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MALAWI EARLY GRADE READING ACTIVITY: SCRIPTING STUDY REPORT

September 1, 2016

Malawi Early Grade Reading Activity:

SCRIPTING STUDY REPORT

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ABBREVIATIONS

EGRA	Early Grade Reading Activity
HP	high performing
LAT	Learner Assessment Test
LP	low performing
MERIT	Malawi Early Grade Reading Improvement Activity
MoEST	Ministry of Education, Science and Technology
MP	middle performing
SLP	scripted lesson plan
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

The Malawi Early Grade Reading Activity (EGRA), funded by the United States Agency for International Development (USAID) and implemented by RTI International, is designed to support the Malawi Ministry of Education, Science and Technology (MoEST) in improving the reading performance of Malawian learners in Standards 1–3. One of the primary goals of the Activity is improving the quality and availability of pedagogical materials for early grade reading; to do so, EGRA developed a teacher's guide with scripted lessons plans (SLPs) for classroom teachers to follow when teaching lessons in both Chichewa and English.

A goal of this study was to investigate teacher use of the SLPs in Standard 1 and 2 classrooms. EGRA included teacher training and in-class support for teachers as they used the SLPs. Teachers received several days of specific, targeted training each year regarding phonics-based reading instruction and the gradual release of responsibility model (*I do, We do, You do*). They also received theory- and practice-based training in the use of the SLPs to deliver high-quality instruction and practicum sessions during which they delivered lessons to groups of current Standard 1–3 learners. The purpose of this study was to shed light on how teachers were using the SLPs in their classrooms to better understand the ways in which the trainings and the materials themselves were supporting teachers, and the ways in which the trainings could be modified.

The study also provides evidence to MoEST about the use of SLPs, to inform policy on their use. Early reading specialists in Malawi (MoEST, Malawi Institute of Education, and RTI) now rely largely on opinion or anecdotal information in designing early education programs. As a result, research on this topic is widely anticipated. Hence, informed by ongoing discussions among Malawi's early education stakeholders, the following research questions were generated:

1. What patterns do we see in the modifications teachers make as they implement the SLPs in Standards 1 and 2?
2. In what ways do these modifications support student learning?
3. In what ways do these modifications hinder student learning?
4. In what ways do teachers understand and explain the modifications they make?

To answer these questions, an EGRA study team conducted in-class observations of 17 Standard 1 and 2 English and Chichewa teachers and post-observation teacher interviews over a period of five weeks in October and November 2015.

The teachers were from six schools that represented three rural regions of Malawi and were categorized as either low, middle, or high performing. These performance categories were based on estimations of performance that were then confirmed by learner assessment tests after the study. The team used three different classroom observation tools to record classroom practice during observations. Team members observed English and Chichewa classes in each of Standard 1 and 2 in each school for three days and interviewed the teachers observed each day. The observations focused on documenting the modifications that teachers made to the SLPs while teaching. After the lessons observed, interviewers asked teachers for explanations regarding some of the modifications that they made.

To answer research question 1, the study documented 886 modifications of the SLPs. After a rigorous process to identify patterns and code all of these modifications, we were able to classify them into three main types of modifications: changes to the **content,** changes to the **structure** of an activity, and changes to the **management** of the lesson. Over half of all modifications were content modifications (52%), where teachers added extra content, omitted or skipped content, and/or conducted an informal assessment. Twenty-three percent of modifications were to the structure of the lesson, which included changes to the *gradual release* model of instruction. Twenty-five percent of modifications were categorized as classroom management, which included use of strategies to redirect learners, such as songs and energizers, as well as changes to the use of resources in the lesson.

Forty-one percent of all modifications occurred during the Standard 1 Chichewa lessons, suggesting that these lessons may require more revisions than those for the other standards and languages.

To answer research questions 2 and 3, the researchers created three subjective codes **help, hinder,** or **neutral—**to describe and categorize the modifications. The codes provided a handle to help us better understand the effect of each modification. These codes used the stated objectives of the lesson in the teacher's guide to determine how the modifications reflected the intended purpose of the lessons. To do this, the researchers drew upon their knowledge of the teacher's guides, prior trainings that had occurred, discussions with project staff, and literature identifying best practices in early grade reading instruction that formed the theoretical foundations of the lessons. Results revealed that a majority of content (52%) and structural modifications (79%) were coded as hindering the intended purpose of the lesson, while a majority of classroom management modifications (72%) were coded as helping the intended purpose of the lesson.

To answer research question 4, the EGRA study team examined 188 teacher explanations of modifications for patterns and coded them. The patterns revealed that many teachers were actively thinking about what their students know and what they can and cannot do. They often embedded opportunities to provide extra

practice and checks for understanding. The patterns also revealed both strengths and gaps in teacher knowledge of the reading process. A majority of explanations involved teachers' modifying content and structure because they believed the content was either too difficult or inappropriate for the stated objectives of the lesson. Given current teacher behavior change research findings, the EGRA study team assumed that teachers were taking the SLPs and modifying them to suit their needs in the classroom. The detailed portrait this study provided of how and why teachers were making modifications was important for two reasons. First, it helped us to better understand the ways in which targeted teacher training and coaching succeeded and highlighted the ways in which teachers were using their professional judgment to inform their teaching. Second, it pointed to the ways in which these support efforts have not had the desired effect and provided insight into the reasons why. The results of this study inform next steps for programs in Malawi, as well as future studies investigating teacher behavior change models.

In Malawi, modifications that were coded as helping the overall quality of the lesson can be explicitly named and encouraged in training. Teachers can be encouraged to embed informal checks for understanding, provide students with extra practice, and use energizers and songs to help manage the flow of the lesson.

It is important to understand why teachers made modifications that were coded as hindering the quality of the lesson and to make efforts to try to discourage these modifications or transform them into helpful modifications. The SLPs and teacher training can use model teachers and strong, consistent messaging to highlight the importance of the *process* of learning, instead of the final product, and support teachers in interpreting and utilizing student errors as teachable moments. Given that teachers often added or omitted specific words or sentences because they thought the given words were either too difficult or did not provide enough practice, the SLPs can provide a word bank of target words that teachers can select from, as well as develop an approach to communicate decisions behind which words should be used (i.e., all 4 letter words that begin with the sound "g").

The big picture conclusion of this study is that teachers are taking curricula and new ideas they have learned from trainings and adapting them to suit their needs in the classroom, even if those changes run contrary to the training they have received. A detailed understanding of the types of modifications teachers are making, as well as why they are making these modifications, can help us understand how features of a program, such as training and curricula, are enacted in the classroom and why certain aspects of training and curricula are taken up and others are not. This rich, nuanced understanding contributes to next steps and helps focus future studies. More research is needed.

While this study provides important evidence of studying the value of teacher modifications to lesson plans, the sample of teachers was small, and the findings are not generalizable to all teachers in the project. Future studies should confirm if

patterns that were identified in this study are generalizable to the wider teaching population.

There is a need to better understand the complexity and length of time involved with changing teacher practices and to conduct research on how different models impact instruction in the classroom. One model to be explored is focusing several trainings and support visits on a limited number of topics. For example, a project may decide to spend one term focusing predominantly on changing teacher attitudes and practices in their use of the *You do* section of the instructional model. In a subsequent term, a similarly sharp focus could be brought to bear on a different element of the pedagogical approach. When teachers are pressured to change too many behaviors at the same time, the breadth and volume of the training points can become overwhelming, with the result that very little change actually takes place. A more incrementalist (and patient) view might encourage implementers to consider tackling different behaviors serially rather than in parallel.

Studies such as this one should be conducted in different countries, with different sets of lessons, to help identify which modifications may be widespread, and which modifications are particular to a context. This information can be helpful in two ways. First, if there are modifications that are found to be widespread, projects can share their approaches to encouraging and/or discouraging these modifications. Second, by identifying modifications that are particular to a context, projects can wisely invest their limited resources to develop methods to encourage and/or discourage these modifications.

1. BACKGROUND OF THE STUDY

The three-year, four-month Malawi Early Grade Reading Activity (EGRA) was a United States Agency for International Development (USAID) contract implemented by RTI International. EGRA was designed to support the Malawi Ministry of Education, Science and Technology (MoEST) in improving the reading performance of Malawian learners in Standards 1–3. EGRA's goals included improving the quality and availability of pedagogical materials for early grade reading; providing training to teacher trainers, teachers, and school administrators in the effective use of those materials; equipping parents and communities with the knowledge and tools to support school-based reading programming; and supporting efforts to build a policy environment conducive to improving early grade reading.

As one of the Activity's responsibilities, EGRA was expected to inform the MoEST about teachers' experiences with the implementation of the scripted lesson plans (SLPs) of EGRA's teacher guides in Chichewa and English and other EGRA methods. To this end, the Malawi EGRA team requested RTI staff to design and implement a study.

1.1 PURPOSE OF THE STUDY

The purpose of this study was to shed light on the ways in which teachers were using the SLPs in classrooms in Standards 1 and 2 in order to better understand how and why teachers were modifying the SLPs while teaching. A detailed record of how and why teachers were using the SLPs provides us with evidence of how the lessons and trainings have supported teacher learning, as well as evidence of the aspects of the lessons and trainings that teachers need more support in. The results will inform next steps in the process of supporting teachers in adopting new methods of instruction.

Teachers' participation and candid feedback were critical to the study, given that the data collected will inform MoEST policy regarding the rollout of a nationwide reading intervention, MERIT: The Malawi Early Grade Reading Improvement Activity, implemented by RTI under contract with USAID.

The main research question of the study is:

- In what ways do teachers implement the SLPs?

The subquestions are:

- What patterns do we see in the modifications teachers make as they implement the SLPs in Standards 1 and 2?
- In what ways do these modifications support student learning?
- In what ways do these modifications hinder student learning?
- In what ways do teachers understand and explain the modifications they make?

2. BACKGROUND LITERATURE

Grossman and Thompson's (2008) longitudinal study looked at how new teachers used curriculum materials over a four-year time frame. The findings show that scripted lesson plans generally guided and helped build new teachers' understanding of pedagogical and content knowledge. Some teachers initially expressed resistance to the use of scripted lesson materials, but eventually they built a repertoire of teaching skills through the SLPs. Grossman and Thompson state that while teachers were faithful to the objectives of the materials in general, there was a linear "trajectory" in which teachers first strictly followed the scripted curriculum then began to modify how they used materials as they grew more familiar with their content and the process of teaching.

Durkin's study (1984) also explored how primary teachers used scripted materials. The findings indicate teachers made several types of modifications, including procedural modifications. For example, teachers created vocabulary lists rather than teaching new vocabulary in context as advised in the teacher's manual. The majority of teachers omitted the procedures for phonics instruction yet maintained an alignment to the learning objectives in the scripted lessons. Teachers also omitted content, such as pre-reading background information that could support learners' comprehension, pre-reading questions, and additional activities designed to meet the needs of diverse learners. The main reasons that teachers gave for implementing the scripted material differently were lack of time and usefulness of certain activities. The author concludes that teachers modified scripted materials differently across grades and that teachers generally emphasized the completion of activities in the scripted lessons. The study also concludes that teachers did not know whether learning objectives were met. When learning objectives were not met, it was clear that the teachers did not know how to meet the needs of learners. Durkin's study shows the importance of the relationship between the ways that teachers make sense of scripted materials, modifications, and actual lesson delivery, and the impact on teacher and student learning.

Valencia, Place, Martin, and Grossman's (2006) multi-case qualitative study delves deeper into new teachers' use of scripted materials in the primary grades. The findings revealed that the scripted material informed beginning teachers' pedagogical and content knowledge. Similar to Durkin's (1984) study finding, Valencia et al. find that teachers' actual lesson delivery reflected a "procedural orientation" in which the focus was on moving from one activity in the scripted lesson to the next. Valencia et al. (2006) state that teachers did not have a conceptual orientation vis à vis the scripted material. As a result, the researchers add that while teachers generally followed the structure and content of the scripted

lessons, they gave less thought to whether the lesson actually helped learners meet the learning objectives or what kinds of instructional adjustments could be made to meet learners' needs.

The studies described above illustrate the critical role of teachers' instructional behaviors. Research shows that teacher support and instructional change can impact learners' academic performance and motivation (Maulana, Opdenakker, & Bosker, 2016; Wang & Eccles, 2013; Elish-Piper & L'Allier, 2011). Furthermore, intervention studies in the health sector that draw on strategies for behavior change indicate diverse approaches that take into consideration different country contexts, while also revealing the collective challenges of changing human behavior (Sanghvi, Jimerson, Hajeebhoy, Zewale, & Huoung, 2013; Bongaarts, Cleland, Townsend, Bertrand, & Das Gupta, 2012).

In the field of education, researchers such as Guskey (2002) describe teachers' reluctance to adopt new methods in the classroom. Teachers faced with the complex interplay of the many expected changes--in classroom practices, in attitudes and beliefs, and in learning outcomes of students—find commitment to those changes complicated. In his 1986 work, Guskey argues that while a reciprocal relationship exists between changes in classroom practices, attitudes, beliefs, and students' learning outcomes, the particular order in which the process occurs is critical if the objective is to facilitate change. In his view of the change process, teachers first engage in ample practice with new instructional methods. Teachers then notice improvements in students' learning outcomes. As a result, teachers' attitudes and beliefs change.

Clarke and Hollingsworth (2002) agree with elements of Guskey's model, yet challenge the sequence in which he asserts that the process of change occurs. They emphasize an iterative and reciprocal approach in which professional development facilitates teacher growth through the process of reflection across four areas: "the personal domain (teacher knowledge, beliefs, and attitudes), the domain of practice (professional experimentation), the domain of consequence (salient outcomes), and the external domain (sources of information, stimulus, and support)" (p. 950).The authors explain that reflection and action in one domain brings about change in another domain.

Teacher resistance also poses a challenge in the introduction of methods of reading instruction that are conceptually different from familiar approaches. Duffy and Roehler (1986) point out that teachers modify their implementation of instructional innovations based on "their conceptual understandings of curricular content, their concept of instruction, their perception of the demands of the working environment, and their desire to achieve a smoothly flowing day" (p. 57). They add that teacher delivery of what was taught in a professional development context may look very different in the classroom due to these "filters."

In Johnson, Monk, and Swain's (2000) study on teacher change, 21 teachers traveled to London for training in an in-service program, then returned to their classrooms in Egypt. The findings show that the majority of the teachers found the professional development support enriched their pedagogical and content knowledge. However, Johnson and colleagues conclude that while some elements of the instructional methods were applied, actual classroom practice for the majority of teachers showed that they had a "mechanical" approach to teaching. In effect, despite their self-reported improvement in pedagogical knowledge, teachers in the end taught the content through memorization, as they had before training. The researchers explain that constraints in developing country contexts compound the already existing challenges to behavior change. One example they point out is that teachers in the study felt they had gained pedagogical and content knowledge but were returning to an education system that had remained the same. This is in line with factors such as overcrowding and limited classroom resources that indicate the critical role education policy plays in minimizing the constraints that further compromise quality instruction (Nordstrum, 2015).

In their analysis of teachers' classroom practice, Johnson, Monk, and Swain draw on the work of researchers such as Feiter, De Vonk, and Akker (1995). Johnson and her colleagues thus describe four general phases of teacher instruction: instruction that forms part of rule-driven methods and limited content knowledge, instruction that focuses strongly on the delivery of the content using traditional teaching methods such as memorization, instruction that draws on a selection of options present in the scripted material, and instruction that involves greater teacher decision making in terms of content and pedagogy. Given that teachers in the study primarily exhibited a "mechanical" approach, they focused heavily on the delivery of the content through traditional teaching methods although they had received professional development support on how to use innovative teaching methods. As a result, Johnson et al. (2000) propose that teacher change should involve an incrementalist approach, one that involves stages of acquisition in pedagogical and content knowledge.

In Malawi, Sailors and her colleagues (2014) studied the impact of directive coaching in literacy instruction under the Read Malawi Program. Teachers in one district participated in professional development sessions on how to use complementary reading materials in the classroom, while teachers in the control group did not. The researchers state that the program had a positive effect on teachers' level of comfort in terms of their attitudes and beliefs about how to teach reading. While these are important elements of teacher change, they add that there were minimal differences found in the treatment and control groups in terms of teachers' actual teaching practices. Sailors and her colleagues explain that low levels of implementation were due to the difficulty teachers faced in adapting the literacy program to the specific challenges, such as large class sizes, of their classroom context. This illustrates one of the many factors that impact the

adoption of new instructional practices in places where challenging teaching conditions exist. The authors found evidence of high levels of implementation in a few schools where teachers implemented the materials and the new instructional approaches as expected by the program. The researchers attribute higher degrees of implementation in certain schools to teacher motivation, strong school leadership, and community participation.

