RTI INTERNATIONAL

Independent Evaluation of the Effectiveness of Institut pour l'Education Populaire's "Read-Learn-Lead" (RLL) Program in Mali

Endline Report

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List of Abbreviations

CAP	*Centre d'animation pédagogique* (pedagogical support jurisdiction)
CLSPM	correct letter sounds per minute
DEF	*Diplôme d'Enseignement Fondamental* (basic education teaching diploma)
EGRA	early grade reading assessment
FPC	finite population correction
G1	Grade 1
G2	Grade 2
G3	Grade 3
IEP	*Institut pour l'Education Populaire* (Institute for People's Education)
IRI	interactive radio instruction
LOI	language of Instruction
MEALN	*Ministère de l'Enseignement, de l'Alphabétisation et des Langues Nationales* (Malian Ministry of Education, Literacy and National Languages)
NGO	nongovernmental organization
OLS	ordinary least squares
ORF	oral reading fluency
PC	*Pédagogie convergente (*Convergent pedagogy—an active method of language instruction developed in Belgium and employed in Mali and elsewhere)
PHARE	*Programme Harmonisé d'Appui au Renforcement de l'Education* (Harmonized Program of Support to Strengthen Education)
QEDC	Quality Education in Developing Countries
RCT	randomized controlled trial
RLL	Read-Learn-Lead Program
SIPPS	Systematic Instruction in Phonemes, Phonics, and Sight Words
SMRS	Systematic Method for Reading Success
SSME	Snapshot of School Management Effectiveness
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Context and objectives. Mali has made great advances in primary education access since 1990 (IEP, 2008). The proportion of primary school-age children enrolled in school has roughly tripled since that time. Mali has also embarked on substantial curriculum reform in elementary education, with a stated focus on active learning and first- as well as second-language literacy development. In practice, multiple curricular approaches coexist, including a majority of schools that continue to practice the entirely French language-based "classic" program of study.

The Institute for People's Education (Institut pour l'Éducation Populaire, or IEP) designed the Read-Learn-Lead (RLL) program to demonstrate that the new official curriculum (here, the Curriculum program), *if properly implemented and supported*, can be a viable and effective approach to primary education, using mother tongue and a very specific pedagogical delivery approach. The RLL program sought also to demonstrate how the new Curriculum can be effectively implemented and supported, and what resources are needed to do so. RLL offers students and teachers carefully structured and systematic lessons, activities, and accompanying materials for instruction and practice on critical early reading skills in mother-tongue medium during the first years of elementary school. It is organized around three programmatic "results sets," the first of which focuses on Grades 1 and 2 and is the subject of the present evaluation.

This independent evaluation study, funded through a grant from the William and Flora Hewlett Foundation and carried out by RTI, explored the effectiveness of the RLL program's Results Set 1 as applied over three school years (2009-2010 to 2011-2012) in the Bamanankan language and in other Malian national languages (Bomu and Fulfulde in all three years, and Songhai in 2009 and 2010).

Design and methods. The independent evaluation of RLL followed a mixed methods approach, with a randomized controlled trial at its core. In early 2009, 100 schools representing four language groups (Bamanankan, Bomu, Fulfulde, and Songhai) were selected in a stratified sampling design and randomly assigned to RLL treatment or control groups of equal size prior to the beginning of program implementation. The evaluation, initially intended to involve three phases (baseline in May 2009; midterm in May 2010; and endline in May 2011, was extended through to May 2012 to accommodate delays in program start-up.

Data collection, at baseline and toward the end of each subsequent school year, involved reading assessments and brief surveys with first, second, and third graders (2009 baseline, 2010 interim with Grade 1 and Grade 2 only, and 2012 endline); teacher and school director surveys (all years); classroom observations (2009, 2010, and 2011); a qualitative case study (2011); and registers of program input and cost data (2011). The 100 schools were traced longitudinally (though with sample reduction to 80 schools in 2010 for budgetary considerations, and to 75 schools in 2012 given loss of access to schools in the northern regions of the country due to political upheaval). In a given school year, students sampled in each school were selected randomly in equal numbers from Grades 1, 2 and 3 (Grades 1 and 2 only in 2010), for a total of over 3000 students participating each year.

Analytic methods utilized to produce the endline results presented in this report included difference in differences, logistic regression, and linear regression techniques. While the randomized controlled trial

portion of the study focused on a single treatment (full RLL Result 1 treatment versus no treatment) in different linguistic contexts, this combination of methods permitted us to explore more deeply the elements of the treatment and other contextual factors and their relation to student performance, and to account for some necessary departures from the original design, notably the loss of access to Songhai-language sample schools at endline.

Results: Impact of RLL participation on students' reading performance by endline. Difference in differences analyses (comparing the change in mean group scores between baseline and endline across RLL treatment and control groups) indicated a positive impact of the RLL program on children's reading skills overall, at the end of Grade 1 (after one year's exposure to the program), and particularly at the end of Grade 2 (after two years of exposure). While children's general language skills and phonemic awareness (as measured by listening comprehension and initial sound identification, respectively) do not appear to have been significantly enhanced by RLL participation, the RLL advantage for actual reading skills—from letter recognition to decoding and demonstrating understanding of connected text—is strongly supported by the results of this study, especially for boys and for students completing Grade 2. Notable differences appear on the emerging-literacy skill of letter identification, with significant difference-in-differences means overall (ES=0.40) and for nearly all subgroups with the sole exception of Grade 3 students. Grade 1 and Grade 2 subgroups showed large effect sizes of 0.59 (Grade 1) and 0.66 (Grade 2). Reading familiar words and decoding new words, skills essential to becoming a proficient reader, also showed moderate positive RLL treatment effects overall (ES=0.33 and ES=0.32, respectively), and large effects among both Grade 1 and Grade 2 students. Results on the oral reading fluency and reading comprehension subtasks further support a positive contribution of the RLL treatment, again particularly for Grade 2 students (ES=0.42) and for boys generally (ES=0.35).

Despite these indications of an important RLL treatment effect, however, the mean reading performance found across both RLL treatment and control groups and in all subgroups is very low by any measure, including Mali's own stated grade level standards for reading (Decision No. 04336/MEALN-SG, 4 November 2011). While RLL is demonstrably making a significant positive difference in children's learning skills, those skills are still exceedingly low even after two years of engagement with the program. The average third grader in an RLL school could read only 11 words of connected text in one minute at endline.

In addition, while RLL effects were generally important for second graders, who were just completing their participation in the program at the time of assessment, differences between third graders in RLL schools versus control schools were negligible. By endline RLL third graders, like their Grade 2 schoolmates, had benefitted from two years of the RLL program, although earlier in the program's evolution (during 2009-10 and 2010-11 school years, versus 2010-11 and 2011-12 for the Grade 2 group). While it is likely that RLL-group children who were in Grade 2 at endline had the advantage of a more complete implementation of the program than third graders who had participated in the program, the Grade 3 findings leave open the possibility that the benefits brought by RLL may not translate into lasting advantages for subsequent learning, even just one year out. Compelling evidence (Abadzi, 2011; Gove and Cvelich, 2011) suggests that reaching some minimum threshold of reading performance (generally at least 40 words per minute, or more depending on the language) is critical before reading skills are "acquired" to any lasting degree, or capable of sustaining or supporting further learning. The

RLL Grade 3 results provide an example of what may happen when an intervention is stopped before such a minimum level of performance is achieved.

In order to examine the relative importance of grade level and gender, as well as language of instruction (LOI), in nuancing RLL treatment effects at endline, we also employed multiple regression models using all of these elements as predictors. School-by-grade-level mean baseline scores were included as covariates to approximate controls for baseline levels in the absence of actual student change scores over time.

Across early grade reading assessment (EGRA) subtasks, results using this basic model (which included grade level, gender, language of instruction, baseline mean score on the same subtask, and RLL program or control group membership) maintained a strong association between students' participation in RLL and their reading outcomes at endline, even when accounting for language of instruction, grade level, gender, and baseline mean score for their school. The one exception to this general finding, and in line with difference-in-difference results, was for listening comprehension, which showed no association with RLL participation in the context of the other predictors in the model.

Grade level was also a strong predictor for all subtasks, with higher grades associated with higher scores overall, as expected. Children attending Fulfulde-language schools tended to display lower scores on initial sound identification, decoding of invented words, and oral reading fluency, although variations in difficulty or administration across instruments by language could also account for this finding, despite efforts of the study team to construct equivalent instruments and to obtain acceptable inter-rater reliability. In any event, the apparent disadvantage in Fulfulde-language schools, which persists across several subtasks, bears further investigation. Student gender and school's baseline mean scores on the same task by grade level did not show any significant association with endline scores in the context of the other variables in the model, with the exception of letter recognition, for which the results suggest that girls performed slightly less well than boys, other things being equal.

The study team also examined the relationship between performance on lower-order skills and that of higher-order skills, through illustrative further regressions. Phonemic awareness skill, when added to the model predicting letter recognition performance, more than doubled the R-squared (from 0.220 to 0.452), suggesting that over 20% in the variance observed in letter recognition could be explained by phonemic awareness skill. Similarly, the R-squared of models to predict familiar word reading improved from just 0.151 for the basic model (which did not include lower-order skill performance at endline), to 0.289 with the inclusion of phonemic awareness, to 0.300 with both phonemic awareness and listening comprehension, and to 0.552 with letter recognition added to these. Similar patterns appear with invented words and oral reading fluency. These results indicate a substantial interdependence between lower- and higher-order reading skills; however they likely also reflect students' general test-taking ability or other factors in the specific assessment experience.

Exploring the RLL effect and its relationship to contextual factors. Using contextual and observational information and correlational techniques, the evaluation study team also examined whether and how RLL and control group samples were similar and how they differed, especially over time. These analyses were carried out to confirm initial equivalence of RLL program and control schools and students (and to control statistically for any differences found), and to better understand their

relationship to the "RLL effect." Contextual characteristics examined include general school characteristics, general student characteristics, and characteristics of schools' pedagogical environment not specifically anticipated to be influenced by RLL. Logistic regression methods were used to test equivalence between RLL treatment and control schools on blocks of variables deemed to represent each contextual area.

On general school and student characteristics, RLL treatment and control samples in fact showed some significant differences, even at baseline, although the nature of these differences varied over the years of the study. As an example, children's home language and literacy environment differed at trend level only in 2009. The association was stronger by endline, with RLL students more likely to report speaking the school's LOI at home and to have books at home in that language, and less likely to have French-language books, than their control school counterparts.

Pedagogical context indices reflecting teachers' qualifications and experience; their own ease in using the national LOI; evidence of active student engagement and student-centered instruction in the classroom; school pedagogical leadership; and schools' degree of (national language) Curriculum program experience and resources were also examined. On all of the pedagogical indices available at baseline, differences were not significant between RLL and control groups, indicating that schools and classrooms in treatment and control groups were roughly equivalent in terms of pedagogical practice prior to the onset of the RLL program. These analyses also indicate that the two groups diverged over time in a number of areas of pedagogical practice once the RLL program began, although not all of these differences persisted through to endline.

General linear regression techniques were also used to estimate the possible contributions of these contextual factors relative to that of RLL participation, on students' reading performance on letter recognition (correct letter sounds per minute or CLSPM) and oral reading fluency (ORF), representing lower and higher ends of the EGRA skills spectrum. Does a given set of characteristics and practices help to explain performance at one or both ends of the spectrum? Does it appear to "add value" to students' reading performance that is independent of the RLL treatment effect, or that might account for the RLL effect?

For letter recognition (CLSPM), analysis results indicate that RLL participation continued to make a strong contribution (3.7% to 5.5%) to variance in student performance explained, even when accounting for general school characteristics, student characteristics, or pedagogical context and practices, as well as grade level, LOI, student gender, and baseline mean scores. At the same time, general school characteristics, student home language-literacy environment, school pedagogical management practices, and school Curriculum program experience and resources also made contributions that were distinct from that of RLL participation or other predictors, with change in R-squared ranging from .014 to 0.020 (roughly 1.4% to 2.0% of variance in CLSPM explained). Total variance in CLSPM explained by each full model ranged from 22.2% to 25.1%.

The results for oral reading fluency (ORF) on these same general school and student characteristics present a much lower proportion of the variance explained, ranging from 13.5% to 16.7% for the full models. As a higher-order, more complex skill, it is not surprising that variations in children's ORF performance would be more difficult to predict or explain. At the same time, the proportion explained is

not negligible. As with CLSPM, the specific contribution of RLL participation to ORF is robust, remaining significant and contributing from 1.8% to 2.7% of total variance explained, independent of all other elements in a given full model. Regarding school and student home characteristics, the child's language-literacy environment stands out, with a value added of 3.4% of variance explained when added last to the model, surpassing RLL's still important, but smaller (1.8%) specific contribution. Among the general pedagogical characteristics and practices examined, school pedagogical management practices and school Curriculum program experience and resources again display contributions to variance explained (1.5% and 1.4%, respectively) that are distinct from RLL program participation. Overall, despite the differences found in general school, student, and pedagogical characteristics between RLL treatment and control samples, these results support the conclusion that RLL program participation remains important for students' reading performance even when these other characteristics are accounted for.

Findings relating to the fidelity of RLL implementation. To further understand the observed patterns in students' learning in RLL and control classrooms, the evaluation study team sought to test the extent to which RLL program implementation as intended was in fact achieved in the sample. In addition, we examined the relationship of the degree of fidelity achieved, to students' learning outcomes. Dimensions of fidelity examined included (1) RLL training and support visits provided to school staff, as reported in teacher and school director surveys; (2) provision of RLL graded teacher's guides, student workbooks and readers, and other pedagogical materials used in implementation of the RLL program; (3) instructional practices for active classrooms in line with RLL philosophy but not specifically emphasized in RLL trainings or materials (through classroom observations conducted in 2010 and 2011); and (4) practices specifically encouraged by RLL (through 2010 and 2011 classroom observations).

On all dimensions, a statistically significant difference between RLL and control schools was observed for all years in which RLL implementation data were collected. On the whole, these results indicate that RLL schools were significantly more likely to have received intended RLL capacity development and instructional material inputs, and to carry out practices consistent with the RLL approach in their classrooms.

At the same time, the findings suggest that there was not perfect separation of the RLL experience from that of control schools. While smaller than those found among personnel in RLL schools, staff, substantial proportions (up to 25%) of control school staff reported that they had participated in an RLL training or received RLL instructional materials. Conversely, from 11% to over 50% of RLL treatment school teachers and principals reported that they had not received one or more of the intended RLL trainings or materials.

These observed variations in RLL program implementation fidelity were further examined in terms of their relationship to students' learning outcomes, first across RLL treatment and control groups, and second, within the RLL treatment subsample itself. Using the same technique as for the contextual indices, we applied complex samples linear regression methods to predict learning CLSPM and ORF outcomes at endline.

On the complete sample, all models tested were highly significant, with full models explaining from 23.9% (RLL training inputs) to 26.2% (RLL training and material inputs together) of the variance observed in students' letter recognition skills, and 13.8% to 15.7% of the variance in ORF. In addition, the specific dimensions of RLL program training and material inputs explained a higher proportion of variance in students' outcome scores than did RLL group membership alone. While these dimensions share with the RLL group a notable portion of the variance explained (3.4%), they also contribute an additional 3.7% when considered together in the model. In other words, for CLSPM, the regression results suggest that when RLL inputs were made available—even inadvertently in control schools— these inputs made a tangible and distinct contribution to students' resulting CLSPM performance.

For ORF, specific information about RLL training provided to teachers and school directors adds only a small proportion (0.4%) to explaining the variance observed in students' performance, above and beyond the base model parameters and RLL group membership. RLL material inputs, on the other hand, continue to play a substantial role in accounting for the variance observed in students' ORF, contributing an additional 2% of variance explained above and beyond other aspects of RLL participation. On the whole, students' ORF performance appears to depend to a greater extent on the material, rather than the training, aspects of the RLL program, although a non-negligible proportion of variance explained also appears to be due to shared (1.5%) and unspecified (0.4%) RLL program inputs.

Turning to these relationships within the sub-sample of RLL treatment schools alone, the findings concord with those of the full sample, and are magnified: For letter recognition, both RLL capacity development (training inputs) and RLL instructional material inputs make important contributions to the variance explained (6.4% and 6.9%, respectively), above and beyond the portion explained by LOI, gender, grade level, and school's baseline mean scores. The two RLL input dimensions taken together and combined with the base model explain 28% of total variance observed, of which 7.8% is provided by the RLL inputs. For ORF, RLL instructional material inputs again appear to have more impact (explaining 3.8% of the variance) relative to RLL training inputs (1.2%), while the overall variance explained is smaller than for letter recognition.

Conclusions. The results of the independent evaluation of the "Read to Learn" results set of IEP's RLL program point to an important contribution of this program to the development of Malian children's early grade reading skills in national languages. The advantages of participating in the program were evident by Grade 1 after only one year of exposure to the program, and particularly at the end of Grade 2, suggesting that the full two-year program offered the greatest benefit. Evidence of a positive RLL effect remained strong for most skills, even when a variety of other potential sources of variance in student performance (LOI, grade level, gender, general contextual characteristics of the school, those of the student's home environment, and other pedagogical resources and practices of the school) were taken into account.

The RLL program implementation fidelity findings indicate that on the whole, adhesion to RLL program implementation was achieved. Both the program's teacher and school director training, and its provision of instructional material inputs to schools, made distinct contributions to student's lower-order skills, while the instructional material inputs were particularly important in predicting higher-order reading skills. The existence of a non-negligible proportion of anomalous cases, however (control schools that reportedly received RLL inputs, and RLL schools that did not), underscores the challenges of

longitudinal experimental and quasi-experimental designs in real-world settings, and the value of combining analytic methods to help account for such departures from intended study design.

The low overall level of reading performance, even in RLL program schools, the apparent non-effect of the program for Grade 3 students, and the lower relative performance found among students in Fulfulde-language schools remain areas of particular concern for the RLL program going forward. The results also suggest some important avenues for further inquiry: the interactions among reading skills, the influence of LOI, and the challenges in giving children evolving in different language environments equivalent chances to learn, and to show what they have learned.

I.   Introduction

A.   *Mali's elementary education context*

Mali has made great advances in primary education access since 1990 (IEP, 2008). The proportion of primary school-age children enrolled in school has roughly tripled since that time. Yet as primary school access has increased, the overall quality of education has not.

Following its independence and as part of the Education Reform launched in 1962, Mali engaged in many years of project-based experimentation in efforts to move away from the classic French-language-only curriculum. This holdover from colonial times was judged to no longer serve the needs of a rapidly growing and increasingly diverse primary school student population. Mali's vanguard work since the early 1990s in active instructional methods and bilingual education, which uses maternal language as well as French (Pédagogie Convergente, or PC), pointed a possible way forward. Children in schools using the PC methods tended to perform better on literacy skills in national exams than those in schools following the classic curriculum. With the launching of the Rebuilding Education Act in 1999, national-level attention finally turned to improving educational quality and learning outcomes. The current decade's curriculum reform efforts, which have resulted in an interdisciplinary, competency-based curriculum, have, in principle, also incorporated the PC approach with its focus on active learning and first- as well as second-language literacy development.

In practice, however, the classic, French-language-based curriculum remains predominant in Malian primary schools. The competency-based Curriculum is in full use in only a minority of schools, while various combinations of classic, competency-based, and PC-informed approaches to teaching and learning exist in public as well as private schools and classrooms. This mélange of curricular approaches, at times within the same schools and varying from grade to grade, may be hypothesized to affect student learning as much as the quality of any given approach. In addition, how the approach is actually applied in the classroom, with what proficiency and enthusiasm, with what learning materials, and with what consistency across teachers and grades all affect learning outcomes. Elementary education in Mali, in other words, displays great diversity with little evidence of full confidence in any one approach. Needless to say, both children and teachers endeavoring to navigate through this situation and master the skills they need to succeed in it are often confused and are not benefiting optimally.

B.   *IEP's Read-Learn-Lead Program*

In response to the situation described above, the Institute for People's Education (Institut pour l'Éducation Populaire, or IEP) designed the Read-Learn-Lead (RLL) program in a conscious effort to demonstrate that the new official Curriculum, *if properly implemented and supported*, is a viable and effective approach to primary education, in its use of mother language and its application of a very specific pedagogical delivery approach. The RLL program seeks also to demonstrate how the new Curriculum can be effectively implemented and supported, and what resources are needed to do so. In its own words, IEP "sees a need to demonstrate a set of model practices that target specific sets of barriers (early grade literacy, national language instructional materials, human resource mobilization initiatives) to develop a social demand for Mali's education reform policy through successful practice and relevant

research." The primary goal of the RLL program is to "Demonstrate that children in Malian primary schools can achieve high learning outcomes with a focused instructional model, driven by effective Malian language materials and effective teaching and supported by networks of human resources" (IEP, 2008).

The RLL program builds on IEP's experience adapting the "Systematic Method for Reading Success" (SMRS; developed by Sandra Hollingsworth and Plan International)[1] for the Malian setting in Bamanankan language, which was implemented in 22 villages during 2007-2008. RLL offers students and teachers carefully structured and systematic lessons, activities, and accompanying materials for instruction and practice on critical early reading skills in mother-tongue medium during the first years of elementary school. The program has involved materials development, capacity development, internal formative and progress assessment, documentation, and stakeholder participation. It is organized around three programmatic "results sets" that are intended to support the overarching goal. The three result sets include:

> ***Results Set 1, "Learn to Read"*** (Grades 1 and 2), constitutes the foundation of the RLL program and focuses on developing materials and teacher capacity (through both pre-service and in-service professional development) for systematic reading instruction and practice (both in and out of school) in four national languages. It includes ongoing formative assessment of children's reading performance over time. This results set was carried out by IEP in 210 schools in identified language zones of the country (Bamanankan, Songhai, Fulfulde, and Bomu languages) during the evaluation period.

> ***Results Set 2, "Read to Learn"*** (Grades 3–6, science and language arts; Grades 1–6, math) focuses on developing and testing instructional materials for active pedagogy and integrated competency-based instruction using foundational math materials (Grades 1 and 2) and leveled readers and other grade-appropriate materials in later primary language arts, math, and science subjects (Grades 3 through 6). The materials developed through this results set were tested in 10 laboratory schools during the first phase of the program in identified language zones of the country.

> ***Results Set 3, "Learn to Lead,"*** focuses on broadening the range of human resources that is mobilized and equipped to support the implementation of the new Curriculum and, thereby, contribute to children's learning: community youth and elders; parents; and community associations in civil society, local government, university staff and students, and teacher training institutes; as well as teachers, principals, and Ministry of Education central and decentralized services. IEP's intention through this results set is to address specific problems while simultaneously building awareness, commitment, and demand for better quality schooling.

The present evaluation explores the effectiveness of the RLL program's Results Set 1 as applied over three school years (2009-10 to 2011-2012) in the Bamanankan language and in other Malian national languages (Bomu and Fulfulde in all three years, and Songhai in 2009 and 2010).

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[1] SMRS was adapted by Hollingsworth from the SIPPS (Systematic Instruction in Phonemes, Phonics, and Sight Words) model developed by Shefelbine and Newman (2001).

Key Elements of Read-Learn-Lead's Results Set 1 Interventions

IEP began developing and testing the *Ciwara Lisent* early grade reading instruction program in Bamanankan language in elementary schools in and around Kati, Mali, in the early 2000s. By the time IEP expanded into other regions and languages with the support of the William and Flora Hewlett Foundation, the Institute had developed a systematic method to assist children to master the five basic reading skills—phonemic awareness, phonetic awareness, reading fluency/automaticity, vocabulary, and comprehension—by the end of Level 1 (generally, the first two years of primary school). The *Ciwara Lisent* method, as laid out in teachers' guides for students' Book 1 (developed for use generally in Grade 1, also in Grade 2 in the first year of the program in a given school) and students' Book 2 (for use in Grade 2), articulates each lesson of instruction around seven (Book 1) or five (Book 2) steps.

The seven steps of each Book 1 lesson are the following:

Step 1: Review of the material read the previous day, both as a means of consolidating learning and to test children's readiness to move on to the next lesson.

Step 2: Phonemic awareness exercises, presented orally.

Step 3: Phonetic awareness exercises, linking written symbols (letters and graphemes) to their constituent sounds, combining alphabetic and syllabic awareness.

Step 4: Practice decoding individual vocabulary words, to develop word-level reading automaticity and consolidate phonemic and phonetic awareness skills.

Step 5: Study and practice reading familiar words in their written form. Each lesson introduces the child to a number of "new" reading vocabulary words, which represent familiar items and notions in the child's local environment, and encourages the child to discover meaning through context and relating the word read to the spoken language.

Step 6: Expressive reading by the teacher, as children follow the text silently, to provide a model of fluid reading with appreciation for the text's meaning.

Step 7: Practice in fluid reading of text and writing decodable words. In this step, students practice using appropriately leveled readers (also designed by IEP) and reproducing letters and words "of the day" after the proper forms are modeled by the teacher.

The five steps of Book 2, while similar to the above, focus more on syllables, complete words, and connected text. The above Steps 2, 3, and 4 are essentially collapsed into a single step focusing on practice with "sight syllables," while practice with familiar words (Step 5 in Book 1) extends in Book 2 (as Step 3) to include not only reading but writing of complete words, and the production of sentences and short texts.

Each book and its teacher's guide also offer a systematic, progressive presentation of letters, syllables, and vocabulary words that contain them, across 60 units ("sequences"; 40 for Book 1 and 20 for Book 2), punctuated by moments of consolidated review and evaluation after several units. The method also employs flash cards, leveled readers, and related posters that reflect the same progression of letters, syllables, and vocabulary words. Words not yet introduced at the point of a given lesson are not entirely avoided, but rather represented by stylized pictures in the RLL schoolbooks.

Source: Institut pour l'Education Populaire (2008a)

C.   *Objectives of the external evaluation*

In November 2008, the William and Flora Hewlett Foundation awarded RTI a grant to conduct an independent evaluation of the effectiveness of IEP's RLL program as IEP extended it to additional Malian regions, school contexts, and languages (over the 2009 to 2012 period). The objectives of the evaluation were the following:

- To establish whether first, second, and third graders who had gone through the RLL program were able to meet Mali's official reading performance benchmarks in national languages.
- To examine whether the RLL approach was effective not only in the major national language group (Bamanankan) but in other languages.
- To determine whether length of exposure to the RLL program (Grades 1 and 2; or Grade 2 only) affected students' performance, and to what degree.
- To examine whether early primary grade teachers and school heads had acquired sufficient knowledge, skills, and materials to implement the early grade reading program.
- To examine the program's effectiveness, and its cost, in bringing about other anticipated outputs and outcomes.
- To help develop research and evaluation capacities in the Malian education research community.

In this report, we present endline findings relating to these objectives, as well as a reanalysis of findings from earlier years to accommodate a major sampling change introduced during the endline year. This change, resulting in the loss of one-half of the non-Bamanankan-language sample of schools, was necessitated by the inaccessibility of the original sample's Songhai-language schools since March 2012 due to the tragic and brutal occupation of Mali's three northern regions by Islamist radical groups.

II. RLL evaluation design

A. *Original evaluation design*

The external evaluation of RLL followed a mixed methods approach, with a randomized controlled trial at its core. Based on a common set of criteria, a population of eligible schools in the regions in which IEP planned to introduce RLL was identified in early 2009. From this population—stratified into Bamanankan and "Other" (Bomu, Fulfulde, and Songhai) language groups—a total sample of 100 schools was drawn (50 each Bamanankan and Other). Schools within each language group were then randomly assigned to RLL intervention and control groups of equal size. The evaluation design stipulated that, within each school, Grade 1, Grade 2, and Grade 3 students and teachers and the school principal were to be surveyed, school and classroom observations were to be made, and a random sample of boys and girls in each grade level was to respond to an EGRA and a set of demographic and other contextual questions.

The evaluation was intended to involve three phases: Baseline in May 2009; Mid-Term in May 2010; and Endline in May 2011.

From the outset, we anticipated that there would be technical and logistical challenges to conducting a full experimental evaluation of a program as complex as RLL in Mali's predominantly rural context. To mitigate these challenges, we selected a relatively simple design with some fundamental limitations (see Section II.B below). Even with these precautions, the initial experimental design of the evaluation was compromised over time in a number of ways, with non-random factors and other design challenges intervening in the course of RLL implementation. These factors and our response to them are discussed in Section II.C.

B. *Principal limitations of the design*

With only one treatment group (RLL) within each language grouping, the evaluation design allowed for examination of the impact of the full RLL package only. It cannot be used to determine the specific impact of particular elements of the program. Nonetheless, our mixed methods approach—including survey and classroom observation information and affording correlational analysis as well as treatment and control group contrasts—did offer an opportunity to explore the relative apparent contributions of program components and to estimate the degree of "implementation fidelity" to the RLL approach that was attained by the different schools participating in the study.

In addition, while the sampled schools in the study remained constant across the years of the study, the individual staff surveyed and students assessed were not traced longitudinally. Rather, within a given school, Grade 1, Grade 2, and Grade 3 students were selected randomly across all classes in the grade and systematically by gender in 2009 (all three grades), 2010 (Grades 1 and 2 only), and again in 2012 (all three grades). At baseline and for the following three years, teachers in the same grades (including Grades 1, 2, and 3 in 2011) were canvassed, but again, a given teacher was not traced longitudinally. This sample structure affords cross-sectional analysis at student, teacher, and school levels within a

given evaluation year. However, cross-year "change" analysis can only reflect changes in overall performance at the school level and by grade level within the school.

Finally, when the school or grade level is taken as the principal unit of analysis (as for analysis of characteristics of schools and principals, and teachers, and of observations of teacher practice in the classroom), the overall sample size (80 to 100 schools total, with 20-25 schools per treatment by language group), is quite small, such that only relatively large differences across groups can be discerned.

C. *Design threats and modifications post-baseline*

The impact evaluation's original design assumed that it would be possible to maintain four initially comparable groups (Bamanankan-language RLL schools and control schools; Other-language RLL and control schools), and that any contextual variables or changes unrelated to the treatment (RLL) would be experienced in roughly the same manner across the four groups. The design was also grounded on the critical assumption that IEP would be able to introduce the RLL program as planned, reaching all Grade 1 and Grade 2 classrooms in all schools in the RLL treatment sample during the 2009-2010 school year and again in subsequent years. In addition, the RLL program itself was predicated on the expectation that the Ministry of Education would, as it had announced, provide national language instructional materials and teacher training to all Curriculum schools (including both RLL treatment and control schools as well as other schools) by 2010. The RLL inputs were designed to build on the foundation to be provided by these Ministry materials and training.

1. **Intervening external factors and other design threats**

The baseline data showed control and treatment groups to be indeed sufficiently well matched—that is, reading performance at baseline was equivalent across RLL and control groups, and other school, teacher, and student characteristics examined did not display significant differences. Over the course of the study, however, a number of external factors may indeed have had variable and non-random impact within and across groups. These factors include other programs working in the same regions and schools that changed their own intervention plans. The *Programme Harmonisé d'Appui au Renforcement de l'Education* (Harmonized program of support to strengthen education or PHARE) project's Interactive Radio Instruction (IRI) program, for example, had originally planned for all schools to have access to the radio lessons (thus its effects could be anticipated to be "constant," or at least random, across schools); subsequent to the RLL baseline data collection, however, the PHARE project changed its implementation design—such that some schools received the radio program and additional support, while others received only the radio program or no PHARE intervention at all—with treatments distributed in a non-random manner.

Another design threat was the fluidity, in practice, of some of the fundamental eligibility criteria for the study population. Some schools officially designated and locally confirmed as national-language Curriculum schools during initial sampling efforts were later found to have early grade classes that followed the classic program of instruction (in French) or that used some combination of languages and instructional programs during reading lessons. Some schools confirmed to have the appropriate grade levels and adequate "student pipeline" to warrant inclusion in the sample were later found not to have an

expected grade level in a given year. While these factors might well be random across treatment and Ccontrol groups, the possibility that they were not demanded closer attention.

