READ LIBERIA IMPACT EVALUATION
ENDLINE REPORT

July 2021 – Update version November 2021

USAID READING AND ACCESS

READ LIBERIA IMPACT EVALUATION

ENDLINE REPORT

Prepared under Contract No.: GS-10F-0033M/AID-OAA-M-13-00010, Tasking N 7617.016.01

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DISCLAIMER

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

TABLE OF CONTENTS

TABLES

FIGURES

ACRONYMS

Cwpm	Correct words per minute
EGR	Early Grade Reading
EGRA	Early Grade Reading Assessment
IE	Impact Evaluation
IRB	Institutional Review Board
KII	Key Informant Interview
LTTP	Liberia Teacher Training Program
MDES	Minimum Detectable Effect Size
M&E	Monitoring and Evaluation
NORC	NORC at the University of Chicago
RCT	Randomized Control Trial
RL	Read Liberia
SAB	Student Activity Book
SOW	Scope of Work
TIG	Teacher Instructional Guide
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

NORC at the University of Chicago, through the USAID Reading and Access Evaluation Contract, has been charged with conducting the external impact evaluation (IE) of the Read Liberia (RL) activity. The primary interest of the evaluation is to measure the degree to which the RL activity increases the proportion of students who, by the end of two grades of primary schooling, demonstrate they can read and understand the meaning of grade level text.

READ LIBERIA

The goal of Read Liberia is to improve reading performance for students in KG, G1, and G2. To reach this objective Read Liberia focuses on four Intermediate Results (IRs):

• IR 1: Government commitment to and support of evidence-based reading instruction increased
• IR 2: EGR classroom instruction improved
• IR 3: Service delivery systems in EGR improved
• IR 4: Parent, community, and private support for EGR increased.

Read Liberia takes place in public primary schools in six counties -Montserrado, Margibi, Bong, Grand Bassa, Nimba and Lofa- in Liberia. The following are the main components of the Read Liberia activity:

Teacher and Principal Training: Two rounds of cluster-based, five-days training workshops organized by Read Liberia.

Provision of student textbooks and supplementary materials: Every grade 1 and grade 2 student was intended to receive the reading book Let's Read and a student activity book (SAB) Every kindergarten, grade 1 and grade 2 student was meant to receive an activity book. Additional copies were provided for the teachers and the school administration.

Provision of teaching materials: Teachers received Teacher Instruction Guides (TIG, from the previous Liberia Teacher Training Program (LTTP) but reviewed in 2019/2020). In addition, each grade 1 and grade 2 classroom were also supposed to receive two alphabet posters, two sets of alphabet and syllable cards, and ten supplementary reader titles.

Coaching: Teachers are to receive coaching from Read Liberia Instructional Supervisors to help them gain confidence using the teacher guides (TIG) for effective instruction to students. Coaches are supposed to visit each school at least once every month and call or send messages to their teachers daily to discuss students' progress and instructional challenges. School principals are expected to observe the teachers teach reading through the week.

Student evaluation: Teachers are required to conduct Oral Reading Fluency assessment three times a year at the school level (2nd period, 4th period, and 6th period). They do so with the support of their cluster coach.

EVALUATION METHODOLOGY

The NORC evaluation team used an experimental or randomized control trial (RCT) approach to answer the evaluation question, with schools randomly assigned to treatment and control groups.

At baseline, we created a sample of 90 public schools randomly selected proportionally by county and urban status. In turn, these schools were randomly assigned to receive treatment or to act as control schools. For the midline implementation study, we visited the 45 treatment schools and a random subsample of 18 control schools. We learned that one of the treatment schools had become a private school and therefore we dropped it. At endline we revisited the remaining 89 schools. In one of them -a treatment school- the principal refused to participate in the study.

Baseline data was collected from a random sample of grade 2 students in May 2017, before RL started. The information collected included students reading assessments and their sociodemographic characteristics, and information about the schools, principals, and grade 2 teachers. In addition, NORC collected data in 2019 as part of a midline study to understand the implementation of Read Liberia, and teacher practices in classrooms, as well as produce programmatic feedback for the implementing partner (IP), USAID/Liberia, and other stakeholders. The endline data collection which included students' assessments and sociodemographic variables, information about implementation of Read Liberia in the schools, principals and grade 2 data, was conducted in March/April 2021 in the same schools visited at baseline. In addition, we conducted classroom observations of reading instruction in August 2021.

Because of the COVID-19 pandemic, we postponed the endline data collection and assessed third grades in the first quarter of the 2021 academic year rather than students at the end of the second grade. The grade 3 students were again selected randomly among those that had been enrolled in the same school in the past year and had not repeated the grade. The data indicate that these students are a very good proxy for grade 2 students at the end of the academic year, as we show below.

In addition, we randomly selected six treatment and six control schools to observe the grade 2 literacy class

FINDINGS - READING PERFORMANCE

What is the impact of the Read Liberia activity on the reading fluency and comprehension of second grade students?	At endline Read Liberia shows positive effects on students oral reading fluency (ORF) and oral reading comprehension

We compute oral reading fluency (ORF) as the number of correct words read aloud from a short, connected text by the student in one minute. Figure 1 below shows ORF at baseline and endline for treatment and control groups. The average ORF at baseline was statistically identical in control and treatment groups, as expected -14.8 vs. 14.4 correct words per minute (cwpm) respectively. At endline, the control students' performance remained the same (14.5 cwpm), while students exposed to Read Liberia activities performed better, reaching an average ORF of 29.7 cwpm, twice the average in the control group. **This substantial increase of 15.3 cwpm corresponds to an effect size of 0.6 of a standard deviation and it is statistically significant.**

Oral Reading Fluency (cwpm), baseline and endline

*** p<0.001. Baseline shows students ORF at the end of grade 2; endline shows students ORF at the beginning of grade 3.

Read Liberia improved ORF among students with different reading abilities, reduced the number of non-readers, increased the number of fluent readers, and improved the performance of beginners and intermediate readers. The effects are similar between girls and boys.

The Ministry of Education guidelines specify an ORF benchmark of 35 cwpm for the learners at the end of grade 2. At baseline, around 13 percent of the students in treatment and control groups reached the reading benchmark. At endline, the percentage stayed very similar among the control students (13.8 percent) however, the percentage of Read Liberia students able to read at least 35 cwpm increased to 35.5 percent, more than doubling their control counterparts' performance.

Percentage of students reaching ORF benchmark of 35 correct words per minute.

	Baseline	Endline
Treatment	12.9	35.5
Control	13.2	13.8

We find a positive impact of Read Liberia on oral reading comprehension. At baseline, the percentage of correctly answered questions was 14.2 and 17.1 for the control and treatment group respectively. **At endline, the percentage of correctly answered questions increased to 31.4 among the treatment students while it is only 18 percent for the control group and this difference is statistically significant.**

Oral Reading Comprehension (percentage correct), baseline and endline
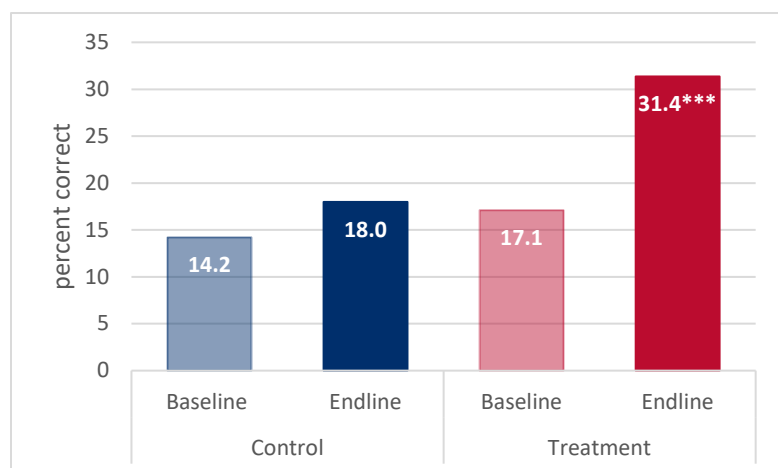
Chart showing percent correct by group. Control: Baseline 14.2, Endline 18.0. Treatment: Baseline 17.1, Endline 31.4***.

*** p<0.001. Baseline shows students ORF at the end of grade 2; endline shows students ORF at the beginning of grade 3.

Read Liberia also had a positive effect on pre-literacy skills included in the EGRA, namely letter name identification, phonemic awareness, familiar words, non-words, and listening comprehension. We did not find significant differences in the receptive listening comprehension and orientation to print subtasks. The scores for these two tasks are high for both groups, treatment and control.

READ LIBERIA IMPLEMENTATION

In general, the implementation of Read Liberia was very successful. Training attendance was very high among teachers and principals. According to teachers and principals, all treatment schools in our sample received visits from the RL coaches during the past academic year. Nearly all principals (93 percent) work with coaches to improve teacher reading instruction.

Teaching and learning materials -TIG, SAB, and LR reader- were distributed to all the Read Liberia schools and students were allowed to take the LR reader and SAB home. In addition, we find that more treatment students report having reading material, reading to someone or being read by someone at home than control students.

CLASSROOM UPTAKE OF READ LIBERIA

Uptake of the program material, both in relation to the use of multiple materials aligned to the program week, as well as adherence to the program week, was very low.

Teachers were very selective in using the Read Liberia daily scripted lesson plans in the TIG and none of them completed the plan. Teachers covered few of the daily steps, with a focus on reading fluency, read alouds and comprehension. Skills at the sound, letter and word level were left out, and more complex parts of the program were not followed. There was no evidence of assessment or homework, both of which are expected daily. Other features of the program like differentiation, feedback and monitoring were also not evident in the lessons observed.

In both, treatment and control classrooms, lessons generally took the form of the reading of a text followed by very low-level questioning. Echo reading was common across both, as was very restricted learner talk. Two key differences were found across the groups. The first was that more individual learners read to the class in control classrooms than in treatment classrooms. The other was that more learners had access to their own reader in treatment classrooms, whereas in control classrooms learners generally shared readers.

A consideration of instructional competence suggested that there were significant issues underpinning the pedagogy observed that a) were crucial to functional instruction and b) appeared not to have been impacted by the program training or provision of materials. On measures of language proficiency, reading proficiency, teacher knowledge and feedback, very low levels of competence were found across treatment and control lessons. When ranked, levels of instructional competence were lower in treatment than control classrooms.

CONCLUSIONS

At endline Read Liberia shows large and positive effects on students oral reading fluency (ORF) and oral reading comprehension. The improvement reached students of different reading abilities, and it is similar for boys and girls. Despite the impressive progress, there is still room for improvement. Still 20 percent (down from 35 percent at baseline) of grade 3 students in Read Liberia schools are not able to read a single word from a simple connected paragraph, the average oral fluency is below the benchmark, and students have very low levels of reading comprehension.

Read Liberia has been well implemented in terms of reaching schools, teachers and principals, with training and coaching and distributing teaching and learning materials to teachers and students. However, based on the small sample of classrooms observations conducted at endline[1], teachers' uptake of the program in classroom instruction is poor. The cause of any program impact on reading levels is thus likely to lie outside the classroom rather than resulting from improved practices in classrooms. A hypothesis to further explore is whether parental and community engagement and the availability of appropriate students' learning materials in the hands of the students could be causing the positive effect, even without substantial pedagogical progress.

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[1] We conducted a large classroom observation exercise at midline, which included the 44 treatment schools and 18 control schools, which also showed poor adherence to weekly progression through the program and daily lesson plans, and the use of student materials.

1. EVALUATION PURPOSE AND AUDIENCE

NORC at the University of Chicago, through the USAID Reading and Access Evaluation Contract, has been charged with conducting the external impact evaluation (IE) of the Read Liberia (RL) activity. RL is a $28 million, five-year (September 2017–September 2022) activity implemented by RTI International. The primary interest of the evaluation is to measure the degree to which the RL activity increases the proportion of students who, by the end of two grades of primary schooling, demonstrate they can read and understand the meaning of grade level text.

The NORC evaluation team used an experimental or randomized control trial (RCT) approach to answer the evaluation question, with schools randomly assigned to treatment and control groups. Baseline data was collected from a random sample of grade 2 students in May 2017, before RL started. In addition, NORC collected data in 2019 as part of a midline study. The general purpose of this study was to understand the implementation of Read Liberia, and teacher practices in classrooms, as well as produce programmatic feedback for the implementing partner (IP), USAID/Liberia, and other stakeholders. The endline data collection was conducted in March/April 2021 in the same schools visited at baseline, and classroom observations of reading instruction took place in August 2021.

This evaluation contributes to the increasing body of evidence on Early Grade Reading Activities in Liberia and other developing countries. The results of the baseline and the impact evaluation will inform USAID, the USAID/Liberia Mission, the Government of Liberia –in particular, the Education Sector-, the activity implementer, the research and practice community, and the donor community.

2. CONTEXT AND ACTIVITY BACKGROUND

Like in many other developing countries, Liberian students' reading performance is below the desired levels. NORC baseline data showed (Menendez and Monroy-Toborda, 2017) that students knew letter names, but their decoding skills were low. This was evident in the high percent (81percent) of learners that were not able to sound a single non-word. Reading ability was low as well. Thirty-five percent of the students were non-readers –they couldn't read a single word from a short grade level paragraph- and on average oral reading fluency was 14.6 words per minute which is far from the levels needed to be able to comprehend the text read. Excluding non-readers, the average oral reading fluency of the rest of the students was 22.4 words per minute, and only 22 percent of them read 35 or more words per minute. On average, girls' reading performance was lower than boys' and rural students' performance was substantially lower than that of urban learners. In addition, overage, student absenteeism and grade repetition were and continue to be common in Liberian schools.

The Read Liberia activity provides technical assistance to the Ministry of Education to improve early grade reading skills students in grades 1 and 2 and pilot a model for improving oral vocabulary of kindergarten students. The activity, supported by USAID, aims to increase the Liberian Government's commitment to improve evidence-based reading instruction, provide teaching and learning materials, and improve early grade reading (EGR) classroom instruction, service delivery, and mobilize parent, community, and private sector support.

The Read Liberia development hypothesis2 assumes that, **IF**:

1. Kindergarten students are taught the oral vocabulary lexicon needed for emergent literacy in English
2. Official time allocations for reading instruction in the early grades are increased and enforced
3. Data about EGR are collected and used to drive system-wide decision-making
4. Reading intervention is refined and simplified, with the key components needed for children to learn to read words and to understand what they read being preserved and improved if necessary
5. Texts appropriate for EGR instruction are improved and additional leveled texts created
6. Teachers receive intensive training and systematic coaching in effectively teaching the EGR curriculum
7. Trained teachers receive evidence-based, scripted reading lessons and materials to support reading improvement in the early grades
8. Teachers are monitored and supported in their classrooms
9. Children's reading skills in the early grades are routinely assessed and children are provided opportunities to practice their reading skills at home
10. More parents and other family members learn how to support their children in learning to read
11. Private and public sources of funding to support EGR progress are identified

THEN:

Students will be able to read with fluency and comprehension at the end of second grade

To achieve the goal of improving reading performance for students in KG, G1, and G2 Read Liberia focused on four Intermediate Results (IRs):

• IR 1: Government commitment to and support of evidence-based reading instruction increased
• IR 2: EGR classroom instruction improved
• IR 3: Service delivery systems in EGR improved
• IR 4: Parent, community, and private support for EGR increased.

Read Liberia takes place in public primary schools in six counties -Montserrado, Margibi, Bong, Grand Bassa, Nimba and Lofa- in Liberia.

The following are the main components of the Read Liberia activity:

Teacher and Principal Training: Two rounds of cluster-based, five-days training workshops organized by Read Liberia in February and August of 2018. Teachers and principals unable to participate in February were offered make-up training in May. Similarly, teachers and principals unable to

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2 The hypothesis is stated on pages 11 and 12 of Request for Proposal (RFP) # SOL-669-17-000004, Read Liberia and included without changes in Read Liberia AMELP, page 5.

participate in August were offered a make-up training later that month.

Provision of student textbooks and supplementary materials: Every grade 1 and grade 2 student was intended to receive the reading book Let's Read and a student activity book (SAB). Every kindergarten student was meant to receive an activity book. Additional copies were provided for the teachers and the school administration.

Provision of teaching materials: Teachers received Teacher Instruction Guides (TIG, from the previous Liberia Teacher Training Program (LTTP) but reviewed and revised in 2019/2020). The guide format could be one annual guide or two guides, one for semester 1 and another for semester 2. In addition, each grade 1 and grade 2 classroom were also supposed to receive:

- Two alphabet posters
- Two sets of alphabet and syllable cards
- Ten supplementary reader titles, as follows:
    - Ayo and His Pencil
    - My Little Snail
    - Eleven Yellow Jerseys
    - Another Kind of Ship
    - Notty goat
    - Surprise from the Boys Room
    - Simon's Story
    - Nelson and Ali
    - Blapoh's Dream
    - Old Man and His Hat

Coaching: Teachers were to receive coaching from recruited Read Liberia Instructional Supervisors (Coaches) to help them gain confidence using the teacher guides (TIG) for effective instruction to students. Coaches were supposed to visit each school at least once every month and call or send messages to their teachers daily to discuss students' progress and instructional challenges. School principals were expected to observe the teachers teach reading through the week. Additionally, the Read Liberia Teacher Training and Coaching Supervisor provided support to coaches and made periodic visits to schools to provide additional support to teachers and principals.

Student evaluation: Teachers were required to conduct Oral Reading Fluency assessment three times a year at the school level (2nd period, 4th period and 6th period.). The expectation was that they would do so with the support of their cluster coach.

3. EVALUATION QUESTION

The main goal of this IE is to answer the following question:

WHAT IS THE IMPACT OF THE READ LIBERIA ACTIVITY ON THE READING FLUENCY AND COMPREHENSION OF SECOND GRADE STUDENTS?

Although the original idea was to evaluate the reading performance of second grade students in 2020 - we had collected baseline data from second grade students at the end of the academic year- the

unprecedented disruption caused by the global COVID-19 pandemic forced us to adapt the original plans. In consultation with USAID/DC and USAID/Liberia, it was decided to postpone the endline data collection that was planned for 2020 and to assess third grades in the first quarter of the 2021 academic year.

This is the cohort of students that we aimed to assess and students at the beginning of third grade are a good proxy to second grade students at the end of the academic year.

The measurement of reading fluency and comprehension was conducted using the Early Grade Reading Assessment (EGRA) in English, specifically designed for Liberia. We provide details in Section 4.2.2.

In addition to answering this evaluation question, NORC also studied the implementation of Read Liberia in schools at midline and endline, including in depth classroom observations to study teachers' instructional practices.

4. RESEARCH METHODS AND LIMITATIONS

4.1 IMPACT EVALUATION RESEARCH METHODOLOGY

An impact evaluation serves to assess the causal effect of a specific intervention on a set of outcomes. It allows us to attribute changes in an outcome to a specific intervention or set of interventions by answering the counterfactual question "What would have happened to activity participants in the absence of the intervention?" Ideally, this is done by observing the same program participants both with and without the intervention at the same point in time. Of course, this is not possible; at any given time, a participant either receives the intervention or does not. Therefore, we can never directly observe the counterfactual and instead need to create a comparison group to serve as the counterfactual proxy. Identifying a credible comparison group is a critical aspect of an impact evaluation and there are several approaches to doing so.

The methodology for this evaluation is a randomized-controlled trial (RCT), with schools randomly assigned to treatment and control groups, and students randomly selected in each school. The primary advantage of an RCT design is that it minimizes the potential for selection bias- that is, the possibility that observed differences in outcomes at endline between the treatment and control groups are due not to the impact of the project, but to other external and possibly systematic differences between groups that the evaluation is not able to account for. More details about the methodology used in this IE can be found in Annex 2.

NORC collected data in three rounds: a baseline prior to program implementation, a midline, and an endline two (academic) years after RL was fully implemented in schools[3] and after schools reopened following the COVID-19 closures. Table 1 below shows the data collection and other events timeline over the evaluation period.

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[3] Although the Read Liberia started in September 2017 the activities did not reach the schools until the academic year 2018-2019. Teachers were trained for the first time in February 2018. Schools received Read Liberia support from September 2018 until March 2020 when schools closed due to COVID

Table 1: Data collection and important events

Event	Instruments	Date
Baseline (quantitative)	Student assessment & Learner interview Teacher & Principal interviews	Term III, 2016-17 academic year
RL starts reaching schools		Term I, 2018-19 academic year
Midline (quantitative in treatment school and qualitative in subsample)	Teacher & Principal interviews Classroom observations	Term III, 2018-19 academic year
COVID-19 schools' closures		Term III, 2019-20 academic year 2020-21academic year postponed
Endline (quantitative and qualitative)	Student assessment & Learner interview Teacher & Principal interviews Classroom observations	Term I, 2020-21 academic year Term II, 2020-21 academic year

4.1.1 SAMPLE

At baseline, we created a sample of 90 public schools randomly selected proportionally by county and urban status. In turn, these schools were randomly assigned to receive treatment or to act as control schools. For the midline implementation study, we visited the 45 treatment schools and a random subsample of 18 control schools. We learned that one of the treatment schools had become a private school and therefore we dropped it. At endline we revisited the remaining 89 schools. In one of them -a treatment school- the principal refused to participate in the study.

At baseline 16 second grade students - 8 girls and 8 boys - were selected randomly in each school. Instead, at endline we targeted third grade students. Because of the COVID-19 pandemic, we postponed the endline data and assessed third grades in the first quarter of the 2021 academic year rather than students at the end of the second grade. The students were again selected randomly among those that had been enrolled in the same school in the past year and had not repeated the grade. During the data collection we learned that enrollment had decreased substantially and decided to complete the target number of students with fourth graders, however it was not necessary to include them in the analysis. *Table 2 below shows the school sample at baseline and endline.*

Table 2: School Sample

County	Area	Number of Schools	
		Baseline	Endline
Bong	Urban	3	3
	Rural	14	14
Grand Bassa	Urban	1	1
	Rural	7	7
Lofa	Urban	2	2
	Rural	17	17

| County | Area | Number of Schools | |
		Baseline	Endline
Margibi	Urban	2	2
	Rural	5	5
Montserrado	Urban	7	6
	Rural	6	6
Nimba	Urban	5	5
	Rural	21	20
	Total Urban	**19**	**19**
	Total Rural	**71**	**69**
TOTAL SAMPLE SIZE		**90**	**88**

In addition, we randomly selected six treatment and six control schools to observe the grade 2 literacy class

More details about the sample and the quantitative sample size calculations can be found in Annex 2.

4.1.2 INCLUSION AND STRATIFICATION

The researchers integrate a gender-sensitive approach, drawing on resources such as USAID's *How-To Notes on Engendering Evaluation and Gender Integration in Education Programming* and USAID's *Gender-sensitive Evaluation: Best and Promising Practices for Engendering Evaluation*. This approach includes ensuring all data are disaggregated and reported by sex where appropriate, engaging female and male researchers, and striving for gender balance among respondents. Gender frameworks were considered in analysis as well, such as examining how the intervention may have affected boys and girls differently. The research team also incorporated social inclusion in their approach, including consideration of geographical or regional variations, language, and socio-economic status in the analysis.

4.2 DATA COLLECTION

The Read Liberia endline assessment and classroom observations were conducted by NORC at the University of Chicago in partnership with School to School International and the local data collection subcontractor, The Khana Group. Data collection training was provided in the second half of February 2021 and included pilot exercises. Students' assessments and interviews with teachers and principals were completed between March and April 2021 and the classroom observations were carried out in August of the same year.

4.2.1 EARLY GRADE READING ASSESSMENT

The evaluation measures reading outcomes using subtasks of the Early Grade Reading Assessment (EGRA), a widely used tool to measure various aspects of reading proficiency. The EGRA subtasks included in the assessment are described in Table 3 below and all were conducted in English.

We used an existing version of EGRA, created for Liberian students in 2011, to collect baseline and endline data.

Table 3: EGRA Subtasks

Skill / Sub-tasks	Description
Orientation to print	Awareness of text direction, where to start reading, how to read down a page. Total of 3 questions.
Alphabet knowledge	Number of letters names, out of 100, correctly identified in 60 seconds
Phonological awareness	Identify and manipulate phonemes; identify the word that starts with a different sound. Number of correctly identified sounds, out of 10
Decoding	Number of nonsense words, out of 50, correctly decoded in 60 seconds
Word Recognition	Familiar word reading, number of correct words, out of 50, read in 60 seconds
Oral Reading Fluency	Oral passage reading, number of words fluently read (with accuracy), out of 60, from a reading passage in 60 seconds
Reading Comprehension	Number of questions answered correctly, out of 5, about a passage read aloud by the student
Productive Listening Comprehension	Number of questions answered correctly, out of 3, about a passage read aloud to the student by the enumerator
Receptive Listening Comprehension	Perform actions following verbal instruction from the enumerator, out of 5.

4.2.2 ADDITIONAL INSTRUMENTS

In addition to the EGRA tool, the endline data collection included: (1) a short student background questionnaire which was administered immediately following the EGRA to every student sampled, (2) a teacher questionnaire which was administered to the grade 2 teacher of literacy/English, and (3) a questionnaire administered to the school's principal. In addition, we recorded grade 2 literacy lessons in a subsample of treatment and control schools.

NORC used validated questionnaires that had been created for and previously used in Liberia, including the baseline and midline data collections conducted for this evaluation. These questionnaires were reviewed by NORC and by USAID and the IP to assure contextual appropriateness and completeness.