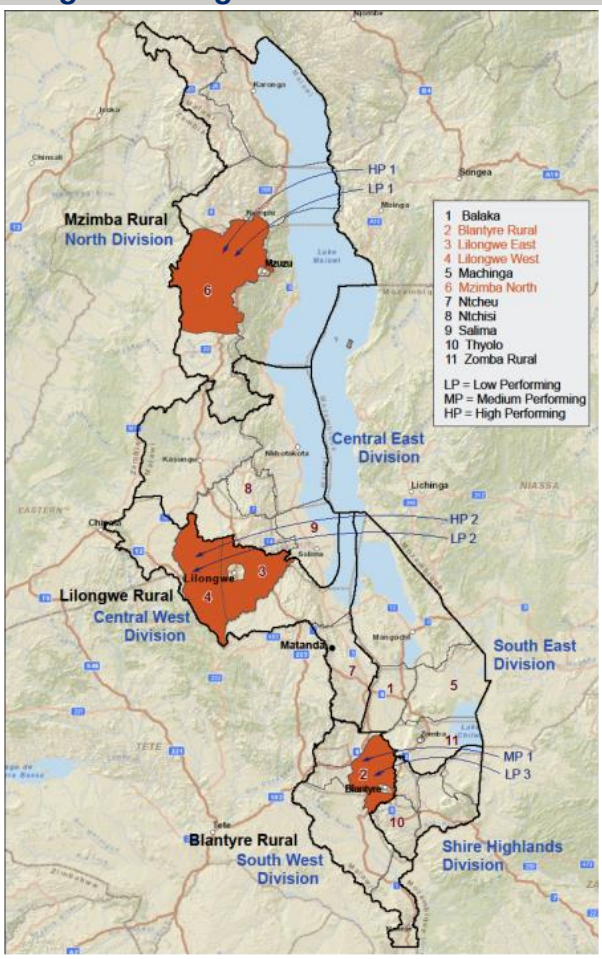
The studies show that new and experienced teachers, as daily decision makers in the classroom, may modify the scripted lesson plans in various ways and for different reasons. Teachers, as learners themselves, enter the classroom with a range of teaching abilities and experiences that shape their beliefs and perceptions about teaching (Borko, 2004; Clarke & Hollingsworth, 2002). These studies provide a window into how teachers understand, interpret, and use teaching and learning materials in the context of daily classroom interactions with learners (Durkin, 1984). The content of the scripted lessons can potentially be used as a tool that supports and builds teachers' repertoire of instructional practices (Davis & Krajcik, 2005; Grossman & Thompson, 2008). The studies suggest that growing teachers' pedagogical and content knowledge involves the use of scripted curriculum materials that are anchored in the realities of the classroom context, thus providing teachers with flexible guidance on how to adjust instruction so they can optimally respond to the immediate and changing needs of learners.

3. METHODS

3.1 DATA COLLECTION METHODS

The EGRA study team used purposeful sampling to select study participants from six schools, two schools from each of the three regions across the country; the north, center, and south. The participant total included 17 teachers, 8 Standard 1 teachers and 9 Standard 2 teachers chosen from the six schools. The schools selected represent low (three schools), middle (one school), and high (two schools) academic performance categories. ***Figure 1*** shows the performance categories and the intervention zones where the data were collected.

Figure 1. Regions and Schools



Malawi EGRA staff categorized and selected schools based on estimations of the teachers' and learners' performance, administration, community participation, and coaching visits to the intervention schools. Post-study quantitative data collected from Learner Assessment Tests (LATs) broadly confirmed the low-, medium-, and high-performance categories of the schools. LAT findings from Standards 1 and 2 in Chichewa and English, in particular phonological awareness and oral reading fluency, were used.

3.2 DESCRIPTION OF THE SCHOOLS

The six schools in the sample are classified as rural; EGRA was implemented in rural areas of the northern, southern, and central regions. ***Table 1*** shows the

performance category of each school, along with the number and gender of the teachers. In some cases, the Standard 1 or 2 teacher taught both English and Chichewa lessons for that standard; in other cases, there were two teachers per standard, one for English, the other for Chichewa. In one school, the researcher randomly selected the teachers, as there was more than one stream per standard. Of the 17 teachers participating in the study, 13 were women and 4 were men; based on data provided by Malawi EGRA staff on the enrollment rates for each school visited, the average class size ranged from 70 to 300 learners in Standard 1 and from 60 to 250 learners in Standard 2. Gender distribution of the learners in Standards 1 and 2 was roughly 50/50 across the six schools.

Table 1. School Characteristics

School ID	Performance Category	Total Number of Teachers Standard 1	Total Number of Teachers In Standard 2	Teacher Gender	Teacher IDs
School 1	Medium	1	2	2 F, 1 M	1, 2, 3
School 2	Low	2	2	4 F	4, 5, 6, 7
School 3	High	1	2	3 F	8, 9, 10
School 4	Low	2	1	1 F, 2 M	11, 12, 13
School 5	High	1	1	2 F	14, 15
School 6	Low	1	1	1 F, 1 M	16, 17

3.3 DATA COLLECTION METHODS AND PROCEDURES

The five weeks of data collection took place from October to November 2015. In week 1, before the data collection started, there was a two-day workshop for two local consultants who assisted with data collection and analysis. Along with training on the purposes and types of data collection instruments, there was guidance provided on the kinds of notes the consultants should take. The tools were then piloted and adapted during week 1. After piloting, questions were adapted for Standard 1 Chichewa interviews as the teacher guide for Standard 1 Chichewa differed in format from the teacher's guides for Standards 1 and 2 English and Standard 2 Chichewa. The interview questions were spread across days 1, 2, and 3 of data collection. Interview questions for day 3 were asked on day 2 in schools that were closed on the planned third day of data collection.

During the four weeks of formal data collection, the researcher and two local consultants visited the six schools for two or three consecutive days. Data collection was planned for three days, but two of the six schools were closed on one of the three days. Across the six schools, researchers conducted a total of 63 classroom observations over 16 days. In each classroom observation, the investigators observed one reading lesson in Chichewa, and one in English.

3.3.1 CLASSROOM OBSERVATIONS

To collect data, investigators observed teachers as they delivered the full reading lesson in Chichewa and in English. The observations focused on the relationship between the content of the scripted lesson and actual lesson delivery. Researchers noted modifications, if any, that a teacher made while implementing a scripted lesson. For the purpose of the study, a *modification* was defined as any teacher actions or words that deviated from the SLP provided. Each of the three observing researchers used a different classroom observation tool that captured a different aspect of lesson delivery, as described below. The EGRA study team also collected any other evidence they found of teachers' modifying SLPs, including photos of teachers as they taught modified lessons or any materials teachers created that evidenced lesson modifications, such as a newly created word game.

Classroom Observation Tool 1 (***Annex 1***) is organized by activity and by the structure of the lesson components, the *I do*, *We do*, and *You do*. This tool was used to make comparisons between what the scripted lesson in the teacher's guide stated and the teacher's actual delivery of the lesson. The researcher included data solely on the modifications made.

Classroom Observation Tool 2 (***Annex 1***) focused on lesson pacing and was used to track instructional time. During classroom observations, the researcher noted how long it actually took the teacher to implement each segment of the lesson compared to the time allotted in the teacher's guide. Start and end times were also included for those lesson segments for which the teacher's guide did not specify the amount of instructional time.

Classroom Observation Tool 3 (***Annex 1***) was an open-ended tool used to collect information on qualitative items, such as how frequently a teacher moved around the classroom during lesson delivery, classroom management practices, access to and flow of learning materials, and the classroom environment as a whole. The tool was a sheet of three columns. In the first column, the researcher wrote open-ended notes on the points mentioned above. In the second column, the researcher briefly wrote a preliminary analysis of what was observed, based on the notes in the first column. In the third column, the researcher wrote possible follow-up questions that could be asked of the teacher during the interview.

Classroom observation data collected each day were triangulated in order to identify any modifications to lessons that teachers made. Based on discussions between the researcher and the two local consultants on the lesson modifications noted, the principal researcher input the modifications in a separate table that listed the modifications by day (1, 2, or 3), teacher, language, standard, and lesson. This table was then used to enter the modifications into a database.

3.3.2 TEACHER INTERVIEWS

The local researchers conducted formal interviews with the teachers after the teachers had finished teaching for the day. One researcher interviewed the Standard 1 teachers, and the other researcher interviewed the Standard 2 teachers. Interviews were conducted in Chichewa, and teachers' responses were handwritten in English. The interview response sheets were scanned and uploaded for coding at a later date.

The interview questions (***Annex 2***) focused on the implementation of the SLPs during reading instruction in Chichewa and English. They were translated from English into Chichewa and divided into three parts, one for each day of data collection at each school. All days included teachers' perspectives on the lesson just taught--the preferred level of scripting; how easy or difficult the *I do*, *We do*, and *You do* segments were; the clarity of the directions; and ways that the lesson could be improved.

In the two schools where it was not possible to visit a third day, the researchers administered questions from the day 3 interviews on day 2. As time permitted at the end of the formal interviews for day 2 and day 3, the researchers also asked brief follow-up questions designed to get teachers to share their reasons for making some of the modifications observed in their actual implementation of the SLPs.

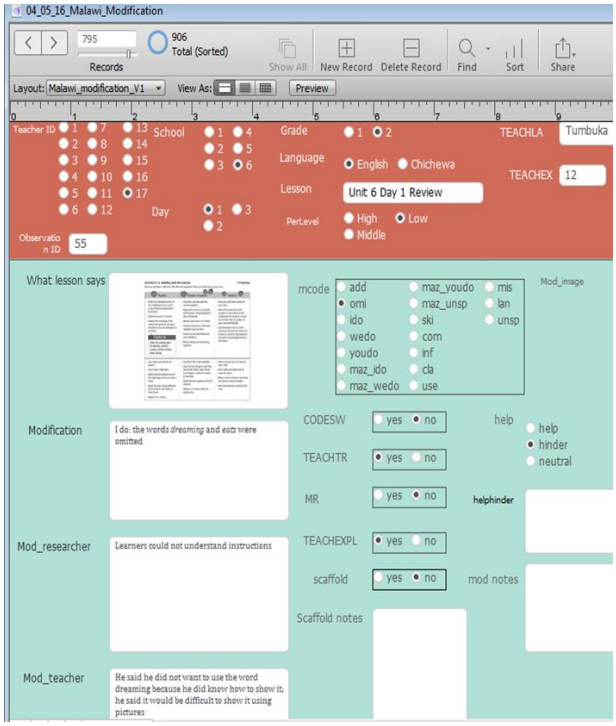
3.3.3 REVIEW OF EGRA MATERIALS

Before the formal data-collection process began, Malawi EGRA staff provided the EGRA study team both teacher's guides and learner's books for Standards 1 and 2 in both languages.

The Chichewa SLPs for Standards 1 and 2 were translated to English. The EGRA study team reviewed the books to learn the lesson routines, examples of success criteria or learning goals, teaching and learning methods, and format and content of the units, as well as the instructional time allotted to each activity. This helped the team better understand the relationship between the teacher's guide and learner's book.

Malawi EGRA staff also provided examples of the teacher observation instruments used by head teachers and PEAs when they observe the teachers they supervise. A review of these materials helped familiarize researchers with EGRA observation protocols and teaching expectations.

Figure 2. Observation Database Entry



3.4 ANALYSIS PROCEDURES

3.4.1 MODIFICATIONS NOTED IN CLASSROOM OBSERVATIONS

The EGRA study team used FileMaker Pro to create a database to store and manage the data on modifications identified during the classroom observations. The fields created in the database included school performance category, teacher identification, grade, language of instruction, unit and lesson number, years of teaching experience, a snapshot of the lesson segment as noted in the teacher's guide, and modification codes. Additional fields were added to distinguish whether a modification served as a scaffold and whether or not the modification helped or hindered during the implementation of the lesson. ***Figure 2*** above depicts an example of an entry in the database.

3.4.2 CODING PROCESS FOR THE MODIFICATIONS

Two members of the EGRA study team first reviewed all the modifications (n=866) documented in the database, looking for patterns and themes from which to develop codes. The preliminary codes were developed through an iterative process that included reviews of supporting information derived from the classroom observation tools as well as multiple sweeps through the data to identify patterns and group similar codes together.

Once the preliminary codes were established, two members of the EGRA study team independently coded the same entries, then met to discuss the codes and revise the working definitions and decision rules of each code. A member of the Malawi EGRA staff also took part in the process by independently coding several entries, and then providing feedback. After four more rounds of double coding by the two members of the team, the final codes were developed. The researchers then double coded a portion of the entries and established an interrater reliability above 90%. ***Annex 3*** in this report provides a list of all the initial codes, though

several were collapsed during analysis. ***Table 2*** below is an example of the types of codes developed and their definitions.

Table 2. Codes for Malawi Scripting Study

NO	CODE IN FILEMAKER PRO	CODE	DEFINITION
1	Add	Additional and/or substitution	Teacher adds content in a given lesson; the teacher is teaching the script, but adds in extra content within an activity. When the teacher replaces the entire activity, or part of the activity with another.
2	Omi	Omission	Teacher omits content in a given lesson; the teacher is teaching the script, but omits some of the content within an activity.

The database also included several fields to capture data in the database that would provide quick and relevant information for each modification observed and allow the researchers to sort the data in different ways. (See ***Figure 2***).

In addition to coding modifications, we used a similar process to code teacher explanations for the modifications they made. There were 189 teacher explanations aligned with observed modifications. These modifications were examined for patterns and coded by one of the researchers.

The interview data were also used to triangulate some of the findings from the modifications study. Specifically, the teacher interview data were used to identify questions that would either confirm or not confirm the findings from the modification study. For example, if teachers omitted lots of words from certain exercises, the EGRA study team looked at questions where teachers gave

feedback about the content of the lesson they just taught, to see if there was confirming evidence.

4. FINDINGS

In this section we answer the main research question, *In what ways did teachers implement the scripted lesson plans?* We present our analysis in three parts. First, we provide an overview of the patterns in modifications by grade and language, providing descriptions and examples of the patterns. Second, we then turn to an additional lens of analysis, the *help/hinder* coding, which is a subjective measurement providing a means to understand the modifications in light of their overall helpfulness or hindrance to meeting the objectives of the lesson. Finally, we turn to teacher explanations of selected modifications to shed light on teacher motivation and understanding while modifying lessons. Taken together, these three sections provide a rich understanding of how and why teachers are modifying lessons that can inform subsequent curricular revisions of the teacher's guides as well as teacher training efforts. Throughout the analysis, we point to particular patterns that are interesting by grade, language of instruction, and performance levels of schools.

4.1 PATTERNS IN MODIFICATIONS

We recorded 886 modifications in total, with three predominant patterns: (1) *structural* modifications, where teachers modified the structure of the lesson in some way, such as changes to grouping structures (e.g., pair work, whole class, small groups, large groups) or to the gradual release model of the scripted lessons; (2) *content* modifications, where teachers altered the content of a lesson, such as adding or omitting words during phonological awareness activities; and (3) *classroom management* modifications, where teachers inserted or modified activities to redirect student attention, and made changes to the use of materials. ***Table 3*** below provides a description and example for each type of modification.

Table 3. Modifications and Examples

MODIFICATION	DESCRIPTION	FREQUENCY	EXAMPLE
Structure	Altering the gradual release model of the lessons with modifications to the *I do, We do, and You do* sections	23%	Teacher 3 (Standard 1, Chichewa, MP school): The teacher omitted the *You do* section of the lesson.
Content	Altering the content within an activity	52%	Teacher 13 (Standard 1 English, LP School): The activity in the teacher's guide focused on writing

MODIFICATION	DESCRIPTION	FREQUENCY	EXAMPLE
			the lowercase letter "h." The teacher modified the content to include the capital letter "h" also.
Classroom Management	Insertion or modification of activities to redirect student attention, modifications in time, modifications in flow of materials, altering the use of materials/resources as stated in the teacher's guide	25%	Teacher 7 (Standard 2 English, LP school): Before beginning the lesson, the teacher had learners sing a song in Chichewa that asked them to move around and touch their elbows, ankles, etc.

Structural and content modifications, which occurred the most frequently, can also be broken down to help us understand the nuances in the different modifications. Structural modifications were grouped into four categories according to when in the gradual release model the modification took place: *I do, We do, You do*, and (for lessons in which the teacher's guide did not clearly delineate the gradual release model) "unspecified." Examples of each type of structural modification are provided in ***Table 4*** below. The majority of the modifications took place during the *We do* and *You do* sections of the lesson.