In addition, IEP's own implementation schedule entailed rapid expansion of the Institute's geographic and linguistic reach from a single region (Kati) and a single language (Bamanankan) to five regions and four distinct languages. RLL's emphasis on instructional materials (requiring development and ground-testing in each of three new languages) and on new techniques of instruction and forms of support (requiring development and delivery of training in these same languages) would be ambitious for a firmly established institution in Mali to produce and roll out in one year, and more so for an institution in as rapid an expansion mode as was IEP. In addition, teacher strikes and other events effectively shortened the school year differently in different regions, further reducing schools' ability to implement the full course of RLL lessons for a given grade level. As a consequence of these factors, RLL's roll-out in Bomu, Songhai, and Fulfulde languages and zones, in particular, did not keep pace with the original plan. The experimental phase of the RLL program, originally due to be completed over two years with the 2010-2011 school year, was therefore extended to a third year.

Furthermore, at the beginning of the 2009-2010 school year, the Ministry did not provide training in the Curriculum approach for Curriculum teachers as anticipated. IEP's RLL training design builds upon the expectation that teachers will have basic training in the Curriculum approach as offered by the Ministry, with RLL providing specific and more in-depth training on reading instructional methods. While this absence of Ministry training affected both RLL and Control schools equally, it also undermined our opportunity to observe the "value added" impact that RLL might have had if the program had been implemented with the expected prerequisites in place.

Undoubtedly the most significant complication to the study's original design was the March 2012 attempted coup in Mali and the subsequent occupation of the north of the country by Islamist radical groups. These events, in themselves tragic and still potentially catastrophic for the country, rendered it impossible to access any Songhai-language schools, located in the north, for the endline data collection. The inaccessible schools represented half of the RLL treatment and control schools in the Other Language sample, such that the size of the groups (now just 12 and 13 schools, respectively) was no longer adequate to permit distinct statistical analysis of these groups. A substantial modification to the analysis approach was therefore required at endline (see below).

2.   Design modifications after baseline

In response to these various threats and events, the RLL program evaluation team was obliged to revise instruments, analysis plan, and calendar post-baseline assessment administration in the following ways:

- We added a number of items into 2010, 2011, and 2012 teacher and principal surveys and observational data collections to provide information on key potential external factors of variation that could be used during analysis in order to partially correct for "contamination" that may be introduced by non-random factors. These items were identified through discussions with IEP and local research partners and close review of the quality of baseline survey and observational data collected.

- Because of the need to better understand the complex context, we also introduced into the evaluation design a complementary qualitative case study, carried out in 2011. Described in other reports (Diallo and Diawara, 2011; Diallo, Ralaingita, and Diawara, 2012), this study examined nine schools, selected on the basis of their 2010 student learning results, to help contextualize the results of students' EGRA performance and the information gathered through structured surveys and observations, and to more deeply investigate the environmental factors, instructional practices, and other processes that might underlie those results.

- Due to IEP's extension of its pilot study program calendar into the 2011-2012 school year to accommodate start-up delays in some sites, and the desire to have an opportunity to evaluate the program after a full implementation cycle, RTI was granted an extension of the evaluation period into the 2011-2012 year. With the extension granted at no cost, we were obliged to make some decisions about the best use of limited resources. We therefore moved the endline student reading evaluation to the end of the 2011-2012 school year but continued survey and observational work in the intervening year (2010-2011) in order to have as complete a record of implementation process evolution as possible.

- Because of the lack of access to any Songhai-language schools at the time of endline assessment due to the Islamist radical incursions in the north, we were obliged to modify our analytical design from four contrast groups to just two groups (RLL treatment and control). Language effects could still be explored, but using less robust correlational methods.

In sum, given all of the factors mentioned here, and despite initial design precautions, the evaluation design departed from that of a straightforward randomized controlled trial (RCT) impact evaluation, from which researchers could confidently draw comparisons between treatment and control groups and attribute differences found (if any) to a program effect, or conclude, if no differences were found, that there was no program effect. Rather, the additional information gathered in post-baseline years was used during analysis to partially correct for non-random extrinsic factors and to provide richer qualitative information on the teaching-learning process that actually occurred in RLL and control schools. In other words, the RCT design gave way to a mixed-methods design, adding correlational analysis techniques and purely qualitative aspects. One shortcoming of the correlational approach, of course, is that if we fail to observe, or to represent adequately, important, non-random factors, their potential effect on outcomes would also go undetected and un-corrected. Second, increasing the number of non-random factors robs the analysis of degrees of freedom, thus further reducing the power of the analysis to detect differences in the factors of primary interest.

D.   Sample

The fundamental RCT sample design for the evaluation was developed in close consultation with RLL program implementor IEP. IEP had developed and applied the RLL approach in a first cohort of schools in the Bamanankan language zone in the 2007-2009 period and planned its extension to a second cohort in this same zone and in three other geographic and linguistic zones. Schools eligible for participation in RLL's second cohort, numbering 136 total schools across seven CAPs (pedagogical support jurisdictions), constitute the population of interest for the purposes of this study.

The eligibility requirements for schools to be considered for participation in the IEP program's second cohort (cohort of focus for this study) were as follows:

- Eligible schools must be teaching Grades 1 and 2 in one of the four national languages of interest (Bamanankan, Fulfulde, Songhai, and Bomu).
- Eligible schools must be either public schools or community schools.
- Eligible schools can be drawn from both urban and rural environments.
- Eligible schools have not been previously supported by IEP.
- Eligible schools must be reasonably accessible (as determined by IEP in cooperation with local district officials)
- Eligible schools must not be one-teacher schools.

IEP worked together with local district officials and ministry data to compile a list of RLL-eligible schools in the seven target CAPs (see *Table 1*).

Table 1. Number of RLL-Eligible Schools by CAP and Language

Language group	Language	CAP	Number of eligible schools
BAMANANKAN	Bamanankan	Torokorobougou	5
	Bamanankan	Kati	36
	Bamanankan	Ségou	17
	Total Bamanankan Schools		58
OTHER LANGUAGE	Bomu	Tominian	23
	Fulfulde	Mopti & Sevaré	24
	Songhai	Gao	31
	Total Other Language schools		78

With the list of eligible schools established, the evaluation study team proceeded to the randomized selection and assignment of schools into RLL treatment and control groups for the period of the study.

The sample structure called for two language groups: Bamanankan, and "Other" (Bomu, Fulfulde, and Songhai). While there would have been some utility to examining each of the four languages separately, there were two significant constraining factors in doing so. First, because the number of eligible schools using each of these languages is much smaller compared to Bamanankan in the selected CAPs, it would have been impossible to ensure a large enough sample for each language. Second, while enough schools might be found by extending the search to additional CAPs, doing so would have required major changes to IEP's own roll-out plan and would have increased the study sample to a size and with a geographic spread that would have been cost-prohibitive. Because the evaluation's second research goal was to establish whether the program was effective in both the majority national language

(Bamanankan) and in other languages, we determined that focusing on the three non-majority languages as one group would still allow us to address this goal.[2]

To eliminate the threat of unobserved selection bias, the principle of random initial selection into intervention and control groups was applied. From the total pool of eligible schools in each language group (Bamanankan and Other), schools were randomly assigned into treatment and control groups in the study sample. This process provides the highest degree of assurance that intervention and control groups have no systematic a priori differences, thereby removing many potential biases and threats to validity associated with the use of control groups.

Systematic random selection was carried out using an interval to count down through the school list and assign schools to treatment and Control groups. Separate draws were conducted for Bamanankan-language schools and Other language schools. Within the Other language group, representation of the three languages (Bomu, Fulfulde, or Songhai) among the sampled schools was roughly proportional to the distribution of all eligible schools that use one of these languages, eliminating the need for post-hoc finite population correction by language within this group.

The target sample size for baseline data collection was set at 26 schools in each of the four treatment-by-language sub-groups. In the 2010 follow-up year, a randomly drawn sub-sample of 20 schools from each group was selected as a cost-management measure with a return to the full original sample for the 2011 follow-up and 2012 endline collections.

Table 2 shows the number of schools in the evaluation sample, by language group and treatment group, and the evolution of this sample across the four years of the evaluation.

Table 2. RLL Evaluation Sample: Number of Schools by Treatment Group and Language

GROUP	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline*
RLL TREATMENT GROUP				
RLL-Bamanankan	25	20	25	25
RLL-Bomu	8	7	8	8
RLL-Fulfulde	5	3	5	5
RLL-Songhai	13	8	13	- - -
CONTROL GROUP				
Control-Bamanankan^	24	20	24	24
Control-Bomu	8	7	8	8
Control-Fulfulde	5	4	5	5
Control-Songhai	13	10	13	- - -

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[2] At endline, as noted above, even this distinction between "Bamanankan" and "Other Language" groups had to be abandoned in favor of a correlational approach to the analysis of possible language effects, due to the inaccessibility of the Songhai-language sample schools.

GROUP	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline*
TOTAL Number of Schools Sampled				
RLL	51	38	51	38
Control	50	41	50	37

^ One control school formally listed as using the Bamanankan language of instruction was discovered upon baseline data collection to be using French-language instruction and was, therefore, eliminated from the sample, resulting in a total of 24 control schools within this language group.

* Given the instability in the Northern regions of Mali, Songhai-language schools in the CAP of Gao were excluded from the 2012 sample. The 2012 sample was, therefore, restricted to schools within the Bamanankan, Bomu, and Fulfulde language groups.

Within each of the sampled schools, 17 children in each of three grade levels (Grades 1, 2, and 3) were randomly selected to participate in baseline student reading assessments. In addition, from within each school, the principal and one teacher from each grade level assessed was surveyed during baseline data collection (see Section II.E below for a discussion of instruments used). If fewer than 17 children were present in a given grade level on the day of the assessment, teams were instructed to test all students present.[3]

In the 2010 follow-up data collection, school principal surveys were administered in each treatment and control school. However, within each school, teacher and student surveys and assessments were limited to Grades 1 and 2 only; Grade 3 teachers and students were not canvassed. To compensate for the reduced sample of schools (from 25 to 20 in each control sub-group), the number of Grade 1 and Grade 2 students selected randomly from within each school to participate in the reading assessment was increased to 20 (from 17).

In 2011, additional contextual information was gathered on schools, school principals, and Grade 1 and Grade 2 teachers, including classroom observations for RLL fidelity. No students were assessed in the 2011 data collection round.

In 2012, endline student assessments were conducted as at baseline in all three grade levels, and school principal and teacher surveys were also conducted.

Table 3 shows the number of students assessed on reading skills at 2009 baseline, 2010 follow-up, and 2012 endline evaluation years.

Table 3. RLL Evaluation Baseline, 2010 Follow-Up, and 2012 Endline Samples of Students by Grade

GROUP and Language of Instruction	2009 BASELINE			2010 FOLLOW-UP		2012 ENDLINE		
	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 1	Grade 2	Grade 3
RLL TREATMENT GROUP								
Bamanankan	427	419	421	382	377	417	367	275
Bomu	135	206	136	140	140	130	128	135

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[3] In the special case of Grade 2 students in non-Bamanankan schools, the number of students selected sometimes reached as many as 20 or 22 in schools that were also part of a broad one-off assessment study that targeted 20 Grade 2 learners per school, as baseline data collection in them was combined with that effort.

GROUP and Language of Instruction	2009 BASELINE			2010 FOLLOW-UP		2012 ENDLINE		
	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 1	Grade 2	Grade 3
Fulfulde	80	95	88	60	60	68	73	74
Songhai	223	237	221	188	168			
CONTROL GROUP								
Bamanankan	407	414	407	397	398	388	221	202
Bomu	128	166	135	143	130	135	127	130
Fulfulde	78	127	94	59	61	76	76	69
Songhai	213	230	220	189	176			
TOTAL number of students surveyed								
RLL	865	957	866	770	745	615	568	484
Control	826	937	856	788	765	599	424	401
TOTAL	1691	1894	1722	1558	1510	1214	992	885

The numbers in *Table 3* represent independently selected samples of students across the 2009, 2010, and 2012 evaluation years. The schools sampled remain constant across years (though with a subset of schools evaluated in 2010, and with no more than 5% replacement schools in a given post-baseline year), such that many students were likely to have participated in two or even all three student samples (as first graders in 2009 and first or second graders in 2010, for example; or as first graders in 2010 and as third graders in 2012).

For survey analysis, the data were suitably weighted, first, to approximate the actual proportions of schools by official language as found in the population of schools in participating districts, and second, to adjust for realized samples by grade within each school that were unequal in size. Weights were thus calculated at two levels:

- FPC (finite population correction) weights at school level, strata being the official language of instruction of the school (Bamanankan, Bomu, Fulfulde and Songhai), and

- Weights at student level, strata being student grade and school.

These two weights were then combined to create a final representative weight.

At endline, an additional sampling wrinkle appeared in a number of the Bamanankan-language sample schools. In these schools, one or more grade levels (particularly Grades 2 and 3) were no longer being taught in Bamanankan. For a variety of reasons, reading instruction was now being carried out in French in these schools, such that it was no longer appropriate to test affected students on their reading skills in Bamanankan. While this phenomenon was more prevalent in control schools, even some schools where RLL was active had started using French as the language of reading and instruction in the 2011-12 school year. Because of this phenomenon, and the strong possibility that it was not randomly distributed, if a given grade level for a given school was not tested at endline (or baseline), that school-grade was removed from analysis at both baseline and endline, Of the 25 Bamanankan RLL schools, one Grade 1; four Grade 2; and nine Grade 3 were excluded. Of the 24 Bamanankan control schools, 11 Grade 2 and 12 Grade 3 were excluded. The samples were re-weighted to accommodate these changes. Bomu and

Fulfulde language groups were unaffected. *Table 4* presents the changes to the Bamanankan sample made for the baseline-endline analyses presented in this report.

Table 4. Bamanankan LOI Sample Included in Baseline-Endline Analyses

BAMANANKAN TREATMENT GROUP	TYPE OF INFORMATION	Grade 1	Grade 2	Grade 3
RLL	Baseline number of schools with grade	25	25	25
	Number of schools excluded for grade	1	4	9
	Number of schools with grade included in baseline-endline analyses	24	21	16
	Number of baseline students included in baseline-endline analyses	409	368	270
	Number of endline students included in baseline-endline analyses	400	350	275
Control	Baseline number of schools with grade	24	24	24
	Number of schools excluded for grade	0	11	12
	Number of schools with grade included in baseline-endline analyses	24	14	21
	Number of baseline students included in baseline-endline analyses	407	227	203
	Number of endline students included in baseline-endline analyses	405	221	202

Apart from its impact on the study sample, the phenomenon of "reversion" to French-language instruction despite Government policy to support early grade instruction in national languages in Curriculum schools is itself a topic worthy of examination. While the present study cannot do this topic justice, analyses of survey data and qualitative information gathered through this study do indicate that teacher preparation and materials provision on the part of Government have lagged well behind the policy.

E.   *Data collection methods and instruments*

Data collection for the RLL evaluation involved direct student assessments of reading and language skills; individually administered survey questionnaires for school principals, teachers, and students; and classroom / lesson observation protocols. The evaluation team, which included Malian researchers and linguistic specialists, developed and tested the survey and observation instruments specifically for the purposes of this study, taking into consideration RLL instructional methods and approaches. The team also adapted the student assessments from existing EGRA materials. The EGRA-Mali assessments are available upon request; principal and teacher survey forms and classroom observation instruments are provided in *Attachment A.*

1.   Recruitment, training, and deployment of data collection teams

Data collection agents and supervisors fluent in each of the four languages of the study were recruited from among Education Ministry staff and NGO-sector agents and had prior assessment and survey fieldwork experience. These personnel were trained on the instruments and administrative aspects of fieldwork in a five-day workshop immediately prior to each data collection phase. During training, trainees had multiple opportunities to practice with each instrument of data collection (see below). Team members who had participated in instrument development assisted with supervision of the training process. Trainees' skills in EGRA administration and classroom observation protocols were assessed using an iterative inter-rater reliability process, in which multiple observers observed the same lesson and their completed protocols were subsequently compared. Items that proved particularly difficult to obtain strong inter-rater reliability were reviewed to ensure that observers had a common understanding of how to mark each item. By the end of each training, trainees were required to meet at least 80% inter-rater reliability levels to continue to the field, and often surpassed 90%.

Data collectors were deployed in teams of three evaluators and one supervisor, with each team responsible for collecting all data required from a given school across two school days (2009 baseline, 2010 follow-up, and 2012 endline) or a single school day (2011 follow-up, without student-level data collection). Supervisors had primary responsibility for teams' adherence to sampling instructions and for the proper organization and logging of completed instrument forms. They also conducted daily observations in study sites and spot-check reviews of completed forms to ensure an adequate degree of quality control.

The 2009 baseline data collection was carried out between April 20 and May 10, 2009. Fieldwork was combined with data collection for a separate Hewlett Foundation-funded study, with many teams collecting data for both studies.

The 2010 follow-up data collection was carried out in two sub-stages: surveys, teacher assessment instruments, and classroom observations were carried out by 24 enumerators and 12 supervisors between April 19 and May 5, 2010, while student reading assessments were carried out by 30 enumerators and 10 supervisors May 13-28, 2010.

The 2011 follow-up data collection mobilized 20 enumerators and 10 supervisors, between February 28 and March 19, 2011.

The 2012 endline data collection, which excluded the Gao CAP / Songhai-language schools, involved 24 enumerators and 8 supervisors, mobilized June 6-20, 2012.

2.   Data collection instruments

The following instruments developed for the purposes of the RLL evaluation are described below. The EGRA tests are available upon request; other instruments are provided in Attachment A.

EGRAs in four national languages. The EGRA instrument contains a series of individually administered protocols designed to assess performance on discrete skills that constitute key building blocks of reading (knowledge of print conventions; phonemic awareness, letter recognition, sight word

recognition, word decoding, reading fluency and comprehension; Gove & Wetterberg, 2011). Following standard EGRA protocols for instrument development (see www.eddataglobal.com for more information), the study team worked with Malian language specialists to develop instruments in each of the four languages (Bamanankan, Bomu, Songhai, and Fulfulde). Pilot results indicated moderate to high internal consistency across instrument sections, with "orientation to print" and "oral comprehension" representing outliers. When these two subtests were included in the calculation, coefficient alphas were modest, ranging from 0.53 for Bomu language to 0.72 for Bamanankan and Songhai languages. When excluded, alphas increased to 0.74 for Bomu and 0.85 or greater for the other three languages, indicating a strong internal consistency across the remaining subtests. This finding makes sense, given that the two "outlier" subtests represent broad "peri-reading" skills, whereas the six subtests showing high internal consistency represent skills that are more specific to early reading, involving sound parsing and letter, word, and text-level symbol recognition.

The EGRA instruments were implemented with students in Grades 1, 2, and 3 at baseline in May-June 2009, again with Grade 1 and Grade 2 students in the subsample of 80 schools during the May/June 2010 follow-up, and with Grades 1, 2, and 3 again during the June 2012 endline data collections.

School Principal Survey / Interview Protocol. An initial version of the School Principal Survey / Interview Protocol was adapted from RTI's School Snapshot of Management Effectiveness[4] (SSME) and applied at baseline in May/June 2009 to collect basic information on the school environment and resources and school principals' background characteristics, practices, and points of view. A revised version of the survey, incorporating RLL-specific items, was produced and applied during follow-up data collection in April 2010. The 2010 version with some small modifications was again applied in March 2011.

The following table (***Table 5***) presents the number of school principal surveys conducted, by group and across the years of the study.

Table 5. School Principal Surveys Administered, by Study Year, Treatment Group, and School's Language of Instruction

GROUP	School's LOI	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline
	Version of survey:	*Version A*	*Version B*	*Revised Version B*	*Revised Version B*
RLL Treatment	Bamanankan	18	20	25	25
	Bomu	3	7	8	8
	Fulfulde	2	3	5	5
	Songhai	6	10	13	
	TOTAL	*29*	*40*	*51*	*38*
Control	Bamanankan	20	20	24	24
	Bomu	6	7	8	8

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[4] SSME, a school survey developed by RTI with EdData 2 (USAID) funding. See www.eddataglobal.com for more information.

GROUP	School's LOI	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline
	Fulfulde	2	3	5	5
	Songhai	7	10	13	
	TOTAL	*35*	*40*	*50*	*37*

Teacher Survey Interview Protocol. As with the School Principal survey, an initial version of the Teacher Survey Interview Protocol was adapted for the Malian context from the SSME and applied at baseline in May/June 2009 to gather basic information on available resources in the classroom as well as teachers' background characteristics, reported practices, and points of view on teaching and learning. The instrument adaptation and refinement process, including piloting, was led by the evaluation study team in consultation with a local education research specialist. It also involved researchers selected from among those who had previously participated in EGRA data collection.

A revised survey interview protocol, incorporating items specific to the RLL program (such as regarding the delivery of RLL materials, training, and follow-up visits to RLL schools, or the equivalent in control schools), was produced and applied during the 2010 follow-up, in April 2010. The 2010 version, with modest modifications in the formulation of some questions, was again applied in March 2011. The June 2012 endline version of the instrument also incorporated a few additional questions, notably relating to RLL implementation fidelity.

Table 6 presents the number of teacher survey instruments that were collected across the years of the study.

Table 6. Teacher Surveys Administered, by Study Year, Grade Level, Treatment Group, and School's Language of Instruction

GROUP	School LOI	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline
	Version of survey:	Version A	Version B	Revised Version B	Revised Version B
GRADE 1					
RLL Treatment	Bamanankan	15	19	21	23
	Bomu	3	7	8	7
	Fulfulde	2	3	4	4
	Songhai	6	10	13	
	TOTAL	*29*	*39*	*46*	*34*
Control	Bamanankan	16	19	24	23
	Bomu	3	7	8	8
	Fulfulde	1	3	5	4
	Songhai	5	10	11	
	TOTAL	*25*	*39*	*47*	*35*
GRADE 2					
RLL Treatment	Bamanankan	11	16	24	17
	Bomu	2	4	7	5
	Fulfulde	1	3	4	4

GROUP	School LOI	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline
	Songhai	4	8	11	
	TOTAL	*18*	*31*	*46*	*26*
Control	Bamanankan	14	19	23	11
	Bomu	3	6	5	4
	Fulfulde	1	3	4	4
	Songhai	6	10	10	
	TOTAL	*24*	*38*	*42*	*29*

Relatively high rates of non-response on teacher surveys across the years posed difficulties for cross-year analyses using these data. In addition to the considerable problem of missing teacher data for 2009 (52% of expected surveys were not recovered), non-response rates reached 2.5% for Grade 1 and 14% for Grade 2 in 2010; 8% for Grade 1 and 13% for Grade 2 in 2011; and 8% for Grade 1 and 27% for Grade 2 in 2012. To conserve cases in subsequent analyses using teacher surveys, therefore, where a teacher's data were missing for a given grade level in a given school, data for the other grade level, if available, were substituted. Teacher surveys were also administered to Grade 3 teachers in 2009, 2011, and 2012; however response rates were even lower, thus those data are not used in any analyses presented here.

Classroom Observation Protocols. Classroom observation protocols were used in the first three years of the study, with some variations by study year and grade level, as shown in *Table 7*.

Table 7. Summary of Classroom Observation Protocols

INSTRUMENT	2009 Baseline	2010 Follow-up	2011 Follow-up
A. "Flash"[5] timed observation across five instructional dimensions	36 elements tracked across 15 three-minute intervals, conducted with both Grade 1 and Grade 2, (pre)RLL and control classrooms	- - -	Slight update of 2009 instrument, increased to 16 three-minute intervals, conducted with Grade 2 RLL and control classrooms only
B1. Checklist of general teaching and learning practices and classroom	- - -	Conducted in both Grade 1 and Grade 2, RLL (19 points) and control (18 points) classrooms	Conducted in both Grade 1 and Grade 2, RLL and control classrooms (18 points)
B2. Checklist of fidelity to RLL lesson-specific practices	- - -	Conducted with both Grade 1 and Grade 2, RLL (25 points) and control (20 points) classrooms	Conducted in Grade 1 RLL (30 points) and control (28 points) classrooms only

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[5] This instrument, used during the observation of a complete reading lesson, involved timed "snapshot" paper-and-pencil recording at 3-minute intervals of a series of behaviors across five dimensions (teacher focus, teacher action, student action, lesson content, and instructional material support).

INSTRUMENT	2009 Baseline	2010 Follow-up	2011 Follow-up
C. Observation register on classroom physical organization and materials available by language	- - -	- - -	Conducted in both Grade 1 and Grade 2, RLL and control classrooms (10 items)

The "Flash" observation (Instrument A) was employed with a subset of Grade 1 and Grade 2 classrooms in RLL and control schools at baseline in 2009, and again with the full Grade 2 sample during the 2011 follow-up data collection. The 2009 Flash instrument was accompanied by pre- and post-observation narrative notes against a series of questions.

Instruments B1 and B2, structured in a simpler yes-no check-list format, were used during the observation of a complete reading lesson. Instrument B1 covered observation of a variety of classroom features and good practice student and teacher behaviors, for both grade levels at 2010 and 2011 follow-up collections.

Instrument B2 provides more specific information on fidelity (or similarity in the case of control schools) with regard to the RLL-prescribed lesson sequence for first-year learners. Fidelity in this case refers to the degree to which teachers in RLL program schools followed the intervention methodology, as well as the degree to which teachers in control schools used similar methodologies. This type of instrument offers a means of confirming whether designated RLL and control groups are indeed significantly different in terms of their exposure to and practice of the RLL program, since variation in a program's impact can be due to the degree of fidelity in implementation. The initial draft of this instrument was developed by the evaluation team's reading specialist, who observed both RLL and control school classrooms and consulted with IEP and local education researchers so that the instrument would appropriately capture key features of the instructional program. The instrument was then reviewed, piloted and finalized by researchers selected from the original EGRA researcher group. In the 2010 study year, Instrument B2 was used in both Grades 1 and 2, as both grades in that year applied the Grade 1 lesson method. In the 2011 study year, the full instrument was used with Grade 1 classrooms only.

Finally, Instrument C was developed and used in both Grades 1 and 2 at 2011 follow-up to record information about the physical layout and organization of the classroom, and the availability of books, and other reading instruction materials in the classroom by language.

While the instruments differed from one data collection year to the next, and between RLL and control groups, a core of common elements offers the opportunity to explore whether and in what respects classroom practice was different across types of schools or from one year to the next. *Table 8* below presents the number of classroom observations conducted across the years and groups of the study.

Table 8. Number of Classroom Observations Conducted, by Study Year, Grade Level, Treatment Group and School's Language of Instruction

GROUP	School LOI	2009 Baseline	2010 Follow-up	2011 Follow-up
Instrument versions:		*Instrument A (G1 & G2)*	*Instruments B1 & B2 (G1 & G2)*	*Instrument A (G2 only); Instruments B1 & C (G1 & G2); Instrument B2 (G1 only)*
GRADE 1				
RLL Treatment	Bamanankan	14	19	21
	Bomu	2	7	8
	Fulfulde	2	3	5
	Songhai	6	10	13
	TOTAL	*24*	*39*	*47*
Control	Bamanankan	17	19	24
	Bomu	4	7	7
	Fulfulde	2	3	5
	Songhai	6	10	12
	TOTAL	*29*	*39*	*48*
GRADE 2				
RLL Treatment	Bamanankan	12	16	24
	Bomu	2	4	8
	Fulfulde	2	3	5
	Songhai	5	7	12
	TOTAL	*21*	*30*	*49*
Control	Bamanankan	14	19	24
	Bomu	4	6	7
	Fulfulde	2	3	5
	Songhai	6	9	13
	TOTAL	*26*	*37*	*49*

Summary. The different types and versions of data collection instruments employed over the years of the study are listed in *Table 9* below.

Table 9. Summary of Data Collection Instruments Used over the Years of the Study

TYPE OF INSTRUMENT	2009 Baseline	2010 Follow-up	2011 Follow-up	2012 Endline
Student EGRA with survey	Yes	Yes	- - -	Yes
School principal survey	Version A	Version B	Revised Version B	Revised Version B
Teacher survey	Version A	Version B	Revised Version B	Revised Version B
Classroom observations	Instrument A (G1 & G2)	Instruments B1 and B2 (G1 & G2)	Instrument A (G2 only); Instruments B1 & C (G1 & G2); Instrument B2 (G1 only)	- - -

It should be noted that during the 2009 baseline year, data collection errors led to unexpectedly low numbers of school principal surveys (64 total, or 63% of expected surveys), teacher surveys (91, or 47% of expected), and classroom observations (100, or 49.5% of expected) completed. These errors seriously reduced the power of analyses using these sources for the baseline year, and between baseline and subsequent years. Thus, in the analyses that follow, the 2010 and 2011 follow-up collections and the 2012 endline collection are the principal sources for analyses of teacher and principal surveys and classroom observation (2010 and 2011 only) protocols. Student EGRA performance data are available from 2009 baseline, 2010 follow-up, and 2012 endline data collections, and for these, proportions of recuperated instruments relative to expected were quite satisfactory. Baseline classroom observation and survey material are used to provide illustrative though not statistically robust information for our purposes.

F.   *Complementary studies*

In the 2011 follow-up year, two additional studies were introduced as part of the overall evaluation to provide complementary qualitative information on the context and process of reading instruction in Malian classrooms and information on the cost of implementing key RLL intervention elements.

1.   **Qualitative study of nine schools**

In March-June 2011, an anthropologist was engaged by the study team, assisted by the Malian study team coordinator, to conduct a qualitative case study to help contextualize the results of students' EGRA performance and the information gathered through structured surveys and observations and to more deeply investigate the environmental factors, instructional practices, and other processes that might underlie those results (Diallo, 2011).

The qualitative study focused on Grade 1 and 2 classrooms in nine schools, including five of the best performing schools and four of the worst performing schools in the overall study sample, based on their 2010 EGRA results. This sample included six RLL schools and three control schools. The case study analysis examined teacher practices and experiences and the viewpoints of multiple stakeholders involved with students, as well as students themselves. In each school, classroom observations were undertaken and interviews were held with parents, students, teachers, and school directors. In addition,

interviews were held with CAP officials, other personnel from the Ministry of Education, IEP staff members, and representatives from civil society. Overall, the qualitative study involved 84 respondents and 13 classrooms in the CAPs of Kati, Segou, and Tominian. The key findings and conclusions of this study are provided in Diallo and Diawara (2011), and Diallo, Ralaingita, and Diawara (2012).

2.   Analysis of RLL program costs

As the Institute looked toward extension of the approach and capacity transfer to other implementers and settings within Mali, during 2011the study team also embarked on systematic collection of cost information in an effort to produce sound estimates of these costs and to offer decision tools and recommendations to IEP going forward. Data relating to three key RLL program elements were collected from IEP technical and financial management staff and records:

- Educator preparation and subsequent structured pedagogical support and monitoring visits to RLL schools and teachers;
- Development and local production of national-language readers and other RLL-based instructional materials in the volume and specifications required, and their provision to RLL schools, with consideration of economies of scale; and
- Mobilization of local actors beyond the school in RLL support networks and service roles.

The study team developed, tested, and with IEP management adapted a series of worksheets to gather information on inputs and expenditures for each program element. These worksheets were then applied with varying degrees of success with IEP and with three other institutions / projects (USAID/PHARE, SAVE, and UNICEF) for comparative purposes; access to financial reporting was not always readily forthcoming, and even with access obtained, reporting formats were found to have varying levels of detail that were often also inadequate to determine or estimate unit costs, thereby impeding straightforward recording in the worksheets.

The results of this study are available in Spratt and Diawara (forthcoming).

III. Students' Reading Performance in RLL Program and Control Schools at Baseline and Endline

This section presents an analysis of RLL treatment effects at endline on each EGRA subtask relative to baseline. Straightforward differences observed between RLL and control schools at baseline and at endline are first established, followed by difference-in-differences analysis and calculation of overall effect size. Results are shown by grade level, overall, and by gender.

Given the limitations of the endline sample, the analyses presented here exclude Songhai-language schools from both baseline and endline and the data have been re-weighted according to the remaining three language groups. Among the remaining schools, there were also schools in which a given grade level was found at endline to no longer be using the national language as language of instruction. In such cases, student reading performance scores in that grade level for that school concerned were also excluded from analysis for both baseline and endline. Thus, the baseline means and other statistics shown below will differ from those presented in earlier reports.