The principal survey included questions about their education and experience, coaching and monitoring of teachers, interaction with education officers, parents, school resources, etc. The teacher questionnaire contained questions about the teachers' education and experience, interactions with the principal or others regarding coaching and monitoring, instructional practices related to reading, etc. Finally, the student context interview focused on the child's home language, reading practices at home, some instructional practices in the classroom, and household possessions. The instruments are included in Annex 5.

Quantitative data collection was tablet-based, with the EGRA assessment and student survey conducted using Tangerine, while the teacher and principal surveys utilized the SurveyCTO/Open Data Kit (ODK). Grade 2 literacy lessons were videoed, and audio recorded.

4.2.3 DATA QUALITY ASSURANCE

To ensure high quality data throughout the field period, NORC employed several quality assurance protocols and strategies including supervisor accompaniments ("sit-ins"), co-enumeration for real-time IRR monitoring, weekly field reporting and data reconciliation, and real-time data quality reviews. Over the course of data collection all data quality review issues were quickly and satisfactorily addressed. The IRR for different EGRA subtasks during the fieldwork period was between 97 and 99 percent.

4.2.4 RESEARCH ETHICS AND STUDY AUTHORIZATION

All data were collected in line with human subjects' research guidelines both in the United States and Liberia. NORC follows established protocols for gathering informed consent, protecting anonymity, and identifying information, and ensuring ethical data collection—including from children and other vulnerable populations. To ensure compliance with our high ethical standards, all evaluations and studies must pass through formal IRB review prior to data collection and all research staff must complete a certified course in Protecting Human Research Participants through the National Institutes of Health (NIH) or Collaborative Institutional Training Initiative (CITI).

Field teams were extensively trained on research ethics, including confidentiality and informed consent procedures. Consent/assent was verbally attained from students, teachers, and principals.

4.3 BASELINE BALANCE

Baseline equivalence of the full sample was guaranteed through the random assignment of schools to treatment and control using statistical software. The randomization worked well, and we find statistical equivalence between treatment and control groups. Tables comparing all variables at baseline in Annex 2.

4.4 LIMITATIONS

4.3.1 EXTERNAL VALIDITY AND REPRESENTATIVENESS OF THE SCHOOL SAMPLE

The sample is representative of the schools where Read Liberia is working. These schools are 1) public; 2) located in the six selected counties (Montserrado, Margibi, Bong, Grand Bassa, Nimba and Lofa); 3) have both grade one and grade two classes; and 4) at baseline had at least 20 learners in Grade 2 according to the EMIS records.

The lessons from this evaluation are not necessarily valid for other regions, countries, school levels, etc.

4.3.2 CONTAMINATION AND COMPLIANCE

Contamination occurs when there is crossover between treatment and comparison groups. For example, if children in RL schools were to transfer to comparison schools between baseline and endline,

it may lead to underestimation of program impact in RL schools. Similarly, if teachers were to move between treatment and comparison schools, the internal validity of the research design could be threatened. To minimize these risks, we collected endline data from students that had been enrolled in the current school in the previous year and that have not repeated the grade. We also collected information about teacher and principal exposure to Read Liberia. Contamination issues are minimal in this evaluation and do not represent a problem.

4.3.3 COVID-19

The unprecedented disruption caused by the global COVID-19 pandemic presents several risks to the research. School closures due to COVID-19 are expected to lead to significantly reduced exposure to reading instruction, and it would be unsurprising to observe declines relative to baseline since even the best designed programs cannot offset several months of learning loss. The use of a comparison group ensures that learning loss due to school closures can be at least partially accounted for in the impact estimates. Second, COVID-19 has imposed a partial "non-compliance" of sorts among treatment schools, which were forced to close out the school year several months early. As such, even an unbiased estimate of program impact would not reflect the true effectiveness of the RL model which was predicated on the assumption that students would receive two full years of program exposure.

5. FINDINGS

5.1 IMPACT OF READ LIBERIA ON STUDENTS

What is the impact of the Read Liberia activity on the reading fluency and comprehension of second grade students?	At endline Read Liberia shows positive effects on students oral reading fluency and oral reading comprehension

We compute ORF as the number of correct words read aloud from a short, connected text by the student in one minute. Figure 1 below shows ORF at baseline and endline for treatment and control groups. The average ORF at baseline was statistically identical in control and treatment groups, as expected -14.8 vs. 14.4 correct words per minute (cwpm) respectively. **At endline, the control students' performance remained the same (14.5 cwpm), while students exposed to Read Liberia activities performed better, reaching an average ORF of 29.7 cwpm, twice the average in the control group.** This substantial increase of 15.3 cwpm corresponds to an effect size of 0.6 of a standard deviation and it is statistically significant.

Figure 1: Oral Reading Fluency (cwpm), baseline and endline
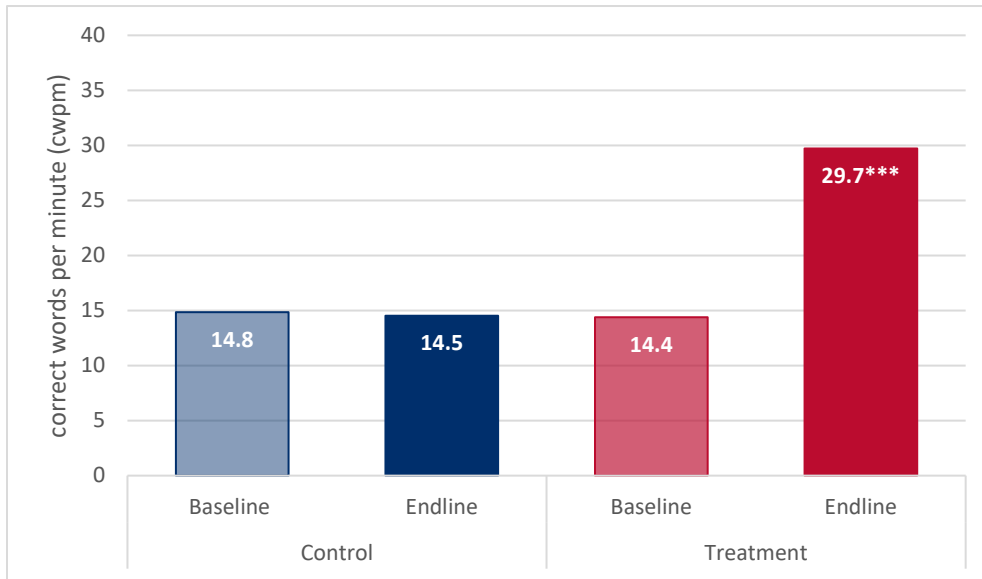
*** p<0.001. Baseline shows students ORF at the end of grade 2; endline shows students
 ORF at the beginning of grade 3.

Read Liberia improved ORF among students with different reading abilities. Figure 2 below shows that
**Read Liberia reduced the number of students that were not able to read a single word
from a short paragraph in half, from 41 percent to 21 percent**. It also reduced the number of
students that read less than 20 cwpm, increased the reading ability of intermediate readers and
increased the percentage of students reading 50 or more cwpm, from 7.5 percent to 23.4 percent.

Figure 2: Distribution of Oral Reading Fluency (cwpm) at endline. Grade 3
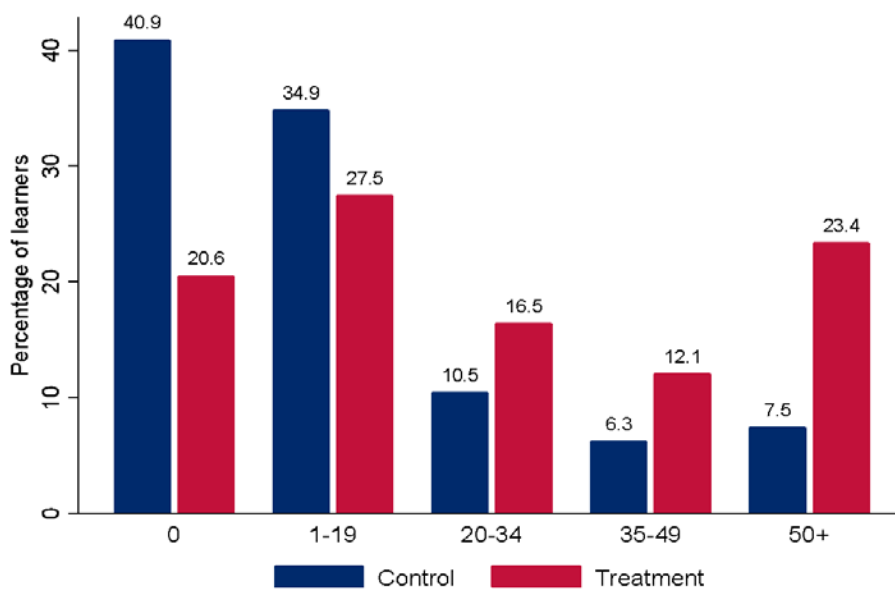
The Ministry of Education guidelines specify an ORF benchmark of 35 cwpm for the learners at the end of grade 2. Table 4 shows the percentage of learners able to reach that benchmark at baseline and at endline. At baseline, around 13 percent of the students in treatment and control groups reached the reading benchmark. At endline, the percentage stayed very similar among the control students (13.8 percent) however, **the percentage of Read Liberia students able to read at least 35 cwpm increased to 35.5 percent, more than doubling their control counterparts' performance**.

Table 4: Percentage of students reaching ORF benchmark of 35 correct words per minute.

	Baseline	Endline
Treatment	12.9	35.5
Control	13.2	13.8

Finally, we also show the percentage of learners that received Read Liberia activities and increased at least one proficiency level in reading at the end of grade 2 (ES.1-48). Liberia does not have defined proficiency levels yet, therefore we used, based on the grade 2 MoE ORF benchmark and the empirical ORF distribution, the following levels:

Does not meet minimum proficiency standard = 0-19 cwpm
Partially meets minimum proficiency standard = 20-34 cwpm
Meets minimum proficiency standard = 35-49 cwpm
Exceeds minimum proficiency standard = 50+

Table 5 shows that from baseline to endline the percentage of Read Liberia students not meeting the minimum proficiency standards was reduced 25 percentage points and the percentage meeting or exceeding it increased in 23 percentage points.

Table 5: Percentage of students increasing one proficiency level in reding

ALL	Baseline	Endline	Difference
Does not meet minimum proficiency standards	73%	48%	25 pp
Meets or exceeds minimum proficiency standards	13%	36%	23 pp
Total reported change			47 pp

Oral reading comprehension is assessed through a set of orally administered questions about the paragraph read by the student. Students are only asked comprehension questions related to the parts of the text that they attempted to read within the time limit. In the EGRA used to assess the students, the first question is asked only if the student attempts at least 6 words and reads at least one of them correctly. The reading comprehension of students that are not asked questions, i.e., non-readers, is not computed.

Figure 3: Oral Reading Comprehension (percentage correct), baseline and endline
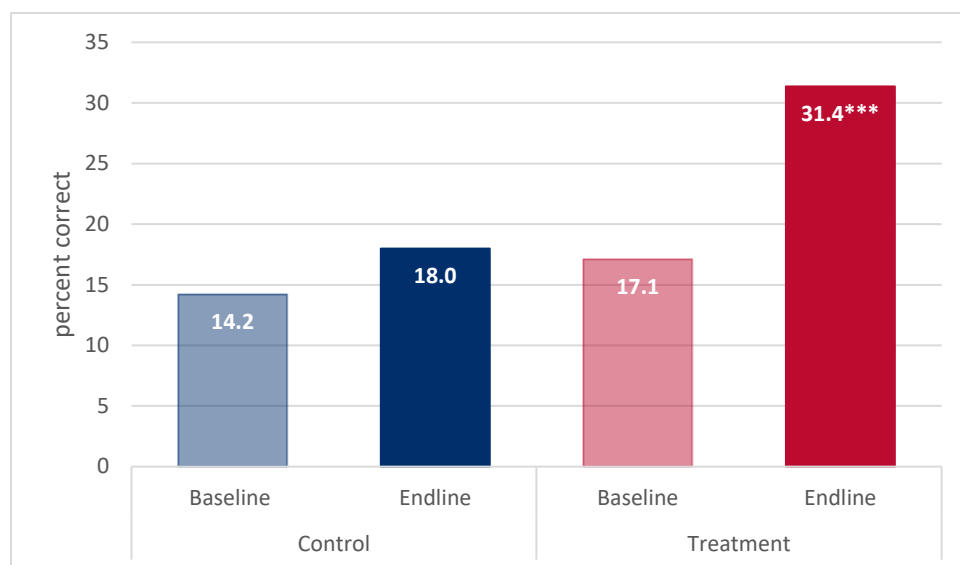
*** p<0.001. Baseline shows students ORF at the end of grade 2; endline shows students
 ORF at the beginning of grade 3.

We find a positive impact of Read Liberia on oral reading comprehension. At baseline, the percentage of correctly answered questions was 14.2 and 17.1 for the control and treatment group respectively. **At endline, the percentage of correctly answered questions increased to 31.4 among the treatment students while it is only 18 percent for the control group and this difference is statistically significant.**

Read Liberia also had a positive effect on pre-literacy skills included in the EGRA, namely letter name identification, phonemic awareness, familiar words, non-words, and listening comprehension. We did not find significant differences in the receptive listening comprehension and orientation to print subtasks. The scores for these two tasks are high for both groups, treatment and control. Details about these pre-literacy subtasks scores can be found in Annex 4.

5.1.1 IMPACT OF READ LIBERIA ON BOYS AND GIRLS

The impact is positive and significant and very similar for boys and girls. Figure 4 shows the Read Liberia effect on ORF by gender and Figure 5 shows the program's effect on oral reading comprehension separately for boys and girls.

Figure 4: Oral Reading Fluency (cwpm), at endline. Grade 3 boys and girls
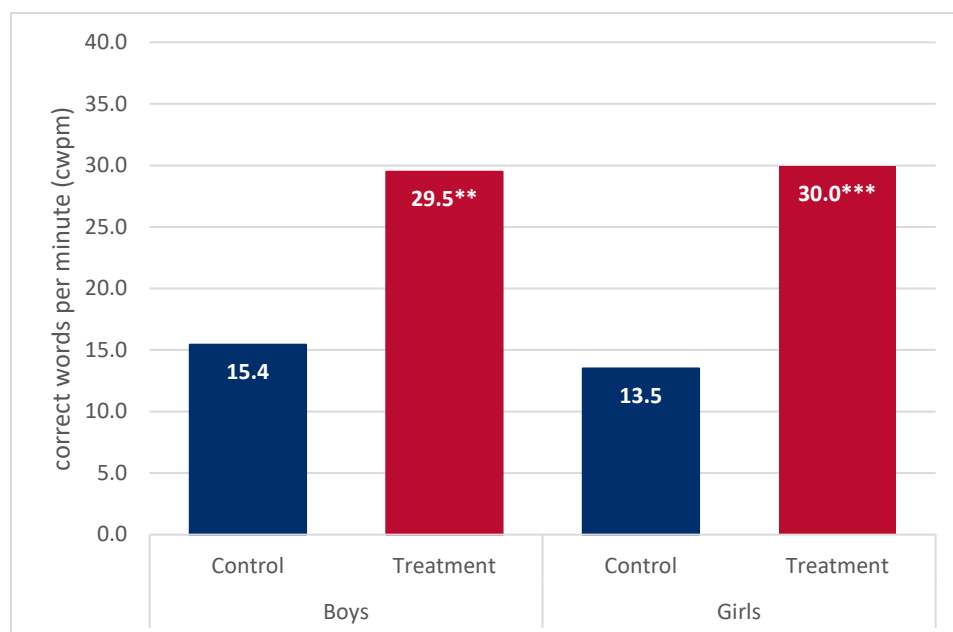
** p<0.01, *** p<0.001

Figure 5: Oral Reading Comprehension (percentage correct), at endline. Grade 3 boys and girls
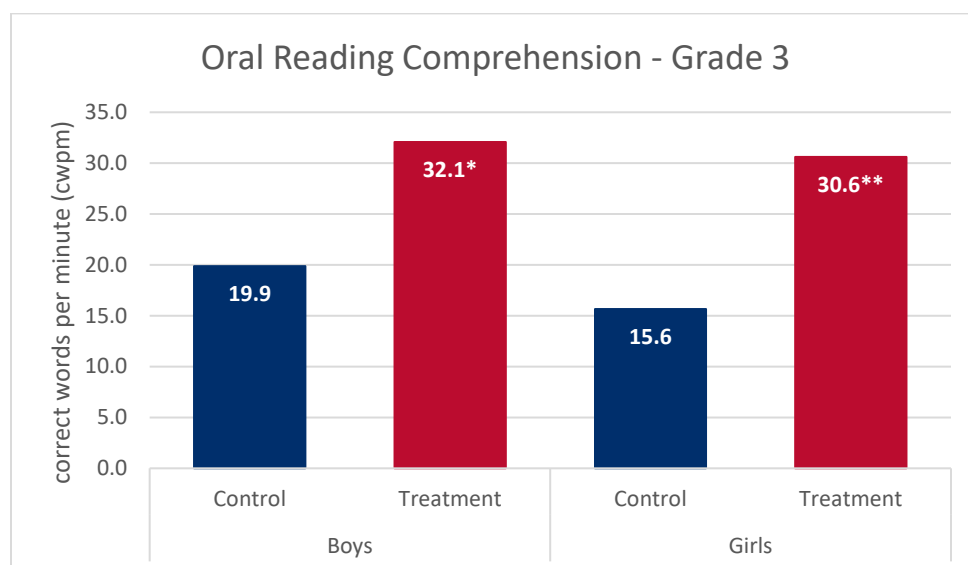
* p<0.05, ** p<0.01, *** p<0.001

We also computed the percentage of boys and girls that received Read Liberia activities and increased at least one proficiency level in reading at the end of grade 2 (ES.1-48). Table 6 shows that the percentage of improvement was large for both, boys and girls. The percentage not reaching the minimum proficiency standards defined as less than 20 cwpm was reduced by 20 percentage points and 29 percentage points for boys and girls, respectively. The percentage of Read Liberia learners meeting or exceeding the minimum proficiency of 35 cwpm from baseline to endline increased 21 and 25 percentage points for boys and girls, respectively.

Table 6: Percentage of boys and girls increasing one proficiency level in reding

BOYS	Baseline	Endline	Difference
Does not meet minimum proficiency standards	69%	49%	20 pp
Meets or exceeds minimum proficiency standards	16%	37%	21 pp
Total reported change			41 pp
GIRLS	Baseline	Endline	Difference
Does not meet minimum proficiency standards	76%	47%	29 pp
Meets or exceeds minimum proficiency standards	9%	34%	25 pp
Total reported change			54 pp

In the next subsection, we investigate differences between boys and girls, taking into account background and context characteristics.

5.2 CONTEXT, STUDENT CHARACTERISTICS AND READING PERFORMANCE

To better understand the relation between students' characteristics, context factors and reading performance we run regressions where we include several explanatory variables. These regressions only show associations between variables and reading performance and do not prove causality. The only exception is the variable "Treatment" which is an indicator that the student received the RL intervention, which we have shown in section 5.1 to have a positive impact on reading proficiency.

Many variables could be related to reading skills. Variables can also be associated with omitted factors which could be the determinants of performance. We experimented with a range of specifications and found that when taking into account student characteristics and context:

On average girls perform slightly worse than boys, although the difference is generally not statistically significant in our sample.

Students in urban areas perform on average better than those in rural areas.

Students in Nimba County perform on average worse than students in other counties.

Practicing reading at home is associated with better reading skills.

Students that come from homes where Kru is the spoken language perform better than other groups.

The full regressions are shown in Annex 3.

5.3 READ LIBERIA IMPLEMENTATION

In this subsection we explore the implementation of Read Liberia activities in the target schools. In all but one treatment schools, principals reported that Read Liberia has reached the school. In that school there is no evidence of RL activities at endline although there were at midline.

In what follows, we focus on several Read Liberia activities in the schools, namely training, coaching, and teaching and learning materials.

5.3.1 TRAINING

We asked principals in all the schools in our sample – treatment and control – about general in-service training and training focused on teaching reading. In addition, we asked questions about Read Liberia training to principals and grade 2 teachers in treatment schools.

Both principals and teachers from all schools were asked questions about their attendance of various professional development trainings and reading trainings. In the total sample, 82 percent of principals and 88 percent of teachers attended some training on how to teach reading (Figure 6).

Figure 6: In-service teaching reading training received by principals and teachers – All schools
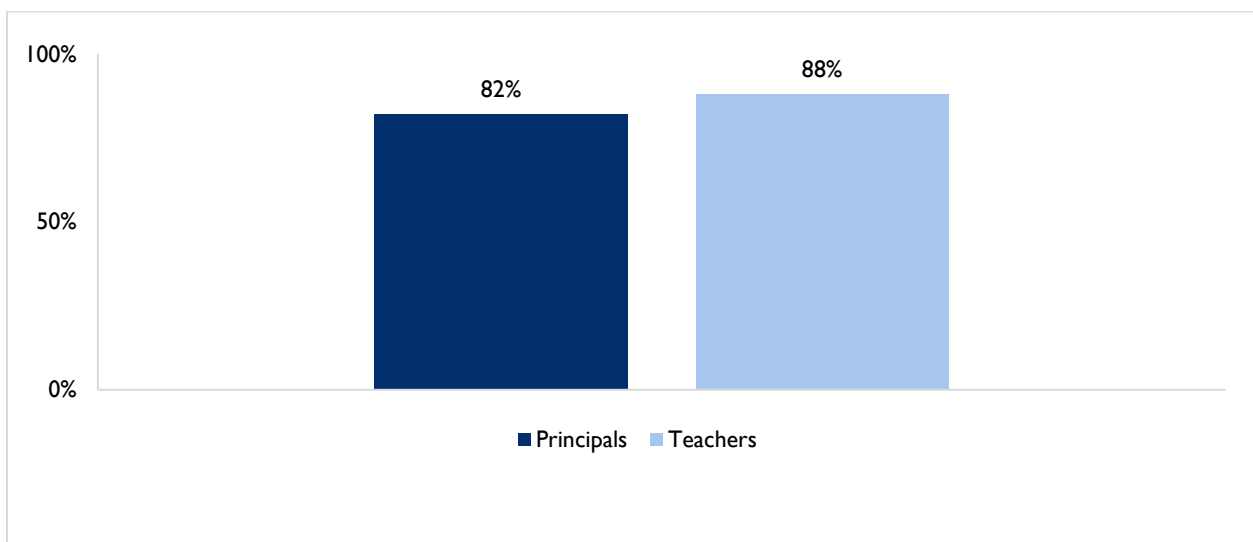
Figure 7 shows the percentage of principals and teachers that ever attended RL training. Ninety one percent of principals and 95 percent of teachers in RL treatment schools did attend some RL training before our visit to the school.

Figure 7: Read Liberia training attended by principals and teachers – Treatment schools only
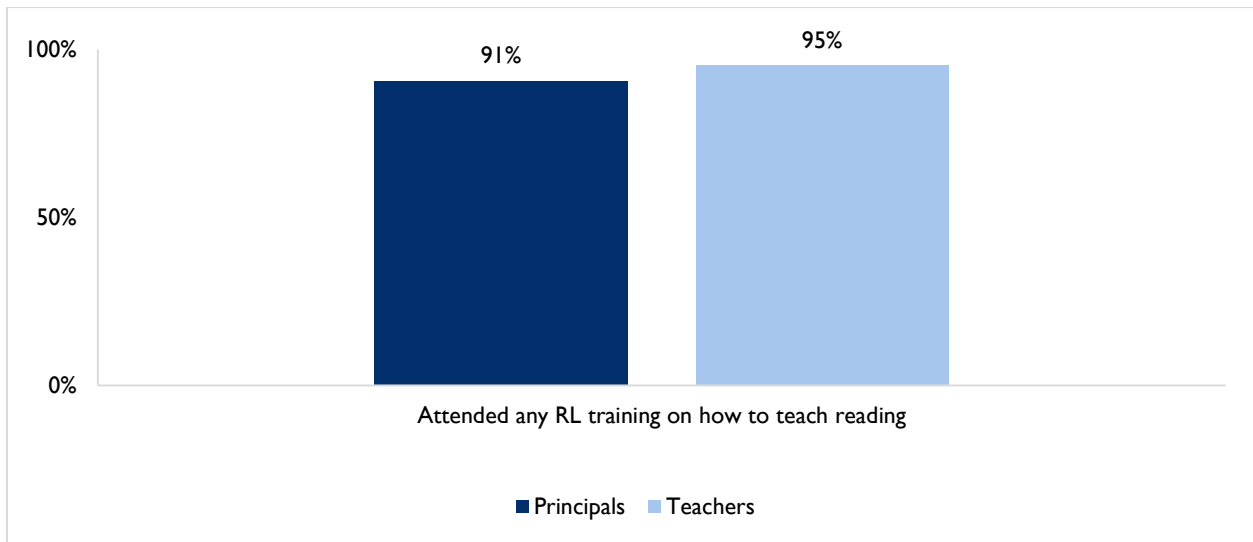
Note: N principals=43, N teachers=43.

Among principals that attended Read Liberia training, 90 percent attended at least one training event in the period 2020-21. The percentage is higher for teachers, reaching 97 percent. Figure 8 shows the percentage of teachers that attended both training sessions, one, and none in the previous year.

Analyzing the details of the RL training attendance (among attendees), we find that largest percentages of principals (69 percent) and teachers (78 percent) attended two RL trainings sessions in 2020/21. This is what the RL program was set up to offer. Twenty-one percent of principals and 20 percent of teachers attended only one RL training session. (Figure 8).

