC	Divisional Teacher Training Coordinator
EGRA	Early Grade Reading Assessment
EGMA	Early Grade Mathematics Assessment
EMIS	Education Management Information System
ESIP	Education Sector Implementation Plan
GoM	Government of Malawi
MaK	<i>Maziko a Kuwerenga</i>
MANEB	Malawi National Examinations Board
MCSE	Malawi Certificate of Secondary Education
M&E	monitoring and evaluation
MIE	Malawi Institute of Education
MoEST	Ministry of Education, Science, and Technology
MTPDS	Malawi Teacher Professional Development Support
NESP	National Education Strategic Plan
NPC	National Primary Curriculum
NSTED	National Strategy for Teacher Education and Development
PCAR	Primary Curriculum and Assessment Reforms
PEA	Primary Education Advisor
PMP	Performance Management Plan
PTA	Parent Teacher Association
SMC	School Management Committee

SRC	School Report Card
TALULAR	Teaching and Learning Using Locally-Available Resources
TEMIS	Teacher Education Management Information System
TLM	Teaching and Learning Material
ToF	Training of Facilitators
ToT	Training of Trainers
USAID	United States Agency for International Development

Section 1. Introduction and Background

The Malawi Teacher Professional Development Support (MTPDS) project is a three-year United States Agency for International Development (USAID) activity designed to provide technical assistance to the Ministry of Education, Science and Technology (MoEST) in implementing teacher education support and systems management as well as supporting the ongoing Primary Curriculum and Assessment Reform (PCAR). MTPDS has supported MoEST in strengthening teacher policy, support, and management systems, as well as the provision of Continuous Professional Development (CPD). Targeting teacher trainers, teachers, school administrators, and children nationwide, MTPDS links with and complements key MoEST and Government of Malawi (GoM) priority initiatives and plans in teacher education and professional development. The project has been implemented by the ABE-LINK team of Creative Associates International, and its subcontractors RTI international and Seward Inc.

The MTPDS activity (2010-2013) has been a key element of USAID-Malawi's broader response in the education sector, one of a number of inter-related USAID activities supporting the GoM and MoEST to improve quality in basic education. The project has focused mainly on supporting the lower primary sub-sector with an emphasis on teacher skill development, classroom support, and materials development aimed to enhance the instructional practices of teachers especially with regards to early grade reading.

The early grades in school, and even before in preschool and at home, form the foundation for a child's lifelong learning. A strong foundation helps to ensure success in the later years of primary school, secondary school, and beyond. Conversely, a poor foundation can hamper a child's ability to succeed in school and in life. The Malawi National Primary Curriculum (NPC), adapting the principles of outcomes-based education, recognizes the importance of data in driving decisions about how to best support teachers as they uptake the new approaches provided in the NPC, in particular information about learning outcomes and teacher performance. Understanding which foundational skills are being mastered and when, as well as understanding classroom and school practices that may encourage or hinder this mastery of skills, is essential as a first step towards informing Malawi's early grade learning reforms and advancing the achievement of the National Education Strategic Plan (NESP) primary school education goals.

The expected results of MTPDS are aligned with the key priorities of the MoEST education strategy, which can be found in the following: NESP (2008); Education Sector Implementation Plan (ESIP 2009); and National Strategy for Teacher Education and Development (NSTED 2007).

This report is a supplement to the MTPDS Final Report (2010-2013) which summarizes the significant achievements and progress over time of the MTPDS program. This Monitoring and Evaluation (M&E) report is intended be read in conjunction with the MTPDS Final Report. It has been written as a separate document in order to provide a detailed, comprehensive analysis of the data collected under the MTPDS performance management plan (PMP) while also providing a sense of the reach and outcomes of the program.

In order to cover the full PMP, this report follows the basic structure of the PMP Results Framework, with an emphasis on the outcome indicators of learner achievement and teacher

performance in reading followed by a discussion of project performance against all output indicators related to strengthening teacher education support and systems management, including the provision of CPD nationwide, enhancing early grade literacy, and improving education-related monitoring and evaluation systems and quality. Section 2 provides a basic overview of the MTPDS project. Section 3 discusses the MTPDS Results Framework as laid out in the PMP along with the procedures developed to monitor progress against project targets. Section 4 lists the MTPDS performance indicators and presents measurements of performance against the established targets for each indicator. Sections 5 and 6 provide a detailed analysis of findings from project M&E data collected to monitor progress towards the two major outcome indicators of “Improved Early Grade Literacy Attainment” (Section 5) and “Improved Early Grade Literacy Instruction” (Section 6). A comprehensive discussion is provided in Section 7 on project performance against all output indicators related to teacher policy, support and management systems; provision of CPD; improved M&E systems and capacity; and improved education quality. Section 8 discusses the lessons learned from the School Report Card Pilot conducted by MTPDS. And Section 9 concludes the report by summarizing the main findings and providing recommendations for building upon the successes and lessons learned from the project.

Section 2. Overview of MTPDS

The MTPDS activity was designed to assist the MoEST in implementing teacher education support and systems management, including the provision of CPD under the Ministry’s Primary Curriculum and Assessment Reforms (PCAR) with a particular focus on early grade reading. Targeting teachers, school administrators, other relevant education personnel, and pupils nationwide, technical assistance under MTPDS has directly supported key teacher education and professional development priorities of the MoEST and GoM. In the area of teacher development, MTPDS has built upon and expanded the agreed-upon model, which embraces CPD with an emphasis on sub-district training and support, including school-based support.

Teacher professional development that specifically targeted improved reading instruction involved two activities. The first was mainstreamed CPD in literacy that was provided to all Standard 1 to Standard 4 teachers and school leaders nationwide. The second was a more intensive intervention targeted towards Standard 1 teachers. This intervention, called the *Maziko a Kuwerenga* (MaK) program, provided a more structured methodology for Standard 1 reading instruction including carefully sequenced and scripted lesson plans, linked materials, and systematic school-based coaching. The MaK program was introduced in seven districts in Malawi: first to Salima, Ntchisi prior to the beginning of the 2011/12 school year, and later to five new districts of Ntcheu, Blantyre Rural, Zomba Rural, Thyolo, and Mzimba North in early 2012, just prior to the final term of the same school year.

Though the underlying goal of MTPDS is to improve early grade reading outcomes through improvements in instructional practice, teaching and learning take place within a large and complex education context. In order to maximize the benefits of improved teaching practice, both an enabling environment and strong systems for accountability are required. Thus MTPDS also worked toward improving the learning environment through the provision of materials support and policy and systems development and support, along with capacity building in

monitoring and evaluation (M&E) at the MoEST headquarters, the division and district offices, and the school and community.

The MTPDS program supports USAID/Malawi's overall education goal, which is improved early grade literacy attainment. Broadly speaking, MTPDS activities are organized around two overall objectives, the first being to promote an enabling environment for early grade learning through strengthened systems, policy support, and accountability systems, and the second, to improve literacy teaching and learning. The MTPDS activities were organized around five result areas which essentially comprise the key intermediate results under the MTPDS Results Framework (see **Section 3**). These Result Areas are described briefly below.

- Result 1. Strengthened Teacher Policy, Support, and Management Systems
- Result 2. Enhanced Teacher Performance
- Result 3. Improved Early Grade Literacy
- Result 4. Enhanced Quality of Primary Teaching and Learning Materials
- Result 5. Improved M&E Systems, focusing on teacher competencies and learner outcomes

The MTPDS program was designed to support the achievement of the project's five Result Areas listed above through a set of requirements and associated standards. The requirements for each of the five Result Areas essentially represent the key activities that—given the logic of the MTPDS design—would need to be accomplished in order to achieve the expected results and the overall goal of the program. The standards are the sub-activities that, taken together, provide a mechanism for measuring the accomplishments of the respective requirements for each result.

The following outlines the MTPDS results and required actions or "Requirements" for each area:

Result Area 1 – Strengthened Teacher Policy, Support, and Management Systems

- 1.1 Formulate a policy framework and implementation plan for teacher education systems management and support in Malawi under the NSTED
- 1.2 Determine key, priority policy actions and support their implementation
- 1.3 Develop an updated teacher education management information system (TEMIS) that is integrated with the EMIS
- 1.4 Provide targeted support for improved coordination among MoEST teacher education departments and institutions and other institutions involved in teacher education and development

Result Area 2 - Enhanced Teacher Performance

- 2.1 Develop or refine operational guidance with relevant stakeholders on how to implement the decentralized (school and cluster-based) systems of teacher education and for effective supervision and advisory services for teachers and teacher support

- 2.2 Implement, in collaboration with MoEST and with the use of a light but effective support structure, the decentralized CPD model with a focus on literacy
- 2.3 Review, revise, develop, print, and distribute CPD modules and related materials for teaching and teacher support personnel

Result Area 3 - Improved Early Grade Literacy

- 3.1 Consolidate best practices in early literacy approach in Malawi
- 3.2 Develop and implement an early literacy approach
- 3.3 Assess and monitor early grade (Standards 1-4) primary school children's literacy level
- 3.4 Promote school and community support of early literacy in school

Result Area 4 - Enhanced Quality of Primary Teaching and Learning Materials

- 4.1 Formally evaluate, and revise, textbooks for Standards 1-4
- 4.2 Produce, print, and distribute complementary reader workbooks (reusable decodable storybooks with teacher's guides)

Result Area 5 - Improved M&E Systems, focusing on teacher competencies and learner outcomes

- 5.1 Define and put into operation the framework, strategy, and plans for monitoring and evaluating PCAR implementation, with a focus on teacher competencies and learner outcomes and for building M&E capacity
- 5.2 Enhance capacity of parents and communities through SMCs and PTAs to participate in CPD and early grade literacy monitoring

Section 3. Overview of the MTPDS Performance Management Plan

The MTPDS Performance Monitoring Plan (PMP) was revised in 2012 in order to ensure its alignment with the MTPDS contract modification finalized December 2011. The contract modification shifted the focus and scope of the project to more directly support USAID's strategic priority of "improved reading skills for 100 million children in primary grades by 2015" as well as USAID/Malawi's overall education goal: ***Improved early grade literacy attainment***. In turn the revised PMP was designed to measure the project's contribution towards achieving this goal, fine-tuning the indicators to include strategic "high level and impact-based indicators" that would allow for precise measurements of improvements in early grade reading teaching practices and learning gains in pre-reading and reading abilities attributable to the MTPDS inputs. The MTPDS Results Framework is presented in **Figure 1** below, including the set of outcome and output indicators.

Figure 1: MTPDS Results Framework

GOAL: Improved early grade literacy attainment

Outcome Indicator #1: Pupils demonstrating improved performance in literacy as measured by:

Sub-indicator 1.a: 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.

Sub-indicator 1.b: Learning gains on regularly administered classroom literacy assessments compared to baseline

RESULT: Enhanced teacher performance

Outcome Indicator #2: Teachers demonstrating essential skills in literacy teaching as measured by:

Sub-indicator 2.a: Percentage of teachers demonstrating essential skills in teaching compared to baseline

Sub-indicator 2.b: Percentage of teachers implementing core literacy CPD content in the classroom compared to baseline

Intermediate Result A: Strengthened education systems and enhanced capacity to support teacher professional development and implement the PCAR

Intermediate Result B: Improved professional development, support and supervision for teachers and education managers

Activity A.1
(MTPDS Result1):
Strengthen
Teacher Support,
Policy and
Management
Svstems

Activity A.4
(MTPDS Result4):
Enhance the
Quality of
Teaching and
Learning
Materials

Activity A.5
(MTPDS Result5):
Improve the
M&E Systems
within the
Ministry &
Communities

Activity B.2
(MTPDS Result 2):
CPD trainings
nationwide

Activity B.3 (MTPDS
Result 3): Literacy
interventions in
selected districts

Output Indicators

A.1 Number of laws, policies, regulations or guidelines developed or modified to improve equitable access to or quality of education

A.2 Number of Administrators and officials successfully trained with USG support (number of women, number of men)

A.3 Number of host country institutions that have used USG assisted MIS to inform administrative/ management decisions

A.4 Number of host country institutions with improved MIS as a result of USG.

A.5 Number of people trained in strategic information management with USG assistance

A.6. Number of learners' books and teachers' guides revised for Std 1-4A.7
Number of textbooks and other teaching and learning materials provided with USG assistance

A.8 Number of people trained in M&E with USG assistance

A.9 Number of SMC/PTAs or similar "school" governance structures supported

Output Indicators

B.1 Number of teachers/ educators successfully trained with USG support (number of males; number of females; pre-service and in-service)

B.2 Number of learners enrolled in USG-supported primary schools or equivalent non-school – based-setting (number of males and females)

B.3 Number of standardized learning assessments supported by USG

One of the key elements of the revised PMP was to provide an avenue to track both teacher performance and learning outcomes in a sample of intervention and control schools through regular (i.e., approximately monthly) assessments. Thus the level of effort needed for quality data management was substantial. To meet this demand MTPDS increased the complement of divisional office staff to include, in each division, a fulltime M&E officer, the District M&E Officer or “DMO.” The PMP revision was also responsive to the recommendations given in the mid-term Data Quality Assessment (DQA) Report, which suggested that the project focus efforts on M&E closer to the data source. The increased staffing of the DMO was instrumental in enhancing the utilization of M&E information at subnational levels of the system and in building capacity for M&E from the district to the community.

The rest of this section outlines the increased level of activity for M&E that took place in conjunction with the revised PMP.

Regular Data Collection and Analysis

For Outcome Indicators 1 and 2 in the PMP, frequent data collection was required to track progress of teachers and learners over time in relation to various project activities. These data collection activities began in late April 2012, after implementation of the *Maziko a Kuwerenga* intervention had just begun in the five new intervention districts. Below are descriptions of the various M&E activities for these indicators:

EGRA-Lite

To address Sub-Indicator 1.b. on the PMP Results Framework, *Learning gains on regularly administered classroom literacy assessments compared to baseline*, MTPDS developed a condensed version of Early Grade Reading Assessment (EGRA), referred to as “EGRA-Lite”, which can be conducted in nearly half the time of the full EGRA instrument. The EGRA-Lite instrument assesses learners on only four of the nine sub-tests from EGRA, namely:

1. Letter naming fluency
2. Syllable reading fluency
3. Familiar word fluency
4. Reading comprehension of connected text

While the full EGRA instrument was used by MTPDS on an annual basis for national samples, the EGRA-Lite instrument was designed to be used on a more regular basis, on average twice per term, in selected districts. A team of enumerators, drawn from the cohort previously trained on using the full EGRA instrument, including MTPDS staff, was trained on the use of the condensed version to ensure inter-rater reliability.

Sampling for EGRA-Lite fell into three categories: (a) “Coached schools” - Intervention district schools receiving regular coaching visits from MTPDS staff, (b) “Non-coached schools” - Intervention district schools not receiving regular coaching visits from MTPDS staff, and (c) “CPD-only” - Non-intervention schools selected from seven control districts. Control districts were selected by identifying one district with similar contextual features to each of the seven intervention districts within the same educational division.

The first EGRA-Lite assessment was conducted at the beginning of term 3 in May 2012, soon after the five new intervention districts had received MaK Module 2 CPD training from the literacy intervention program. This initial EGRA-Lite assessment was to act as a baseline for subsequent EGRA-Lite samples. A second assessment was conducted at the end of the 2011/12 school year in late June/early July 2012. Three additional EGRA-Lite assessments were conducted in the following school year (2012/13) in September 2012, January 2013 and March 2013. The schedule and sampling for the EGRA-Lite assessments is presented in **Table 1** below.

Table 1: Sampling for EGRA-Lite Assessments

EGRA-Lite Assessment Date	Intervention Districts (x7)			Non-intervention districts (x7)			
	Coached schools (a) per district	Non-coached schools (b) per district	Total intervention schools	Schools (c) per district	Total CPD-Only schools	Total schools sampled	Total learners assessed
May 2012	3	3	42	1	7	49	1,386
June/July 2012	3	3	42	3	21	63	1,890
Sep 2012	3	3	42	3	21	63	1,260*
Jan 2013	3	3	42	3	21	63	1,890
Mar 2013	3	3	42	3	21	63	1,890

*Standard 1 learners were not assessed in Sep 2012 because the Standard 1 learners were new to school and had not yet received any reading instruction, as it was the beginning of the 2012/13 school year.

Monthly classroom observations

To track progress of teachers' performance over time in the literacy intervention districts, MTPDS began conducting monthly classroom observations in April 2012. The NPC M&E classroom observation instrument, which was developed in collaboration with MoEST, was used for data collection focusing on 22 observation items directly related to general and reading-specific teaching skills. On a nearly monthly basis, MTPDS Divisional Teacher Training Coordinators (DTTCs) and DMOs conducted observations in the exact same schools where the first EGRA-Lite data collection was conducted. The purpose of conducting both the classroom observations and EGRA-Lite learner assessments in the same schools and classrooms was to correlate changes in learner assessment scores to the performance of that particular class's teacher.

Classroom observations were conducted three times during the latter end of the 2011/12 school year in April, May, and June of 2012. Three additional classroom observations were conducted at the same schools during the following school year (2012/13) in September and October of 2012 and January 2013. At each school, three teachers (one teacher each from Standards 1, 2,

and 4¹) were observed. **Table 2** provides a summary of the timing and sample sizes for each monthly classroom observation conducted.

Table 2: Sampling for Monthly Classroom Observations

Date	Intervention Districts (X7)			Non-Intervention Districts (X7)			Total Teachers Observed
	Coached Schools (a) per District	Non-Coached Schools (B) per District	Total Intervention Schools	Schools (C) per District	Total CPD-Only Schools	Total Schools Sampled	
May 2012	3	3	42	1	7	49	147
June 2012	3	3	42	1	21	63	189
July 2012	3	3	42	1	21	63	189
Sep 2012	3	3	42	1	21	63	189
Oct 2012	3	3	42	1	21	63	189
Jan 2013	3	3	42	1	21	63	189

Annual Data Collection and Analysis

In addition to the regular data collection activities described above, MTPDS also conducted the annual Early Grade Reading Assessment (EGRA) on a national level for learners in Standards 2 and 4 plus the annual national classroom observation. These are described below.

Early Grade Reading Assessment (EGRA)

From the onset of the project, MTPDS has used EGRA as the principal source of data to measure early grade reading achievement of Malawian primary school learners. The EGRA is conducted by trained enumerators from MoEST departments and institutions and MTPDS. There are nine reading tasks assessed using the EGRA instrument. The overall structure of the instrument is maintained each year, with minor adjustments made to the content to ensure the test is authentic and distinct every year.

A national baseline EGRA was conducted in November 2010 with a random sample of 2,460 students from 99 schools across all six education divisions. In addition, the baseline for an EGRA intervention study was conducted at the same time in November 2010 with a controlled sample of 1,440 learners from the two original MaK intervention districts of Salima and Ntchisi and two control districts. A second (mid-term) national EGRA was conducted in November 2011 with an increased sample size of just over 3,000 learners from 150 randomly selected schools in order to provide for greater disaggregation and deeper analyses of learner achievement nationwide. The final national EGRA was conducted in November 2012 with a sample of 5,240 learners from 202

¹ These three standards were those selected for EGRA-Lites; Standards 2 and 4 because these are the standards assessed in the annual national EGRA samples of 2010, 2011, and 2012. Standard 1 was added into the EGRA-Lite data collection because it was the focus grade for the MTPDS intensive reading intervention program. Standard 3 was left out of the sampling in order to keep the number of learners sampled in a day manageable for one data collector to assess at each school.

schools. At the same time, the endline assessment for the EGRA intervention study was conducted with a sample of 1,332 learners from 49 schools. The sampling for all EGRA assessments conducted by MTPDS is summarized in **Table 3** below.

Table 3: Sampling for EGRA Studies

Assessment Type	Number of Schools Sampled	Number of Learners Assessed
National Baseline (November 2010)	99	2,460
Intervention Study Baseline (November 2010)	49	1,016
National Midterm (November 2011)	150	3,019
Intervention Study Midterm (May 2012)	20	210
National Final (November 2012)	202	5,240
Intervention Study Final (November 2012)	49	1,332

Annual national classroom observations

To address Outcome Indicator 2 in the PMP, *Teachers demonstrating essential skills in literacy teaching*, MTPDS conducted annual classroom observations with a random nationwide sample of Standard 1-4 teachers. The first annual observation was conducted in November/December 2010, the second in September 2011, the third in June/July 2012, and the final in March 2013. The purpose of annual classroom observations differed from the monthly observations as it was designed to measure teacher performance nationwide through a nationally representative random sample, while the monthly observation targeted specific teachers repeatedly to track their progress in teaching practices over shorter periods of time.

Both activities used the same observation instrument, with the exception of the initial 2010 annual observation, after which the instrument was modified significantly to be in-line with the observation instrument developed for the MoEST NPC M&E Framework. The modification was significant enough to make the 2010 observation instrument incomparable to subsequent classroom observation activities. Therefore, the 2011 annual classroom observation is treated as the baseline for comparative purposes for MTPDS.

The sample for the annual national observation activity was randomly selected each year with equal representation from each of the six divisions. **Table 4** shows the number of schools and teachers selected for national classroom observations each year. Standard 1 teachers were not observed in the first two samples (2010 and 2011) because the observations were conducted during the first term of the school year, when literacy and mathematics subjects are not included in the NPC syllabus (due to the orientation focus of the first term of Standard 1). Therefore, MTPDS decided to conduct the 2012 annual observation at the end of the school year (June/July 2012) and the final annual observation in March 2013 in order to include Standard 1 teachers in the sample.

Table 4: Sampling for National Classroom Observations

Observation Date	Number of Schools Sampled	Number of Teachers Observed	Number of Lessons Observed
2010 November/ December	79	274	298
2011 September	60	214	238
2012 June/July	60	240	240
2013 March	60	240	240

Section 4. Measurements of Performance Indicators against Targets

The table below (*Table 5*) presents the results for each performance indicator, both outcome and output indicators, attained over the life of the project. The table is organized to present the annual results compared to the annual targets starting with Year 1 of the project. Baseline data and the cumulative end of project data are also presented for ease of comparison. In Sections 5-7 following the summary table, more detailed presentations of findings are presented for each of the outcome indicators and the full set of MTPDS output indicators. Section 5 focuses on learning outcomes from the EGRA and EGRA-Lite data, Section 6 focuses on teacher performance outcomes, and Section 7 focuses on the output indicators.