Because of the now reduced number of Other-language schools (only 13 in each treatment group), it was also not possible to examine patterns separately for Bamanankan and Other language groups, which had been found in 2010 to show some divergent behaviors.[6] Instead, specific language group differences are examined as covariates in multiple regression models presented at the end of this section.

A.   *Students' performance on initial sound identification*

The capacity to recognize and identify the initial sounds of spoken words is a useful measure of children's phonemic awareness, and it is viewed in the RLL approach as an important foundational skill for learning to read. The results obtained on this EGRA subtask are summarized graphically by Grade level (*Figure 1*), overall and by gender (*Figure 2*). In these box plots, mean values for each group are also shown, as diamond-shaped points.

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[6] See Friedman, Gerard & Ralaingita, 2010, and Spratt & Ralaingita, 2012, for discussion of differences in patterns of performance and RLL treatment effect across Bamanankan and Other language groups.

Figure 1. Boxplots and Mean Scores on Initial Sound Identification Subtask at Baseline and Endline, by Grade Level
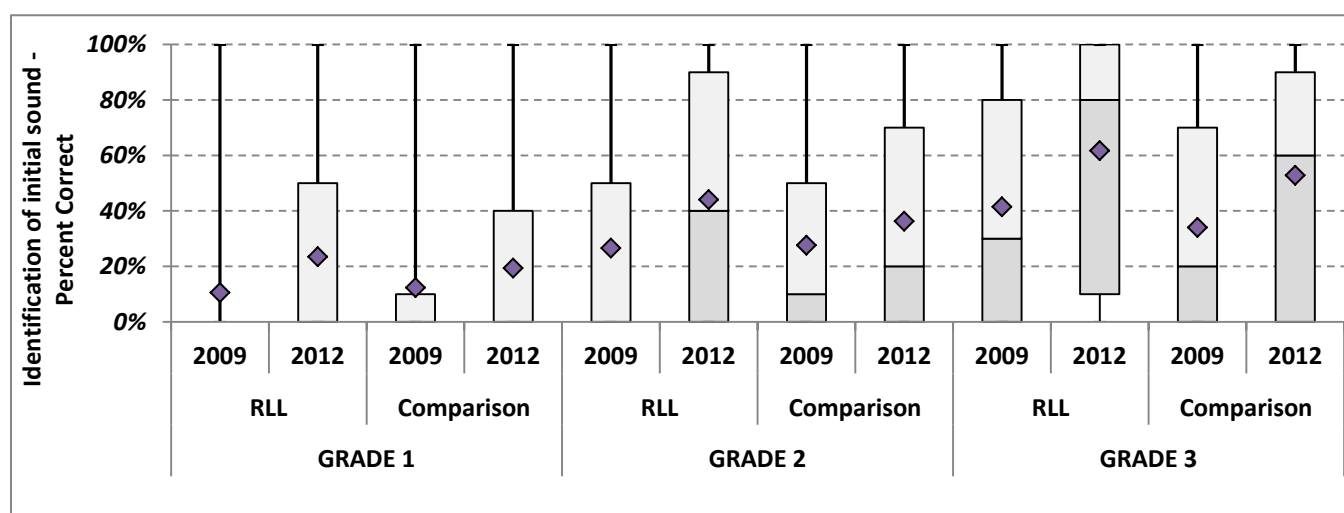
Figure 2. Boxplots and Mean Scores on Initial Sound Identification Subtask at Baseline and Endline, Overall and by Gender
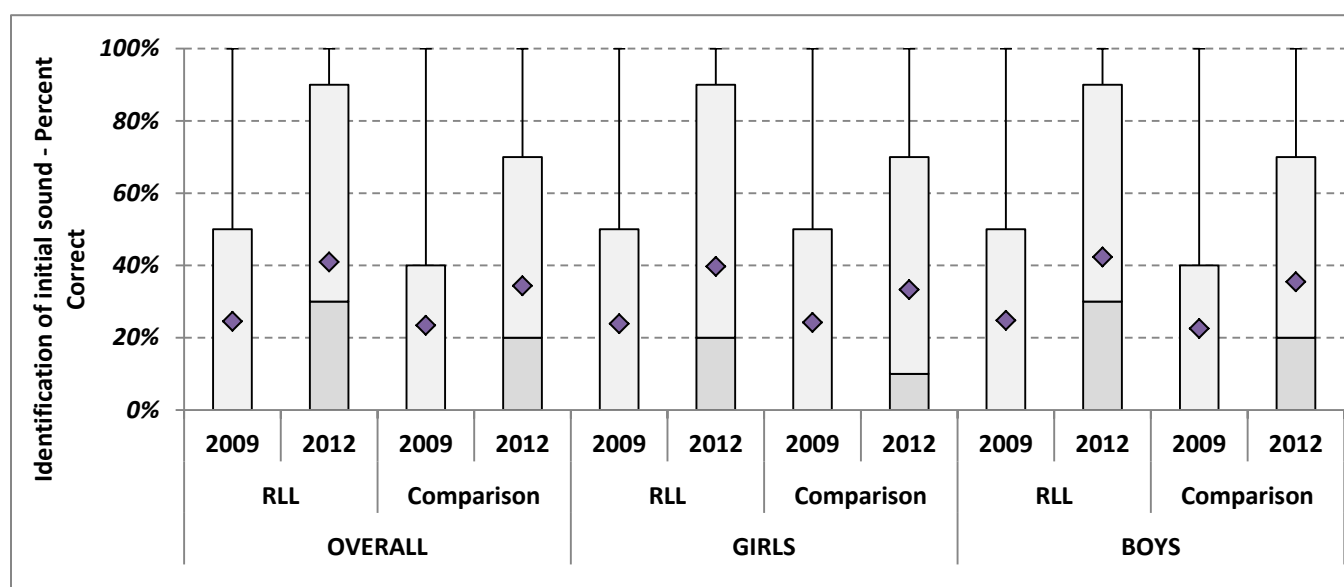
Of initial note are the modest scores overall. Only by Grade 3 do mean scores for children in any group surpass 50% correct on this measure of fundamental skills, and then only at endline. Also, while these differences were not tested for statistical significance, it appears that over time group means increased, both from baseline to endline and from one grade to the next, as would be expected. Similarly, both boys' and girls' means appear to increase from baseline to endline. Whether these patterns are significant, and whether they indicate an effect of the RLL treatment, are explored in *Table 10* (by grade) and in *Table 11* (overall and by gender).

Table 10. Baseline-Endline Results on Initial Sound Identification Subtask, by Grade

INITIAL SOUND IDENTIFICATION	Grade 1		Grade 2		Grade 3	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	624	597	669	551	494	484
Control Sample Student n	613	615	520	423	432	401
RLL Sample Mean	.105	.234	.272	.437	0.417	.615
Control Sample Mean	.123	.194	.271	.355	0.333	.517
Difference in Differences	0.058	trend	0.081	n.s.	0.013	n.s.
Baseline-Endline ES	0.210		0.207		0.033	
Baseline-Endline SD	0.278		0.390		0.400	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p < .01$; * = $p < .05$; "trend" = $p < 0.10$; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control school performance from baseline to endline.

While means are quite low, particularly in Grades 1 and 2, students at higher grade levels in both RLL and control groups consistently scored higher than those in lower grades, particularly at baseline. Difference-in-differences analysis reached only trend level significance for Grade 1 (with a low-moderate effect size of 0.21), indicating that the growth from baseline to endline demonstrated by RLL students was marginally greater than the growth demonstrated by control sample students. Difference-in-differences analyses for Grades 2 and 3 and baseline-to-endline effect sizes for all grades were non-significant.

Turning to results overall and by gender, *Table 11* indicates similarly that differences in initial sound identification were generally non-significant, though with a trend-level advantage for RLL-schooled girls over their control group counterparts.

Table 11. Baseline-Endline Results on Initial Sound Identification Subtask, Overall and by Gender

INITIAL SOUND IDENTIFICATION	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1632	921	798	823	768
Control Sample Student n	1565	1439	747	705	765	779
RLL Sample Mean	.248	.408	.242	.391	.252	.427
Control Sample Mean	.231	.338	.238	.324	.222	.353
Difference in Differences	0.052 n.s.		0.064 trend		0.045 n.s.	
Baseline-Endline ES	0.140		0.172		0.118	
Baseline-Endline SD	0.375		0.371		0.380	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

These results suggest that with regard to phonemic awareness (as measured by initial sound identification), prerequisite for the development of reading skills, the RLL program did not make a discernible difference in students' performance over time relative to a control group overall, although there is modest evidence for a positive RLL contribution to this skill among Grade 1 students and among girls.

B.   *Students' performance on listening comprehension*

The aim of the listening comprehension subtask was to establish or confirm the child's basic oral comprehension of the language used in classrooms to teach reading. This subtask consisted of a short story, which the evaluator read aloud to the child in the school's language of instruction, followed by seven comprehension questions that were posed orally to the child with the child asked to respond orally. A priori, RLL and control school students were expected to perform similarly on this task over time, as no "reading skills" per se were involved.

Box plots and mean scores on the listening comprehension subtask at baseline and endline, presented below by grade (*Figure 3*), overall and by gender (*Figure 4*), generally confirm this expectation.

Figure 3. Boxplots and Mean Scores on Listening Comprehension Subtask at Baseline and Endline, by Grade
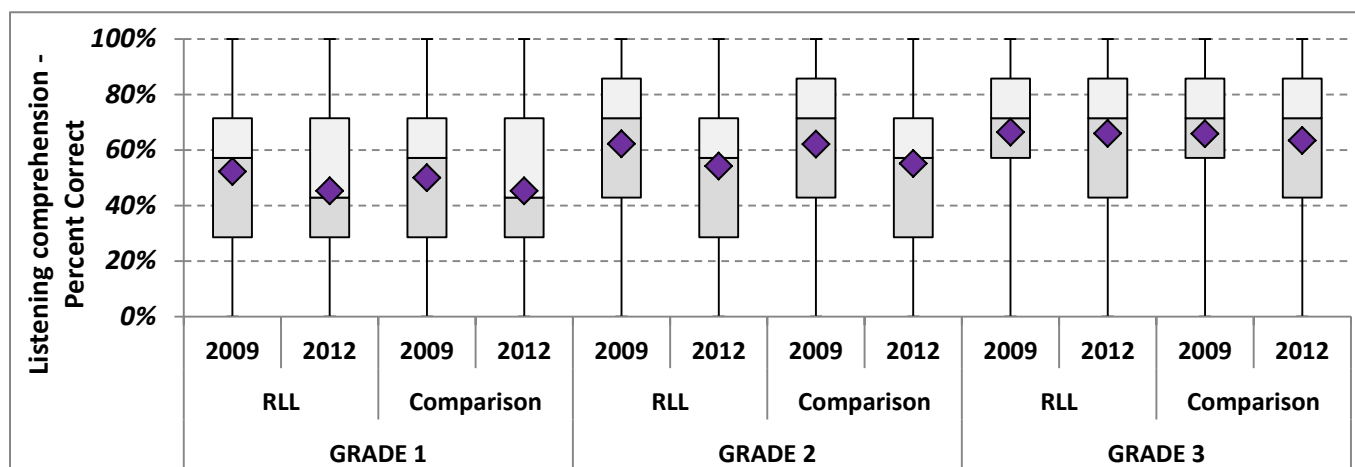
Figure 4. Boxplots and Mean Scores on Listening Comprehension Subtask at Baseline and Endline, Overall and by Gender
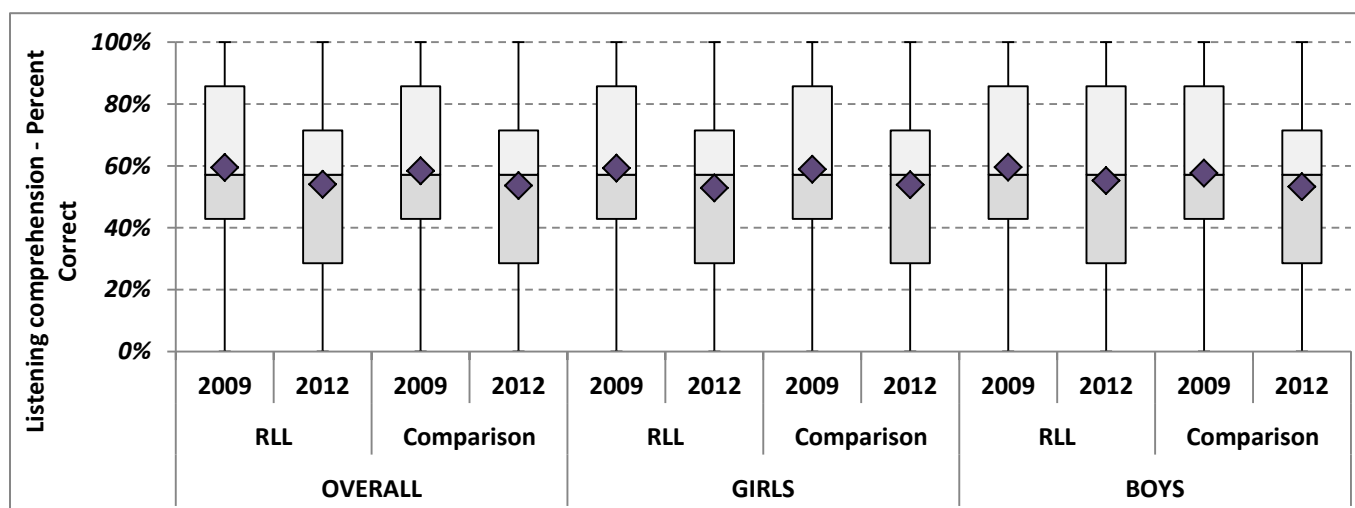
In *Figure 3* and *Figure 4*, across all grades and overall, scores appear to be lower at endline than at baseline. This pattern appears to be unrelated to the RLL treatment, however, as it is observed in both RLL and control groups. While efforts had been taken to establish equivalent difficulty of the forms of each task administered across years, this pattern suggests that the endline listening comprehension task was a more difficult task. Because our inferential analyses employ techniques that focus on the relative change over time across treatment and control groups rather than absolute changes, the possible effect of variation in the difficulty of a given measure across years is controlled. However, it is not possible to make inferences about absolute changes in skill level on this task, without additional calibrations and controls.

The evident lack of RLL treatment-control differences in children's listening comprehension skills is confirmed in the following tables of analytical results by grade (*Table 1*2), overall and by gender (*Table*

13). As shown in these tables, difference-in-differences analyses on this task were non-significant by grade, overall, or by gender.

Table 12. Baseline-Endline Results on Listening Comprehension Subtask, by Grade

LISTENING COMPREHENSION	Grade 1		Grade 2		Grade 3	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	624	597	669	551	494	484
Control Sample Student n	613	615	520	420	432	400
RLL Sample Mean	.522	.453	.614	.552	0.641	.667
Control Sample Mean	.500	.453	.612	.561	0.636	.645
Difference in Differences	-0.022	n.s.	-0.012	n.s.	0.017	n.s.
Baseline-Endline ES	-0.078		-0.041		0.063	
Baseline-Endline SD	0.286		0.291		0.265	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

Table 13. Baseline-Endline Results on Listening Comprehension Subtask, Overall and by Gender

LISTENING COMPREHENSION	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1632	838	831	921	799
Control Sample Student n	1565	1435	801	729	747	703
RLL Sample Mean	.586	.546	.585	.531	.586	.562
Control Sample Mean	.575	.543	.577	.544	.570	.541
Difference in Differences	-0.008 n.s.		-0.020 n.s.		0.005 n.s.	
Baseline-Endline ES	-0.027		-.070		0.016	
Baseline-Endline SD	0.290		0.287		0.294	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control performance from baseline to endline.

As indicated earlier, these results are as expected, given that the RLL program did not specifically endeavor to improve children's listening or other oral language skills. The non-significance of differences on listening comprehension, rather, helps us to rule out spoken language ability as a contributor to reading differences observed across RLL and control sample students.

C. *Students' performance on letter recognition*

Familiarity with the names and sounds of written letters is a critical building block for reading in alphabetic languages. As indicated in the figures below, RLL students' performance on the letter recognition subtask appears to have increased from baseline to endline for all three grades (***Figure 5***), overall and for both genders (***Figure 6***). On the other hand, control-group mean scores actually decreased over time in all grades, and for both boys and girls; this is most notable at Grade 2 (a decrease of 16% from baseline to endline).

Figure 5. Box Plots and Mean Scores on Letter Recognition at Baseline and Endline, by Grade
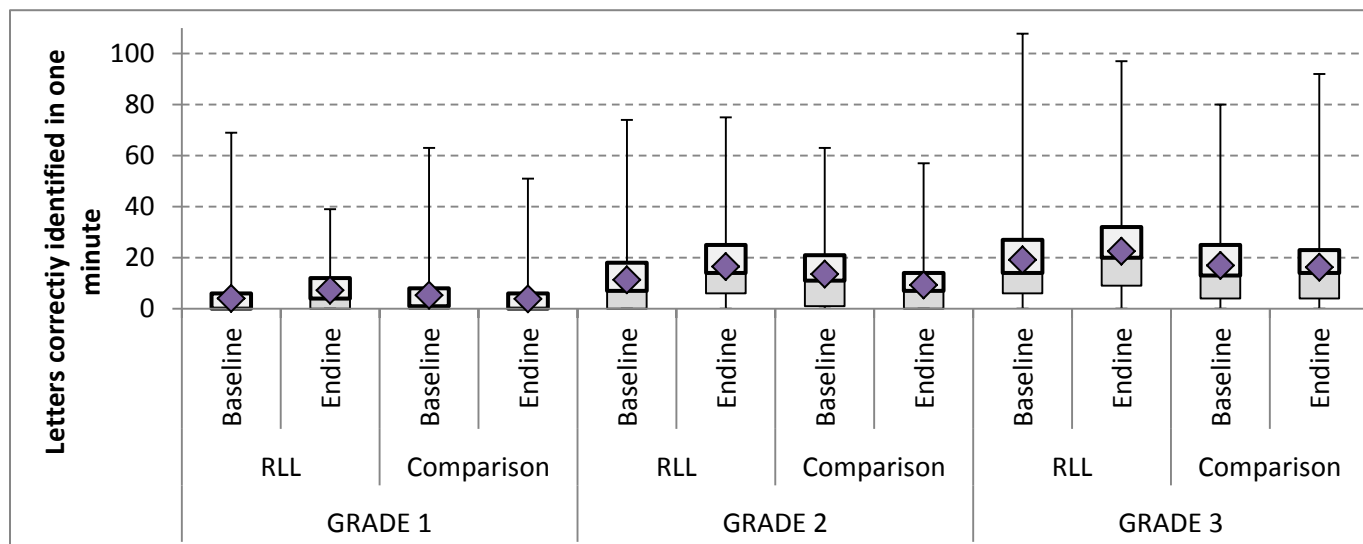
Figure 6. Box Plots and Mean Scores on Letter Recognition Subtask at Baseline and Endline, Overall and by Gender
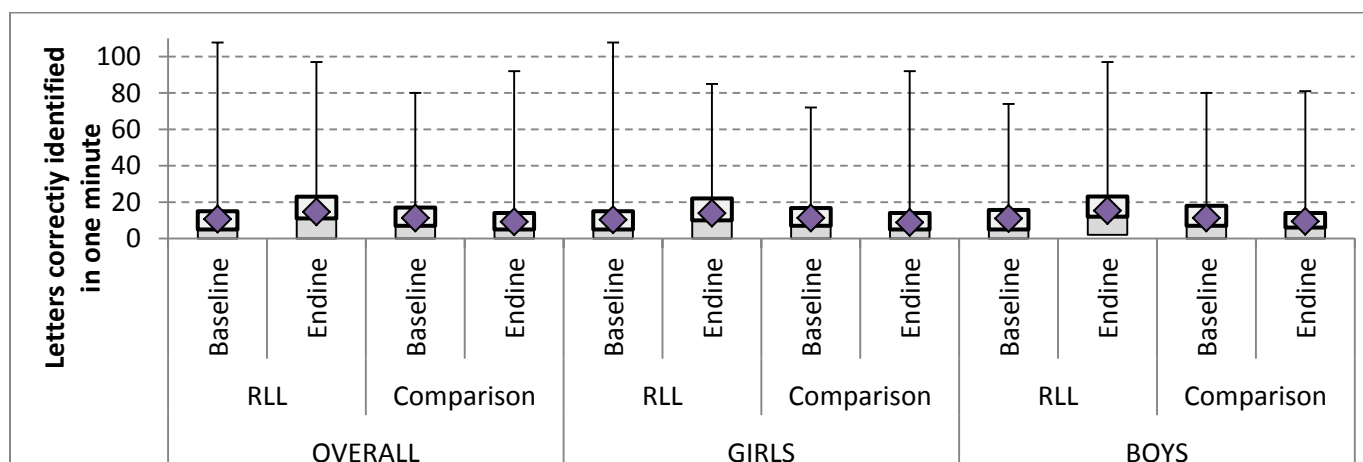
It should be noted that in general performance on this task was quite weak, with even Grade 3 students unable to correctly identify more than 20 letters in a minute on average at baseline, or more than 22 letters in a minute at endline. The shape of the distribution of scores on this task at endline by grade

shows that while performance is clearly better moving from Grade 1 to Grade 3 for both RLL and control groups, the slope is generally steeper for the RLL groups.

As shown in *Table 14*, significant differences emerge by grade. Difference-in-differences analyses show that in both Grades 1 and 2, the growth observed in the RLL student means from baseline to endline surpassed that of control sample student means, with large baseline-to-endline effect sizes of 0.59 and 0.66, respectively. Scores overall on this subtask were highest at Grade 3, however difference-in-differences scores between RLL and control groups were non-significant.

Table 14. Baseline-Endline Results on Letter Recognition Subtask, by Grade

LETTERS CORRECTLY IDENTIFIED IN ONE MINUTE	Grade 1		Grade 2		Grade 3	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	624	597	669	551	494	484
Control Sample Student n	613	616	520	424	432	400
RLL Sample Mean	4.059	7.242	11.574	16.450	19.428	22.735
Control Sample Mean	5.301	3.871	13.003	8.881	16.206	16.427
Difference in Differences	4.614	***	8.998	***	3.086	n.s.
Baseline-Endline ES	0.594		0.664		0.180	
Baseline-Endline SD	7.764		13.552		17.167	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p<.01$; * = $p<.05$; "trend" = $p < 0.10$; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

The results presented in *Table 15* (overall and by gender) show highly significant difference-in-differences scores overall and for each gender, with moderate effect sizes in the 0.40 range for each group, indicating a general advantage of RLL participation for the development of this skill, regardless of a child's gender.

Table 15. Baseline-Endline Results on Letter Recognition, Overall and by Gender

LETTERS CORRECTLY IDENTIFIED IN ONE MINUTE	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1632	838	832	921	798
Control Sample Student n	1565	1440	801	733	747	704
RLL Sample Mean	10.872	14.631	10.410	13.797	11.287	15.540
Control Sample Mean	10.891	9.076	10.779	8.634	11.015	9.529
Difference in Differences	5.574	***	5.532	***	5.739	***
Baseline-Endline ES	0.396		0.403		0.398	
Baseline-Endline SD	14.079		13.738		14.419	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p<.01$; * = $p<.05$; "trend" = $p < 0.10$; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

Taken as a whole, the results indicate that the RLL program substantially supports development of letter identification skills among early grade learners, although by Grade 3 this "RLL advantage" is attenuated. Children's skills on this task were still quite low by endline, however, even in the highest-scoring RLL group.

D. *Students' performance on familiar word reading*

The familiar word reading fluency subtask was the first task administered to students that assessed their ability to identify written units of speech larger than individual letters. This task required students to quickly identify words taken from the national language Government student books for Grades 1 and 2, as a measure of students' automaticity in reading words that they already know (or could be expected to know).

Figure 7. Box Plots and Mean Scores on Familiar Word Reading Subtask at Baseline and Endline, by Grade
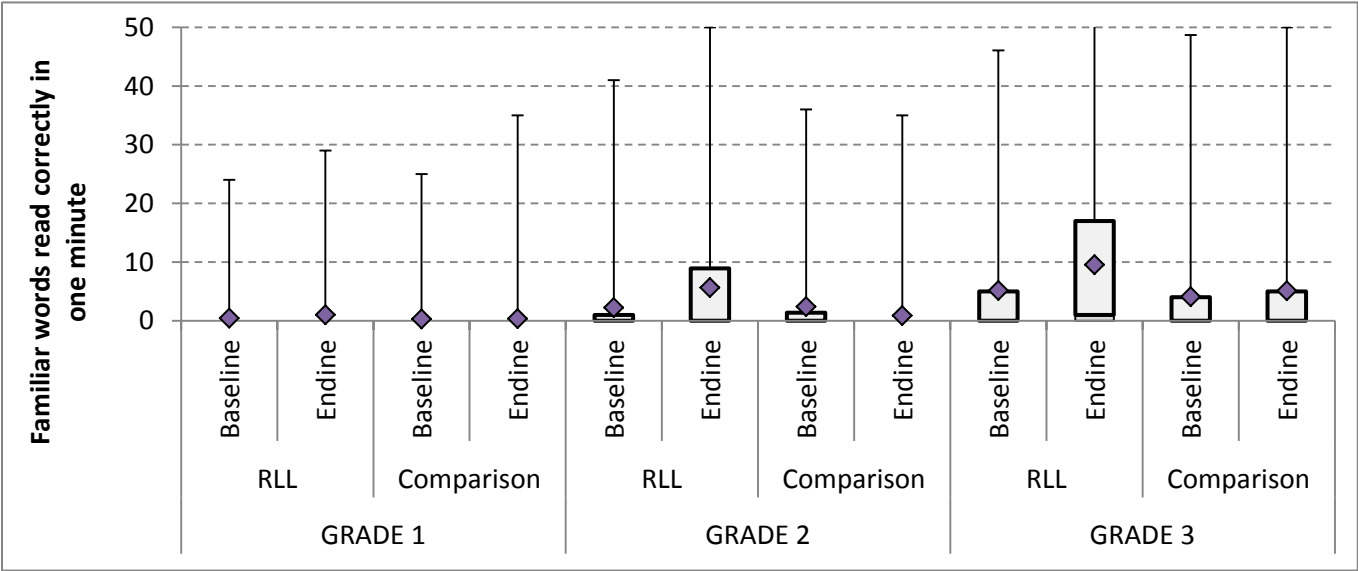
As displayed in *Figure 7*, grade-specific scores from baseline to endline appear to have increased for RLL students, notably in Grade 2 and Grade 3. RLL students' scores at both baseline and endline for each grade were also higher than for the grade(s) below it, showing an expected progression by grade level. This grade-by-grade progression was much less evident for control sample students, however.

Figure 8. Box Plots and Mean Scores on Familiar Word Reading Subtask at Baseline and Endline, Overall and by Gender
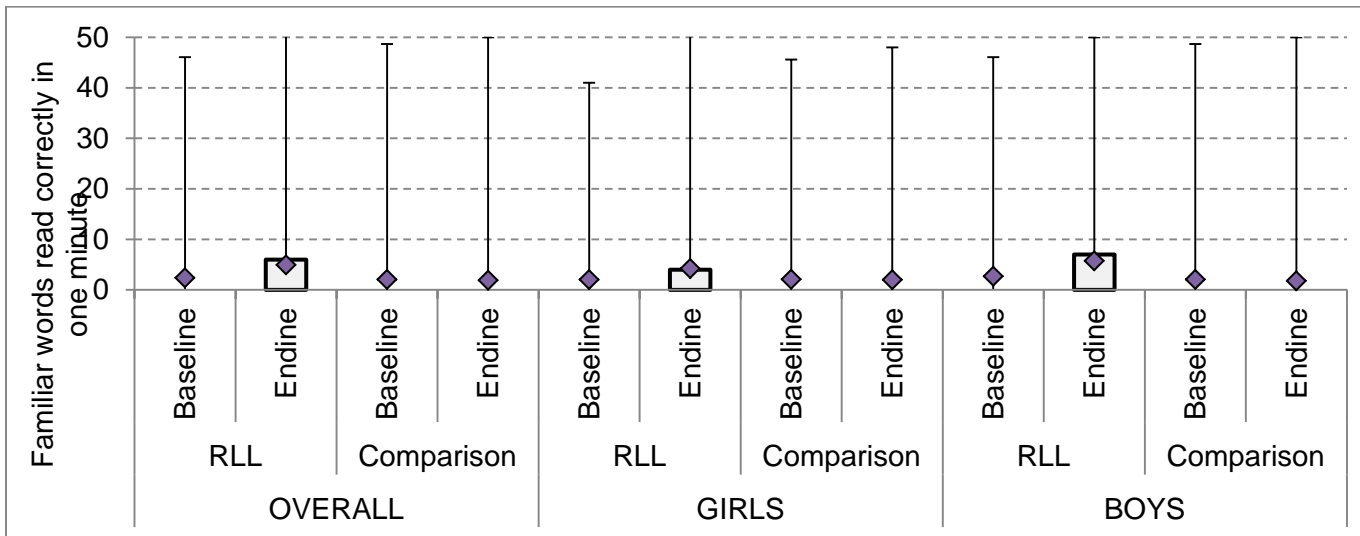
Overall and by gender (*Figure 8*), RLL group means similarly increased in all cases, whereas Control group means did not change perceptibly from baseline to endline.

Table 16 (by grade) and in *Table 17* (overall and by gender) explore whether these patterns indicate an effect of the RLL treatment.

Table 16. Baseline-Endline Results on Familiar Word Reading Subtask, by Grade

FAMILIAR WORDS READ CORRECTLY IN ONE MINUTE	Grade 1		Grade 2		Grade 3	
	Baseline	**Endline**	**Baseline**	**Endline**	**Baseline**	**Endline**
RLL Sample Student n	624	598	669	551	494	484
Control Sample Student n	613	616	520	424	432	401
RLL Sample Mean	.450	1.004	2.268	5.442	5.141	9.226
Control Sample Mean	.319	.370	2.153	.812	3.754	5.143
Difference in Differences	0.503	n.s.	4.514	***	2.696	n.s.
Baseline-Endline ES	0.207		0.672		0.260	
Baseline-Endline SD	2.432		6.722		10.358	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p<.01$; * = $p<.05$; "trend" = $p < 0.10$; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

As displayed in *Table 16,* the growth from baseline to endline among RLL Grade 2 students was significantly greater than that among control sample students, as evidenced by the statistically significant Grade 2 difference-in-differences score, supporting the hypothesis of a positive impact of the RLL program on students' skills in reading familiar words at Grade 2. The large (0.67) effect size for

Grade 2, furthermore, indicates a sizeable RLL advantage at this grade. Difference-in-differences scores for Grades 1 and 3, however, were not significant, with effect sizes falling in the small-to-moderate range (0.20 and 0.26, respectively).

When comparing student performance overall and for each gender (***Table 17***), the difference-in-differences results and moderate effect sizes indicate that mean scores for all RLL groups improved relative to those of their control group counterparts, supporting a positive and moderately substantial RLL treatment effect overall and irrespective of gender.

Table 17. Baseline-Endline Results on Familiar Word Reading Subtask, Overall and by Gender

FAMILIAR WORDS READ CORRECTLY IN ONE MINUTE	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1633	751	828	823	769
Control Sample Student n	1565	1441	815	818	765	779
RLL Sample Mean	2.378	4.779	1.962	3.979	2.767	5.651
Control Sample Mean	1.891	1.884	1.881	1.960	1.897	1.802
Difference in Differences	2.408	***	1.939	**	2.978	***
Baseline-Endline ES	0.334		0.299		0.377	
Baseline-Endline SD	7.215		6.493		7.897	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

At the same time, across both RLL and control groups, the distribution of results indicates that most students, even in Grade 3, were not able to read familiar words at a fluent pace (see ***Figure 9***).