Figure 8: Number of Read Liberia training sessions attended by principals and teachers in 2020-21 – Treatment schools only
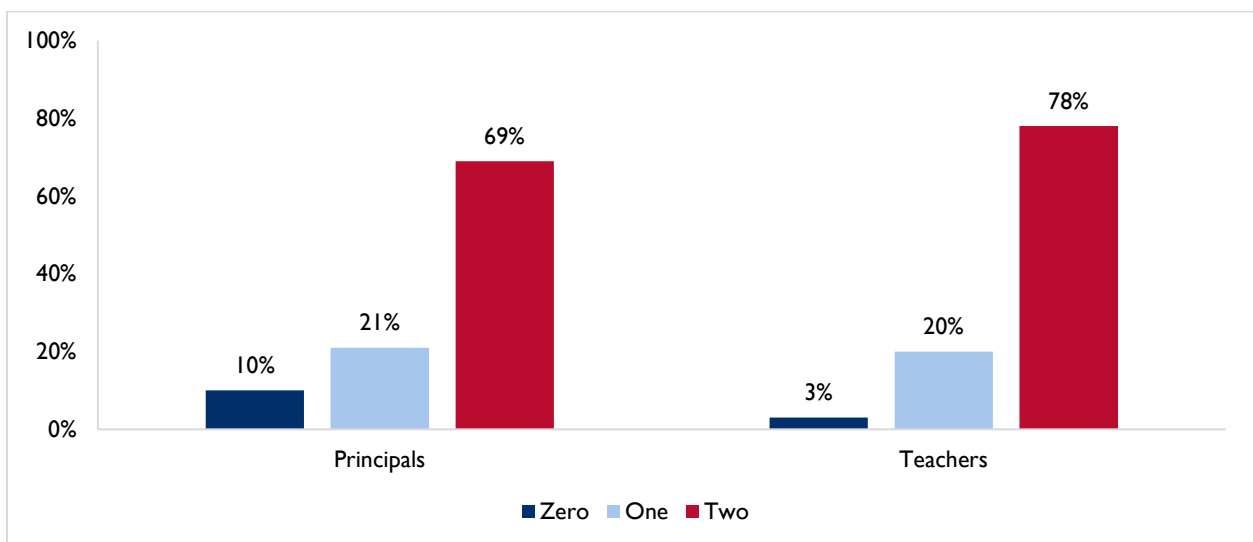
Note: Among those who said they had attended the Read Liberia training before. N principals=39, N teachers=41.

Principals and teachers have very positive opinions about the Read Liberia training they received. Almost all of them think that the training was useful, and they learned new things. They feel better qualified to teach and report using in their reading instruction lessons what they learned during training. In terms of the length of training, the opinions are divided and around half think that training was not long enough. This percentage went down since the midline data collection, when more than 70 percent of teachers and principals did not think the length of training was appropriate.

5.3.2 COACHING

According to the principals, all treatment schools in our sample received visits from the RL coaches during the past academic year. Nearly all principals (93 percent) work with coaches to improve teacher reading instruction. The most common ways of working with coaches to improve teacher reading instruction are the following: principals observe teachers together with the RL coaches (92 percent), receiving the RL coach's explanations on how to use materials such as the TIG and RL reader and SAB (85 percent), and receiving the RL coach's explanations on how to test students (82 percent) (Figure 9). Explaining how to test students has become more common, increasing from 37 percent observed at midline. All principals find the feedback provided by the RL coaches to teachers to be generally helpful.

Figure 9: Principals' work with the Read Liberia coaches aimed at improving teacher reading instruction – Treatment schools only
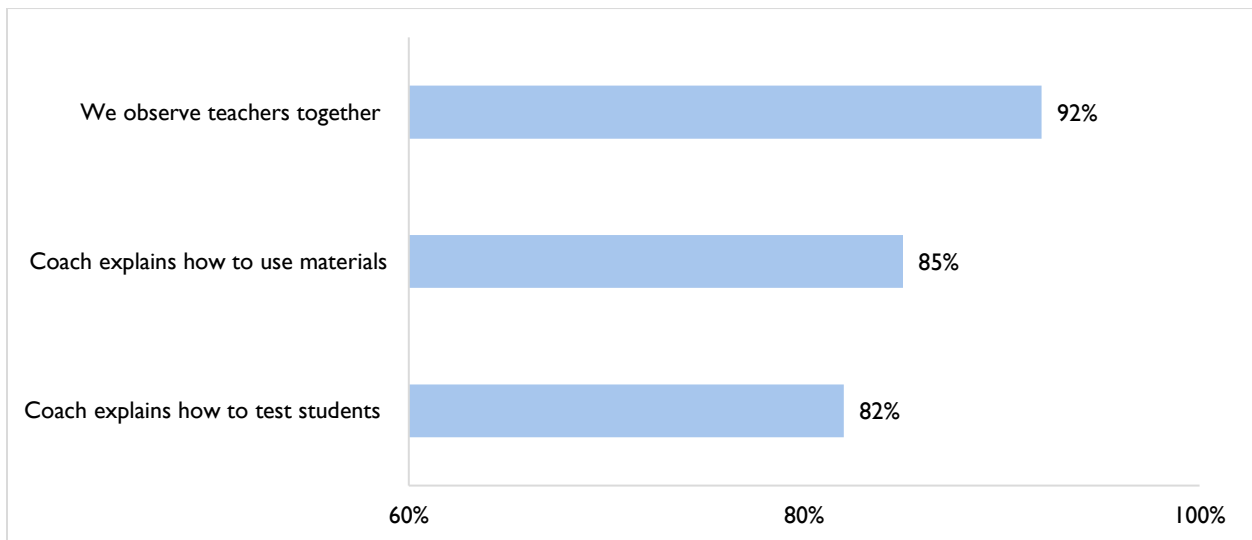
Note: Among the principals who said a Read Liberia coach had visited the school during the current school year. N=42.

Teachers' reports about RL coaches agree with those of principals. Ninety-eight percent of the grade 2 teachers in our RL schools sample say that a RL coach came to observe their teaching of the literacy/English class during the school year and in all cases, coaches provided feedback (Figure 10).

Figure 10: Percentage of teachers who say a Read Liberia coach observed them teaching a literacy/English class

98%

■ No ■ Yes
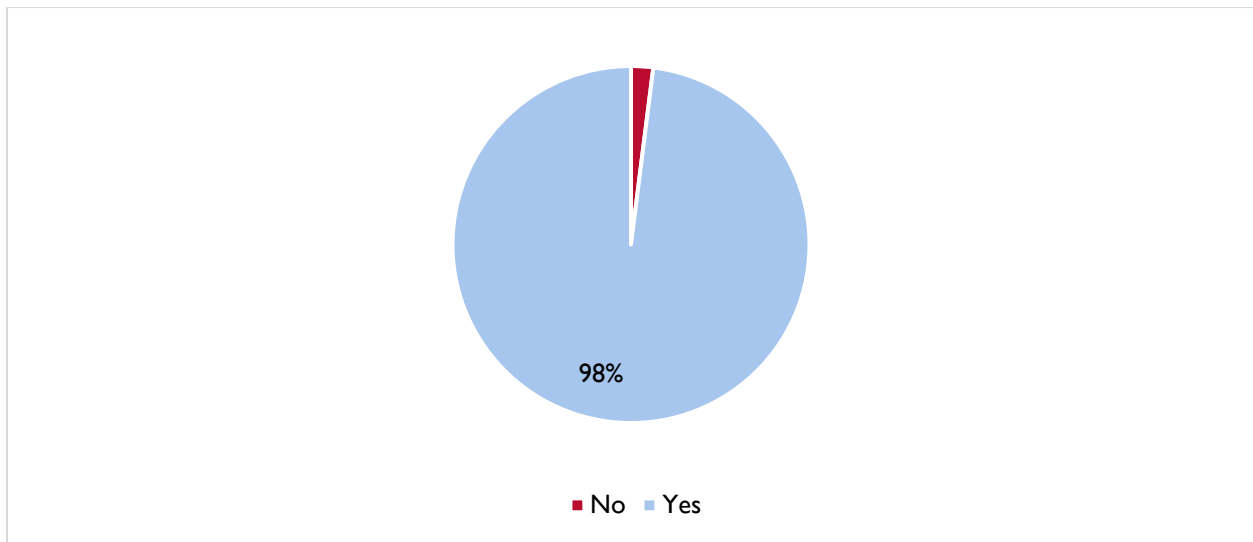
Note: N=43.

5.3.3 TEACHING AND LEARNING MATERIALS

In this subsection we show findings related to the availability of teaching and reading materials in treatment and control schools. In addition, we asked about frequency and modalities of students reading assessments.

There is a substantial gap in the availability of teaching and learning materials observed between the treatment and control schools. Figure 11 shows that while almost all teachers at the treatment schools have printed TIG(s) to help develop their classes, around 60 percent of teachers in the control schools have such guides.

Figure 11: Availability of teacher guides – All schools

■ Yes ■ No
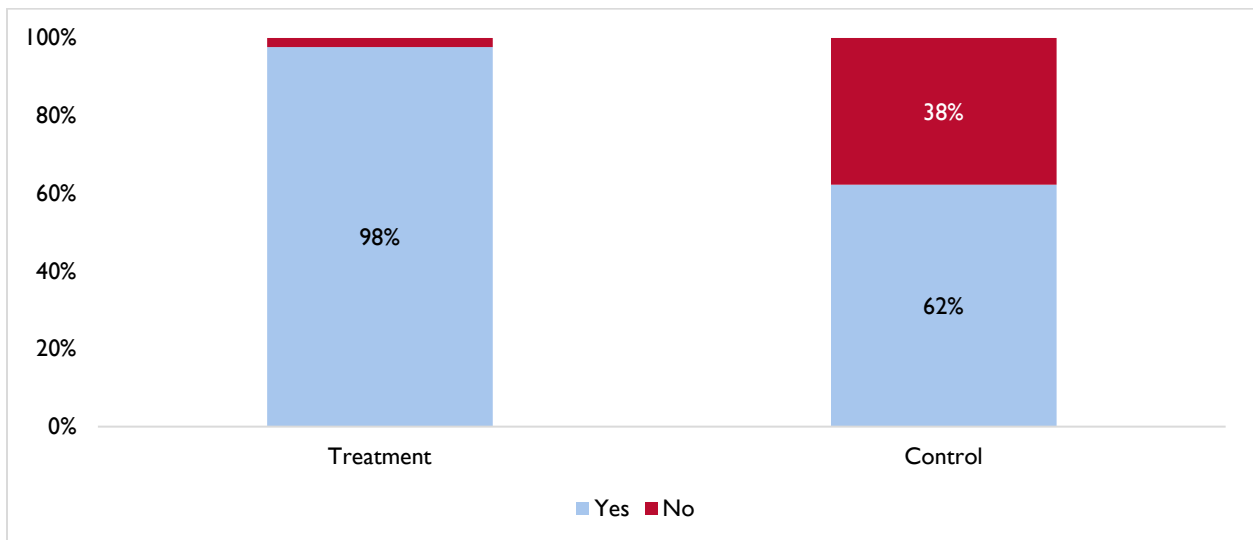
Note: N treatment=43, N control=45.

Ninety-eight percent of the teachers in the treatment schools received their printed teacher guide(s) from the RL. Among these teachers, 64 percent received one RL guide for each semester, 12 percent received one guide for the whole year, 19 percent received one for the first semester, and two percent received a second semester guide (Figure 12). Therefore, 76 percent of the teachers in RL schools have teacher guides for the whole academic year. All teachers have a good or very good opinion about the RL teacher guides and most of them report using the guides every day.

Figure 12: Number of teacher guides received from Read Liberia –Treatment schools only
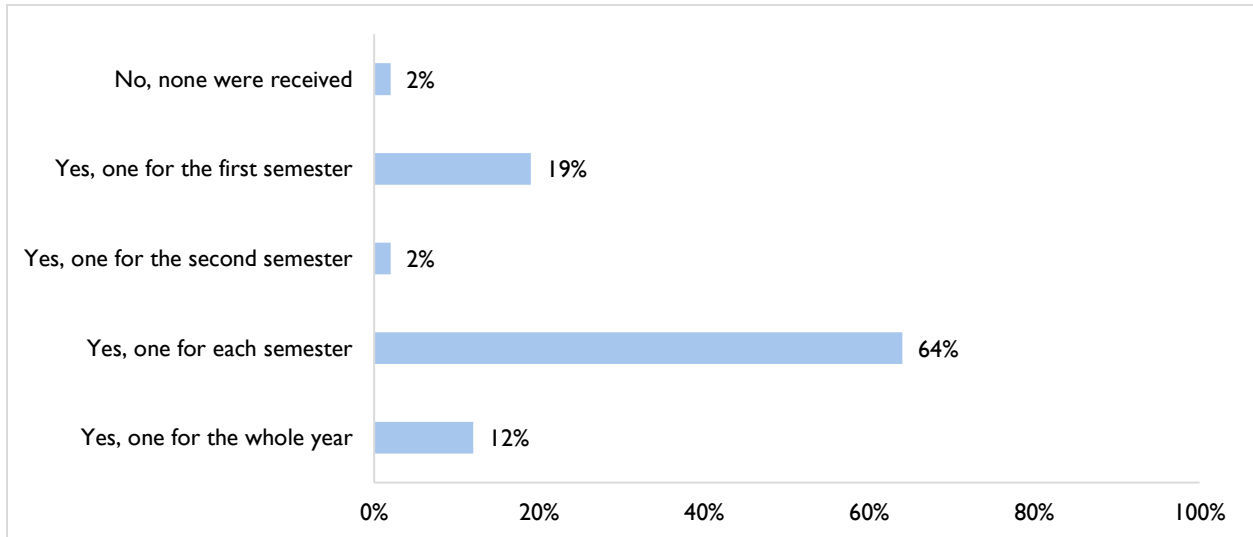
Note: N=43.

We asked teachers about assessing the students' reading skills. Student reading assessments were conducted by about 70 percent of all grade 2 teachers in our sample last year, with a slightly higher rate of teachers in the RL schools conducting assessments compared to those in the control schools (72 vs. 67 percent) (Figure 13).

Figure 13: Reading assessments conducted by grade 2 teachers last year – All schools
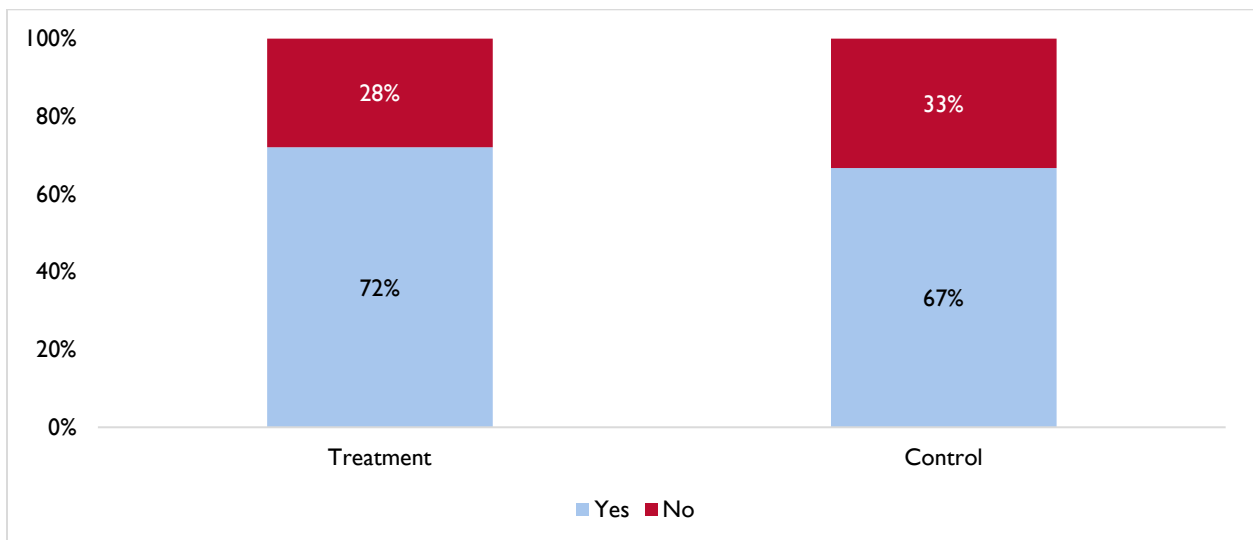
Note: N treatment=43, N control=45.

All but one teacher in the treatment schools who conducted the assessments received them from RL. In control schools, each teacher has his or her own approach to assess the students. In treatment school, over 83 percent of those who received the RL assessments find them to be very good and another 13 percent find them to be good. Over 80 percent of the teachers who conduct assessments do it with the frequency specified in the materials (every 11-12 weeks), and the remaining 17 percent conduct them once per term.

The availability of reading books in grade 2 classrooms is much higher at the RL schools, as expected. Among RL schools, 98 percent of the grade 2 classrooms have reading books (Let's read) available. This compares to 51 percent at the control schools (Figure 14). In RL schools, three quarters of the grade 2 classes have reading books for every student and in 24 percent of the cases, the students need to share the books.

Figure 14: Availability of reading books in grade 2 classes, as reported by teachers – All schools
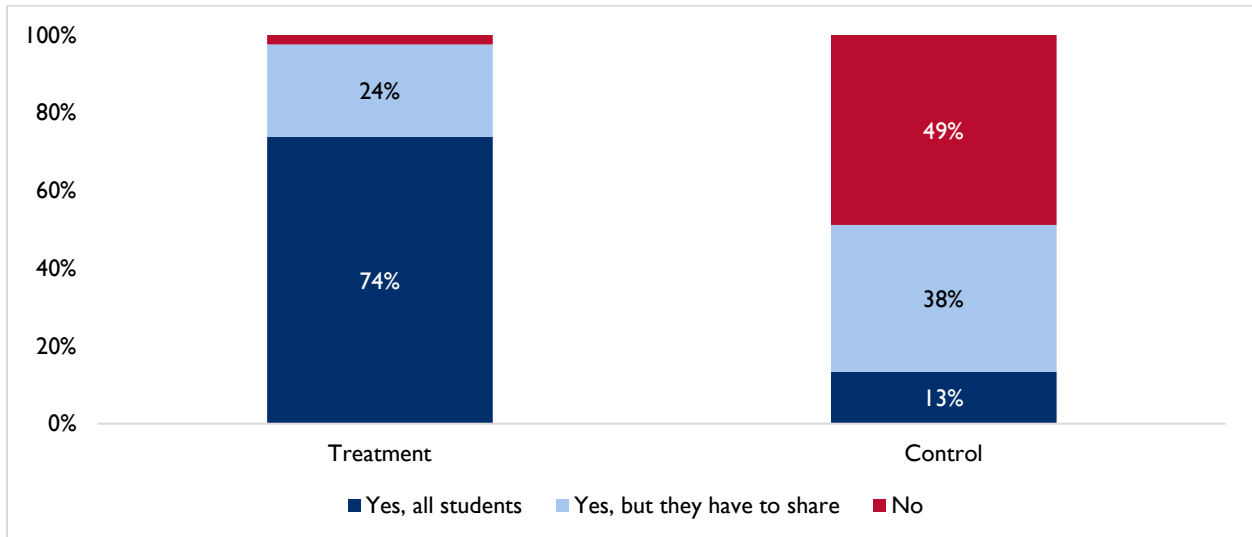
Note: N treatment=43, N control=45.

In treatment schools, 98 percent of the grade 2 classes that have reading books received those from RL (Let's Read) and the books are used daily in 83 percent of the cases (Figure 15).

Figure 15: Frequency of using Let's Read books in grade 2 classes – Treatment schools only
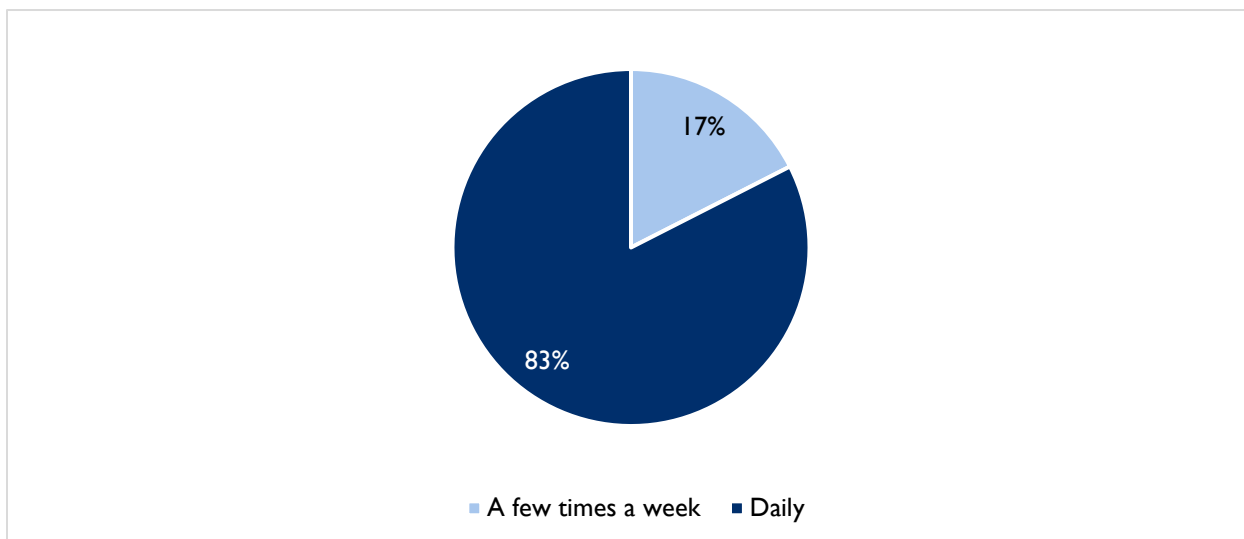
17%

83%

- A few times a week ■ Daily

Note: Among the teachers whose students received their reading books from Read Liberia. N=40.

All grade 2 RL teachers allow their students to take the Let's Read book home. One teacher only allows this to happen sometimes, while the rest report that students are always allowed to take Let's Read home (Figure 16).

Figure 16: Frequency of students taking Let's Read books to read at home – Treatment schools only
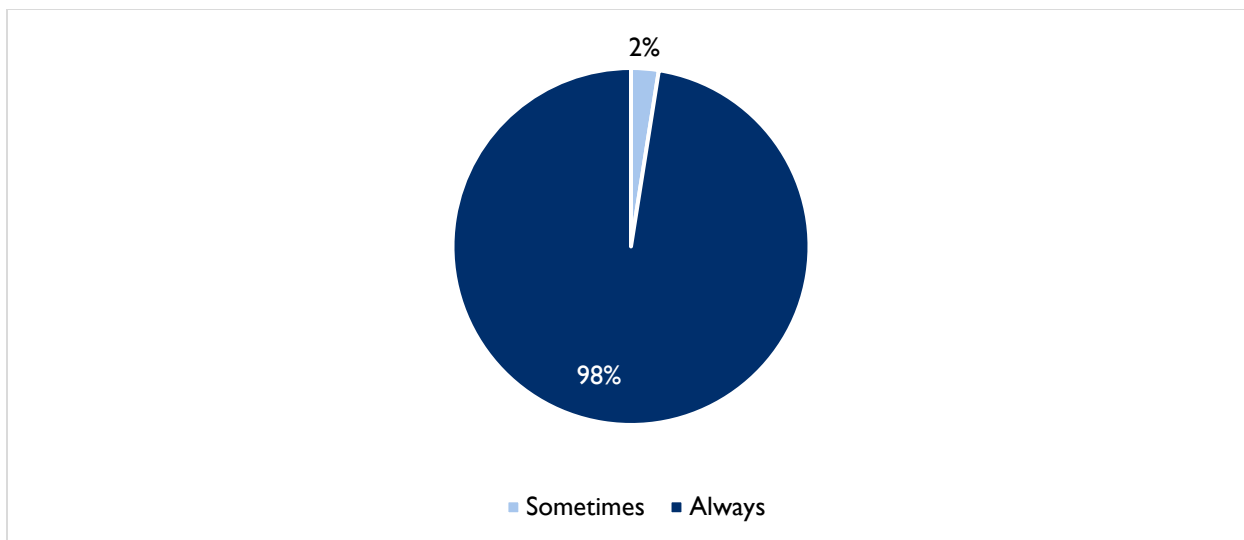
2%

98%

- Sometimes ■ Always

Note: Among the teachers whose students received their reading books from Read Liberia. N=40.

Grade 2 teachers reported that activity books are available to students in almost all the treatment schools (98 percent), whereas the majority (62 percent) of the control schools do not have such books available (Figure 17). Read Liberia provided all the student activity books (SAB) to the treatment schools.