Table 5: Summary of Targets for Each Indicator

Indicator	Baseline		Reported Sept 30, 2010		Reported Sept 30, 2011		By Sept 30, 2012		By End of Project June 2013	
	Date	Results	Target	Actual	Target	Actual	Target	Actual	Target	Actual
OUTCOME INDICATORS										
GOAL: Improved early grade literacy attainment										
Outcome Indicator 1: Pupil performance on literacy assessment										
1.a. <i>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</i>	Dec. 2010	<u>Std2</u> 0.8*	N/A	N/A	N/A	Data Not Available	5% ↑ over baseline	<u>Std2</u> 0.4*	10% ↑ over baseline	<u>Std2</u> 1.3* 63%↑ <u>Std4</u> 15.4* 34%↑
* Results represent the mean scores on oral reading fluency (correct words per minute -cwpm) from the national EGRA. See further discussion in Section 5 below for a detailed breakdown of learning gains and intervention-control comparisons from the national EGRA study.										
1.b. Learning gains on regularly administered classroom literacy assessments compared to baseline	May 2012	<u>Control</u> 1.43*	N/A	N/A	N/A	N/A	<u>Control</u> 5% ↑ <u>MaK</u> 10%↑ over May'12 baseline	<u>Control</u> 2.96* 106%↑ <u>MaK</u> 3.98* 58%↑	<u>Control</u> 10% ↑ <u>MaK</u> 20%↑ over May'12 baseline	<u>Control</u> 3.89* 172%↑ <u>MaK</u> 9.26* 268%↑

*The learning gains reflected here are familiar word reading fluency scores (cwpm) from EGRA-Lite for children from Std1 and Std2 combined for the MaK intervention and control (CPD-only) schools. See further discussion in Section 5 for detailed analysis of EGRA-Lite learning outcomes. Std 1 and Std 2 were combined for both the May 2012 EGRA-Lite baseline and the March 2013 EGRA-Lite endline to provide a single comparison measure to inform relative gains over time. Comparison across a single grade was not practical because the baseline was conducted during a different school year and at a different time of the year than when the endline was conducted.

Indicator	Baseline		Reported Sept 30, 2010		Reported Sept 30, 2011		By Sept 30, 2012		By End of Project June 2013	
	Date	Results	Target	Actual	Target	Actual	Target	Actual	Target	Actual
RESULT: Enhanced teacher performance										
Outcome Indicator 2: Teachers demonstrating essential skills in literacy teaching										
2.a. Percentage of teachers demonstrating essential skills in teaching compared to baseline	Sep. 2011*	21.6%*	N/A	26.4%*	10% increase over baseline	21.6%* (treated as baseline)	20% increase over baseline	26.8% (24% increase over 2011*)	25% increase over baseline	32.1% (48.6% increase over 2011)*.
* Observation instrument was modified for 2011 data collection (to increase data quality and align to NPC M&E Framework); the modification was significant enough to render the 2010 baseline incomparable to subsequent observations, thus 2011 was taken as baseline. See Section 6 below for a detailed breakdown of teacher performance gains and intervention vs. control comparisons from the national classroom observations.										
2.b. Percentage of teachers implementing core literacy CPD content in the classroom compared to baseline		<u>Control</u> 00%*						<u>Control</u> 19.50		<u>Control</u> 25%
	April 2012	<u>MaK</u> 25%	N/A	N/A	N/A	N/A	10% increase over baseline	<u>MaK</u> 32.50 30%↑ over baseline	12% increase over baseline	<u>MaK</u> 53.6% 114%↑ over Apr'12 Baseline
* None of the teachers (0%) from the control districts were observed to be implementing core literacy CPD at baseline under the study criteria. See Section 6 below for detailed breakdown of teacher performance on core literacy CPD content. (Note with a 0 baseline, % gain not calculable for controls)										
OUTPUT INDICATORS										
Intermediate Result A: Strengthened systems and enhanced capacity across the education sector										

Indicator	Baseline		Reported Sept 30, 2010		Reported Sept 30, 2011		By Sept 30, 2012		By End of Project June 2013	
	Date	Results	Target	Actual	Target	Actual	Target	Actual	Target	Actual
A.1. Number of laws, policies, regulations or guidelines developed or modified to improve equitable access to or quality of education	0	0	N/A	0	3 (draft verified)	5	6 (implemented)	7*	7 (implemented)	10*
* Reflects the cumulative total since the beginning of the project. For list of policy documents see Section 7 below.										
A.2. Number of Administrators and officials successfully trained with USG support (number of women, number of men)	N/A	N/A	465 (W=140) (M=325)	23 (W=9) (M=14)	465 (W=140) (M=325)	583 (W=195) (M=388)	465 (W=140) (M=325)	423* (W=140) (M=283)	465 (W=140) (M=325)	542** (W=176) (M=366)
* Reflects the highest attended ToF (Literacy 3) conducted in FY 2011-12.										
**Reflects the highest attended ToF (Literacy 4) conducted between Oct 2012 and May 2013 plus 68 TTC lecturers. (see narrative in Section 7 below)										
A.3. Number of host country institutions that have used USG-assisted MIS to inform administrative/management decision	N/A	N/A	0	0	7	7	20	50*	24	50*
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										
A.4. Number of host country institutions with improved MIS as a result of USG assistance	N/A	N/A	0	0	7	7	20	7*	24	471* (464 since Sep 2012)
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										
A.5. Number of people trained in strategic information management with USG assistance	N/A	N/A	0	0	40 (W=12) (M=28)	23 (W=4) (M=19)	40	23* (W=4) (M=19)	40	57* (W=10) (M=47) (34 since Sep 2012)
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										

Indicator	Baseline		Reported Sept 30, 2010		Reported Sept 30, 2011		By Sept 30, 2012		By End of Project June 2013	
	Date	Results	Target	Actual	Target	Actual	Target	Actual	Target	Actual
A.6. Number of learners' books and teachers' guides revised for Standard 1-4	N/A	N/A	0	0	28 (titles)	28 titles drafted	62 (titles)	62* (28 finalized + 34 drafted)	62 (titles)	62* finalized
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										
A.7. Number of textbooks and other teaching and learning materials provided with USG assistance (target reduced from 2,000,000 to 400,000 as per letter from CO dated March 15, 2011)	N/A	N/A	0	0	100,000	105,200	400,000	402,100*	430,000	554,300*
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										
A.8. Number of people trained in M&E with USG assistance	N/A	N/A	0	0	184 (W=55) (M=129)	64* (W=29) (M=35)	184 (W=55) (M=129)	305* (W=131) (M=174)	184 (W=55) (M=129)	305 (W=131) (M=174)
*Reflects the total trained in that particular reporting period (not cumulative). See narrative in Section 7 below.										
A.9. Number of SMC/PTAs or similar "school" governance structures supported	N/A	N/A	0	0	68	272	427	356* (84 FY 2011-12)	427	5,405*
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										
Intermediate Result B: Teachers and education managers supported through continuous professional development										
B.1. Number of teachers/educators successfully trained with USG support (number of women; number of men)	N/A	N/A	0	0	29,685 (W=12,152) (M=17,533)	20,386 (W=9,205) (M=11,181)	29,685 (W=12,152) (M=17,533)	33,292* (W=13,648) (M=19,644)	29,685 (W=12,152) (M=17,533)	33,292* (W=13,648) (M=19,644)

Indicator	Baseline		Reported Sept 30, 2010		Reported Sept 30, 2011		By Sept 30, 2012		By End of Project June 2013	
	Date	Results	Target	Actual	Target	Actual	Target	Actual	Target	Actual
*Reflects the highest attended CPD module (Literacy 2) conducted in FY 2011-12 (see narrative in Section 7 below).										
<i>B.2. Number of learners enrolled in USG-supported primary schools or equivalent non-school-based-setting (number of male and female students)</i>	N/A	N/A	0	0	1,954,012 (G=986,638 B=976,374)	3,774,116 G=1,896,311 B=1,877,805	2,997,630 (B=1,511,217 G=1,486,413)	3,996,831 B=1,981,875 G=2,014,956)*	2,997,630 (B=1,511,217 G=1,486,413)	4,188,677** (B=2,088,792) (G=2,099,885)
*Based on EMIS 2011 data. **Based on EMIS 2012 data (see narrative in Section 7 below).										
<i>B.3. Number of standardized learning assessments supported by USG</i>	N/A	N/A	0	0	2	2	3	3*	4	4*
* Reflects the cumulative total since the beginning of the project (see narrative in Section 7 below).										

Note: *USAID standard agency indicators are written with italics. MTPDS custom indicators are written without italics.*

Section 5. Study of Learning Outcomes

Learning outcomes were tracked in two separate studies. The first involved the administration of the Early Grade Reading Assessment (EGRA) to pupils in a random sample of schools across the nation. The national EGRA testing program involved three annual data collection points in 2010, 2011, and 2012 and included the following EGRA subtasks: letter naming, syllable reading, familiar word reading, oral reading fluency, reading comprehension, and listening comprehension. The EGRA was administered to Standard 2 and Standard 4 students approximately two months into the school year, in November. The national study also included a sub-sample of schools from the two districts at which the intensive MaK reading intervention was first implemented and from two control districts during the baseline (2010) and endline (2012) samples. Standard 1-4 teachers in the control schools—like all teachers across the nation—attended the CPD training in literacy. Teachers in Standard 1 intervention classrooms participated in both the MaK intervention in addition to the CPD literacy training.

In the second study, a “lite” version of EGRA, was conducted twice a term in a selection of intervention and control schools, with the intervention group sub-divided to address differences related to the level of school-based coaching provided and the number of years that teachers participated in the interventions. EGRA-Lite consisted of the following subtasks: Letter naming, syllable reading, familiar word reading, and reading comprehension.

Outcome Indicator 1a: 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

National level data from the 2010 and 2012 EGRA studies was used to inform this indicator. Data for these studies has been reported in the National EGRA reports². The following results (**Table 6**) were recorded in the EGRA 2012 National Report for Oral Reading Fluency and Reading Comprehension for both Standards 2 and 4. A more in-depth analysis of the national EGRA findings is given in the “Findings from the National EGRA Study” section below and in the 2012 EGRA National Study Report (2013). Note that the EGRA data for these results were collected from Standard 2 and Standard 4 pupils within the first two months of the school year and therefore best reflect the performance of Standard 1 and Standard 3 pupils at the end of the school year, respectively.

² The following reports were written for each of the National EGRA studies:

2010 - “Malawi Early Grade Reading Assessment: National Baseline Report,” March 2011. Project report submitted to USAID. Prepared by J. Mejia.

2011 - “Malawi National Early Grade Reading Midterm Assessment 2011,” July 2012. Project report submitted to USAID. Prepared by E. Miksic and S. Harvey.

2012 - “Malawi National Early Grade Reading Assessment Survey: Final Assessment – November 2012,” June 2013, MTPDS prepared by S. Pouzevara.

Table 6: Comparison of 2010 and 2012 EGRA Scores on Oral Reading Fluency and Reading Comprehension

Subtask	Standard Level	2010 EGRA	2012 EGRA	Learning Gains
Oral Reading Fluency (cwpm)	Standard 2	0.8	1.3	62.5%↑
	Standard 4	11.5	15.4	33.9%↑
Reading Comprehension	Standard 2	0.8%	0.9%	12.5%↑
	Standard 4	8.8%	13.3%	51.1%↑

(Data from “Malawi National Early Grade Reading Assessment Survey: Final Assessment – November 2012,” June 2013, MTPDS.)

Outcome Indicator 1b: Learning gains on regularly administered classroom literacy assessments compared to baseline

Results for this indicator were measured through the EGRA-Lite instrument, which was first administered in May 2012. Learning gains from this first data collection point presented in **Table 7** below are combined for Standard 1 and Standard 2³ students from schools in the seven intervention and seven control (schools where teachers only participated in the national literacy CPD) districts. This is because learners that were in Standard 1 during the first EGRA-Lite assessments moved on to Standard 2 in September 2012 with the start of a new school year (2012/13).

It should be noted that the first data collection point was not a true baseline as the MaK intervention was introduced in two districts in the 2010/2011 school year, approximately one year before the EGRA-Lite monitoring program was initiated. Thus the learning outcomes were higher for the intervention group at the time of the May 2012 data collection point. In spite of this, the learning curves were steeper for the intervention group in all but the syllable reading task; where the percent difference between the May 2012 and March 2013 data collection points was higher for the control group in syllable reading. The intervention group had higher scores than the control group on all subtasks at the last data collection point, and these results were statistically significant. Learning gains by subtask for each individual standard (Standards 1, 2 & 4) are provided in **Annex A**.

³ Due to the fact that the EGRA-Lite assessment was conducted over the span of two separate school years, Standard 1 and Standard 2 were combined to provide a single comparison measure to inform relative gains from the May 2012 baseline to the March 2013 endline on Outcome Indicator 1.b.

Table 7: Group Comparisons in Learning Gains on EGRA-Lite subtasks

EGRA-Lite Subtask	Treatment	Group Means ⁴		Percent Learning Gains	Univariate Analyses of Variance	
		May '12	Mar '13		F Test	Sig
Letter Naming	Intervention	9.36	23.51	151%	24.29	p=0.000*
	Control	4.08	8.64	112%		
Syllable Reading	Intervention	5.82	15.09	159%	7.02	p=0.008*
	Control	1.95	6.40	227%		
Familiar Word Reading	Intervention	2.52	9.26	268%	12.17	p=0.000*
	Control	1.43	3.89	172%		
Reading Comprehension	Intervention	0.94	7.50	700%	15.04	p=0.000*
	Control	1.29	3.42	166%		

*Statistically significant differences in the gain scores for treatment and control

Findings from the National EGRA Study

As mentioned above, in the national study the EGRA was administered annually in November from baseline in 2010 to the endline data collected in 2012. In addition the national EGRA study sample included a random sample of 33 schools from the original two intervention districts (Salima and Ntchisi) and a random sample of 16 control schools selected from Dedza and Mwanza, districts similar in context and primary school characteristics. This allowed for both a national study of early grade reading and a comparative study of learning outcomes within a controlled context to allow, as much as possible, attribution of learning gains to the MaK intervention.

Analysis of Learning Gains from the National EGRA Study Data

Overall findings from the national EGRA study demonstrated a slight gradual improvement in learning outcomes across the life of the project. These gains reflect the collective benefit of the new primary curriculum and associated CPD and a number of school-quality improvement initiatives across Malawi. USAID activities such as Read Malawi; *Tikwere* Interactive Radio Instruction English language program; Education Decentralization Support Activity (EDSA), with the introduction of the School Improvement Grant through the PSIP; and the MTPDS national CPD trainings and MaK intervention have had a positive impact, as have other activities, such as the Save the Children and World Vision Literacy Boost program. Overall there have been slight increases in pre-reading and reading skills as depicted by the baseline, midline, and endline findings from the national EGRA, shown in **Figures 2 through 7**.