Figure 9. Distribution of Endline Scores on Familiar Words Read Correctly in One Minute, by Grade
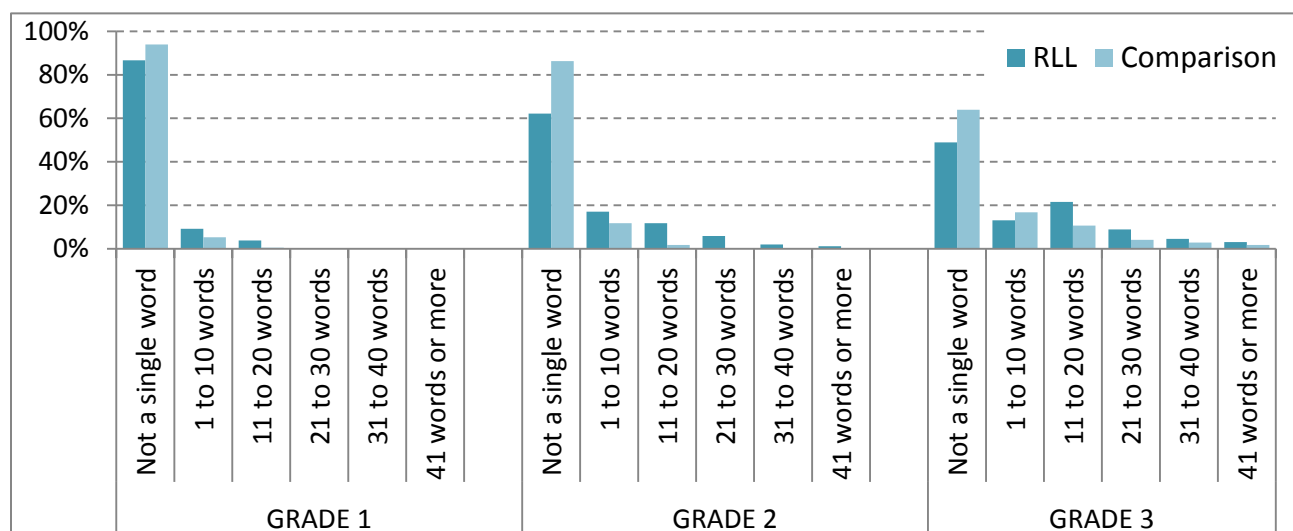
Even at endline, with the single exception of Grade 3 RLL students, the majority of students in both RLL and control groups was unable to read even one word correctly, although the range of skill was considerable (from 0 to over 50 words, shown here and in the box plots above), such that the RLL overall mean score reached 6 words per minute, and 9 words among RLL Grade 3 students.

In short, while children's letter-level skills (previous section) appear to have benefitted from RLL exposure as soon as Grade 1 as well as in Grade 2, an "RLL advantage" at the written word level emerges only by second grade. As found for letter-level skills, children's word-level skills are nonetheless low overall, in all grade levels.

E.   Students' performance on invented word reading

EGRA's invented word reading subtask was designed to be a "pure" measure of children's word decoding skills, uncontaminated by sight vocabulary that may already be known to the child. The "invented" words for this subtask used common spelling patterns of the written language being studied. They can be pronounced using decoding knowledge and skills, but are not themselves actual words that the child may have encountered before.

The following box plots present mean score results of RLL and control groups on the invented word reading subtask, at baseline and endline, by grade (***Figure 10***), overall and by gender (***Figure 11***).

Figure 10. Box Plots and Mean Scores on Invented Word Reading Subtask at Baseline and Endline, by Grade
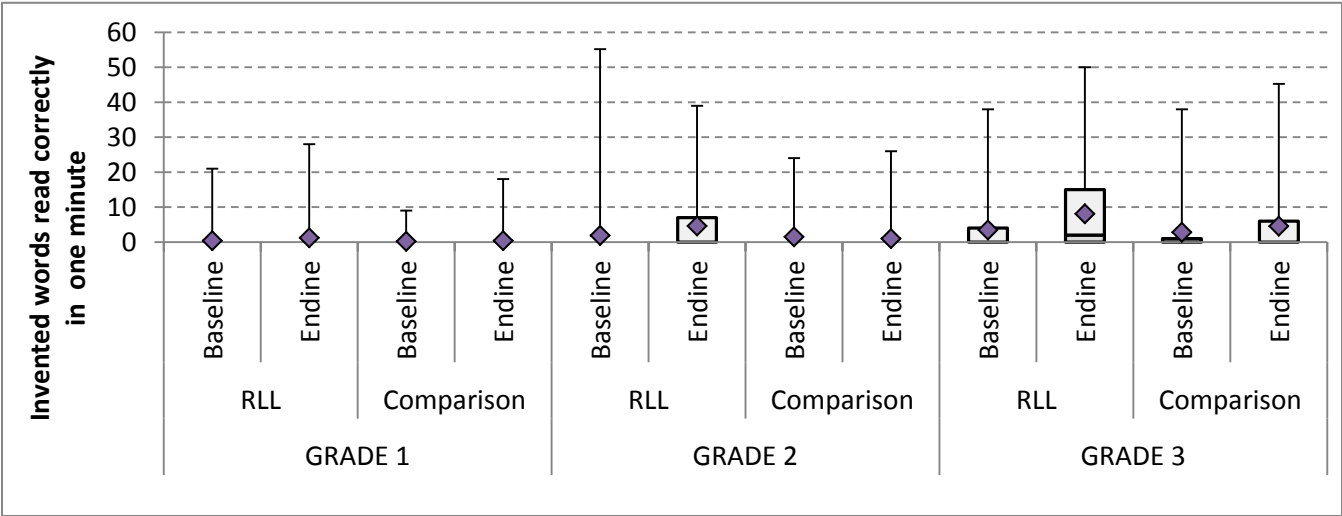
Figure 11. Box Plots and Mean Scores on Invented Word Reading Subtask at Baseline and Endline, Overall and by Gender
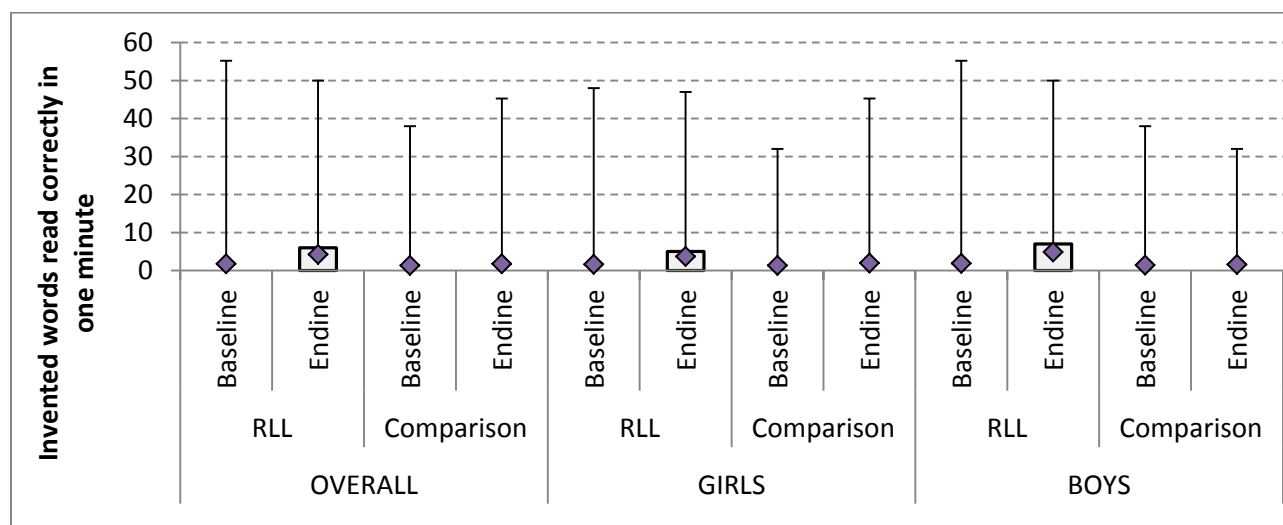
As displayed in Figure 10, taking each grade separately, Grade 1 appears to show little improvement over time for either RLL or control groups, and a similar pattern is evident for the Grade 2 control group. Grade 2 and Grade 3 RLL group means appear to improve from baseline to endline, as does the Grade 3 control group mean. Overall and for each gender (*Figure 11*), the pattern of slight improvement from baseline to endline in the RLL groups, and flatline for the control groups, would also suggest a positive effect of the RLL program.

Table 18 (by grade) and *Table 19* (overall and by gender) provide the statistics underlying these figures.

Table 18. Baseline-Endline Results on Invented Word Reading, by Grade

INVENTED WORDS READ CORRECTLY IN ONE MINUTE	Grade 1		Grade 2		Grade 3	
	Baseline	**Endline**	**Baseline**	**Endline**	**Baseline**	**Endline**
RLL Sample Student n	624	597	669	551	494	483
Control Sample Student n	613	616	520	424	432	401
RLL Sample Mean	.394	1.197	1.870	4.357	3.453	7.611
Control Sample Mean	.199	.382	1.332	.865	2.589	4.424
Difference in Differences	0.618	*	2.954	***	2.323	trend
Baseline-Endline ES	0.274		0.524		0.285	
Baseline-Endline SD	2.253		5.641		8.138	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

As displayed in *Table 18*, difference-in-differences scores between RLL and control groups were statistically significant for Grades 1 and 2, and significant at the trend level for Grade 3. Effect sizes were moderate for Grade 1 (0.27), large for Grade 2 (0.52), and again moderate for Grade 3 (0.29). These results indicate a positive and substantial impact of the RLL program on developing children's word decoding skills.

Statistics overall and by gender (*Table 19*) also showed significant improvement in scores among RLL students relative to their control group counterparts in all cases, and especially among boys.

Table 19. Baseline-Endline Results on Invented Word Reading, Overall and by Gender

INVENTED WORDS READ CORRECTLY IN ONE MINUTE	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1631	838	831	921	798
Control Sample Student n	1565	1441	801	733	747	705
RLL Sample Mean	1.744	4.045	1.588	3.405	1.904	4.740
Control Sample Mean	1.247	1.699	1.205	1.856	1.302	1.532
Difference in Differences	1.849	***	1.165	*	2.606	***
Baseline-Endline ES	0.320		0.219		0.418	
Baseline-Endline SD	5.776		5.310		6.240	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

In summary, a positive RLL treatment effect is evident when looking at all groups together, for all grade levels, and for both genders, although it is strongest for Grade 2 and among boys. The apparent positive impact of the RLL program on this skill is promising, as the ability to decode, and thereby to access unfamiliar words, is an essential skill in mastering reading

Still, as with identification of familiar words, sizeable proportions of students in both RLL and control schools were unable to correctly read a single invented word, even at endline. Zero scores on this task were obtained by 68% of RLL students (including 51% of third graders) and 84% of control sample students (including 69% of third graders) at endline.

F. *Students' performance on oral reading fluency with connected text*

While the EGRA subtasks presented up to this point were designed to measure essential foundational reading skills, the oral reading fluency subtask directly measures the child's ability to read connected text. For this subtask, students are asked to read aloud a short passage and then to answer a series of direct-recall and inferential comprehension questions that are read to them by an assessor. Resulting scores include a fluency score (the number of words read correctly in one minute) and a comprehension score (the percentage of comprehension questions correctly answered).

Figure 12 (by grade) and *Figure 13* (overall and by gender) present mean ORF score results of RLL and control groups at baseline and endline. Comprehension score results are presented in the next sub-section of this report.

Figure 12. Box Plots and Mean Scores on Oral Reading Fluency Subtask at Baseline and Endline, by Grade
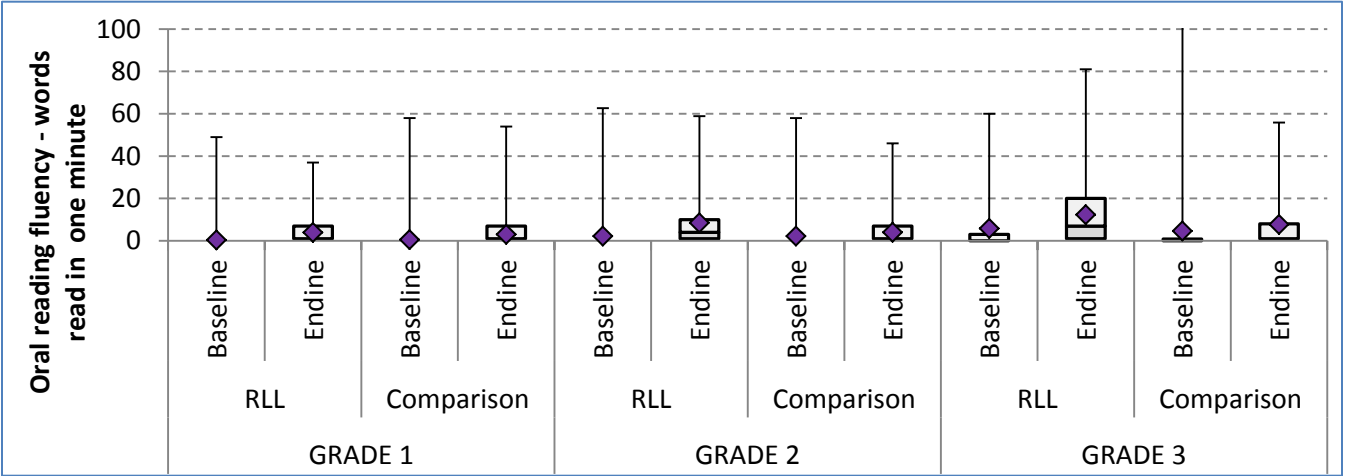
Figure 13. Box Plots and Mean Scores on Oral Reading Fluency Subtask at Baseline and Endline, Overall and by Gender
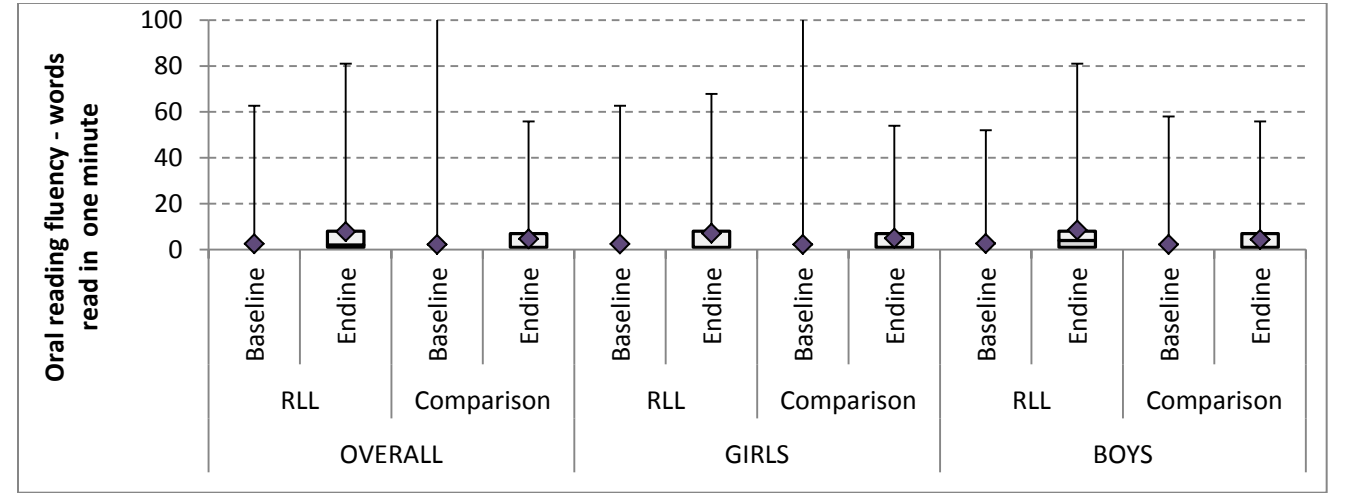
As displayed in *Figure 12* and *Figure 13*, both RLL and control groups appear to improve on oral reading ability from baseline to endline. While each pair of subgroups performs comparably at baseline, there appears to be greater growth among RLL students particularly at Grade 2 and for boys, with superior RLL group performance over time overall.

Table 20 and *Table 21* (overall and by gender) present statistical confirmation of these apparent trends. By grade level (*Table 20*), difference in differences between treatment groups was significant at the trend level for Grade 1, with a modest effect size (0.23), and highly significant at Grade 2 (moderate to

large effect size of 0.42). However at Grade 3, difference in differences indicated no RLL treatment effect.

Table 20. Baseline-Endline Results on Oral Reading Fluency, by Grade

| ORAL READING FLUENCY (Words in connected text read correctly in one minute)	Grade 1		Grade 2		Grade 3	
	Baseline	**Endline**	**Baseline**	**Endline**	**Baseline**	**Endline**
RLL Sample Student n	624	598	669	551	494	484
Control Sample Student n	613	616	520	424	432	401
RLL Sample Mean	.387	3.876	2.117	7.804	5.475	10.971
Control Sample Mean	.482	2.997	1.910	3.962	3.994	7.361
Difference in Differences	0.974	trend	3.635	***	2.129	n.s.
Baseline-Endline ES	0.232		0.421		0.172	
Baseline-Endline SD	4.190		8.626		12.361	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 control schools for Grade 1; 34 RLL and 26 control schools for Grade 2; and 29 RLL and 25 control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

Overall (*Table 21*), growth observed over time in the RLL group was significantly greater than that observed in the control group, with a moderate effect size (0.25). Turning to gender (also in *Table 21*), the analyses indicate only a trend-level difference-in-differences score and a small (0.015) effect size for girls. For boys, however, while both RLL and control means increased over time, the growth observed among RLL boys surpassed that of control boys, with a highly significant difference-in-differences score and a moderate effect size of 0.35.

Table 21. Baseline-Endline Results on Oral Reading Fluency, Overall and by Gender

ORAL READING FLUENCY (Words in connected text read correctly in one minute)	All grades		Girls		Boys	
	Baseline	**Endline**	**Baseline**	**Endline**	**Baseline**	**Endline**
RLL Sample Student n	1787	1633	838	832	921	799
Control Sample Student n	1565	1441	801	733	747	705
RLL Sample Mean	2.401	7.165	2.277	6.430	2.522	7.961
Control Sample Mean	1.946	4.560	1.925	4.782	1.993	4.316
Difference in Differences	2.151 ***		1.297 trend		3.117 ***	
Baseline-Endline ES	0.245		0.151		0.345	
Baseline-Endline SD	8.794		8.588		9.034	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = p < 0.001; ** = p<.01; * = p<.05; "trend" = p < 0.10; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

Thus a positive RLL effect is supported.

However, as for other reading subtasks, the scores on ORF are low overall, even at endline and for Grade 3, and their distribution displays a marked positive skew (***Figure 14***). While at baseline, over three-quarters of all students were unable to read a single word, the endline curve for all grades and both RLL and control groups has improved, shifting slightly toward the right, with most children able to read at least one word, and with RLL students showing a small advantage over control sample students in all grades. But the proportions with any solid reading skill remain few, whether in RLL or control schools.

Figure 14. Distribution of Endline Scores on Oral Reading Fluency, by Grade Level
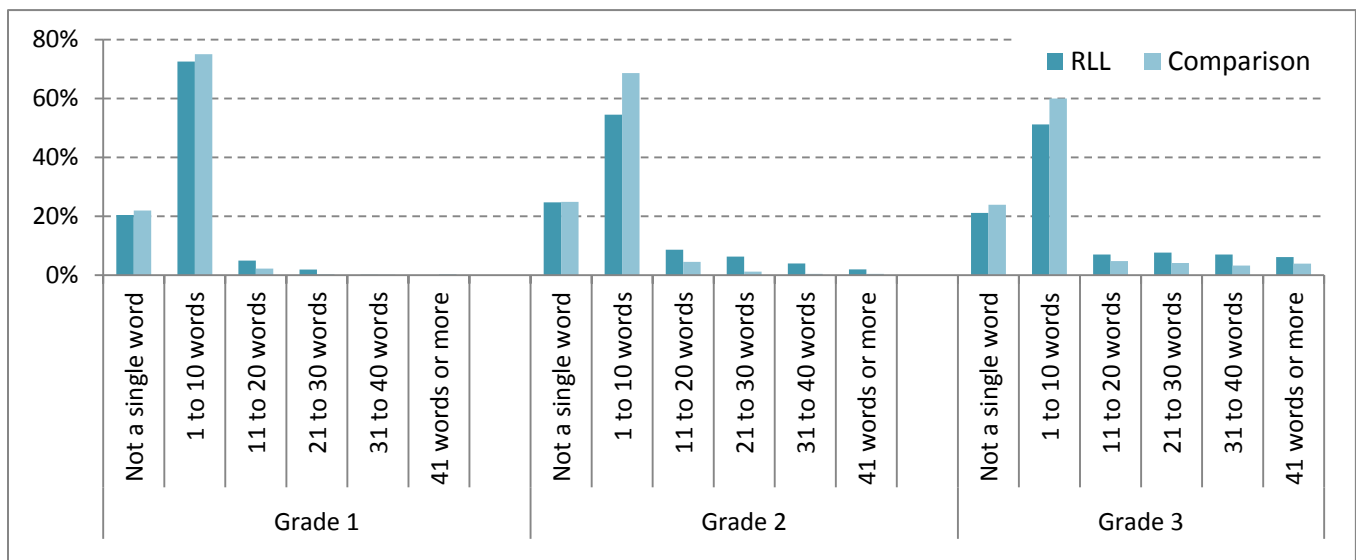
The ability to read connected text with fluency and comprehension is the ultimate goal of early grade reading instruction. These analyses suggest that over time both RLL and control sample students improved in their ability to read, as evidenced in increases in mean words read per minute as well as a dramatic decline in the proportions of student receiving zero scores on this subtask. Particularly among boys and for students in Grade 2, it appears that exposure to the RLL treatment resulted in greater gains than those experienced by the control group, although ORF performance levels remain very low for the large majority of students.

G.   *Students' performance on reading comprehension*

Are these fluency levels adequate to support reading comprehension? On the basis of her own comparative research and that of others, Helen Abadzi has stated that a minimum ORF of at least 45 words per minute is necessary "to understand a simple passage given the capacity of short-term memory" and that "this standard is possibly usable worldwide" (Abadzi, 2011, p. 7). Clearly, even the RLL third graders in this study were not, for the most part, reaching even this minimum level. At endline, fewer than 2% (1.2, 2.8; SE = 0.4) of the overall sample were able to read more than 40 words correctly within one minute.

After completing the ORF subtask, students were asked a set of questions — posed and answered verbally—as a measure of their comprehension of what they had read. A given student was only asked comprehension questions corresponding to the text s/he had read or attempted, so that the number of questions a student received depended on how far s/he had reached in the passage. The content covered by comprehension questions was fairly evenly spaced throughout the story.

As we have seen, the large majority of students were unable to read more than a few words in one minute. Correspondingly, the number of questions administered, even at endline, was also quite low for most students. *Figure 15* provides a visual summary of the results for reading comprehension at endline, by grade level.

Figure 15. Distribution of Endline Responses on Reading Comprehension Questions Administered, by Grade
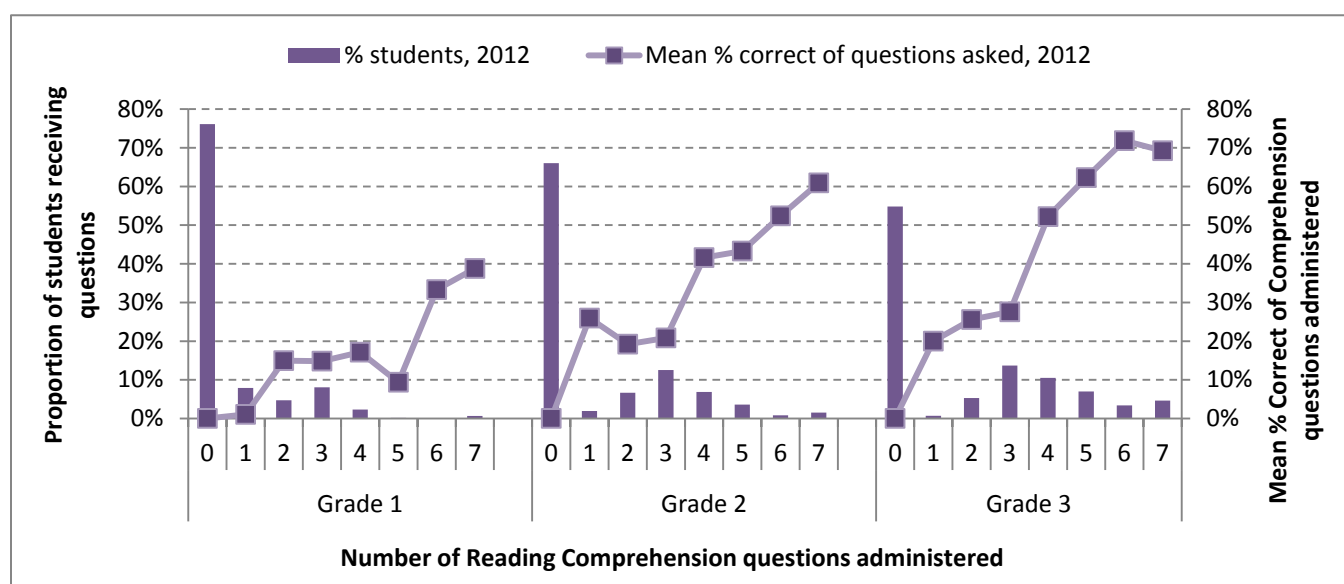
In *Figure 15*, the horizontal axis presents the number of questions administered to each child, and the columns (and left-hand vertical axis) present the distribution of proportions of children receiving 0, 1, 2, and more questions, for each grade level. Apart from the very large proportion of children asked no comprehension questions given their very low ORF levels, the remaining columns indicate a shift toward a greater proportion of children receiving more questions, from Grade 1 to Grade 3, in line with greater levels of ORF obtained in the higher grades.

Also in *Figure 15*, the superimposed lines (and right-hand vertical axis) present the average proportion of correct answers, out of the number of questions administered, obtained by each grade level. This line is smoother and has a steeper slope for Grade 3 than for the lower grade levels, indicating a stronger and more regular progression. While only a very small proportion of children were asked 6 or 7 questions, third graders who were asked that many were most likely to respond correctly (average 70% correct).

Greater detail for Grade 3 on this point is presented in *Table 22* below. The table relates the number of reading comprehension questions administered to the mean ORF score obtained, as well as to the average proportion of correct reading comprehension answers (RcompA score). Data for both baseline and endline and by treatment group are presented.

Table 22. Reading Comprehension Performance and Oral Reading Fluency, Grade 3

Number of Reading comprehension questions administered	BASELINE			ENDLINE		
	% of weighted sample	ORF	RcompA score	% of weighted sample	ORF	RcompA score
RLL TREATMENT STUDENTS—GRADE 3						
No questions	80%	0.5	- - -	52%	3.1	- - -
1 question	2%	9.7	27%	1%	1.0	0%
2 questions	5%	14.3	42%	4%	6.5	30%

Number of Reading comprehension questions administered	BASELINE			ENDLINE		
	% of weighted sample	ORF	RcompA score	% of weighted sample	ORF	RcompA score
3 questions	4%	19.5	58%	14%	9.5	30%
4 questions	4%	28.6	58%	12%	16.5	47%
5 questions	2%	35.9	74%	8%	28.2	60%
6 questions	3%	43.6	74%	3%	34.3	73%
7 questions	1%	46.7	80%	6%	42.4	75%
CONTROL SAMPLE STUDENTS—GRADE 3						
No questions	85%	0.5	- - -	67%	2.6	- - -
1 question	3%	8.8	48%	0%	3.5	50%
2 questions	2%	10.9	27%	6%	6.1	23%
3 questions	3%	21.3	66%	10%	9.5	24%
4 questions	2%	26.6	68%	7%	16.4	61%
5 questions	2%	33.2	61%	4%	30.6	67%
6 questions	1%	38.8	23%	3%	41.7	70%
7 questions	1%	62.2	77%	2%	33.4	56%

Figure 16 presents the endline results of this table graphically, juxtaposing means on students' ORF scores (left vertical axis) against percent correct of comprehension questions administered (right vertical axis) and the number of reading comprehension questions administered (horizontal axis) at endline, by treatment group. The first observation is the overall high, though not perfect, relationship between the two scores, which appears to support the hypothesis that comprehension is tied closely to fluency, although the interpretation must take into consideration both the very small sample sizes underlying all data points beyond "zero" questions asked, and the increasing denominator (number of questions administered) of the reading comprehension means as one moves right across the graph for each group. A second observation is that the relationship between the two scores appears to be tighter and more regular for the RLL group than for the control group.

Figure 16. Juxtaposition of Grade 3 Oral Reading Fluency and Reading Comprehension at Endline, by Treatment Group
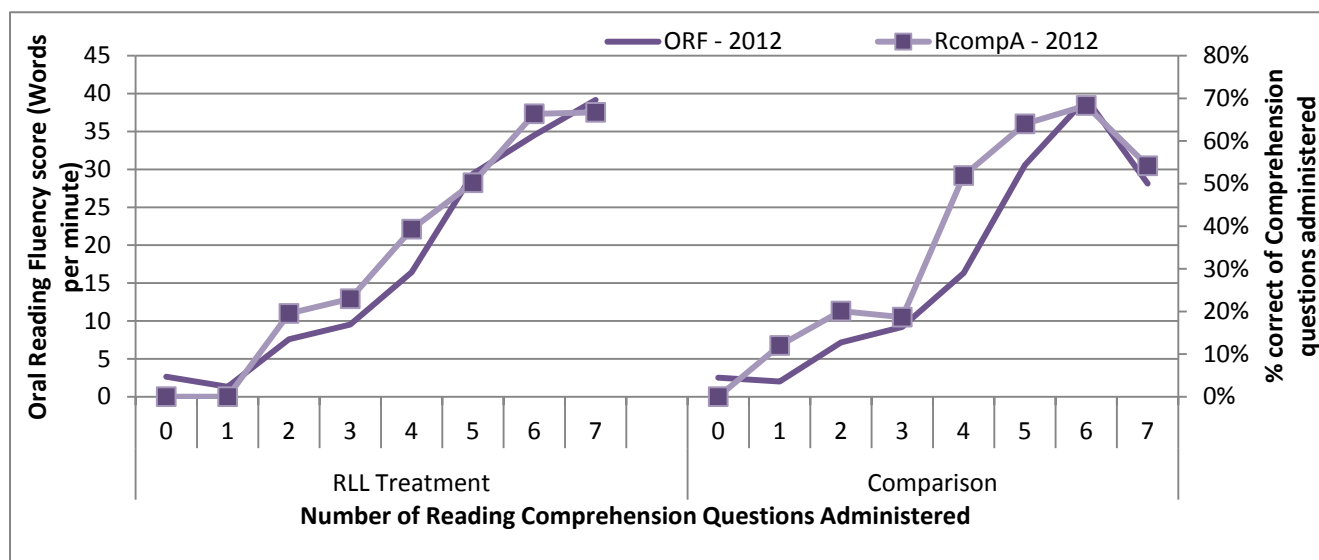
Continuing the analysis of students' reading comprehension, *Figure 17* presents summary scores over time and for each subgroup of the sample.