Table 4. Structural Modifications

MODIFICATION	DESCRIPTION	FREQUENCY WITHIN STRUCTURAL MODIFICATIONS	EXAMPLE
I do	Modifications to the *I do* structure	7%	Teacher 16 (Standard 1 English, LP school): The activity was about naming objects beginning with /i/. In the *I do* section, the teacher's guide asked the teacher to show the learners objects or pictures beginning with the letter /i/ and say the name of the object. The teacher invited learners to say the names of the objects and asked them to repeat after her.

MODIFICATION	DESCRIPTION	FREQUENCY WITHIN STRUCTURAL MODIFICATIONS	EXAMPLE
We do	Modifications to the *We do* structure	41%	Teacher 11 (Standard 1, Chichewa, LP school): The *We do* section of the lesson asked the teacher and learner to blend sounds and say a word together. Instead, the teacher blended the sounds, then had learners repeat after her, then said the word, and had learners repeat after her.
You do	Modifications to the *You do* structure	27%	Teacher 15 (Standard 2, Chichewa, HP school): The *You do* section asked the whole class of learners to read words written on the chalkboard as a group. Instead, the teacher changed the participation by first asking the whole class to read the words, then small groups to read the words, and then individual learners.
Unspecified	Modifications to the structure for lessons where the structure was not clearly delineated	24%	Teacher 3 (Standard 1 Chichewa, MP school): The guide asked teachers to write words on the board, then help learners to read the words silently by pointing at each letter. Instead, the teacher read the words and asked learners to repeat after her.

The *We do* section had many modifications made to the structure. Although the We do section was intended to be guided learning, where the learners and teacher would complete an activity together, it was often interpreted as a teacher demonstration with students repeating after the teacher, as seen in the example from Teacher 11 above. The *You do* section, which is intended to provide independent practice to learners, was sometimes skipped, and other times continued to be directed by teachers instead of allowing students independent practice time. Unspecified structural modifications happened most often in the Standard 1 Chichewa lessons, as the guide often did not provide clear instructions for the *I do, We do*, and *You do* sections of the lesson.

Content modifications consisted of five categories: additions to content, omissions of content, skipping of activities, combining the content of activities, and the addition of an informal assessment (***Table 5***).

Table 5. Content Modifications

MODIFICATION	DESCRIPTION	FREQUENCY WITHIN CONTENT MODIFICATIONS	EXAMPLE
Additions	Additions to content	41%	Teacher 13 (Standard 1, English, LP school): Modified the content while conducting an activity titled "Writing the letter h." She had learners write both the uppercase H and lowercase h, instead of just the lowercase h as the lesson requested.
Omissions	Omissions of content within one activity	29%	Teacher 3 (Standard 1, Chichewa, MP school): The activity is about identifying the uppercase letter Z. Part of this activity is to look at a picture of a word beginning with the letter Z in the learner's book. The teacher omitted this part of the lesson.
Skipped Activities	Skipping of an entire activity	12%	Teacher 4 (Standard 1, Chichewa, LP

MODIFICATION	DESCRIPTION	FREQUENCY WITHIN CONTENT MODIFICATIONS	EXAMPLE
			school): The teacher skipped the activity titled "Review or make sentences."
Combinations	Combining two or more activities	3%	Teacher 14 (Standard 1 Chichewa, HP school): Activities 4 ("Learning a new letter name *t*") and 5 ("Learning a new letter sound /t/") were combined.
Informal Assessments	Conducting informal checks for understanding, providing feedback to students	15%	Teacher 12 (Standard 2, English, LP school): During the activity "Writing words that begin with the initial letter g," the teacher walked around providing feedback, asking a learner to write in the air when he saw the learner struggling to write the word.

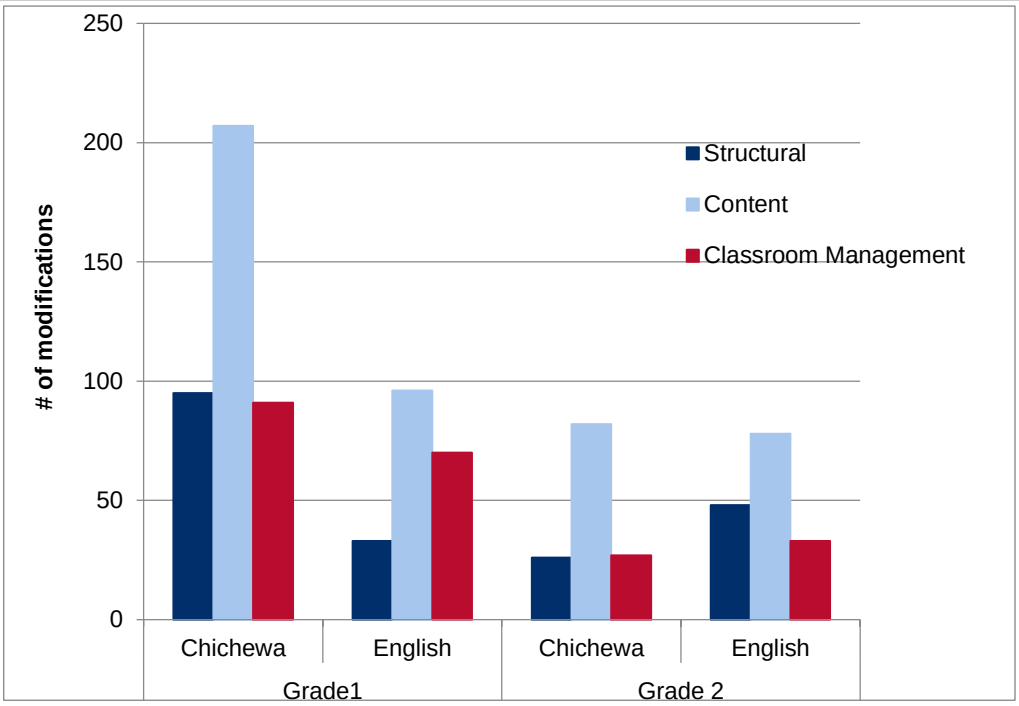
A majority of content modifications consisted of additions to content and omissions of content. Skipping activities and combining activities mainly occurred during the Standard 1 Chichewa lessons, as those lessons are longer than the other lessons.

Figure 3 on the next page shows the patterns in all modifications by standard and language of instruction. A majority of all modifications (52%) that teachers made were content modifications. That content modifications were so frequent is not surprising—most of these modifications were seemingly minor additions or omissions to the lessons, such as adding extra words or omitting one part of an activity. It may be that teachers felt more comfortable altering the content in small ways instead of making larger, structural changes to the lesson, which could account for the large number of content modifications.

Figure 3 also shows that, across the four patterns, 41% of all modifications we observed were made in Standard 1 Chichewa classrooms. Both of these trends (predominance of content modifications, and large number of modifications in Standard 1 Chichewa) suggest that further analysis must be done in order to shed

light on these findings. Below we discuss the modifications in light of their overall usefulness to the objectives of the lesson, and teacher explanations for the modifications.

Figure 3. Patterns in Modifications by Standard and Language of Instruction

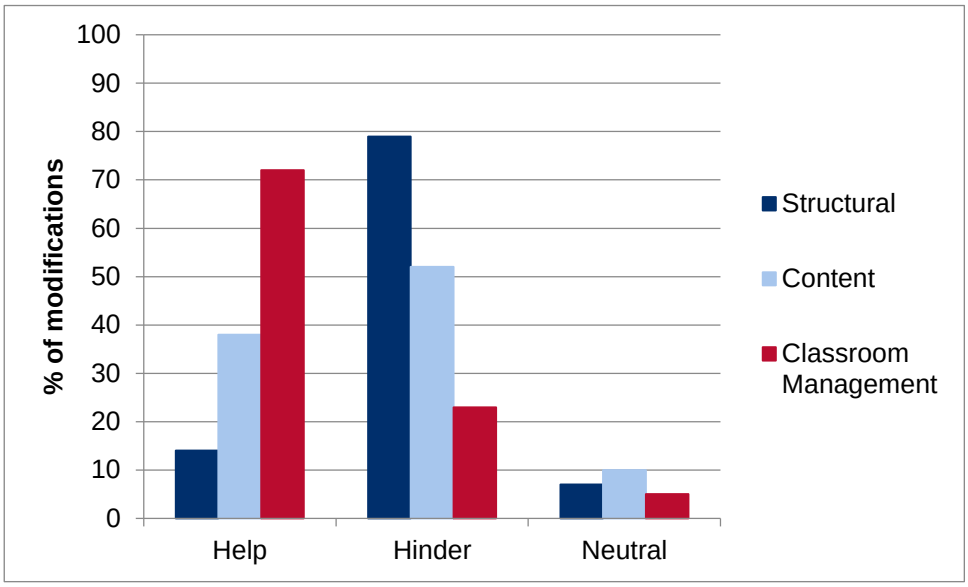


4.2 CONTRIBUTION OF MODIFICATIONS TO THE QUALITY OF THE LESSON

All modifications were given a code of help, hinder, or neutral. The help code identified modifications that contributed to the instruction's meeting the objectives of the lesson. The hinder code identified modifications that detracted from the objectives of the lesson. The neutral code identified modifications that neither helped nor hindered the objective of the lesson. These codes were subjective measures made by the researchers that coded the data. The researchers relied on the stated objectives of the lesson in the teacher's guide and how the modifications reflected the intended purpose of the lessons. To do this, the researchers drew upon their knowledge of the teacher's guides, prior trainings that had occurred, discussions with project staff, and literature identifying best practices in early grade reading instruction that formed the theoretical foundations of the lessons.

Figure 4 below displays the percentage of modifications that we coded as helping, hindering, or neutral according to the modification type. We discuss each below.

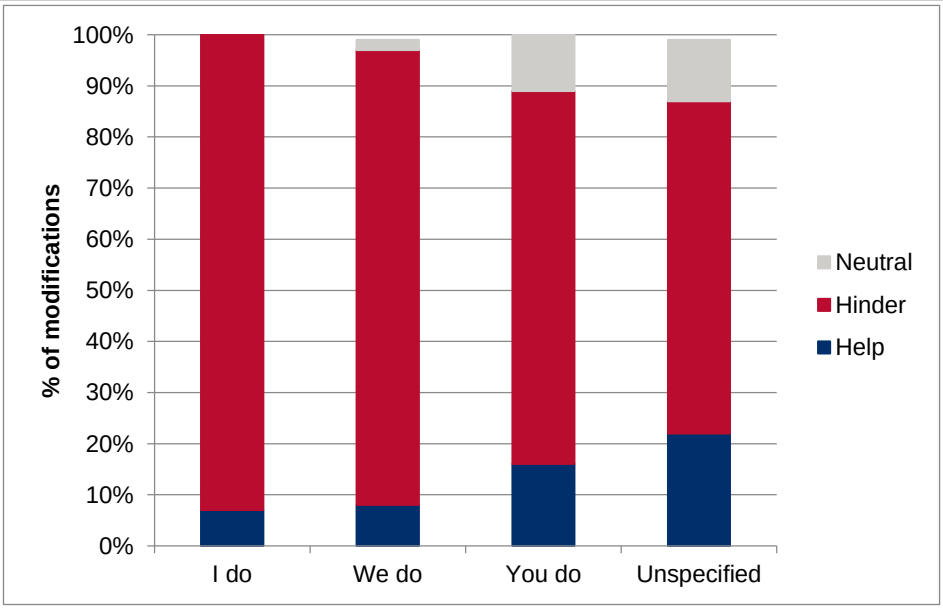
Figure 4. Percentage of Modifications Coded as Help/Hinder/Neutral by Modification Type



4.2.1 STRUCTURAL MODIFICATIONS

Of the structural modifications, 79% were coded as hindering the objective of the lesson, with only 14% coded as helping the lesson. Thus, a clear majority of the times that teachers modified the structure of the lesson, either in the *I do, We do*, or *You do* sections, the modification was coded as hindering learning. ***Figure 5*** shows the percentage of each category of structural modifications was coded as either help, hinder, or neutral.

Figure 5. Percentage of Categories of Structural Modifications Coded as Help/Hinder/Neutral



Of all structural modifications, 47% occurred in Standard 1 Chichewa lessons, and followed the pattern of being coded largely as hindering learning. In the Chichewa Standard 1 teacher's guide, every activity was not necessarily explicitly formatted in the *I do*, *We do*,

You do structure. Instead, the structure was implied by the procedural language in the SLP. Because of this, teachers often imposed their own structure on the activity. For example, Teacher 8 (Standard 1, Chichewa, HP school) was teaching an activity about learning a new letter name in Lesson 3 of Unit 5, seen below.

Learning a new letter name. Today we will learn a new letter. I will show you the letter and say its name. Write the letter D on the chalkboard or show a card with the letter D. Point to the letter and say, this is D. Let's say the letter name together. Teacher and learners say D. Now you will name the letter on your own. This letter is (learners say D). Now, open your books to page 16. Point to letter D next to the picture of the Dengu.

The gradual release model is implicit in this activity. First the teacher writes the letter "D" on the chalkboard (or shows a letter card) and says the name of the letter (*I do*), then the teacher and students say the name together (*We do*), and lastly the teacher points to the letter and the students say its name and then point to the letter in their learner's book (*You do*). However, as seen in the text above, the lesson is not formatted to explicitly highlight the three different sections of the lesson (*I do, We do,* and *You do*). Teacher 8 modified the structure of the *You do* by asking two learners to individually say the name of the letter D, instead of asking the whole class to name the letter. In effect, the teacher selected two learners from the whole class to complete the implicit *You do* segment of the letter naming activity.

This modification was coded as hindering learning because in this case, the *You do* was designed to provide practice for all students in identifying the letter "D." By modifying and asking only two learners to identify the letter instead of the whole class, the teacher decreased all learners' hands-on practice with letter identification.

Figure 6. Story Reading Activity

- *Say: Open your books at page 26.*
- *Say:* Listen. I will read.
- *Make sure all learners are on the right page and that they are following.*
- *Read aloud the story on pages 26 and 27.*
- *Repeat 2 or 3 times.*

- *Say:* Let's read together.
- *Say:* Put your finger under the first word of the story.
- *Say:* Move your finger under the words as you read.
- *Read the story together with the learners.*
- *Repeat 2 or 3 times with the whole class.*

- Now, it is your turn to read on your own.
- Be in pairs and take turns to read.
- *Move round to observe and help the learners where needed.*
- *Ask some learners to read to the class.*

Across all standards and languages, teachers mainly modified the *We do* and *You do* sections. In the *We do*, some teachers tended to modify the activity from "doing it together" to "repeat after me." For example, Teacher 7 (Standard 2, English, LP School) was teaching an activity about reading a story. ***Figure 6*** below contains the text from the teacher's guide.

In the *We do* part of the lesson, the guide asks teachers and learners to read the story together. This is important because it provides a scaffold for the *You do* section, where learners are expected to read in partners without the direct support of the teacher. However, instead of reading the story together, Teacher 7 read each line of the story and had the learners repeat after her. What was intended to be a scaffold turned into a repetition exercise, and learners no longer were given the opportunity to apply their skills to read a story with the support of the teacher. By changing the structure of the activity in this way, the teacher may have hindered the learning process. The domino effect of this modification of the *We do* was that it often led to a corresponding modification of the *You do* segment of the learning activity. In the *We do*, the instruction helps learners engage in collaborative and independent practice in the *You do*. Structural modifications that minimized opportunities for learners to practice with adequate support from the teacher, such as the example above, may have led to further modifications that were coded as hindering learning in the *You do* section.

For example, Teacher 7, after modifying the *We do* section of the lesson in ***Figure 6*** above, modified the *You do* section also. Instead of asking students to read the story in pairs, the teacher instead formed groups of learners. She then went to each group and instructed them on how to read the story. This modification took time, with most learners having to wait until the teacher approached to begin reading. It may be that, because all learners did not have the opportunity to practice in the *We do* section, the teacher felt they were unprepared to read in pairs during the *You do* section without providing detailed instructions to each group. This modification lowered the amount of time students were reading. In addition, by reading in small groups instead of pairs, students may have had less opportunity to participate in the reading.

Another structural modification that was common was modifying how students worked, either the whole class, in pairs, in small groups, and/or individually. The majority of these modifications were coded as hindering learning, though there were some examples of modifications to the *You do* that supported student learning. For example, Teacher 1 (Standard 2, Chichewa, MP school) was teaching an activity titled “Reviewing Syllables,” seen below.

Reviewing syllables. Open your books to page 10. Point to the syllables and read them aloud using sounds. The syllables are mfa, mfe, mfi, mfo, mfu. Ask learners to read the syllables individually, in pairs, and in groups. Assist those learners who fail to read.