Figure 2: Letter Naming

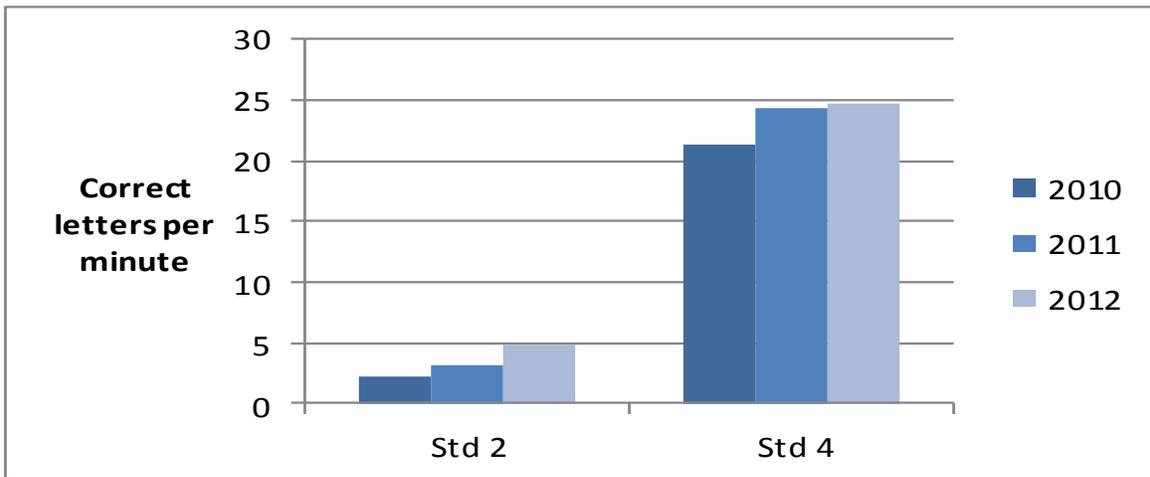


Figure 3: Syllable Reading

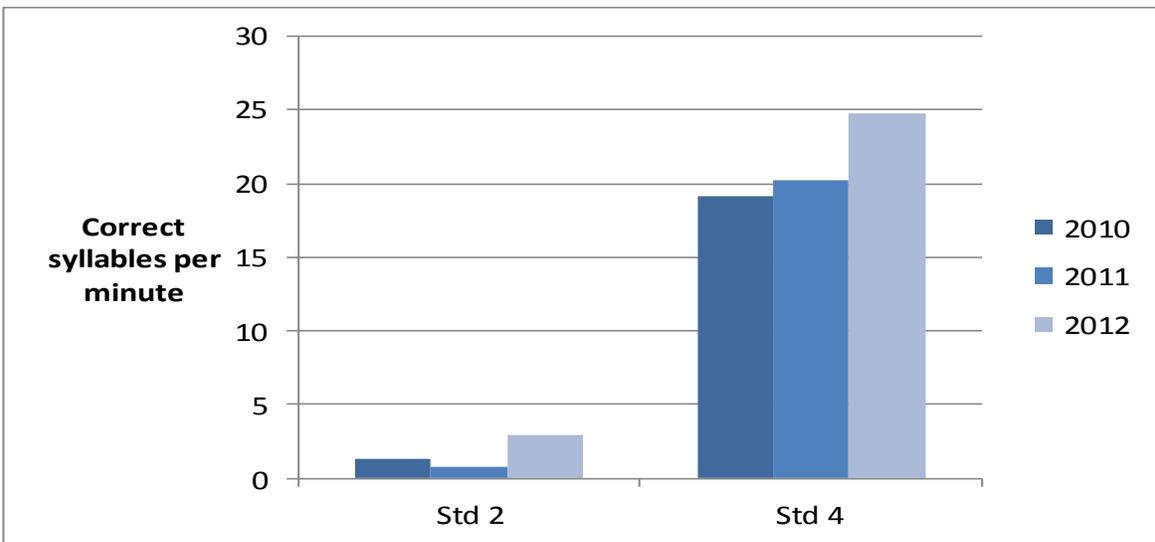


Figure 4: Familiar Word Reading

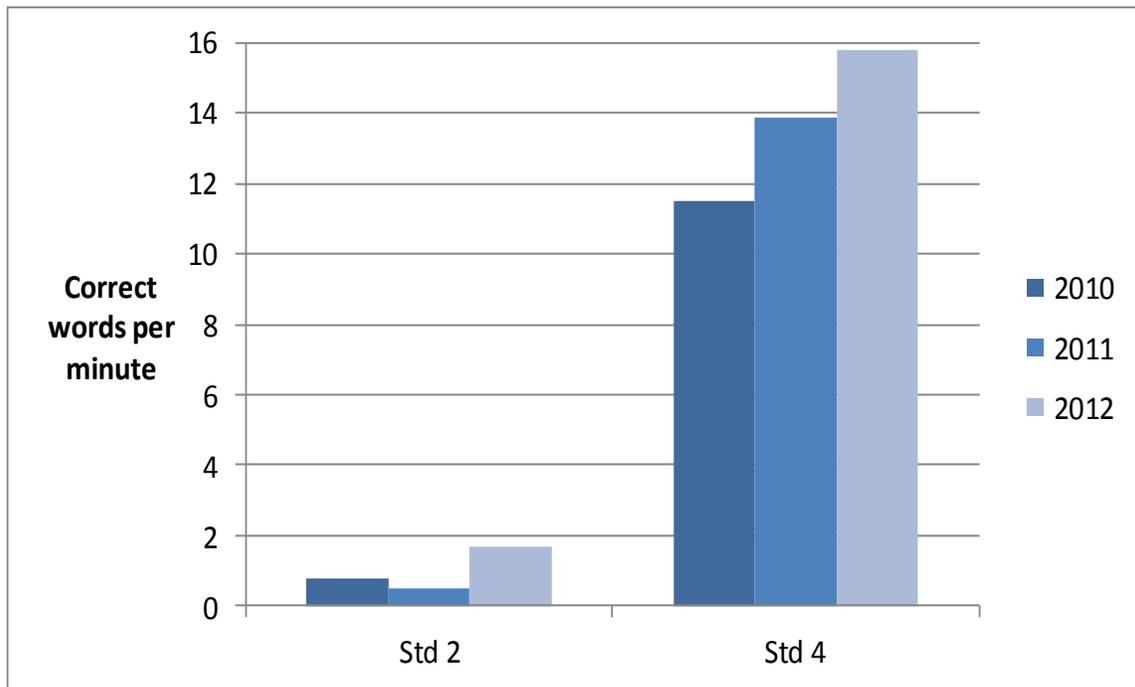


Figure 5: Oral Reading Fluency

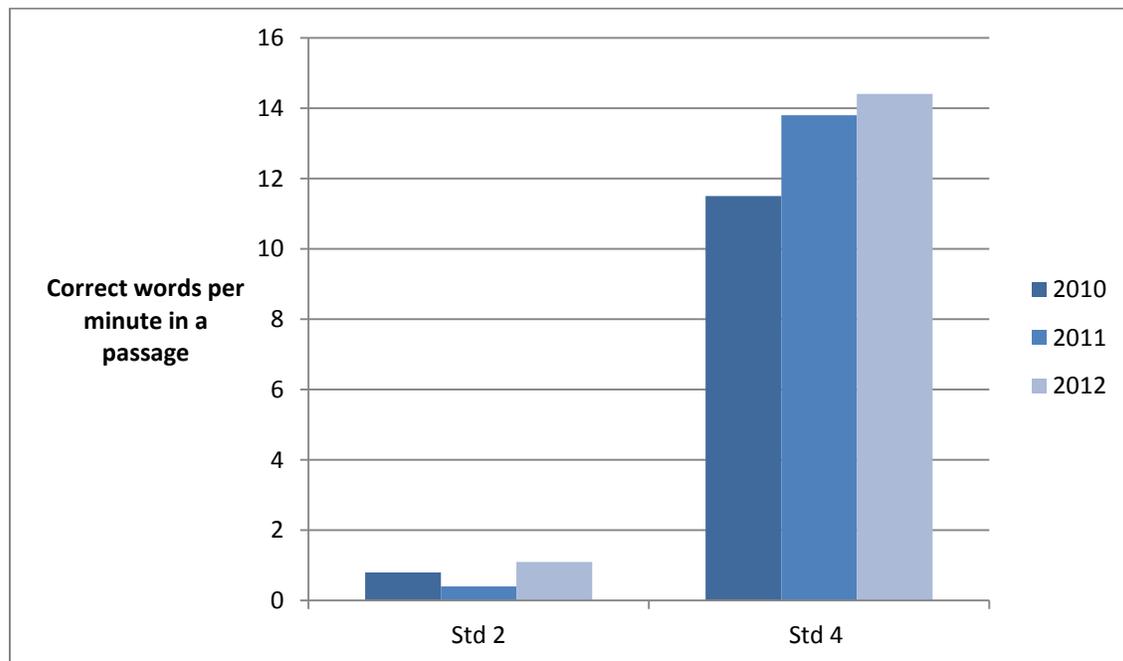
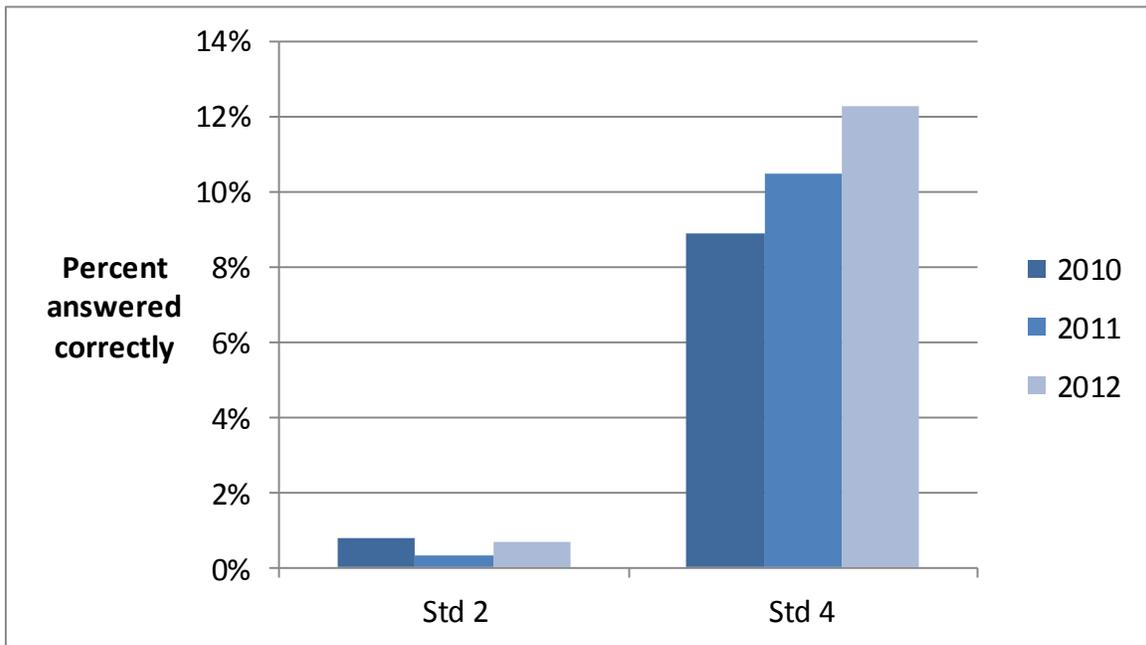
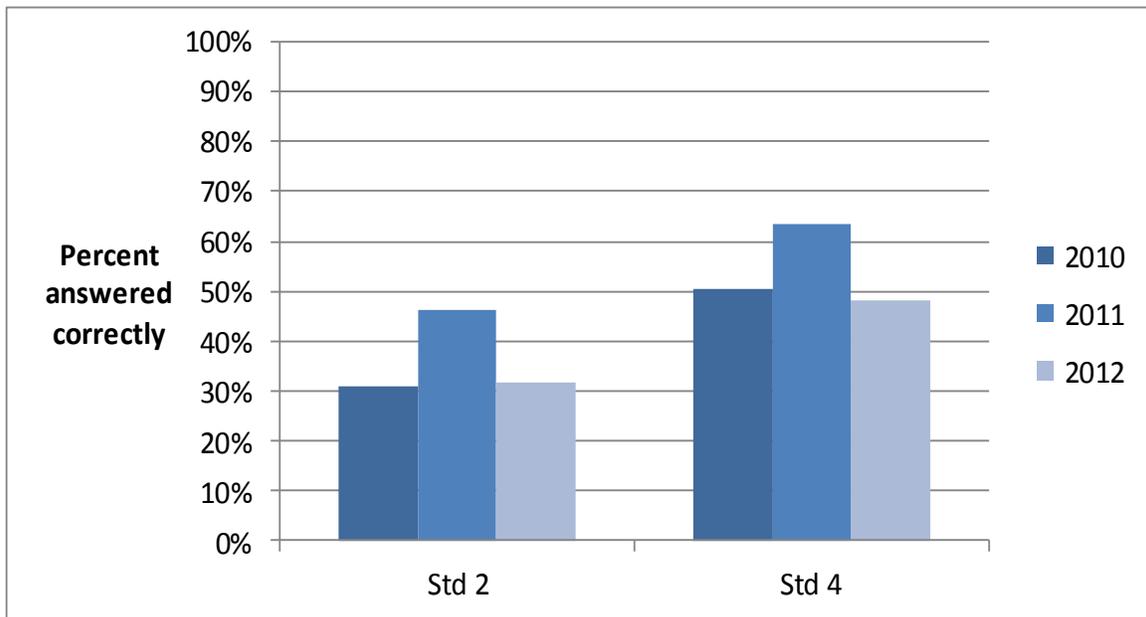


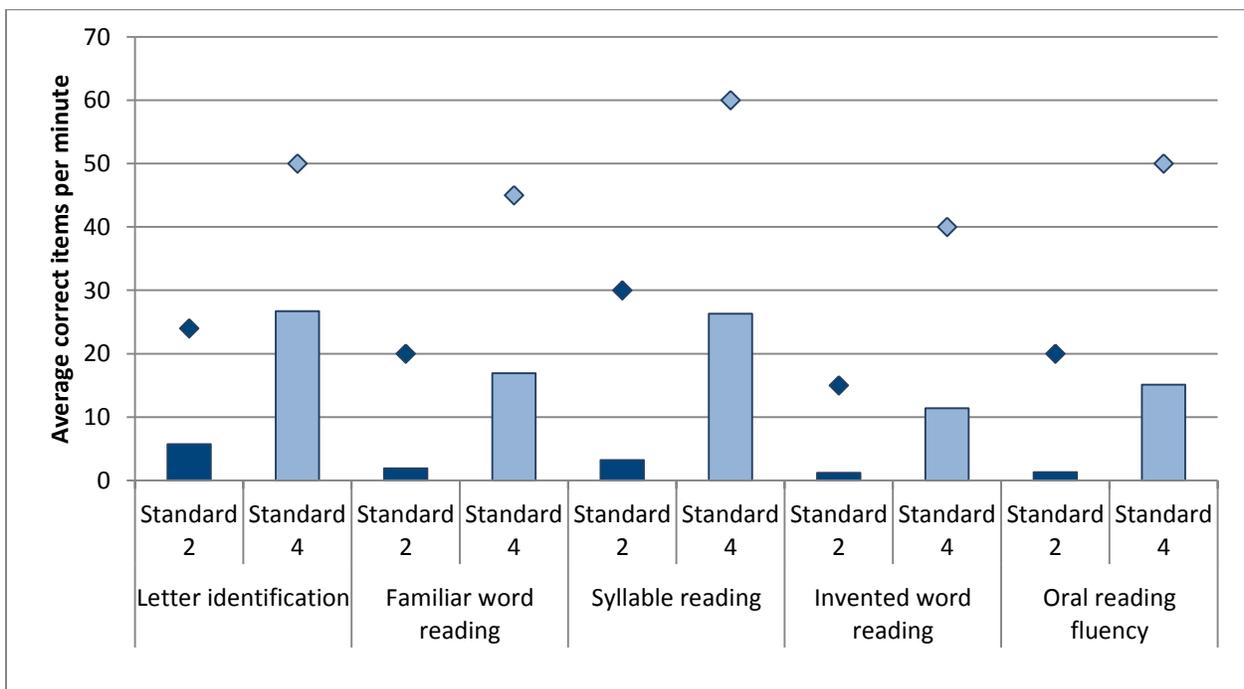
Figure 6: Reading Comprehension**Figure 7: Listening Comprehension**

As can be seen in the figures above, the national scores on most reading skills are improving over time. Although the gains are not drastic, they point to a positive national trend. As we review these results it must be taken into account that the majority of national CPD modules on teaching early literacy were conducted after the 2011 EGRA data collection with relatively little

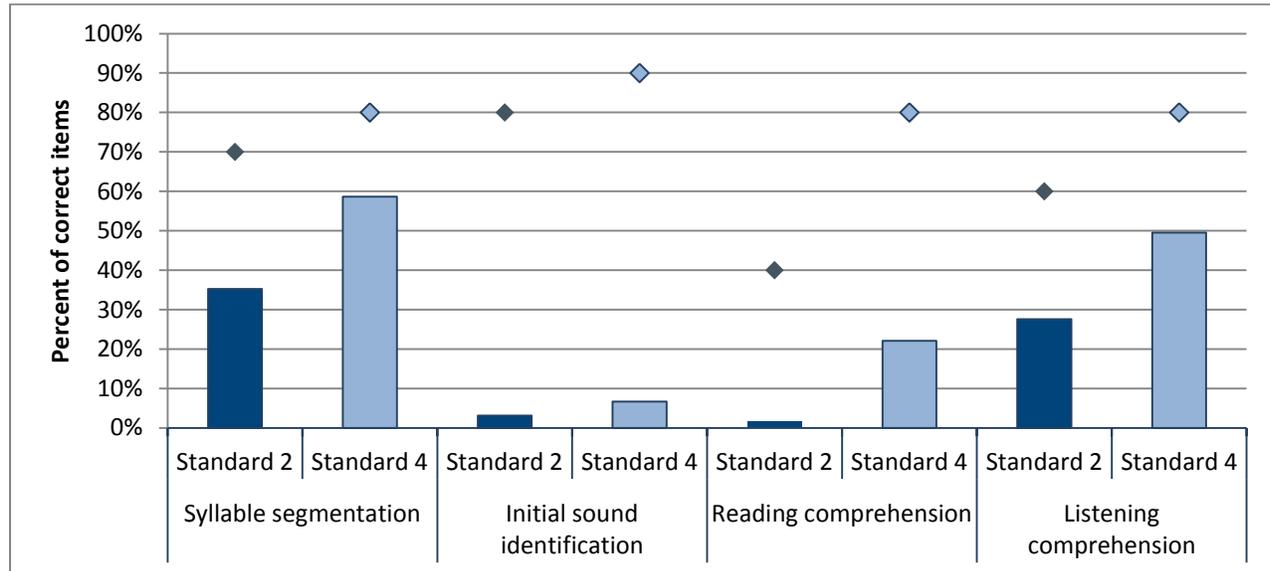
time for the skills and concepts trained through CPD to sink in and take effect in the classroom. In fact, the fourth and final national CPD (Literacy 4 – December 2012) was conducted after the 2012 EGRA data collection had taken place. Therefore, the EGRA 2012 results may be somewhat premature to assess the full impact of the series of MTPDS-supported national CPD modules.

Although slight gains have been reported, larger gains in learning outcomes are required if one is to expect literacy attainment to be more aligned with development expectations and to achieve the national benchmarks for reading achievement. (For more information about national benchmarks, **Annex B** provides a table listing the benchmarks established by the MoEST National EGRA Coordinating Committee and **Annex C** presents a table of learner performance against those benchmarks.) To help illustrate this point, **Figures 8 & 9** show 2012 national EGRA scores against national benchmarks on reading subtasks. To reach these goals a more remarkable shift in the way teachers think about and teach reading in the early grades is required. This shift will require building upon best practices from successful schools and districts.

Figure 8: EGRA 2012 Scores on Measures of Fluency against National Benchmarks*



*National benchmarks are indicated by a diamond for each respective subtask and standard.

Figure 9: EGRA 2012 Scores on other Measures against National Benchmarks*

*National benchmarks are indicated by a diamond for each respective subtask and standard.

The MaK intervention model was introduced in two districts in the 2010/2011 school year to provide systematic approaches and school-based support for teaching Chichewa pre-reading and reading skills in Standard 1. The intervention was then scaled to include five more, a total of seven, districts from the 2011/2012 school year to the end of the project. In the following section we present the findings from the national EGRA control study of the MaK intervention, comparing learning performance of Standard 2 children in the intervention schools to those in a set of schools in comparable control districts.

Findings from the National EGRA Intervention Study

Findings from the national EGRA study underscore the benefit of the MaK structured reading curriculum with linked teachers' guides and student readers and school-based support or "coaching." Gains in Chichewa pre-reading⁴ and reading outcomes for children in the intervention schools surpassed those for children in the control schools, and the differences were statistically significant ($p < .05$). The following section summarizes findings from the 2012 EGRA Intervention Study Report.⁵ The findings demonstrate that while overall performance remains low, large absolute and relative gains in reading performance were achieved in the intervention schools that were not achieved in control schools. After one year of exposure to the MaK model in Standard 1 substantial gains over the control group were demonstrated in all

⁴ Pre-reading skills refers to the sub-skills required in order to be able to decode and read words fluently. These include: Letter Naming, Syllable Reading, Initial Sound Identification, and Syllable Segmentation.

⁵ Pouezevara, S, Costello, M, and Banda, O., April, 2013, Malawi Reading Intervention Final Early Grade Reading Assessment – 2012

of the EGRA subtasks.⁶ Children in control schools were demonstrating little, if any, measurable pre-reading skill, including the task of “naming the letters of the alphabet.” Though noticeable gains in the overall means for learning outcomes were observed for children who participated in the Standard 1 MaK intervention, still the majority of learners failed to meet the national benchmarks for Standard 1 in oral reading fluency (e.g., the number of correct words per minute read in a short reading passage). Students who were able to read words in a passage, on average read 19 words per minute. This number is below what is needed for reading with comprehension. **Table 8** presents the average scores compared from baseline to endline for a few select measurements, as well as the Malawi Standard 1 benchmark for that skill and results disaggregated by gender.

Table 8: Endline Results on Selected EGRA Subtasks by Intervention Group

Subtest	Intervention group	Mean (Baseline)	Mean (Endline)	National benchmark (Std 1)	Standard error (Endline)	Boys (2012)	Girls (2012)
Letter Naming	Intervention	1.5	21.5	24	0.9	21.3	21.7
	Control	1.6	1.5		0.3	1.6	1.5
Syllable Reading	Intervention	0.5	14.3	30	1.9	14.4	14.2
	Control	0.6	0.6		0.2	0.6	0.6
Oral Reading Fluency	Intervention	0.2	7.4	20	1.4	7.1	7.0
	Control	0.3	0.2		0.0	0.3	0.0
Reading Comprehension	Intervention	0%	5%	40%	0.0	6%	5%
	Control	0%	0%		0.0	0%	0%

¹ All differences between intervention and control group are statistically significant (p-value =<.05).

An impressive finding from the results of the national EGRA was the shift away from zero scores for learners on pre-reading and reading tasks to some measurable ability after one year of exposure to the MaK intervention. In the 2010 baseline, no more than 26% of the Standard 2 children could name one letter or sound in the Chichewa alphabet and only 2% of the children could read a single word in a simple passage. Substantial gains over the control group were demonstrated in all of the EGRA subtasks after only one year of participating in a Standard 1 classroom where the MaK intervention was implemented, with the zero scores dropping from

⁶ A qualitative study was conducted near the end of the project in May 2013 in the intervention districts to investigate the factors that contribute to the performance of high performing schools in comparison to low performing schools on reading scores when the level of intervention is the same. Overall findings showed that teachers in high performing schools have a stronger support system within the school. They receive more professional development support through in-school CPD and coaching from PEAs and head teachers, and higher levels of support from the community as a result of greater community involvement. In addition, these teachers display better creativity and initiative in addressing challenges than those in low performing schools. This is over and above the added support of extra CPD training, scripted lesson plans, supplementary readers and extra time for reading which all of the intervention schools receive. All of these factors have been shown to have an impact on increased reading scores for early grade learners.

79% to 21% in letter naming and 98% to 63% in oral reading fluency. While a substantial shift away from zero scores was seen for the intervention group, the percentage of zero scores was unchanged for the control group across subtests. **Figure 10** and **Figures 10.1-10.5** present the percentage of zero scores for each of the EGRA subtasks for children in the intervention and control schools. Note the characteristic shift in performance away from zero for the intervention schools (i.e., Fig.8.1-8.5).