Figure 17. Mean Scores on Reading Comprehension Subtask at Baseline and Endline
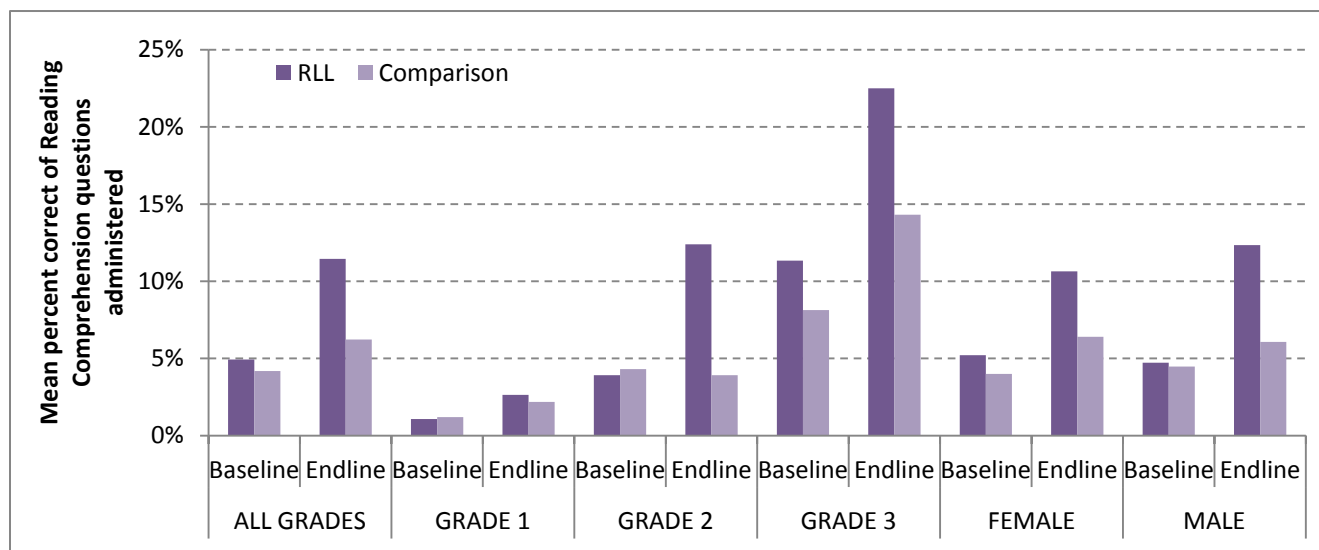
Overall, particularly for higher grade levels and for both genders, there appears to be some progress over time in students' ability to demonstrate comprehension of what they have read, with RLL groups displaying apparently greater gains than their control counterparts.

Table 23 (by grade) and *Table 24* (overall and by gender) present the underlying values shown in *Figure 17*, as well as statistics indicating the size and significance of the differences between RLL treatment and control groups.

Table 23. Baseline-Endline Results on Reading Comprehension Subtask, by Grade

READING COMPREHENSION (Percent correct of questions administered)	Grade 1		Grade 2		Grade 3	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	624	598	669	551	494	484
Control Sample Student n	613	616	520	424	432	401
RLL Sample Means	0.011	0.026	0.039	0.124	0.113	0.225
Control Sample Means	0.012	0.022	0.043	0.039	0.081	0.143
Difference in Differences	0.006 n.s.		0.089 ***		0.050 n.s.	
Baseline-Endline ES	0.052		0.419		0.166	
Baseline-Endline SD	0.111		0.212		0.300	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL schools and 37 Control schools for Grade 1; 34 RLL and 26 Control schools for Grade 2; and 29 RLL and 25 Control schools for Grade 3.
Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p<.01$; * = $p<.05$; "trend" = $p < 0.10$; n.s. = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in Control sample performance from baseline to endline.

As shown in *Table 23,* Grade 1 students in particular appear to have struggled with the reading comprehension subtask, with both RLL and control-group means of just 1% correct at baseline and only slightly higher at endline. Grade 2 students performed somewhat better at both baseline and endline, and the RLL group showed significantly greater growth from baseline to endline than the control group, with a moderate effect size (0.42). Mean scores for Grade 3 increased for both RLL and control groups, with no significant difference at endline, although a small effect size (0.17) suggests a modest RLL advantage. These findings suggest that, at least in the higher grades, exposure to the RLL program has a positive impact on reading comprehension skills.

The data on reading comprehension overall and by gender, presented in *Table 24*, also display a generally positive effect of the RLL treatment on reading comprehension, although the effect is much stronger among boys than for girls.

Table 24. Baseline-Endline Results on Reading Comprehension Subtask by Gender

READING COMPREHENSION (Percent correct of questions administered)	All grades		Girls		Boys	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
RLL Sample Student n	1787	1633	838	832	921	799
Control Sample Student n	1565	1441	801	733	747	705
RLL Sample Means	0.049	0.115	0.052	0.106	0.047	0.123
Control Sample Means	0.042	0.063	0.040	0.064	0.045	0.061
Difference in Differences	0.045	**	0.030	trend	0.060	***
Baseline-Endline ES	0.206		0.140		0.276	
Baseline-Endline SD	0.217		0.217		0.218	

Note: Only schools with student scores available at both baseline and endline are included in these analyses. They number 38 RLL treatment schools and 37 control schools. Student sample n's are unweighted; statistics shown are weighted.
ES = Effect size; SD = Standard deviation.
*** = $p < 0.001$; ** = $p<.01$; * = $p<.05$; "trend" = $p < 0.10$; "n.s." = not significant. P-levels shown indicate significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

In summary, the results support a positive effect of participation in the RLL program on reading comprehension, particularly in Grade 2 and among boys. Nonetheless, even RLL third graders at endline scored on average less than 25% correct. While third graders with strong oral reading fluency (over 40 words per minute) also scored very well on reading comprehension, the number of students in this group was very small–only 6% of the RLL third grade sample. Even at endline, 78% of RLL students and 86% of control sample students were unable to correctly answer even one question.

H. Relative contributions of RLL treatment, gender, grade level, and language of instruction: Results of multiple regressions

The analyses presented in previous sections of this report focus strictly on the RLL treatment effect overall and for specific subgroups of children examined separately. In order to examine the relative importance of grade level and gender, as well as language of instruction (not tested above) in nuancing RLL treatment effects, we also employed multiple regression models using all of these elements as predictors. School-by-grade-level mean baseline scores were included, to approximate controls for baseline levels in the absence of actual student change scores over time, given that student samples were cross sectional.[7] The results of these analyses are presented in *Table 25* and *Table 26*.

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[7] The threat of multicollinearity among predictor variables used in each model was assessed through an examination of bivariate correlations among these variables. The only predictors found to have strong correlations (0.400 or higher) were the following: each of the baseline school mean scores by grade excepting listening comprehension, with 2012 grade level; the listening comprehension baseline school mean score with language of instruction; and correct letters per minute (used illustratively as a predictor variable in higher-order models of higher-order reading skills) with grade level and with initial sound identification (also used as a predictor variable in higher-order models). Models with the baseline mean scores included are presented here, given the conceptual importance of controlling for baseline performance to the degree possible. Models were nonetheless also run without baseline mean scores (not shown), to determine if multicollinearity was substantially distorting the results. While overall model strength (R-squared) was seen to decline by up to but no more than two percentage points of explained variance lost, the significance of parameter estimates for predictors remaining within each model did not change substantially.

Table 25. Prediction of Student Performance on Selected EGRA Subtasks at Endline: Comparison of Estimation Models (Part 1)

MODEL	PARAMETER ESTIMATES															
	Listening comprehension		Initial sound identification		Letters identified per minute - 1		Letters identified per minute - 2		Familiar words read correctly per minute - 1		Familiar words read correctly per minute - 2		Familiar words read correctly per minute - 3		Familiar words read correctly per minute - 4	
(Intercept)	0.676	***	0.279	***	11.516	***	5.952	***	5.161	***	2.503	trend	.289	n.s.	-.801	***
RLL_yes	0.002	n.s.	0.067	*	5.562	***	4.305	***	2.961	***	2.380	***	2.411	***	.664	n.s.
LOI_Bomu	0.121	***	0.035	n.s.	-0.388	n.s.	-0.912	n.s.	0.066	n.s.	-0.086	n.s.	-.470	n.s.	.247	n.s.
LOI_Fulfulde	0.117	*	-0.153	***	-3.189	trend	-0.601	n.s.	-1.505	*	-0.395	n.s.	-.785	n.s.	-.338	n.s.
Grade_1	-0.083	***	-0.159	***	-6.846	***	-3.649	***	-2.714	***	-1.152	**	-.925	*	.545	trend
Grade_3	0.093	***	0.153	***	6.651	***	3.677	***	4.336	***	2.889	***	2.644	***	1.205	**
Female gender	-0.012	n.s.	-0.019	n.s.	-0.922	*	-0.546	n.s.	-0.563	trend	-0.396	n.s.	-.368	n.s.	-.177	n.s.
Baseline mean score[a]	0.096	n.s.	0.177	n.s.	0.054	n.s.	0.546	n.s.	-0.118	n.s.	-0.096	n.s.	-.077	n.s.	-.055	n.s.
Initial sound identification	- - -		- - -		- - -		18.127	***	- - -		8.138	***	7.443	***	.680	trend
Listening comprehension	- - -		- - -		- - -		- - -		- - -		- - -		3.399	***	1.169	**
Letter recognition	- - -		- - -		- - -		- - -		- - -		- - -		- - -		.399	***
Observations (n)	3062		3066		3067		3064		3069		3066		3059		3057	
df (Complex sample)	(7, 66)		(7, 66)		(7, 66)		(8, 65)		(7, 66)		(8, 65)		(9, 64)		(10, 63)	
Wald F	31.94	***	38.49	***	46.27	***	98.25	***	16.58	***	26.55	***	23.56	***	40.05	***
R-squared	*0.127*		*0.176*		*0.220*		*0.452*		*0.151*		*0.289*		*0.300*		*0.552*	

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$; "trend" = $p < 0.10$.
a. "Baseline mean score" = Mean score obtained at baseline for same subtask, school, and grade level.

Table 26. Prediction of Student Performance on Selected EGRA Subtasks at Endline: Comparison of Estimation Models (Part 2)

MODEL	PARAMETER ESTIMATES													
	Invented words read correctly per minute - 1		Invented words read correctly per minute - 2		Invented words read correctly per minute - 3		Oral reading fluency - 1		Oral reading fluency - 2		Oral reading fluency - 3		Oral reading fluency - 4	
(Intercept)	3.385	***	1.141	n.s.	-.888	***	3.994	***	1.528	***	-.837	n.s.	-1.745	n.s.
RLL_yes	2.392	***	1.898	***	.520	n.s.	2.602	***	2.064	**	2.114	***	0.593	n.s.
LOI_Bomu	-0.682	n.s.	-0.829	n.s.	-.466	n.s.	-0.306	n.s.	-0.499	n.s.	-.965	n.s.	-0.365	n.s.
LOI_Fulfulde	-1.929	**	-0.981	trend	-.840	n.s.	-4.733	***	-3.690	***	-4.101	***	-3.696	***
Grade_1	-2.028	***	-0.719	**	.549	*	-2.608	***	-1.186	**	-.955	*	0.293	n.s.
Grade_3	3.562	***	2.355	***	1.089	***	3.332	***	2.030	**	1.805	*	0.583	n.s.
Female gender	-0.330	n.s.	-0.184	n.s.	-.020	n.s.	-0.284	n.s.	-0.123	n.s.	-.094	n.s.	0.075	n.s.
Baseline mean score[a]	-0.076	n.s.	-.064	n.s.	-.028	n.s.	0.025	n.s.	0.017	n.s.	.022	n.s.	0.029	n.s.
Initial sound identification	- - -		6.934	***	1.219	***	- - -		7.691	***	6.946	***	1.047	trend
Listening comprehension	- - -		- - -		- - -		- - -		- - -		3.666	***	1.690	**
Letter recognition	- - -		- - -		.315	***	- - -		- - -		- - -		0.348	***
Observations (n)	3067		3064		3062		3069		3066		3059		3057	
df (Complex sample)	(7, 66)		(8, 65)		(9, 64)		(7, 66)		(8, 65)		(9, 64)		(10, 63)	
Wald F	15.77	***	22.98	***	39.59	***	26.06	***	20.51	***	18.27	***	16.79	***
R-squared	*0.150*		*0.298*		*0.536*		*0.124*		*0.213*		*0.223*		*0.361*	

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.
a. "Baseline mean score" = Mean score obtained at baseline for same subtask, school, and grade level.

The first table (*Table 25*) presents results of regression analyses on certain foundational skills (listening comprehension, phonemic awareness, and letter recognition) and on early grade reading up to the one-word level. The second table (*Table 26*) continues with results on word decoding skill (reading of invented words) and oral reading fluency.

Each model presented shares a common set of predictors taken together, including baseline mean score, grade, gender, and language of instruction, as well as RLL treatment group or control group membership. For **listening comprehension (***Table 25***)**, the basic model explains only 12.5% (adjusted R-squared) of the variance observed, but confirms bivariate findings presented earlier, that this skill is not associated with participation in the RLL treatment group and tends to increase with grade level. The model also suggests that children in the non-Bamanankan language of instruction groups (Bomu and Fulfulde) had somewhat higher listening comprehension skills, though difficulty variations in the task across languages may also underlie this result. Student's gender and the school's baseline mean scores on the same task by grade level do not appear to contribute significantly to the model.

For **initial sound identification**, the basic model results overall are somewhat stronger, explaining 17% of the variance observed. Grade level is again confirmed as an important contributor, with higher skill associated with higher grade level. Language of instruction also contributes to the model, although on this skill it is children in the Fulfulde language of instruction group who tend to have lower scores, other things being equal. And even when accounting for the contribution of these other predictors, as well as student's gender and the same school's baseline mean score on the same task, a child's participation in the RLL treatment group is confirmed to make a small but significant positive contribution. Student's gender and the school's baseline mean scores on the same task by grade level again are non-significant in predicting this skill.

For **letter recognition** (number of letters identified correctly in one minute), the basic model (subscript 1) accounts for a more substantial 22% of the variance observed. RLL group participation remains strongly and positively associated with skill on this task, even when the contributions of grade level, language of instruction, gender, and school's baseline mean performance are taken into account. Grade level also plays an important role, with higher skill associated with higher grade level; whereas language of instruction has a very modest predictive value. In the second model to predict this skill (model subscript 2), we added the child's own phonemic awareness score as a predictor to examine the interdependency of skills. The proportion of variance explained jumps substantially to 45%, suggesting strong interdependence between the two skills, although the child's general test-taking ability and other unobserved student-level factors may also be contributing to this increase. It is noteworthy that participation in the RLL treatment group (along with grade level) retains a highly significant and positive predictive importance in letter identification skill in this model, even with child's phonemic awareness skill accounted for.

We examined **familiar word reading** (number of familiar words read correctly in one minute) through four models: the first, basic model (subscript 1), followed by incremental additions of initial sound identification (subscript 2), listening comprehension (subscript 3), and letter identification (subscript 4) to the basic model. From an initial proportion of variance explained of 15%, the incremental additions produce substantial increases in this proportion: to 29% with the addition of initial sound identification (or 19% with listening comprehension in place of initial sound identification, not shown); to 30% with

listening comprehension along with initial sound identification; and to 55% with letter identification. These contributions again suggest the interdependency of reading skills: children with stronger phonemic awareness, language comprehension, and sound-symbol understanding, may also have an advantage in reading complete words. Again, it should be noted that these variables differ from other predictors in the model, in that the data they contain were produced through individual student assessment in a single session with a given student along with the dependent variable, and therefore likely also share other, unobserved student-specific features such as test-taking ability. Thus the "variance explained" should be interpreted to include these unobserved features as well.

In all of the models, with the single exception of the final model that includes letter recognition as a predictor, a strong, positive relationship persists between participation in RLL treatment and performance in reading familiar words, when accounting for other predictors in each model. Grade level also maintains a significant relationship with the skill across all models, while language of instruction and gender lose their small contributions evident in the first, basic model.

Turning to *Table 26*, we note a similar pattern for **word decoding** (invented words read correctly in one minute). A strong, positive association between this skill and RLL group membership is maintained even when accounting for grade level (which also makes an important, positive contribution to the model), language of instruction (with Fulfulde language apparently having a moderate depressive effect), and gender, and controlling for school baseline mean score. This overall basic model (subscript 1) explains about 15% of the variance observed. With the addition of phonemic awareness as a predictor (subscript 2), variance explained again doubles to about 30%, and letter recognition (subscript 3) adds another 23% (though to be interpreted with the same cautions as mentioned for familiar word reading above). As with familiar word reading, the inclusion of letter recognition as a predictor would appear to "absorb" the RLL participation contribution in this final model.

The last series of models we examined in this way concern **oral reading fluency**, involving connected text. Overall these models explain a smaller though still highly significant proportion of variance (from 12% for the basic model to about 40% when phonemic awareness, listening comprehension, and letter recognition are also included as predictors) in the outcome variable than the single-word-level models (familiar and invented words). The behavior of predictors within the models also suggests that different factors come into play to support skill with connected text: Unlike the single word models, language of instruction maintains a strong influence on the outcome variable, with children in Fulfulde-language classrooms evidently at some disadvantage, even when accounting for student-level foundational skills. And the importance of grade level declines, or is absorbed, as students' individual skills (phonemic awareness, language comprehension, and letter recognition) are incorporated in the model, in a way not observed in the single-word models. Nonetheless, it is noteworthy that RLL participation maintains a strong positive association with oral reading fluency through the first three models; though again, this association is "absorbed" once letter recognition is introduced into the model.

As a whole these regressions, while explaining relatively modest proportions of variance in the outcome measures of students' skills, generally confirm an important contribution of RLL, regardless of school's language of instruction or student's grade level or gender, and while statistically controlling for baseline differences at the school by grade level. These results also suggest some important avenues for further inquiry: the interactions among reading skills, the influence of language of instruction, and the

challenges in giving children evolving in different language environments equivalent chances to learn and to show what they have learned.

I.   *Summary of RLL program impacts on student learning performance at endline*

The analyses presented in this section have confirmed a positive impact of the RLL program on children's reading skills overall, at the end of Grade 1 (after one year's exposure to the program), and particularly by the end of Grade 2 (after two years of exposure). While children's general language skills and phonemic awareness (as measured by listening comprehension and initial sound identification, respectively) do not appear to have been significantly enhanced by RLL participation, the RLL advantage for actual reading skills—from letter recognition to decoding and demonstrating understanding of connected text—is strongly supported by the results of this study, especially for boys and at the end of Grade 2. The principal results, including baseline-to-endline difference-in-differences comparisons of RLL- and control-group means and associated effect sizes across all EGRA subtasks, are summarized below in *Table 27* by subgroup.

Table 27. Summary of Baseline-to-Endline Significant RLL Treatment Effects on Reading Skills

GROUP AND SUBTASK	DID	p level	ES	Pooled SD
OVERALL (Grade 1, Grade 2, and Grade 3 combined)				
Initial sound identification	0.052	n.s.	0.140	0.375
Listening comprehension	-0.008	n.s.	-0.027	0.290
Letters identified correctly in one minute	5.574	***	0.396	14.079
Familiar words read correctly in one minute	2.408	***	0.334	7.215
Invented words read correctly in one minute	1.849	***	0.320	5.776
Oral reading fluency	2.151	***	0.245	8.794
Percent correct on reading comprehension questions asked	0.045	**	0.206	0.217
GRADE 1 STUDENTS				
Initial sound identification	0.058	trend	0.210	0.278
Listening comprehension	-0.022	n.s.	-0.078	0.286
Letters identified correctly in one minute	4.614	***	0.594	7.764
Familiar words read correctly in one minute	0.503	n.s.	0.207	2.432
Invented words read correctly in one minute	0.618	*	0.274	2.253
Oral reading fluency	0.974	trend	0.232	4.190
Percent correct on reading comprehension questions asked	0.006	n.s.	0.052	0.111
GRADE 2 STUDENTS				
Initial sound identification	0.081	n.s.	0.207	0.390
Listening comprehension	-0.012	n.s.	-0.041	0.291
Letters identified correctly in one minute	8.998	***	0.664	13.552
Familiar words read correctly in one minute	4.514	***	0.672	6.722
Invented words read correctly in one minute	2.954	***	0.524	5.641
Oral reading fluency	3.635	***	0.421	8.626
Percent correct on reading comprehension questions asked	0.089	***	0.419	0.212
GRADE 3 STUDENTS				
Initial sound identification	0.013	n.s.	0.033	0.400
Listening comprehension	0.017	n.s.	0.063	0.265
Letters identified correctly in one minute	3.086	n.s.	0.180	17.167
Familiar words read correctly in one minute	2.696	n.s.	0.260	10.358
Invented words read correctly in one minute	2.323	trend	0.285	8.138

GROUP AND SUBTASK	DID	p level	ES	Pooled SD
Oral reading fluency	2.129	n.s.	0.172	12.361
Percent correct on reading comprehension questions asked	0.050	n.s.	0.166	0.300
GIRLS (Grade 1, Grade 2, and Grade 3 combined)				
Initial sound identification	0.064	trend	0.172	0.371
Listening comprehension	-0.020	n.s.	-0.070	0.287
Letters identified correctly in one minute	5.532	***	0.403	13.738
Familiar words read correctly in one minute	1.939	**	0.299	6.493
Invented words read correctly in one minute	1.165	*	0.219	5.310
Oral reading fluency	1.297	trend	0.151	8.588
Percent correct on reading comprehension questions asked	0.030	trend	0.140	0.217
BOYS (Grade 1, Grade 2, and Grade 3 combined)				
Initial sound identification	0.045	n.s.	0.118	0.380
Listening comprehension	0.005	n.s.	0.016	0.294
Letters identified correctly in one minute	5.739	***	0.398	14.419
Familiar words read correctly in one minute	2.978	***	0.377	7.897
Invented words read correctly in one minute	2.606	***	0.418	6.240
Oral reading fluency	3.117	***	0.345	9.034
Percent correct on reading comprehension questions asked	0.060	***	0.276	0.218

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$; "trend" = $p < 0.10$.
Statistical significance shown indicates significant difference between change in RLL sample performance from baseline to endline, and change in control sample performance from baseline to endline.

Looking across all the EGRA subtasks as shown in *Table 27*, we note only minimal differences in growth over time between RLL and control groups on the pre-literacy subtasks of phonemic awareness and listening comprehension. For the most part, it appears that any change over time was approximately comparable across both groups on these subtasks. More notable differences appear on the emerging-literacy skill of letter identification, with significant difference-in-differences means overall and for nearly all subgroups. It should be recalled that on this subtask, control-group means decreased over time, thereby contributing to the widening differences observed between the RLL treatment and control groups.

The ability to read familiar words as well as to decode new words is essential to becoming a proficient reader. The results for these two subtasks also support a positive RLL treatment effect, in particular in Grades 1 and 2. With regard to familiar word reading, it was again often the case that control sample means decreased over time, rather than or in addition to RLL means increasing. Results on the oral reading fluency and reading comprehension subtasks further support a positive contribution of the RLL treatment, particularly for Grade 2 students and for boys generally.

Two large cautions, however, cloud these results. The first remains the mean reading performance found across both RLL treatment and control groups and in all subgroups, that is astoundingly low by any measure, including Mali's own stated grade level standards for reading (MEALN, 2011). While RLL is demonstrably making a significant positive difference in children's learning skills, those skills are still exceedingly low even after two years of engagement with the program.

The second caution concerns the apparent absence of an enduring RLL effect for children by the end of third grade. By endline these children, like their Grade 2 schoolmates, have had the benefit of two years of the RLL program, albeit earlier in the evolution of the program (during 2009-10 and 2010-11 school years, versus 2010-11 and 2011-12 for the Grade 2 group). We might expect that these Grade 3 students

would have retained a weakened, though still significant, advantage of their RLL participation just a year after completing the early grade program with RLL, over their control group peers. But this was not the case. It is possible, indeed likely, that the RLL program required a process of "maturation" for teachers and school management to adjust to and master the new methods and materials introduced by RLL. Indeed, endline data collection was moved out a full year at the request of the IEP implementers, given their own concerns about the degree of uptake by schools and teachers during the first year of the program and delays in the production and distribution of RLL materials to schools. In other words, RLL-group children who were in Grade 2 at endline had the benefit of a more complete implementation of the program than did their Grade 3 schoolmates.

But the possibility that the early advantages brought by RLL may not translate into lasting advantages for subsequent learning, even just one year after a child has left the program at the end of Grade 2, cannot be ruled out by the data at hand. The present study, given its own design and having reached its term, is not able to provide a clear answer to this important outstanding question. We encourage IEP the implementer, and other researchers to follow, to pursue this line of inquiry in the coming years of RLL implementation.

IV Examination of Contextual Characteristics and Their Relation to RLL Treatment Assignment and Effects

The analyses presented so far in this paper have treated the RLL "effect" as a single, dichotomous variable: A school, classroom, or child either participated in the program, or didn't. In the present section, we make use of contextual and observational information also gathered through the course of the study, to examine more closely in what ways the RLL and control group samples were in fact similar, and how their experience came to differ, especially over time, to better understand the "RLL effect" using correlational techniques.[8] In addition, within the RLL sample itself, schools and students have displayed a broad range of outcomes and skills. We therefore also examined the degree of "fidelity to RLL implementation" achieved by individual schools to shed further light on possible explanations for the range of outcomes observed (Section V).

The present section offers the results of analyses across RLL treatment and control groups on contextual characteristics that were *a priori* expected not to vary between the two groups. The purpose of these analyses is threefold: first, to confirm the success of initial randomized assignment of schools to treatment and control groups; second, to determine if any of these characteristics appeared to change with the introduction of the RLL treatment, or in other words, to identify potential unintended consequences of the treatment; and third, through a separate set of analyses, to adjust the results of RLL treatment effects presented earlier, taking into consideration characteristics that were found to be non-equivalent across RLL and control groups.

The characteristics examined in these ways include general school characteristics, general student characteristics, and characteristics of schools' pedagogical environment (Curriculum program exposure and practice, teaching style and attitudes, evidence of student engagement, and school pedagogical leadership) not specifically anticipated to be influenced by RLL.

A.   *Construction and analysis of thematic indices*

In order to reduce over 200 survey and classroom observation variables into meaningful clusters of information on contextual characteristics while removing redundancy among them, we grouped these variables into broader thematic indices and derivative variables. For each index, candidate variables were assessed for their "viability" (offering sufficient number of cases with data such that missing values could be either imputed or ignored). Qualitative variables were recoded as necessary into dummy variables; new variables were calculated as proportions and ratios of raw data. Each resulting index was then tested for equivalence across RLL treatment and control schools.

Table 28 provides a brief description of the indices that were created to capture general school characteristics, general student characteristics, and characteristics of schools' pedagogical environment. Index variables were reduced to a single variable ("single variable" in the table).

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[8] Other activities in the course of this study have also addressed this question, notably the qualitative study presented in Diallo and Diawara (2011) and Diallo, Ralaingita, and Diawara (2012); and the Year 2 interim survey study of teaching practices, presented in Fomba and Diawara (2011) and Spratt, Ralaingita, Fomba, and Diawara (2013). The analyses discussed in the present report complement these earlier efforts, with the addition of endline-year data and an index-based analytical approach.

Table 28. Indices of Contextual Characteristics

Index code	Index name and description
GENERAL SCHOOL ENVIRONMENT CHARACTERISTICS	
GSCH_01	General school characteristics (location relative to urban center; school size [enrollment]; water; electricity)
GENERAL STUDENT HOME ENVIRONMENT CHARACTERISTICS	
GSTU_01a	Student's home material wealth (series of marker items)
GSTU_01b	Student's home material wealth (scale based on marker items)
GSTU_02	Student's home language & literacy environment (ML=LOI; books in LOI; books in French; literate persons at home)
SCHOOL'S GENERAL PEDAGOGICAL CHARACTERISTICS	
GPED_01	Teachers' general qualifications (years of experience, DEF, higher degree)
GPED_02	Teacher's ease of teaching in LOI (own maternal language; use of French; years of teaching in national language; views on Curriculum method)
GPED_03	Teacher's use of student-centered activities in teaching
GPED_04	Signs of active student engagement
GPED_05	School pedagogical management and oversight
GPED_06	School's Curriculum program experience and resources

See Attachment B for a list of all variables comprising each index, along with the data source and years of availability for each variable.

B.   *Analysis of equivalence of contextual characteristics across RLL and control schools*

This section of the report examines the degree of equivalence between RLL treatment and control schools with regard to characteristics, of schools, of students, and of the general pedagogical context, that are not expected to be related to the RLL treatment. We would hope to find comparable results across treatment and control groups in all three domains at baseline, in order to confirm that randomized assignment was successful. In other words, the sample should display no obvious initial bias that might differentially affect the subsequent performance of one group or the other and thus make it difficult to attribute differences found at follow-up or endline to the RLL intervention. In the first two domains in particular (general school and student characteristics), we would also expect to see no great changes specific to one group or the other over time. With regard to general pedagogical characteristics, differences that may begin to appear over time between RLL treatment and control groups may signal unintended (and possibly beneficial) consequences of the program on the school's overall pedagogical context.

When considering these findings, which are based on regression techniques, we must keep in mind that the validity of regression results is entirely bound up with the adequacy and appropriateness of model specification (selection of specific variables to represent a given phenomenon, and the nature of the relationship among those variables), and the quality and thoroughness of the underlying observations. The model cannot test a phenomenon that was not observed or measured. The direction (positive or negative) and size of individual parameter estimates for each element (predictor) within a given model can also vary considerably in the presence of multicollinearity among variables. In addition, given

different sample sizes and somewhat different model elements due to variations in data availability, location of missing data points, and lack of observed distribution on some data elements in a given year, the results from one year to the next are not directly comparable. The results presented below should be considered with these cautions in mind.

1.   Tests of equivalence across RLL treatment and control schools on general school characteristics

Logistic regression methods were used to test equivalence between treatment and control schools on general school characteristics—represented by the first thematic index that reflects basic resources, setting (relative urbanity), and size (enrollments) of schools. The results of these regressions, with RLL treatment or control group (recoded 1-0) as the response variable and the index variable(s) as predictors, can be seen in *Table 29.* A separate model was estimated with each index for a given year.

F-scores, probability levels, and relevant sample sizes are shown for each year for which data were available. A significant F-value indicates that RLL treatment and control schools were found to have statistically different values on the index.

Table 29. Results of Equivalence Tests Between Treatment and Control Schools on Indices of General School Characteristics

ÍNDEX		Year	d.f.	Association with RLL group (Wald F)		School n
GSCH_01	General school characteristics (Location relative to urban center; school size (enrollment); water; electricity)	2009	4, 56	**4.18**	**	63
		2010	5, 70	**2.35**	*	78
		2011	5, 93	**7.14**	***	101
		2012	5, 68	**2.76**	*	75

 * p < 0.05; ** p < 0.01; *** p < 0.001; "trend" = p < 0.10; n.s. = not significant.

As indicated in *Table 29*, RLL treatment and control samples in fact showed significant differences, even at baseline, on general school characteristics. On the basis of an examination of parameter estimates (provided for 2012 in Attachment C; other years not shown but available upon request), the greater availability of water in RLL schools would appear to account almost entirely for the difference observed between RLL and control schools on this index at baseline. At endline, RLL schools tended to have larger enrollments but also less availability of water and electricity, other things being equal, relative to control schools. Interim years also indicate "shifting" advantages across RLL and control schools in terms of basic resources, suggesting an instability in provision of these resources. The possibility that RLL schools were becoming "magnets" for enrollment given a reputation for better learning outcomes should not be ruled out.

2. Tests of equivalence across RLL treatment and control schools on general student characteristics

General student characteristics tested included measures of students' home material environment and their home language and literacy context. As above, data were collected across multiple years on most indices, and logistic regressions were carried out to determine whether a given index displayed a statistically significant association with RLL treatment or control group membership. Results of equivalence tests on these indices are presented in *Table 30* for each year for which data were available.

Table 30. Results of Equivalence Tests Between Treatment and Control Schools on Indices of General Student Characteristics

ÍNDEX		Year	d.f.	Association with RLL group (Wald F)		School n	Class or Student n
GSTU_01a	Student's home material wealth (series of marker items)	2009	10, 63	1.86	trend	75	3755
		2012	10, 65	**3.26**	**	75	2977
GSTU_01b	Student's home material wealth (count of marker items in single variable)	2009	1, 72	**4.00**	*	75	3939
		2012	1, 72	**26.84**	***	75	3088
GSTU_02	Student's home language & literacy environment (ML=LOI; books in LOI; books in French; literate persons at home)	2009	5, 68	2.26	trend	75	3902
		2012	5, 68	**4.06**	**	75	2970

 * p < 0.05; ** p < 0.01; *** p < 0.001; "trend" = p < 0.10; n.s. = not significant.

On students' home material wealth, (Index GSTU_01a and GSTU_01b) there was a slight, for the most part positive association with RLL group participation, which strengthened by 2012.

Across the two groups, children's home language and literacy environments (GSTU_02) differed at trend level only in 2009. In 2012 the association with RLL group was stronger, with RLL students more likely to speak the school's language of instruction at home and to have books at home in the language of instruction, and less likely to have French-language books in the home, than their control school counterparts.

In summary, despite randomized assignment of schools to RLL treatment and control groups, some statistically significant differences between RLL and control schools and students were observed, and will therefore be reexamined for their possible contribution to reading outcomes (see Section IV.C).