Figure 17: Availability of activity books in grade 2 classes, as reported by teachers – All schools
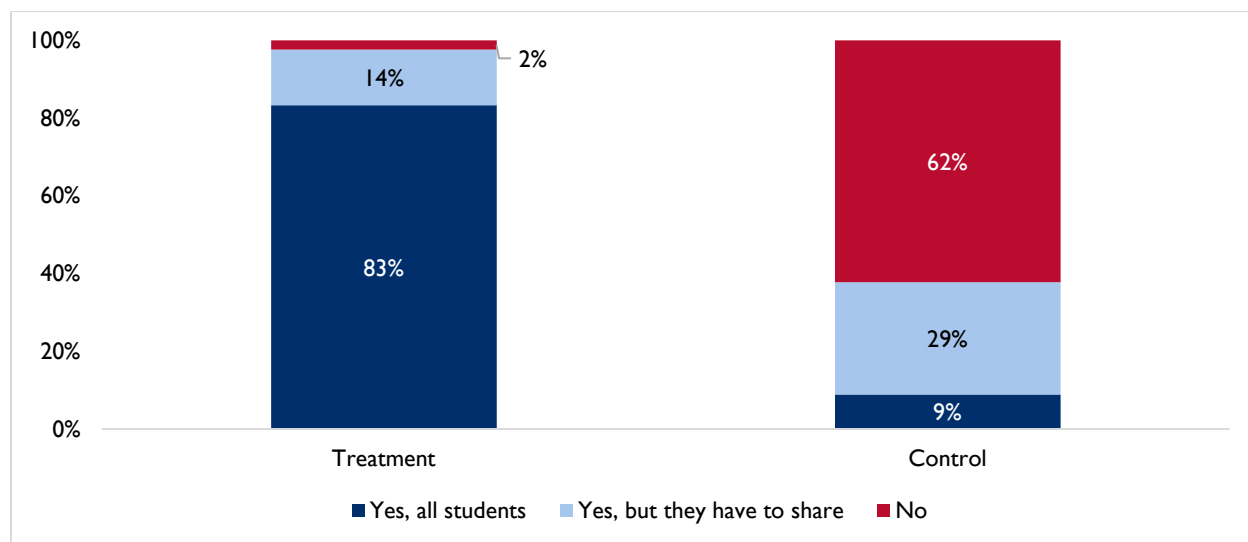
Note: N treatment=43, N control=45.

Almost all (98 percent) RL grade 2 teachers allow their students to take home the SAB always or almost always (Figure 18).

Figure 18: Frequency of students taking Read Liberia activity books (SAB) to work at home – Treatment schools only
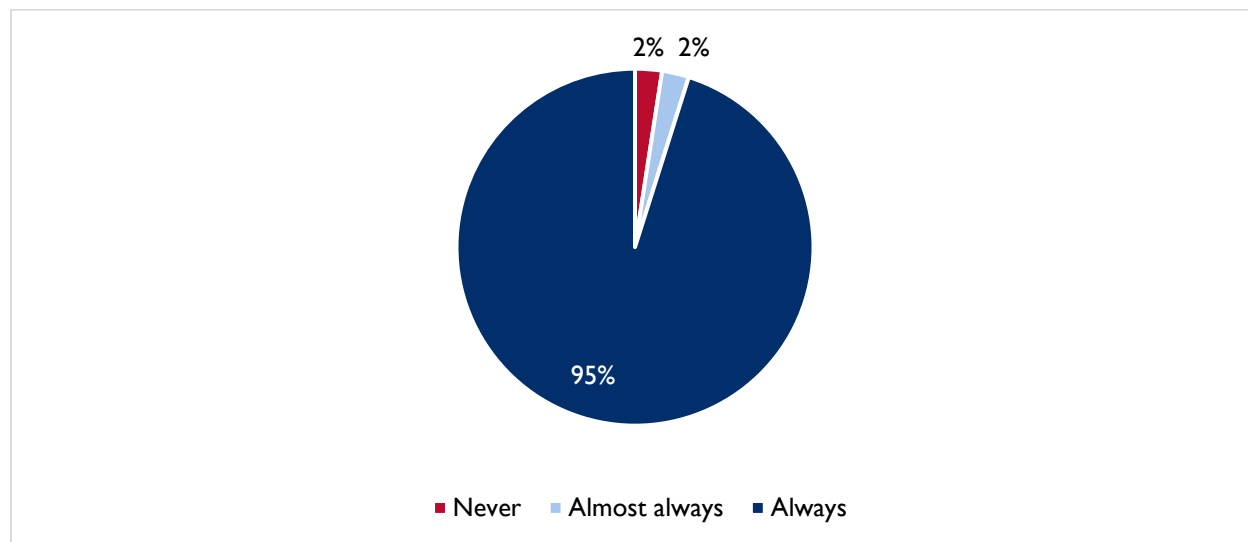
Note: Among the teachers whose students received their activity books from Read Liberia. N=41.

Figure 19 shows the availability of supplementary teaching and learning materials in treatment and control schools in our sample. In treatment schools, 88 percent of teachers report having alphabet cards and/or syllable cards to guide classes, while in control schools only 29 percent of teachers report the availability of these materials. Among teachers at the treatment schools who received some alphabet and/or syllable cards, 97 percent reported that these materials were received from Read Liberia. The gap in materials availability between treatment and control schools is also large for alphabet posters.

While 76 percent of treatment grade 2 class have at least one, only 29 percent of the control class do. In addition, it is more common for RL grade 2 classrooms to have supplementary reading books (86 percent) than for control classrooms (60 percent).

Figure 19: Availability of alphabet cards (syllable cards), alphabet posters, and additional reading books in grade 2 – All schools
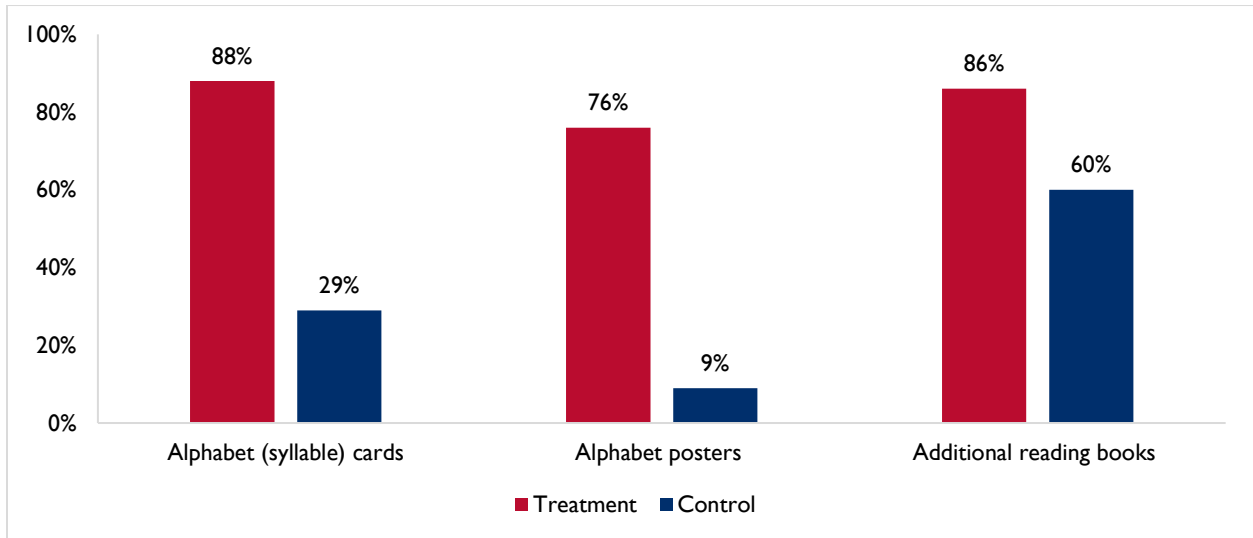
Note: N treatment=43, N control=45.

According to the RL teachers report, 65 percent of the classroom received the additional reading books from Read Liberia while 35 percent did not (Figure 20).

Figure 20: Percentage of grade 2 classrooms received additional reading books from Read Liberia – Treatment schools only
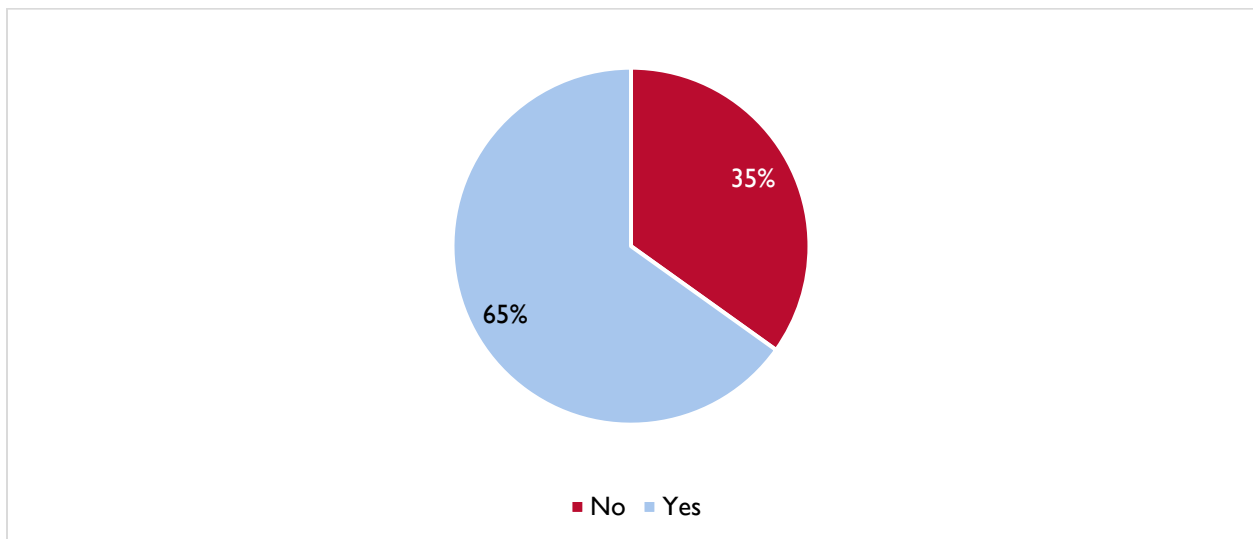
Note: N=43.

Finally, few schools -23 and 20 percent for treatment and control respectively- have a library or a reading room.

5.4 TEACHERS' CLASSROOM PRACTICES

In this subsection we present findings from the classroom observations conducted in treatment and control schools. Our analysis focused on the use of the Read Liberia program materials and the nature of instructional practice in early grade reading classrooms. To understand how Read Liberia could have affected pedagogy, we compare instructional practices between six grade 2 treatment lessons and six grade 2 control lessons in selected schools.

The questions we seek to address are:

What was the uptake by teachers of the Read Liberia program materials in teaching early grade reading?

What was the uptake by teachers of the Read Liberia structured lesson plans in classrooms, and what content was covered?

What were the differences in instructional practices between Treatment and Control classrooms?

5.4.1. BRIEF OVERVIEW OF THE READ LIBERIA INSTRUCTIONAL INTERVENTION

Program Components. The Read Liberia program uses four material components: a Teacher Instruction Guide (TIG), a Student Activity Book (SAB), a student reader titled Let's Read (LR), and a series of levelled Supplementary Readers (SRs). The TIG provides teachers with weekly overviews of the reading skills to be covered and daily lesson plans which provide detail on what content needs to be covered and how the content should be taught. The daily lesson plans (an example of a page shown in Figure 21 below) have similar steps (between three and five steps) to be completed in a 45-minute period every day. The TIG includes lists of materials required for each lesson and makes cross-references to the SAB, LR and SRs. The TIG also provides teachers with an assessment system, incorporating daily continuous assessment activities for the teachers to conduct; oral reading fluency test passages and directions; formative bi-weekly tests; and periodic assessments to be conducted every six weeks.

The SAB provides students with reading and practice activities for every week of the program. These are meant to be used in class and completed at home if necessary. The LR reader consists of a set of 34 fiction and non-fiction texts, also intended for use in class and at home. The LR is supplemented with a set of SRs to support learners in reading independently at their level. Finally, the program supplies teachers with a Read Liberia alphabet chart, set of letter cards, and an oral reading fluency booklet.

Figure 21: Pages from the TIG - Weekly schedule and daily lesson plan

REVIEW Week 5 Lesson Planner

	Monday (Day 1) pages 82–85	Tuesday (Day 2) pages 86–89	Wednesday (Day 3) pages 90–93	Thursday (Day 4) pages 94–97	Friday (Day 5) pages 98–100
Alphabet Recognition and Phonics	short vowel sounds, consonants, double consonants, and consonant blends	ee/ea as /ē/, ay/ai as /ā/, ie as /ī/	a + consonant + silent e, o + consonant + silent e	i + consonant + e, ar, ew	
Spelling/ Sight Words	sad, get, big, not, run, last, went, fell, stick, jump, want, fix, rest, glad, friend	need, green, eat, beans, stay, way, wait, tie, lied, cook, done, said, thought, pull, another		make, take, came, safe, place, home, hole, close, hope, stove, forest, crab, many, live, people	life, like, time, hide, white, farm, hard, car, few, grew, village, work, city, different, could, miss
Written Vocabulary	want, fix, rest, glad, friend	cook, done, said, thought, pull, another		forest, crab, many, live, people	village, work, city, different, could, miss
Reading Comprehension			"Spot Got Bit" and "Why Spider Has 8 Thin Legs"		"A Crab That Lives in a Tree" and "Kwenah Goes to Monrovia"
Reading Fluency	"Spot Got Bit"	"Why Spider Has 8 Thin Legs"		"A Crab That Lives in a Tree"	"Kwenah Goes to Monrovia"
Oral Vocabulary	excited, proud, stretch, suddenly, shy	hungry, wing, steal, fight, safe, hide	full, grow, build, ground, well, wind	meat, gone afraid, decide, a little while	
Read-Aloud	"My First Day at School"	"The Mother Hen and the Hawk"	"Why Must It Rain?"	"Muhammad Goes to the Market"	

Grade 2 National Standards for Reading and Comprehension

Learning Outcomes: Read and process information • Demonstrate knowledge of sight words and other vocabulary for improved spelling and writing skills • Use letter-sound associations, word parts, and context to read new words and analyze texts • Improve spelling and writing skills for effective communication • Analyze text content and share ideas, information, and messages with others • Predict outcomes and make judgments after careful evaluation of facts and issues • Demonstrate the awareness that speech is made of a sequence of symbols and sounds that can be manipulated to recognize and read words accurately and fluently • Demonstrate a literal comprehension of readings, through identification and analysis of main ideas and supporting details • Fluently read grade-level texts • Read grade-level text with speed and accuracy • Correctly respond to questions from texts read.

Learning Objectives: Identify vowels and recognize consonants • Read words with varied word patterns • Identify beginning, middle, and end of a story • Retell a story • Identify characters, setting, events, and plot in a story • Identify the problem in a story • Construct sentences correctly • Read diverse types of writings • Identify facts from a text • Identify main idea and facts in a nonfiction text • Identify theme in a text • Recognize the elements of diverse types of writings • Name and identify some types of adjectives • Demonstrate knowledge of new words • Read words with variant word patterns • Identify the sequence of a text • Spell high-frequency and subject-related words • Demonstrate understanding of vocabulary and related subject words in context • Read diverse texts fluently • Listen to and discuss texts.

Teachers are expected to follow three to five steps or activities specified daily in the TIG, while learners engage with activities and reading in the SAB and the LR student reader[4].

Program principles. The program incorporates a well-established conception of successful literacy instruction based on the explicit and systematic teaching of different components of reading, including phonemic awareness; phonics; vocabulary; and comprehension (National Reading Panel, 2000; Snow, 2017). It also incorporates a focus on fluency, spelling, sight words, and shared writing. These different components are structured into the scripted reading program for each day of the week, for 36 weeks (an example shown in Figure 1). In the TIG, the program also recognizes writing and oral language fluency as key to the development of reading.

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[4] This is down from eight steps in the previous version of the materials

A further set of program-specific instructional principles also inform the program, also common to structured pedagogy programs. These are wide-ranging and include scripted content; the 'I do, we do, you do' methodology (or gradual release model)[5]; use of familiar language; monitoring and feedback; use of appropriate pacing; inclusion; positive discipline; and homework.

Both the literacy focused principles and the pedagogical principles form the basis for the analysis presented below, looking at what is covered in the reading lessons as well as how this content is taught.

5.4.2. CLASSROOM OBSERVATION STUDY DESIGN AND DATA ANALYSIS

Sample. The sample for the observation study included six Grade 2 treatment classrooms and six classrooms in control schools, a total of 12 classrooms out of the baseline sample. All six treatment schools had also been observed in the Classroom Practices Study conducted by NORC in 2019, also at the Grade 2 level. All the Grade 2 teachers were, however, different from those observed in 2019. Using the same labels as 2019, the treatment schools are T6; T8; T15; T36; T37; and T41 and the control schools C6; C20; C21; C22; C24; and C40 for a control school that was not part of the classroom study in 2019.

The schools were selected to obtain a range in reading outcome levels, including higher and lower performers on the baseline test. The sample also included schools from six different counties and different districts within those counties, ensuring an equal spread of treatment and control schools within counties. In general, the sizes of the classrooms were small, shown in Table 5 below. Most classes ranged from six learners to 25, with only one control class with more than 40 learners.

Table 7: Number of learners in treatment and control classrooms

Treatment		Control	
T6	7	C6	25
T8	15	C20	14
T15	18	C21	49
T36	10	C22	6
T37	21	C24	19
T41	22	C40	21

There were enough seats for all learners in all the classrooms. In two control classrooms learners had to share desks. In all classrooms light was insufficient for all learners to read due to a lack of windows and electricity.

The duration of lessons ranged between 19 minutes and 47 minutes, with the majority being between 31 and 37 minutes.

Data Collection. A dominant way of measuring classroom practices at scale is the use of closed-ended schedules that require relatively low inference judgments on a range of features of classroom practice.

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[5] Fisher and Frey, *Better Learning through Structured Teaching* (2008)

Often these instruments include what can be measured easily: time, presence of resources and coverage, for example. One of the problems with studying pedagogy in this way is that it produces atomistic descriptions that tell us little about the actual pedagogic processes in classrooms, and hence about quality. In other words, a set of inputs are measured, but without an understanding of when, whether and how these inputs combine to produce potential learning. In addition, more detailed and subtle processes, such as the nature of classroom discourse and feedback are missed. The importance of collecting data that captures detailed description of the lessons has thus been a focus of the classroom-based approach taken in the study.

In the 2019 classroom observation study that NORC conducted, fieldworkers conducted live observations and were trained to collect closed-ended items and open-ended narrative descriptions of classroom activity. Due to COVID-19 travel restrictions, this form of data collection was not possible in 2020 at all and was restricted in 2021. A decision was taken to video a smaller sample of classrooms in 2021. The trade off in this round was between a greater number of classrooms observed and the collection of video data which allows for greater in-depth analyses of classroom processes and discourse. Audio records were simultaneously collected, with the microphone positioned near to the teacher. This was to assist with accurate transcription. Still photographs of all text that was used in the lesson, including any text written by the learners, were taken. All 12 lessons were transcribed in full.

5.4.3. UPTAKE OF READ LIBERIA PROGRAM MATERIALS

The uptake of the program across the treatment lessons was poor. Teachers used the Read Liberia TIG in three of the six classrooms, and the Read Liberia LR student reader was used in five classrooms. The Read Liberia SAB was used in only two classrooms. None of the teachers taught a week that suggested they had been following the program systematically. It would be expected that teachers who were following the program would at least be in the last four to six weeks of the program (i.e. weeks 30 to 36), or, given COVID-19, be at least halfway through the program (around Week 20). Table 6 shows that only one of the lessons was taught around the expected program weeks (Weeks 30 to 36). The other four lessons were behind program expectations, with two of the lessons drawing material from Week 1. Two lessons drew on more than one daily lesson plan, in different weeks. This suggests that the program was generally not being followed in the schools.

Table 8: Week of the program of the observed lesson

School	Program week
T37	Week 32 / Week 33
T36	Week 1 / Week 8 / Week 4 /Week 2
T41	Week 10
T15	Week 1
T8	Week 29

Where the TIG was in evidence teachers followed few of the lesson plan steps and did so selectively when they did. The expectation of the Read Liberia daily lesson plans is that teachers work through different steps each day. All the daily material, time allocations, written instructions as well as scripted sentences to be read aloud by the teacher, as provided. Where questions are provided, answers are also

given. Most days entail five steps. However, most of the teachers left out most of the steps. Where the steps were taught, this was also done selectively with much of the material in the TIG left out. T37 and T36 covered multiple days in their lessons. In the case of T37, having completed two read alouds from different weeks, the teacher then asked learners to write down sight words from a completely different week, in relation to a story not read. The confusion stemmed from an inability to accurately decipher the TIG. In the case of T36, after doing a very simple phonics activity with learners from Week 1, the teacher selected two stories from different weeks to read, and a picture from another different week for discussion. In these cases, the actual steps of the TIG were not followed.

There was no evidence of assessment or homework, both of which are expected daily. The Homework step in the program provides simple and clear activities for the learners to do at home, for example "Have students complete page 21 in the Student Activity Book and read "The Lone Star Kite" aloud to someone at home" (TIG, 2020, p.132). The activities build on and rehearse material from the day or week's lessons. None of the teachers directed students to do homework. Finally, the TIG contains a well-developed and clear assessment system of teachers to use, especially in the review weeks (of which only one was observed being taught). However, there are also 'Daily Checks' within each lesson, where teachers are given observational assessment opportunities that help them monitor student mastery of skills. Examples of these are shown in Figure 2 below. None of the teachers were seen to conduct these assessments.

Other features of the program like differentiation, feedback and monitoring were also not evident in the lessons observed. The observations made it clear that the teachers were either unused to using the TIG as a guide for instruction or they were unable to use it. Teachers especially appeared to make changes to the TIG instructions when directions were more complex or challenging.

5.4.4. INSTRUCTIONAL PRACTICE

In this section we look at the nature of reading instruction across classrooms, the availability and nature of text across the classrooms and finally patterns in classroom discourse.

In the forms of reading observed in treatment classrooms, RL's approach to reading is not being realized. RL's balanced approach that combines an emphasis on phonemic awareness and phonics with the development of vocabulary, fluency and understanding was not evident as teachers left off the first part of the lesson plan. In all the control lessons and in five of the six treatment lessons, learners had the opportunity to read extended text. Table 7 below shows the form that the reading took in the lessons.

Table 9: The form of reading of extended text

	Treatment	Control
The teacher reads aloud to the class	2	2
The whole class reads aloud together with the teacher		
The whole class reads aloud together without the teacher	2	2
The whole class reads portions of text after the teacher	4	4
Learners read aloud together in groups or pairs		1

	Treatment	Control
1-3 learners read individually aloud to the class		1
>3 learners read individually aloud to the class	1	5

A common form of reading in the lessons consisted of teachers reading portions of text aloud to the class and learners repeating after (echo reading). Given the importance of learners having the opportunity to read on their own, especially for assessment purposes, the fact that this occurred more in Control than Treatment classrooms is noteworthy. The RL lessons plans include directives for 'individuals to take turns reading aloud correctly and fluently to the whole class' throughout the program. Similarly, paired reading is emphasized constantly in the lesson plans. In two of the lessons where teachers were following the TIG, paired reading was replaced with whole class choral reading.

The dominant practice of echo reading often atomized the text into single words or very short phrases thereby obstructing the meaning of the story. Learners were more likely to hear individual words than connections between words and phrases so that they could understand what they were reading.

In the rote recitation or echo form of reading, and where individual learners read, there were no strategies deployed to assist learners when they faltered. 'Word attack skills' such as decoding, syllabification or using contextual clues were absent. If a learner was not able to read, the teacher moved onto the next learner.

5.4.5 AVAILABILITY AND NATURE OF PRINTED TEXT

There was text available to learners in the form of readers or photocopied pieces of paper across all treatment and control classrooms except one - C21 - where the blackboard was used for reading. There was a notable difference between treatment and control in this regard, however. Table 7 below shows the availability of reading text in the lessons.

Table 10: Availability of reading text for learners

	Treatment	Control
All learners have their own copy of the reading text	5	2
Learners share copies of the reading text	1	3
No learners have copies of the reading text	0	1

In five of the six treatment lessons all learners had their own copy of the reading text (the Let's Read reader), and the sixth school where the program was not being followed had learners sharing readers. In the control classrooms there were far fewer texts available for all the learners and sharing between two and three learners occurred in half the lessons. Reading from passages written up on the blackboard occurred in one classroom.

While the dominant text used by treatment classrooms in the 2019 study was the blackboard, in 2021 readers were the dominant text used in the classroom. This would partly stem from a change in the format of the lessons – away from phonics and word level work to reading whole texts and comprehension questions. In both 2019 and 2021 the dominant text in Control classrooms were

readers. These included ministry-distributed materials, RL material as well as material from previous programs and Bridge school readers.

5.4.6 CLASSROOM DISCOURSE PATTERNS

Teale et al (2017) have recently argued that equally important to the development of the five foundational skills (phonemic awareness; phonics; vocabulary; fluency; and comprehension) is oral language development and the development of background knowledge, especially for comprehension. Oral language development occurs through modeling, the syntactic structure of the language by the teacher; through learners being given opportunities to use language; and through teachers pointing out the semantic, syntactic, and phonological aspects of students' speech. The development of early language knowledge and skills is central to the RL program. "In addition to learning to read, it is important that students develop strong early language knowledge and skills. This knowledge includes developing oral language, basic and academic vocabulary, and the tools to write (Baumann, Kame'enui, & Ash, 2003)" (TIG, xiv).

The question of teachers' modeling of language is dealt with under instructional competency below. In relation to learners the study found minimal opportunities for oral language development in the classrooms, particularly given that learners had minimal opportunities to speak. This was the case across all treatment and control classrooms except one (C20). In neither treatment nor control classrooms were learners given the opportunity to talk in pairs or groups. Similarly, individual learners spoke very seldom and when they did uttered single word responses.

The very limited opportunities for student talk stems from at least two strategies used by the teachers in the lessons: echo reading, which requires the restatement of text after the teacher, and closed questions requiring simple factual recall from learners. The nature of questioning provides a clear indication of teacher expectations in the classrooms, where very low-level responses are expected and accepted. For example:

Students [reading from book]: *Hawa said, "I came with my mother too".*

Teacher: *who said 'I came with my mother too'*

Students: *Hawa*

Teacher: *Clap for yourself one more*

What this form of questioning negates is active meaning making and engagement with the texts introduced. The questions do not function to check for understanding nor allow for inferential reasoning, but rather delimit student response and close down thinking.