Figure 10: Percent Zero Scores from Baseline to Endline

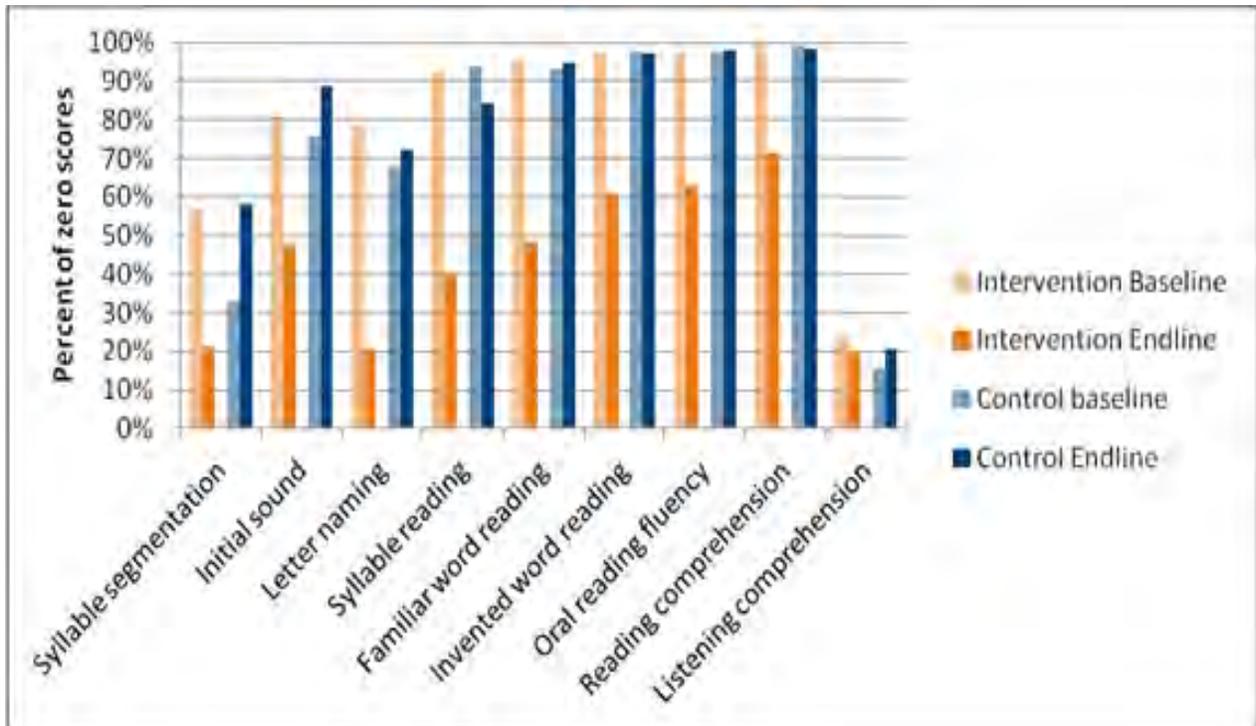


Figure 10.1: Letter Naming

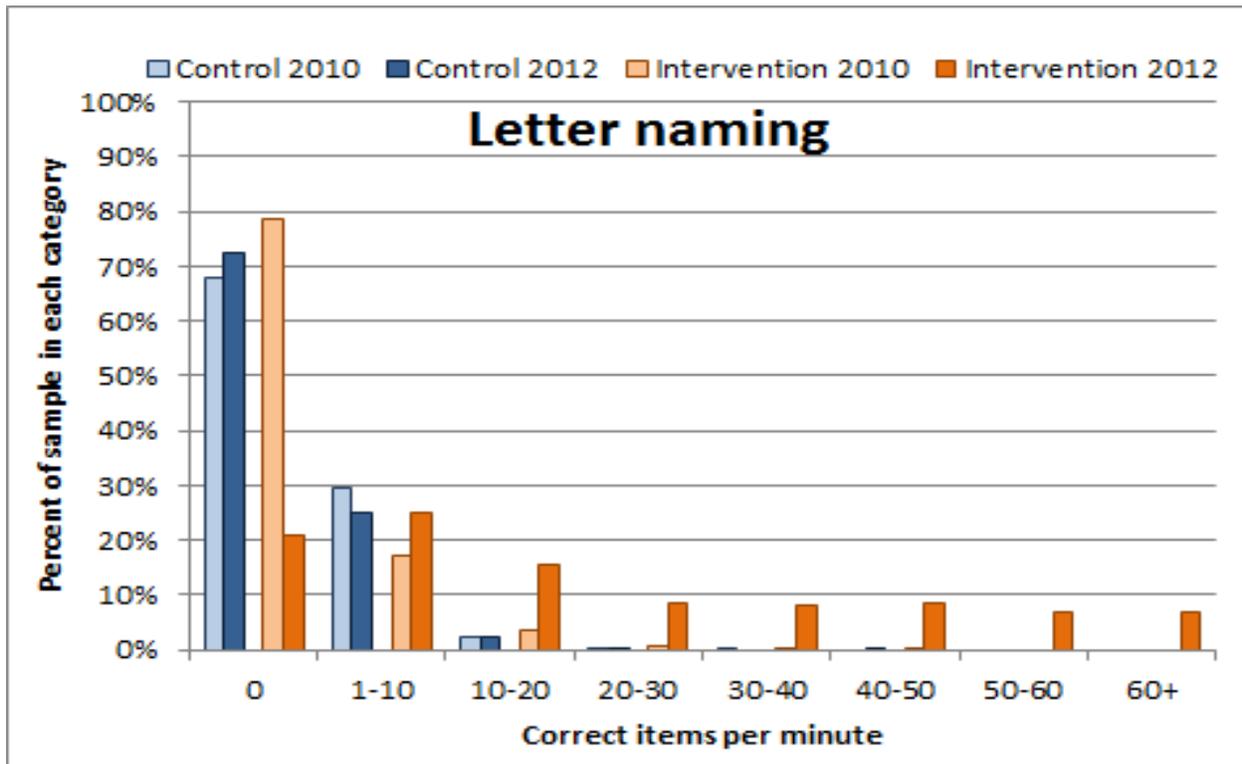


Figure 10.2: Syllable Reading

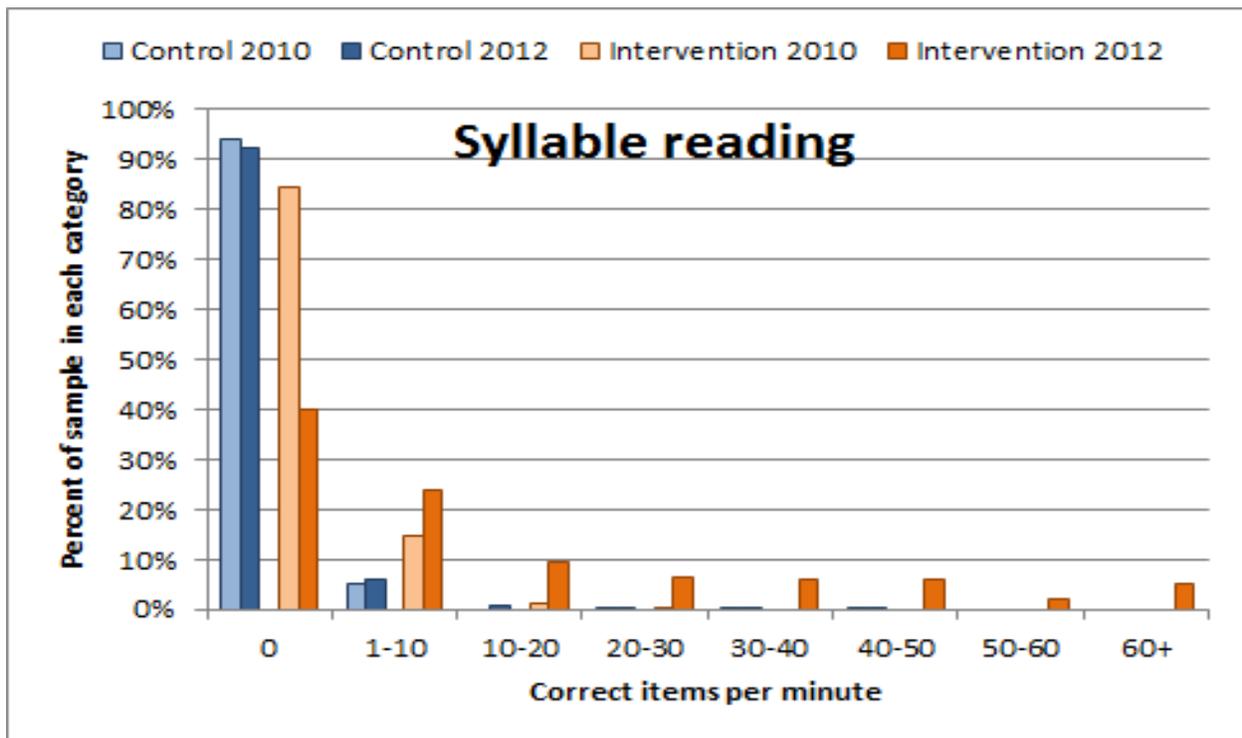


Figure 10.3: Familiar Word Reading

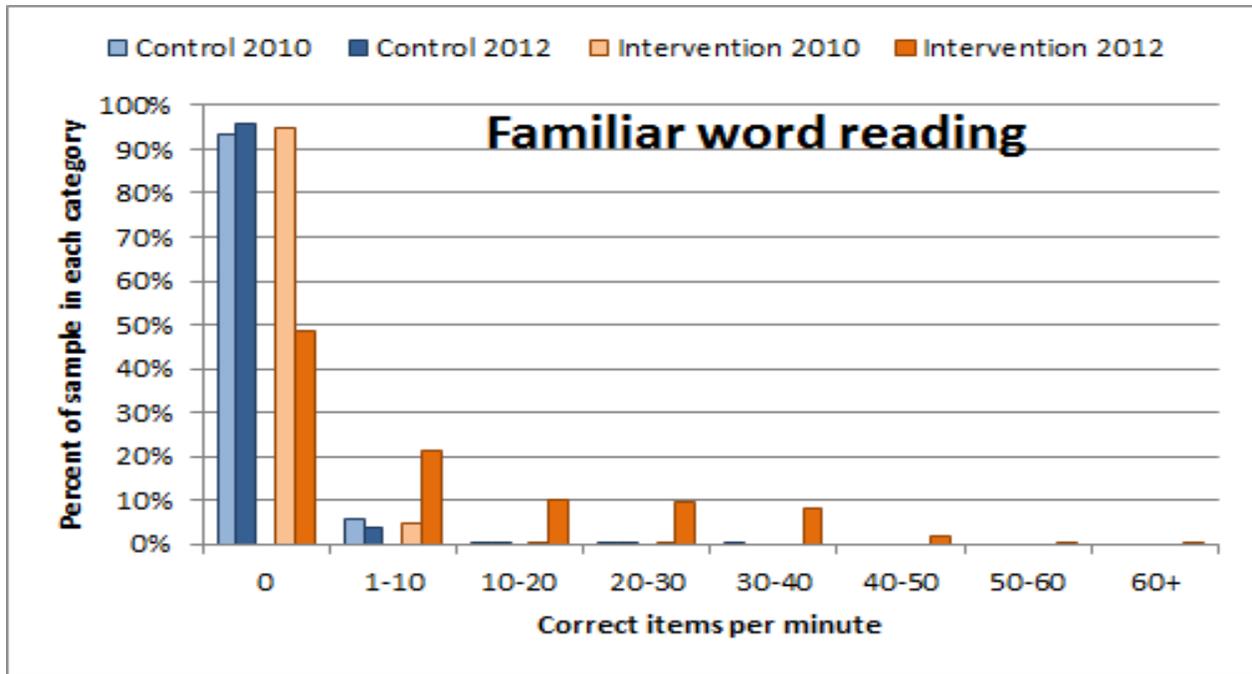


Figure 10.4: Invented Word Reading

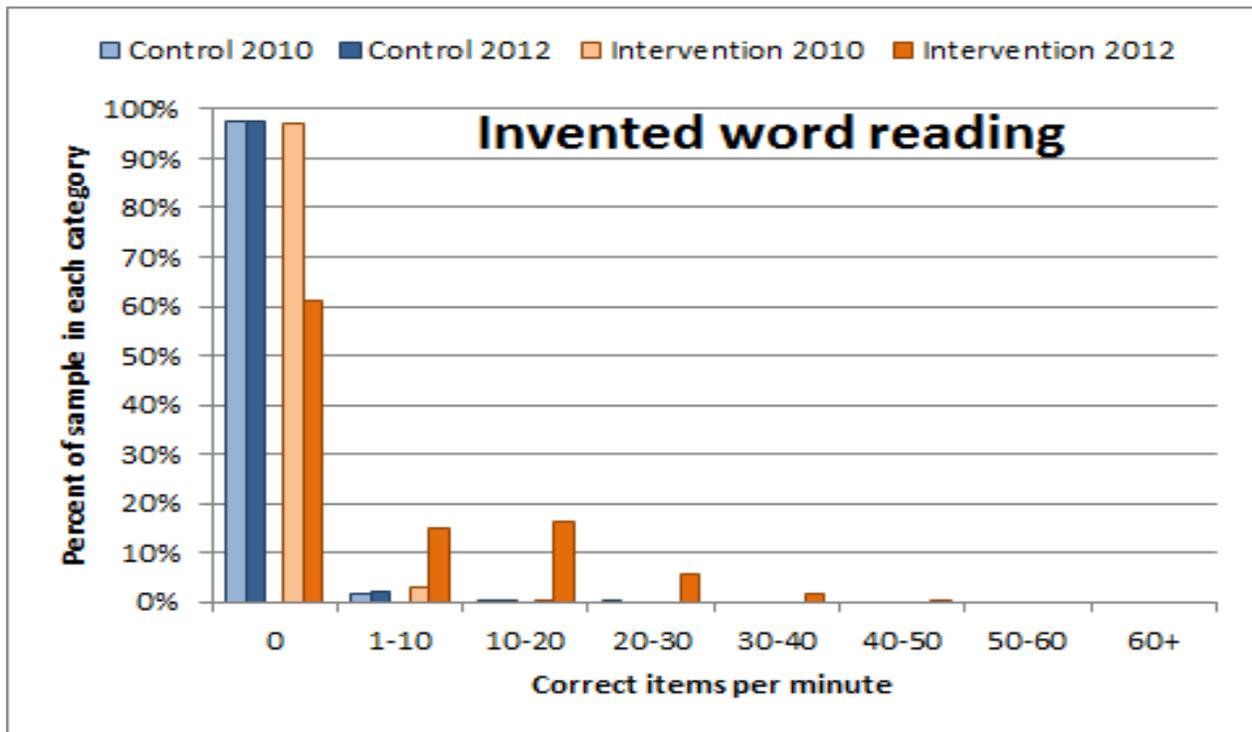
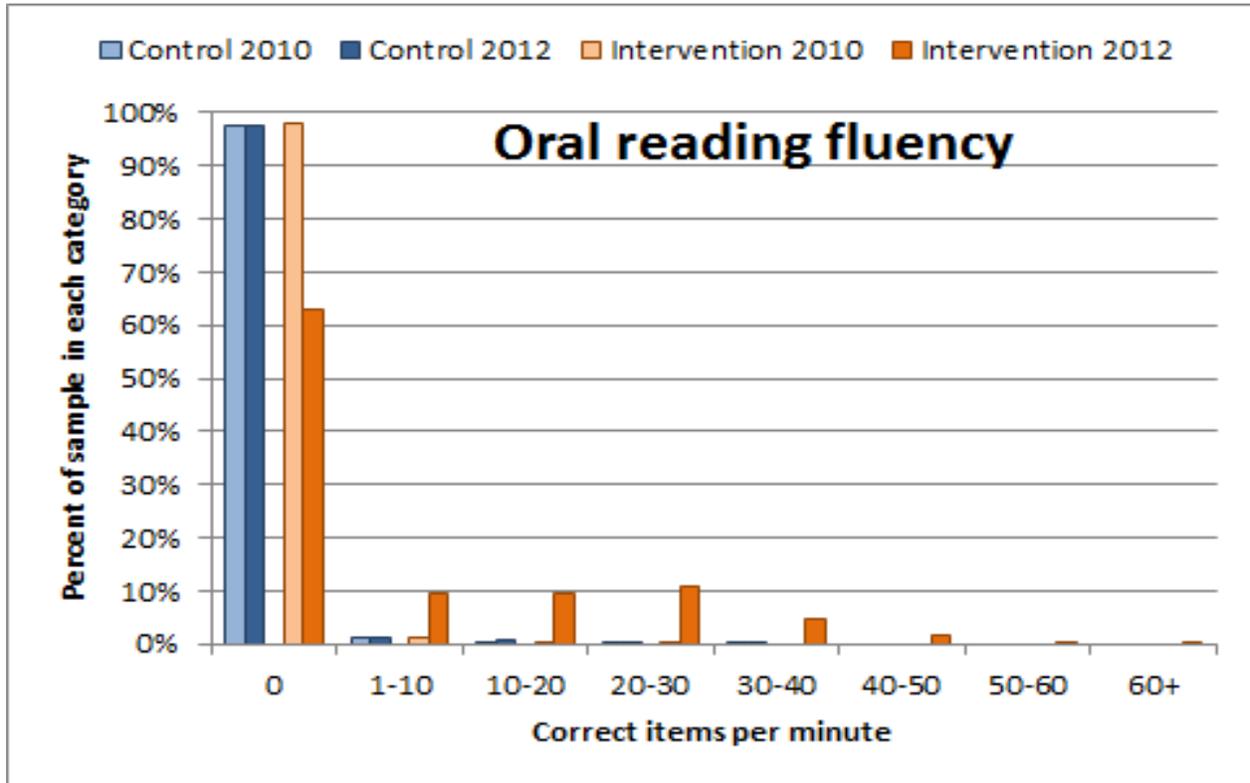


Figure 10.5: Oral Reading Fluency

Standard 1 Learning Thresholds: Analysis of Shifts from Zero Scores to Measurable Reading

With the introduction of the MaK intervention, one of the most significant findings was the shift from zero scores for the majority of pupils to measurable pre-reading and reading skills. The analysis of zero scores and the shift to measurable pre-reading and reading skills is presented in the previous section. This section attempts to apply this information by providing recommendations for the establishment of a set of preliminary learning thresholds for Standard 1 (**Table 9**). These thresholds are being proposed with the aim of informing a continued discussion and final determination by MoEST and its partners of the expected trends in literacy development as reading instructional reforms become established as regular practice in Malawi's primary schools. The proposed thresholds are considered to be a conservative estimate of what one can expect for Standard 1 children, considering the most recent EGRA results from the intervention study.

Table 9: Learning Thresholds for Standard 1

Range of Performance	Estimated Percentage of Standard 1 Pupils
Letter Naming (Correct Letters/Minute)	
Zero	No more than 25%
1-10	25%
11-20	25%
>30	At least 25%
Syllable Reading (Correct Syllables/Minute)	
Zero	No more than 40%
1-10	25%
11-30	20%
>30	At least 15%
Nonword Reading (Correct Nonwords/Minute)	
Zero	No more than 60%
1-10	15%
11-20	15%
>20	At least 10%
Familiar Word Reading (Correct Words/Minute)	
Zero	No more than 50%
1-10	20%
11-30	20%
>30	At least 10%
Oral Reading Fluency from a Passage (Correct Words/Minute)	
Zero	No more than 60%
1-10	10%
11-20	10%
>20	At least 20%

Findings from EGRA-Lite Studies

The EGRA-Lite studies tracked learning outcomes in letter naming, syllable reading, familiar word reading, and reading comprehension among children in a selection of intervention and control schools across five occasions, in May, July, and September of 2012 and January and

March of 2013. The results below present the progress of children across two school calendar years, from May to July in the 2011/2012 school year and from September to March in the 2012/2013 school year. Unlike the national EGRA study, the EGRA-Lite sample included children in all seven intervention districts and in seven control districts.

The following section presents comparative learning outcomes according to two different group comparisons:

- Level of coaching support (3 groups): (a) MaK schools with regularly scheduled coaching visits (coached schools), (b) irregular ad hoc support visits from the Primary Education Advisor (PEA; non-coached), and (c) CPD only schools
- Duration of intervention (3 groups): (a) MaK schools with two years of the intervention, (b) MaK schools with one year of the intervention, and (c) CPD-only schools

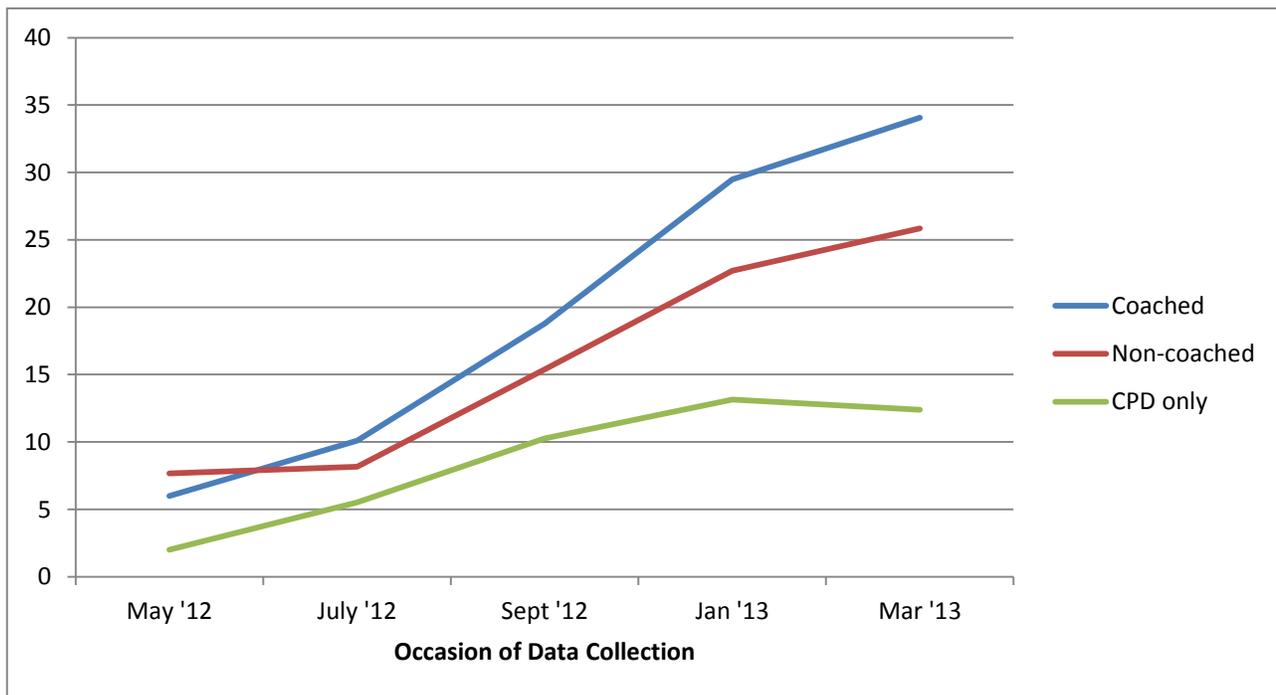
The findings presented below demonstrate that children benefited from the national literacy CPD (even without the MaK intervention) and the different sub-groups of the MaK intervention, yet the value added of the structured approach of MaK with carefully sequenced lessons and linked materials along with coaching support impacted learning outcomes in a more substantial way. The learning gains for children in the intervention schools were significantly different from children in schools where teachers only attended the CPD training in literacy. Furthermore, findings from the EGRA-Lite demonstrate the added value of providing regularly scheduled support visits from a trained coach. Findings also underscore the positive relationship between the period of exposure that a teacher had to training and support on the new teaching methods and that of student learning outcomes. The learning outcomes of children in schools where the intervention was in its second full year of implementation were impacted in a noticeable way compared to those of children in schools that had received the intervention for less than one year, especially as the child transitioned from first to second grade. Children who had been in districts where Standard 1 classes were taught by teachers trained in MaK from the beginning of the 2011/12 school year and who were being supported for a second year under MaK seemed to “take off” in Standard 2—over and above the Standard 2 performance of children with Standard 1 teachers who had just been introduced to the program at the latter end of the 2011/12 school year.

Learning Outcomes for Coached, Non-coached, and Control Schools

The EGRA-Lite study collected data at schools from three different categories: coached, non-coached, and CPD only (control). “Coached” schools were defined as schools from MaK intervention districts that received regularly scheduled coaching visits from MTPDS divisional staff. “Non-coached” schools were defined as schools from MaK intervention districts that did not receive regularly scheduled coaching visits from MTPDS staff, but may have received occasional coaching visits from PEAs. “CPD-only” schools were defined as schools from the seven non-intervention districts that were selected as control districts. These control schools received the national literacy CPD, but did not receive any extra reading intervention support from MTPDS.

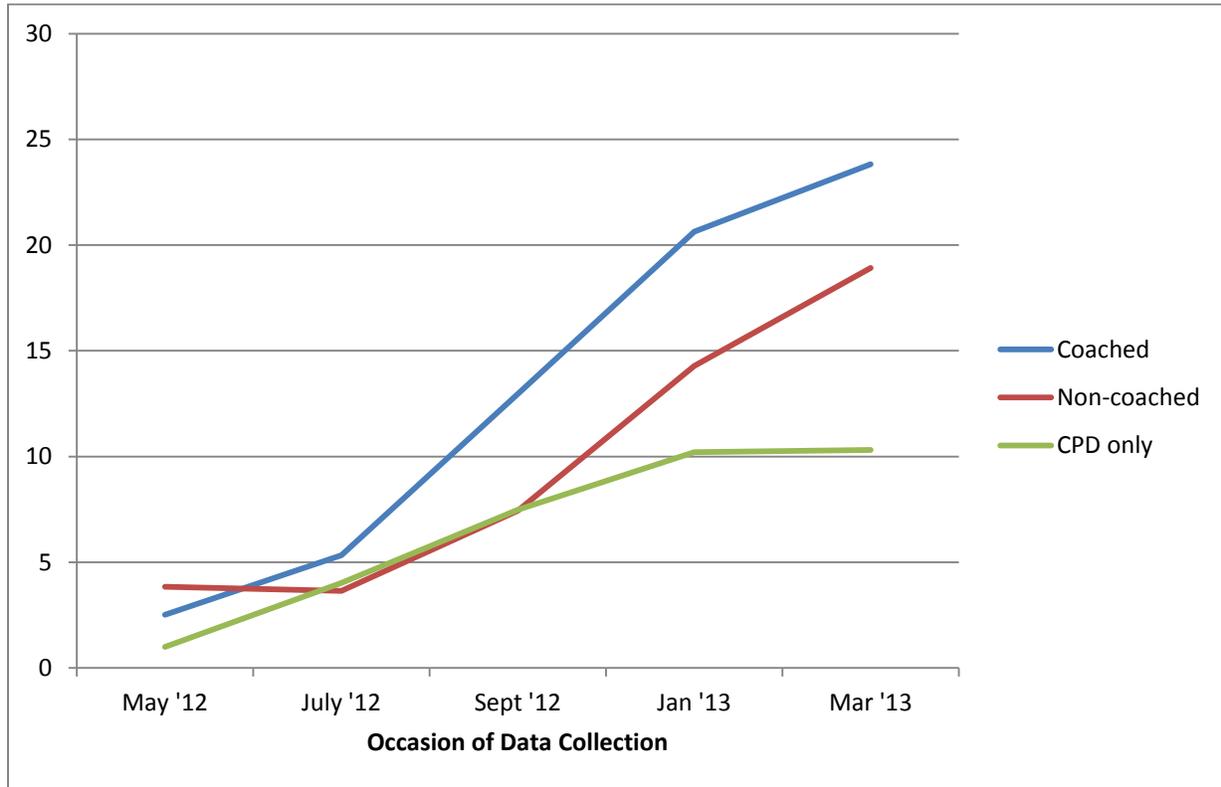
Overall there were statistically significant differences ($<.001$) in the learning curves across testing occasions among the three groups: the coached, non-coached, and control groups. When comparing learning trends between children in the coached and non-coached groups alone, statistically significant differences ($p<.003$) were found in all of the subtasks except reading comprehension. **Figure 11** to **Figure 14** present the learning outcomes of cohorts of children tracked from May 2012 (Standard 1 learners in the 2011/2012 school year) to March 2013 (who became Standard 2 learners in the 2012/2013 school year) in the three target groups⁷. The learning curves were steeper for children attending Standard 1 classrooms where there were regularly scheduled coaching sessions from trained coaches.