3. Tests of equivalence on schools' overall pedagogical context across RLL treatment and control schools

We also examined the degree of equivalence between RLL and control schools on their overall pedagogical context (not specifically traceable to RLL) via indices reflecting teachers' qualifications and experience; their own ease in using the national language of instruction; evidence of active student engagement and student-centered instruction in the classroom; school pedagogical leadership; and

schools' degree of (national language) Curriculum program experience and resources. A summary of the results of these tests can be seen in ***Table 31***. For 2012, the individual parameter estimates and other details on which these results are based may be found in Attachment C.

Table 31. Results of Equivalence Tests Between Treatment and Control Schools on Overall Pedagogical Context Characteristics

ÍNDEX		Year	d.f.	Association with RLL group (Wald F)		School n	Class or Student n
GPED_01	General teacher qualifications (years of experience, DEF, higher degree)	2009	3, 49	0.78	n.s.	55	90
		2010	3, 72	**4.08**	*	78	144
		2011	3, 93	**2.96**	*	99	182
		2012	3, 65	1.11	n.s.	70	160
GPED_02	Teacher's ease of teaching in LOI (own maternal language; use of French; years of teaching in national language; views on Curriculum method)	2009	2, 49	1.67	n.s.	54	86
		2010	5, 69	1.53	n.s.	77	135
		2011	6, 88	**8.97**	***	97	169
		2012	5, 63	1.09	n.s.	70	167
GPED_03	Teacher's use of student-centered activities in teaching	2009	7, 45	1.00	n.s.	55	100
		2011	7, 88	**10.34**	***	98	98 (G2 only)
GPED_04	Signs of active student engagement	2010	4, 70	**5.94**	***	77	127
		2011	5, 91	**5.58**	***	99	179
GPED_05	School pedagogical management and oversight	2009	5, 32	0.91	n.s.	40	61
		2010	11, 59	**2.56**	**	73	131
		2011	10, 86	**4.78**	***	99	177
		2012	8, 54	1.77	n.s.	64	153
GPED_06	School's Curriculum program experience and resources	2009	4, 35	1.06	n.s.	42	64
		2010	7, 63	**6.33**	***	73	128
		2011	8, 82	**13.31**	***	93	170
		2012	11, 31	**2.98**	**	44	103

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; "trend" = $p < 0.10$; n.s. = not significant.

Overall, for all general pedagogical indices on which data were available at baseline, the analyses present non-significant differences between RLL and control groups. This overall finding offers the reassurance that before the RLL program began, schools and classrooms in both treatment and control groups were roughly equivalent in terms of pedagogical practice.

Over time, however, some significant differences emerged, notably in interim program years (2010 and 2011):

- **GPED_01: Teacher's general qualifications.** RLL treatment and control schools showed significant differences on this index in both 2010 (with RLL teachers more likely to report having the DEF teaching degree) and in 2011 (with RLL teachers more likely to report longer teaching experience).

- **GPED_02: Teacher's ease of teaching in language of instruction.** This index, while non-significant in 2009, 2010, or 2012, displayed significant difference between RLL and control schools in 2011. In that year, RLL teachers were more likely to report that their own mother tongue was also the school LOI, and that they had received training in national language instruction (possibly referring to RLL-provided training, rather than Ministry training).

- **GPED_03: Inclusion of student-centered activities in teaching pedagogy.** This index is one in which we would hope to see higher ratings for RLL than for control groups over time, as taking steps to engage students in their learning is a key component of the RLL treatment program. Indeed, while RLL and control scores were not significantly different at baseline (2009), by 2011 RLL teachers were reported to engage students more during reading instruction. This finding suggests an adoption of the pedagogy that underlies the RLL treatment among RLL teachers, in contrast to a broader shift in teaching approaches that would have appeared in both RLL and control classrooms.

- **GPED_04: Student engagement.** Data on student engagement in the classroom were available for 2010 and 2011. In 2010, RLL schools obtained higher observational scores than control schools on three indicators of student engagement: students were engaged interactively with the teacher, students appeared motivated to learn, and students appeared to be busy. In 2011, the overall index was again highly significant, with RLL students' greater likelihood of having chalk and slate standing out from other variables making up the index.

- **GPED_05: School pedagogical management and oversight.** In both 2010 and 2011, RLL treatment schools differed significantly on this index from control schools, although not necessarily in ways that would suggest that RLL school management was stronger. In 2010, RLL teachers were <u>less </u>likely than control school teachers to report that their lesson plans were reviewed every day, although RLL principals were more likely to report having been trained for the job, and RLL classrooms tended to have higher attendance rate on the day of observation, and to have had a recent pedagogical support visit, other things being equal. In 2011, in-house classroom observations and recent pedagogical support visits were again more likely in RLL classrooms, although lesson plan review continued to be less frequent in RLL schools than in control schools.

- **GPED_06: School's Curriculum program experience and resources.** In 2010 and 2011, RLL treatment and control schools reported statistically significant differences in their Curriculum program (national language instruction) experience, fidelity, and resources. When considered together with the entire set of variables in the index, control school teachers were more likely to report having received Ministry books in national languages (both in 2010 and 2011), although children in RLL classrooms were more likely to have a national language textbook (2011), their teachers were less likely to report using French

language in class, and the principal was more likely to have trained teachers in Curriculum program methods (national language instruction).

When considering these findings, we must keep in mind that the validity of regression results is entirely bound up with the adequacy and appropriateness of model specification, and the quality of the underlying observations. The direction and size of individual parameter estimates within a given model can also vary greatly in the presence of multicollinearity among variables. In addition, given different sample sizes and somewhat different model elements due to variations in missing data and the constant presence of multicollinearity among variables across years, the results from one year to the next are not directly comparable. Nonetheless, of these differences, only schools' Curriculum program experience and resources maintained a significant difference between RLL treatment and control schools at endline. On this index, in 2012 RLL teachers again reported that they were likely to use French in the classroom less often than control teachers. Regarding materials in national languages, RLL school directors reported Grade 1 textbooks in national language to be less available than did control school directors, although Grade 2 textbooks in national language were reported to be more available. These results partially confirm the generalizability of qualitative evidence (reported in Diallo and Diawara, 2011, and Diallo, Ralaingita, and Diawara, 2012) that participation in RLL helped schools obtain better access to the Ministry's Curriculum program resources, through IEP's role as an effective intermediary with Ministry.

In summary, the examination of equivalence presented here has highlighted some areas in which RLL and control schools and students differed even at baseline (notably, general school resources and student home material wealth), but also permits us to affirm that across a broad array of school, teacher, and classroom pedagogical characteristics, RLL treatment and control groups at baseline were not significantly different from each other. These analyses also indicate that the two groups diverged over time in a number of areas of pedagogical practice once the RLL program began, although not all of these differences persisted through to endline.

C.   *Relationship of general contextual and pedagogical characteristics to students' learning outcomes*

The analyses presented in the previous section helped to identify or confirm general contextual and practical areas on which RLL treatment and control schools and classrooms appeared to be equivalent, and on which they were different, at baseline and over time. These results lead us to question whether and to what degree the characteristics and practices represented through these same thematic indices appear to contribute to students' reading performance, above and beyond participation in the RLL program, and whether any contributions found would require us to change or attenuate our interpretation of the findings on RLL treatment effects presented in Section III.

In the present section, we examine these same characteristics and practices, using general linear regression techniques for complex samples, to estimate their possible contributions to students' reading performance on two key EGRA subtasks. The subtasks letter recognition and oral reading fluency were selected as they represent, respectively, first-order foundational skills and higher-order integrative skills along the early grade reading skills spectrum. Does a given set of characteristics and practices, as represented in each thematic index, help to explain performance at one or both ends of the spectrum?

Does it appear to make a "value added" contribution to students' reading performance that is independent of the RLL treatment effect, or that might account for the RLL effect?

1. Contextual characteristics and students' early grade reading performance

We turn first to the indices of general school and student characteristics presented earlier. For each index, four models were tested to predict each EGRA skill, constraining the sample to those cases remaining in the full model: (1) the "base" model (including only school LOI, grade level, mean score on the same subtask for the same school and grade at baseline, and student gender; (2) the base model with RLL treatment or control group; (3) the base model with the contextual index variables added as a single block; and (4) the full model, including base, RLL group, and index variables. The resulting R-squared of each model can be interpreted as an estimation of the proportion of observed variance explained in the outcome variable by the model as a whole. By comparing the R-squared obtained across the different models for a given index, we can determine the estimated contributions of the theme represented by the index, relative to the contribution made by the base variables alone, and by RLL participation. The results for the foundational letter recognition subtask (measured in CLSPM) are presented in *Table 32*.

Table 32. Results of Estimation of Students' Letter Recognition Performance (CLSPM) at Endline Using School and Student General Context Indices

STATISTIC	Strength of Index Models to Predict Letter Recognition Score (CLSPM)			
	GSCH_01 General school characteristics	G_STU_01a Student's home material wealth - items	G_STU_01b Student's home material wealth - scale	G_STU_02 Student's home language / literacy context
School n	75	75	75	75
Student n	3067	2953	3064	2946
R-squared (all models for a given index are constrained to school n and student n of the full index model)				
Base model	0.182	0.179	0.179	0.177
Base model + Index	0.198	0.187	0.182	0.198
Base model + RLL group	0.222	0.220	0.222	0.220
Base model + RLL group + Index	**0.242**	**0.227**	**0.222**	**0.235**
df (complex sample)	12, 61	17, 56	8, 65	12, 61
Wald F	31.566 ***	19.898 ***	39.949 ***	29.587 ***
RLL contrib. still significant?	***	***	***	***
Value added w/ RLL (entered last)	4.4%	4.0%	4.0%	3.7%
Value added w/ Index (entered last)	**2.0%**	0.7%	0.0%	**1.5%**

* p < 0.05; ** p < 0.01; *** p < 0.001; n.s. = not significant.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

As shown in *Table 32*, notwithstanding slight fluctuations in student sample size due to variations in available cases on the index elements included, the base model explains about 18% of the variance observed in students' CLSPM performance at endline ("Base model" R-squared ranging from 0.177 to 0.182), while the full model for each index (Base model + RLL group + Index) explains a greater

proportion, ranging from 22-23% with student home wealth indices; to 23%-24% with student's home language-literacy context taken into account, and to over 24% with general school characteristics considered in the model. All models were highly significant; in other words, their overall apparent relationships to the outcome variable were unlikely to have occurred by chance. In the last two lines of the table, we see that RLL membership would appear to make a substantial contribution to the variance observed in CLSPM, ranging from 3.7% to 4.4% of the variance observed, above and beyond the base model contribution and any index contribution; the RLL membership parameter estimate maintains a significant, positive association with CLSPM in the full model context. As for the "value added" of each index, we see that general school characteristics, when added last to the model, also make a considerable contribution of 2%, followed by student's home language-literacy environment with 1.5%. The variations observed in student's home material wealth, however, add negligible explanatory value in predicting students' CLSPM performance. Detail on parameter estimates, standard errors, and confidence intervals for the full 2012 model with each index is provided in Attachment D.

The results for oral reading fluency on these same general school and student characteristics, provided in *Table 33*, show some interesting differences from the CLSPM results.

Table 33. Results of Estimation of Students' Oral Reading Fluency at Endline Using School and Student General Context Indices

STATISTIC	Strength of Index Models to Predict Oral Reading Fluency (ORF)			
	GSCH_01 General school characteristics	G_STU_01a Student's home material wealth - items	G_STU_01b Student's home material wealth - scale	G_STU_02 Student's home language / literacy context
School n	75	75	75	75
Student n	3069	2955	3066	2948
R-squared (all models for a given index are constrained to school n and student n of the full index model)				
Base model	0.110	0.108	0.110	0.109
Base model + Index	0.118	0.116	0.111	0.149
Base model + RLL group	0.133	0.132	0.133	0.133
Base model + RLL group + Index	**0.144**	**0.142**	**0.135**	**0.167**
df (complex sample)	12, 61	17, 56	8, 65	12, 61
Wald F	15.385 ***	11.097 ***	20.223 ***	15.643 ***
RLL contrib. still significant?	***	***	***	***
Value added w/ RLL (entered last)	2.6%	2.6%	2.4%	1.8%
Value added w/ Index (entered last)	1.1%	1.0%	0.2%	3.4%

* p < 0.05; ** p < 0.01; *** p < 0.001.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

First, we note that, while still highly significant overall, these models explain a much lower proportion of the variance observed in ORF, than was found for CLSPM. As a higher-order, more complex skill, it is not surprising that variations in children's ORF performance would be more difficult to predict or explain. At the same time, the proportion explained (ranging from 13.5% to 16.7% for the full models)

is not negligible—indeed, it is quite respectable relative to much educational survey research of this type.

As with CLSPM, we note that RLL's specific contribution to ORF is robust, remaining significant and contributing from 1.8% to 2.6% of total variance explained, independent of all other elements in a given full model. Regarding school and student home characteristics, the child's language-literacy environment stands out, with a value added of 3.4% of variance explained when added last to the model, surpassing RLL's still important, but smaller (1.8%) specific contribution. Specific parameter estimates, standard errors, and confidence intervals for full 2012 models with each index are provided in Attachment E.

These results give us some confidence to conclude that, despite some baseline differences on general school and student characteristics between RLL treatment and control samples, a positive effect of RLL program participation on student performance persists even when these other characteristics are included in the analysis.

2. Pedagogical characteristics and practices and students' early grade reading performance

Pedagogical characteristics and practices, even those not directly intended or anticipated to change due to RLL program participation, were in fact found to present some significant differences between RLL and control schools once the RLL program was introduced (Section IV.B). We therefore also examine their relation to students' early grade reading performance, and the degree to which a given set of characteristics or practices might account for or complement the RLL effect. The results of these analyses with relation to endline results on the EGRA letter recognition subtask are presented in *Table 34*.[9]

Table 34. Results of Estimation of Students' Letter Recognition Performance at Endline Using Pedagogical Context Indices

| STATISTIC | Strength of Index Models to Predict Letter Recognition Score (CLSPM) | | | |
	GPED_01 Teacher's qualifications & experience	GPED_02 Teacher's ease of teaching in LOI	GPED_05 School pedagogical management	GPED_06 Curriculum program experience & resources
School n	70	70	70	69
Student n	2592	2712	2798	2936
R-squared (all models for a given index are constrained to school n and student n of the full index model)				
Base model	0.184	0.182	0.180	0.19
Base model + Index	0.191	0.200	0.196	0.21
Base model + RLL group	0.220	0.238	0.232	0.234
Base model + RLL group + Index	**0.227**	**0.249**	**0.251**	**0.248**

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[9] Only four of the six indices on general pedagogical context could be examined using data collected at endline. Because student observations were not carried out during endline data collection, the two indices that explored student engagement and student-centered classroom activities are not presented here. Results for 2010 are available on request. The interim study report of Friedman, Gerard, and Ralaingita (2010) also provides some information on the topic, but used a different analytical approach.

STATISTIC	Strength of Index Models to Predict Letter Recognition Score (CLSPM)			
	GPED_01 Teacher's qualifications & experience	GPED_02 Teacher's ease of teaching in LOI	GPED_05 School pedagogical management	GPED_06 Curriculum program experience & resources
df (complex sample)	10, 58	12, 56	15, 53	18, 49
Wald F	29.049 ***	21.500 ***	23.146 ***	22.740 ***
RLL contrib. still significant?	***	***	***	***
Value added w/ RLL (entered last)	3.6%	4.9%	5.5%	3.8%
Value added w/ Index (entered last)	0.7%	1.1%	1.9%	1.4%

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

As shown in **Table 34**, given a higher incidence of cases with missing data on the elements making up each index, the realized school sample for the final model on all of the general pedagogical indices has fallen from 75 to 70, and in the case of the Curriculum program index, to 69 schools. The base model for CLSPM nonetheless maintains a proportion of variance explained of 18% to 19%, comparable to that found on all 75 schools (from **Table 32**). The individual general pedagogical indices, when added last to the model, account for amounts ranging from less than 1% (teacher's qualifications) to nearly 2% (pedagogical management practices) of the variance in observed CLSPM scores.

RLL program participation in all cases contributed a much greater proportion (from 3.6% to 5.5%) of the variance explained when added last. In other words, the results support the conclusion that RLL participation and other pedagogical features of the classroom make distinct, complementary contributions to predicting children's CLSPM performance, and that the RLL effect is considerably more substantial than that of any of the general pedagogical indices tested. See Attachment D, Tables D5 through D8, for detail on parameter estimates, standard errors, and confidence intervals for the full 2012 model with each index.

Parallel results on these same indices are presented for oral reading fluency in **Table 35** below.

Table 35. Results of Estimation of Oral Reading Fluency at Endline Using School and Pedagogical Context Indices

STATISTIC	Strength of Index Models to Predict Oral Reading Fluency (ORF)			
	GPED_01 Teacher's qualifications & experience	GPED_02 Teacher's ease of teaching in LOI	GPED_05 School pedagogical management	GPED_06 Curriculum program experience & resources
School n	70	70	70	69
Student n	2594	2714	2800	2838
R-squared (all models for a given index are constrained to school n and student n of the full index model)				
Base model	0.118	0.116	0.102	0.107
Base model + Index	0.122	0.123	0.117	0.126
Base model + RLL group	0.137	0.143	0.127	0.133
Base model + RLL group + Index	**0.141**	**0.150**	**0.142**	**0.147**
df (complex sample)	10, 58	12, 56	15, 53	18, 49

STATISTIC	Strength of Index Models to Predict Oral Reading Fluency (ORF)			
	GPED_01 Teacher's qualifications & experience	GPED_02 Teacher's ease of teaching in LOI	GPED_05 School pedagogical management	GPED_06 Curriculum program experience & resources
Wald F	15.636 ***	12.548 ***	9.968 ***	8.369 ***
RLL contrib. still significant?	***	***	***	***
Value added w/ RLL (entered last)	1.9%	2.7%	2.5%	2.1%
Value added w/ Index (entered last)	0.4%	0.7%	1.5%	1.4%

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

As can be seen in *Table 35*, overall levels of variance in ORF explained by each model are again weaker than those observed for CLSPM with the same indices. For ORF, variance explained ranges from just over 10% to 11.8% for the basic index, depending on the specific sample, and from 14.1% to 15% for the "full" models that include both the RLL effect and the contribution of a given index. The "value added" rows again indicate that RLL's specific contribution (ranging from 1.9% to 2.7%) is substantially larger than that of any given general pedagogical index, although school pedagogical management and school's Curriculum program experience and resources (contributing 1.5% and 1.4%, respectively, to the variance explained) also provide notable, distinct "value added." Specific parameter estimates, standard errors, and confidence intervals of each full 2012 model are available in Attachment E, Tables E5 through E8.

D. Summary of findings on contextual factors

On the basis of logistic regressions using survey and classroom observation data, RLL treatment and control samples displayed some areas on which RLL and control schools and students differed at baseline (notably, availability of water at the school and student home material wealth). On the whole, however, the results suggest that across a broad array of school, teacher, and classroom pedagogical characteristics, RLL treatment and control groups were not significantly different at baseline. While the two groups diverged over time in a number of areas of pedagogical practice once the RLL program began, not all of these differences persisted through to endline.

Results on letter recognition confirm a strong contribution of RLL participation to variance in student performance explained, even when accounting for general school characteristics, student characteristics, or pedagogical context and practices, as well as grade level, language of instruction, student gender, and baseline mean scores. At the same time, general school characteristics, student home language-literacy environment, school pedagogical management practices, and school Curriculum program experience and resources also made contributions to the models that were distinct from that of RLL participation or other predictors.

Results on oral reading fluency present a much a much lower proportion of the variance explained, but the specific contribution of RLL participation continues to be significant and relatively large, independent of all other elements in a given full model. Child's language-literacy environment at home also stands out when added last to the model, surpassing RLL's still important, but smaller, specific contribution. Among the general pedagogical characteristics and practices examined, school pedagogical management practices and school Curriculum program experience and resources again display contributions to variance explained that are distinct from RLL program participation.

V. Examining the Fidelity of RLL Implementation

To help understand the observed patterns in students' learning in RLL and control classrooms, we sought to test the extent to which RLL program implementation as intended was in fact achieved in our sample. To do this, we collected and analyzed data from teacher and school principal surveys and classroom observation instruments using the same "index" approach described in the previous section, to evaluate whether and to what degree RLL training and material inputs were provided, the quality of principals' and teachers' reported understanding and practice of RLL methods, and the quality of their delivery of those methods as actually observed.

Given the threats to consistency of RLL program roll-out described in Section II.C of this report, we sought to measure the degree of fidelity of implementation actually achieved by IEP in RLL program schools, and conversely, whether control schools may have been compromised through exposure to RLL elements. In addition, we examined the relationship of the degree of fidelity achieved, to students' learning outcomes.

A. *Construction of RLL implementation fidelity indices*

The construction of indices representing the degree of RLL implementation fidelity that was achieved followed a process similar to that used in developing the contextual characteristics indices described in the previous section. Variables drawn from teacher survey, classroom observations, and director survey sources were grouped conceptually and examined for their viability. Four separate indices of RLL implementation fidelity were created in this way (***Table 36***).

Table 36. Indices of RLL Implementation Fidelity

INDEX CODE	INDEX NAME AND DESCRIPTION
INDICES OF RLL IMPLEMENTATION FIDELITY	
RLLF_01	Fidelity to RLL capacity development inputs
RLLF_02	Fidelity to RLL material inputs
RLLF_03	Fidelity to general RLL-supported instructional practices
RLLF_04	Fidelity to RLL-specific instructional practices

The first index, RLLF_01, represents RLL training and support visits provided to teachers and school directors, as reported in teacher and school director surveys. The second index , RLLF_02, reflects the provision of RLL graded teacher's guides, student workbooks and readers, and other pedagogical materials used in implementation of the RLL program. Index RLLF_03 and RLLF_04, based on classroom observation, are available for interim years (2010 and 2011), but not at endline, as classroom observation was not carried out as part of the study in that year. These indices reflect, respectively, instructional practices for active classrooms in line with RLL philosophy but not specifically emphasized in RLL trainings or materials (RLLF_03), and practices specifically encouraged by RLL (RLLF_04). The specific variables making up each index may be found in Attachment B, Table B4.

## B.	Tests of fidelity of RLL implementation

Logistic regression methods were applied to test the strength or "fidelity" of RLL implementation, using RLL treatment or control group (recoded 1-0) as the response variable, and the four "RLL fidelity" indices as predictor variables. A separate model was estimated using each index. A large and highly significant F score would indicate a strong association between a school's situation on a given index, and its membership in the RLL treatment group. *Table 37* displays the results of these tests across the four indices, by year.

Table 37. Results of Tests of Fidelity of RLL Implementation

ÍNDEX		Year	d.f.	Association with RLL group (Wald F)		School n	Class or Student n
RLLF_01	Fidelity to RLL capacity development inputs	2010	2, 71	68.88	***	76	135
		2011	2, 94	63.24	***	99	181
		2012	6, 61	9.673	***	69	173
RLLF_02	Fidelity to RLL material inputs	2011	1, 95	164.65	***	99	144
		2012	7, 59	15.127	***	68	174
RLLF_03	Fidelity to general RLL-supported instructional practices	2010	14, 53	4.00	***	70	117
		2011	11, 85	7.50	***	99	190
RLLF_04	Fidelity to RLL-specific instructional practices	2010	6, 71	17.65	***	80	143
		2011	6, 85	5.93	***	94	94 (G1 only)

* = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$; trend = $p < 0.10$; n.s. = not significant.

On all indices, a statistically significant difference between RLL and control schools was observed for all years in which RLL implementation data were collected.

- **Index RLLF_01: Fidelity to RLL capacity development inputs.** On all variables contained in this index, RLL means surpassed control means in all years for which data were available. This finding confirms that RLL schools on the whole received planned RLL training, and that control schools were less likely to have received these inputs.

- **Index RLLF_02: Fidelity to RLL material inputs.** As with Index RLLF_01, on most variables that make up this index, available for 2011 and 2012, RLL means surpassed control means. This finding confirms that RLL schools were more likely to have received RLL teacher and student curricular materials than were control schools, in accordance with the treatment plan.

- **Index RLLF_03: Fidelity to general good classroom practices supported by RLL.** On the basis of structured classroom observations conducted in 2010 and 2011, RLL means were for the most part higher than or not significantly different from control means on this index. In 2010 RLL classrooms were found to be more participatory and friendly, with RLL teachers circulating and attending to students' needs. RLL teachers in 2010 were, however, less often observed to pause in the course of the lesson to give students a chance to catch up.

In 2011, this practice became more prevalent in RLL classrooms, while the teacher circulating among the students continued to be a more common sight in RLL classrooms than in control classrooms. Observers in 2011 did find RLL classrooms to be less often "organized to favor learning," although a large majority of both RLL and control classrooms were found to meet this measure (84% and 94%, respectively).

- **Index RLLF_04: Fidelity to specific RLL classroom practices.** On nearly all of the six steps of an RLL first year lesson on which classroom observations were made in both 2010 (Grades 1 and 2) and 2011 (Grade 1 only), each step was more likely to be observed in RLL classrooms than in control classrooms. The single exception was in 2011 on Step 1, review of the previous day's text, which was observed in only 51% of RLL classrooms but in 57% of control classrooms. (Step 5 was measured only in RLL classrooms, so is not included in this analysis). Thus, as hoped, RLL teachers displayed fidelity to the RLL program relative to control group teachers. However, proportions of RLL teachers observed to follow a given step in the reading lesson varied from 63% to 91% in 2010 and from 51% to 86% in 2011, so fidelity to the program's approach was still well below universal even in RLL classrooms.

On the whole, the results indicate that RLL schools were significantly more likely to have received intended RLL capacity development and instructional material inputs, and to carry out practices consistent with the RLL approach in their classrooms. At the same time, these findings do not present a perfect separation of the RLL experience from that of control schools, even in the case of specific inputs of the program, as shown in *Table 38*.

Table 38. Divergences from RLL Implementation Fidelity in the Provision of Program Inputs

Examples of incomplete "Fidelity of Implementation" in RLL Treatment Schools	Examples of "Contamination" of Control Schools
• **11%** of 2012 RLL school principals reported that they did NOT receive RLL training (4 out of 38 principals responding)	• **24%** of 2012 control school principals reported having received RLL training (9 out of 37 principals responding)
• **51%** of 2012 RLL treatment-school Grade 1 teachers report that they did NOT receive RLL training (19 out of 37 teachers responding)	• **25%** of 2012 control school Grade 1`teachers reported having received RLL training (9 out of 36 teachers reporting responding)
• **44%** of 2012 RLL treatment-school Grade 2 teachers report that they did NOT receive RLL training (15 out of 34 teachers responding)	• **23%** of 2012 control school Grade 2 teachers reported having received RLL training (6 out of 26 teachers reporting responding)
• **27%** of 2012 RLL treatment-school Grade 1 teachers report that they had NOT received RLL Teacher's Guide 1 (10 out of 37 teachers responding)	• **30%** of 2012 control school Grade 1 teachers reported having received RLL Teacher's Guide 1 (11 out of 37 teachers responding)
• **43%** of 2012 RLL treatment-school Grade 2 teachers report that they had NOT received RLL Teacher's Guide 2 (15 out of 35 teachers responding)	• **20%** of 2012 control school teachers in any grade reported having received RLL Teacher's Guide 1 (18 out of 88 teachers responding)
	• **12%** of 2012 control school Grade 2 teachers reported having received RLL Teacher's Guide 2 (3 out of 26 teachers responding)
	• **8%** of 2012 control school teachers in any grade reported having received RLL Teacher's Guide 2 (7 out of 88 teachers responding)

The above findings may to some extent be clouded by respondents' imperfect recall as well as confusion over the source of training and materials received. School staff turnover and transfer from one location to another during the period of the study may also have played a role; though the implementer did work with local education authorities to minimize out-transfers of RLL-trained teachers over the period.

They also present another reminder of the challenges inherent in longitudinal experimental and quasi-experimental designs in real-world settings and the value of combining analytic methods to help account for departures from initial study design.

C.   Relationship of RLL implementation fidelity to students' learning outcomes

We further explored the observed variations in RLL program implementation fidelity by examining the relationship of each RLL fidelity index available at endline to students' learning outcomes, first across RLL treatment and control groups, and second, within the RLL subsample itself. Using the same technique as for the contextual indices presented in Section IV, we applied linear regression methods for complex samples to predict learning CLSPM and ORF outcomes at endline.

Table 39 below presents the results of these analyses for CLSPM across the full sample (RLL treatment and control groups), for each RLL fidelity index available at endline and for the two indices together. All models tested were highly significant, with full models explaining from 23.9% (RLLF_01) to 26.2% (RLLF_01 & RLLF_02 together) of the variance observed in students' letter recognition skills.

It is noteworthy that each RLL fidelity index contributes a higher proportion of variance explained than does RLL group membership alone, when added last to the model. RLL group membership and a given index, as expected, share a substantial amount of the overall contribution to variance explained (2.5% for RLL training inputs and 3.6% for RLL material instruction inputs). Above and beyond this shared variance each index contributes further "value added" of 2.0% to 2.2% in additional variance explained, while other, unspecified features of RLL participation contribute smaller to negligible amounts (1.4% and 0.1%).

Table 39. Strength of Treatment Fidelity Indices as Predictors of Letter Recognition (CLSPM), RLL Treatment and Control Schools

STATISTIC	Strength of Index Models to Predict Letter Recognition		
	RLLF_01 RLL capacity development inputs	RLLF_02 RLL instructional material inputs	RLLF_01 & RLLF_02 together
School n	69	68	63
Student n	2804	2834	2588
R-squared (all models for a given index are constrained to school n and student n of the full index model)			
Base model	0.180	0.189	0.191
Base model + Index	0.225	0.247	0.262
Base model + RLL group	0.219	0.226	0.225
Base model + RLL group + Index	**0.239**	**0.248**	**0.262**
df (complex sample)	13, 54	14, 52	20, 41
Wald F	29.416 ***	20.625 ***	19.108 ***
RLL group contrib. still significant?	**	n.s.	n.s.

STATISTIC	Strength of Index Models to Predict Letter Recognition		
	RLLF_01 RLL capacity development inputs	RLLF_02 RLL instructional material inputs	RLLF_01 & RLLF_02 together
Value added w/ RLL (entered last)	1.4%	0.1%	0.0%
Value added w/ Index (entered last)	2.0%	2.2%	3.7%
Shared variance - RLL group & Index	2.5%	3.6%	3.4%

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; n.s. = not significant.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

Taking the two indices together (last two columns of the table), total variance in CLSPM explained increases to over 26%, with no additional distinct RLL group contribution, although the fidelity indices share with RLL group a notable portion of the variance explained (3.4%). On the other hand, the specific information on RLL training and material inputs together contributes an additional 3.7% to the proportion of variance explained. In other words, for CLSPM, the regression results suggest that when RLL inputs were made available—even inadvertently in control schools—these inputs made a tangible and distinct contribution to students' resulting CLSPM performance. Specific parameter estimates, standard errors, and confidence intervals on each full 2012 model are available in Attachment D, Tables D9 through D11.

A parallel analysis to explain the variance observed in students' higher-order oral reading fluency performance is presented in ***Table 40***.