Teacher 1 used whole class instruction to teach the activity on reviewing syllables. In effect, the teacher removed the scaffolds that pair and group work provide. This modification was coded as hindering learning, as learners were not given the necessary opportunities to be able to perform the activity with success.

In contrast, Teacher 15 (Standard 2, Chichewa, HP school) was teaching an activity titled “Reading Words,” seen below.

Table 6. Reading Words Activity

Reading Words. Now we will learn to use syllables we have learned to read words. We will say each syllable in a word and read the word. After saying all the syllables in a word, I will move my finger under the word and we will read it. I will point at each letter and you will say the sound. After saying all the sounds in a word you will read it.

TEACHER	TEACHER AND LEARNERS	LEARNERS
I will point at each letter in a word on the chalkboard and say, Look here. **mla mba** *move my finger under each word and read* **mlamba**	Now let’s do together. Remember to say the sound as I point to each letter. Teachers points at each letter in a word on the chalkboard. Teacher and learners say the sounds in each word **mla mba** and read **mlamba.** Continue with other examples **mleme, mlime, mlimi, mlosi.**	Now do it on your own **mlamba.** Continue with other examples such as **mleme, mlimi, mlosi, mlomo, mluzu.**

The teacher modified the activity by adding paired work and group work to the *You do* segment of the activity, asking students to read the words first in groups and pairs before reading it individually. This modification was coded as helping learning, as the teacher effectively scaffolded student learning. Structural modifications largely were coded as hindering learning, instead of helping learning or being neutral. Modifications ranged from imposing a structure on Chichewa Standard 1 lessons due to the lack of an explicit structure in the teacher’s guide, to changes in the level of scaffolding in the *We do*, to changes to the organization of the work in the *You do*. Based on the data presented above, there are several key areas that may benefit from more intensive focus in materials development, teacher training, and follow-up support.

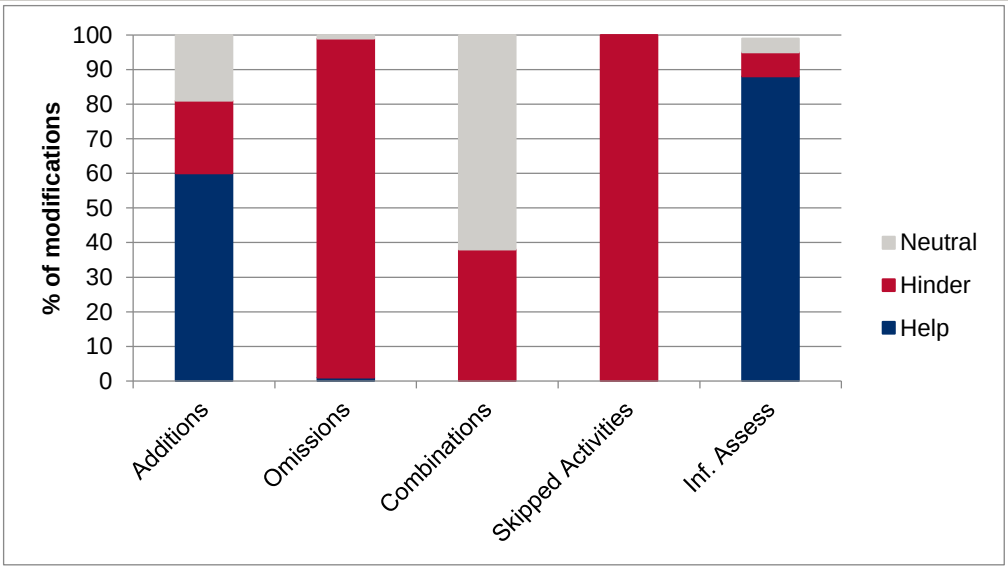
- Standard 1 Chichewa teacher’s guides should explicitly detail the gradual release model.
- Teacher training and school-based coaching should support teachers in understanding the purpose of the *We do* section and provide them with ample practice on implementing the *We do* section.

- Teacher training and school-based coaching should discuss the purpose of the *You do* section and the importance of providing all learners with an opportunity to practice the skill that has just been taught.

4.2.2 CONTENT MODIFICATIONS

Of the content modifications, 52% were coded as hindering meeting the learning objectives of the lesson, with 38% coded as helping. Thus while a majority of content modifications were hindering the lesson, there was also a substantial proportion of modifications that supported the objectives of the lesson. ***Figure 7*** shows the breakdown by the categories of the different modifications within content modifications. Additions and Informal Assessments were the most likely to be coded as helping the lesson, while skipped activities and omissions were most likely to be coded as hindering the lesson. The majority (62%) of modifications where the teacher combined activities had a neutral effect on the objectives of the lesson.

Figure 7. Percentage of Categories of Content Modifications Coded as Help/Hinder/Neutral



Additions

The majority of additions were coded as helping learning. Additions consisted of singing songs that were relevant to the learning objective, incorporating additional words or sentences to provide students with extra practice, using additional informal language or realia to expand learners' understanding of vocabulary words, assigning relevant homework, and explicitly connecting the lesson of the day with the learning from the previous day. For example, Teacher 6 (Standard 2, Chichewa, LP school) was teaching the activity below, titled "Reviewing Meanings of Words."

Reviewing Meaning of Words: I will read words and ask you to give their meanings. The words are: mkeka, mkaka. Say mkeka (learners say mkeka). Do the same with these words: mkute, mkoko, mkaka, mkate, mkono, mkuku. Put your hand up if you know the meaning of word mkute, mkoko, mkaka, mkate, mkono, mkuku, (Learners put their hands up). If more than half of the class put their hands up, tell them to share the meaning of the word with a colleague next to them. If the less than half of the class put their hands up, tell them the meaning of the word. The meaning of the word mkate: mtundu wa chakudya mkute: chakudya chotsala chogona, mkaka: chakumwa, chocokera m'mawere. Use the words mkaka, mkeka, mkono, mkate, mkute, mkoko, mkuku meaningful sentences.

During the classroom discussion, the teacher realized that the learners could not tell the difference between the target word "mkeka" which means mat and "mphasa'" which is another type of mat used for a different purpose. She took out examples of both types of mats and engaged learners in conversation to expand their vocabulary knowledge of the two different words, as seen in ***Figure 8*** above. By doing this, the teacher added to the content of the lesson in a helpful way, enhancing the quality of learner's vocabulary.

Figure 8. Teacher 6 Using Realia as a Helpful Modification

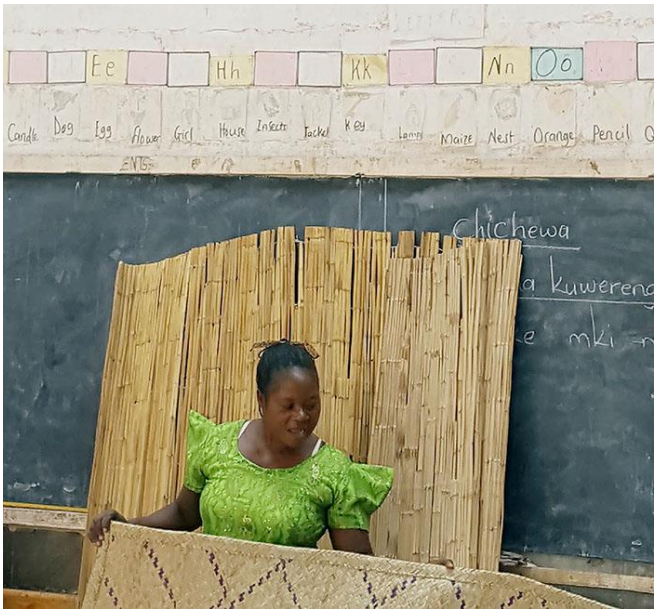


Photo credit by: Monika Mattos, RTI International

Teacher 12 (Standard 2 Chichewa, LP school) added content to an activity titled "Review Reading Word Cards," seen below. This was the introduction to a lesson.

Introduction. Review reading words from word cards. The words are mgaiwa, mgolo, mgula, mgugu. Assist learners who have problems reading words.

Before asking learners to read the four words listed above, the teacher wrote four syllables on the board: *mga, mge, mgi*, and *mgo*. The teacher then reviewed the beginning syllables for each of the words that learners were supposed to read. By doing this, the teacher helped meet the objectives of the lesson by adding content that was relevant and met the needs of her students.

However, not all modifications that were additions to the content were coded as helping: 21% of modifications hindered the objective of the lesson. Teacher 12 (Standard 2, English, LP school) was teaching the activity below, "Blending Sounds to Make Words" (***Figure 9***).

Figure 9. Blending Sounds to Make Words

Activity 4.2.1 Blending sounds to make words **10 minutes**

Today we will make words from sounds. I will say the sounds and make words. I will say the sounds and we will make words together. Then I will say the sounds and you will make words on your own.

Teacher	Teacher + Learners	Learners
• Listen: /f/ /i/ /g/. The word is *fig.* • Listen: /o/ /f/. The word is *off.* • Listen: /f/ /i/ /n/ /i/ /sh/. The word is *finish.* **Teacher tip** Pause between each sound. You may hold up one finger as you say each sound. Move closer to the learners so that all get a chance to hear the sounds.	• Now I will say the sounds. You will say the word with me. • *Say:* /f/ /i/ /g/. What is the word? (*Teacher and learners say:* fig.) • *Say:* /o/ /f/. What is the word? (*Teacher and learners say:* off.) • *Do the same with* finish.	• Now I will say the sounds. You will say the word. • Listen: /f/ /i/ /g/. What is the word? (*Learners say:* fig.) • Listen: /o/ /f/. What is the word? (*Learners say:* off.) • *Do the same with* finish. • *Repeat with groups, pairs and individuals.*

The purpose of this activity was to support students in developing their phonological awareness in English by listening to sounds and blending them orally to make words. The teacher modified the activity by adding the written letters f-i-g on the board. He pointed to each letter as he made the sounds, transforming the activity from oral blending to reading of the letters on the board. The lessons in the guide book are deliberately sequenced to build on developmental trajectories of learning and provide opportunities for students to orally blend sounds before blending them with the written symbols. This modification was thus coded as hindering the objective of the lesson, as the modification transformed the intended purpose of the activity.

Informal assessments

The use of informal assessments as modifications to the lessons was mostly coded as helping the lessons. Modifications included teachers asking learners if they had questions, informally observing learners' classwork, and requesting that learners justify their answers to thumbs up/down activities.

Teacher 3 (Standard 1, English, MP school) was instructing learners in an activity "Singing a Song: Show me h", seen in ***Figure 10*** .

Figure 10. Singing a Song: Show Me h

Activity 5.4.2 Singing a song: *Show me* h **5 minutes**

Now we will sing a song, I will sing the song. We will sing the song together. Then you will sing the song on your own.

Teacher	Teacher + Learners	Learners
• *Sing:* Show me **h**.	• Let's sing the song together. • *Teacher and learners sing the song together as a whole class, in groups, and individually.*	• Now it's your turn, class. Sing the song on your own.

After the song, the teacher asked the learners several times, "This letter is what?" By asking this question the teacher was able to informally assess if learners knew the name of the target letter. This modification provided the teacher with an understanding of her students, which improved the overall quality of the instruction.

In other instances, teachers used what they learned from these informal assessments to give immediate feedback to the learners. For example, Teacher 14 (Standard 1, Chichewa, HP school) was teaching the activity "Reviewing Letters and Sounds," seen below.

Reviewing letters and sounds: Look at the section that has a star on page 10 of the Learners' Book. Point at each letter and say its name u, U, M, e. Now point at each letter and say its sound u, U, m, M, e, E.

While learners were practicing the sounds individually, the teacher moved around the classroom and listened to individual learners. She provided verbal feedback to learners who were struggling. The use of this informal assessment at the end of the lesson enhanced the quality of the lesson and may indicate that checking for understanding and using this information to address learners' needs are elements of teaching that teachers may be ready to discuss, think, and learn more deeply about.

Figure 11. Matching Numbers with Words View

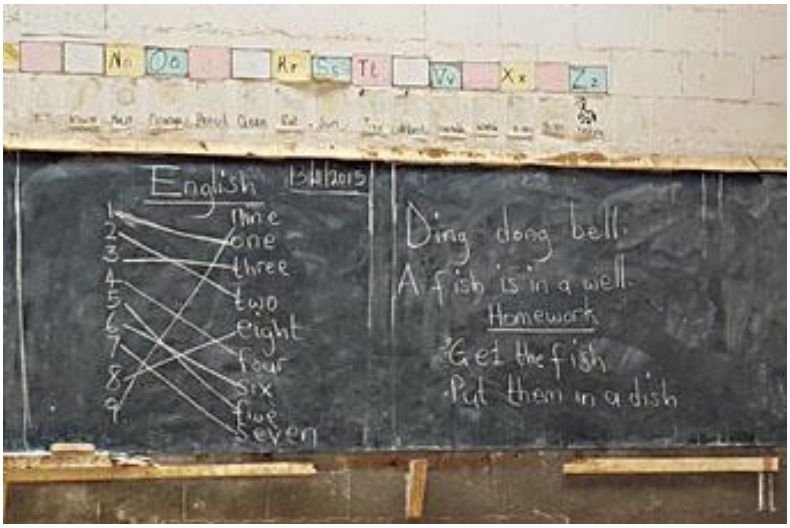


Photo credit by: Monika Mattos, RTI International

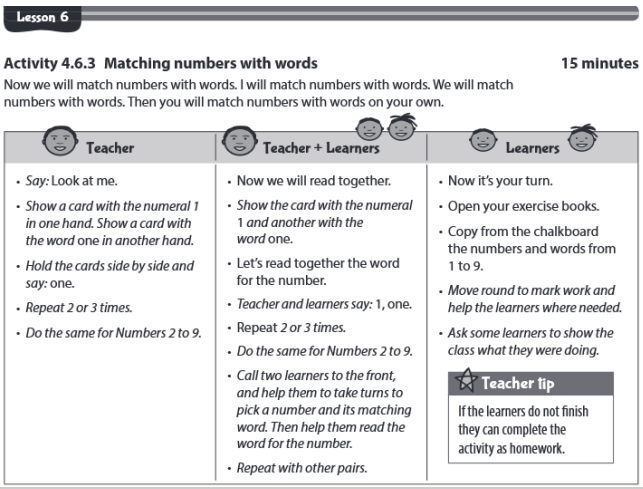
Teacher 7 (Standard 2, English, LP school) was teaching the activity in ***Figure 11*** and ***12,*** "Matching Numbers with Words."

After the activity, the teacher created a matching activity on the board to check for understanding, seen in the photo below. This modification helped the teacher meet the objectives of the lesson.

Omissions

Of modifications that omitted content, 98% were coded as hindering the objectives of the lesson. Omissions consisted of the removal of target words and/or procedures within the activity. These omissions took away learners' opportunity to broaden their vocabulary; practice reading words with particular target letters and sounds; make sentences using target words; understand the meaning of words through a teacher's gestures, illustrations, or realia; and/or write letters, words, or sentences. Teacher 5 (Standard 1, English, LP school) was teaching the activity "Identifying the Letter g," seen in ***Figure 13***.

Figure 12. Matching Numbers with Words



Lesson 6

Activity 4.6.3 Matching numbers with words **15 minutes**

Now we will match numbers with words. I will match numbers with words. We will match numbers with words. Then you will match numbers with words on your own.

Teacher	Teacher + Learners	Learners
• *Say:* Look at me. • *Show a card with the numeral 1 in one hand. Show a card with the word* one *in another hand.* • *Hold the cards side by side and say:* one. • *Repeat 2 or 3 times.* • *Do the same for Numbers 2 to 9.*	• Now we will read together. • *Show the card with the numeral 1 and another with the word* one. • Let's read together the word for the number. • *Teacher and learners say:* 1, one. • Repeat *2 or 3 times.* • *Do the same for Numbers 2 to 9.* • *Call two learners to the front, and help them to take turns to pick a number and its matching word. Then help them read the word for the number.* • *Repeat with other pairs.*	• Now it's your turn. • Open your exercise books. • Copy from the chalkboard the numbers and words from 1 to 9. • *Move round to mark work and help the learners where needed.* • *Ask some learners to show the class what they were doing.* **Teacher tip** If the learners do not finish they can complete the activity as homework.

The *I do* segment stated that teachers should tell the learners the sound of the letter *g* in addition to the name of the letter g. The teacher omitted the sound of the letter g, deleting valuable content from the activity. Because of this, the modification was coded as hindering, as it did not allow the teacher to meet the objective of the lesson.

Figure 13. Identifying the Letter g

Activity 4.9.1 Identifying the letter *g* **10 minutes**

Now we will name the letter **g**. I will name the letter. We will name the letter together. Then you will name the letter on your own.