5.4.7 INSTRUCTIONAL COMPETENCE

In 2017 the Ministry of Education (MOE) in Liberia tested 12,853 Teachers. The purpose was to identify the large number of ghost teachers on the payroll, but also to plan professional development and remove functionally illiterate teachers from the system. Teachers scored lower for English than for mathematics on the test, and overall 51 percent of teachers failed the test with below 40 percent

combined score for mathematics and English. Between 28 percent and 57 percent of teachers were deemed "untrainable" by the Ministry.

Our analysis of the classroom videos indicated that teacher competence, and especially facility with English was a problem in many classrooms. We developed an 'instructional competence' metric. The first concern was to gain a more precise measure of teacher competence in the classroom and its implications for reading instruction. The second was to consider whether the treatment teachers demonstrated greater instructional competence than the control teachers (thus possibly explaining some difference in the differential reading outcomes). Four dimensions were coded for instructional competence for each lesson:

Language use: the extent to which teachers modelled the use of English, particularly as a conduit to the standard English texts being used in the classroom

Verbal feedback: the type of feedback given by the teacher to students on their reading or answers to questions.

Knowledge: the extent to which the teacher demonstrated knowledge or understanding of components of the lesson or texts.

Reading fluency: the extent to which teachers were able to accurately identify most words; read smoothly with appropriate phrasing and expression; and convey the meaning of the text read.

Language Use. There are 31 established languages in Liberia (Eberhard, Simons, & Fennig, 2020). The language of wider communication is 'Liberian English', which is a variety of English that is spoken in Liberia and includes several varieties (for example, Kru Pidgin English, Liberian Kreyol language, the Merico language, and Caribbean English). The official language of instruction for all public schools in Liberia is English from the first grade even though many students speak a local language as their mother tongue and are not familiar with English upon entering the education system (IBIS, 2013; Mitterhofer, 2015).

English was the official medium of instruction in all classrooms and English was used 100 percent of the time across the treatment and control classrooms. However, all teachers spoke non-standard Liberian English, and in many cases 'translated' the text for learners. However, there was a range across classrooms in the extent to which the teachers' dialect approximated the more formal variety of Standard Liberian English. Teachers were scored on the distance between the English of the text used in the classroom and the dialect used in the classroom on a simple measure of strong dialect very different from Standard English (0) to dialect closer to the Standard English of the text (2). This measure is a crude one based on a general, global judgement of sound and grammatical similarity between the different Englishes rather than on a formal, detailed analysis of lexical, syntactic and phonological similarities and differences. The bounds of a given speaker's range (from less to more standard-like) has in the past been taken as an indicator of educational level (Singler et al, 1971) although that is not clear here nor verifiable.

Reading Fluency. Poor reading skills among Liberian teachers have been linked to low levels of education and qualification, as well as language competence. Davidson and Hobbs (2013) found a considerable number of primary teachers (irrespective of qualification level) struggled with reading skills.

This was confirmed in the low performance of teachers on the 2017 MOE tests. Several of the teachers across the classrooms clearly struggled to read themselves.

Teachers were scored on a three-point scale – from struggling to read (0), to reading smoothly but without appropriate phrasing (1), to reading fluently with expression (2)

Knowledge. Several of the teachers showed a lack of knowledge of different aspects of the content. T37 did not know what a sight word was: in the lesson she stated: "Class we say what is sight words? What's is sight word? Sight word is the word we use every day, ehn? Isn't so? Okay sight words you can say sight words is a word or are words we use every day in our speaking".

In the following exchange, two learners provide correct answers to the question of the setting of the story in used in a lesson. The teacher replies that these are wrong and provides his own answer:

Teacher: Kwenah is the main character in the story. What is the setting?

Student: Kwenah village

Teacher: No.

Student: In Monrovia

Teacher: Err the setting is… the setting is the thing where Bainda, ehn Bainda ask Kwenah to go in Monrovia with him? Because why? Because he find him that suffering, he suffering plenty. He doing all kind of hard, hard work. When Kwenah came and saw Bainda doing that hard work, he try he was try to take him and carry him to he can have little rest you hear?

These misunderstandings of texts as well as components or questions were common across several classrooms. Teachers were scored as exhibiting misunderstanding of text or program components (0) or exhibiting understanding of text or program components (2).

Verbal feedback. A core principle of the RL program is feedback – "In order for students to learn to read, they need to know what they have done well, what they need to improve, and how they can improve. The teacher needs to give students constructive feedback" (TIG, xx). Data extracts showed how teachers across the classrooms failed to provide learners with feedback on their reading, other than simple correction. In teaching comprehension, the teacher's response to incorrect answers was generally to move on to the next learner. There was no evident attempt to understand errors that occurred nor to work with individual learners in deriving the correct answer. Teachers were scored in terms of giving no feedback and/or simply moving on (0); asking learners to "rub hands" or clap for a learner for doing well (1); or correcting learners or making explicit how a response was correct or incorrect (2).

Teachers were given a cumulative score and lessons were ranked from 1 (strongest) to 12 (weakest). The interest was in whether this ranking related to whether the teachers were teaching in treatment or control classrooms. Figure x below shows that the control teachers were more highly ranked than the treatment teachers. The three lowest ranked teachers were Treatment teachers, and four of the

Control teachers were in the highest six ranks. This ranking occurred within a very narrow and low band of demonstrated competence, however.

The main point of measuring instructional competence was to consider in more detail certain teacher characteristics and behaviors that emerged as central to the nature of the instruction observed in the research in the initial analysis. It was also to ascertain whether it was possible to attribute gains in learner reading levels to what was going on in classrooms. Based on the analysis presented here, instructional competence emerged as stronger in control classrooms and thus a relationship between higher learner scores in the treatment group and better instructional practices in those classrooms was disconfirmed in this limited sample.

Figure 22: Instructional competence ranking of treatment and control classrooms

5.5. READING ACTIVITIES AT HOME

We asked students a few questions about their reading behavior at home. First, we asked them if they had books to read at home. In cases of affirmative responses, we asked if anyone at home reads to them and if they practice reading to someone at home.

Table 11: Reading practices at home

	Baseline			Endline		
	Treatment	Control	Diff.	Treatment	Control	Diff.
Do you have any reading books at home?	65%	62%	3pp	78%	50%	28pp***
Does anyone read aloud to you at home?	61%	64%	-2pp	69%	60%	9pp*

	Baseline			Endline		
	Treatment	Control	Diff.	Treatment	Control	Diff.
Do you practice reading aloud to someone at home?	62%	61%	1pp	67%	60%	7pp*

* p<0.05, *** p<0.001

At baseline, both groups, treatment and control reported very similar availability of reading books at home. 65 percent and 62 percent respectively. Treatment and control students also reported the same reading behaviors at home. Sixty-one percent of the treatment students said that someone at home read to them aloud, while 64 percent of the control students reported that same behavior. At baseline, they also reported very similar rates of practicing reading to someone at home, 62 and 61 percent for treatment and control respectively. However, by endline, a significantly higher percentage of students in the treatment group indicated having reading books at home. The difference with the control group is of 28 percentage points and it is statistically significant. The treatment group also significantly increased the percentage of students that report being read by someone or reading to someone at home relative to the control group.

6. CONCLUSIONS

IMPROVEMENT IN STUDENTS READING PERFORMANCE

At endline Read Liberia shows positive effects on grade 3 students oral reading fluency and oral reading comprehension. Oral reading fluency among control students remained at the baseline level (14.5 cwpm), while students exposed to Read Liberia activities performed better, reaching an average of 29.7 cwpm, twice the average in the control group. This substantial increase of 15.3 cwpm corresponds to an effect size of 0.6 of a standard deviation and it is statistically significant.

The program benefited students of all reading skill levels. It reduced the number of students that were not able to read a single word from a short paragraph in half (from 41 to 21 percent), increased the reading ability of beginners and intermediate readers, and increased the percentage of students reading 50 or more cwpm, from 7.5 percent to 23.4.

The average student in Read Liberia schools has higher oral reading comprehension than one in a control school (24.2 vs. 10.1 percent). Pre-literacy skills, such as letter name recognition or phonemic awareness show improvement as well.

The impact of Read Liberia is very similar for boys and girls.

LEVEL OF READING PERFORMANCE

Despite the large improvement in reading performance due to Read Liberia, 20 percent of the grade 3 students assessed in Read Liberia schools do not read a single word from a simple connected paragraph. The average oral reading fluency is 30 cwmp, while the MoE benchmark is 35 cwpm at the end of grade 2. In addition, the levels of reading comprehension, although improving, remain very low.

READ LIBERIA IMPLEMENTATION

In general, the implementation of Read Liberia was very successful. Training attendance was very high among teachers and principals. According to teachers and principals, all treatment schools in our sample received visits from the RL coaches during the past academic year. Nearly all principals (93 percent) work with coaches to improve teacher reading instruction.

Teaching and learning materials -TIG, SAB, and LR reader- were distributed to all the Read Liberia schools and students were allowed to take the LR reader and SAB home.

CLASSROOM UPTAKE OF THE READ LIBERIA PROGRAM MATERIALS

Read Liberia materials were evident in five of the six classrooms in the treatment group. Although designed to be used together, the TIG, SAB and LR reader were often used alone. In none of the lessons were multiple, *aligned* materials used. The Read Liberia LR student reader was the most commonly used material. The Read Liberia SAB was seen in only two classrooms and the TIG in only three.

In considering where teachers were in the 36-week program, the analysis found a wide range, with teachers drawing on multiple weeks and days in a single lesson. In summary, uptake of the program

material, both in relation to the use of multiple materials aligned to the program week, as well as adherence to the program week, was very low.

UPTAKE BY TEACHERS OF THE READ LIBERIA DAILY LESSON PLANS IN CLASSROOMS, AND CONTENT COVERAGE

Teachers were very selective in using the Read Liberia daily scripted lesson plans in the TIG and none of them completed the plan. Teachers covered few of the daily steps, with a focus on reading fluency, read alouds and comprehension. Skills at the sound, letter and word level were left out, and more complex parts of the program were not followed. There was no evidence of assessment or homework, both of which are expected daily. Other features of the program like differentiation, feedback and monitoring were also not evident in the lessons observed. In short, adherence to the lesson plans had decreased considerably since 2019, with teacher practices suggesting they were either unused to or unable to use the TIG in conjunction with the other program materials.

DIFFERENCES IN INSTRUCTIONAL PRACTICES BETWEEN TREATMENT AND CONTROL CLASSROOMS

Treatment and control lessons were more similar than they were in 2019. In both sets of classrooms, lessons generally took the form of the reading of a text followed by very low-level questioning. Echo reading was common across both, as was very restricted learner talk. Two key differences were found across the groups. The first was that more individual learners read to the class in control classrooms than in treatment classrooms. The other was that more learners had access to their own reader in treatment classrooms, whereas in control classrooms learners generally shared readers.

INSTRUCTIONAL COMPETENCE

A consideration of instructional competence suggested that there were significant issues underpinning the pedagogy observed that a) were crucial to functional instruction and b) appeared not to have been impacted by the program training or provision of materials. On measures of language proficiency, reading proficiency, teacher knowledge and feedback, very low levels of competence were found across treatment and control lessons. When ranked, levels of instructional competence were lower in treatment than control classrooms. The cause of any program impact on reading levels is thus likely to lie outside the classroom rather than resulting from improved practices in classrooms.

READING ACTIVITIES AT HOME

The percentage of treatment students that have reading materials at home increased and it is significantly larger than the control group. Reading practices at home -reading to someone or having someone reading to the student- also increased for the treatment but not for the control group.

Summarizing, Read Liberia shows large and positive effects on students' reading performance. Read Liberia has been well implemented in terms of reaching teachers and principals with training and coaching and distributing teaching and learning materials to teachers and students. However, based on the small sample of classrooms observations

conducted at endline[6], teachers' uptake of the program in classroom instruction is poor. The cause of any program impact on reading levels is thus likely to lie outside the classroom rather than resulting from improved practices in classrooms. A hypothesis to further explore is whether parental and community engagement and the availability of appropriate students' reading materials in the hands of the students could be causing the positive effect, even without substantial pedagogical progress.

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[6] We conducted a large classroom observation exercise at midline, which included the 44 treatment schools and 18 control schools, which also showed poor adherence to weekly progression through the program and daily lesson plans, and the use of student materials.

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ANNEXES

ANNEX 1: EVALUATION STATEMENT OF WORK

Contract No. AID-OAA-M-13-00010

Activity: Read Liberia Baseline and Impact Evaluation

October 3, 2017

Statement of Work

Budget Estimate: $905,000

Period of Performance: January 1, 2017-September 2020

INTRODUCTION:

This Statement of Work (SOW) outlines the details of a baseline data collection and impact evaluation of the upcoming Read Liberia activity, to be carried out by NORC at the University of Chicago, the prime contractor of the Reading and Access contract. The Reading and Access Contract This SOW covers contextual information as well as sub-activities already carried out by NORC and those activities to be handled in the remaining time on this evaluation activity. This abbreviated SOW takes the place of a formal Statement of Work, which was not developed prior to the inception of this activity. The information in this SOW draws from conversations held among USAID/Liberia, USAID/Washington (E3/ED), and NORC around the design of the evaluation and decision memos created prior to the development of an Evaluation Design Report and Data Collection. The Evaluation Design Report also provides additional details to the approach being taken and informed the development of this SOW.

In the remaining sections of this SOW, we provide the following information:

Background Information on Read Liberia Activity

Evaluation Objectives

Evaluation Questions and Methodology

Deliverables

Period of Performance and Budget Estimate

Background Information:

USAID/Liberia is in the process of procuring a new basic education activity, designed to provide technical assistance to improve early grade reading skills for Liberian grade one and two students in in six targeted counties. The activity will also pilot test emergent literacy skills for Liberian students in selected public kindergarten schools. USAID/Liberia has an expected award date in September 2017. The new activity will be informed by lessons learned and experience from previous reading initiatives in

Liberia, including follow-on to the Liberia Teacher Training Program, (LTTP II). Details of the approach to be taken will be finalized with the implementing partner post-award.

Project Context:

Since 2005, a number of education reforms aimed at restoring the educational infrastructure and reconstructing schools to accommodate the increasing population of school-age children have been championed by the Government of Liberia. The Government of Liberia's overarching goal of the education emergency response in 2005 was to get as many children, as quickly as possible, into school and deal with the quality of education issues in the future. As a result, the number of students enrolled in schools has increased significantly. Per the 2014 Census, the Ministry of Education now estimates a gross enrollment rate of 57.7 percent in grades one to six, this is a large improvement over the 31.8 percent gross enrollment in 2012, and prior years.

While enrollment has increased the issues of educational quality and efficiency at all levels of the system are a major challenge. Dropout is high, repetition is frequent, and student outcomes on system exams remain far from satisfactory. English is the official language of instruction in Liberia public schools, aimed at fostering a sense of national unity.

The Government of Liberia has implemented a robust policy framework to address these persistent hindrances to quality. The Education Sector Plan (ESP) (2010-2020); the Education Reform Law of 2011; the Roadmap for System Transformation; the National Agenda for Transformation (NAfT); and the MOE three-year Operational Plan (OP, 2014-2017) all highlight the importance of ensuring that Liberian children receive the "minimum stipulated quality (ESP)." Specific, reading-related initiatives incorporated in these plans include:

The establishment of Liberia as a middle income country by 2030 (Education Reform Law and Poverty Reduction Strategy)

A plan to decentralize the education system and create a management structure that is more locally focused (Education Reform Act of 2011- See Section J, J.4)

The introduction of annual learning achievement tests in early grade reading (ESP)

Analysis of test scores and their use to inform policy decisions as well as action (ESP)

The prioritization of human development to address capacity and inclusiveness, and the improvement of the quality of basic education through soliciting community oversight (NAfT)

A plan to Eradicate illiteracy to reduce the risk of conflict (NAfT)

Results-based planning (MOE three-year plan -"Quality education for all-redirecting our future")

The monitoring of all training activities with emphasis on mainstreaming early grades reading and math (OP, Objective 1, Output 2, Activity 2.2) 14

Supplementary readers provided to public and community schools grades 1-4 (OP, Objective 1.4, Output 2)

Even with these ambitious initiatives, student results remain very low. As the USAID/Liberia Teacher Training Program II (LTTP II) results indicate, students make more progress when they receive regular, well-designed reading lessons. Therefore, the new activity will be structured to build on and supplement these initiatives.

Read Liberia:

While the Read Liberia Activity has not yet been awarded, the request for proposal (RFP), articulated a clear problem statement and hypothesis. The problem statement is as follows:[7]

PROBLEM STATEMENT: EARLY GRADE READING

Liberian students in grade one and two are not learning to read with fluency and comprehension because:

Children in kindergarten are not being exposed early to oral vocabulary needed for emergent literacy.

Time allocations for reading instruction in the early grades during the school day are insufficient

Data to drive system-wide decision-making about early grade reading is not regularly collected

An evidence-based reading curriculum, with accompanying materials appropriate for reading instruction in the early grades, exists, but has not been incorporated into the primary grade comprehensive curriculum

Teachers' levels of literacy are very low. More time and resources are needed to coach teachers to become better readers.

Teachers receive insufficient training in reading instruction.

Monitoring and coaching systems for early grade reading instruction are under-developed.

Students' reading skills are not routinely assessed in the early grades.

Some children have limited access to print in their home environments.

Some parents and other family members lack the skills and time to support children's acquisition of reading skill.

Investment by the Government of Liberia and partners in early grade reading remains low.

The USAID/Liberia Development Objective hypothesis for Read Liberia states that:

IF:

Kindergarten students are taught the oral vocabulary lexicon needed for emergent literacy in English;

Official time allocations for reading instruction in the early grades are increased and enforced;

Data about early grade reading is collected and used to drive system-wide decision-making;

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[7] The problem statement and hypothesis are stated on pages 11 and 12 of Request for Proposal (RFP) # SOL-669-17-000004, Read Liberia!

Reading intervention is refined and simplified with the key components needed for children to learn to read words and to understand what they read are preserved and improved if necessary;

Texts appropriate for early grade reading instruction are improved and additional leveled texts created;

Teachers receive intensive training and systematic coaching in effectively teaching the early grade reading curriculum;

Trained teachers receive evidence based, scripted reading lessons and materials to support reading improvement in the early grades;

Teachers are monitored and supported in their classrooms;

Children's reading skills in the early grades are routinely assessed and children provided opportunities to practice their reading skills at home;

More parents and other family members learn how to support their children in learning to read; and Private and public sources of funding to support early grade reading progress are identified;

THEN: Students will be able to read with fluency and comprehension at the end of second grade.

In addition to the aforementioned problem statement and development objective, the RFP for the Read Liberia activity outlines the intended results and provides illustrative examples of the sub-activities the implementing contractor may implement to reach the intended outcomes.[8] The intermediate results for Read Liberia targets include the following:

Increased government commitment to and support of evidence-based reading instruction

Improved early grade reading classroom instruction

Improved service delivery systems

Increased parent, community and private support for Early Grade Reading.

The RFP also includes a table of technical deliverables that outlines specific activities such as coaching, the development of new materials, and an MOE approved teacher's manual.

It is important to emphasize that the manner in which the Mission structured the Read Liberia RFP allows for the development of sub-activities that will help the Mission reach its intended outcomes. This is important because it could potentially place some limitations on the design of the evaluation described herein.

School Selection:

USAID/Liberia, in collaboration with the Ministry of Education, has defined a set of criteria that will be used to identify schools that are eligible to receive the READ Liberia activities. These criteria include

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[8] See Appendix A for SOW (Section C) of Read Liberia RFP.

schools that: 1) are public; 2) are located in the six selected counties (Montserrado, Margibi and Bong, Grand Bassa, Nimba and Lofa); and 3) have grade one and grade two classes. To strengthen the design of the Impact Evaluation, NORC has asked that the schools have at least 20 students in grade 2.

During the data collection process, the evaluation team learned that there was an agreement with the Liberian government that there be no overlap between the sample of schools selected for Read Liberia and for the Read Liberia Evaluation and the Partnership Schools for Liberia (PSL) treatment and control schools.

It will be essential for USAID/Liberia and its implementing contractor to follow these criteria as they serve as the basis for the sampling frame and the sample size calculations. If modifications are made, it could jeopardize the study.

EVALUATION OF READ LIBERIA

Evaluation Objectives, Intended Audience and Questions:

USAID/Liberia had two primary objectives when it reached out to USAID/Washington and NORC.

OBJECTIVE ONE: undertake a baseline study that will inform USAID/Liberia and their contractor about the population with which they will be working-including schools, teachers and students.

OBJECTIVE TWO: Conduct an impact evaluation to measure the impact of the Read Liberia activity on reading outcomes.

Objective One: Informing Activity Design

The baseline will be used to provide the Mission and Implementing Partner descriptions of the schools, students, and teachers included in the population of schools they will target to help them finalize the design of the sub-activities under Read Liberia. While both the information gathered about students' performance on literacy tasks and all the information gathered through the supplemental data collection (teacher survey, principal survey, and brief student survey) can be a helpful resource for understanding the population that will be served, USAID/Liberia are particularly interested in a several topics. First, they want to understand, from the students' perspectives, if teachers are working with students on letter sounds and if students are taking books home to read. Second, they want information about the qualifications of the teachers and whether or not the current teachers are government paid teachers or volunteers.

Objective Two: Examining the Results/Impact of Read Liberia

In addition to understanding the background of the activity participants and the context in which the activity will occur, USAID/Liberia also wants to assess the results of the Read Liberia activity. More specifically, the Mission would like to examine the impact of the activity on grade 2 students' ability to read and understand grade level text in English after two years of schooling. Students' literacy gains will be assessed using the Early Grade Reading Assessment (EGRA).

During the design phase, USAID and the evaluation team identified three potential options for the impact evaluation.

An impact evaluation that examines the teacher to coach ratio needed for the activity to be effective and the effectiveness of teachers with different levels of coaching on reading fluency and comprehension of second grade students.

An impact evaluation with two treatment arms. One arm would target schools with a new kindergarten sub-activity. The second arm would target schools that received the remaining treatment without the kindergarten sub-activity. This design would allow us to assess the degree to which the activity as a whole had an impact on reading fluency and comprehension of second grade students, and the difference that adding a kindergarten component would have on impact, if any.

An impact evaluation with a treatment and control that examines the impact of all Read Liberia interventions, as a package, on reading fluency and comprehension of second grade students.

USAID/Liberia, USAID E3/ED, and the NORC team determined that the third was the best option due to a number of factors. First, USAID/Liberia concluded that the first option was not likely the best use of resources because they wanted to make sure that there weren't schools that were deprived of coaches or a potentially effective coach:teacher ratio. The second option was of great interest, especially given the political situation in Liberia and the role KG has played there and the lack of evidence we have on the effectiveness of literacy activities in kindergarten. Despite this, with a total budget of $900,000, it was not feasible to undertake an impact evaluation with three distinct arms. However, if additional funds became available, the team may consider adding an arm and undertake baseline data collection for this component in either the fall or spring. USAID will give NORC at least five months notice if they decide to add an arm for kindergarten so that NORC has sufficient time to prepare a new tool to assess literacy skills.

Taking the third approach also allows some flexibility in the design of the sub-activities, which is especially important because the Read Liberia contract has not yet been awarded.

To meet this objective, NORC will answer the following evaluation questions:

What are the features of the population that will be served through Read Liberia?

What is the impact of the Read Liberia activity on the reading fluency and comprehension of second grade students?

Evaluation Design and Methods:

Based on the objectives and evaluation questions identified above, NORC implemented a baseline data collection during the 2016-2017 school year. The sampling approach taken for the baseline data collection will allow for an impact evaluation of the Read Liberia activity as well as a description of the population served. It is crucial, however, that the Mission and Implementing partner adhere to the same selection criteria used for the baseline in order to select schools. If differing criteria are used, this could jeopardize the design, as the sample may no longer represent the activity as a whole. The sections below provide details related to the expectations for the design, data collection, and analysis.

Design:

NORC was responsible for proposing an evaluation design. The design and analysis plan proposed consists of the following features:

The primary outcome of interest for the IE is oral reading fluency and reading comprehension

Randomized control trial of Read Liberia activity, with a single treatment arm

Two rounds of data collection - at the baseline and at the endline

Point of randomization at the school level

Endline to occur either two or three years after implementation has commenced

Data will be collected using four tools:

EGRA

Student Survey

Teacher Survey

Principal Survey

The EGRA instrument previously used for the Liberia Teacher Training Program (LTTP) and follow-on, LTTP II will be used with minimum modification

Power calculations to determine sample size rely on the following assumption:

α of .95

β of .80

ρ (or ICC) of .3

r^2 of .20

MDES of .34

NORC in collaboration with STS and a local subcontractor will undertake enumerator training and data quality control.

At a minimum, NORC's analysis plan should include an estimate of the impact of Read Liberia on reading fluency and reading comprehension, as well as sub-group analyses of the impact of these indicators on boys and girls. Other sub-group analysis and analysis of other key dimensions of the EGRA may be proposed by NORC and approved by USAID/Liberia.

While the NORC evaluation team will be responsible for carrying out the baseline and impact evaluation, it will be up to USAID/Liberia and their contractor to carry out effective activity monitoring

and activities such as data collection on the fidelity of implementation, classroom observations, and the collection of other performance data, such as annual learning assessments.