Table 40. Strength of Treatment Fidelity Indices as Predictors of Oral Reading Fluency, RLL Treatment and Control Schools

STATISTIC	Strength of Index Models to Predict Oral Reading Fluency		
	RLLF_01 RLL capacity development inputs	RLLF_02 RLL instructional material inputs	RLLF_01 & RLLF_02 together
School n	69	68	63
Student n	2806	2836	2590
R-squared (all models for a given index are constrained to school n and student n of the full index model)			
Base model	0.112	0.111	0.114
Base model + Index	0.131	0.146	0.153
Base model + RLL group	0.134	0.132	0.133
Base model + RLL group + Index	0.138	0.152	0.157
df (complex sample)	13, 54	14, 52	20, 41
Wald F	13.034 ***	14.159 ***	9.013 ***
RLL group contrib. still significant?	*	*	trend
Value added w/ RLL (entered last)	0.7%	0.6%	0.4%
Value added w/ Index (entered last)	0.4%	2.0%	2.4%
Shared variance of RLL group & Index	1.5%	1.5%	1.5%

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; "trend" = $p < 0.10$; n.s. = not significant.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

The results shown in *Table 40* suggest that for oral reading fluency, specific information about teachers' and school directors' RLL training adds only a small proportion (0.4%) to explaining the variance observed in students' performance, above and beyond the base model parameters and RLL group membership. Other, unobserved features of RLL group membership contribute an additional 0.7%, and the two together share 1.5% of the explained variance, for a total of 13.8% for this first full model. Turning to the second model, the results suggest that RLL material inputs continue to play a substantial role in accounting for the variance observed in students' performance, sharing 1.5% of the variance explained with RLL group, but contributing an additional 2%, along with 0.6% of variance explained by other aspects of RLL participation, for a total variance explained of 15.2%. The final, combined model shows a similar pattern, with total variance explained of 15.7%, and suggests that RLL training inputs and material inputs make distinct contributions. On the whole, students' oral reading fluency performance appears to depend to a greater extent on the material, rather than the training, aspects of the RLL program, although a non-negligible proportion of variance explained also appears to be due to shared (1.5%) and unspecified (0.4%) RLL program inputs. (Detail on specific parameter estimates, standard errors, and confidence intervals on each full 2012 model are available in Attachment E, Tables E9 through E11).

We must also keep in mind that a large proportion of the variance observed in students' reading performance (over 70% for CLSPM and over 80% for ORF) remains unexplained in any of these models.

To further understand how the degree of RLL implementation fidelity achieved might influence students' performance, we also looked at these relationships within the sub-sample of RLL treatment schools alone. *Table 41* summarizes the results of these analyses.

Table 41. Strength of Treatment Fidelity Indices as Predictors of Treatment Effects, by Subtask (RLL Treatment Schools Only)

STATISTIC	Strength of Index Models to Predict :			
	Letter Recognition (CLSPM)		Oral Reading Fluency (ORF)	
	RLLF_01 RLL capacity development inputs	RLLF_02 RLL instructional material inputs	RLLF_01 RLL capacity development inputs	RLLF_02 RLL instructional material inputs
School n	37	35	37	35
Student n	1566	1499	1567	1500
R-squared (all models for a given index are constrained to school n and student n of the full index model)				
Base model	0.184	0.209	0.138	0.155
Base model + Index	**0.249**	**0.278**	**0.150**	**0.193**
df (complex sample)	14, 21	13, 20	14, 21	13, 20
Wald F	19.523 ***	14.225 ***	6.197 ***	9.281 ***
Value added w/ Index (entered last)	6.5%	6.9%	1.2%	3.8%

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
NOTE: "Base model" includes school LOI subgroup, student grade level, student gender, and baseline mean score for same school X grade on same EGRA subtask.

Restricted to RLL schools only, these results concord with those of the full sample, and are magnified: For letter recognition, both RLL capacity development (training inputs) and RLL instructional material inputs make important contributions to the variance explained (6.4% and 6.9%, respectively), above and

beyond the portion explained by LOI, gender, grade level, and school's baseline mean scores. The two RLL fidelity indices taken together and combined with the base model explain 28% of total variance observed, of which 7.8% is provided by the RLL fidelity indices, entered last (not shown). For oral reading fluency, the greater value added of RLL instructional material inputs (3.8%) is again observed, relative to RLL training inputs (1.2%).

D. Summary of results on RLL implementation fidelity

On all dimensions of RLL implementation fidelity examined, RLL schools were significantly more likely to have received intended RLL capacity development and instructional material inputs and to carry out practices consistent with the RLL approach in their classrooms. Nonetheless, there were also cases of control school staff who reported that they had participated in an RLL training or received RLL instructional materials, and some RLL treatment school teachers and principals who reported that they had not received the intended RLL training or materials.

Turning to the relationship of implementation fidelity to students' reading performance, the specific dimensions of RLL program training and material inputs explained a higher proportion of variance in students' letter recognition scores than did RLL group membership alone. While sharing with the RLL group a notable portion of the variance explained (3.4%), these dimensions contributed a distinct, additional 3.7% when considered together in the model using the full sample. A similar pattern is observed within the RLL-only sample.

With regard to oral reading fluency, specific information about RLL training provided to teachers and school directors added only a small proportion to explaining the variance observed in students' performance, but RLL material inputs continued to account for a distinct portion of the variance observed in students' scores, above and beyond other aspects of RLL participation. Again, this pattern was found in both the full sample (RLL and control schools) and the RLL-only sample.

VI. Summary of Evaluation Findings, Conclusions, and Lessons

The William and Flora Hewlett Foundation engaged RTI International to conduct an independent evaluation of the effectiveness of IEP's "Learn to Read" results set of its Read-Learn-Lead program over the course of its extension into additional areas and instructional languages (Bomu, Fulfulde, and Songhai as well as Bamanankan) of the country. The evaluation sought to examine the effectiveness of the program in producing early grade readers and the human and material resources necessary to do so, as well as how language of instruction and length of exposure may affect this process.

A mixed-methods design, combining a randomized controlled trial with survey and qualitative methods, afforded the opportunity to rigorously estimate the impact of the program while accounting for some departures from the initial design as real-world factors came into play over the three years of the study. These real world factors included a slower implementation roll-out than initially planned, delays in the Ministry of Education's own plans of support for national languages instruction, some schools' reversion to the use of French as language of instruction, and school staff transfers that led to some "contamination" of control schools. Finally, political upheaval in northern Mali, which began in March 2012, effectively removed our ability to access Songhai-language schools at endline and reduced the endline sample by 25%.

In spite of these considerable challenges both to program implementation and to its evaluation, the evaluation study found clear evidence for an important and positive effect of the RLL program.

A.   Summary of findings

Impact of RLL participation on students' reading performance by endline. Difference-in-differences analyses (comparing the change in mean group scores between baseline and endline across RLL treatment and control groups) indicated a positive impact of the RLL program on children's reading skills overall, at the end of Grade 1 (after one year's exposure to the program), and particularly at the end of Grade 2 (after two years of exposure). While children's general language skills and phonemic awareness do not appear to have been significantly enhanced by RLL participation, the RLL advantage for actual reading skills—from letter recognition to decoding and demonstrating understanding of connected text—is strongly supported by the results of this study, especially for boys and for students completing Grade 2. Reading familiar words and decoding new words, skills essential to becoming a proficient reader, also showed moderate positive RLL treatment effects overall, and large effects among both Grade 1 and Grade 2 students. Results on the oral reading fluency and reading comprehension subtasks further support a positive contribution of the RLL treatment, again particularly for Grade 2 students.

Nonetheless, while RLL is demonstrably making a significant positive difference in children's learning skills, those skills are still exceedingly low even after two years of engagement with the program. The average third grader in an RLL school could read only 11 words of connected text in one minute at endline. In addition, while RLL effects were generally important for second graders, differences between third graders who had participated in the RLL program and those in control schools were negligible. These findings leave open the possibility that the benefits brought by RLL may not translate into lasting advantages for subsequent learning, even just one year after completing the program.

Compelling evidence (Abadzi, 2011; Gove and Cvelich, 2011) suggests that reaching some minimum threshold of reading performance (generally at least 40 words per minute, or more depending on the language) is critical before reading skills are "acquired" to any lasting degree, or capable of sustaining or supporting further learning. The RLL Grade 3 results provide an example of what may happen when an intervention is stopped before such a minimum level of performance is achieved.

Complex samples linear regressions on EGRA subtasks also displayed a strong association between students' participation in RLL and their reading outcomes at endline, even when accounting for language of instruction, grade level, student's gender, and baseline mean score for their school. Grade level was also a strong predictor for all subtasks, with higher grades associated with higher scores overall. Children attending Fulfulde-language schools tended to display lower scores on initial sound identification, decoding of invented words, and oral reading fluency. Student gender did not show any significant association with endline scores other than letter recognition, on which girls performed slightly less well than boys, other things being equal. Lower-order or foundational skills (phonemic awareness, letter recognition) also correlated positively with higher-order skills (word-level and connected text reading), indicating substantial interdependence across skills, while also reflecting students' general test-taking ability or other factors in the specific assessment experience.

RLL and contextual factors. On the basis of logistic regressions using survey and classroom observation data, RLL treatment and control samples showed some significant differences, even at baseline, although the nature of these differences varied over the years of the study. Contextual characteristics examined include general school characteristics, general student characteristics, and characteristics of schools' pedagogical environment not specifically anticipated to be influenced by RLL. While revealing some areas on which RLL and control schools and students differed at baseline (notably, availability of water at the school and student home material wealth), the results also suggest that across a broad array of school, teacher, and classroom pedagogical characteristics, RLL treatment and control groups were not significantly different at baseline. These analyses also indicate that the two groups diverged over time in a number of areas of pedagogical practice once the RLL program began, although not all of these differences persisted through to endline.

The possible contributions to students' reading performance of these contextual factors relative to that of RLL participation were also examined, focusing on letter recognition and oral reading fluency as they represent the lower and higher ends of the EGRA skills spectrum. Results on letter recognition confirm a strong contribution of RLL participation to variance in student performance explained, even when accounting for general school characteristics, student characteristics, or pedagogical context and practices, as well as grade level, language of instruction, student gender, and baseline mean scores. At the same time, general school characteristics, student home language-literacy environment, school pedagogical management practices, and school Curriculum program experience and resources also made contributions to the models that were distinct from that of RLL participation or other predictors.

The results for oral reading fluency on these same general school and student characteristics present a much lower proportion of the variance explained, but the specific contribution of RLL participation continues to be significant and relatively large, independent of all other elements in a given full model. Child's language-literacy environment at home also stands out when added last to the model, surpassing RLL's still important, but smaller specific contribution to variance explained. Among the general pedagogical characteristics and practices examined, school pedagogical management practices and

school Curriculum program experience and resources again display contributions to variance explained that are distinct from RLL program participation.

Findings relating to the fidelity of RLL implementation. The study also examined the extent to which RLL program implementation was achieved in the sample, in terms of RLL training provided, RLL instructional materials provided, observed pedagogical practices generally in line with the RLL approach, and pedagogical practices specifically prescribed by the RLL approach. On all dimensions, RLL schools were significantly more likely to have received intended RLL capacity development and instructional material inputs and to carry out practices consistent with the RLL approach in their classrooms.

At the same time, the experience of RLL schools and personnel on these dimensions was not entirely distinct from that of control schools. Some control school staff reported that they had participated in an RLL training or received RLL instructional materials, while some RLL treatment school teachers and principals reported that they had not received the intended RLL training or materials. Thus, the observed variations in RLL program implementation fidelity were further examined in terms of their relationship to students' learning outcomes, first across RLL treatment and control groups, and second, within the RLL treatment subsample itself.

On the complete sample, the specific dimensions of RLL program training and material inputs explained a higher proportion of variance in students' letter recognition scores than did RLL group membership alone. While these dimensions shared with RLL group a notable portion of the variance explained (3.4%), they also contributed a distinct, additional 3.7% when considered together in the model. In other words, for CLSPM, the regression results suggest that when RLL inputs were made available—even inadvertently in control schools—they made a tangible and distinct contribution to students' resulting CLSPM performance. For oral reading fluency, while specific information about RLL training provided to teachers and school directors adds only a small proportion (0.4%) to explaining the variance observed in students' performance, RLL material inputs continued to account for a distinct portion of the variance observed in students' scores, above and beyond other aspects of RLL participation.

Within the subsample of RLL treatment schools alone, the findings concord with those of the full sample, and are magnified: both RLL capacity development (training inputs) and RLL instructional material inputs make important contributions to the variance in letter recognition scores, above and beyond the portion explained by language of instruction, gender, grade level, and school's baseline mean scores. For oral reading fluency, RLL instructional material inputs again appear to be more important than RLL training inputs, and overall variance explained is smaller than for letter recognition.

B.   *Conclusions, lessons, and recommendations going forward*

The results of the independent evaluation of the "Read to Learn" results set of IEP's Read-Learn-Lead program point to an important contribution of this program to the development of Malian children's early grade reading skills in national languages. The advantages of participating in the program were evident by Grade 1 after only one year of exposure to the program, and particularly at the end of Grade 2, suggesting that the full two-year program offered the greatest benefit. Evidence of a positive RLL effect remained strong for most skills, even when a variety of other potential sources of variance in student performance (language of instruction, grade level, gender, general contextual characteristics of

the school, those of the student's home environment, and other pedagogical resources and practices of the school) were taken into account.

The RLL program implementation fidelity findings indicate that on the whole, adhesion to RLL program implementation was achieved. Both the program's teacher and school director training, and its provision of instructional material inputs to schools, made distinct contributions to student's lower-order skills, while the instructional material inputs were particularly important in predicting higher-order reading skills. The existence of a non-negligible proportion of anomalous cases, however (control schools that reportedly received RLL inputs, and RLL schools that did not), also underscores the challenges of longitudinal experimental and quasi-experimental designs in real-world settings and the value of combining analytic methods to help account for such departures from intended study design.

The low overall level of reading performance, even in RLL program schools, the apparent non-effect of the program for Grade 3 students, and the lower relative performance found among students in Fulfulde-language schools remain areas of particular concern for the RLL program going forward. The results also suggest some important avenues for further inquiry: the interactions among reading skills, the influence of language of instruction, and the challenges in giving children evolving in different language environments equivalent chances to learn and to show what they have learned.

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Attachments

Attachment A   List of Study Instruments, with Illustrative Examples

Attachment B   Content of Thematic Indices

Attachment C   Results of 2012 Logistic Regression Models Estimating Strength of Thematic Index
                Associations with RLL Treatment

Attachment D   Results of 2012 Multiple Regression Models Estimating Strength of Thematic Indices
                in Predicting Students' Letter Recognition Performance (CLSPM) at Endline

Attachment E   Results of 2012 Multiple Regression Models Estimating Strength of Thematic Indices
                in Predicting Students' Oral Reading Fluency (ORF) at Endline

Attachment A. List of Study Instruments, with Illustrative Examples

Note: Given the volume of study instruments in multiple versions and languages, only illustrative examples of each instrument are provided here. All study instruments are available upon request from the authors.

A1.   EGRA instruments in four national languages

   Bamanankan-language instrument used in 2012 is provided as an example

A2.   Teacher survey / Interview protocol

   Revised (2012) Teacher Survey is provided as an example

A3.   School principal survey / Interview protocols

   Revised (2012) School Principal Survey is provided as an example

A4.   Classroom observation instruments

   Revised (2011) Classroom Observation Protocols are provided as an example

Evaluation des compétences en lecture dans les premières années de l'école fondamentale - 2012

FICHE DES RÉPONSES DE L'ÉLÈVE- LANGUE <u>BAMANANKAN</u>

Instructions générales :

Il est important de s'assurer que la visite de l'école se fasse de manière planifiée et minutieuse. Une fois sur place, il faut tout faire pour s'assurer que tout le monde se sente à l'aise. Il est tout particulièrement important d'établir une relation détendue et enjouée avec les élèves qui vont être évalués, grâce à de simples conversations initiales (voir exemple ci-après). L'élève doit presque percevoir l'évaluation qui suit comme étant un jeu.

ATTENTION !
- Lisez toutes les instructions **en langue nationale** et ne dire aux élèves que ce qui est surligné en gris.
- Eteignez votre téléphone portable avant de commencer le test.
- Ecartez les autres élèves de celui qui passe le test.
- Evitez que les élèves se racontent les uns aux autres de quoi il s'agit !

I ni sɔgɔma! Ne tɔgɔ ye .... I ka karamɔgɔ teri dɔ de ye ne ye. Ne denw fana bɛ yen. I n'u bɛɛ ye kelen ye. Kalanjɛ, farikolonɛnajɛ ni miziki ka di u ye. E dun, e tɔgɔ ? Mun de ka di e ye ?
> [Attendez la réponse de l'enfant. Si l'enfant semble à l'aise, passez directement au consentement verbal.
> S'il hésite ou a l'air peu à l'aise, posez la deuxième question avant de passer au consentement verbal].
> N'i ma taa lekɔli la don min, i b'i diyanyeko jumɛn kɛ ?

Veuillez lire, à haute voix, la déclaration suivante à l'élève pour obtenir son *consentement verbal*.

Ne nakun ye min ye yan bi, a to ne k'o nɛfɔ e ye. Kalan misiriso y'a nini denmisɛninw ka kalanjɛ kɛcogo ka jateminɛ. E sugandira k'i sendon o jateminɛ la. Nafa de bɛ i sendonni in na ; nka n'a man di i ye, i tɛ diyagoya.
An bɛna misali dɔw kɛ: lamɛnni, kalanjɛ ani sɛbɛnni. N bɛ waatilan (mɔnturu) in ta k'a lajɛ i bɛ waati min ta fɛn dɔw kalanni na. Nka ɛkizamɛn (kuruxini) tɛ dɛ! Ne ni e bɛ min kɛ, o tɛ foyi de falen i ka kuru la kilasi kɔnɔ. N bɛna nininkali dɔw k'i la fana aw ka so kan. Nka ne tɛna i ka jaabiw sɛbɛn. O la, maa si tɛn'a dɔn ko e ka jaabiw de don. Ani fana, ni e sago tɛ ka nininkali min jaabi, i b'o to yen; baasi foyi t'o la. N b'a fɔ i ye hali bi, i diyagoyalen tɛ k'i sendon kiimɛli in na n'a ma bɛn i ma. An bɛ se k'a daminɛ wa?

Consentement verbal obtenu: ☐ *OUI*

(Si le consentement verbal n'est pas obtenu, remercier l'élève et passer au prochain élève, utilisant ce même formulaire.)

A. Date du test :		F. Année d'études de l'élève :	1 = 1ère année
B. Nom du passateur:			2 = 2 ème année
C. Nom de l'école :			3 = 3 ème année
D. Nom du CAP :		G. Classe (Section):	
E. Code unique - école:		H. Mois et Année de naissance de l'élève	Mois de : ____ Année : _____
		I. Genre de l'élève	1 = Féminin 2 = Masculin
		J. Heure du début du test :	___ : ___ am / pm

Section 0. Orientation au texte

Instructions
Montrer à l'enfant le passage sur la première page du cahier de l'élève.
Lire les instructions dans les cases grises ci-dessous et noter la réponse de l'élève avant de passer à l'instruction suivante :

**Sɛbɛnni min bɛ kalanden ka kaye ɲɛ laban na, i b'o jira a la.
Cikan minnu sɛbɛnnen filɛ soninw kɔnɔ duguma, i b'olu kalan. Kalanden ka jaabi bɛ sɛbɛn ka sɔrɔ ka se ci donnen nɔkanta ma.**

---

1. [Pour l'instant, tu ne vas pas lire ce texte. Tu vas juste me montrer où tu vas commencer à lire cette phrase avec ton doigt. Mets ton doigt là où tu vas commencer à lire]

I tɛna masalabolo in kalan fɔlɔ. I bɛna kalanjɛ damɛnɛ gafe fan min fɛ, i bɛ fɔlɔ k'o de jira ne la. I bolokɔnnin da a yɔrɔ la

L'enfant met son doigt (ou pointe) le premier mot situé sur la première ligne (le plus à gauche)

☐ Correct   ☐ Incorrect   ☐ Pas de réponse

---

2. [Maintenant, montre moi avec ton doigt vers quelle direction tu continueras à lire.]

Sisan, i bɛna kalanjɛ kɛ ka taa fan min fɛ, o jira n na

L'enfant bouge son doigt de la gauche vers la droite

☐ Correct   ☐ Incorrect   ☐ Pas de réponse

---

3. [Quand tu arriveras au bout de la ligne, où est ce que tu continueras à lire ensuite ?]

Ni sera sɛbɛnnisira laban na, i bɛna kalanjɛ tɔ kɛ ka taa min?

L'enfant met son doigt (ou pointe) le premier mot de la deuxième ligne (le plus à gauche)

☐ Correct   ☐ Incorrect   ☐ Pas de réponse

Section 1. Identification du son initial

Cet exercice est uniquement à l'oral. Il ne faut pas montrer les mots écrits à l'élève. L'épreuve n'est pas chronométrée. Donnez d'abord à l'élève les exemples, l'un après l'autre en lui expliquant la tâche. Après chaque exemple, demandez-lui de répondre tout seul.

<u>Instructions à l'élève :</u> **Nin ye degeli de ye min bɛ kɛ baro senfɛ. N bɛna daɲɛ kelen fɔ i ye. Nb'a fɔ ka segin a kan. O kɔfɛ, i mana sigiden min mankan mɛn daɲɛ in daminɛ na, i b'o fɔ n ye. I sɔnna wa?**

Misali la "sogo" daɲɛ bɛ daminɛ ni « s » mankan ye. O tɛ wa ? « sogo » daɲɛ bɛ fɔlɔ ni mankan jumɛn ye ? « sogo » ? [Attendre que l'élève répète le son "s". S'il ne répond pas, dites-lui, "**« sogo » daɲɛ bɛ daminɛ ni « s » mankan ye.**]

An ka misali wɛrɛw lajɛ :

"Jala" daɲɛ bɛ daminɛ ni mankan jumɛn ye? « jala » ?

(Si l'élève répond correctement, dites-lui **a ka ɲi kosɛbɛ. « jala » daɲɛ bɛ daminɛ ni « j » mankan ye.**)

(Si l l'élève ne répond pas, dites-lui **« jala » daɲɛ bɛ daminɛ ni « j » mankan ye.**)

« ciden » daɲɛ bɛ daminɛ ni mankan jumɛn ye? « ciden » ?

(Si l'élève répond correctement, dites-lui **«a ka ɲi kosɛbɛ! « ciden » daɲɛ bɛ daminɛ ni « c » mankan ye.**)

(Si l'élève ne répond pas, dites-lui « **« ciden » daɲɛ bɛ daminɛ ni « c » mankan ye.**)

« palan» daɲɛ bɛ daminɛ ni mankan jumɛn ye ? « palan » ?

(Si l'élève répond correctement, dites-lui **«a ka ɲi kosɛbɛ! « palan » daɲɛ bɛ daminɛ ni « p » mankan ye.**)

(Si l'élève ne répond pas, dites-lui **« palan » daɲɛ bɛ daminɛ ni « p » mankan ye.**)

Ne bɛ min nɔfɛ i y'o faamu wa ? Sisan, ne bɛna daɲɛ wɛrɛw kalan i ye. N bɛ daɲɛ bɛɛ kelen kelen kalan siɲɛ fila. I tulomajɔ kosɛbɛ. I bɛ fɔlɔ ka mankan min mɛn daɲɔ daminɛ na, i b'o fɔ n ye. I sɔnna wa ?

<u>Ne pas corriger l'élève pendant le test.</u> En cas de non-réponse ou d'hésitation de sa part, après 3 secondes marquer la case « Pas de réponse » et passez au prochain item.

<u>Règle d'auto-stop :</u> Si l'élève ne réussit pas à donner une seule réponse correcte parmi les cinq premiers mots, demandez-lui gentiment de s'arrêter, et cocher la case « auto-stop ». Passez au prochain exercice.

……… ……daɲɛ bɛ daminɛ ni mankan jumɛn ye ? ………… ? (daɲɛ kelen o kelen bɛ kalan siɲɛ fila)					Code
fɔ	/f /	○ Correct	○ Incorrect	○ Pas de réponse	
di	/d/	○ Correct	○ Incorrect	○ Pas de réponse	(daɲɛ 5)
nin	/n/	○ Correct	○ Incorrect	○ Pas de réponse	
bin	/b/	○ Correct	○ Incorrect	○ Pas de réponse	
sin	/s/	○ Correct	○ Incorrect	○ Pas de réponse	
ɲɛw	/ɲ/	○ Correct	○ Incorrect	○ Pas de réponse	
kɔ	/ k/	○ Correct	○ Incorrect	○ Pas de réponse	
ma	/m/	○ Correct	○ Incorrect	○ Pas de réponse	
tɔ	/t/	○ Correct	○ Incorrect	○ Pas de réponse	
la	/l/	○ Correct	○ Incorrect	○ Pas de réponse	

Cochez ici si l'exercice a été arrêté par manque de réponses correctes parmi les 5 premiers mots:

(auto-stop)

Section 2. Connaissance des graphèmes (lettres et groupes de lettres)

Une réponse est « correcte » si l'élève a donné le **nom** ou le **son** (a', i', l', ɔ) des lettres. Pour les graphèmes de plus d'une lettre, leur prononciation est celle qu'ils ont dans les mots (par exemple, 'an' se lit comme dans le mot 'kan', 'on' comme dans le mot 'kon', 'aa' comme dans le mot 'baara', 's' comme dans 'sɛ' ; 'ɲ' comme dans 'ɲɔ'…).

Les réponses de l'élève doivent être indiquées de la manière suivante :

- **Incorrect ou non-réponse:** Barrer (/) le graphème si l'élève a donné une réponse incorrecte, ou n'a pas donné de réponse.
- **Auto-correction :** Dans le cas oɗl'élève a donné une réponse incorrecte mais s'est corrigé par la suite (auto-correction), entourer l'item que vous avez déjà barré. Comptez cette réponse comme étant correcte.

Ne dites rien sauf si l'élève ne répond pas et reste bloqué sur un graphème pour au moins 3 secondes. Dans ce cas, demandez-lui, « Continue », en lui montrant le prochain graphème. Marquer le graphème sur lequel l'élève s'est bloqué comme incorrect.

Montrez à l'élève la feuille de la Section 2 dans le Cahier de Stimuli (F/2). Dites-lui:

Siginidenw ni siginidenkuluw filɛ ka ɲɛ in fa. Siginiden ninnu kalan i k'u tɔgɔ walima u mankan fɔ n ye. Misali la, nin siginiden in :"a". Ale bɛ kalan /a/ i n'a fɔ "ba" daɲɛ kɔnɔ *[Indiquer le "a" dans la ligne des exemples]*.

An k'a waleya sisan *[Indiquer le "i" dans le rang des exemples]*:

  Si l'élève répond correctement, dites: a ka ɲi kosɛbɛ, siginidenkulu in bɛ kalan /i/ i n'a fɔ "si" daɲɛ kɔnɔ.

  Si l'élève ne répond pas correctement, dites: " siginidenkulu in bɛ kalan /i/ i n'a fɔ "si" daɲɛ kɔnɔ.

An ka misali werew lajɛ *[Indiquer le "l" dans le rang des exemples]*:

  Si l'élève répond correctement, dites: " a ka ɲi kosɛbɛ, siginidenkulu in bɛ kalan /l/

Si l'élève ne répond pas correctement, dites: " siginidenkulu in bɛ kalan /l/

An ka misali werew lajɛ tun. *[Indiquer le "ɔ" dans le rang des exemples]*:

  Si l'élève répond correctement, dites: " a ka ɲi kosɛbɛ, siginidenkulu in bɛ kalan /ɔ/ i n'a fɔ « kɔ » daɲɛ kɔnɔ

    Si l'élève ne répond pas correctement, dites: siginidenkulu in bɛ kalan /ɔ/ i n'a fɔ « kɔ » daɲɛ kɔnɔ

I sɔnna wa? An bɛ se ka taa a fɛ ? Ni ne ko "a daminɛ", i kɛtɔ ka siginiden fɛn o fɛn kalan, i b'i bolo da o kan. I b'u kalanni daminɛ numanfɛ ka taa kininfɛ. I y'a faamu kosɛbɛ wa? I bolo da sigiden fɔlɔ kan. I labɛnnen don wa? I b'a lajɛ k'u kalan ka ɲɛ teliya la. A damiɛ!

🕐 Etablir le chronomètre pour une minute (60 secondes) en appuyant sur le bouton « MIN ». Au moment oɗl'élève prononce la première lettre, faites démarrer le chronomètre en appuyant sur le bouton START / STOP.

Au bout d'**une minute,** mettre un crochet (**]**) juste après le dernier graphème que l'élève a lu. Demandez à l'élève de s'arrêter. Si l'élève a tout lu en moins d'une minute, notez dans la case fournie à cet effet en bas de la page, le nombre exact de secondes restantes indiquées sur le chronomètre. Par contre, si l'élève n'a pas terminé l'exercice en une minute, notez "0" secondes.

Règle d'auto-stop : Si l'élève ne réussit pas à donner une seule bonne réponse parmi les dix premiers graphèmes (le premier rang), demandez-lui gentiment de s'arrêter, et cocher la case « auto-stop ».

Misaliw: a   i   l   ɔ

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	
d	ɔ	an	g	an	i	a	o	d	r	*(10)*
r	k	m	u	a	t	i	l	d	m	*(20)*
nb	h	np	ŋ	z	nf	nj	ns	nc	nk	*(30)*
o	k	a	s	ɔ	k	n	an	a	t	*(40)*
s	w	ɛ	o	l	b	e	f	in	a	*(50)*
i	u	a	ɛ	n	w	g	l	r	m	*(60)*
y	j	a	ɛn	ɲ	c	on	nt	ng	p	*(70)*
aa	oo	ii	ee	uu	ɔɔ	ɛɛ	un	ɔn	en	*(80)*
ɔ	u	k	i	b	s	ɛ	n	i	a	*(90)*
b	l	ɛ	i	g	s	ɔ	l	a	u	*(100)*

Nombre exact de secondes restantes indiquées sur le chronomètre : [ ]

Cochez ici si l'exercice a été arrêté par manque de réponses correctes à la première ligne **(auto-stop):** [ ]

I ni ce, an bɛ se ka tɛmɛ ni dɔ wɛrɛ ye

Codes :   Crochet [ ]   # Incorrect [ ]

Section 3. Lecture de mots familiers

Comme pour la section précédente, les réponses de l'élève doivent être indiquées de la manière suivante :

- *Incorrect ou non-réponse:* Barrer (/) le mot si l'élève a donné une réponse incorrecte ou n'a pas donné de réponse.
- *Auto-correction :* Dans le cas où l'élève a donné une réponse incorrecte mais s'est corrigé par la suite (auto-correction), entourer l'item que vous avez déjà barré. Comptez cette réponse comme étant correcte.

Ne dites rien sauf si l'élève ne répond pas et reste bloqué sur un mot pour au moins 3 secondes. Dans ce cas, demandez-lui, « Continue », en lui montrant le prochain mot. Compter le mot sur lequel l'élève s'est bloqué comme incorrect, meme si l'élève le répète correctement après vous.

Rétablir le chronomètre pour une minute (60 secondes) en appuyant sur le bouton « MIN ».

Présentez à l'élève la feuille de la Section 3 dans le Cahier de Stimuli (F/3). Dites-lui:

Daɲɛ dɔw filɛ ɲɛ in kan i bɛna minnu kalan. Misali 3 de bɛ yan. Misali la, daɲɛ in bɛ kalan « fo » *[Indiquer le mot «fo » avec le doigt]***. I bɛ se ka daɲɛ fɔlɔ in kalan wa ?**
[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]
daɲɛ in dun ? *[indiquer le mot « taa » avec le doigt]*. **I bɛ se k'o kalan wa ?**
[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]
Nin dun ? *[indiquer le mot « ne » avec le doigt]*. **I bɛ se k'o kalan wa ?**
[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]
I sɔnna wa ? N bɛ min nɔfɛ i y'o faamu wa? Ni ne ko "a daminɛ", i bɛ siraw ta kelen kelen k'u kalan k'a daminɛ numanfɛ ka taa kininfɛ. N'i sera sira dɔ laban na, i bɛ dɔ wɛrɛ daminɛ. I labɛnnen don wa? I b'a lajɛ k'u kalan ka ɲɛ teliya la. A daminɛ!

Faites démarrer le chronomètre lorsque l'élève essaye le premier mot (« ma ») , en appuyant sur le bouton <START / STOP>.

Au bout d'**une minute,** mettre un crochet (**]**) juste après le dernier mot que l'élève a lu. Demandez à l'élève de s'arrêter. Si l'élève a tout lu en moins d'une minute, notez dans la case fournie à cet effet en bas de la page, le nombre exact de secondes restantes indiquées sur le chronomètre. Dans le cas contraire, si l'élève n'a pas terminé l'exercice, notez "0" secondes.

<u>*Règle d'auto-stop :*</u> Si l'élève ne réussit pas à donner une seule bonne réponse parmi les cinq premiers mots (le premier rang), demandez-lui gentiment de s'arrêter, et cocher la case « auto-stop ». Passer au prochain exercice.