Teacher	Teacher + Learners	Learners
• *Show the small letter **g** to the learners on a letter card.* • *Say:* The letter name is **g**. • *Repeat 3 or 4 times.* • *Say:* the letter sound is /**g**/. • *Repeat /**g**/ 3 or 4 times.* • *Show the letter card with small **g** and big **G**. Point to each and say:* Small ***g***, big ***G***. • Repeat this 3 or 4 times.	• Let's say the letter name together *Show the letter card with small **g**. (Teacher and learners say **g** together.)* • *Repeat this 3 or 4 times.* • Let's say the letter sound together. *Teacher and learners say /**g**/ together.* • *Repeat this 3 or 4 times.* • *Show the letter card with small **g** and big **G**.* Let's say together: Small ***g***, big ***G***. • *Repeat this 3 or 4 times.*	• Now say the letter name on your own. • *Show the letter card and say:* The letter name is ____ . *(Learners say **g**.)* • *Repeat this 3 or 4 times.* • *Show the letter card and say: The letter sound is ____ . (Learners say /**g**/.)* • Now open your books at page 23. Point to small **g**. Point to big **G**. Close your books. • In pairs, point to small **g** and big **G** in the classroom.

Skipped Activities

Of the modifications coded as skipped activities, 100% were also coded as hindering. It is no surprise that when teachers modified the lesson by skipping an entire activity, the objectives of the lesson were not met. Skipped activities, which occurred most frequently in Standard 1 Chichewa classrooms, took away the scaffolds set in place in the sequence of the scripted lessons. It is plausible that although Standard 1 teachers are taught in the training to teach the approximately 15 activities over two days, they may think that the content should be taught in one day since the string of activities in the teacher's guide is referred to as a lesson. When trying to fit all activities into one day, teachers needed to skip activities, a factor that will be explored further below.

Combinations

Modifications in which teachers combined two or more activities were largely neutral (62%), though 38% hindered learning. Neutral modifications consisted of a pairing of activities that were related. For example, Teacher 14 (Standard 1, Chichewa, HP school), was teaching a lesson including the letter e. There were three related activities: learning a new letter name e, learning a new letter sound e, and writing a new letter e. Instead of teaching these three skills as three distinct activities, the teacher combined all three, and taught the letter name, sound, and how to write it all at the same time. This was coded as neutral because, while the lesson developers intended for the three activities to remain separated, perhaps to ensure that the three skills were all taught, combining the skills still met the lesson

objectives. It may be that teachers combined similar activities together to save time, especially in Standard 1 Chichewa lessons.

However, some modifications combining activities were coded as hindering. Teacher 1 (Standard 2, Chichewa, MP school) was teaching a series of activities, “Writing Words,” “Reviewing Meaning of Words,” and “Hand Writing,” seen in ***Table 7***.

Table 7. Combined Writing Activities

Writing words: now we will use the blend mf to write words. I will say the blend mf and write a word mfolo on the chalkboard. Then we will write the words together. After writing the words, I will ask you to point to the words with mf. Continue with other words.

TEACHER	TEACHER AND LEARNERS	LEARNERS
▪ Put your finger below the word on the chalkboard and say: – Look here: mfo lo – mfolo	▪ Now let’s do together. Remember to say the sounds as I write the word. ▪ Teacher writes each letter in a word on the chalkboard. ▪ Teacher and learners read the syllables in each word ▪ /m/ /f/ /o/ /l//o/ and read mfolo ▪ Continue with other examples **mfumu, mfiti, imfa, mfiti**	▪ Now do on your own. The word is mfolo ▪ Continue with other examples such as **mfumu, mfiti, mfulu, mfuko, imfa, mfuti**

Reviewing meanings of words: Review meanings of words with learners. Ask them to make meaningful sentences. The words are: mfumu, mfiti, mfulu, mfuko, imfa, mfuti

Hand writing: Now we will write words and a sentence. The words are: mfiti, mfolo, mfuti, and the sentence is: asirikari ali pa mfolo. I will write the words and the sentence on the chalkboard. We will write together, then you will write the words and the sentence in your exercise books. Assist learners where necessary.

These three activities form a sequence of learning, beginning with writing words, then understanding their meanings through making sentences, and then writing the sentences. Instead of following that sequence, the teacher began by writing the sentence in the third activity, asirikari ali pa mfolo, and then moving backwards through the activities. By doing this, the teacher may have hindered the learning in the lesson, as learners did not receive the scaffolds in place of first writing words with the /mf/ blend and discussing their meaning before being asked to write sentences with the words.

Overall, content modifications tended to fall into groups: additions and informal assessments tended to be coded as helping the learning process, while the majority of omissions and skipped activities were coded as hindering. Combinations were largely neutral, and in a few cases they hindered the learning process. Based on the data presented above, there are several recommendations for teacher training and materials development.

- Many helpful additions that teachers made to content, such as the use of realia and extra words for practice, can be incorporated into the teacher's guide. Teacher training can support this by communicating to teachers which types of additions may be helpful for learning, and which types may hinder learning.
- Informal assessment may be a valuable skill that teachers bring to the lessons. Informal assessment can be encouraged during teacher training, with specific examples given to support teachers (e.g., justification during thumbs up/thumbs down, checking for understanding at end of lesson, providing verbal feedback). Some of these strategies can also be incorporated into the teacher's guide.

Efforts can be made to limit the amount of content that teachers omit, skip, and/or combine in the teacher's guide. Reviewing the number of activities in a particular lesson and ensuring that they fit within the allotted time can help. Activities can be reviewed to see where it may make sense to combine skills. And finally, teacher training can support teachers in learning that lessons are designed with a particular sequence in mind and help them understand how one activity may scaffold the next.

4.3 CLASSROOM MANAGEMENT

Classroom management modifications were the most likely to be coded as helping meet the overall objectives of the lesson. Classroom management modifications involved singing songs, clapping, call and response, and physical activities to redirect attention, mark transitions, build community, and address low engagement. In addition, changes to the use of materials and/or flow and access of materials were also included in the classroom management code. For example, consider Teacher 8 (Standard 1, Chichewa, HP school). After finishing an activity titled "Letter Spellings," which was the 6th activity of a total of 15 activities in the lesson, the teacher decided the learners needed a break and sang an energizer song.

Other ways that teachers used classroom management modifications to help learning included spending additional instructional time singing community-building songs to start off a lesson, celebrating the learning that took place at the end of a lesson, and marking a transition to Chichewa reading instruction. Teachers also clapped to redirect attention, code switched to explain directions,

and encouraged peer praise and exclamations of “Wuhu!” to celebrate learners’ efforts. This evidence of teacher practice indicates that teachers take a great deal of time and effort in managing classroom behavior and helping learners internalize social behaviors appropriate in a classroom setting so that the actual teaching of the lesson can take place.

Teacher 14 (Standard 1, Chichewa, HP school) was coded as helping meet the lesson objectives. The lesson on “Reviewing Words” asked students to look at a picture in their learner’s book, then point to and read words. Instead, the teacher used a chart for the picture, and then used word cards for the students to read. This modification was coded as helping because, for a quick activity, the use of the word cards and charts was quicker and easier than distributing all learners’ books, and helping children open to the correct page. However, it is important to note that even though this modification was coded as helpful in this particular instance, such practices do remove opportunities for students to learn about concepts of print (as they do not have the words directly in front of them) and practice handling the learner’s book, both of which are important skills for students to develop.

Although a majority of classroom management modifications were coded as helping meet the objects of the lesson, 17% were coded as hindering the learning process. Some teachers may have needed support in implementing effective classroom management strategies. This entails learning how to best balance the implementation of relevant classroom management strategies without compromising the time allotted for actual teaching. For example, Teacher 8 (Standard 1 English, HP school) was teaching an activity titled ”Naming Objects Beginning with the Letter h”, which was allotted 12 minutes. The teacher instead took 21 minutes for this activity. While the additional time may have benefitted learners, the overall lesson objective may have been compromised because there was less time to complete the other activities.

Another type of classroom management modification that was coded as hindering was how to effectively facilitate the access to and flow of learning materials. For example, Teacher 8 (Standard 1 Chichewa, HP school) was teaching a lesson that asked learners to point to and read words on page 16 of the learner’s books. The teacher took four minutes of instructional time to help learners find the right page. While important to the objective of the lesson, this modification revealed that the teacher did not have a working system in place, in the context of the large class size, to distribute learner’s books or help learners turn to the right page even when they do not know their numbers. This may have hindered the learning process because either a significant amount of instructional time was spent opening to the right page, or, if teachers decided not to use the learner’s books, some learners did not consistently have the opportunity to hold the book in their hands and to practice reading directly from the text.

4.4 TEACHERS' PERSPECTIVES ON THE MODIFICATIONS

There were 188 instances in which teachers provided an explanation for a modification they made. It is important to remember that teachers were not asked to provide justifications for all modifications. It was up to the researchers' discretion to ask about the modifications. For this reason, it is important to not over-interpret the trends and patterns discussed below. For example, higher frequency for one pattern overall does not necessarily mean that that pattern is more prevalent than others; it may be that a particular modification that falls into that pattern was asked about more often.

Below, we look at the data in two ways. First, we describe the overall patterns according to the modifications. Then, we look at each modification type in detail to understand which patterns emerged within modifications.

There were 8 patterns that emerged from the data. It is noteworthy that 7 of the 8 (all except the "forget" pattern) involved teachers making conscious decisions to modify the content and/or structure of the lesson (***Table 8***). The explanations show that teachers are thinking about what their students know, what they can and cannot do, and embedding opportunities to provide extra practice and checks for understandings. The explanations also highlight teachers' pedagogical content knowledge for teaching early grade reading.

Table 8. Teacher Explanation Patterns

PATTERN	DESCRIPTION	EXAMPLE
Too Difficult (n=31)	Teachers said they modified the lesson because either the content and/or the structure were too difficult for the students.	Teacher 11 (Standard 1, Chichewa, LP school) was teaching a lesson about segmenting words. She omitted the *You do* section, and explained that she thinks the *You do* should be omitted in Standard 1 because it is too difficult for students to do on their own.
Inappropriate Content and/or Structure (n=40)	Teachers said they modified the lesson because the content and/or structure were either too easy, or somehow inappropriate or missing an element (e.g., a particular word was not aligned with the goal of the lesson, students should also be writing a letter in addition to reading it), there was a song that fit the goal of the lesson better than the one in the T-Guide, or the content in two separate activities was better paired together than separated).	Teacher 14 (Standard 1, English, HP school) was teaching the activity "Naming Objects Beginning with the Letter h." During the *We do* section, instead of asking 2 learners to come to the front of the classroom and ask and answer questions, the teacher called on various students to point to words on the

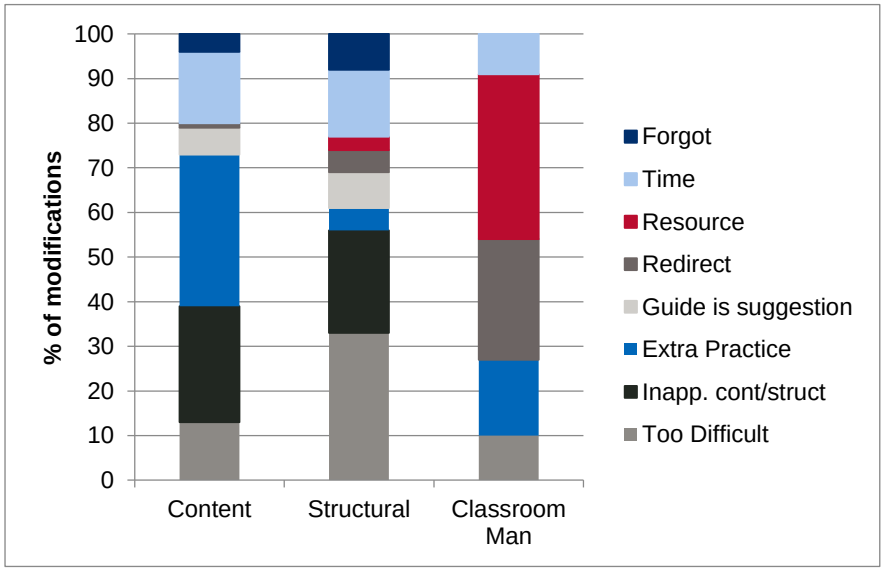
PATTERN	DESCRIPTION	EXAMPLE
		wall that start with the letter h. The teacher explained she thought learners should see the letter h in the context of a whole word.
Extra Practice (n=48)	Teachers said they modified the lesson because students needed extra practice. These modifications were both in content (e.g., adding extra words) and structure (asking multiple students to demonstrate), and included checking for understanding.	Teacher 1 (Standard 2 Chichewa, MP school) was teaching a lesson on reading words that begin with mf. The teacher added 5 words during the *I do* section, and explained that one example was not enough for students to learn.
Guide Is a Suggestion (n=10)	Teachers stated that the teacher's guide is only a suggestion and that teachers should modify the content as they see fit.	Teacher 6 (Standard 1, Chichewa, LP school) substituted words during an activity identifying words beginning with the letter f. The teacher explained that the guide is just a guide, and that they can use any words they want to as long as they are doing the intended activity.
Redirect (n=11)	Teachers said they needed to redirect student attention, often through a song or break.	Teacher 11 (Standard 1, Chichewa, LP school) had learners sing a song before Activity 7. The teacher explained that the learners were very tired at this point and needed a break.
Resource (n=12)	Teachers said they modified use of a resource because it could not be used as stated in the teacher's guide.	Teacher 8 (Standard 1, Chichewa, HP school). The learners were asked to review syllables. The teacher wrote the syllables on the board instead of having learners read them in their book. The teacher explained that the learners were getting confused with the book because they sit too close to each other and are distracted when they hear other learners reading out loud.
Time (n=28)	Teachers said they modified an activity due to a lack of time.	Teacher 14 (Standard 1, Chichewa, HP school) skipped the comprehension activity, which was

PATTERN	DESCRIPTION	EXAMPLE
		activity number 12. She explained that the learners were tired, and that comprehension should be a lesson on its own.
Forgot (n=8)	Teachers said they forgot to do a particular part of the lesson.	Teacher 12 (Standard 2, English, LP school) omitted a word during the *I do* section. The teacher explained that he forgot the word.

4.4.1 WITHIN MODIFICATION CATEGORIES

There were 119 explanations given of content modifications, 39 structural modifications, and 30 for classroom management modifications. In ***Figure 14*** we highlight some predominant patterns.

Figure 14. Predominant Explanation Patterns



4.4.2 CONTENT MODIFICATIONS

Of the content modifications that had teacher explanations, 38% of the explanations were coded as extra practice (n=41), meaning that teachers felt that their students needed more practice with a particular aspect of the lesson. This extra practice manifested in additions to the content as well as in changes to the structure of the lesson. For example, Teacher 16 (Standard 1 Chichewa, LP school) was teaching an activity about reading syllables and added an extra syllable, *ma*. When asked about her reasoning, she said that she did not think the

learners understood with her first example, so she added another word to reinforce the concept and provide extra practice. This modification suggests that some teachers are actively assessing children's understanding as they teach the lessons and modifying the content to better meet their students' needs.

In addition to extra practice, teachers also felt that they needed to check students' understanding to see if they were grasping the content. For example, Teacher 10 (Standard 2 Chichewa, HP school) added content to an activity titled "Reading Words with the Initial Letter *j*," seen in ***Figure 15***.

Figure 15. Reading Words Activity

Activity 5.8.3 Reading words with the initial letter *j* **10 minutes**

Now we will read words that begin with the letter **j**. I will read the words. We will read the words together. Then you will read the words on your own.

Teacher	Teacher + Learners	Learners
• *Show the word cards with the following words, or write them on the chalkboard one at a time:* jam/jeans/join. • *Read each word 2 or 3 times.*	• Now we will read together. • *Read with the learners the following words, one at a time:* jam/jeans/join. • *Repeat each word 2 or 3 times with the whole class, groups, pairs and individuals.*	• Now you will read on your own. Be in pairs. Open your books at page 36. • Take turns to read all the words on the page. • *Move round the class to observe and help the learners where necessary.* • *Ask some pairs to show the class what they were doing.*

After modeling how to read the words *jam/jeans/join* in the *I do*, and then reading them together in the *We do*, the students were asked to read the words on their own in the learner's book while the teacher moved around and observed and supported struggling learners. The teacher modified the content by asking learners to point to the words in the learner's books as they read the words. When asked why she asked learners to point to the words, she said she wanted to check if learners were actually reading the words or if they had simply memorized them from the *I do* and *We do* sections. This extra check for understanding was coded as a helpful modification, as it allowed the teacher to quickly and informally assess students' ability to read the words they had just practiced.