This is important because the impact evaluation will be supplemented with descriptive data gathered throughout the duration of Read Liberia implementation. These data will be gathered by the contractor that will be implementing the activity and will not only supplement the impact evaluation, but will also provide information that can help guide programming as the activity progresses. Data that will be systematically collected include, but are not limited to the following:

LQAS

Classroom observation

Other relevant implementation data (including teacher retention and turnover)

If implementing contractor does not gather this information, it will not be included in the evaluation. Additionally, USAID/Washington and NORC expect that USAID/Liberia and its contractor to keep NORC aware of any potential contamination issues such as employment of coaches at control schools.

Instrument and Data Collection:

While some raised concerns regarding test security of the EGRA version that used in 2011, the team elected to move forward using the same version of the test due to limitations in the budget and timeline. The evaluation team collected the data electronically. NORC and their partners were responsible for training local enumerators, soft piloting of the instrument and undertaking data quality checks.

NORC undertook data collection for the baseline in June 2017. The evaluation team will collect endline data either in April/May 2019 or April/May 2020. NORC will use the same version of the instruments used at baseline.

NORC gained approval for the research from both the NORC IRB at the University of Chicago and the University of Liberia and has worked in close collaboration with the Ministry of Education. The NORC evaluation team trained all team members from the local data collection firm in ethics and all team members committed to comply with child protection policies.

Deliverables and Audience:

Table 1.0 below reflects the deliverables as required Section F of the Read and Access Contract, Contract Number AID-OAA-M-13-00010. Descriptions of the standards for each deliverable are located under the results in Section C.4 of the contract. Table 1.0 also includes notes regarding the status of the deliverable.

USAID/Washington provided a report template to NORC for the Baseline report. USAID expects all reports to follow guidance in the Reading and Access contract. The evaluation team should develop clearly written reports in plain English with a non-technical audience in mind. USAID will identify specific targeted audiences prior to the creation of the deliverable so that the evaluation team may target that audience.

Deliverable Number	Type of Written Deliverable / Report	Due Date	Audience	Format	Notes
1.1	Consultation Plan	Within 30 calendar days after written notification of an evaluation task	N/A	Email	An outlined plan was not communicated. The process unfolded more organically as a formal SOW for the task was not issued
1.2	Draft Evaluation Plan	Within 60 calendar days of receiving written notification of the evaluation task or as agreed upon by CO	USAID/Washington, USAID/Liberia	Email	Received and accepted
1.3	Final Evaluation Plan	Within 90 calendar days of receiving written notification of the evaluation task or as agreed upon by the contractor and COR	USAID/W, USAID/Liberia	Email	Received and accepted
1.4	Data Collection Instruments for Data collection and Analysis for Impact Evaluation	30 days before pilot testing begins	USAID/W, USAID/Liberia	Email	Received and accepted
1.6	Evaluation Baseline Report and Data Files	Within 60 days of completion of baseline data collection or as agreed upon by the	USAID/W, USAID/Liberia, MOE, Implementing contractor, Development Partners	Email	Data collection completed prior to June 1. Deadline for the baseline

Deliverable Number	Type of Written Deliverable / Report	Due Date	Audience	Format	Notes
		contractor and COR			report extended to allow for USAID to provide additional guidance on what was to be included in the report. Report Draft submitted August 25, 2017
1.8	Final Evaluation Report and/or Summative Evaluation Report and Data Files	Within 60 calendar days of end-line data collection or as agreed upon by the contractor and COR		Email	End line currently slated to take place in 2019 or 2020.
2.1	Evaluation Results: Briefing documents, summaries and analysis	Meeting with IP following award			Two that are suggested, one is a meeting with IP once award made and second one after endline to debrief Mission on findings

Evaluation Budget and Period of Performance:

The estimated budget for the evaluation is $905,000. The current Reading and Access contract was modified and is now active through September 29, 2021. The period of performance for this specific task, Impact Evaluation of Read Liberia runs from January 1, 2017 through September 2020.

Under this task order and at the request of USAID/Liberia, the baseline data collection occurred prior to the end of the 2016-2017 school year and prior to awarding the Read Liberia contract. This is important to note as it may create challenges down for the impact evaluation. However, USAID/Liberia chose to take this approach so that the information gathered during the baseline could be used to make programmatic decisions.

While the period of performance runs through 2020, the evaluation team may complete the work in 2019. This is because the evaluation team will collect endline data either two years after baseline, in 2019, or three years after the baseline data in 2020. During the planning phase, USAID/Liberia, E3/ED and NORC weighed the pros and cons of waiting three years before collecting endline data. The advantage of waiting until 2020 is that it maximizes the time for the intervention to have affect. This could increase the impact that the intervention has on outcomes and also allows necessary flexibility should the Read Liberia activity start too late in the year. However, there are conditions that may cause a decline in outcomes after two years. If we see a substantial change in staff, with the number of experienced staff departing and new staff coming on board, the length of exposure to the treatment could decrease which could diminish the size of the impact on learning outcomes.

Building in midline data collection could help mitigate this risk. However, due to budgetary constraints, this is not an option for this evaluation. To reduce this risk, USAID/Liberia and their contractor will monitor the turnover of teaching staff and alert NORC if they are losing a substantial number of staff. If this occurs, the evaluation team may undertake the endline a year earlier, in 2019.

ANNEX 2: SAMPLING AND METHODOLOGY

SCHOOL SELECTION

USAID/Liberia, in collaboration with the Ministry of Education, defined a set of criteria that was used to identify schools eligible to receive the Read Liberia assistance. These criteria include all schools that: 1) are public; 2) are located in the six selected counties (Montserrado, Margibi, Bong, Grand Bassa, Nimba and Lofa); and 3) have both grade one and grade two classes. The evaluation sample will be drawn from schools who meet these same criteria.

For the evaluation, NORC requested an additional criterion, that the schools had at least 20 learners in Grade 2 (according to the EMIS records) to assure finding enough learners for the assessment. The EMIS list of schools provided by the MOE includes designations for urban and rural schools. Using these data, the sample was assigned proportionally to the number of urban and rural schools within each county. As a result, the sample is representative of the population of public schools which had at baseline grade 1 and grade 2 classes for each of the 6 counties in the sample.

STUDENT SELECTION

Students were selected randomly in each school. The target was 16 students - 8 girls and 8 boys. All learners were eligible for selection unless they refused to participate, or severe disabilities precluded them from participating.

SAMPLE SIZE CALCULATION

The sample size calculation was made based on the following assumptions.

α is the significance level of the test, or probability of Type I error. We use the standard value of 0.95.

β is the power of test, where (1-β) is the probability of Type II error. We use the standard value of 0.8.

ρ is the intracluster correlation coefficient, or ICC. The ICC in the present case is a measure of how much variability lies between schools and how much lies within schools. Based on King et al. (2015) which describes Liberian EGRA data, we assume an ICC of 0.3.[9]

r^2 is the proportion of the variation in the outcome due to the covariates anticipated in the regression analysis. In our case, these covariates will include a range of household and individual characteristics, as well as school fixed effects. For this parameter, we assume an approximate value of 0.2.

MDES is the minimum detectable effect size. The MDES is the smallest impact of the activity on the outcome variable that the evaluation will be able to detect. The selected MDES is 0.34 of a standard deviation, a medium size effect. This corresponds to the standardized effect for Oral Reading Fluency found in the midline evaluation of LTTP (The NORC team estimated this standardized effect using our

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[9] This figure corresponds to the one in Annex H for grade 2 in the Endline report of LTTP (King, Simon, Medina Korda, Lee Nordstrum and Susan Edwards (2015). Liberia teacher training program: Endline assessment of the impact of early grade reading and mathematics interventions)

own calculations and data from the Midline LTTP report.[10,11]) During a phone call (February 2017) USAID/Washington and USAID/Liberia considered it a reasonable effect to be expected given previous experiences and the intensity of the intervention.

Based on these parameters, the required sample size is 45 schools in each study group (treatment and control) with 16 students in each school, for a total sample of 1,440 students. The teacher and head teacher sample consist of one Grade 2 teacher and one head teacher per school and has the objective of completing the picture of the learners' education context and helping understand the mechanisms behind the impact effects.

BASELINE EQUIVALENCE

The randomization worked well, and we find statistical equivalence between treatment and control groups. We show all variables means for treatment and control groups at baseline in the tables below.

Baseline equivalence between treatment and control - Student variables

Variables	Treatment	Control	Diff.	p-val.	Obs.
Student age	12.57	12.49	0.07	0.77	1322
Student gender	0.50	0.47	0.03	0.23	1357
Language parents read or write in? English	0.68	0.72	-0.04	0.36	1357
Has reading books at home	0.65	0.62	0.03	0.54	1351
Has any reading books at home. Yes, in English	0.95	0.95	0.00	0.98	858
Does anyone read aloud to you at home?	0.61	0.64	-0.02	0.50	1344
In what language do they read to you? In English	0.96	0.95	0.01	0.56	838
Do you practice reading aloud to someone at home?	0.62	0.61	0.01	0.80	1346
If yes, in what language(s) do you read? English	0.96	0.97	-0.01	0.60	828
Have you ever repeated a grade?	0.44	0.41	0.03	0.40	1338
I repeated Grade 1	0.15	0.14	0.00	0.84	1357
I repeated Grade 2	0.16	0.13	0.04	0.11	1357
I repeated Grade 3	0.12	0.15	-0.02	0.24	1357
Teacher ever practices letter sounds	0.73	0.80	-0.07	0.12	1334
Teacher ever reads aloud	0.91	0.92	-0.01	0.63	1343
Teacher makes you practice silent reading in class	0.87	0.90	-0.03	0.32	1345

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[10] DeStefano, Joseph, Timothy Slade, and Medina Korda (2013). Liberia Teacher Training Program (LTTP): Midterm Assessment of the Impact of Early Grade Reading and Math Interventions.
[11] We divide the DID for ORF and grade 2 in table 8 of the midline report, by the standard deviation that we calculated using the data in table 2 of the midline report.

Variables	Treatment	Control	Diff.	p-val.	Obs.
Teacher makes you practice reading out loud in class	0.92	0.92	0.01	0.71	1347
Teacher assigns reading for you to do at home	0.89	0.88	0.01	0.78	1351
Eat lunch at school yesterday/ last school day	0.63	0.64	-0.01	0.87	1353
Missed any school days last week	0.32	0.35	-0.03	0.36	1351
There is a library at your school	0.38	0.37	0.01	0.86	1330
Has books at school that you can take home to read	0.67	0.65	0.02	0.67	1350
Do you watch television at home?	0.29	0.26	0.02	0.56	1353
Do you listen to radio at home?	0.78	0.82	-0.04	0.22	1349
Do you have electricity/current at home?	0.31	0.30	0.01	0.77	1353
Did you eat before coming to school today?	0.62	0.59	0.04	0.41	1352
Orientation to Print raw score	2.21	2.19	0.02	0.86	1335
Orientation to Print percent correct	0.74	0.73	0.01	0.86	1335
Orientation to Print zero score indicator	0.11	0.09	0.02	0.31	1335
Correct letter names per minute	67.91	67.69	0.22	0.93	1354
Letter raw score	66.84	66.44	0.41	0.87	1354
Letter percent correct	0.67	0.66	0.00	0.87	1354
Letter zero score indicator	0.01	0.01	-0.01	0.45	1354
Phonemic Awareness raw score	3.88	3.79	0.09	0.60	1339
Phonemic Awareness percent correct	0.39	0.38	0.01	0.60	1339
Phonemic Awareness zero score indicator	0.11	0.11	0.00	0.97	1339
Correct Familiar Word names per minute	10.13	10.47	-0.35	0.76	1357
Familiar Word raw score	9.84	10.19	-0.35	0.74	1357
Familiar Word percent correct	0.10	0.10	0.00	0.74	1357
Familiar Word zero score indicator	0.16	0.17	-0.01	0.71	1357
Correct Invent Word names per minute	1.63	1.29	0.34	0.26	1357
Invent Word raw score	1.62	1.28	0.34	0.25	1357
Invent Word percent correct	0.02	0.01	0.00	0.25	1357
Invent Word zero score indicator	0.78	0.83	-0.04	0.15	1357
Correct Oral Reading names per minute	14.39	14.85	-0.46	0.80	1357

Variables	Treatment	Control	Diff.	p-val.	Obs.
Oral Reading raw score	13.68	13.96	-0.28	0.87	1357
Oral Reading percent correct	0.14	0.14	0.00	0.87	1357
Oral Reading zero score indicator	0.35	0.34	0.01	0.82	1357
Reading Comprehension raw score	0.86	0.71	0.14	0.21	674
Reading Comprehension percent correct	0.17	0.14	0.03	0.21	674
Reading Comprehension zero score indicator	0.54	0.61	-0.07	0.21	674
Listening Comprehension raw score	1.66	1.49	0.17	0.14	1277
Listening Comprehension percent correct	0.33	0.30	0.03	0.14	1277
Listening Comprehension zero score indicator	0.15	0.20	-0.06	0.10	1277

Baseline equivalence between treatment and control - School and Principal variables

Variables	Treatment	Control	Diff.	p-val.	Obs.
Principal sex	0.11	0.09	0.02	0.73	90
Years as principal	6.07	7.24	-1.18	0.25	85
Qualification is Certificate C	0.67	0.58	0.09	0.39	90
First grade taught in school	0.36	0.38	-0.02	0.83	90
Last grade taught in school	7.16	6.93	0.22	0.56	90
Special training/courses to teach reading	0.67	0.69	-0.02	0.82	90
Grade expected students to read fluently	2.60	2.36	0.24	0.38	90
Grades 1 and 2 teachers lessons plans reviewed	1.00	0.96	0.04	0.16	90
(Vice)principal reviews lesson plans	0.78	0.71	0.07	0.47	90
Lesson plans are reviewed at least weekly	0.80	0.89	-0.09	0.25	90
Grade 1 and Grade 2 teachers lessons observed	0.98	0.89	0.09	0.09	90
(Vice)principal observes teachers practices in class	0.89	0.76	0.13	0.10	90
Classrooms are observed daily	0.56	0.60	-0.04	0.67	90
External inspection or support visit, last year	0.69	0.76	-0.07	0.49	90
There is feeding program at school	0.24	0.40	-0.16	0.12	90
School observes student dress code?	0.96	1.00	-0.04	0.16	90
Sufficient materials/ textbooks for Grade 1?	0.04	0.11	-0.07	0.24	90
Sufficient materials/ textbooks for Grade 2?	0.07	0.09	-0.02	0.70	90
Do you have a library or reading room?	0.27	0.18	0.09	0.32	90
Do you hold regular PTA meetings?	0.89	0.91	-0.02	0.73	90
d_num_parents_PTA_3levels==Few	0.28	0.24	0.03	0.75	81
d_num_parents_PTA_3levels==Some	0.28	0.24	0.03	0.75	81

Variables	Treatment	Control	Diff.	p-val.	Obs.
d_num_parents_PTA_3levels==Most	0.45	0.51	-0.06	0.58	81
There is lockable book storage at your school	0.38	0.51	-0.13	0.21	90
Keeps records of teachers' attendance	0.96	1.00	-0.04	0.16	90
Attendance records shown and in good shape	0.84	0.91	-0.07	0.34	90
Special efforts to improve reading, last year	0.64	0.80	-0.16	0.10	90
Why? We saw other schools doing it	0.02	0.07	-0.04	0.31	90
Why? We thought it might be important	0.16	0.16	0.00	1.00	90
Why? The Ministry told us to do it	0.07	0.16	-0.09	0.18	90
Why? An NGO told us to do it	0.02	0.04	-0.02	0.56	90
Why? Teachers got teacher training	0.13	0.18	-0.04	0.57	90
Why? Other	0.42	0.56	-0.13	0.21	90
School has ALP or Non-Formal school	0.23	0.16	0.07	0.40	89
Are you currently teaching in this school?	1.00	0.91	0.09	0.04	90
What grades are you teaching? Grade 1	0.29	0.31	-0.02	0.82	90
What grades are you teaching? Grade 2	0.22	0.29	-0.07	0.47	90
What grades are you teaching? Grade 3	0.33	0.31	0.02	0.82	90
What grades are you teaching? Grade 4	0.47	0.40	0.07	0.53	90
What grades are you teaching? Grade 5	0.56	0.44	0.11	0.30	90
What grades are you teaching? Grade 6	0.60	0.56	0.04	0.67	90
What grades are you teaching? Grade 7	0.27	0.27	0.00	1.00	90
What grades are you teaching? Grade 8	0.22	0.22	0.00	1.00	90
What grades are you teaching? Grade 9	0.24	0.20	0.04	0.62	90
No. Grade 1 teachers	2.11	2.29	-0.18	0.60	90
No. Grade 1 volunteer teachers	1.00	1.20	-0.20	0.35	58
No. Grade 2 teachers	2.16	2.31	-0.16	0.64	90
No. Grade 2 volunteer teachers	0.85	1.13	-0.28	0.18	58

Baseline equivalence between treatment and control - Teacher variables

Variables	Treatment	Control	Diff.	p-val.	Obs.
Sex	0.20	0.24	-0.04	0.66	89
Qualification is Certificate C	0.64	0.71	-0.07	0.46	89
Years of teaching experience	11.70	10.49	1.22	0.51	89
Attended in-service training	0.68	0.71	-0.03	0.77	89
Received training on how to teach reading	0.57	0.71	-0.14	0.16	89
Receive training for this school year	0.04	0.13	-0.08	0.24	57

Variables	Treatment	Control	Diff.	p-val.	Obs.
About how many hours?	5.00	18.00	-13.00	0.22	5
Support visits past year on how to teach reading	0.14	0.24	-0.11	0.20	89
Teaching the same class since the beginning of year	0.93	0.98	-0.05	0.30	89
Keeps attendance records of students	0.98	1.00	-0.02	0.32	89
Frequency of developing lesson plans - Other	0.09	0.07	0.02	0.68	89
Frequency of developing lesson plans - Daily	0.64	0.62	0.01	0.89	89
Frequency of developing lesson plans - Weekly	0.27	0.31	-0.04	0.69	89
Where do you develop lesson plans?	0.18	0.05	0.14	0.04	88
Do you have a written lesson plan for today?	0.34	0.55	-0.20	0.05	88
Teacher was able to show a lesson plan	0.86	0.76	0.11	0.20	89
Scheduled time during the day for lesson planning	0.50	0.45	0.05	0.67	88
Class repeats letters/words Never	0.11	0.09	0.02	0.70	89
Class repeats letters/words Sometimes	0.50	0.33	0.17	0.11	89
Class repeats letters/words Frequently	0.20	0.38	-0.17	0.07	89
Class repeats letters/words Everyday	0.18	0.20	-0.02	0.83	89
Students sound unfamiliar words Never	0.27	0.18	0.09	0.29	89
Students sound unfamiliar words Sometimes	0.55	0.47	0.08	0.46	89
Students sound unfamiliar words Frequently	0.07	0.27	-0.20	0.01	89
Students sound unfamiliar words Everyday	0.11	0.09	0.02	0.70	89
Students read aloud Never	0.07	0.02	0.05	0.30	89
Students read aloud Sometimes	0.59	0.53	0.06	0.59	89
Students read aloud Frequently	0.25	0.20	0.05	0.58	89
Students read aloud Everyday	0.09	0.24	-0.15	0.05	89
Students learn new words Never	0.16	0.02	0.14	0.03	89
Students learn new words Sometimes	0.48	0.58	-0.10	0.35	89
Students learn new words Frequently	0.18	0.18	0.00	0.96	89
Students learn new words Everyday	0.18	0.22	-0.04	0.64	89
Students retell stories Never	0.20	0.07	0.14	0.06	89
Students retell stories Sometimes	0.64	0.71	-0.07	0.46	89
Students retell stories Frequently	0.11	0.13	-0.02	0.78	89
Students retell stories Everyday	0.05	0.09	-0.04	0.42	89
Students read independently Never	0.14	0.07	0.07	0.28	89
Students read independently Sometimes	0.59	0.60	-0.01	0.93	89
Students read independently Frequently	0.18	0.22	-0.04	0.64	89

Variables	Treatment	Control	Diff.	p-val.	Obs.
Students read independently Everyday	0.09	0.11	-0.02	0.76	89
Reading assignment at home Never	0.16	0.02	0.14	0.03	89
Reading assignment at home Sometimes	0.59	0.51	0.08	0.45	89
Reading assignment at home Frequently	0.18	0.33	-0.15	0.10	89
Reading assignment at home Everyday	0.07	0.13	-0.07	0.31	89
Uses official reading curriculum Never	0.25	0.22	0.03	0.76	89
Uses official reading curriculum Sometimes	0.27	0.29	-0.02	0.87	89
Uses official reading curriculum Frequently	0.27	0.24	0.03	0.76	89
Uses official reading curriculum Everyday	0.20	0.24	-0.04	0.66	89
Do you have teacher guides?	0.80	0.84	-0.05	0.59	88
The principal observes classes daily	0.68	0.73	-0.05	0.60	89
Last year, external inspection or support visit?	0.55	0.64	-0.10	0.38	84
Measure progress Written tests	1.00	0.93	0.07	0.08	89
Measure students' progress? Oral evaluations	0.66	0.73	-0.07	0.45	89
Measure students' progress? Portfolios/projects	0.02	0.02	0.00	0.99	89
Measure your students' progress? Homework	0.48	0.51	-0.03	0.75	89
Measure your students' progress? End evaluations	0.16	0.36	-0.20	0.03	89
Measure your students' progress? Other	0.09	0.16	-0.06	0.36	89
Reading skills at the end of school year? _ Read	0.82	0.78	0.04	0.64	89
Reading skills at the end of school year? Sound	0.18	0.24	-0.06	0.48	89
Reading skills at the end of school year? Understand	0.39	0.49	-0.10	0.34	89
Reading skills sat the end of school year? Know	0.00	0.20	-0.20	0.00	89
Reading skills at the end of school year? Other	0.14	0.24	-0.11	0.20	89
Borrow books to read at home (Almost) never	0.40	0.23	0.18	0.08	86
Borrow books to read at home Sometimes	0.36	0.48	-0.12	0.26	86
Borrow books to read at home (Almost) always	0.24	0.30	-0.06	0.55	86
Special efforts to improve reading past year	0.66	0.80	-0.14	0.14	89
Why? We saw other school doing it	0.02	0.04	-0.02	0.57	89
Why? We thought it might be important	0.09	0.16	-0.06	0.36	89
Why? The Ministry told us to do it	0.02	0.11	-0.09	0.10	89
Why? An NGO told us to do it	0.05	0.09	-0.04	0.42	89
Why? Teachers training on how to teach	0.14	0.29	-0.15	0.08	89
Why? Other	0.39	0.53	-0.15	0.17	89

ANNEX 3: ADDITIONAL FINDINGS

Other EGRA Subtasks

Subtask	Baseline			Endline		
	Treatment	**Control**	**p-val.**	**Treatment**	**Control**	**p-val.**
Orientation to print % correct	73.7	73.0	0.860	76.2	73.3	0.565
Correct letter names per minute	67.9	67.7	0.933	73.6	65.3	0.014
Phonemic awareness sum (out of 10)	3.9	3.8	0.604	4.4	3.8	0.005
Correct familiar word per minute	10.1	10.5	0.760	18.9	10.2	0.000
Correct Nonwords per minute	1.6	1.3	0.260	6.0	1.7	0.000
Listening comprehension sum (out of 3)	1.7	1.5	0.142	1.7	1.4	0.066
Listening comprehension % correct	0.3	0.3	0.142	56.3	46.9	0.066
Receptive listening comprehension % correct	NA	NA	---	87.7	83.8	0.148

Full Regression Results – Grade 3

	Correct Familiar Words per min.	Oral Reading Fluency	Reading Comp.	Listening Comp.
Treatment	7.798***	14.22***	12.27***	7.295
	(1.654)	(2.803)	(3.248)	(4.044)
Girl	-3.091**	-2.305	-3.133	0.505
	(0.970)	(1.655)	(2.448)	(2.040)
Student age	-0.342	-0.397	-0.466	-1.077
	(0.232)	(0.413)	(0.551)	(0.616)
Do you have any reading books at home?	0.980	2.006	0.466	0.675
	(1.216)	(1.901)	(2.650)	(2.524)
Do you practice reading aloud to someone at home?	5.487***	9.334***	8.760***	6.402*
	(0.844)	(1.503)	(2.313)	(2.530)
Student has not repeated a grade	4.377***	5.623**	3.633	4.877
	(1.165)	(1.828)	(3.301)	(3.156)

	Correct Familiar Words per min.	Oral Reading Fluency	Reading Comp.	Listening Comp.
Language/dialect most often spoken at home				
Bassa	-5.966**	-7.917**	-4.554	-4.200
	(1.890)	(2.859)	(4.628)	(3.042)
Gio	1.343	2.355	1.652	-11.24
	(1.668)	(2.407)	(6.398)	(6.694)
Gbandi	0.289	0.284	-11.85**	-31.02***
	(3.378)	(5.059)	(4.436)	(8.788)
Kissi (or Gisi)	6.740	13.63*	10.66*	-23.03**
	(3.946)	(6.599)	(4.379)	(8.216)
Gola	-2.376	7.530	19.72	13.23
	(5.424)	(16.47)	(17.29)	(21.70)
Grebo	1.276	4.729	-5.970	6.835
	(10.92)	(25.09)	(17.31)	(5.186)
Kpelle	1.785	-0.680	4.254	12.94**
	(2.016)	(3.621)	(4.536)	(4.145)
Kru	43.90***	83.26***	35.82***	50.06***
	(2.541)	(4.254)	(3.903)	(5.911)
Lorma	4.110	4.264	9.879	4.952
	(2.411)	(4.866)	(8.014)	(7.575)
Mende	-4.920	-7.752	-9.065	-39.79***
	(2.822)	(5.945)	(11.20)	(6.168)
Mano	5.727**	6.921*	7.163	7.736
	(2.147)	(3.193)	(7.368)	(5.882)
Mandinga	-9.604**	-14.10*	7.538	8.295
	(3.268)	(6.176)	(7.415)	(24.07)
Vai	3.899	5.164	14.27	3.980
	(5.729)	(7.711)	(14.06)	(21.94)
Other	-16.52***	-21.92***	-30.35***	17.01*
	(2.601)	(3.874)	(4.968)	(6.538)
Urban school	4.990*	9.007*	10.93**	11.87*
	(2.043)	(3.446)	(3.554)	(5.168)
County				
Grand Bassa	5.468	7.071	-15.59*	1.038
	(3.219)	(5.475)	(7.560)	(7.056)

	Correct Familiar Words per min.	Oral Reading Fluency	Reading Comp.	Listening Comp.
Lofa	-0.298	-4.702	-18.41*	2.709
	(3.313)	(6.051)	(7.291)	(7.391)
Margibi	3.904	7.958	-15.57*	-1.126
	(3.139)	(6.407)	(7.174)	(6.347)
Montserrado	-0.700	-0.813	-17.81*	-18.07**
	(2.970)	(5.398)	(7.058)	(6.789)
Nimba	-9.032**	-16.66**	-26.87**	-14.56
	(3.043)	(5.164)	(8.555)	(8.181)
Constant	8.509	11.05	27.40*	57.69***
	(4.711)	(7.860)	(11.18)	(10.30)
Observations	859	859	568	859
Adjusted R-squared	0.243	0.249	0.176	0.180

Notes: Reference category for language/dialect most often spoken at home is English. Reference county is Bong. Standard errors adjusted for 88 clusters based on school are in parentheses. *** p<0.001, ** p<0.01, *** p<0.001.