Figure 11: Letter Naming – Mean Number of Correct Letters per Minute*



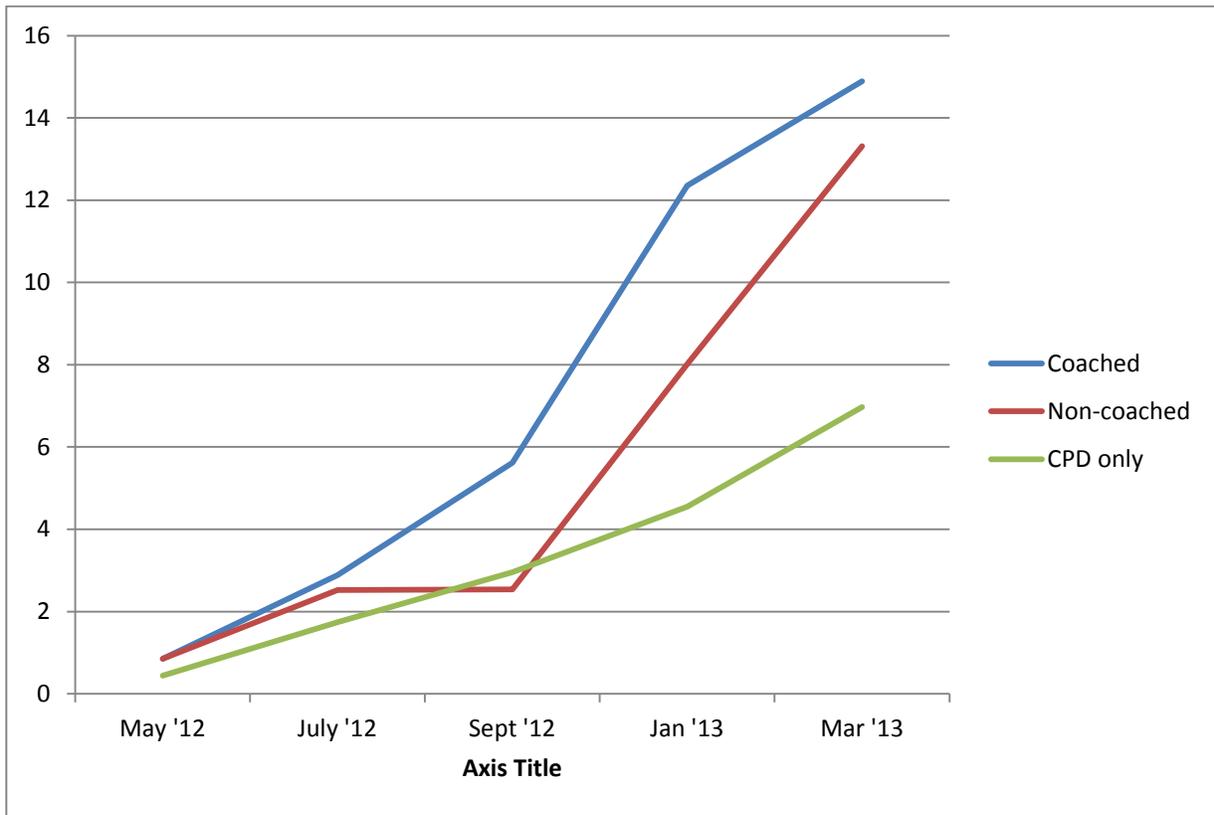
Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

⁷ Although Standard 1 learners from the cohort which began Standard 1 at the beginning of the 2012/13 school year (in September 2012) were assessed with EGRA-Lite, the limited number of data collection points for this cohort restricted the level of analysis possible on changes in performance over time. Therefore, the cohort one grade higher was used for this analysis.

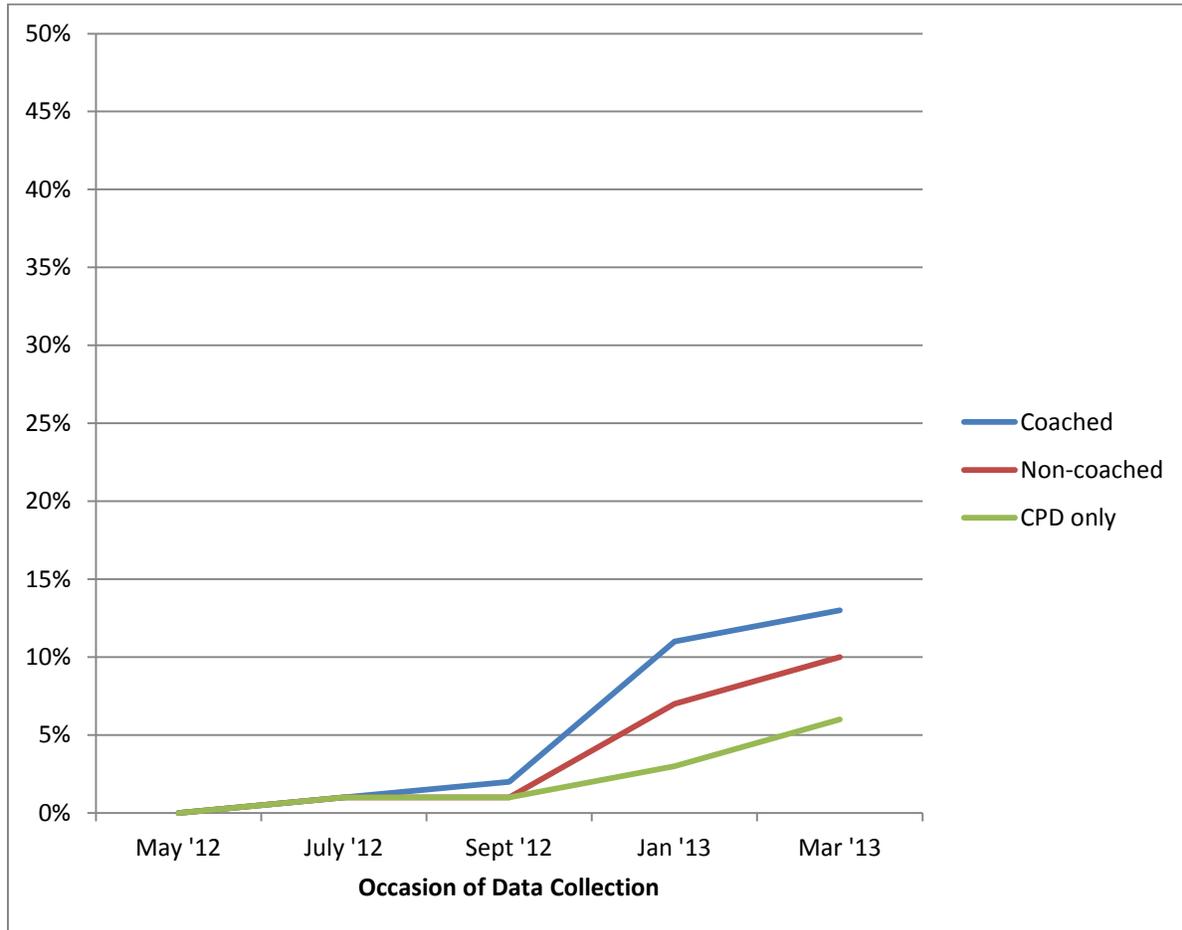
Figure 12: Syllable Reading – Mean Number of Correct Syllables per Minute

Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

Figure 13: Familiar Word Reading – Mean Number of Correct Words per Minute

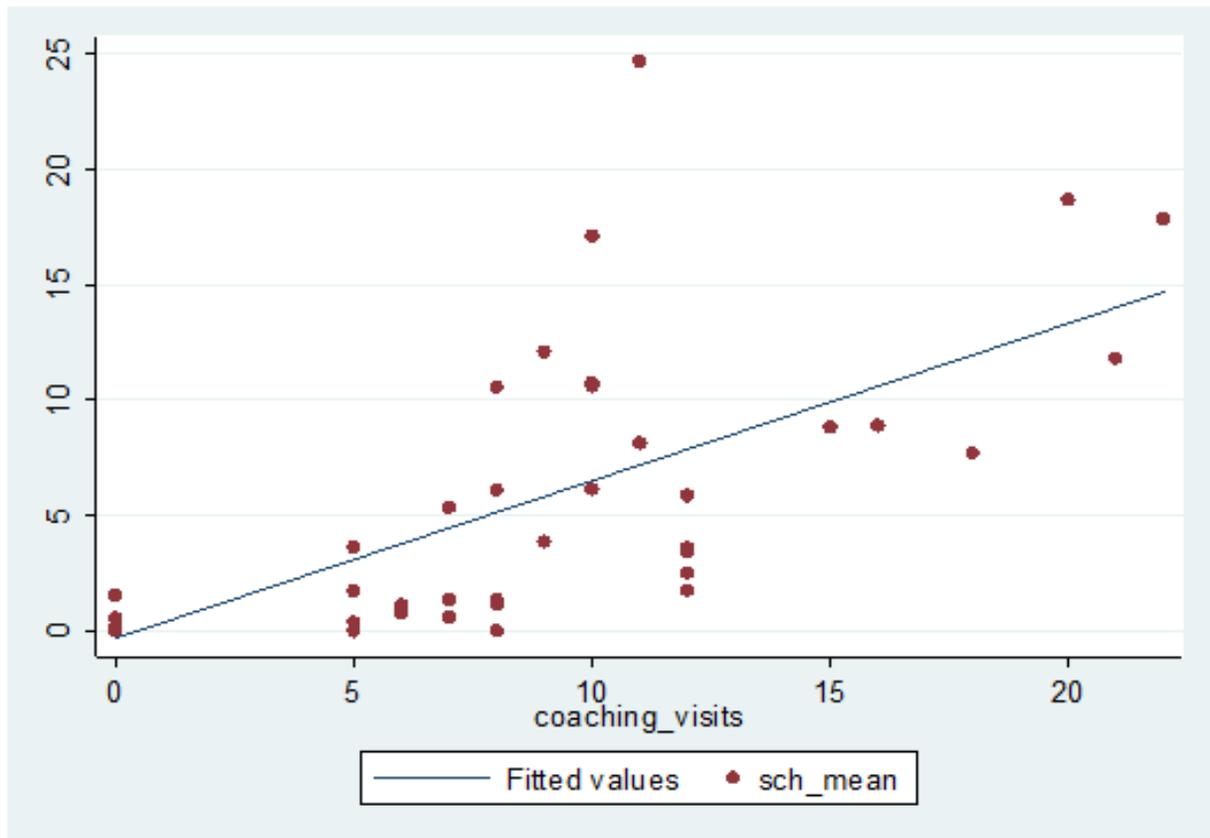


Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

Figure 14: Reading Comprehension – Mean Percent Correct

Findings from the national EGRA⁸ intervention study reveal a strong positive correlation between coaching and a child's reading ability. It can be seen in **Figure 15** that as the number of coaching visits increases, so do student scores. National EGRA findings indicate that with every additional coaching visit, on average, children's oral reading fluency score increases by 0.65 words per minute (p-value = 0.001). Though this may seem small, if teachers received a coaching visit once per week in a school year, children could be expected to increase their oral reading fluency by 6.5 words in a single term. Coaching allows for support that is directly responsive to teachers' needs, serves to provide a one-on-one refresher of the new methods, and also provides an accountability mechanism. As the findings show a strong correlation between coaching and learner performance on reading, it must be noted that other factors, such as teacher training, reading materials, scripted lesson plans, and extra time for reading instruction also have an impact on learner performance, so coaching alone has little impact absent of these other factors and inputs.

⁸ (Pouezevara, S, McKay, M, and Banda, O, 2013, Malawi Reading Intervention Final EGRA-2012 Study, p. 28)

Figure 15: Relationship between Coaching Visits and Oral Reading Fluency

(Pouezevara, S, et.al., 2013, Malawi Reading Intervention Final Early Grade Reading Assessment – 2012, p. 28)

Learning Outcomes According to the Period of the Interventions: Two Years, One Year, and Control Schools

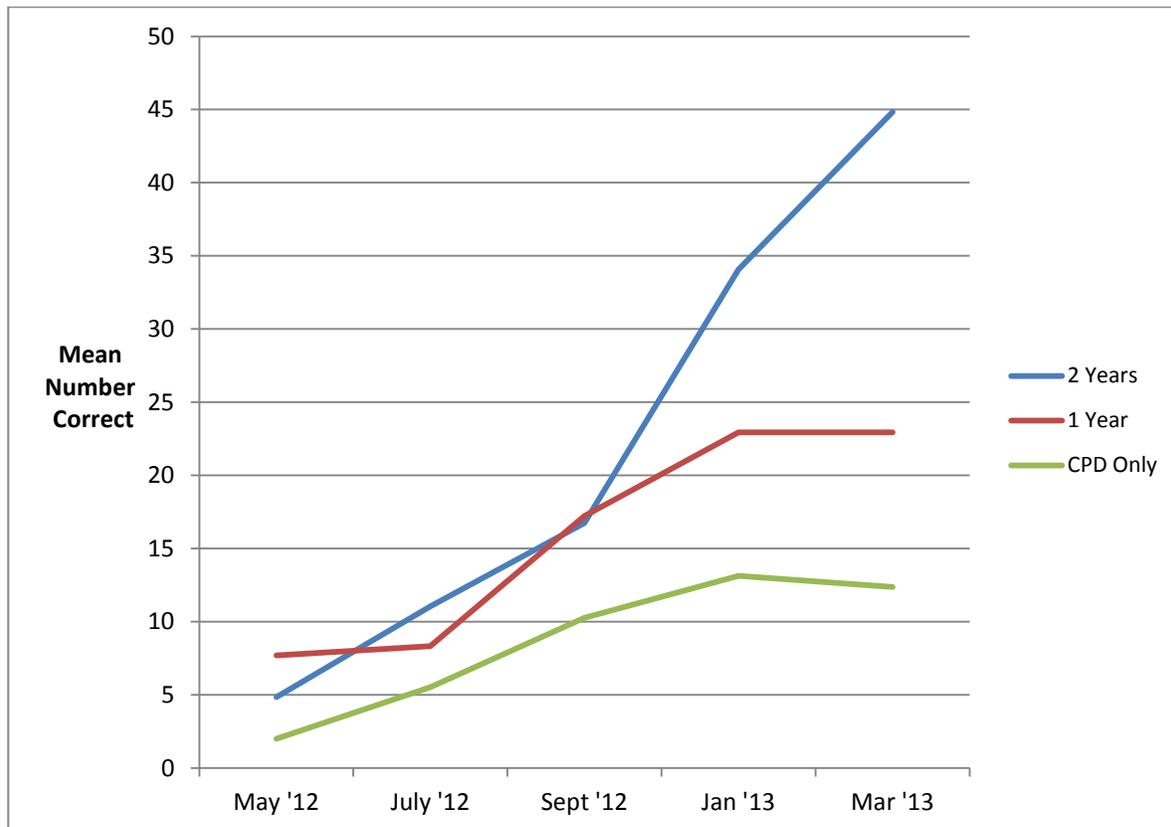
Findings from the EGRA-Lite also demonstrated that there is a cumulative effect in student learning that is predicted by the amount of exposure teachers had to the intervention. Learning gains of children in three different groups were compared: 1) children who were in schools where the MaK intervention had been ongoing for two years (Salima and Ntchisi districts); 2) children in schools where the MaK intervention had been introduced during the last term of the 2011/12 school year just prior to the first occasion of EGRA-Lite data collection in May 2012 (Ntcheu, Zomba Rural, Blantyre Rural, Mzimba North, and Thyolo; and 3) children in CPD-only schools or the “control” group. Findings demonstrated that the learning gains of students who had been in a Standard 1 class where teachers were in their second full year of the MaK intervention were significantly greater than those who were in a Standard 1 class where teachers were in their first full year of the MaK intervention.

Overall there were statistically significant differences ($p < .001$) in the learning curves across testing occasions among the three groups: children in Standard 1 classes where the intervention was in its second year; children in Standard 1 classes where the intervention was in its first full year; and children in Standard 1 classes where teachers only had the literacy CPD

(control group). When comparing learning trends among children in Standard 1 classes where teachers were in their second year of exposure to the intervention with the children in Standard 1 classes where teachers were in their first year of the intervention there were also statistically significant differences ($p < .003$) for all subtasks except reading comprehension. **Figure 16** to **Figure 19** present the learning outcomes of cohorts of children tracked from May 2012 (in the 2011/2012 school year) to March 2013 (in the 2012/2013 school year) in the three target groups.

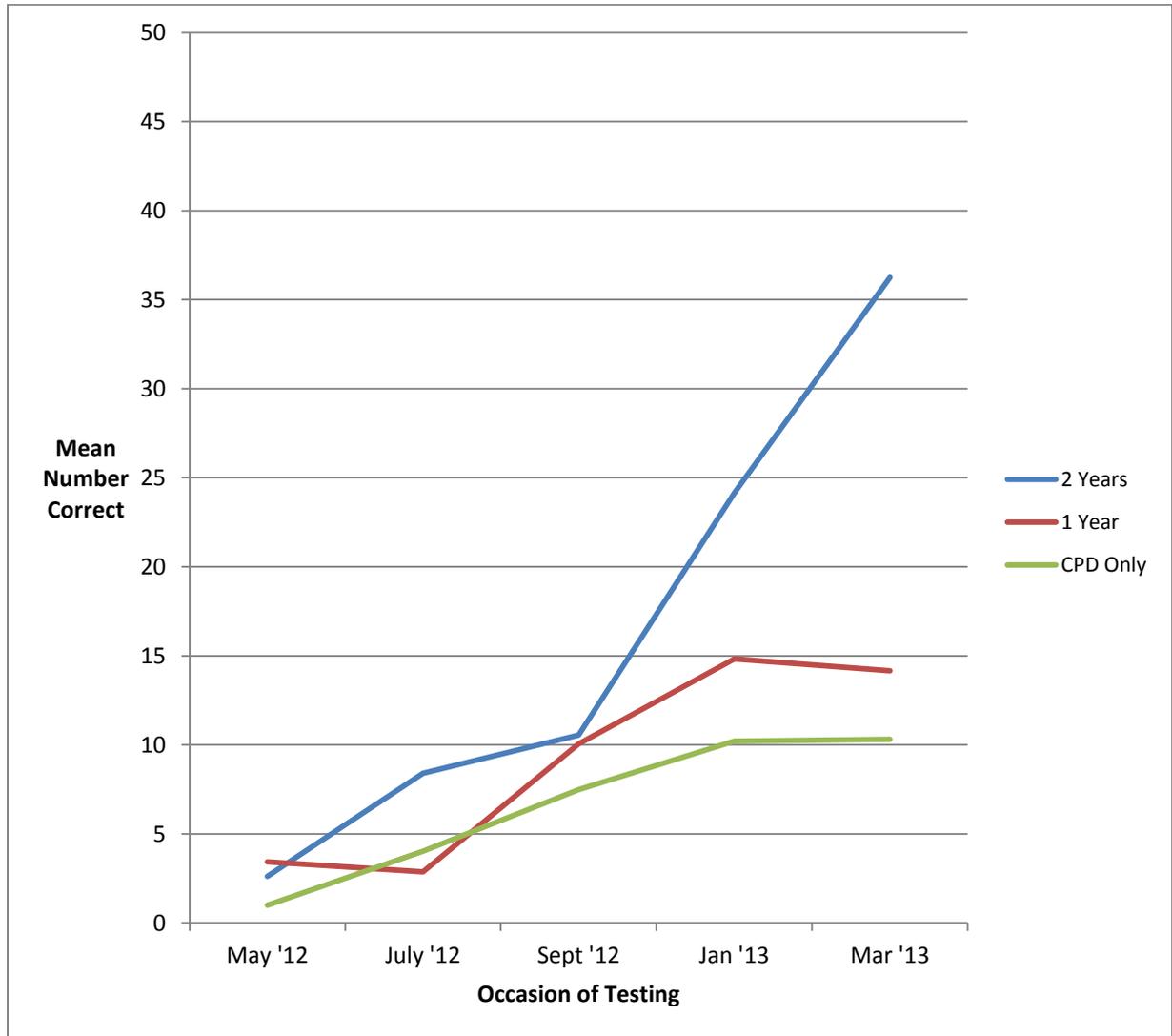
These figures demonstrate that the learning gains of children from schools where teachers were in their second full year of the MaK intervention seemed to “take off” in Standard 2, particularly for the pre-reading skills of letter naming and syllable reading. The results underscore the importance of providing continuous school-based support to teachers as they apply and try to “root” the new teaching practices. They also provide evidence to guard against the tendency toward one-off trainings. It is well known that teachers need continuous, teacher-driven professional development—even after they have successfully adopted new methodologies in their classrooms—but during the initial learning period it is important to provide the training and support they need to become confident in the methodologies, reducing the likelihood of returning to the old practices.