Of these content modifications with an "extra practice" code, a large majority (90%) were also coded as helping learning, suggesting that when teachers modified content with the intention of providing students with extra practice and checking for understanding, it was expected to support student learning.

Twenty-six percent of content modifications with explanations were coded as *inappropriate content and/or structure*, meaning that teachers modified the content in some way because they felt the content was either too easy or did not align with the goal of the lesson. For example, Teacher 5 (Standard 1, English, LP school) was teaching an activity titled "Naming Objects," where children were shown a picture and asked to say the word (see ***Figure 16***). All the words began with the letter *g*. The teacher modified the lesson by asking learners to also write the letter *g* in the air and on the floor. When asked why, the teacher responded that she did not think it was appropriate for learners to learn words without also practicing how

to write the word. The teacher may not have fully understood that this activity was focusing on vocabulary development as well as building oral language in English. Therefore, the teacher modified the content because she thought the directions were not aligned with her perceived goal of the activity. A majority of the time that teachers modified the content because they thought the content or structure was inappropriate, the modifications were coded as hindering learning.

Figure 16. Naming Objects Activity

Activity 4.8.1 Naming objects **10 minutes**

Today we will name objects. I will name the objects. We will name the objects together. Then you will name the objects on your own.

Teacher	Teacher + Learners	Learners
• *Show learners a picture, a model, or a real object, one at a time, beginning with the letter* ***g****.* • *Ask:* What is this? *Answer:* It is a goat. • *Repeat this 3 to 4 times.* • *Ask:* What is this? *Answer:* It is a girl. • *Repeat this 3 to 4 times.* • *Repeat for the other two objects:* gate *and* gun.	• *Hold up an object or picture of the object. Ask:* What is this? • *Answer together with the learners:* goat/girl/gate/gun. • *Repeat with learners several times (whole class, in groups, and individually).* • *Invite two learners to the front with their learners' books to ask:* What is this? *Answer:* goat/girl/gate/gun.	• Now open your books at page 23. • In pairs, point to an object to ask: What is this? Answer: It is a goat/girl/gate/gun. • *Ask some pairs to show the class what they were doing.*

Of content modifications with teacher explanations, 18% were coded as time. Often these teachers omitted or skipped activities due to a lack of time. Most of the time, these modifications tended to hinder student learning, as students were not exposed to certain parts of the lesson, and may have lost opportunities to practice. For example, Teacher 15 (Standard 2, Chichewa, HP school) omitted several words during a review activity taking place in an introduction to a lesson because she said she did not have enough time to review all the words.

Although only 13% of all modifications were content modifications made because teachers said the content was too difficult, these are worth investigating as they reflect on teachers' knowledge of the content and knowledge of their students. The data suggest that some teachers in this sample understood what their students could and could not do and modified the content accordingly. For example, Teacher 14 (Standard 1, Chichewa, HP school) was teaching an activity about reading words and omitted several words, including *mkeka*. When asked why it was omitted, the teacher said that children had not learned consonant clusters like *mk* before; they had only learned the consonant, vowel combinations. In this case, the teacher thought the content was too difficult for her learners and decided to omit it.

While some teachers may have modified content because they thought something was too difficult, it may have been that the content was actually appropriate. For example, Teacher 3 (Standard 1, Chichewa, MP school) skipped an activity in which learners were supposed to say the sounds of the letters that the teacher wrote on the board. The teacher explained that she skipped the activity because it was Term 1, and the learners could not yet read. This teacher may not have understood that having students practice reading the letters was intended to teach them to read, and that students did not need to already know how to read before doing this activity.

Some teachers directly or indirectly stated that they modified the lessons because they felt that the *teacher's guide was only a suggestion*, and that they are supposed to teach the lesson as they see fit. For example, Teacher 17 (Standard 2, Chichewa, LP school) was teaching an activity titled "Identifying letter sounds" (***Figure 17***). During the *You do* portion, the teacher omitted the words *mbuzi* and *kwiya* and replaced them with *mgula*. When asked why, the teacher said that it did not matter which words were used as long as they started with the correct first letters, *mg*. However, the teacher may have misunderstood the purpose of the chosen words, which was to provide children with some words that started with the target sound, and some that did not, so that teachers could differentiate between the sounds. Teachers' interpretation of the teacher's guide as only a guide, without a full understanding behind the purpose of the different activities, may reduce the number of varied learning opportunities for students.

Figure 17. Identifying Letter Sounds Activity

Identifying letter sounds. Today we will learn a new sound /mg/. I will say a word. If it begins with /mg/ point your thumbs up. If the word does not begin with /mg/, point your thumbs down.

TEACHER	TEACHER AND LEARNERS	LEARNERS
▪ The sound is **/mg/** ▪ The word is **mgaiwa**. The word begins with /mg/. I point my thumbs up. ▪ The next word is **mfolo**. Does not begin with **/mg**/, I point my thumbs down.	▪ Let's say **/mg/** together ▪ *Learners and teachers say **/mg/**.* ▪ Now, I will say a word. If it begins with **/mg/** we point our thumbs up. If the word does not begin with /mg/, we point our thumbs down. ▪ The first word is **mgaiwa**. (*Teacher and learners point thumbs accordingly*). ▪ Continue with other examples: **mgolo, mgonero, mgula, mbuzi, kwiya.**	▪ Now you will say the letter sound on your own. ▪ The letter sound is … ▪ *Learners say **/mg/.*** ▪ *Now I will say a word*. If it begins with **/mg/** you point your thumbs up. If the word does not begin with **/mg/**, you point your thumbs down. ▪ *The first word is **mgaiwa*** (*learners point thumbs accordingly*). ▪ *Continue with other examples: **mgolo, mgonero, mbuzi, kwiya.***

4.4.3 STRUCTURAL MODIFICATIONS

Teacher explanations for most of the structural modifications they made were coded as either too difficult or inappropriate content and/or structure. Thirty-three percent were coded as too difficult, meaning that the teachers modified the structure in some way because they thought the lesson, as is, was too difficult. A majority of these were coded as hindering learning, suggesting that when teachers changed the structure of a lesson because they thought it was too difficult, it tended to hinder learning. For example, Teacher 16 (Standard 1, English, LP school) was teaching a lesson that began with a song titled "Clap Your Hands." Instead of singing with the class, as instructed in the guide, the teacher sang the song alone. When asked why, the teacher said it was because learners did not know the song, so they could not sing it.

When teachers modified the structure because they felt it was somehow inappropriate, most of the time the modification tended to hinder student learning. For example, Teacher 16 (Standard 1, Chichewa, LP school) was teaching the writing activity in ***Figure 18***. During the *We do* section, the teacher did not say the sounds in the word together with the students, but instead said the sounds and then had students chorally repeat. When asked why, the teacher said that he knew that they were supposed to do the *We do* section together, but that it was awkward. By doing this, the teacher did not provide students with an opportunity to engage in guided practice before moving to the *You do* section.

Table 9. Writing Words Activity

Writing words. Now we will learn to use letter sounds to write words. I will say each sound in a word as I write it. We will say each sound of a letter in a word and we will write it. Then I will say a word and you will say the sounds in the word as you write it.

TEACHER	TEACHER AND LEARNERS	LEARNERS
The word atate. I will say the sounds in the word as I write it /a/ /t/ /a/ /t/ /e/ …atate	Now let's do together. Remember to say the sounds as I write the word. Teacher writes each letter in a word on the chalkboard. Teacher and learners say the sounds in each word /m/ /u/ /t/ /u/ and read mutu.	Now I will say the word and you will write it in your exercise books. Point at the chalkboard and say your "your word should look like this. Continue with other examples such as tuma, atate.

4.4.4 CLASSROOM MANAGEMENT MODIFICATIONS

There was less variation with the explanations for classroom management modifications. Many of the explanations in this category (27%) were coded as redirect, where teachers used a strategy such as a song or movement to capture students' attention and motivate them. A majority of these modifications were coded as helping learning, suggesting that teachers were accurately able to read their students and understand when they either needed a break or needed added motivation to continue the lesson. For example, Teacher 1 (Standard 2, Chichewa, MP school) used a song after an activity. When asked why, she said she used the songs to get the attention of the learners and motivate them. Of the explanations for classroom management modifications, 37% were coded as "resource," where teachers said they made modifications because it was not possible or practical to use the resources as stated in the teacher's guide. For example, Teacher 14 (Standard 1, Chichewa, HP school) was teaching an activity that asked learners to point to letters in their learner's books and say the letters' sound. Instead, the teacher wrote the letters on the board and asked learners to read them. When asked why, the teacher said that distributing the books would have taken a long time. Then, she would have had to help learners find the right page and check each learner to make sure they are on the right page. This would have taken too long and disrupted the flow of the lesson. Although the modifications make sense given the context, the learners were not able to individually point to letters and read them in their books, which alters the nature of the practice.

In sum, the analysis of teacher explanations point to teachers' actively using the teacher's guide in conjunction with their knowledge of their students and the learning process. Although teachers' explanations for modifying lessons were varied, underlying the explanations was thoughtfulness and agency. Most teachers were not simply forgetting parts of the lessons, or exclusively changing content because they did not understand how to follow the lesson; instead, they were modifying content and structure because they thought it best met the needs of their learners. Many of these modifications enhanced the quality of the lesson and helped learners achieve the objectives of the lesson. Other modifications did not support learners in meeting the objectives of the lesson and point to revisions needed in the materials and teacher training to address gaps in teacher's knowledge about reading pedagogy, as well as to alterations necessary to the lessons themselves.

5. CONCLUSION

The purpose of this study was to shed light on the ways in which teachers were using the SLPs in classrooms in Standards 1 and 2 in order to better understand how and why teachers were modifying the SLPs while teaching. This study used classroom observations and interviews to answer the research question, *In what ways did teachers use the SLPs?* To do this, we observed modifications that teachers made to the SLPs, classified those modifications as being of different types, described patterns in whether modifications helped or hindered the overall quality of the lesson, and then examined why teachers were making the modifications they did. We found that all teachers, whether in low-, medium-, or high-performing schools, made three types of modifications: content modifications, structural modifications, and classroom management modifications.

Content modifications were the most commonly observed across all grades and languages (52%). There were five categories of content modifications. Additions involved teachers adding content to a lesson, such as extra sentences or words. Additions were the most common type of content modification, and 60% of them were coded as helping the teacher meet the objectives of the lesson. Omissions involved teachers deleting content within one activity, such as only asking three out of five comprehension questions. Skipped activities involved a teacher bypassing an entire activity, such as “Identifying Words Beginning with the Letter j.” Not surprisingly, a majority of omission and skipped activity modifications were coded as hindering the overall quality of the lesson, as learners missed valuable content. Combinations involved teachers combining two entire activities together, and were largely coded as neutral, as combining two activities together did not either help or hinder the quality of the lesson. Finally, informal assessments involved the teacher conducting extra checks for understanding, such as asking students for explanations during a “thumbs up, thumbs down” activity. A majority of informal assessments (88%) were coded as helping the overall quality of the lesson, as they provided teachers with a way to understand how their students were progressing.

Structural modifications were defined as changes to the gradual release model of instruction, which involved an *I do, We do*, and *You do* section for each activity. A majority of structural modifications were coded as hindering the overall quality of the lesson. Many of these modifications took place within the *We do* section of the lesson, where teachers had students repeat after them instead of practicing a new skill together—an important step to prepare students for independent work in the *You do* section. Other modifications took place to the *You do* section, which was

sometimes skipped, reducing students' opportunity to independently practice a new skill.

Classroom management modifications included energizers and songs to redirect learner attention, changes to use of resources, and changes in time allotted to activities. A majority of these modifications were coded as helping the overall quality of the lesson. The actions of teachers to motivate students and keep their attention were positive additions to the SLPs.

A majority of modifications occurred in Standard 1 Chichewa lessons. These lessons had a different formatting than materials for the Standard 2 Chichewa and for English, and contained more activities as one lesson was meant to span two days. Some activities contained explicit guidance for the gradual release model, similar to the other materials, but other activities did not. Because the formatting was less explicit in some activities, combined with the length of the lessons, teachers felt they had to modify the script in some way. This accounts for the large number of modifications in Standard 1 Chichewa.

Teacher explanations suggested that teachers were making deliberate modifications to the SLPS, not simply forgetting or not understanding the formatting of the SLPs. Teachers added extra content to provide students with more practice, they modified content and/or structure that they believed was too difficult or inappropriate for students, and they often inserted energizers to redirect student attention.

Consistent with what has been found in other teacher behavior change research, we assumed that teachers were taking the SLPs and modifying them to suit their needs in the classroom. This detailed portrait of how and why teachers were making modifications was important for two reasons. First, it helped us to better understand the ways in which EGRA's targeted teacher training and coaching succeeded and highlighted the ways in which teachers were using their professional judgment to inform their teaching. Second, it pointed to the ways in which these support efforts have not had the desired effect and provided insight into the reasons why. The results of this study inform next steps for programs in Malawi, which are detailed below.

Modifications that were coded as helping the quality of the lesson can be explicitly named in training and the SLPs as examples of using professional judgment to enhance the lessons. Assuming that teachers will modify the SLPs, it is useful to provide teachers with examples of types of modifications that enhance the lesson. In particular, it may help motivate teachers to know that these are modifications that we observed them doing.

- Conducting daily informal checks for understanding
- Providing students with extra practice of particular concepts/skills
- For Standard 1 Chichewa lessons, combining activities that are similar

- Singing songs, providing frequent praise, and doing energizers when learners are tired and/or to redirect their attention

It is important to understand why teachers made modifications that were coded as hindering the quality of the lesson and to revise approaches to try to discourage these types of modifications. ***Table 10*** below provides some specific recommendations.

Table 10. Recommendations for Teacher Training/SLPs

MODIFICATIONS	EXAMPLE TEACHER EXPLANATIONS	RECOMMENDATION
We do section is not done together with learners, but instead the teacher asks students to repeat after him/her *You do* is not done	Content too difficult for students Structure is inappropriate	Through messaging in teacher training and coaching: -Highlight the importance of the process of learning, instead of the final product, and that it is acceptable and even desirable for learners to make mistakes. -Support teacher reflection on how to interpret and respond to student errors, and utilize student errors as teachable moments. -Use model teachers identified by the study or local team to model effective use of the gradual release model.
Activities are skipped	Not enough time in lesson	When revising SLPs, explicitly make allowance in activity-planning for reasonable transition times between activities. During training, highlight the importance of planning for lessons (even when SLPs are available) in terms of more efficient transitions and thus better use of instructional time Ensure that assessment of the duration of a given activity is explicitly captured and considered during the piloting and subsequent revision of SLPs.

MODIFICATIONS	EXAMPLE TEACHER EXPLANATIONS	RECOMMENDATION
Additions/omissions of words	Content too difficult Students need extra practice	Provide a word bank of target words that teachers can select from, in addition to those included in the *I do, We do, You do* materials, that describe the characteristics for the words (e.g., use words that begin with the target letter h, which students are familiar with) When revising SLPs, develop an approach to communicate decisions behind word choices.
Use of resources altered	Resources can't be used as they are because: -takes too long to find page number in learners book- takes too long to distribute materials	Build on effective classroom management strategies that teachers are already using: songs, clapping, physical exercise to redirect attention and mark transitions Explicit teaching of classroom management strategies for access and flow of materials in the context of large class sizes; e.g., use of monitors to help with learner book distribution, ensuring learners have turned to the correct page, transitioning from whole class to small group work and pair work, modeling for learners what small group work and pair work is supposed to look like and sound like, using slips of paper as pre-placed bookmarks to help children find the correct page more rapidly, etc.
Time management	Too many activities in lessons Too much time spent on distributing materials	Provide repeated opportunities for teachers to practice how to effectively pace as part of their planning and preparation for lessons. Reduce number of activities in SLPs for Chichewa Standard 1.

Although the results of this study point to specific next steps for training and materials, the wider conclusion is that teachers are taking curricula and new ideas they have learned from trainings and adapting them to suit their needs in the classroom, even if those changes run contrary to the training they have received. All of this is consistent with prior research on teacher behavior change as detailed earlier in the report. A more complete understanding of the types of modifications teachers are making, as well as why they are making these modifications, can help us understand how features of a program, such as training and curricula, are enacted in the classroom, and why certain aspects of training and curricula are taken up and others are not. This rich, nuanced understanding contributes to next steps and helps focus future work. In addition, studies such as this one can inform efforts to have teachers reflect on their teaching in order to support them in changing their own attitudes and behaviors around targeted practices.