	Correct letter names per min.	Correct Nonword per min.	Orientation to Print	Phonemic Awareness
Treatment	7.322**	3.583***	1.656	6.320**
	(2.300)	(0.815)	(3.630)	(1.918)
Girl	-1.471	-1.737***	-1.244	-4.515**
	(1.332)	(0.435)	(1.910)	(1.685)
Student age	1.000**	0.0189	1.334*	-1.623***
	(0.366)	(0.122)	(0.644)	(0.412)
Do you have any reading books at home?	0.514	1.041	-0.514	3.241*
	(1.514)	(0.547)	(2.623)	(1.477)
Do you practice reading aloud to someone at home?	6.610***	2.204***	4.282	1.515
	(1.380)	(0.506)	(2.443)	(1.450)
Student has not repeated a grade	7.255**	1.686*	-0.166	-1.870
	(2.201)	(0.660)	(2.631)	(1.713)
Language/dialect most often spoken at home				
Bassa	-2.677	-1.286	-3.987	-4.301
	(3.347)	(0.739)	(7.385)	(3.711)

	Correct letter names per min.	Correct Nonword per min.	Orientation to Print	Phonemic Awareness
Gio	0.737	-0.974	1.658	2.603
	(3.515)	(0.685)	(5.332)	(3.343)
Gbandi	2.394	1.182	-5.496	-5.185
	(3.618)	(2.582)	(6.193)	(4.956)
Kissi (or Gisi)	5.835	5.950*	4.147	2.183
	(4.716)	(2.575)	(7.400)	(6.138)
Gola	-6.905	-1.738	-22.27	-16.22
	(14.15)	(1.741)	(19.44)	(8.507)
Grebo	2.678	7.979	6.802	9.190
	(8.711)	(9.859)	(10.46)	(11.85)
Kpelle	-4.392	0.0607	7.041	3.564
	(3.300)	(1.136)	(3.748)	(2.712)
Kru	45.11***	-2.752**	55.83***	15.77***
	(4.484)	(0.933)	(6.878)	(4.319)
Lorma	3.841	-0.775	3.396	3.201
	(5.602)	(1.601)	(9.445)	(4.450)
Mende	-16.18	-2.375	-17.60	-16.08***
	(11.05)	(1.877)	(10.63)	(4.205)
Mano	11.83***	0.564	5.515	10.56**
	(2.927)	(1.011)	(5.451)	(3.614)
Mandinga	7.091	1.025	19.81***	-1.966
	(4.181)	(3.693)	(5.745)	(2.625)
Vai	14.86**	1.813	-2.878	-6.215
	(4.986)	(5.060)	(11.69)	(7.878)
Other	-13.21**	3.173**	-9.969	19.69***
	(4.681)	(0.985)	(8.603)	(4.584)
Urban school	5.208	1.459	-0.656	-0.612
	(2.660)	(0.828)	(5.023)	(2.266)
County				
Grand Bassa	9.096	-2.124	-2.779	-1.363
	(4.574)	(1.556)	(7.978)	(3.441)
Lofa	-3.720	0.892	-12.69	-9.882*
	(3.789)	(2.101)	(7.138)	(4.421)
Margibi	8.833	-1.209	-8.117	4.633

	Correct letter names per min.	Correct Nonword per min.	Orientation to Print	Phonemic Awareness
	(5.388)	(1.085)	(11.01)	(4.083)
Montserrado	-5.229	-1.866	-39.20***	-6.659
	(4.742)	(1.324)	(6.858)	(4.410)
Nimba	-17.29***	-2.483	-10.62	-10.76**
	(4.665)	(1.443)	(6.573)	(3.688)
Constant	46.64***	-0.279	64.33***	64.23***
	(7.138)	(2.365)	(11.26)	(6.208)
Observations	859	859	859	859
Adjusted R-squared	0.221	0.175	0.122	0.089

Notes: Reference category for language/dialect most often spoken at home is English. Reference county is Bong. Standard errors adjusted for 88 clusters based on school are in parentheses. *** $p<0.001$, ** $p<0.01$, *** $p<0.001$.

ANNEX 4: DATA COLLECTION INSTRUMENTS

Grade 2 Teacher Instrument

<u>Verbal Consent</u>

My name is _____. I work with the Khana Group Liberia.

We are trying to understand how children learn to read. Your school was selected through the process of statistical sampling. We would like your help in this. But <u>you do not have to take part</u> if you do not want to.

I will be asking you questions from the tablets to understand your experiences. The tablet is only being used to administer the survey, after the interview, I will upload the information to our server so that it can be combined with the information obtained from other schools.

Your name will not be mentioned anywhere in reports based on this survey. Results of this survey will be presented in an aggregated format so that your specific responses will not be identifiable The information acquired through this instrument will be shared with the Ministry of Education in the hopes of identifying areas where additional support may be needed. To support future research, anonymized data from this study may be released to the public. However, all information that may be used to identify you or this school will be removed prior to public release

Your responses will NOT affect you in any way. They will not have any impact on your employment or your pay.

If you agree, I would ask you some questions regarding your normal activities at school, including your interactions with school staff, Ministry office staff, students, and parents.

My interview with you will take around 15-20 minutes.

Are you willing to participate? Once again, you do not have to participate if you do not wish to. Once we begin, if you would rather not answer a question, that's all right.

Contacts

If at any time you have questions about the research study, you may ask the interviewer from TKG or you may call the Research Coordinator, (XXXX, telephone Number: XXXXXXXXXX).

If you have questions about your rights as a study participant, you may contact the UL-PIRE IRB:

XXXXXXXXXXX

Institutional Review Board

University of Liberia-PIRE

Monrovia, Liberia

XXXXXXXXXXX

Can we get started?

Check box if verbal consent is obtained :   ☐ *YES* ☐ *NO*

(If verbal consent is not obtained, thank the teacher and select the next one)

Section 1. Grade 2 Teacher Interview

SC1	School Name	
SC2	School Code	
1	Interviewer Name	
2	Interviewer Code	
3	Starting Time of Interview	____:____ AM
4	Ending Time of Interview	____:____ PM
5	Interview Date (dd/mm/yyyy)	Day:____ Month:_____ Year:_____
6	Interview Status	Refused =1 Partially Completed = 2 Complete = 3
7	*Enumerator: Mark if the teacher is male or female. Do not read question out loud.*	Male=0 Female=1
8	Teacher name	
9	What type of teaching certificate do you have?	C Certificate = 0 B Certificate = 1 AA Certificate = 2 Other =3 None = 4 Don't know = 88 Refuse/No Answer = 99
10	What is your highest level of education?	Elementary=0 Junior High School =1 Senior High School =2 Associate = 3 Certificate C = 4 Certificate B = 5 Certificate AA = 6 Bachelor's Degree = 7 Master's degree or other = 8 Other (Do not specify) = 9 Don't Know = 88 Refuse/No Answer = 99
11	How many years of teaching experience do you have (Enter number)	
20	What grade or grades do you teach in this school year? (Select all that apply)	Kindergarten = 0 Grade 1 =1 Grade 2 = 2 Grade 3 = 3 Grade 4 = 4 Grade 5 = 5 Grade 6 = 6
21	Have you been teaching the same class since the beginning of the school year?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99

22	Do you keep an attendance record of students?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
23	How often do you develop lesson plans?	Daily = 1 Weekly = 2 Bi-weekly = 3 Monthly = 4 Don't Know = 88 Refuse/No Answer = 99
27	Do you have any scheduled time during the school day for lesson planning?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
I'm going to ask you about different activities you might do with your students. Think about the last 5 school days and tell me how frequently the following activities took place.		
28.1	The whole class repeated letters or words that you said first, when teaching reading skills	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
28.2	Students sounded unfamiliar words they are learning	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
28.3	Students read aloud to teacher or another student	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
28.4	Students learned the meaning of new words	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
28.5	Students had to retell a story that they read during the week	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99

28.6	Students were assigned reading to do on their own in school time	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
28.7	Students were assigned reading to do at home	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3 Don't Know = 88 Refuse/No Answer = 99
Now we are going back to some questions about your overall work.		
29	Do you use the official reading curriculum in your classroom lessons?	Never = 0 Sometimes = 1 Frequently = 2 Everyday = 3
30	Do you have teacher guides?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
31	(If answer to 30 is 1) How useful do you find them?	Not very useful = 0 Moderately useful = 1 Very Useful = 2 Don't Know = 88 Refuse/No Answer = 99
32	How frequently does your principal observe (your) classes?	Never = 0 → skip to 33 Once a year = 1 Once every 2-3 months = 2 Once every month = 3 Once every two weeks = 4 Once every week = 5 Daily = 6 Don't Know = 88 → skip to 33 Refuse/No Answer = 99 → skip to 33
32.1	Does your principal provide feedback to you after he/she observes your class?	No = 0 → skip to 33 Yes = 1 Don't Know = 88 → skip to 33 Refuse/No Answer = 99 → skip to 33
32.2	What kinds of things does your principal provide feedback on? *(Select all that apply)*	My teaching = 1 Student progress = 2 My teaching plans = 3 Other = 4 Don't Know = 88 Refuse/No Answer = 99

32.3	(If answer to 32.2 is 4) Please specify what other kinds of things your principal provides feedback on:	Don't Know = 88 Refuse/No Answer = 99
32.4	How is this feedback communicated by the principal? *(Select all that apply)*	Talks with me = 1 Texts me = 2 Calls me = 3 Provides me with a written note = 4 Don't know = 88
32.5	How often do you receive feedback from your principal?	Daily = 1 Weekly = 2 Bi-weekly = 3 Monthly = 4 Don't Know = 88 Refuse/No Answer = 99
32.6	Do you find this feedback to be helpful?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
33	How do you measure your students' progress? *(Do not read options, just select all options mentioned)*	Written tests = 1 Oral evaluations = 2 Their portfolios and other projects = 3 Their homework = 4 End of term evaluations = 5 Other = 6 Don't Know = 88 Refuse/No Answer = 99
34	What reading skills should your children have at the end of school year? *(Do not read options, just select all options mentioned)*	Read grade level stories = 1 Sound out words they don't know = 2 Understand stories that they read = 3 Know letter names = 4 Other = 5 Don't Know = 88 Refuse/No Answer = 99
42	Are you a volunteer teacher?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
43	(If answer to 42 is 1) Will you continue teaching next year?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
Now I'd like to ask you about training you may have received and the skills you learned from it.		
44	Have you attended any in-service training or professional development sessions such as workshops over the past year?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
45	Have you <u>ever</u> received training on how to teach reading?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99

50	(If answer to 44 is 1 or answer to 45 is 1) Have you ever attended any Read Liberia training on how to teach reading?	No = 0 → skip to question 57 Yes = 1 Don't Know = 88 Refuse/No Answer = 99 →skip to question 57
51	(If answer to 50 is 1) Did you attend the Read Liberia training in February 2020?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
53	(If answer to 50 is 1) Did you attend the Read Liberia training in September 2020?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
57	(If answer to 50 is 0 or 51, 53, and 55 are all 0) Why didn't you attend the Read Liberia training?	Not invited = 1 Unavailable = 2 Not interested = 3 Other = 4 Don't Know = 88 Refuse/No Answer = 99
58	(If answer to 57 is 4) If other reason for not attending, please specify:	_____ Don't Know = 88 Refuse/No Answer = 99
61	(If answer to 50 is 1) Thinking about the training: Did you learn new things?	No, nothing = 0 Yes, a few things= 1 Yes, a lot of things =2 Don't Know = 88 Refuse/No Answer = 99
62	(If answer to 50 is 1) Thinking about the training: Did you find the training useful?	No = 0 Yes, a little = 1 Yes, a lot =2 Don't Know = 88 Refuse/No Answer = 99
63	(If answer to 50 is 1) Thinking about the training: Did you think the training was long enough?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
65	(If answer to 50 is 1) Thinking about the training: Do you feel better qualified to teach early grade reading after the training?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
66	(If answer to 50 is 1) Thinking about the training: Are you implementing the training approach to teaching reading in your classes?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
67	(If answer to 62 is 0) Why did you not finding the training useful?	It is too difficult = 1 I need more training = 2 Not enough materials = 3 Not enough time = 4 Too many pupils = 5 Other = 6 Don't Know = 88

	Thank you. I would now like to ask you about the coaching or support that you may have received during this school year.	
68	During this school year, has anyone came to observe you teaching a literacy/English class?	No = 0 ➔ skip to question 78 Yes = 1 Don't Know = 88 ➔ skip to question 78 Refuse/No Answer = 99 ➔ skip to question 78
69	(If answer to 68 is 1) Did a Read Liberia coach observe you teaching a literacy/English class?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
71	Did the Read Liberia coach provide you with feedback after observing you teaching reading?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
72	(If answer to 71 is 1) How is this feedback communicated from the coach? *(Check all that apply)*	Talks with me = 1 Texts me = 2 Calls me = 3 Provides me with a written note = 4 Don't know = 88
73	(If answer to 71 is 1) How useful do you find the feedback from the coach? *(Read the options)*	Very Useful = 1 Useful = 2 Needs improvement = 3 Not useful = 4 Don't know = 88
	Next, I'd like to ask you about some of the instructional materials you use in your classroom or have in your school.	
78	Do you have a printed teacher guide(s) to help guide your classes?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
79	Did you receive one or more teacher guides from Read Liberia?	Yes, one for the first semester = 1 Yes, one for the second semester = 2 Yes, one for each semester = 3 Yes, one for the whole year = 4 No, none were received = 0 ➔ skip to question 82 Don't Know = 88 ➔ skip to question 82 Refuse/No Answer = 99 ➔ skip to question 82
80	(If answer to 79 is 1, 2, 3, or 4) What is your opinion about the teacher guide(s)? Would you say they are: *(read options aloud)*	Very good = 1 Good = 2 Fair = 3 Poor = 4 Very poor = 5 Don't Know = 88 Refuse/No Answer = 99

81	How often do you use the teacher guide(s)?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
82	Did you conduct an oral reading assessment of your students this year?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
83	Did you receive this/these assessment(s) from Read Liberia?	No = 0 → skip to 86 Yes = 1 Don't Know = 88 → skip to 86 Refuse/No Answer = 99 → skip to 86
84	(If answer to 83 is 1) What is your opinion about the assessment(s) as a whole? Would you say they are: (read options aloud)	Very good = 1 Good = 2 Fair = 3 Poor = 4 Very poor = 5
85	(If answer to 83 is 1) How often do you conduct these assessments using the Read Liberia materials?	When specified in the materials, every 11-12 weeks = 1 At least once a year = 2 Never = 3 Don't Know = 88 Refuse/No Answer = 99
86	Do the students in your class have activity books to work on?	Yes, all of them = 1 Yes, but they have to share = 2 No = 0→ skip to 90 Don't Know = 88 → skip to 90 Refuse/No Answer = 99→ skip to 90
87	Did your students receive these activity books form Read Liberia?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
88	(If answer to 87 is 1) What is your opinion about these activity books? Would you say they are: (read options aloud)	Very good = 1 Good = 2 Fair = 3 Poor = 4 Very poor = 5
89	(If answer to 87 is 1) How often do you use these activity books in class?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99

89.5	(If answer to 87 is 1) Do students take these activity books from school to work at home?	Never = 0 Almost never = 1 Sometimes = 2 Almost always = 3 Always = 4 Refuse/No Answer = 99
90	Do the students in your class have reading books to read from?	Yes, all of them = 1 Yes, but they have to share = 2 No = 0→skip to 95 Don't Know = 88 →skip to 95 Refuse/No Answer = 99→skip to 95
91	Did your students receive these reading books from Read Liberia? Are these "Let's Read" books?	No = 0 →skip to 95 Yes = 1 Don't Know = 88→skip to 95 Refuse/No Answer = 99→skip to 95
93	What is your opinion about these "Let's Read" books? Would you say they are: *(read options aloud)*	Very good = 1 Good = 2 Fair = 3 Poor = 4 Very poor = 5
94	How often do you use these Let's Read books in class?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
94.5	Do students take these Let's Read books from school to read at home?	Never = 0 Almost never = 1 Sometimes = 2 Almost always = 3 Always = 4 Refuse/No Answer = 99
95	Do you have any alphabet cards to guide your classes?	No = 0 →skip to 101 Yes = 1 Don't Know = 88 →skip to 101 Refuse/No Answer = 99 →skip to 101
96	(If answer to 95 is 1) Did you receive these alphabet cards from Read Liberia?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
97	(If answer to 96 is 1) How many sets of these alphabet cards did you receive for your class?	One set = 1 Two sets = 2 Don't Know = 88 Refuse/No Answer = 99

98	(If answer to 97 is 1 or 2) Do you find that using these cards helps your students learn more effectively?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
100	(If answer to 96 is 1) How often do you use these alphabet cards in your instruction?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
101	Do you have syllable cards to guide your classes?	No = 0 → skip to 106 Yes = 1 Don't Know = 88 → skip to 106 Refuse/No Answer = 99 → skip to 106
102	Did you receive these syllable cards for your classroom from Read Liberia?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
103	(If answer to 102 is 1) How many sets of these syllable cards did you receive for your class?	One set = 1 Two sets = 2 Don't Know = 88 Refuse/No Answer = 99
104	(If answer to 103 is 1 or 2) Do you find that using these helps your students learn more effectively?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
105	(If answer to 102 is 1) How often do you use these syllable cards in your instruction?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
106	Do you have alphabet posters in the classroom?	No = 0 → skip to 110 Yes = 1 Don't Know = 88 → skip to 110 Refuse/No Answer = 99→ skip to 110
107	Did you receive the alphabet posters from Read Liberia?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
108	(If answer to 107 is 1) Do you find that using these helps your students learn more effectively?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99

109	(If answer to 107 is 1) How often do you use these alphabet posters in your instruction?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
110	In addition to the Reading and Activity books that we discussed before, does your classroom have any books for students to read?	No = 0 → skip to question 114 Yes = 1 Don't know = 88 → skip to question 114 Refused = 99→ skip to question 114
111	Did your classroom receive these books from Read Liberia?	No = 0 → skip to question 114 Yes, all of them = 1 Yes, some of them=2 Don't know = 88 → skip to question 114 Refused = 99→ skip to question 114
111.5	Which books did you receive? *(Read aloud, multiple options can be selected)*	Ayo and His Pencil = 1 My Little Snail = 2 Eleven Yellow Jerseys = 3 Another Kind of Ship = 4 Notty goat = 5 Surprise from the Boys Room = 6 Simon's Story = 7 Nelson and Ali = 8 Blapoh's Dream = 9 Old Man and His Hat = 10 Don't Know = 88 Refuse/No Answer = 99
112	Do you find that these books help your students learn more effectively?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
113	How often do you use these books in your instruction?	Daily = 1 A few times a week = 2 At least once a month = 3 Rarely = 4 Never = 5 Don't Know = 88 Refuse/No Answer = 99
114	Does your school have a library or reading room?	No = 0 → skip to question 116 Yes = 1 Don't Know = 88 → skip to question 116 Refuse/No Answer = 99 → skip to question 116

115	(If answer to 114 is 1) Does the library or reading room have reading materials appropriate for kindergarten, grade 1, and grade 2 students?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
Thank you very much for your time.		
116	*Enumerator: count the number of students in the class.*	(Enter number)
117	(If answer to 87 is 1) *Enumerator: Ask the students in the class to hold up the Read Liberia Activity book they have and count how many you see.*	(Enter number) [must be less than or equal to answer from 119]
118	(If answer to 91 is 1) *Enumerator: Ask the students in the class to hold up the Let's Read book they have and count how many you see.*	(Enter number) [must be less than or equal to answer from 119]
119	*Enumerator, locate the reading shelf and/or corner in the classroom.*	There is reading corner but no shelf = 1 There is a shelf but no reading corner = 2 There is a reading corner and a shelf = 3 There is no reading corner or shelf visible = 4 → end survey
120	*Enumerator, count the number of books available on the shelf and/or corner and record the total number of books available in the classroom.*	(Enter number)
121	(if answer to 107 is 1) *Enumerator: Observe whether or not the Read Liberia alphabet posters are hanging in the classroom.*	One poster = 1 Two posters = 2 More than two posters = 3 No posters seen = 0

THANK YOU VERY MUCH

General Impression

_____

Principal Questionnaire

My name is _____. I work with The Khana Group in Liberia.

We are trying to understand how children learn to read. Your school was selected through the process of statistical sampling. We would like your help in this. But you do not have to take part if you do not want to.

Your name will not be mentioned anywhere in reports based on this survey. Results of this survey will be presented in an aggregated format so that your specific responses will not be identifiable the information acquired through this instrument will be shared with the Ministry of Education in the hopes of identifying areas where additional support may be needed. To support future research, anonymized data from this study may be released to the public. However, all information that may be used to identify you or this school will be removed prior to public release.

Your responses will NOT affect you in any way. They will not have any impact on your employment or your pay.

If you agree, I would ask you some questions regarding your normal activities at school, including your interactions with your staff, Ministry office staff, students, and parents.

Then, I would randomly select 16 students in Grade 3 to assess their reading skills. I would also ask these students about some of their normal school activities, school assets, language use, and reading practices at home, as well as home asset ownership. Selected students need only participate if they wish. I will spend about 20 minutes interviewing each child. My interview with you will take 15-20 minutes. Finally, I would spend about 15-20 minutes interviewing the Grade 2 teacher.

Are you willing to participate? Once again, you do not have to participate if you do not wish to. Once we begin, if you would rather not answer a question, that's all right.

If at any time you have questions about the research study, you may ask the interviewer from TKG or you may call the Research Coordinator, (XXXX, telephone Number: XXXXXXXXXX).

If you have questions about your rights as a study participant, you may contact the UL-PIRE IRB:

XXXXXXXXXXX

Institutional Review Board

University of Liberia-PIRE

Monrovia, Liberia

XXXXXXXXXXX

 Can we get started?