Figure 16: Letter Naming – Mean Number of Correct Letters per Minute

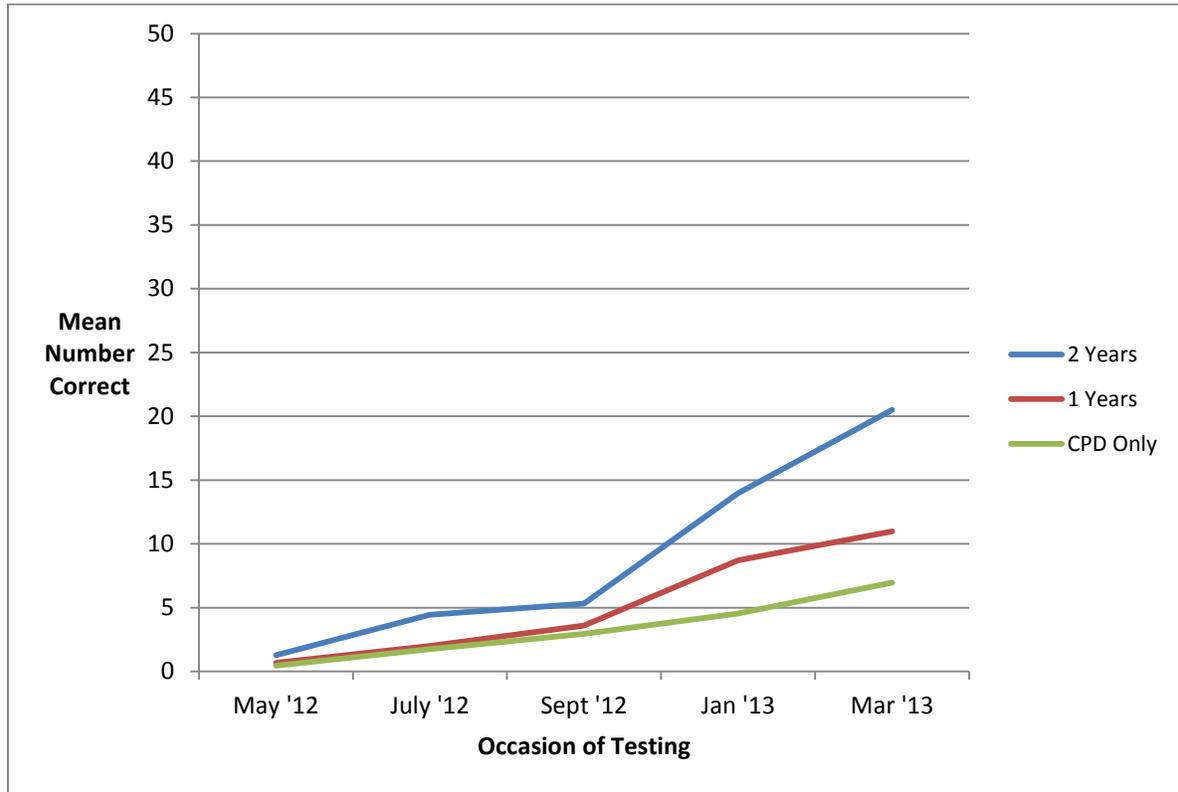


Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

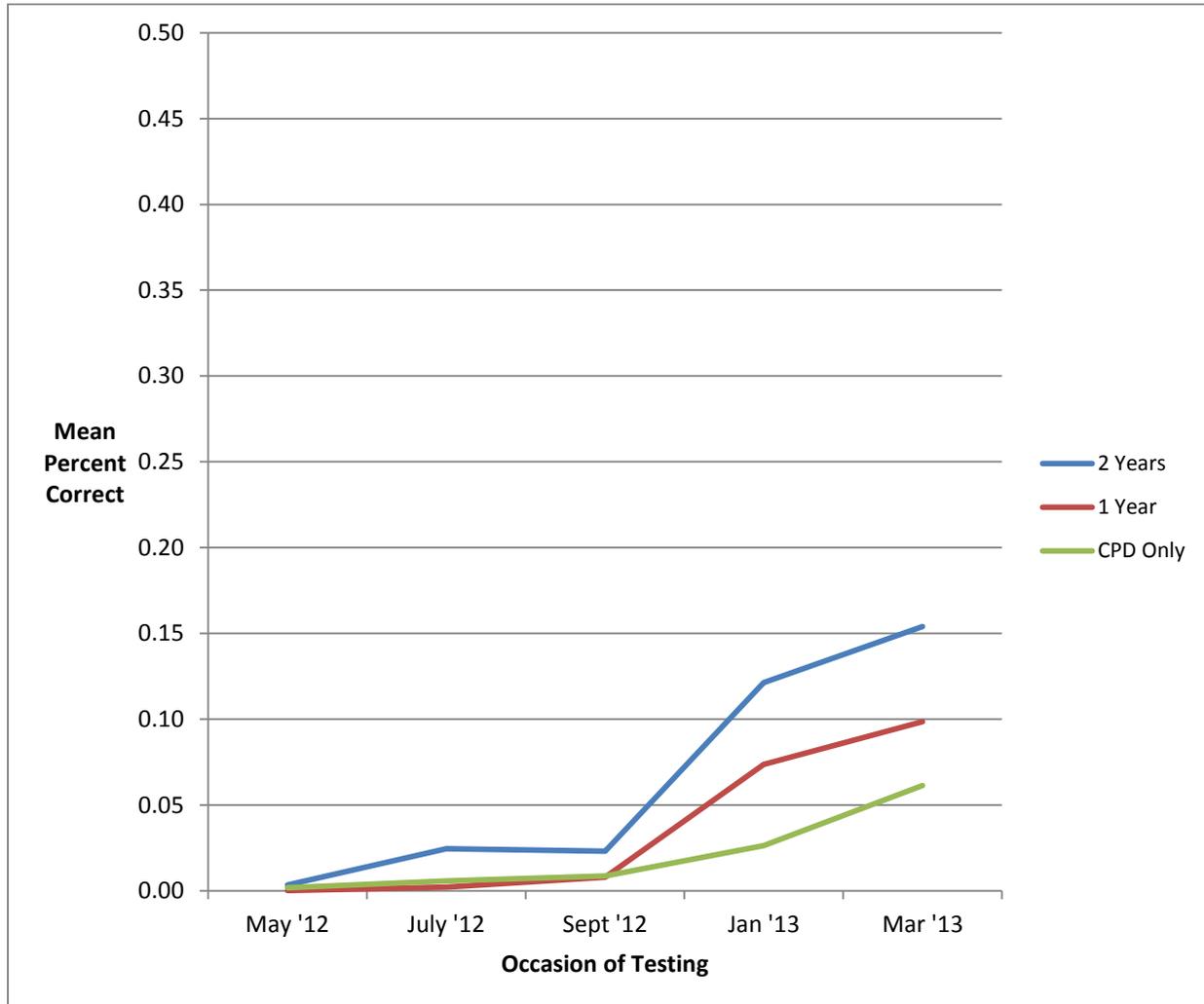
Figure 17: Syllable Reading – Mean Number of Correct Syllables per Minute



Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

Figure 18: Familiar Words – Mean Number of Words per Minute

Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

Figure 19: Reading Comprehension – Mean Percent Correct

Note in these figures the learning trends (line drawings) represent the learning outcomes of cohorts of children who attended Standard 1 in May and July during the 2011/2012 school year and moved on into Standard 2 in September to March during the 2012/2013 school year.

Section 6. Study of Teacher Performance Improvements

The underpinning factor in the success of MTPDS in improving student learning outcomes was the provision of teacher professional development and support in the area of early grade reading. Improvements in literacy teaching practices were demonstrated by teachers who attended the national CPD literacy trainings only while teachers who participated in the MaK intervention in addition to attending the national CPD literacy training demonstrated even larger improvements. The two teacher development programs focused on certain common and essential reading instructional practices such as providing opportunities for guided and independent practice, use of phonics, regular learner assessment, instruction on reading

comprehension strategies and the mechanics of writing letters. The MaK intervention provided a more structured program involving carefully sequenced lesson plans and linked materials that, through scripted lessons and school-based support or “coaching,” guided teachers through the pre-reading to reading to comprehension stages of literacy development.

Teachers’ classroom practices were rated through a classroom observation instrument (COI) that was developed by a sub-committee from the MoEST consisting of representatives from the departments of Basic Education, Policy and Planning, Inspection and Advisory Services (DIAS) and the Malawi Institute for Education (MIE). The COI was developed initially as a part of the overall national NPC M&E strategy and was adopted by MTPDS to track improvements in teaching quality that could be attributed to CPD and/or the MTPDS intervention, the MaK program for Standard 1. The COI involves ratings of selected behaviors of students (e.g., working in groups, use of questions, independent practice) and teachers (e.g., assessing learners, using phonics) that are observed during a regular reading lesson.

Working with and through the Department of Teacher Education Development (DTED), District Education Offices (DEOs), and DIAS personnel, the MTPDS teacher development component built teacher skills nationally through the MoEST CPD program. Every Standard 1 – Standard 4 teacher in Malawi was provided with 8 days of CPD training in literacy pedagogy. In addition, the MaK model for teaching early grade reading was implemented in seven intervention districts in cooperation with corresponding DEOs. MaK consists of a structured Chichewa reading program. All Standard 1 – Standard 4 teachers in the MaK schools participated in a single annual early grade reading training program with Standard 1 teachers receiving an additional 8 days of training on top of the national CPD trainings. The full MaK intervention with scripted lessons, linked materials, and school-based coaching was only implemented in Standard 1 classrooms.

The MTPDS M&E strategy was organized to track teacher skill development over the course of the project in two ways: 1) a national classroom observation study that involved ratings of selected instructional practices among Standard 1 – Standard 4 classrooms in a national random sample of schools conducted annually; and 2) through a study of teaching practices in a random selection of schools participating in the MaK intervention and a selection of comparable schools serving as a control. Teachers in the control schools of the second study only participated in the CPD training. In the second study, teachers were observed monthly to allow for the observation of teacher performance trends and their relative impact on student learning. Results demonstrate that teachers across Malawi benefited from both the CPD and the MaK programs. Considering the more structured and intense approach of the MaK program, teachers in the seven intervention districts made more appreciable improvements.

MTPDS adopted the MoEST COI for tracking improvements in teaching practice. Though an earlier classroom observation tool was developed by MTPDS in 2010, item analyses of the earlier instrument revealed quite a number of non-performing test items and thus provided further justification for adopting the COI, which was developed in 2011 by MoEST. As a result, the national classroom observation study conducted in October 2011 by MTPDS was used as the baseline. In consultation with MoEST, the criteria for a minimum performance standard for teacher performance in presenting a literacy lesson was established as “at least 65% of the COI observation items judged to be satisfactory.”

Outcome Indicator 2.a Percentage of teachers demonstrating essential skills in teaching compared to baseline

The percentage of teachers demonstrating essential skills from the national sample of teachers observed at the time of last data collection in March 2013 was 32.1%. This represented a 48.6 % increase over the percentage recorded for September 2011 of 21.6%. Although the teacher observation scores recorded in the final year are not directly comparable to the baseline scores of 2010 due to revisions made to the COI, this year's scores are still higher than the 2010 results by 5.7%, or a 21.6 % increase over 2010.

For a more comprehensive discussion of findings from the national teacher observation study, see the section on "Findings from the National Classroom Observation Study" below.

Outcome Indicator 2.b. Percentage of teachers implementing core literacy CPD content in the classroom compared to baseline

Core literacy CPD content is determined by the scores of teachers on six specific observation items on the COI. **Table 10** lists the percentage of teachers who performed at a satisfactory level or above on each of the six items:

Table 10: Percentage of Teachers Implementing Core Literacy CPD Content

Classroom Observation Item	April 2012	March 2013
Guided and independent practice in reading	30.8%	49.6%
Providing a stimulating environment	13.3%	19.2%
Assessment of learner activities	23.3%	47.3%
Use of phonics in teaching reading	13.3%	32.6%
Teaching reading comprehension strategies	13.3%	32.1%
Teaching mechanics of writing letters and numbers	21.3%	21.9%

Findings from the National Classroom Observation Study

Gradual and constant improvement was seen in the early grade teaching practices from the 2011 baseline to the end of the project. **Table 11** shows the percentage of teachers who were given a satisfactory rating on 65% of the total number (22) of classroom observation items and relative increase over baseline. The percent increase exceeded annual targets, and significantly exceeded targets in the final year with a 49% increase from the 2011 baseline.

Table 11: Percentage of Teachers Meeting 65% of Criteria

2011	2012	2013
21.6	26.8	32.1
Percent ↑ from Baseline	24%↑	49%↑

*Std 2, 3, and 4 teachers

The results demonstrate the impact of the CPD training on early grade reading practices. In comparing the March 2013 result to the 2011 baseline on the six core reading instructional practices (see **Table 12**) you see a somewhat steeper trend. The most dramatic change in the six core reading practices for the nation overall was in the area of learner assessment. At baseline, only 19.4% of the teachers observed were rated satisfactory or above in the area of learning assessment, while 49.4% were judged satisfactory in the final teacher observation study, reflecting an improvement over baseline of 155%.

Table 12: Average Percentage of Core Reading Instructional Practices Judged Satisfactory by Standard

Classroom Observation Item	October 2011	March 2013	Percent Change
Guided and independent practice in reading	50.3%	50.0%	-0.60
Providing a stimulating environment	15.1%	18.9%	25.17
Assessment of learner activities	19.4%	49.4%	154.64
Use of phonics in teaching reading	27.4%	28.7%	4.74
Teaching reading comprehension strategies	48.4%	45.1%	-6.82
Teaching mechanics of writing letters and numbers	20.7%	22.7%	9.66

Improvements on specific reading instructional practices

Figure 20.1 to **Figure 20.3** on the following page provide information on the benefit of the CPD literacy training on the six core reading instructional practices for Standard 2, Standard 3, and Standard 4 teachers. In general the Standard 2 teachers showed more consistent improvement across the targeted classroom practices. The single most impacted practice was that of conducting learner assessments in the classroom, with an average gain of 153% from baseline.

Figure 20.1 to 20.3: Percent of Core Reading Practices Rated Satisfactory

Figure 20.1

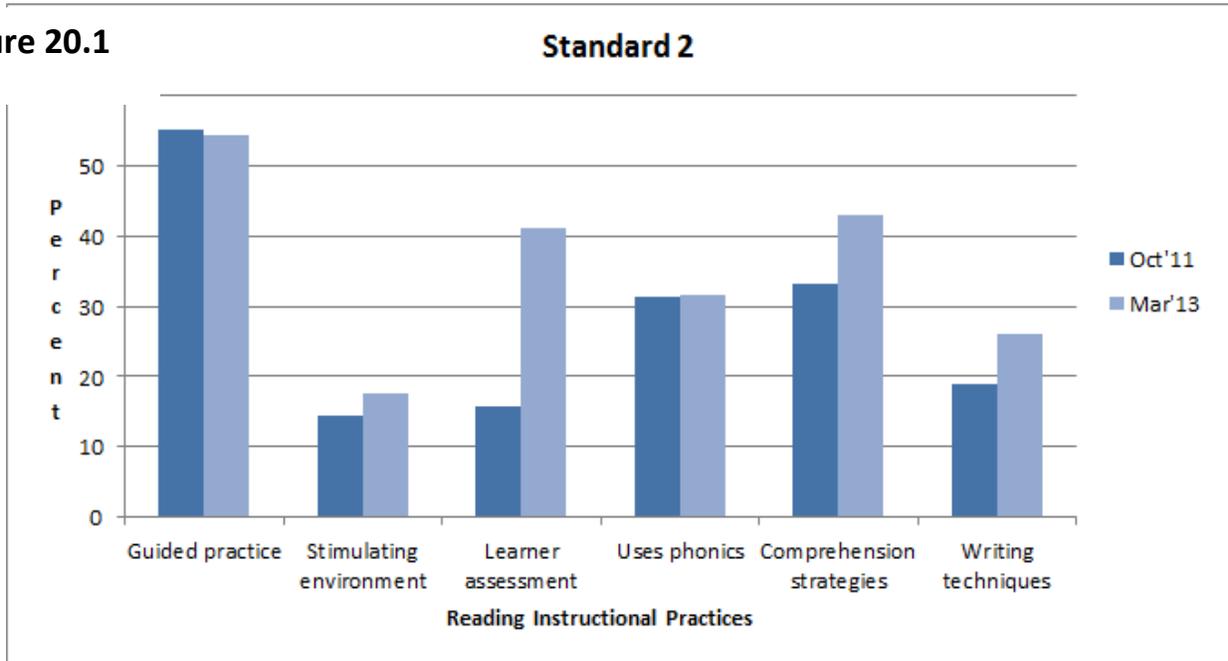


Figure 20.2

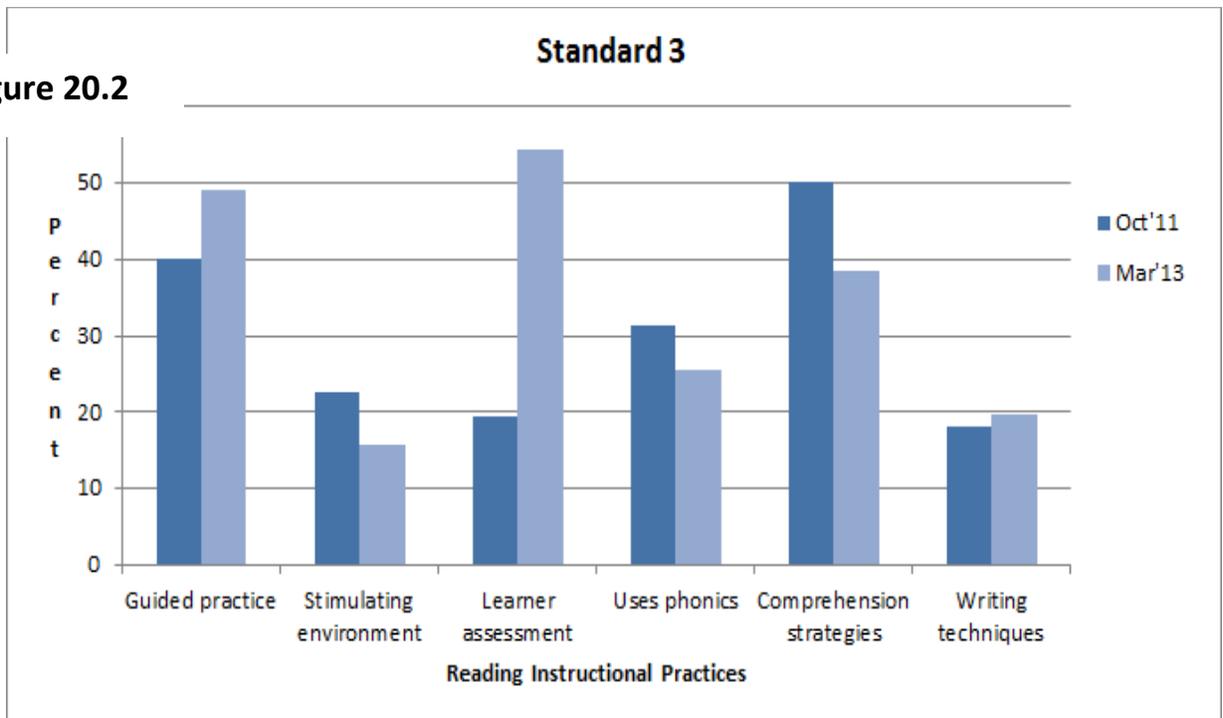
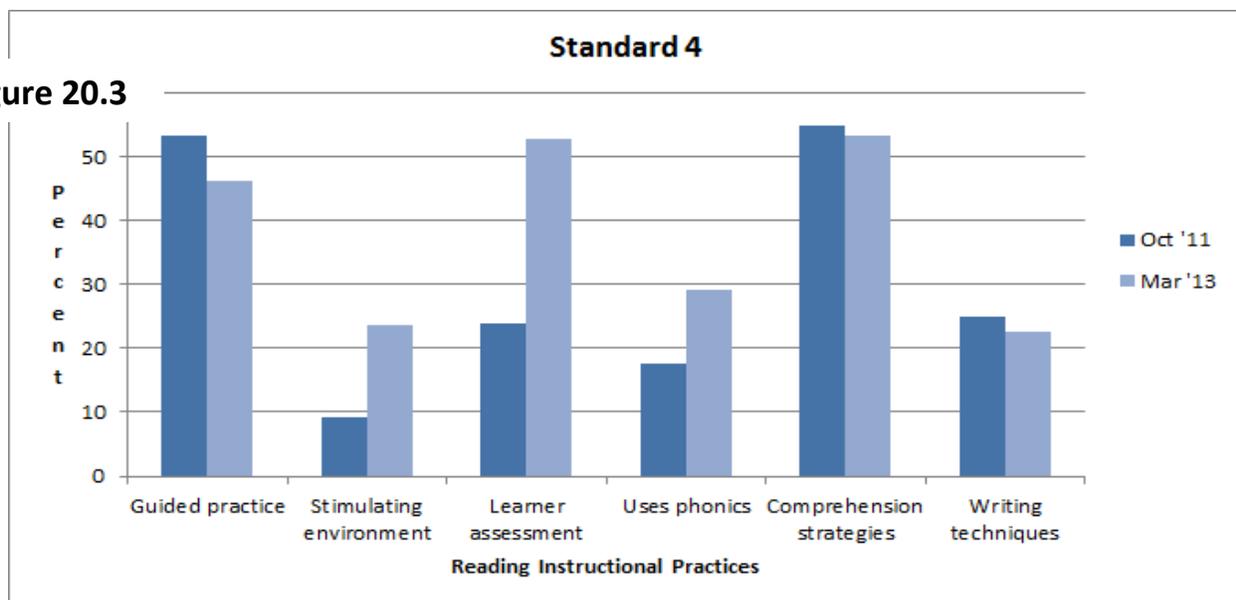


Figure 20.3



Findings from the Monthly Classroom Observation Study

The monthly classroom observation study involved regular classroom observations of teachers presenting a reading lesson in a selection of MaK schools and a sample of control schools where teachers only had exposure to the literacy CPD. A higher percentage of teachers in the MaK schools met the minimum standard criteria of 65% of the observation items rated satisfactory at both the first data collection point in April 2012 and the last data collection point in January 2013 (**Table 13**). One reason for this is that at the time of the first data collection the intervention had been implemented for at least one year in some schools while in the remainder of MaK schools the teachers had received initial training (MaK Module 1) from the program just prior to the first data collection. Thus the April data collection point is not considered a true baseline. Compiling ratings for Standard 1 and Standard 2 teachers, the cross-tabulation for Meet Criteria/Fails to Meet Criteria by Intervention/Control at the last data collection point (January 2013) was statistically significant (Chi-Square = 15.97, P-value = 0.000).

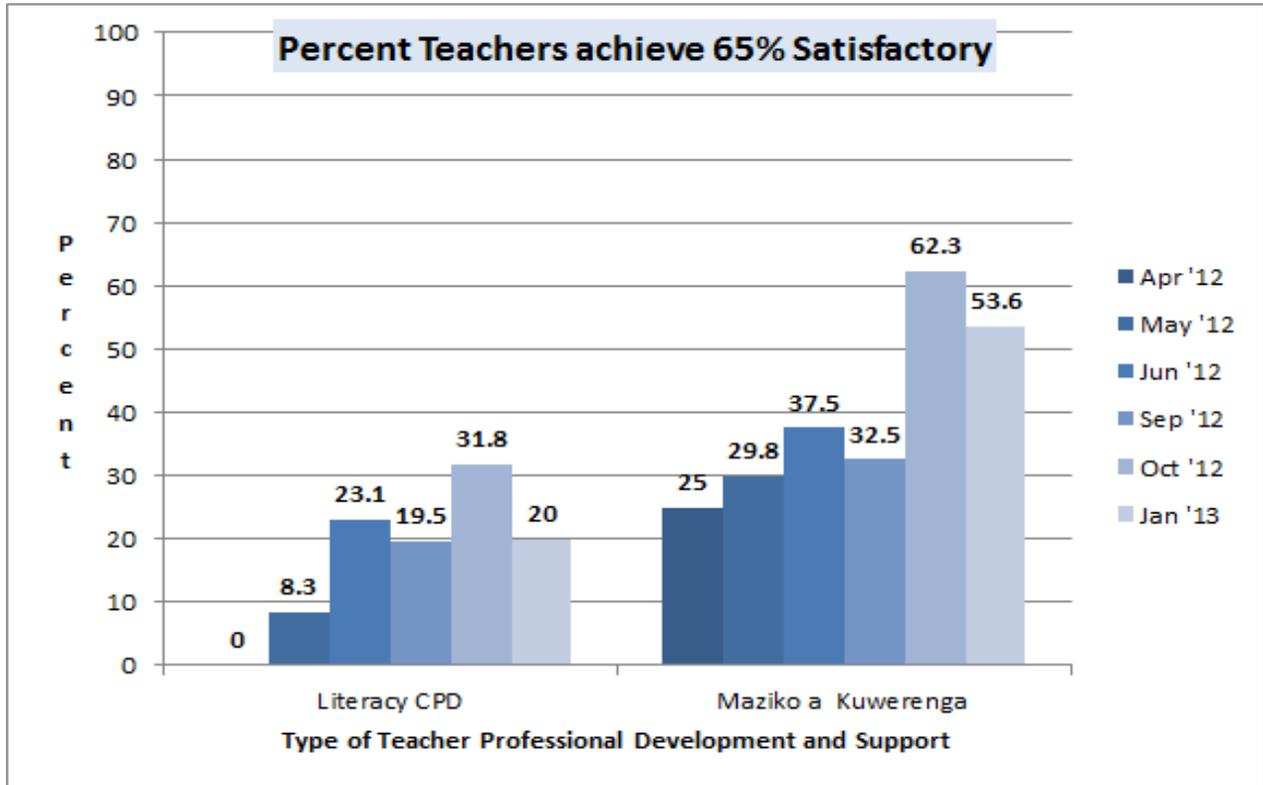
Table 13: Percentage Improvement on Monthly Teacher Observation

Treatment	Meets Criteria		Percent improvement from April '12
	Apr '12	Jan '13	
Intervention	25.0%	53.6%	114%
CPD Only	0.0%	20.0%	Not Calculable

Instructional practices of teachers from both the MaK and CPD only schools showed gradual improvements over the course of the data collection period, from April 2012 to January 2013.