This study also has implications for further research.

- This study highlighted the different modifications that teachers made, identified which of those modifications may have helped student learning and which did not, and provided some teacher explanations for why they made the modifications they did. However, the sample of teachers was small, and the findings are not generalizable to all teachers in the project. Future studies should confirm if patterns that were identified in this study are generalizable to the wider teaching population.
- In addition, future investigations can compare various types of instruction. For example, a comparative case study of an experienced teacher versus a new teacher may help us to understand how the modifications may differ with teacher experience levels. Another possible comparison may focus on language of instruction (mother tongue versus English). It may also be useful to link observed teacher practices to student learning in classrooms.
- Future studies should focus more on teacher explanations for modifications, and probe teachers for detailed information on why they made the changes they did, what effect they think those changes will have on their students, and provide recommendations for future revisions. This can provide a more complete picture of how and why teachers are making modifications to lessons.
- It would be worthwhile to research several of the recommendations of this study to better understand how they play out in the classroom. For example, if checks for understanding are to be integrated in the teacher trainings, coaching visits, and the SLPs, a detailed study of how they are used in the classroom can inform future efforts.

- There is a need to better understand the complexity and length of time involved with changing teacher practices and to conduct research on how different models impact instruction in the classroom.
    - One model to be explored is focusing several trainings and support visits on a limited number of topics. For example, a project may decide to spend one term focusing predominantly on changing teacher attitudes and practices in their use of the *You do* section of the instructional model. In a subsequent term, a similarly sharp focus could be brought to bear on a different element of the pedagogical approach. When teachers are pressured to change too many behaviors at the same time, the breadth and volume of the training points can become overwhelming with the result that very little change actually takes place. A more incrementalist (and patient) view might encourage implementers to consider tackling different behaviors serially rather than in parallel. For instance, a limited number (1–2) of training points would be introduced each term, with additional points being held in reserve until mastery or significant consolidation of those few initial training points could be realized.
    - Another model that could be explored may be to build an implementation around existing teacher practices, with small but important changes to the content. A study similar to this one can explore how teacher practices change when only small changes are expected of them, and their own practices are validated, versus overhauling an entire curriculum.
    - A study could shed light on how different types of behavior change communication support changes in teacher practice.
- Studies such as this one should be conducted in different countries, with different sets of lessons, to help identify which modifications may be widespread, and which modifications are particular to a context. This information can be helpful in two ways. First, if there are modifications that are found to be widespread, projects can share their approaches to encouraging and/or discouraging these modifications. Second, by identifying modifications that are particular to a context, projects can wisely invest their limited resources to develop methods to encourage and/or discourage these modifications.

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ANNEXES

ANNEX 1. CLASSROOM OBSERVATION TOOLS 1–3

CLASSROOM OBSERVATION TOOL 1

REGULAR LESSON

Time Lesson begins			**Time Lesson ends**		
School		**Region/District**		**Teacher ID**	
Grade		**Language of Instruction**		**Unit**	
Lesson		**Week**		**Day**	

Note to researcher: Use a copy of the Teacher's Guide to compare what the guide says to what the teacher does in the space provided below.

Activity _____	Section	What the Teacher does	My thoughts- follow up questions
Introduction			
	Teacher		
	Teacher + learners		
	Learners		

Activity _____	Section	What the Teacher does	My thoughts- follow up questions
Activity _____	Teacher		
	Teacher + learners		
	Learners		
Activity _____	Teacher		
	Teacher + learners		
	Learners		
Closing			

CLASSROOM OBSERVATION TOOL 2

REGULAR LESSON – PACING TOOL

Time Lesson begins			**Time Lesson ends**		
School		**Region/District**		**Teacher ID**	
Grade		**Language of Instruction**		**Unit**	
Lesson		**Week**		**Day**	

Note to the Researcher: In this pacing tool, the lesson will be observed to determine how long it actually takes the teacher to implement each segment. Have both of the Teachers' Guides available so you can then ask what lesson they are going to teach and readily find it.

Activity	Section	Observation Notes	My thoughts	Follow up questions
Start time: **End time:**	**Introduction**			
Start time: **End time:**	**Teacher**			
Start time: **End time:**	**Teacher + learners**			

Activity	Section	Observation Notes	My thoughts	Follow up questions
Start time: End time:	Learners			
Activity Start time: End time:	Teacher			
Start time: End time:	Teacher + learners			

Activity	Section	Observation Notes	My thoughts	Follow up questions
Start time: **End time:**	**Learners**			
Activity **Start time:** **End time:**	**Teacher**			
Start time: **End time:**	**Teacher + learners**			
Start time:	**Learners**			

Activity	Section	Observation Notes	My thoughts	Follow up questions
End time:				
Start time: **End time:**	**Closing**			

CLASSROOM OBSERVATION TOOL 3

REGULAR LESSON

Time Lesson begins				**Time Lesson ends**	
School		**Region/District**		**Teacher ID**	
Grade		**Language of Instruction**		**Unit**	
Lesson		**Week**		**Day**	

Note to researcher: Select from the questions listed in the “follow up questions” column to ask during the teacher interview. Have the lesson plan available

`	Section	Open-ended Observation Notes	My thoughts	Follow up questions
Introduction				
	Teacher			
	Teacher + learners			

`	Section	Open-ended Observation Notes	My thoughts	Follow up questions
	Learners			
Activity	**Teacher**			
	Teacher + learners			
	Learners			
Activity	**Teacher**			

`	Section	Open-ended Observation Notes	My thoughts	Follow up questions
	Teacher + learners			
	Learners			
Closing				

ANNEX 2. SAMPLE INTERVIEW PROTOCOL (DAYS 1–3)

STDS 1 & 2 TEACHER INTERVIEW QUESTIONS (VERSION 6)

Teacher Interview for Standard 1: English Teacher Interview for Standard 2: English and Chichewa					
Date		**Region**		**Teacher ID**	
Standard		**Language**		**Observation #**	
Interview #					

Demographic Information

Demographic Information			
How many years have you taught primary school?		**How many years have you taught this particular grade?**	
How many years have you taught in Chichewa?		**How many years have you taught in English?**	
How many years have you taught in the EGRA program?		**What is your first language**	
What is your second language?		**What is your third language, if any?**	

a. In a scale from 1 to 5 (1 meaning not at all comfortable and 5 meaning extremely comfortable) how would you rate your level of comfort in teaching in the first language? Circle one: 1 2 3 4 5

b. In a scale from 1 to 5 (1 meaning not at all comfortable and 5 meaning extremely comfortable) how would you rate your level of comfort in teaching in the second language? Circle one: 1 2 3 4 5

We are in the process of revising the teaching materials and I'd like your help. I saw you teach this lesson (point to lesson they just taught), and I'd like to ask you some questions about what you think went well, and what you think can be improved, as well as some questions about the EGRA program overall. Is this okay?

Yes ❒ No ❒

School		**Standard**		**Lesson Language**	
Unit		**Malawi EGRA Teacher's Guide page(s)**		**Student book page(s)**	

Tell the teacher: the following questions are about the materials you use in the classroom and the methods you use to teach your students.

Section 1: Methodology and Materials		
1	a. Each lesson plan starts with success criteria to be achieved. *(Show the teacher the success criteria for the lesson they just taught.)* Do you use this information to plan your lesson?	1a. Circle YES or NO
	b. If so, can you share how?	1b. How the teacher uses success criteria to plan a lesson _____ _____ _____
2	Each lesson plan has a list of resources for the lesson *(Show the teacher the resources for the lesson they just taught.)*	
	a. Do you use these resources? (If "No", ask why not.)	2a. Circle YES or NO. If *no*, reason why not: _____ _____ _____
	b. If yes, how do you think they help the students learn?	2b. Ways the teacher thinks the resources in the teacher's guide help students: _____

		_____ _____
	c. Do you ever use other resources?	2c. Other resources used by the teacher: _____ _____ _____
3	a. Do you use the lesson planners in the English course? *(If "No," ask why not.)*	3a. Circle YES or NO. If *no,* ask reason why not: _____ _____ _____
	b. If yes, please give specific examples of how you have used them.	3b. Specific examples: _____ _____ _____

4	a. Have you read the front pages? *(Indicate the front pages you are referring to in the Teacher's Guide. If "No," ask why not.)*	4a. Circle YES or NO. If *no*, ask reason why not. _____ _____ _____
	b. If yes, how useful are they?	4b. Check the response that applies: ❒ Very useful ❒ Useful ❒ Somewhat useful ❒ Not useful at all
	c. Explain your response for 4b.	_____ _____ _____
5.	a. The teacher's guide uses the repetitive structure i. Teachers ii. Teachers = learners iii. Learners Do you think this format works well for teaching early grade reading? *(If "no," ask why or why not. Have the current lesson taught available so the teacher can readily see the format.)*	5a. Circle YES or NO. If no, why not? _____ _____ _____
	b. If yes, give a specific example	5b. Provide example.

		_____ _____ _____	
6.	*(Focus on the lesson just taught. Write down the name of the first activity then ask this question. Do this activity by activity for the same lesson.)* For each activity, there is a script for you to follow. What do you think about the level of clarity and detail of the teacher directions for each activity? Why? Give a specific example. *Include the following information for the lesson discussed:* Name of the lesson _____ Lesson #: _____ Day: _____ Week: _____	Activity 1: Teachers Check: Level of Clarity ❒ Very Clear ❒ Clear ❒ Not Clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____
		Activity 1: Teachers Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____

			SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 1: Teachers + Learners Check: Level of Clarity ❒ Very Clear ❒ Clear ❒ Not Clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____
		Activity 1: Teachers + Learners Check: Level of Detail ❒ Too detailed	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____

		❒ Not enough detail ❒ Enough detail	_____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 2: Teachers Check: Level of Clarity ❒ Very clear ❒ Clear ❒ Not clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____

		Activity 2: Teachers Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 2: Teachers + Learners Check: Level of Clarity ❒ Very Clear ❒ Clear ❒ Not Clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____

			_____
		Activity 2: Teachers + Learners Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 3: Teachers Check: Level of Clarity ❒ Very clear ❒ Clear ❒ Not clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY

			_____ _____ _____
		Activity 3: Teachers Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 3: Teachers + Learners Check: Level of Clarity ❒ Very Clear ❒ Clear ❒ Not Clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____

			_____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____
		Activity 3: Teachers + Learners Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____
		Activity 4: Teachers Check: Level of Clarity	REASON (S) GIVEN ON THE LEVEL OF CLARITY

		❒ Very clear ❒ Clear ❒ Not clear	_____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____
		Activity 4: Teachers Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____ _____ _____

		Activity 4: Teachers + Learners Check: Level of Clarity ❒ Very Clear ❒ Clear ❒ Not Clear	REASON (S) GIVEN ON THE LEVEL OF CLARITY _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF CLARITY _____ _____ _____
		Activity 4: Teachers + Learners Check: Level of Detail ❒ Too detailed ❒ Not enough detail ❒ Enough detail	REASON (S) GIVEN ON THE LEVEL OF DETAIL _____ _____ _____ SPECIFIC EXAMPLE ON THE LEVEL OF DETAIL _____

			_____ _____
7	*(Ask the two questions below for each of two activities that the teacher just taught. Have the teacher provide a reason for the response provided.)*	Activity	Comments on Scripting
	a. Do you follow this segment of the script?	7.1. Teacher	7.1a._____ _____ _____
	b. If no, why not?		7.1b._____ _____ _____
	a. Do you follow this segment of the script?	7.2. Teacher + learners	7.2a._____ _____ _____
	b. If no, why not?		7.2b._____ _____ _____

	a. Do you follow this segment of the script?	7.3. Learners	7.3a._____ _____ _____
	b. If no, why not?		7.3b._____ _____ _____
	a. Do you follow this segment of the script?	7.4. Teacher	7.4a._____ _____ _____
	b. If no, why not?		7.1b._____ _____ _____
	a. Do you follow this segment of the script?	7.5. Teacher + learners	7.5a._____ _____ _____
	b. If no, why not?		7.5b._____

			_____ _____
	a. Do you follow this segment of the script?	7.6. Learners	7.6a._____ _____ _____
	b. If no, why not?		7.6b._____ _____ _____
8	a. Based on the lesson you just taught, which part of the activity do you think is the easiest to teach?	_____ _____ _____ _____	
	b. Why?	_____ _____ _____	

		_____
9	a. Based on the lesson you just taught, which activity do you think is the hardest to teach?	_____ _____ _____ _____
	b. Why?	_____ _____ _____ _____
10	a. In your opinion, which activity do you think is the easiest for the learners?	_____ _____ _____ _____
	b. Why?	_____

		_____ _____ _____
11	a. In your opinion, which activity do you think is the hardest for the learners?	_____ _____ _____ _____
	b. Why?	_____ _____ _____ _____
12	*Based on the consecutive lessons taught by the teacher, select a teaching strategy noted in the Teacher's Guide. Have the TG handy and reference it as you speak with the teacher. Then ask how the teacher has used it in her teaching practice. Below is an example*	
	a. If you have made modifications to the lessons, can you give me an example of a modification that you made on today's lesson?	_____ _____ _____

		_____
	b. Why did you make this modification?	_____ _____ _____ _____
13.	*Note to researcher: This question is for teachers with previous experience with using the scripted lesson plans the previous year. Provide an example of a lesson as is and then the same lesson with less scripting. Ask what she/he thinks about the two versions, if one were used when an activity is introduced, but the after that the scripting level went down.*	
	a. Read these two versions of the same lesson in Chichewa. Which one do you think is more useful? Why?	13a. Circle YES or NO. If no, why not? _____ _____ _____ ❒ Version 1 Regular scripted lesson from the teacher's guide (Chichewa) ❒ Version 2 Less scripted lesson (Chichewa) Reason: _____ _____ _____

	b. Do you find it useful for the level of scripting to remain the same throughout the year? If yes or no, why?	13b. Circle YES or NO. Reason why. _____ _____ _____
	c. Would you prefer for there to be less scripting over time? If yes, why?	13c. Circle YES or NO. Reason why _____ _____ _____ _____
14	14a. Read these two versions of the same lesson in English. Which one do you think is more useful? Why?	14a. Circle YES or NO. Reason why. _____ _____ _____
	14b. Do you find it useful for the level of scripting to remain the same throughout the year? If yes or no, why?	14b. Check one: ❒ Version 1 Regular scripted lesson from the teacher's guide (English) ❒ Version 2 Less scripted lesson (English)

		Reason why: _____ _____ _____
	14c. Would you prefer for there to be less scripting over time? If yes, why?	14c. Circle YES or NO. Reason why. _____ _____ _____
15	*Note to researcher: This question is for teachers that are aware of the modifications they make. If it is hard to gauge whether a teacher is aware of a change made, refer to observation notes where you have jotted down a modification from what the scripted lesson states and what the teacher actually did. If applicable, remind the teacher of the modification, then ask why it was made.*	
	15a. If you have begun to make modifications to the lessons, can you give me an example of a modification that you made on today's lesson?	_____ _____ _____ _____
	15b. Why did you make this modification?	_____ _____

		_____ _____
16	*(This question is for new teachers that have been using the scripted lessons for only several weeks.)*	
	a. When you think of a good teacher's guide, what would you expect it to contain?	_____ _____ _____ _____
17	a. We are trying to make the lesson plans better. Can you share 2-3 ways that you think the lesson plans are meeting your needs as a reading teacher?	1. _____ _____ 2. _____ _____ 3. _____ _____
18	a. We are trying to make the lessons plans better. Can you share 2-3 ways that you think the lesson plans could be improved?	1. _____

		_____ 2. _____ _____ 3. _____ _____
19	The review units comprise five lessons, to be taught during one week. These units give you the opportunity to *provide remediation* to learners who need extra practice and support. If learners have not done well, do you use the remediation activities?	
	a. Do you use the remediation activities?	19a. Circle YES or NO. Reason why. _____ _____ _____
	b. If yes or no, why?	_____ _____ _____ _____
	c. If yes, give an example of one remediation activity you used and explain how you think it helps learners.	_____

		_____ _____ _____
20	As mentioned in the previous question, the review units comprise five lessons, to be taught during one week. These units give you the opportunity to *provide enrichment* to learners who are doing well.	
	a. If students have done well, do you do the enrichment activities?	20a. Circle YES or NO.
	b. If yes or no, why?	b. Reason why. _____ _____ _____
	c. If yes, give an example of one enrichment activity you used and explain how you think it helps learners.	20c. Specific example provided _____ _____ _____
21	*Note to researcher: Keep in mind that even though it says to review and/or assess, the activities in the lesson take up the full 60 minutes.* The last lesson in a unit is the lesson review. *(Show an example that connects directly to the current unit.)* You can use the time to review or to assess learners based on the specific success criteria noted on the assessment checklist.	
	a. How do you decide whether to use the teaching time for lesson review or to assess learners?	a. _____