Check box if verbal consent is obtained: ☐ *YES* ☐ *NO*

(If verbal consent is not obtained, thank the principal, and terminate the exercise in this school)

Section 1. Principal Interview

1	School Name	
2	School Code	
3	Principal Name	
4	Interviewer Name	
5	Starting Time of Interview	____: ____AM/PM
6	Ending Time of Interview	____: ____PM/PM
7	Interview Date (dd/mm/yyyy)	Day: ___Month:___Year:____
8	Interview Status	Refused = 1 Partially Completed = 2 Complete = 3
9	What is your position at this school? *(Circle all that apply)*	Principal = 1 Vice Principal = 2 Teacher = 3
10	*Enumerator: Mark if the principal is male or female. Do not read question out loud.*	Male = 0 Female=1
11	How many years have you been a principal? *(Enter years)*	____ years Don't Know = 88 Refuse/No Answer = 99
12	What is your highest level of education?	Elementary=0 Junior High School =1 Senior High School =2 Associate = 3 Certificate C = 4 Certificate B = 5 Certificate AA = 6 Bachelor's Degree = 7 Masters degree or other = 8 Other (Do not specify) = 9 Don't Know = 88 Refuse/No Answer = 99
13	What grades are taught at this school this year? *(Enter the first grade taught and the last grade taught)*	First grade taught ____ Don't Know = 88 Refuse/No Answer = 99
		Last grade taught _____ Don't Know = 88 Refuse/No Answer = 99
14	Have you received special training or taken courses that prepared you to teach reading or support teachers to teach reading?	Yes =1 No = 0 Don't Know = 88 Refuse/No Answer = 99
15	At what grade do you expect all of your students to read fluently? *(Enter the grade)*	___ grade Don't Know = 88 Refuse/No Answer = 99

16	Think about first and second grade teachers, does anyone review those teachers' lessons plans?	Yes =1 No = 0→ skip to question 20 Don't know = 88 → skip to question 20 Refuse/No Answer= 99→ skip to question 20
17	Who is the <u>main </u>person that reviews the teachers' lesson plans?	Principal = 1 Vice Principal = 2 Read Liberia Coach = 3 Other = 4 Don't Know = 88 Refuse/No Answer = 99
18	(If answer to 17 is 4) Please specify who the main person that reviews teachers' lessons plan is:	Don't Know = 88 Refuse/No Answer = 99
19	How often are these plans reviewed?	Once per year = 1 Once every term = 2 Once every month = 3 Every week or more often = 4 Don't Know = 88 Refuse/No Answer = 99
20	In your school, does anyone observe Grade 1 and Grade 2 teachers' lessons in their classrooms?	No = 0 → skip to question 24 Yes = 1 Don't Know = 88→ skip to question 24 Refuse/No Answer = 99 → skip to question 24
21	Who <u>mostly</u> observes those teachers' practices in the classrooms?	Principal = 1 Vice Principal = 2 Read Liberia Coach = 3 Other = 4 Don't Know = 88 Refuse/No Answer = 99
22	(If answer to 21 is 4) Please specify who mostly observes teacher practices in the classrooms:	Don't Know = 88 Refuse/No Answer = 99
23	(If answer to 20 is 1) How often does this person observe the teachers' lessons?	Once a year = 1 Once every 2-3 months = 2 Once every month = 3 Once every two weeks = 4 Once every week = 5 Daily = 6 Don't Know = 88 Refuse/No Answer = 99
24.1	Do you have a feeding program at school?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
24.2	Is any organization implementing a reading program currently in this school?	No = 0 >SKIP to 26 Yes = 1 Don't Know = 88 >SKIP to 26 Refuse/No Answer = 99 >SKIP to 26

24.3	What is the name of the reading program that is currently being implemented?	READ LIBERIA Other _____ Don't know = 88 Refuse/No Answer = 99
26	Do you have sufficient resource materials/ textbooks for Grade 1?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
27	Do you have sufficient resource materials/ textbooks for Grade 2?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
28	Do you have a library or reading room?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
29	(If answer to 28 is 1) Does the library or reading room have enough books for students from kindergarten to Grade 2?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
30	Do you hold regular PTA meetings?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
31	(If answer to 30 is 1) How many parents come to the PTA meetings *(Read options aloud)*	Few = 1 Some = 2 Most = 3 All or almost all = 4 Don't Know = 88 Refuse/No Answer = 99
32	Do you have lockable book storage at your school?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
33	Do you keep records of teachers' attendance?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
34	(If answer to 33 is 1) Could I see the attendance records please?	Was not able or willing to show = 1 Was able to show but badly kept (out of date, incomplete) = 2 Was able to show and in good shape = 3
37	Does your school implement the Accelerated Learning Program (ALP) or the accelerated Basic Education (ABE)? ?	No = 0 Yes = 1 both programs ALP and ABE Yes = 2 only ALP Yes = 3 only ABE Don't Know = 88 Refuse/No Answer = 99
38	Are you currently teaching in this school?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
39	(If answer to 38 is 1) What grades are you teaching? *(Choose all that apply)*	KG = 0 Grade 1 = 1 Grade 2 = 2 Grade 3 = 3 Grade 4 = 4 Grade 5 = 5 Grade 6 = 6
40	How many Grade 1 teachers does your school have? *(Enter number)*	_____ Grade 1 Teachers Don't Know = 88 Refuse/No Answer = 99

41	How many Grade 2 teachers does your school have? *(Enter number)*	_____ Grade 2 Teachers Don't Know = 88 Refuse/No Answer = 99
	Thank you. Next, I'd like to ask you some questions about training you may have attended.	
43	Have you ever received training on how to teach reading?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
44	(If answer to 43 is 1) Did you attend any Read Liberia training on how to teach reading?	No = 0 → skip to question 62 Yes = 1 Don't Know = 88 →skip to question 62 Refuse/No Answer = 99 →skip to question 62
45	(If answer to 44 is 1) Did you attend the Read Liberia training in February 2020?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
47	(If answer to 44 is 1) Did you attend the Read Liberia training in September 2020?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
49	(If answer to 44 is 1) Did you attend the Read Liberia training in February 2021?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
51	(If answer to 44 is 0) Why didn't you attend the Read Liberia training?	Not invited = 1 Unavailable = 2 Other = 3 Don't know = 88 → skip to 62 Refuse/No Answer = 99 → skip to 62
52	(If answer to 51 is 3) Please specify any other reason for not attending:	_____ Don't know = 88 Refuse/No Answer = 99
55	Thinking about the training: Did you learn new things?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
56	Thinking about the training: Did you find the training useful?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
57	Thinking about the training: Did you think the training was long enough?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
59	Thinking about the training: Do you feel better qualified to teach early grade reading or to support teachers after the training?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
60	Thinking about the training: Are you using what you learn during training to teach or to support teachers?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
61	(if answer to 56 is 0) Why didn't you find training useful?	It is not useful = 1 It is too difficult = 2 I need more training = 3 Not enough materials = 4 Not enough time = 5 Too many pupils = 6 Other = 7 Don't know =88 Refuse/No Answer = 99
	Thank you. I would now like to ask you about the coaching that you may have received through the Read Liberia program.	

62	During this school year, did any Read Liberia coach visit the school?	No = 0 →skip to question 68 Yes = 1 Don't Know = 88 → skip to question 68 Refuse/No Answer = 99 → skip to question 68
63	(If answer to 62 is 1) Did the Read Liberia coach ever visit the school with their supervisor?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
64	Do you work with coaches to improve teacher reading instruction at your school?	No = 0 → skip to question 67 Yes = 1 Don't Know = 88 → skip to question 67 99 Refuse/No Answer → skip to question 67
65	(If answer to 64 is 1) How do you work with coaches to improve teacher reading instruction at your school? *(Select all that apply)*	We observe teachers together = 1 Coach explains how to use materials (teacher guide, books, etc.) = 2 Coach explains how to test students = 3 Other = 4 Don't Know = 88 Refuse/No Answer = 99
66	(If answer to 65 is 4) Please specify how you work with coaches to improve teacher reading instruction at your school.	_____ Don't Know = 88 Refuse/No Answer = 99
67	Do <u>you</u> think that the feedback the coaches provide the teachers is generally helpful?	No = 0 Yes = 1 Don't Know = 88 Refuse/No Answer = 99
68	How many children are enrolled in Grade 2? (If there is more than one grade 2 class select the class where you will interview the teacher)	_____ _____ students
69	While the school was closed due to COVID-19, did the Grade 2 teacher or anyone else from the school send any homework to the Grade 2 students?	No = 0 Yes, the Grade 2 teacher = 1 Yes, someone else from the school = 2 Don't Know = 88 Refuse/No Answer = 99
THANK YOU VERY MUCH		
General Impression		
_____		

Student Instrument

<u>General Instructions</u>

It is important to establish a playful and relaxed rapport with the children to be assessed, via some simple initial conversation among topics of interest to the child. The child should perceive the following assessment as a game to be enjoyed rather than a severe situation. After you have finished, thank the child for his/her time and effort.

<u>Verbal Assent</u>

Read the text in the box clearly to the child:

> **My name is _____. I work with the Ministry of Education in Liberia.**
>
> **We are trying to understand how children learn to read. You were picked by chance, like in a raffle or lottery.**
>
> **We would like your help in this. But you do not have to take part if you do not want to.**
>
> **We are going to play a reading game. I am going to ask you to read letters, words and a short story out loud.**
>
> **Using this stopwatch, I will see how long it takes you to read.**
>
> **This is NOT a test and it will not affect your grade at school.**
>
> **I will also ask you questions about your family, like what language your family uses at home and some of the things your family has.**
>
> **We may share your answers but I will NOT write down your name so no one will know these are your answers.**
>
> **Once again, you do not have to participate if you do not wish to. Once we begin, if you would rather not answer a question, that's all right.**
>
> **Can we get started?**

Check box if verbal consent is obtained: ☐ *YES*
(If verbal consent is not obtained, thank the child and move on to the next child, using this same form)

A. Date of assessment:		H. Unique student code:	
B. Assessor name/code:		I. Confirm Student's is in grade 3:	3 = 3rd grade (if not stop)
C. NAME and location of school:			
D. Unique School code:		J. Class section:	
E. School shift:	1 = Full day 2 = Morning 3 = Afternoon	K. Student's month and year of birth:	Month: _____ Year: _____ Age: _____
G. Teacher name *(important!)*		M. Student's gender	1 = girl 0 = boy

Task 0. RECEPTIVE LISTENING COMPREHENSION

In this task you will instruct the learners to perform different actions and judge their understanding of English.

Please can you do the following actions to show me that you understand English.

Say each instruction once only.

Give the learner 5 seconds to respond to the instruction. If there is no response by 5 seconds, mark that item as "No response" and move on by asking the next item.

	Response options (only select one)
Close your eyes. (Thank you, you can open them now)	1 Closes eyes 2 Performs other action 99 No response
Stand up.	1 Stands up 2 Performs other action 99 No response
Put your hands in the air. (learner must put up both hands)	1 Raises both hands 2 Performs other action 99 No response
Bend down and touch your feet.	1 Bends down to touch feet/shoes (both actions) 2 Performs other action 3 Only bends 4 Raises leg to touch shoe 99 No response
Sit down and put your hands on your head. (if the learner is sitting, ask them to stand in HL before giving the instruction) (the order in which the learner performs the task does not matter)	1 Both actions done 2 Performs other actions 3 Only sits 4 Only puts hands on their head 99 No response

Task 1. Orientation to Print

Show the child the paragraph segment on the last page of the student assessment (Section 6).

Read the instructions in the gray boxes below, recording the child's response before moving to the next instruction.

I don't want you to read this now. On this page, where would you begin to read? Show me with your finger.			
[Child puts finger on the top row, left-most word]	Correct	Incorrect	No Response
Now show me in which direction you would read next.			
[Child moves finger from left to right]	Correct	Incorrect	No Response
When you get to the end of the line, where would you read next?			
[Child moves finger to left-most word of second line]	Correct	Incorrect	No Response

Task 2. Letter Name Knowledge

Show the child the sheet of letters on the first page of the student assessment. Say,

> **Here is a page full of letters of the alphabet. Please tell me the NAMES of as many letters as you can--not the SOUNDS of the letters, but the names.**
>
> **1. For example, the name of this letter** [point to O] **is "OH".**
>
> **Now you try: tell me the name of this letter [**point to V**]:**
>
> [If correct:] **Good, the name of this letter is "VEE."**
>
> [If incorrect:] **The name of this letter is "VEE."**
>
> **2. Now try another one: tell me the name of this letter [**point to L**]:**
>
> [If correct:] **Good, the name of this letter is "ELL."**
>
> [If incorrect:] **The name of this letter is "ELL."**
>
> **Do you understand what you are supposed to do? When I say "begin," name the letters as best as you can. I will keep quiet and listen to you, unless you need help. Ready? Begin**.

Set the timer on 1 minute. Start the timer when the child reads the first letter. Follow along with your pen and clearly mark any incorrect letters with a slash (/). Count self-corrections as correct. **Stay quiet,** except when providing answers as follows: if the child hesitates for 3 seconds, provide the name of the letter, point to the next letter and say "**Please go on**." Mark the letter you provide to the child as incorrect.

WHEN THE TIMER REACHES 0, SAY, "stop." *Mark the final letter read with a bracket (⌐)*

Early stop rule: If the child does not give a single correct response on the first line, say "**Thank you!**", draw a line through the letters in the first row, discontinue this exercise, check the box at the bottom, and go on to the next exercise.

L	i	h	R	S	y	E	O	n	T	10
i	e	T	D	A	t	a	d	e	w	20
h	O	e	m	U	r	L	G	R	u	30
g	R	B	E	i	f	m	t	s	r	40
S	T	C	N	p	A	F	c	a	E	50
y	s	Q	A	M	C	O	t	n	P	60
e	A	e	s	O	F	h	u	A	t	70
R	G	H	b	S	i	g	m	i	L	80
L	i	N	O	e	o	E	r	p	X	90
N	A	c	D	d	l	O	j	e	n	100

Time left on stopwatch if student completes in LESS than 60 seconds: _____
☐ Exercise was discontinued as child had no correct answers in the first line.

Task 3. Phonemic Awareness

This is **NOT** a timed exercise and **THERE IS NO STUDENT SHEET**. Read aloud each set of words **once** and have the student say which word begins with a different sound. Read these instructions to the child:

> **This is listening exercise. I'm going to say THREE words. ONE of them begins with a different sound, and you tell me which word BEGINS WITH A DIFFERENT SOUND**
>
> **1. For example:**
>
> "lost", "map", "like". **Which word begins with a different sound?**
>
> [If correct:] **Very good, "map" begins with a different sound.**
>
> [If incorrect:] **"lost", "map", "like". "map" begins with a different sound than "lost" and "like."**
>
> **2. Now try another one: "train", "trip", "stop". Which word begins with a different sound?**
>
> [If correct:] **Very good, "stop" begins with a different sound.**
>
> [If incorrect:] **"train", "trip", "stop". "stop" begins with a different sound than "train" and "trip."**
>
> **Do you understand what you are supposed to do?**

Pronounce each set of words **once slowly** (about 1 word per second). If the child does not respond after 3 seconds mark it no response and move on.

Early stop rule: If the child gets the **first 5 sets** of answers **incorrect or no response,** draw the line through each of the 5 first rows, discontinue this exercise, check the box at the bottom of this page and go on to the next exercise.

Which word begins with a different sound? [repeat each set ONCE]										
1	boy	ball	cat	[cat]	☐	Correct	☐	Incorrect	☐	No Response
2	man	can	mad	[can]	☐	Correct	☐	Incorrect	☐	No Response
3	pan	late	pin	[late]	☐	Correct	☐	Incorrect	☐	No Response
4	back	ten	tin	[back]	☐	Correct	☐	Incorrect	☐	No Response
5	fish	fat	cat	[cat]	☐	Correct	☐	Incorrect	☐	No Response
6	boat	bit	coat	[coat]	☐	Correct	☐	Incorrect	☐	No Response
7	day	bag	dot	[bag]	☐	Correct	☐	Incorrect	☐	No Response
8	can	girl	cold	[girl]	☐	Correct	☐	Incorrect	☐	No Response
9	run	race	sand	[sand]	☐	Correct	☐	Incorrect	☐	No Response
10	leg	make	lay	[make]	☐	Correct	☐	Incorrect	☐	No Response

☐ EXERCISE WAS DISCONTINUED AS CHILD HAD NO CORRECT ANSWERS IN THE FIRST FIVE SETS OF WORDS.

Task 4. Familiar Word Identification

Show the child the sheet of words on the second page of the student assessment. Say,

> **Here are some words. I would like you to read me as many words as you can (do not spell the words, but read them).**
>
> **For example, this word is: "CAT".**
>
> **1. Now you try: [**point to the word "mat" and say] please **read this word:**
>
>   [If correct]: **Good, this word is "mat."**
>
>   [If incorrect]: **This word is "mat."**
>
> **2. Now try another one: [**point to the word "top"] **please read this word:**
>
>   [If correct]: **Good, this word is "top."**
>
>   [If incorrect]: **This word is "top."**
>
> **Do you understand what are you supposed to do? When I say "begin," read the words as best as you can. I will keep quiet and listen to you, unless you need help. Ready? Begin.**

Start the timer when the child reads the first word. Follow along with your pencil and clearly mark any incorrect words with a slash (/). Count self-corrections as correct. **Stay quiet,** except when providing answers as follows: if the child hesitates for 3 seconds, read the word, point to the next word and say "**Please go on**." Mark the word you read to the child as incorrect.

WHEN THE TIMER REACHES 0, SAY, *"Stop." Mark the final word read with a bracket (⌐).*

*__Early stop rule:__ If the child gives no correct answers on the first line, say, "**Thank you!**", discontinue this exercise, draw the line through the words in the first row, check the box at the bottom of the page, and go on to the next exercise.*

but	time	in	the	also	5
make	no	its	said	were	10
came	very	do	after	long	15
water	as	all	for	even	20
her	was	three	been	more	25
that	must	can	around	it	30
another	words	back	called	work	35
could	an	him	on	see	40
than	get	not	where	what	45
you	if	their	through	when	50

Time on stopwatch if student completes in LESS than 60 seconds: _____
☐ Exercise was discontinued as child had no correct answers in the first line.

Task 5. Simple unfamiliar nonword decoding

Show the child the sheet of nonwords on the third page on the student form. Say,

> **Here are some made-up words. I would like you to read me as many made-up words as you can (do not spell the words, but read them).**
>
> **For example, this made-up word is: "ut".**
>
> **1. Now you try:** [point to the next word: "dif" and say] **please read this word**
>
>   [If correct]: **"Very good: dif"**
>
>   [If incorrect]: **This made-up word is "dif."**
>
> **2. Now try another one:** [point to the next word: mab and say] **please read this word.**
>
>   [If correct]: **"Very good: mab"**
>
>   [If incorrect]: **This made-up word is "mab."**
>
> **Do you understand what you are supposed to do? When I say "begin," read the words as best as you can. I will keep quiet and listen to you, unless you need help. Ready? Begin.**

Start the timer when the child reads the first word. Follow along with your pencil and clearly mark any incorrect words with a slash (/). Count self-corrections as correct. **Stay quiet,** except when providing answers as follows: if the child hesitates for 3 seconds, provide the word, point to the next word and say "**Please go on.**" Mark the word you provide to the child as incorrect.

WHEN THE TIMER REACHES 0, SAY, *"Stop." Mark the final letter read with a bracket (⌐).*

__Early stop rule:__ If the child gives no correct answers on the first line, say "__Thank you!__", discontinue this exercise, draw the line through the words in the first row, check the box at the bottom of the page, and go on to the next exercise.

loz	ep	yat	zam	tob	5
zom	ras	mon	jaf	duz	10
tam	af	ked	ig	el	15
tig	pek	dop	zac	ik	20
uf	ral	ep	bab	vif	25
lut	sig	zop	zar	jaf	30
ruz	huf	wab	ak	jep	35
wub	dod	ik	vus	nux	40
pek	zel	bef	wab	hiz	45
wof	ib	dek	zek	vok	50

Time left on stopwatch if student completes in LESS than 60 seconds: _____

☐ Exercise was discontinued as child had no correct answers in the first line.

Task 6. Passage reading and Comprehension.

Show the child the story on the last page of the student form. Say,

> **Here is a short story. I want you to read this aloud. When you finish, I will ask you some questions about what you have read.**
>
> **Do you understand what are you supposed to do? When I say "begin," read the story as best as you can. I will keep quiet and listen to you,**
>
> **unless you need help. Ready? Begin**.

Set the timer on 1 minute. Start the timer when the child reads the first word. Follow along with your pencil and clearly mark any incorrect words with a slash (/). Count self-corrections as correct. **Stay quiet,** except when providing answers as follows: if the child hesitates for 3 seconds, provide the word, point to the next word and say "**Please go on.**"

Mark the word you provide to the child as incorrect. **WHEN THE TIMER REACHES 0, SAY,,** "**stop**." Mark the final word read with a bracket (⌐). If the child gets the entire first line incorrect, discontinue this exercise – both reading and comprehension questions -, check the box below and go on to the next exercise.

STOP THE CHILD AT 0 SECONDS AND MARK WITH A BRACKET (⌐).

Take **the text away** from the child after they read it. Read instructions to the child. Then read each question slowly and clearly. After you read each question, give the child at most 15 seconds to answer each question. Mark the answers to the questions as correct or incorrect.

		Now I am going to ask you a few questions about the story you just read. Try to answer the questions as best as you can.
Kemah lives near the big river.	6	**Where does Kemah live?** [near the big river] ☐Correct ☐Incorrect ☐ No Response
There is a big tree by the river where Kemah lives. Kemah likes to sit in the tree.	24	**Where does Kemah like to sit when she goes to the river?** **[in the tree, in the big tree near the river]** ☐**Correct** ☐**Incorrect** ☐ **No Response**
Every day after school, she stops by the tree and looks for a place to sit. She climbs the tree and sits on a branch.	49	**What does Kemah do after she climbs the tree?** [she sits on a branch, she finds a place to sit in the tree] ☐Correct ☐Incorrect ☐ No Response
She looks at the fish in the river.	57	**What does Kemah do when she sits in the tree?** [she looks at the fish in the river, looks at fish] ☐Correct ☐Incorrect ☐ No Response
Kemah is happy.	60	**Why is Kemah happy when she sits in the tree?** [she likes to look at fish in the river, she likes the tree] ☐Correct ☐Incorrect ☐ No Response

Time left on stopwatch: _____   ☐ Test

Discontinued because child read NO words on the first line:

Task 7. Listening Comprehension

This is NOT a timed exercise and **THERE IS NO STUDENT SHEET.** The administrator reads aloud the following passage **ONLY ONE TIME**, slowly (about 1 word per second). Say,

---

I am going to read you a short story aloud ONCE and then ask you some questions. Please listen carefully and answer the questions as best as you can.

Do you understand what are you supposed to do?

Musu goes to the Bong Town School every day on a motor bike. One day, Musu could not get a motor bike to take her to school because it was raining and they were all busy. Musu did not want to get wet. Then, one old man said, "You can have my son's raincoat." Musu was happy. She did not have to be wet at school.

How does Musu usually get to school?

      [on a motorbike]   ☐Correct ☐Incorrect ☐No Response

Why did the old man give Musu a coat?

      [because it was raining]☐Correct ☐Incorrect ☐No response

Why was Musu happy at school that day?

[because she did not have to be wet at school] ☐Correct ☐Incorrect ☐No Response

Student Context Interview

Thank you very much. Now, I am going to ask you some questions about your family and about reading.

S1	What language/dialect does your family speak most often at home?	English = 1 Others = 2 **[Specify main one]**_____ Don't know = 88 Refuse/No Answer= 99
S2	What language/dialect do your parents read or write in?	Cannot read and write = 0 English = 1 Others =2 **[Specify main one]**_____ Don't know = 88 Refuse/No Answer = 99
S3	Do you have any reading books at home? (If no, skip to S5.)	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S4	If answer to S3 is Yes, in what language/dialects?	English = 1 Other = 2 **[Specify main one]**_____
S5	Does anyone read aloud to you at home? (If No, skip to S7.)	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S6	If answer to S5 is Yes, in what language/dialects do they read to you?	English = 1 Other = 2 **[Specify main one]**_____
S7	Do you practice reading aloud to someone at home? (If No, skip to S9.)	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S8	If answer to S7 is Yes, in what language(s) do you read?	English = 1 Other = 2 **[Specify main one]**_____ Don't know = 88 Refuse/No answer = 99
S9	Have you ever repeated a grade? If yes, which ones? (**CIRCLE** the grades repeated.)	No = 0 Yes, Grade 1 = 1 Yes, Grade 2 = 2 Yes, Grade 3 = 3 Don't know = 88 Refuse/No answer = 99
S10	Does your current teacher ever practice letter sounds with you? [Give student example of /k/ and /m/].	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S11	Does your teacher ever read aloud to you?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S12	Did you eat lunch at break time at school yesterday [or last school day]?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S13	Did you miss any school days last week?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99

S18	Do you have a library at your school?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S18a	Is there a reading corner in your classroom?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S19	Do you watch television at home?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S20	Do you listen to radio at home?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S21	Do you have electricity/current at home?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S22	Did you eat before coming to school today?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S23	Do you have books at school that you can take home to read?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99
S24	Does your teacher make you practice silent reading in class?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S25	Does your teacher make you practice reading out loud in class?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S26	Does your teacher assign reading for you to do at home?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S27	Does your teacher ever make you re-tell a story during class?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S28	Think about last year when the school was closed, did you study or did any schoolwork at home?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S29	While the school was close, did you used to hear any learning program on the radio?	Never = 0 Often = 1 Always = 2 Refuse/No answer = 99
S30	Did your teacher or someone else from the school send you any homework to be done while schools were closed?	No = 0 Yes = 1 Don't know = 88 Refuse/No answer = 99

Thank the student for his/her participation!

ANNEX 5: DISCLOSURE OF CONFLICT OF INTEREST

Name	Alicia Menendez
Title	Principal Research Scientist International Projects
Organization	NORC at the University of Chicago
Evaluation Position?	☒ Team Leader ☐Team member
Evaluation Award Number *(contract or other instrument)*	AID-OAA-M-13-00010 – Impact Evaluation of READ Liberia Project
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID/Liberia Read Liberia Impact Evaluation
I have real or potential conflicts of interest to disclose.	☐Yes ☒No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	*[signature]*
Date	July 2021

Name	Anna Solovyeva
Title	Principal Research Analyst International Projects
Organization	NORC at the University of Chicago
Evaluation Position?	Team member
Evaluation Award Number *(contract or other instrument)*	AID-OAA-M-13-00010 – Impact Evaluation of READ Liberia Project
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID/Liberia Read Liberia Impact Evaluation
I have real or potential conflicts of interest to disclose.	☐ Yes ☒No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	July 2021

Name	Ursula Hoadley
Title	Professor of Education
	Consultant
Organization	University of Cape Town-School of Education
	NORC at the University of Chicago
Evaluation Position?	Education and Classroom Observation Expert
Evaluation Award Number *(contract or other instrument)*	AID-OAA-M-13-00010 – Impact Evaluation of READ Liberia Project
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID/Liberia Read Liberia Impact Evaluation
I have real or potential conflicts of interest to disclose.	☐ Yes ☒No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	*[signature]*
Date	July 2021

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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