Standard 1 and 2 teachers in the MaK schools showed a 114% improvement from the first data collection in April 2012. None of the teachers who only accessed the CPD literacy program met the 65% satisfactory minimum standard at the first data collection in April 2012. At the final data collection point in January 2013, 20% of the teachers in the CPD only schools met the minimum standard (*Figure 21*).

Figure 21: Percent Teachers Achieve 65% Satisfactory

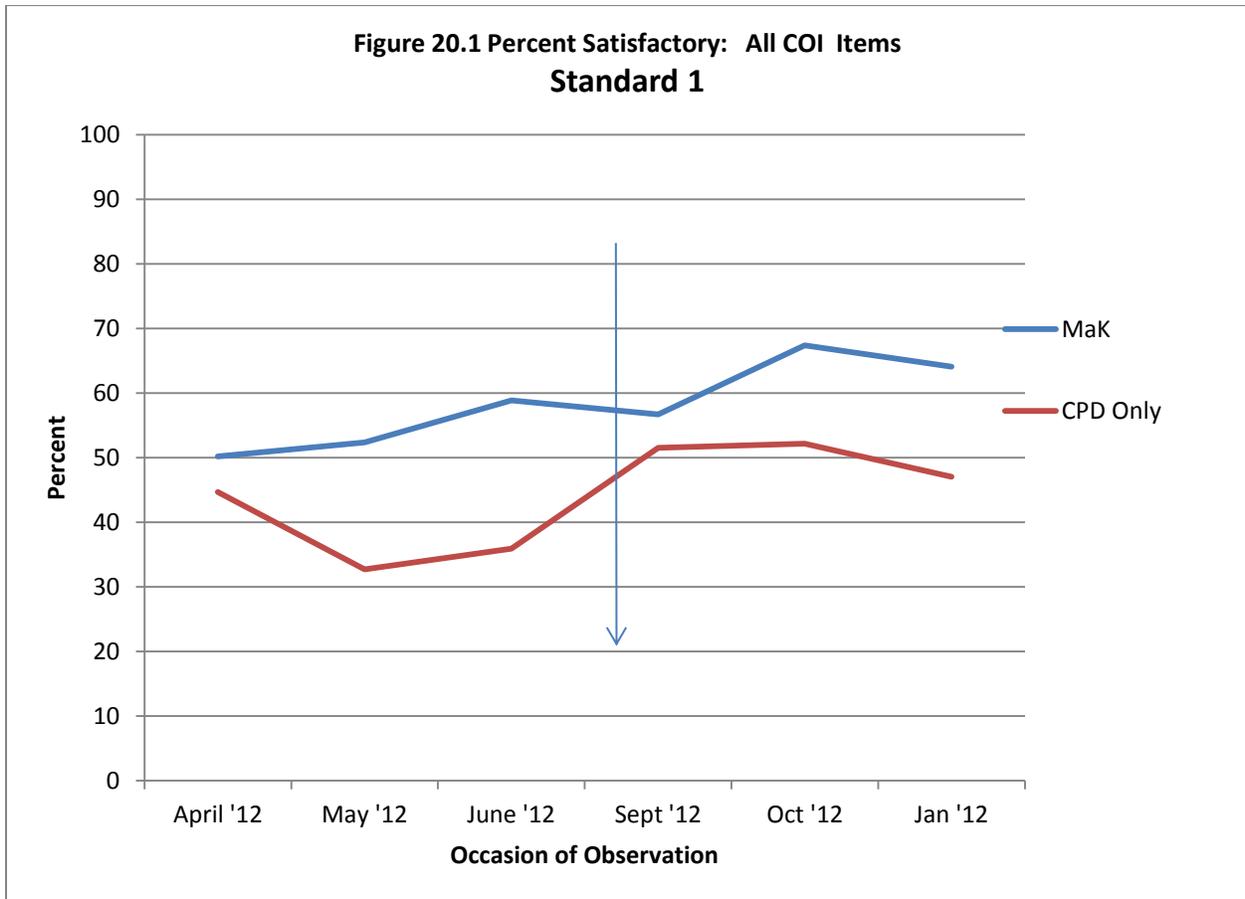


Figures 22.1 to 23.2 and *Tables 14 and 15* present the relative trends in teacher performance for the MaK and CPD only schools from April 2012 to January 2013. *Figures 22.1 to 22.2* and *Table 14* present trends and the relative gains in instructional practice based on the full complement of 22 classroom observations for Standard 1 and Standard 2 teachers. *Figures 23.1 to 23.2* and *Table 15* present trends and the relative gains in instructional practice based on the six core reading instructional practices. When reviewing these figures it is also important to note that Standard 1 teachers in two of the seven MaK intervention districts (Salima and Ntchisi) had been exposed to the intervention approximately one year before the first teacher observation data collection took place in April 2012. Thus the mean percentage of classroom observations judged to be satisfactory among the MaK schools was higher than the CPD only schools at the first data collection point and continued to be so through January 2013.

Improvements from April 2012 to January 2013 are observed in both groups. It is interesting to note the benefit to the Standard 2 teachers in the intervention schools even though these teachers did not necessarily participate in the full MaK Intervention, which was designed for

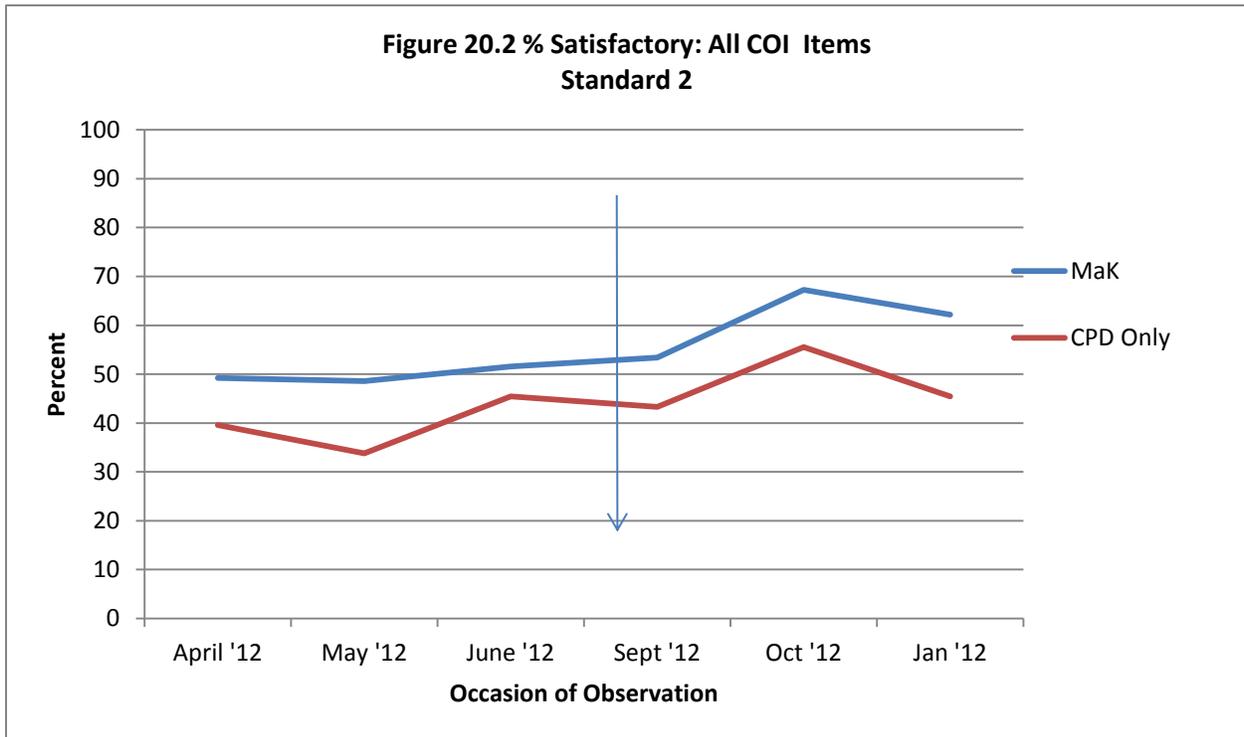
Standard 1 teachers. Standard 2 teachers (like all early grade teachers in the MaK schools) did participate in a single, two-day annual training on early grade reading teaching practices. However, only the Standard 1 teachers received the eight days of training from the full MaK intervention, including the scripted lessons and support provided. Even so, the Standard 2 teachers in these schools had an obvious advantage. In the figures below, the new school year is marked by an arrow where most teacher performances were seen to dip slightly.

Figure 22.1: Percent Satisfactory: All COI Items – Standard 1



Note: In two of the *Maziko a Kuwerenga* intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection

Figure 22.2: Percent Satisfactory: All COI Items – Standard 2

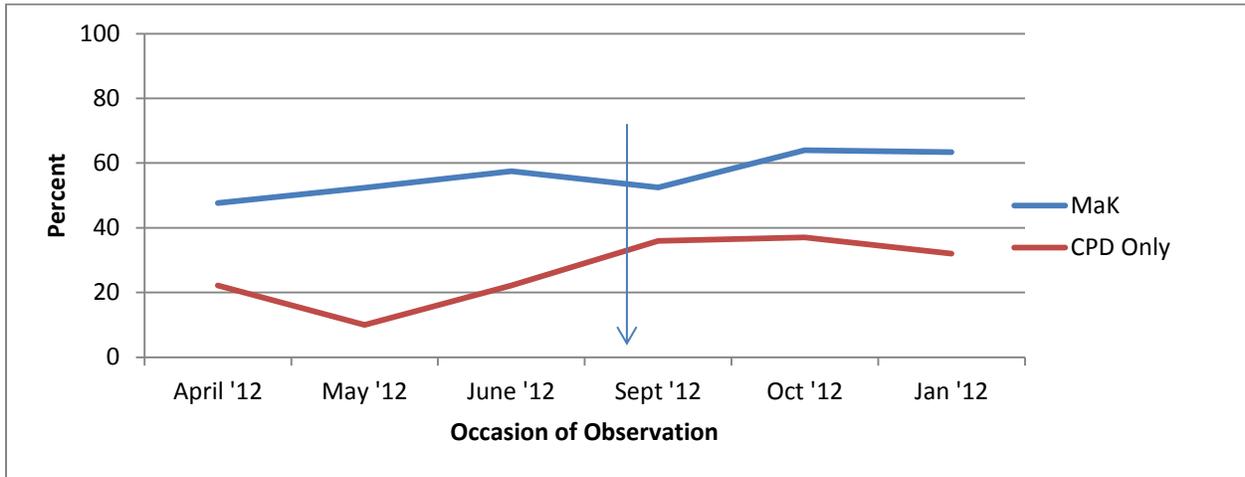


Note: In two of the *Maziko a Kuwerenga* intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection

Table 14: Percent All Observations Satisfactory

Treatment	Std	April '12	Jan '12	Percent Gain
MaK	Std 1	50.2	64.1	27.6
	Std 2	49.2	62.2	26.4
CPD Only	Std 1	44.7	47.1	5.3
	Std 2	39.6	45.5	14.7

Figure 23.1: Percent Satisfactory: Core Reading Items – Standard 1



Note: In two of the *Maziko a Kuwerenga* intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection

Figure 23.2: Percent Satisfactory: Core Reading Items – Standard 2

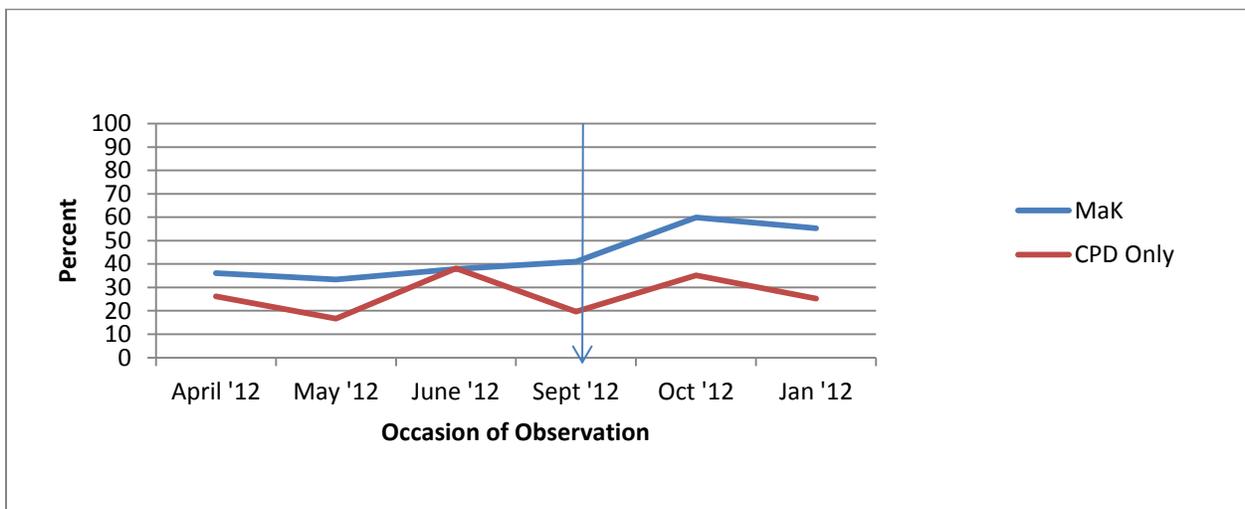


Table 15: Percent Core Reading Practices Satisfactory

Treatment	Std	April '12	Jan '12	Percent Gain
MaK	Std 1	47.6	63.4	33.2
	Std 2	36.1	55.2	53.0
CPD Only	Std 1	22.2	32.0	44.1
	Std 2	26.2	25.2	-3.6

Over the course of two years, teachers appear to be applying essential instructional skills in the classroom with more and more confidence and success. Findings show that a higher percentage of teachers who participated in the intervention for two years meet the minimum performance criteria (e.g., 65% of the observations rated as satisfactory or better) than do teachers who have only been exposed to the intervention for one year, and the results were significant (Chi-square = 32.02, p-value=0.00). The cross-tabulation findings are given presented in **Table 16** below.

Table 16: Cross-tabulation: Percentage Meeting 65% Criteria – Years of Exposure Compared to Control

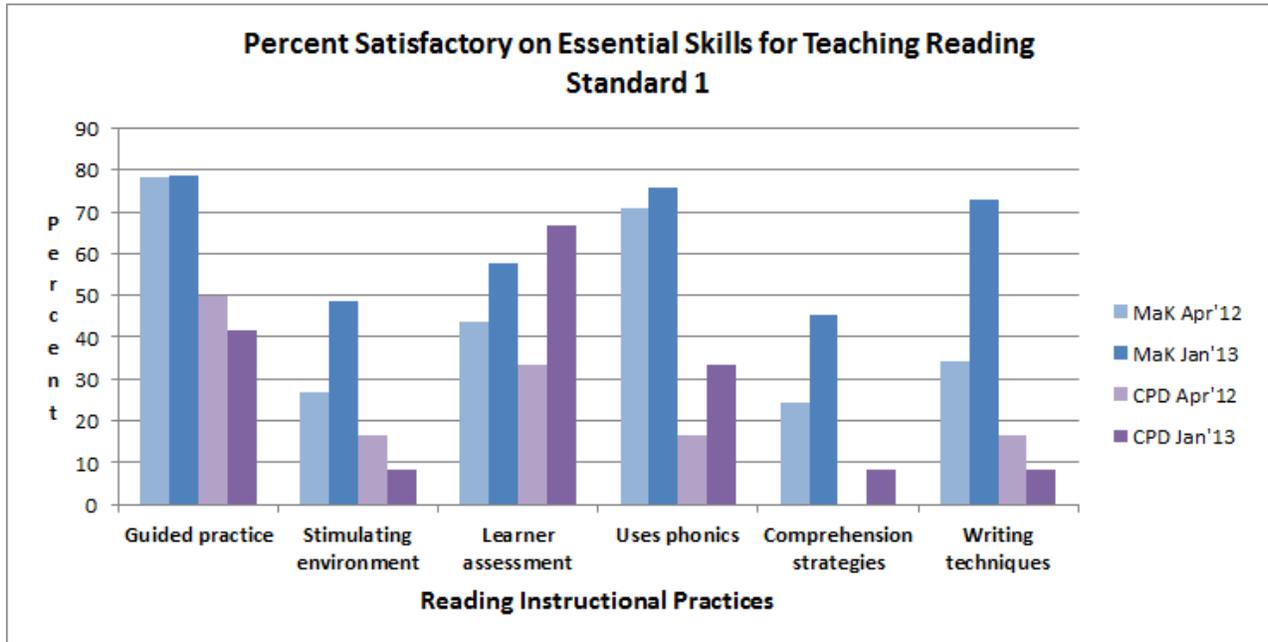
Years of Exposure	Meets Criteria		Total
	Yes	No	
2 Years	49.3%	50.7%	100%
1 Year	34.0%	66.0%	100%
CPD Only	24.9%	75.1%	100%
Total	35.0%	65.0%	100%
Pearson Chi-Square	31.02	p-value =.000*	

Tables 17 and 18, with **Figures 24 and 25**, present the improvements in teachers' ratings from the first data collection period in April 2012 to the last data collection period in January 2013, comparing teachers in the MaK schools to teachers in the CPD only schools for each of the six core reading instructional practices. With the exception of the skill of "conducting learner assessments," teachers participating in the MaK intervention obtained a higher percentage of satisfactory ratings and also made improvements over time. For both the Standard 1 and Standard 2 teachers in both the MaK and CPD-only schools, noticeable improvements were made in the practice of "conducting learner assessments." This result is consistent with national teacher observation results, which showed the practice of student assessment to be one of the most prominent national teacher outcomes of the CPD training with gains comparable to those in the MaK program.

Table 17: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 1

	Guided practice	Stimulating environment	Learner assessment	Uses phonics	Comprehension strategies	Writing techniques
MaK Apr'12	78.05	26.83	43.9	70.73	24.39	34.15
MaK Jan'13	78.79	48.48	57.58	75.76	45.45	72.73
CPD Apr'12	50	16.67	33.33	16.67	0	16.67
CPD Jan'13	41.67	8.33	66.67	33.33	8.33	8.33

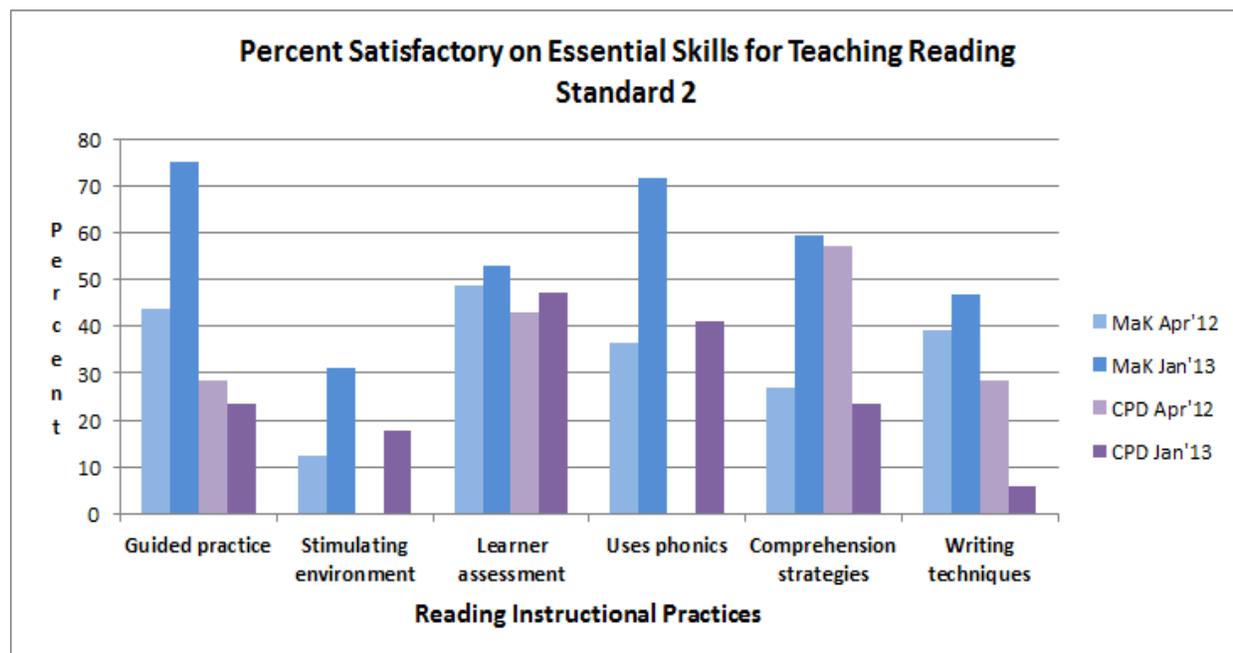
Figure 24: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 1



Note: In two of the *Maziko a Kuwerenga* intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection.

Table 18: Percent Satisfactory on Essential Skills for Teaching Reading -- Standard 2

	Guided practice	Stimulating environment	Learner assessment	Uses phonics	Comprehension strategies	Writing techniques
MaK Apr'12	43.9	12.2	48.78	36.59	26.83	39.02
MaK Jan'13	75.00	31.25	53.13	71.88	59.38	46.88
CPD Apr'12	28.57	0.00	42.86	0.00	57.14	28.57
CPD Jan'13	23.53	17.65	47.06	41.18	23.53	5.89

Figure 25: Percent Satisfactory on Essential Skills for Teaching Reading – Standard 2

Note: In two of the *Maziko a Kuwerenga* intervention districts, Salima and Ntchisi, the intervention had been ongoing for one year before the first classroom observation monitoring activity in April 2012. This helps to explain the advantage shown for the MaK teachers over the CPD-only schools from the first data collection.

Section 7. Evaluation of Performance on the Output Indicators

The following section provides a detailed explanation of the results for the Output Indicators (A.1-A.9 & B.1-B.3) in the PMP Results Framework as reported in **Table 5** against the targets established in the MTPDS Performance Plan and Report.

Intermediate Result A: Strengthened systems and enhanced capacity across the education sector

Output Indicator A.1 Number of laws, policies, regulations, or guidelines developed or modified to improve equitable access to or the quality of education services

MTPDS supported MoEST in developing and/or modifying ten (10) policy-related documents over the duration of the project. This exceeded the original target of seven such documents because additional policy support was needed by MoEST.