		_____ _____
	b. Do you assess learners? If *yes* or *no*, why?	21b. Circle YES or NO. Reason why. _____ _____ _____
	c. If yes, *how* do you assess learners?	21c. Check the ones that apply: ❒ Individually ❒ By group ❒ Whole class
	d. How do you keep track of individual learners' performance?	_____ _____ _____ _____
	e. Can I see the form you use? *(Make sure to make a copy of the form used; label it with the date and other proper identifiers.)*	*e. (Write a description of the type of form used to assess learners.)* _____

		_____ _____ _____
22	*Note to researcher: If the teacher uses a form and is able to show you an example of a completed form, ask the following question.*	
	a. What does the information on the learner tracker tell you about your learner(s)?	_____ _____ _____ _____
	b. How could this information be used to inform your teaching of the lessons?	_____ _____ _____ _____
TELL THE TEACHER: THE FOLLOWING QUESTIONS ARE ABOUT THE LANGUAGE YOU USE TO TEACH YOUR STUDENTS.		
Section 2: Language Use		
1	*What language (s) do most of your learners speak at home?* *1*_____*3*_____ *2*_____*4*_____	

2	*(Ask these questions if the teacher teaches in both Chichewa and English.)*	
	a. Do you find it is easier to use the Chichewa or English materials?	2a. Circle CHICHEWA or ENGLISH.
	b. Why?	*2b.* _____ _____ _____ _____
3	*(Make sure to know ahead of time and write down if the teacher teaches only in one language or if she/he teaches in both.)*	
	a. Based on the number of learners in your class, about how many can *understand* when spoken to in English?	Approximate number of learners in the class: _____ 3a. Check one: ❒ None ❒ Few ❒ Half ❒ More than half ❒ All
	b. Based on the number of learners in your class, about how many can *speak* in English?	Approximate number of learners in the class: _____ 3b. Check one: ❒ None ❒ Few ❒ Half ❒ More than half ❒ All
	c. Based on the number of learners in your class, about how many can *read* in English?	Approximate number of learners in the class: _____ 3c. Check one: ❒ None

		❒ Few ❒ Half ❒ More than half ❒ All
4	*(This question is about code switching.)*	
	a. In your opinion, how helpful are the materials for learners who are learning English?	4c. Check one: ❒ Very helpful ❒ Helpful ❒ Somewhat helpful ❒ Not helpful
	b. If yes, in what ways are the materials helpful?	*4b.* _____ _____ _____ _____
	c. If no, in what ways are the materials not helpful?	*4c.* _____ _____ _____ _____
	d. How would you make the teaching material more helpful?	*4d.* _____ _____ _____

		_____
5	*(Make sure to know ahead of time and write down if the teacher teaches only in one language or if she/he teaches in both.)*	
	a. Based on the number of learners in your class, about how many can *understand* when spoken to in Chichewa?	Approximate number of learners in the class: _____ 5a. Check one: ❒ None ❒ Few ❒ Half ❒ More than half ❒ All
	b. Based on the number of learners in your class, about how many can *speak* in Chichewa?	Approximate number of learners in the class: _____ 5b. Check one: ❒ None ❒ Few ❒ Half ❒ More than half ❒ All
	c. Based on the number of learners in your class, about how many can *read* in Chichewa?	Approximate number of learners in the class: _____ 5c. Check one: ❒ None ❒ Few ❒ Half ❒ More than half ❒ All
6	a. In your opinion, how helpful are the materials for learners who are learning to read in Chichewa?	6a. Check one: ❒ Very helpful ❒ Helpful ❒ Somewhat helpful ❒ Not helpful
	b. If yes, in what ways?	*6b.* _____

		_____ _____ _____
	c. If no, in what ways are they not helpful?	*6c.* _____ _____ _____ _____
	d. How would you make the teaching material more helpful?	*6d.* _____ _____ _____ _____
TELL THE TEACHER: THE FOLLOWING QUESTIONS ARE ABOUT THE ROLE OF ASSESSMENT IN THE SCRIPTED LESSONS.		
Section 3: Assessment		
1	a. How do you know if a learner can read well in *Chichewa*?	*1a.* _____ _____ _____

		_____
	b. Tell me 2 ways that you can identify strong Chichewa readers in your classroom.	*1b.* 1. _____ 2. _____
	c. What are 2 ways that you can help strong readers Chichewa readers become even better readers?	*1c.* 1. _____ 2. _____
2.	a. How do know if a learner is having trouble with learning to read in Chichewa?	*2a.* _____ _____ _____ _____
	b. Tell me 2 ways that you can identify struggling Chichewa readers in your classroom.	*2b.* 1. _____ 2. _____
	c. What are 2 ways that you can help struggling Chichewa readers become strong readers?	*2c.* 1. _____ 2. _____

3.	*(Ask this question only to standard 1 teachers who teach in English.)*	
	a. How do you know if a learner can listen and speak well in *English*?	*3a.* _____ _____ _____ _____
	b. Tell me 2 ways that you can identify strong English listeners and speakers in your classroom.	*3b.* 1. _____ 2. _____
	c. What are 2 ways that you can help strong English listeners and speakers become even better English listeners and speakers?	*3c.* 1. _____ 2. _____
4.	*Ask this question only to standard 1 teachers who teach in English.)*	
	a. How do know if a learner is having trouble with listening and speaking in English?	*4a.* _____ _____ _____ _____
	b. Tell me 2 ways that you can identify learners who are struggling with listening and speaking in English.	*4b.* 1. _____

		2. _____
	c. What are 2 ways that you can help learners who are struggling with listening and speaking in English?	*4c.* 1. _____ 2. _____
5.	*(Ask this question only to standard 2 teachers who teach in English.)*	
	a. How do you know if a learner can read well in *English*?	*5a.* _____ _____ _____ _____
	b. Tell me 2 ways that you can identify strong English readers in your classroom.	*5b.* 1. _____ 2. _____
	c. What are 2 ways that you can help strong readers English readers become even better readers?	*5c.* 1. _____ 2. _____
6.	*(Ask this question only to standard 2 teachers who teach in English.)*	
	a. How do know if a learner is having trouble with learning to read in English?	*5a.* _____

		_____ _____ _____
	b. Tell me 2 ways that you can identify struggling English readers in your classroom.	*5b.* 1. _____ 2. _____
	c. What are 2 ways that you can help struggling English readers become strong readers?	*5c.* 1. _____ 2. _____
7.	*Note to Researcher: Remember to first ask to see the assessments before asking these questions. Become familiar with the assessment tools already available in the teacher's guide to support any probing questions that may need to be developed based on the teacher's responses. Connect this question to the immediate lesson observed.*	
	a. Do you use or develop mini daily assessments that let you know how well your students are doing, for example, on letter sounds or comprehension?	7a. Circle YES or NO.
	b. (If yes) Show me an example of a mini daily assessment.	*7b.* _____ _____ _____ _____
	c. What does the assessment tell you about the learner(s)?	*7c.* _____

		_____ _____ _____
	d. How do you know if learners have developed phonics skills appropriate for their age and grade level?	*7d.* _____ _____ _____ _____
	e. How do you know if learners have developed phonics skills appropriate for their age and grade level?	*7e.* _____ _____ _____ _____
8.	*(This question helps the researcher know if the teacher conducts a daily formal/informal assessment.)*	
	a. After you taught the lesson today, were you able to check if students understood what you taught?	8a. Circle YES or NO.
	b. If yes, how did you do this?	*8b.* _____ _____

		_____ _____
	c. If yes, how does this information help you when you teach a lesson?	*8c.* _____ _____ _____ _____
9.	*(This question helps the researcher know if the teacher conducts an end of unit assessment.)*	
	a. Do you keep an updated record of learners' progress/assessment checklist at the *end* of a unit?	9a. Circle YES or NO.
	b. If yes, can I see it? *(Make a photocopy of the example provided by the teacher. Label it with identifiers; date, school, grade, etc.)*	*9b.* _____ _____ _____ _____
	c. If yes, how does this information help you when you teach a lesson?	*9c.* _____ _____ _____

			_____
10.	*Note to the researcher: Have a copy of the assessments that are used in the particular unit that the teachers are on and refer to each.*		
		Unit:_____	
	What assessment tools do you find most helpful/least helpful in this unit and why?	Assessment Description	Teacher's Opinion
		1	Most Helpful _____ _____ _____
			Least Helpful _____ _____ _____
		2	Most Helpful _____ _____ _____
			Least Helpful _____

			_____ _____
		3	Most Helpful _____ _____ _____
			Least Helpful _____ _____ _____
		4	Most Helpful _____ _____ _____
			Least Helpful _____ _____ _____
		5	Most Helpful

			_____ _____ _____
			Least Helpful _____ _____ _____
11.	a. When the PEA or head teacher arrives to conduct observations and learner assessments, does he/she discuss your learners' assessment results?	11a. Circle YES or NO.	
	b. If yes, provide2-3 examples about what you discuss regarding learners' assessment results.	*11b.* 1. _____ 2. _____ 3. _____	
TELL THE TEACHER: THE FOLLOWING QUESTIONS ARE ABOUT THE SUPPORT YOU RECEIVE TO HELP YOU USE THE SCRIPTED LESSONS IN THE TEACHER GUIDE.			
Section 4: Teacher Support			
1.	Tell me about the support you receive from the head teacher.		
	a. How many times a (month? term?) does the head teacher visit your classroom?	1a. _____ _____	

		_____ _____
	b. Does the head teacher specifically support you in the use of the lesson plans?	1b. Circle YES or NO.
	c. If yes, how?	1c. _____ _____ _____ _____
	d. Are there other ways that the head teacher supports your teaching practice?	1d. _____ _____ _____ _____
2	a. Tell me about the support you receive from the head teacher in implementing the scripted lesson plans.	2a. Check one: ❒ Very helpful ❒ Helpful ❒ Somewhat helpful ❒ Not helpful
	b. Explain how you came up with your answer.	2b. _____ _____

		_____ _____
	c. How do you think the support you receive from the head teacher can be improved?	2c. _____ _____ _____ _____
3	a. Tell me about the support you receive from the Primary Education Advisor. How many times a (month? term?) does the Primary Education Advisor visit your classroom?	3a. _____ _____ _____ _____
	b. Does the Primary Education Advisor specifically support you in the use of the lesson plans?	2b. Circle YES or NO
	c. If yes, how?	3c. _____ _____ _____ _____

	d. Are there other ways that the Primary Education Advisor supports your teaching practice?	3d. _____ _____ _____ _____
4	a. Tell me about the support you receive from the Primary Education Advisor in implementing the scripted lesson plans.	4a. Check one: ❒ Very helpful ❒ Helpful ❒ Somewhat helpful ❒ Not helpful
	b. Explain how you came up with your answer.	4b. _____ _____ _____ _____
	c. How do you think the support you receive from the Primary Education Advisor can be improved?	4c. _____ _____ _____ _____
5	a. Who else supports you in implementing the lesson plans?	5a.

		_____ _____ _____ _____ .
	b. What type of support does she/he provide?	5b. _____ _____ _____ _____
TELL THE TEACHER: THE FOLLOWING QUESTIONS ARE ABOUT TEACHER TRAINING SUPPORT ON THE USE OF THE SCRIPTED LESSONS AND OTHER MATERIALS.		
Section 5: Teacher Training		
1.	a. What kinds of training have you received on the use of the scripted lessons?	1a. _____ _____ _____ _____
	b. What kinds of training have you received on the use of the materials?	1b. _____

		_____ _____ _____
2.	What are the 3 most useful things you learned from this training?	*2.* 1. _____ 2. _____ 3. _____
3	What are the 3 things that you would like to change or add to the training to better support teachers in using the scripted lessons?	*3.* 1. _____ 2. _____ 3. _____
4.	What are the 3 things that you would like to change or add to the training to better support teachers in using the materials?	*4.* 1. _____ 2. _____ 3. _____
TELL THE TEACHER: THE FOLLOWING ARE GENERAL QUESTIONS ABOUT THE SCHOOL WHERE YOU TEACH.		
Section 6: General		

1.	*a. Does your school extend the school day by one hour every day?*	1a. Circle YES or NO.
	b. If not, why?	1b. _____ _____ _____ _____
	c. If so, what is the extended hour used for?	1c. _____ _____ _____ _____
	d. What benefits have you observed, if any?	1d. _____ _____ _____ _____
2	*a. Does your school teach reading for one hour every single day? (This could be a probing question if the answer to the above question does not mention reading.)*	2a. _____ _____

		_____ _____
3	*(Ask questions 3a and 3b if you observe that the teacher uses NPC material.)*	
	3a. Based on the lesson you just taught from the National Primary Curriculum (NPC) material, which part of the activity do you think is the easiest to teach?	3a. _____ _____ _____ _____
	3b. Why?	3b. _____ _____ _____ _____
4.	*(Ask questions 3a and 3b if you observe that the teacher uses NPC material.)*	
	4a. Based on the lesson you just taught from the National Primary Curriculum (NPC) material, which part of the activity do you think is the hardest to teach?	4a. _____ _____ _____

		_____
	4b. Why?	4b. _____ _____ _____ _____
5.	a. What do you think about the lessons in the NPC curriculum?	5a. _____ _____ _____ _____
	b. Can you explain how you came up with your answer?	5b. _____ _____ _____ _____

ANNEX 3. SAMPLE CODE BOOK

SAMPLE CODE BOOK

A modification is defined as anything that deviates from the scripted lesson provided.

No.	Code in FileMaker	Code	Definition
1	add	Addition and/or substitution	Teacher adds content in a given lesson; the teacher is teaching the script, but adds in extra content within an activity. When the teacher replaces the entire activity, or part of the activity with another
2	omi	Omission	Teacher omits content in a given lesson; the teacher is teaching the script, but omits some of the content within an activity.
5	ido	I do Structural modification	Omission and/or addition of structure of the lesson:
6	wedo	We do structural modification	Omission and/or addition of structure of the lesson: Teacher reads and students repeat

No.	Code in FileMaker	Code	Definition
7	youdo	You do structural modification	Omission and/or addition of structure of the lesson: No group or individual work
8	Unsp	Structural modification in lessons (that are not Maziko) during an activity that does not specify the I do, we do, you do structure	All structural modifications to activities that do not have the I do, we do, you do structure (skipping a step, not using groups, etc.) during lessons other than Maziko If we can't tell which section (I do we do you do) it falls into (from the modification description), mark unspecified
8	Maz_ido	Structural modification in Maziko lessons during the I do section	All I do structural modifications (skipping a step, not using groups, etc.) during Maziko lessons
9	Maz_wedo	Structural modification in Maziko lessons during the we do section	All We do structural modifications (skipping a step, not using groups, etc) during Maziko lessons
10	Maz_youdo	Structural modification in Maziko lessons during the you do section	All You do structural modifications (skipping a step, not using groups, etc.) during Maziko lessons
11	Maz_unsp	Structural modification in Maziko lessons during an activity that does not specify the I do, we do, you do structure	All structural modifications to activities that do not have the I do, We do, You do structure (skipping a step, not using groups, etc.) during Maziko lessons
12	ski	Skipped activity	Teacher did not do an activity (not at the level of I do, We do, You do)

No.	Code in FileMaker	Code	Definition
13	Com	Combining activities	Teacher combines activities together, or incorporates parts of one activity into another
14	inf	Informal assessment	When the teacher conducts some type of informal assessment, checking for understanding, feedback oral and written Providing scaffolding is a separate code, don't include in inf code
15	cla	Classroom management: restoring order, redirecting attention	Sing a song Say "silence" etc. Some way of redirecting student attention Access/flow of materials Helping students find pages Code time as CLA if there is no other modification
16	use	Use of materials	Substitution of materials -Uses board instead of flashcards -has drawing in class of something in learner book -drawing in dirt instead of learner books
17	mis	Mistakes/errors in content	When teacher makes an error in content, define word incorrectly, letter sound correspondence
18	lan	Language influence	L1 language influence on pronunciation

Other codes apart from modifications:

CODESW: Code switching (Teacher uses language other than the intended language of instruction; if there is a record that deals only with code switching, add it to another record for that same activity and delete the record with just code switching.

Could be for directions, content, classroom management)- yes/no

TEACHTR: Teacher training support needed: yes/no

-include pacing/time issues

-include classroom management

-omissions related to preplanning

MR: Materials revision needed: yes/no

-for all maz codes

TEACHEXPL: Teacher explanation: yes/no

TEACHEX: Teacher level of experience

TEACHLAN: Teacher home language