Five documents were cleared by USAID in the FY 2010-11 under this indicator:

1. Review of the NSTED Policy Framework
2. Career Paths for Primary School Teachers
3. NSTED Policy Framework and Implementation Strategy with accompanying Implementation Plan
4. National Framework for Monitoring and Evaluating the National Primary Curriculum

5. National Primary Curriculum M&E Implementation Strategy

Two additional documents were developed during the course of FY 2011-12:

1. Roles and Responsibilities of Departments and Institutions of MoEST Involved in Initial Training, Continuous Professional Development and Management of Primary School Teachers and its accompanying summary titled Clarified Roles and Responsibilities of MoEST Departments and Institutions
2. TEMIS-EMIS Integration Report

During the final year of the project FY 2012-13, three additional documents were developed:

1. Competencies of a Primary School Teacher
2. The Action Plan for Improved Coordination among Teacher Education Institutions
3. The Continuous Assessment Guidelines for Standards 1-4 Teachers

Output Indicator A.2 Number of administrators and officials trained (number of women; number of men)

Over the duration of the project, a number of administrators and officials were trained as master trainers and training facilitators for the series of national CPD trainings. A list of administrators and officials trained for each event is provided in **Table 19**.

Table 19: Number of Administrators and Officials Trained through CPD since FY 2011-12

CPD Training	ToT	ToF
CPD Leadership Module 1	30	465
CPD Leadership Module 2	8	350
CPD Leadership Module 3	17	350
CPD Leadership Module 4	16 (W=6, M=10)	462 (W=136, M=326)
CPD Numeracy Module 1	20	465
CPD Literacy Module 1	30	465
CPD Literacy Module 2	21	404 (W=122; M=282)
CPD Literacy Module 3	22	423 (W=140; M=283)
CPD Literacy Module 4	22 (W=9, M=13)	474 (W=152, M=322)
TTC Lecturers Orientation	68 lecturers (W=24, M=44)	

The annual total of 542 administrators and officials reported for FY 2012-13 reporting period comes from the CPD Literacy Module 4 Training of Facilitators (ToF), which was the highest attended ToF, plus the 68 lecturers provided with orientation training. It must be noted that the actual number for this indicator is most likely higher than 542 because some administrators and officials may not have attended the Literacy 4 ToF but attended other trainings. The addition of

TTC lecturers in these trainings caused MTPDS to exceed the original target of 465 officials which had anticipated for PEAs only to be trained. MTPDS added TTC lecturers the trainings at the request of MoEST to ensure that the pre-service training efforts are informed by the CPD training content developed through MTPDS support.

Output Indicator A.3 Number of host country institutions that have used USG-assisted MIS to inform administrative/management decisions

The MoEST and its satellite departments use the MIS in teacher education to inform administrative/management decisions. These include the six TTCs, DTED, MIE, Supplies Unit, MANEB, 34 DEMs, and all six EDMs for a total of 50 institutions. The total number exceeded the original target by more than double.

Output Indicator A.4 Number of host country institutions with improved MIS as a result of USG decision

In FY 2010-11 all six public TTCs plus DTED were provided with MIS systems to track progress of ODL students. In November 2012 a total of 464 zones were provided with copies of the TDC Register, which is being used to fill out the TDC questionnaire portion of the EMIS annual data collection. This is the result of MTPDS efforts to support MoEST in integrating the TEMIS and EMIS systems. With the addition of the TDC questionnaire which included all zones, the project far exceeded the original target of 24 institutions with improved MIS.

Output Indicator A.5 Number of people trained in strategic information management with USG assistance.

In FY 2010-11 a total of 23(W=4, M=19) officers from TTCs and DTED were trained in implementing the ODL database system. In November 2012 a total of 34 CPEAs (W=6, M=28) were trained on how to use the TDC Register, which is being used to fill out the TDC questionnaire portion of the EMIS annual data collection. Due to the inclusion of representatives from each education district in the country, MTPDS exceeded its original target of 40 people trained in strategic information management with a total of 57.

Output Indicator A.6 Number of learners' books and teachers' guides revised for Standard 1-4

A total of 62 new titles have been drafted through a consultative process and a series of writers' workshops held at the Malawi Institute of Education. The 28 titles for Standards 1 and 2 were finalized in FY 2011-12. The 34 titles for Standards 3 and 4 were finalized during the final year of the project.

Output Indicator A.7 Number of textbooks and other teaching and learning materials provided with USG assistance

In addition to the 105,200 teaching and learning materials reported in the FY 2010-11 Annual Report, and the 296,900 reported in the FY 2011-12 Annual Report, an additional 152,200 teaching and learning materials were provided by MTPDS, broken down into the quantities indicated in **Table 20**. MTPDS exceeded its original target of 430,000 by 114,300 extra materials provided to schools, teachers and learners.

Table 20: Teaching and Learning Materials Printed since FY 2011-12

CPD Training	Number of books
Materials provided in FY 2010-11	
Literacy Module 1	32,300
Numeracy Module 1	34,300
Leadership Module 1	26,300
Leadership Module 2	12,300
Total in FY 2010-11	105,200
Materials provided in FY 2011-12	
CPD Leadership Module 3 Facilitators' Guides	700
CPD Leadership Module 3 Participant Manuals	10,600
CPD Literacy Module 2 Participant Manuals	35,000
CPD Literacy Module 3 Participant Manuals	35,600
Maziko a Kuwerenga Module 1 Teachers' Guides	3,750
Maziko a Kuwerenga Module 2 Teachers' Guides	3,750
Maziko a Kuwerenga Module 3 Teachers' Guides	3,750
Maziko a Kuwerenga Module 1 Training Manuals	6,500
Maziko a Kuwerenga Module 2 Training Manuals	3,750
Maziko a Kuwerenga Module 3 Training Manuals	4,300
Maziko a Kuwerenga Facilitators' Training Manual	1,000
Nditha Kuwerenga Reader	164,000
Total in FY 2011-12	296,900
Materials provided in FY 2012-13	
CPD Leadership Module 4 Manuals	24,200
CPD Literacy Module 4 Manuals	36,000
<i>Maziko a Kuwerenga</i> Module 1 Teachers' Guides	41,000
<i>Maziko a Kuwerenga</i> Module 2 Teachers' Guides	5,000
<i>Maziko a Kuwerenga</i> Module 3 Teachers' Guides	5,000
<i>Nditha Kuwerenga</i> Reader	41,000
Total in FY 2012-13	152,200
Total Overall 2010-13	554,300

Output Indicator A.8 Number of people trained in monitoring and evaluation with USG assistance

In FY 2010-11, a total of 64 (W=29; M=35) officials were trained in M&E in three different areas: 1) developing instrumentation for monitoring teachers' application of what they have learned from the CPD training (7 officials); 2) Training in the developing monitoring instruments and collecting data on learner performance in reading and mathematics (46); and 3) Training in the development of tools and processes to provide a nationwide M&E of the uptake and effectiveness of the National Primary Curriculum and related reforms (11).

In FY 2011-12, a total of 305 people were trained in M&E in three different areas: 1) 93 PEAs (W=27; M=66) and 1 SEMA (W) were trained in conducting M&E data collection, including teacher classroom observations, as part of the National Primary Curriculum M&E Framework and Strategy; 2) a total of 168 people, including 84 teachers (W=47; M=37) and 84 SMC members (W=31; M=53), were trained as part of a pilot in the intervention districts for community monitoring of school performance using a School Report Card; and 3) in October 43 (W=25; M=18) MoEST officials were trained as enumerators and supervisors for the 2011 EGRA data collection activity. This total of 305 people exceeded the original target of 184 by nearly double.

In October 2012, 66 (W=33; M=33) MoEST officials were trained as enumerators and supervisors for the 2012 EGRA data collection activity.

Output Indicator A.9 Number of SMCs trained on how to monitor performance of learners

In FY 2010-11 MTPDS oriented 272 SMC/PTAs, including 1015 committee and PTA members in two districts (Ntchisi and Salima) on the reading interventions that were being implemented in these pilot districts.

In FY 2011-12, 84 SMC/PTAs were trained in monitoring the performance of teachers and achievement of learners with a focus on literacy. They have been trained to use a School Report Card once every month since May, 2012.

In FY 2012-13, the CPD Leadership Module 4 training included at least one participant from the SMCs and PTAs from every government primary schools throughout the nation. This training was conducted at the cluster level where representatives from each school gathered together at a central location for each cluster of schools to be trained together all at once. The content of the training was to support SMCs to work with head teachers and school staff in monitoring teaching and learning at their schools including the performance of learners on reading. Therefore, the total number reflects the total number of government primary schools recorded in the EMIS 2012 data. Due to the addition of these community representatives in the national CPD training, MTPDS far exceeded its original target of 427 school committees supported.

Intermediate Result B: Teachers and education managers supported through continuous professional development***B.1. Number of teachers/educators trained with USG support (number of women; number of***

men)

Table 21 lists CPD trainings conducted during this reporting period, with their accompanying attendance by teachers and head teachers.

Table 21: Number of Teachers Trained per CPD over duration of MTPDS

Module	Target Group	Duration	Date	Attendance
Literacy 1	All standard 1-4 teachers nationwide	2 days	Jan 2011	27,477 (15,309 male; 12,168 female)
Literacy 2	All standard 1-4 teachers nationwide	2 days	May-Jun 2012	33,292 (19,644 male; 13,648 female)
Literacy 3	All standard 1-4 teachers nationwide	2 days	Aug 2012	33,242 (19,136 male; 14,106 female)
Literacy 4	All standard 1-4 teachers nationwide	2 days	Dec 2012-Feb 2013	32,560 (20,630 male; 11,930 female)
Numeracy 1	All standard 1-4 teachers nationwide	2 days	Apr 2011	28,181 (15,441 male; 12,740 female).
Leadership 1	All head teachers and deputy head teachers	2 day	Dec 2010-Jan 2011	10,020 (W=2,582; M=7,438)
Leadership 2	All head teachers and deputy head teachers	1 day	Aug 2011	10,041 (8,294 male; 1,747 female)
Leadership 3	All head teachers and deputy head teachers	1 day	Jan 2012	9,738 (7,957 male; 1,781 female)
Leadership 4	All head teachers and deputy head teachers + 1 School Management Committee (SMC) and 1 Parent Teacher Association (PTA) member	1 day	Oct 2012	21,329 total (15,880 male; 5,449 female); [12,580 school managers (9,417 male; 3,163 female)] [8,749 SMCs & PTAs (6,463 male; 2,286 female)]

The numbers reported for teachers trained for this indicator reflect the total number of the most-attended CPD training (Literacy 2, with 33,292 participants) although the actual number is most likely higher than this because some teachers who did not attend the Literacy 2 CPD training may have attended other CPD trainings during the duration of the project. Due to the high attendance rate of teachers at the CPD trainings, MTPDS was able to exceed its original target of 29,685 teachers.

B.2. Number of learners enrolled in USG-supported primary schools or equivalent non-school-based settings (number of girls; number of boys)

This information was based on current statistics for the schools that MTPDS has supported. The names of all schools that have attended national CPD training were identified. The total enrolment of these schools was then calculated based on figures derived from the EMIS 2012

database. Since we are supporting CPD across the nation, these figures essentially reflect population statistics for the public sector. MTPDS was able to exceed its original target because it reached all government primary schools through its national CPD trainings.

B.3. Number of standardized learning assessments supported by USG

Early grade mathematics assessments (EGMAs) and EGRAs were administered in 2011 through MTPDS support. Due to contract modification, which was effective December 2011, the EGMA was removed from the contract. In November 2011 a second round and in November 2012 a third round, of EGRA were administered, resulting in a total of four national standardized learning assessments conducted through MTPDS support to date.

School Report Card Pilot

Under Results 5, MTPDS introduced the School Report Card (SRC) tool and monitoring process in 79 schools in all seven intervention districts implementing the MaK program. SMC members and teachers worked in teams of two (one SMC member - usually a parent - and one teacher) to collect data from the SRC tool and to debrief school staff and SMC/PTA committees on the results. The collective effort of community and school was the underpinning factor in the success of this process. For many of the participating school-communities, this was the first time that SMC members had worked actively with school staff to monitor performance, and all involved felt the results were positive.

The SMC members—many for the first time—were able to understand the challenges faced by their primary schools while teachers learned to appreciate the value of the SMC as an important force in school improvement. When the school monitoring was shared between community members and school staff collective responses to school challenges were often translated into immediate actions. In many cases these actions were directly tied to improved learning outcomes. These results are spelled out in the MTPDS Report on the SRC Pilot Study.

Conclusions

The MTPDS project inputs focused on both the enhancement of teaching practices for early grade reading through the national CPD training in literacy and on a dedicated program designed to help schools achieve the Malawi national benchmarks for Standard 1. The program includes structured and carefully sequenced lesson plans guiding Standard 1 teachers through the sequence of pre-reading to reading and reading comprehension strategies needed for children to read with meaning. Across the nation, Standard 1 to 4 teachers showed improvements in teaching effectiveness according to classroom observations conducted in a random sample of schools nationwide. Overall, teachers showed a 48% improvement from the baseline. However, still only 32% of teachers in the national study met the agreed-upon minimum standard for essential skills (i.e., 65% of the classroom observation items rated as satisfactory or above). A higher percentage of teachers in the schools where the MaK intervention was implemented met this minimum criterion. At the end of the project 53.6% of the teachers in the MaK schools (as opposed to the national results of 32.1%) met the minimum criterion. The improvements were even more pronounced when considering the core reading

instructional practices. At the last data collection point in January 2013, on average, Standard 1 teachers in the MaK schools achieved satisfactory ratings on 63.4% of the core reading instructional practices, and Standard 2 teachers in the MaK schools achieved satisfactory ratings on 55.2% of the core reading practices compared to 32% (Standard 1) and 25% (Standard 2) for teachers in the CPD-only schools.

Noticeable gains in performance were achieved by children who participated in the Standard 1 MaK intervention, with the performance of these children surpassing that of those in the control schools with significant differences seen on all subtests.

Systematic regular coaching, providing teachers with school-based support and teacher-driven refresher training, was shown to give children an added learning advantage above and beyond the carefully sequenced lesson plans and associated materials support provided to the Standard 1 classrooms in the MaK intervention schools. A positive and significant relationship was found in the number of coaching visits and the learning outcomes of children.

Another finding that impacted learning outcomes was the level of exposure that the teachers had to the intervention. Children who attended Standard 1 classrooms where the MaK intervention had been implemented for two years demonstrated higher learning gains than children who had been in Standard 1 classrooms where the teachers were exposed to the interventions for the first time, or for only one year.

Thus, both the coaching and the continuity in support over time impact the learning outcomes of children placed in classrooms where the core intervention is being implemented, and the results of analysis were statistically significant.

Though noticeable gains in the overall means for learning outcomes were observed for children who participated in the Standard 1 MaK intervention, the majority of children still failed to meet the national benchmarks for Standard 1 in oral reading fluency (e.g., the number of correct words per minute read in a short reading passage). Students who were able to read words in a passage on average read 19 words per minute. This number is below what is needed for reading with comprehension.

Unlike children in classrooms where teachers only participated in the CPD literacy training, children in Standard 1 classrooms where the MaK intervention was introduced made important shifts in performance—away from zero. Zero scores were reduced by almost half for subtasks, and an increasing percentage of children began to demonstrate measurable pre-reading skills and early reading (e.g., reading familiar words and words in a reading passage). One of the learning outcomes that was not affected as much as one would expect is in children's development of phonological awareness skills such as identifying letter sounds and syllables and the application of phonics concepts to read nonwords. Even though teachers in the MaK classrooms were observed to "apply phonics" in their reading lessons, children still didn't demonstrate a high percentage of zero scores on tasks involving alpha-phonemics such as syllable reading and reading of nonwords. Thus teachers need even more support to build their understanding of the principles of phonics and their ability to support the development of these skills among their Standard 1 learners. Standard 1 children who demonstrate "applied

knowledge” of alpha-phonemics in reading are likely to develop meaningful reading much quicker and will be better prepared for reading in Standard 2.

A number of factors are at play in achieving a sustained shift in learning outcomes. These findings demonstrate the advantage of having a dedicated structured approach in the first year of schooling, yet the same approach must be continued through all of the foundational years for children to see the full benefit of these curriculum reforms. Furthermore, until a number of known barriers to learning are successfully removed in Malawi, these barriers will continue to attenuate the literacy attainment of Malawi’s primary school children. Teachers in Malawi are faced with a number of known barriers to academic performance, including but not limited to extremely large class sizes (on average 140 for a Standard 2), a large proportion of teachers in the early grades who have had no formal teacher training (e.g., unqualified teachers), a short school day, little if any exposure to reading in the home, and chronic malnutrition.

Annex A: Learning Gains on EGRA-Lite Subtasks by Standard

Table A-1: Standard 1 Learning Gains on EGRA-Lite

Subtask	School Category	May 2012	March 2013	Learning Gains
Letter Naming	Coached	5.93	16.87	184. %↑
	Non-coached	7.28	13.95	91.62 %↑
	CPD-only	2.00	4.78	139.00 %↑
Syllable Reading	Coached	2.49	7.37	195.98 %↑
	Non-coached	3.62	8.30	129.28 %↑
	CPD-only	1.00	2.37	137.00 %↑
Familiar Word Reading	Coached	0.84	3.02	259.52 %↑
	Non-coached	0.95	4.32	354.74 %↑
	CPD-only	0.43	0.72	67.44 %↑
Reading Comprehension	Coached	0.04	2.20	5400.00 %↑
	Non-coached	0.20	3.13	1465.00 %↑
	CPD-only	0.17	0.60	252.94 %↑

* Significant at the 5% level.

Table A-2: Standard 2 Learning Gains on EGRA-Lite

Subtask	School Category	May 2012	March 2013	Learning Gains
Letter Naming	Coached	9.98	34.07	241.38 %↑
	Non-coached	13.48	25.85	91.77 %↑
	CPD-only	6.15	12.38	101.30 %↑
Syllable Reading	Coached	5.51	23.82	332.30 %↑
	Non-coached	10.62	18.92	78.15 %↑
	CPD-only	2.91	10.31	254.30 %↑
Familiar Word Reading	Coached	2.45	14.89	507.76 %↑
	Non-coached	5.21	13.32	155.66 %↑
	CPD-only	1.24	6.97	462.10 %↑
Reading Comprehension	Coached	0.65	12.81	1870.77 %↑
	Non-coached	2.26	10.44	361.95 %↑
	CPD-only	0.64	9.75	1423.44 %↑

* Significant at the 5% level.

Table A-3: Standard 4 Learning Gains on EGRA-Lite

Subtask	School Category	May 2012	March 2013	Learning Gains
Letter Naming	Coached	36.65	46.06	25.68 %↑
	Non-coached	39.37	44.42	12.83%↑
	CPD-only	34.28	42.23	23.19 %↑
Syllable Reading	Coached	35.74	46.95	31.37 %↑
	Non-coached	38.46	43.90	14.14 %↑
	CPD-only	33.95	41.55	22.39 %↑
Familiar Word Reading	Coached	22.35	36.10	61.52 %↑
	Non-coached	24.05	32.18	33.80 %↑
	CPD-only	22.03	31.85	44.58 %↑
Reading Comprehension	Coached	9.01	30.44	237.85 %↑
	Non-coached	9.89	22.41	126.59 %↑
	CPD-only	8.61	24.98	190.13 %↑

* Significant at the 5% level.

Annex B National Reading Benchmarks and Targets

Table B-1: Benchmarks and Targets for EGRA, 2012-2017

Subtest	Measure	Suggested benchmark Std. 1	Suggested benchmark Std. 3	Possible	Std. 1 2017	Std. 3 2017	Std.1 2013	Std. 3 2013	Std. 1 2012	Std. 3 2012
Letter naming	correct letters per minute (clpm)	24+ [2.3%]	50	(unlimited)	60%	60%	25%	25%	10%	10%
Syllable segmentation	% correct	70[0%]	80[3.6%]	10/20/30...100	60%	70%	40%	50%	20%	30%
Initial sound identification	% correct	80 [0%]	90 [0%]	10/20/30...100	30%	30%	10%	10%	5%	5%
Syllable reading	correct syllables per minute (cspm)	30 [1.8%]	60 [9.7%]	(unlimited)	50%	60%	20%	30%	10%	20%
Familiar word reading	correct words per minute (cwpm)	20 [1.7%]	45[3.7%]	(unlimited)	50%	50%	25%	25%	10%	10%
Nonsense word reading	correct words per minute (cwpm)	15 [1.3%]	40[0.6%]	(unlimited)	30%	30%	10%	10%	5%	5%
Oral reading fluency	correct words per minute (cwpm)	20 [1.6%]	50[2.7%]	(unlimited)	50%	50%	25%	25%	10%	10%
Reading comprehension	% correct	40 [1.6%]	80 [0.8%]	20/40/60/80/100	30%	30%	10%	10%	5%	5%
Listening comprehension	% correct	60 [6%]	80 [24.1%]	20/40/60/80/100	60%	60%	40%	40%	30%	30%

(Pouzevara, S, Costello, M, and Banda, O., April, 2013, Malawi Reading Intervention Final Early Grade Reading Assessment – 2012)

Annex C Performance of Learners against National Reading Benchmarks

Table C-1: Percentage of Learners Meeting Benchmarks and Performance Targets

Subtest	Standard	Benchmark	2012 Perf. target	% Reaching benchmark 2010	% Reaching benchmark 2011	% Reaching benchmark 2012	
Letter naming	2	24+ clpm	10%	2.3%	2.1%	7.1%	
	4	50 clpm	10%	11.5%	14.3%	15.4%	✓
Syllable segmentation	2	70% correct	20%	41.9%	24.7%	31.5%	✓
	4	80% correct	30%	52.0%	36.0%	48.6%	✓
Initial sound identification	2	80% correct	5%	0.1%	0.7%	0.7%	
	4	90% correct	5%	0.0%	0.8%	1.2%	
Syllable reading	2	30 cspm	10%	1.8%	0.4%	3.0%	
	4	60 cspm	20%	10.0%	7.3%	12.2%	
Familiar word reading	2	20 cwpm	10%	1.8%	0.6%	2.6%	
	4	45 cwpm	10%	3.4%	5.2%	6.5%	
Nonsense word reading	2	15 cwpm	5%	1.4%	0.5%	2.5%	
	4	40 cwpm	5%	0.6%	1.2%	2.9%	
Oral reading fluency	2	20 cwpm	10%	1.7%	0.4%	1.8%	
	4	50 cwpm	10%	2.7%	2.1%	3.5%	
Reading comprehension	2	40% correct	5%	1.4%	0.0%	0.1%	
	4	80% correct	5%	0.2%	0.0%	0.0%	
Listening comprehension	2	60% correct	30%	20.3%	24.3%	18.7%	
	4	80% correct	30%	24.1%	21.7%	24.6%	

(Pouzevara, S, Costello, M, and Banda, O., April, 2013, Malawi Reading Intervention Final Early Grade Reading Assessment – 2012)

Page Intentionally Left Blank