Misaliw: fo   taa   ne

1	*2*	*3*	*4*	*5*	
dugu	cogo	teri	fɛ	diya	*5*
biɲɛ	olu	den	sɔrɔ	taara	*10*
dɔ	na	bɔ	don	muɲu	*15*
sɔrɔ	tuma	jama	lajɛ	segin	*20*
fana	ko	tun	bila	kɛ	*25*
sama	da	kelen	kan	bɛɛ	*30*
se	na	bɛ	ni	san	*35*
ka	tɛ	min	ye	fɛn	*40*
forow	nɔgɔn	kala	yɛrɛ	tora	*45*
safi	fara	ɲini	man	baro	*50*

Nombre exact de secondes restantes indiquées sur le chronomètre : [ ]

Cochez ici si l'exercice a été arrêté par manque de réponses correctes à la première lign (**auto-stop**) : [ ]

I ni ce, an bɛ se ka tɛmɛ ni dɔ wɛrɛ ye   Codes :   Crochet [ ]   # Incorrect [ ]

Section 4. Lecture de mots inventés

Comme pour la section précédente, les réponses de l'élève doivent être indiquées de la manière suivante :

- **Incorrect ou non-réponse:** Barrer (/) le mot si l'élève a donné une réponse incorrecte ou n'a pas donné de réponse.
- **Auto-correction :** Dans le cas où l'élève a donné une réponse incorrecte mais s'est corrigé par la suite (auto-correction), entourer l'item que vous avez déjà barré. Comptez cette réponse comme étant correcte.

Ne dites rien sauf si l'élève ne répond pas et reste bloqué sur un mot pour au moins 3 secondes. Dans ce cas, demandez-lui « Continue », en lui montrant le prochain mot. Compter le mot sur lequel l'élève s'est bloqué comme incorrect, meme si l'élève le répète correctement après vous.

🕐 Rétablir le chronomètre pour une minute (60 secondes) en appuyant sur le bouton « MIN ».

Présentez à l'élève la feuille de la Section 4 dans le Cahier de Stimuli (F/4). Dites-lui:

> **Daɲɛ dɔw filɛ, lala i ma deli ka minnu ye. Nka ne tun b'a fɛ i k'a lajɛ k'u kalan. Misali la, daɲɛ fɔlɔ in bɛ kalan « yii »** *[Indiquer le mot « yii » avec le doigt].* **I bɛ se ka daɲɛ fɔlɔ in kalan wa ?**
> *[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]*
> **daɲɛ in dun ?** *[indiquer le mot « ke » avec le doigt].* **I bɛ se k'o kalan wa ?**
> *[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]*
> **Nin dun ?** *[indiquer le mot « pu » avec le doigt].* **I bɛ se k'o kalan wa ?**
> *[Après sa réponse, ou après 3 secondes dans le cas de non-réponse, montrez-lui comment faire.]*
> **I sɔnna wa ? N bɛ min nɔfɛ i y'o faamu wa? Ni ne ko "a daminɛ", i bɛ siraw ta kelen kelen k'u kalan k'a daminɛ numanfɛ ka taa kininfɛ. N'i sera sira dɔ laban na, i bɛ dɔ wɛrɛ daminɛ. I labɛnnen don wa? I b'a lajɛ k'u kalan ka ɲɛ teliya la. A daminɛ!**

🕐 Faites démarrer le chronomètre lorsque l'élève essaye le premier mot (« ma ») , en appuyant sur le bouton <START / STOP>.

Au bout d'**une minute,** mettez un crochet (**]**) juste après le dernier mot que l'élève a lu. Demandez à l'élève de s'arrêter. Si l'élève a tout lu en moins d'une minute, notez dans la case fournie à cet effet en bas de la page, le nombre exact de secondes restantes indiquées sur le chronomètre. Dans le cas contraire, si l'élève n'a pas terminé l'exercice, notez "0" secondes.

Règle d'auto-stop : Si l'élève ne réussit pas à donner une seule bonne réponse parmi les cinq premiers mots (le premier rang), demandez-lui gentiment de s'arrêter, et cocher la case « auto-stop ». Passer au prochain exercice.

Misaliw :   yii   ke   pu

1	*2*	*3*	*4*	*5*	
baa	kee	mo	nɔn	ki	*5*
gamo	tahe	yow	basɔ	pɔfo	*10*
nto	zi	lo	tee	fi	*15*
kiwɔ	zaa	yenu	todɛ	jowe	*20*
laaw	gibɔ	lezo	fuci	kunpɛ	*25*
pa	ɲitɛ	nanluw	lina	yonpe	*30*
nsɔ	wɛɛ	nbeliw	tansaw	njew	*35*
guu	ŋasi	yiila	dɛca	zuso	*40*
ɲoo	loo	luro	pinw	cola	*45*
wɛn	mido	poora	wi	mire	*50*

Nombre exact de secondes restantes indiquées sur le chronomètre :

*Cochez ici si l'exercice a été arrêté par manque de réponses correctes à la première ligne***(auto-stop):**

| I ni ce, an bɛ se ka tɛmɛ ni dɔ wɛrɛ ye | | Codes : | Crochet | | # Incorrect | |

Section 5a. Lecture du texte (petite histoire)

Indiquer les réponses de l'élève : de la manière suivante :
- *Incorrect ou non-réponse:* Barrer (/) le mot .
- *Auto-correction :* Entourer l'item que vous avez déjà barré.

Ne dis rien sauf si l'élève reste bloqué sur un mot pendant au moins 3 secondes. Dans ce cas, demandez-lui gentiment de continuer. Marquer le mot comme erroné. Au bout d'*une minute* faites suivre le dernier mot que l'élève a lu (ou tenté de lire) par un crochet (**]**), et demandez-lui gentiment de s'arrêter. Si l'élève a tout lu en moins d'une minute, notez dans la case fournie à cet effet en bas de la page, le nombre exact de secondes qui restent sur le chronomètre. Si l'élève n'a pas terminé l'exercice, notez "0" secondes.

Règle d'auto-stop : Si l'élève ne réussit pas à donner une seule bonne réponse parmi les 6 premiers mots (la première ligne), arrêter l'épreuve et cocher la case « auto-stop ». Passer à la Section 6.

🕐 Rétablir le chronomètre pour une minute (60 secondes) en appuyant sur le bouton « MIN ». Lorsque vous dites "Commence", faites démarrer le chronomètre.

Section 5b. Compréhension du texte lu

Lorsque l'élève a terminé de lire (Section 5a), *retirez le texte de sa possession* et posez la première question ci-après. Si l'élève ne donne aucune réponse après 10 secondes, répétez la question, et donnez à l'enfant encore 5 secondes pour répondre. S'il ne donne toujours pas de réponse, passez à la question suivante. Poser les questions qui correspondent aux lignes du texte *jusqu'à la ligne à laquelle se trouve le crochet* (**]**), c'est-à-dire, jusqu'à l'endroit où l'élève a cessé de lire .

Notez les réponses de l'élève dans l'espace « Réponses de l'élève »:
Mettez une croix dans la case qui correspond à sa réponse par rapport à chaque question.
- « Correct » : L'élève donne une réponse correcte ou a donné une réponse incorrecte mais s'est corrigé par la suite (auto-correction). Les réponses correctes peuvent être fournies en langue française ou en langue nationale.
- « Incorrect » : L'élève donne une réponse incorrecte.
- « Pas de réponse » : L'élève ne donne pas de réponse.

Sisan, n b'a fɛ i ka maana in kalan. I b'i kan bɔ kosɛbɛ A lajɛ i k'a kalan ka ɲɛ teliya la; o kɔ ne bɛ ɲininkali dɔw kɛ i la. Ni ne ko i k'a daminɛ, i b'a daminɛ yan *(Mettez la feuille de la Section 5 devant l'élève (F/5). Montrez du doigt le premier mot du passage).* I labɛnna wa ? An k'a daminɛ. [*Faites démarrer le chrono en appuyant sur le bouton START / STOP]*

Sisan, i bɛna ɲininkali damadɔ jaabi maana in kan.

QUESTIONS	RÉPONSES DE L'ÉLÈVE			
	Correcte	Incorrecte	Pas de réponse	Code
Mun na Yusu ma na lekɔli la bi ? [A man kɛnɛ]				
A teriw nana bɔ a ye tuma jumɛn ? [wulafɛ]				
U nana ni mun ye ? [namasa]				
Yusu n'a teriw ye baro kɛ min ? [kɛnɛma]				
U da sera mun ma ? [safi ni binta ka kɛlɛ]				
Binta ye mun kɛ o don ? [A ye Safi ka duloki fara]				
Mun na kɛlɛ banna ? [Binta ye yafa ɲini Safi fɛ]				

1- Yusu ma na lekɔli la bi ; a man kɛnɛ — 9

2- A teriw nana bɔ a ye wulafɛ — 16

3- U nana ni namasa ye — 21

4- Yusu n'a teriw ye baro kɛ kɛnɛma — 28

5- U da sera safi ni Binta ka kɛlɛ ma — 37

6- O don, Binta ye Safi ka duloki fara — 45

7- Nka, a ye yafa ɲini Safi fɛ ; kɛlɛ banna — 54

Nombre exact de secondes restantes indiquées sur le chronomètre : ☐

Cochez ici si l'élève n'a pas pu lire un seul mot **(auto-stop):** ☐

Codes :   Crochet ☐   # Incorrect ☐

I ni ce, an bɛ se ka tɛmɛ ni dɔ wɛrɛ ye

Section 6. Compréhension à l'audition

Cette section n'est pas chronometrée et il n'y a pas de stimuli de l'élève. Vous allez lire à haute voix une petite histoire, deux fois, puis demander à l'élève quelques questions de compréhension.

Notez les réponses de l'élève dans l'espace « Réponses de l'élève », de la manière suivante : Mettez une croix dans la case qui correspond à sa réponse par rapport à chaque question.

- « Correct » : L'élève donne une réponse correcte ou a donné une réponse incorrecte mais s'est corrigé par la suite (auto-correction). Les réponses correctes peuvent être fournies en langue française ou en langue nationale.
- « Incorrect » : L'élève donne une réponse incorrecte.
- « Pas de réponse » : L'élève n'arrive pas à donner une réponse après 3 secondes.

Dites à l'élève :

> Sisan, ne bɛna maana kelen kalan i ye siɲɛ kelen. O kɔ, n bɛ ɲininkali damadɔ k'i la maana in kan. I bɛ maana in lamɛn kosɛbɛ. I bɛ tila ka ɲininkaliw jaabi i fɛrɛ ma'
>
> I sɔnna wa? N b'a fɛ i ka min kɛ i y'o faamu wa? An k'a daminɛ. A lamɛn kosɛbɛ:
>
> Kura ye zenabu ka karamɔgɔ, ye a bɛ san saba bɔ
> U bɛ kalan kɛ so Araba wulafɛ
> K'u to kalan na, a dɔgɔmuso balala ka kasi
> A tun y'a yɛrɛ jogin ni u fa ka muru ye
> Zenabu y'a ta k'a nɛgɛ yanni u ba ka na
> U ba nana o kɔfɛ. A ye den ta k'a furakɛ
> Karamɔgɔ kura ko Zenabu ma k'a ka ɲi

QUESTIONS	Réponse correcte (NE PAS LIRE À L'ÉLÈVE)	RÉPONSES DE L'ÉLÈVE			Code
1. Zenabu ka karamɔgɔ tɔgɔ ye di ?	[Kura]	○ Correct	○ Incorrect	○ Pas de réponse	
2. U bɛ mun kɛ Araba wulafɛ ?	[U bɛ kalan kɛ so]	○ Correct	○ Incorrect	○ Pas de réponse	
3. Zenabu dɔgɔmuso ye mun kɛ?	[A balala ka kasi]	○ Correct	○ Incorrect	○ Pas de réponse	
4. Munn a dɔgɔmuso kasira ?	[A tun y'a yɛrɛ jogin ni muru ye]	○ Correct	○ Incorrect	○ Pas de réponse	
5. Zenabu ye mun kɛ ?	[A y'a ta k'a nɛgɛ]	○ Correct	○ Incorrect	○ Pas de réponse	
6. Jɔn ye ye Zenabu dɔgɔmuso furakɛ ?	[u ba]	○ Correct	○ Incorrect	○ Pas de réponse	
7. Karamɔgɔ ko di?	[A ko k'a ka ɲi]	○ Correct	○ Incorrect	○ Pas de réponse	

> I ni ce, an bɛ se ka tɛmɛ ni dɔ wɛrɛ ye

Section 7. Entretien sur l'environnement de l'élève

Selon le cas, écrivez la réponse de l'enfant ou entourez le code qui correspond à sa réponse.
S'il n'y a pas d'instruction spécifique, seulement une réponse est autorisée

An tilala ka ban. An tɔ ye ɲininkali damadɔw ye e kan, aw ka du kan, i ka kalan kan ani aw ka so kan.	
1	E si ye san joli ye? (En nombre d'années)	_____ ans ; Ne sais pas / pas de réponse 99
2	I bangena kalo jumɛn ?	Mois de _____ ; Ne sais pas / pas de réponse 99
3	I bangena san jumɛn ?	Année _____ ; Ne sais pas / pas de réponse 9999

4	I bɛ kan jumɛn (w) fɔ so ? [Jaabi caman bɛ se ka di]		Oui	Non	Pas de Réponse
		4.1 Bamanankan	1	0	9
		4.2 Fulfuldé	1	0	9
		4.3 Songhoi	1	0	9
		4.4 Bomu	1	0	9
		4.5 Français	1	0	9
		4.6 Arabe	1	0	9
		4.7 Autre (*Précisez en bas*)	1	0	9
		4.7 *(Détail)*			

5	Kalanjɛ gafe dɔ b'i bolo wa?	Non ....0 ; Oui.................1 Ne sais pas / pas de réponse 9
6	Gafe wɛrɛw, kunnafonisɛbɛnw walima fɛn kalanta wɛrɛ b'i bolo k'a bɔ kalanso taw la wa ?	Non ....0 ; Oui.................1 Ne sais pas / pas de réponse 9
[Si oui à la question précédente:] misali damadɔw di	(Pas besoin d'enregistrer la réponse)	

7	*[Si oui à la question 6:]* Gafe ninnu bɛ kan jumɛnw na? [Plusieurs réponses sont autorisées]		Oui	Non	Pas de réponse
		7.1 Français	1	0	9
		7.2 Bamanankan	1	0	9
		7.3 Fulfuldé	1	0	9
		7.4 Songhoi	1	0	9
		7.5 Bomu	1	0	9
		7.6 Arabe	1	0	9
		7.7 Autre (*précisez en bas*)	1	0	9
		7.7 *(Détail)*			

8	K'a bɔ e la, mɔgɔ wɛrɛ bɛ a' ka du kɔnɔ min bɛ se kalanjɛ la wa ?	Non ....0 ; Oui.................1 Ne sais pas / pas de réponse 9

9	*[Si oui à la question précédente:]* jɔn ni jɔn bɛ se kalanjɛ la aw ka so ? *[Plusieurs réponses sont autorisées]*		Oui	Non	Pas de réponse
		9.1 Mère	1	0	9
		9.2 Père	1	0	9
		9.3 Sœur(s)/frère(s)	1	0	9
		9.4 Autre (*préciser en bas*)	1	0	9
		9.4 *(Détail)*			

Nin fɛn ninnu b'aw ka so wa ?	Oui	Non	Pas de réponse
10	Arajo	1	0	9
11	Telefùni	1	0	9
12	Yeelen (kuran)	1	0	9
13	Tele	1	0	9
14	Firigo (jisumanyalan)	1	0	9
15	Sokɔnɔɲɛgen	1	0	9
16	Nɛgeso	1	0	9
17	Moto	1	0	9
18	Wotoro walima kulun walima pinasi	1	0	9
19	Mɔbili, kamiyɔn, 4x4, tirakitɛri	1	0	9

20	E ye zaridɛn kɛ yanni e ka don ekɔli la wa ?	Non 0
		Oui 1
		Ne sais pas / pas de réponse 9
21	I bɛ kilasi jumɛn na ɲinɛ ?	1ère année... 1
		2ème année 2
		3ème année... 3
		4ème année 4
22	E tun bɛ kilasi jumɛn na salon?	Jardin d'enfants 7
		1ère année... 1
		2ème année 2
		3ème année... 3
		4ème année 4
		Pas à l'école... 0
		Ne sais pas / pas de réponse 9
23	Yala karamɔgɔ bɛ to ka baara d'e ma ka kɛ so wa ?	Non 0
		Oui 1
		Ne sais pas / pas de réponse 9
24	Yala mɔgɔ b'i dɛmɛ ka baara in kɛ tuma dɔw wa ?	Non 0
		Oui 1
		Ne sais pas / pas de réponse 9
25	Salon, e ye dɔgɔkun kelen kɛ ekɔli kɔ wa ?	Non 0
		Oui 1
		Ne sais pas / pas de réponse 9
	Kiimɛli kuncɛwaati	__ : ___ am / pm

An tilala. A diyara n ye. I bɛ se k'i tile ka taa kilasi kɔnɔ. An ye min kɛ sisan, kana a fɔ tɔw ye

Evaluation IEP 2012
ENTRETIEN AVEC L'ENSEIGNANT

Code de l'entretien:

IDENTIFIANTS

M001	**NOM DU CAP**	
M002	**NOM DE L'ÉCOLE**	
M003	**CODE DE L'ÉCOLE**	
M004	Nom du passateur	
M005	Date de la passation	J J M M A A A A
M006	Heure de la passation	☐ H ☐ Min
M007	Nom de l'enseignant(e)	_____
M008	[INDIQUEZ SI L'ENSEIGNANT EST UNE FEMME OU UN HOMME]	Femme ☐ 1 Homme ☐ 2
M009	Vous enseignez quelle(s) classe(s) cette année? [SI MULTIGRADE, COCHEZ TOUTES LES CLASSES MENTIONNÉES]	1ère année ☐ 1 2ème année ☐ 2 3ème année ☐ 3 4ème année ☐ 4 5ème année ☐ 5 6ème année ☐ 6
M010	En quelle langue enseignez-vous dans votre classe cette année?	Bamanankan ☐ 1 Fulfulde ☐ 2 Songhoi ☐ 3 Bomu ☐ 4 Français ☐ 5

INFORMATIONS SUR LE PROFIL DE L'ENSEIGNANT

M011	Quelle est votre langue d'origine?	Bamanankan ☐ 1 Fulfulde ☐ 2 Songhoi ☐ 3 Bomu ☐ 4 Français ☐ 5 Autre ☐ 6 Si "Autre", préciser: _____
M012	Vous êtes né(e) en quelle année?	Année de naissance: 19 ☐
M013	Vous avez enseigné pendant combien d'années, y compris cette année?	Nombre d'année(s) ☐
M014	Dans votre classe, quelle approche utilisez-vous? (PC, classique, ou curriculum)	Classique ☐ 1 Curriculum ☐ 2 PC ☐ 3 Autre ☐ 4 Si "Autre", préciser: _____
M015	Vous avez enseigné dans le système classique (Français) pendant combien d'années?	Nombre d'année(s) ☐
M016	Vous avez enseigné dans le système PC/Curriculum pendant combien d'années? [CETTE année INCLUSE]	Nombre d'année(s) en PC ☐ Nombre d'année(s) en Curriculum
M017	Vous avez enseigné dans cette école pendant combien d'années?	Nombre d'année(s) ☐

M018	Dans combien d'écoles avez-vous enseigné avant d'arriver à cette école?	Nombre d'école(s)	

M019	Pourquoi / Comment êtes-vous venu enseigner dans cette école?	J'ai desiré venir à cette école	1
		Le CAP m'a envoye dans cette école	2
		Autre	3
		Si "Autre", préciser: _____	

| M020 | Habitez-vous dans le même village où se trouve l'école? | Non | 0 |
| | | Oui | 1 |

| M021 | Préciser le diplôme académique le plus élevé obtenu. | Diplôme obtenu: | |

M022	[AU PASSATEUR: COCHER LE NIVEAU D'ÉTUDES AUQUEL LE DIPLOME CORRESPOND]	Inferieur au Diplôme d'Études Fondamentales (DEF)	1
		Diplôme d'Etudes Fondamentales (DEF)	2
		DEF +2	3
		DEF +4	4
		Baccalauréat (BAC)	5
		BAC +2	6
		BAC +4	7
		Autre	8
		Pas de réponse	99

INFORMATIONS SUR LES RESPONSABILITÉS ET LES CHARGES DE L'ENSEIGNANT À L'ÉCOLE

M023	Dans une semaine typique, au total, combien d'heures par semaine enseignez-vous par niveau? [NOTEZ LE NOMBRE D'HEURES PAR NIVEAU]	Heures	
		1ère année - Nbre d'heures	1
		2ème année - Nbre d'heures	2
		3ème année - Nbre d'heures	3
		4ème année - Nbre d'heures	4
		5ème année - Nbre d'heures	5
		6ème année - Nbre d'heures	6
		Autre	7
		Si "Autre", préciser: _____	

M024	En quel(s) niveau(x)/classe(s) avez-vous enseignez l'an passe?	1ère année	1
		2ème année	2
		3ème année	3
		4ème année	4
		5ème année	5
		6ème année	6
		Autre	7
		Si "Autre", préciser: _____	

M025	Combien d'apprenants y a-t-il dans votre classe?		Filles	Garçons
		Nombre d'apprenants		

M026	Combien d'apprenants sont présents en classe aujourd'hui?		Filles	Garçons
		Nombre d'apprenants présents		

INFORMATIONS SUR LA SITUATION PHYSIQUE DE LA CLASSE

M027	Combien de table-bancs utilisables y a-t-il dans votre classe?	Nombre de table-bancs	

Les questions M028 - M031 sont à remplir PAR OBSERVATION EXCLUSIVEMENT - A ne pas demander à l'enseignant.

| M028 | AU PASSATEUR: Y a t-il des élèves assis par terre? | Non | 0 |
| | | Oui | 1 |

| M029 | AU PASSATEUR: Comment les bancs sont-ils organises dans la classe? | En rangee (organisation classique) | 1 |
| | | En groupe(s) pour le travail collectif | 2 |

M030	AU PASSATEUR: L'enseignant a-t-il suffisamment de place pour circuler entre les bancs?	Non	☐ 0
		Oui	☐ 1
M031	AU PASSATEUR: L'enseignant utilise-t-il les murs de la classe pour y afficher des fiches ou panneaux pedagogiques?	Les murs sont remplis de fiches/panneaux	☐ 1
		Il y a quelques fiches/panneaux	☐ 2
		Il n'y a pas de fiches/panneaux dans la salle	☐ 3

INFORMATIONS SUR LA PRÉPARATION ET LES PRATIQUES DE CLASSE

M032	Dans votre classe, a quelle frequence enseignez-vous en Français (et non pas en langue nationale)?	Toujours en Français	☐ 1
		La plupart en Français	☐ 2
		La moitie en Français	☐ 3
		Un quart en Français	☐ 4
		Jamais en Français	☐ 5
M033	Pour l'enseignement de la lecture - l'écriture, utilisez-vous conjointement la méthode syllabique avec le curriculum?	Non	☐ 0
		Oui	☐ 1
M034	Combien de temps avez-vous passe a la preparation de cette journee de cours?	Zero	☐ 1
		De 1 à 30 minutes	☐ 2
		De 31 à 60 minutes	☐ 3
		De 61 à 120 minutes (2 heures)	☐ 4
		De 121 à 180 minutes (3 heures)	☐ 5
		Plus de 3 heures	☐ 6
M035	En moyenne, combien de temps passez-vous à la preparation du cours du lendemain?	Zero	☐ 1
		De 1 à 30 minutes	☐ 2
		De 31 à 60 minutes	☐ 3
		De 61 à 120 minutes (2 heures)	☐ 4
		De 121 à 180 minutes (3 heures)	☐ 5
		Plus de 3 heures	☐ 6
M036	Au cours de la semaine dernière, combien de jours avez-vous donné des devoirs à faire à la maison?	Nombre de jours (entre 0 et 5)	☐
M037	Au cours de la semaine dernière, combien de jours avez-vous donné des devoirs **de lecture** à faire à la maison?	Nombre de jours (entre 0 et 5)	☐
M038	Combien de temps un élève de votre classe devrait-il consacrer chaque jour à ses devoirs à faire à la maison, en moyenne, selon vous? [SI L'ENSEIGNANT NE SAIT PAS, DEMANDEZ-LUI DE DEVINER]	Moins de 15 minutes	☐ 0
		De 15 à 29 minutes	☐ 1
		De 30 à 59 minutes	☐ 2
		Une heure ou plus	☐ 3
		Pas applicable, je ne donne pas de devoirs	☐ 88
M039	Comment faites-vous pour savoir si les élèves progressent? [NE PAS LIRE LES REPONSES POSSIBLES. COCHER **TOUTES** LES METHODES CITÉES]	Evaluation régulière sur base de test ecrits individuels	☐ 1
		Evaluation régulière sur base de test par groupe	☐ 2
		J'évalue les élèves à l'oral	☐ 3
		Correction des devoirs en classe et à la maison	☐ 4
		Autre	☐ 5
		Si "Autre", préciser:_____	
		Ne sais pas/refuse de	☐ 99
M040	A quelle frequence verifiez-vous si vos élèves progressent?	chaque leçon	☐ 1
		chaque jour	☐ 2
		chaque semaine	☐ 3
		chaque mois	☐ 4
		Jamais (il n'y a pas d'evaluation en curriculum)	☐ 0

M041	Gardez-vous une fiche d'évaluation des élèves?	Non ☐ 0
		Oui ☐ 1
		Ne sait pas / Refuse de répondre ☐ 99

M042	Pourriez-vous classer vos élèves par niveau de connaissance maintenant sans les interroger?	Non ☐ 0
		Oui ☐ 1
		Ne sait pas / Refuse de répondre ☐ 99

| M043 | Avez-vous une stratégie ou un programme spécifique pour aider les apprenants le plus faibles? | Non ☐ 0 |
| | | Oui ☐ 1 |

Si oui, préciser: _____
_____
_____

M044	Utilisez-vous les programmes radio (EIR) dans votre classe? Si oui, avec quelle frequence?	Non ☐ 0
		Oui, moins d'une fois par mois ☐ 1
		Oui, une à deux fois par mois ☐ 2
		Oui, une ou deux fois par semaine ☐ 3
		Oui, plus de 2 fois par semaine ☐ 4

INFORMATIONS SUR L'ENCADREMENT ET LA GESTION DES ÉLÈVES EN CLASSE

| M045 | Circulez-vous dans la classe pendant les leçons (entre les bancs)? | Non ☐ 0 |
| | | Oui ☐ 1 |

| M046 | Laissez-vous parfois les enfants seuls dans la classe? | Non ☐ 0 |
| | | Oui ☐ 1 |

Si oui, pourquoi?: _____

| M047 | Chantez-vous en classe avec les enfants? | Non ☐ 0 |
| | | Oui ☐ 1 |

| M048 | Y a-t-il de problèmes de discipline dans votre classe? | Non ☐ 0 |
| | | Oui ☐ 1 |

M049	[Si oui,] Quelles sont les problèmes de discipline dans votre classe?	Préciser _____
		_____
		_____

M050	Quelles sont vos solutions pour les problèmes éventuelles de discipline dans votre classe?	Préciser:_____
		_____
		_____
		Pas applicable ☐ 88

| M051 | Notez-vous les presences chaque jour? | Non ☐ 0 |
| | | Oui ☐ 1 |

| M052 | Au jourd'hui, dans cette classe, combien d'apprenants ne sont pas venus? | Nombre d'apprenants absents aujourd'hui ☐ |

| M053 | Aujourd'hui, dans cette classe, combien d'apprenants étaient en retard le matin? | Nombre d'apprenants venus en retard aujourd'hui ☐ |

| M054 | Le jour precedent ouvrable, dans cette classe, combien d'apprenants ne sont pas venus a l'école? | Nombre d'apprenants ☐ |

| M055 | Le jour precedent ouvrable, dans cette classe, combien d'apprenants sont venus en retard? | Nombre d'apprenants ☐ |

M056	Y a t-il des élèves dans votre classe qui dorment en plein cours?		Non	☐	0
			Oui	☐	1

INFORMATIONS SUR LE MATÉRIEL DIDACTIQUE DISPONIBLE EN CLASSE

M057	Avez-vous reçu des livres scolaires du Ministère pour enseigner la lecture en langue nationale pour le niveau que vous enseignez cette année? Si oui, en quel moment les avez-vous reçu?	Non	☐	0
		Oui, mais pas cette année	☐	1
		Oui mais ils sont arrives en retard	☐	2
		Oui, cette année	☐	3
		Si oui, préciser le nom du livre:_____		

M058	[SI OUI,] Les trouvez-vous inutiles, utiles, très utile?	Inutiles	☐	1
		Utiles	☐	2
		Très utiles	☐	3
		Ne sais pas/refuse de répondre	☐	99
		Pas applicable (il n'y a pas de livres)	☐	88

M059	[SI OUI A LA QUESTION ___] Comment trouvez-vous le niveau du livre de lecture? Adapté au niveau des élèves, trop difficile, ou trop facile?	Adapté au niveau des élèves	☐	1
		Trop difficile pour mes élèves	☐	2
		Trop facile pour mes élèves	☐	3
		Autre	☐	4
		Si "Autre", préciser: _____		
		Ne sais pas/refuse de répondre		99
		Pas applicable (il n'y a pas de livres)		88

M060	Combien d'élèves de votre classe disposent du livre de lecture en langue nationale?	Personne	☐	1
		Moins de 25%	☐	2
		Entre 25% et 50%	☐	3
		Entre 50% et 75%	☐	4
		Plus de 75%	☐	5
		Ne sait pas / Refuse de répondre	☐	99
		Pas applicable (il n'y a pas de livres)	☐	88

M061	Les enfants peuvent-ils emmener les livres a la maison?	Jamais	☐	0
		Oui, parfois	☐	1
		Oui durant toute l'année	☐	2
		Autre	☐	3
		Si "Autre", préciser: _____		
		Ne sait pas / Refuse de répondre	☐	99
		Pas applicable (il n'y a pas des livres)	☐	88

M062	Combien d'élèves de votre classe disposent de cahiers et d'ardoises/craies chaque jour?	Moins de 25%	☐	1
		De 25% à 49%	☐	2
		De 50% à 74%	☐	3
		75% ou plus	☐	4
		Ne sait pas / Refuse de répondre		99

M063	Les élèves dans votre classe disposent-ils des livres de lecture de l'éleve Ciwaras Lisent en langue nationale? Si oui, en quel nombre par niveau?	Livres de lecture élève Ciwaras Lisent reçu Niveau 1 - Nbre	☐	a
		Livres de lecture élève Ciwaras Lisent reçu Niveau 2 - Nbre	☐	b
		[Si la réponse est "Non", mettez 0 (zero)]		
		Ne sait pas / Pas de réponse	☐	99

M064	Avec quelle fréquence utilisez-vous les livres de l'élève Ciwaras Lisent en classe?	Jamais, je n'ai pas reçu ce matériel	☐	1
		Jamais, mais j'ai le matériel	☐	2
		Rarement	☐	3
		Une ou deux fois par mois	☐	4
		Une ou deux fois par semaine	☐	5
		Tous les jours	☐	6
		Ne sais pas/refuse de répondre	☐	99

M065	Les élèves dans votre classe disposent-ils des cahiers d'exercice d'écriture Ciwaras Lisent en langue nationale? Si oui, en quel nombre par niveau?	Cahier d'exercices d'écriture reçu Niveau 1 - Nbre	a
		Cahier d'exercices d'écriture reçu Niveau 2 - Nbre	b
		[Si la réponse est "Non", mettez 0 (zero)]	
		Ne sait pas / Pas de réponse	99

M066	Avec quelle fréquence utilisez-vous les cahiers d'exercice d'écriture Ciwaras Lisent en classe?	Jamais, je n'ai pas reçu ce matériel	1
		Jamais, mais j'ai le matériel	2
		Rarement	3
		Une ou deux fois par mois	4
		Une ou deux fois par semaine	5
		Tous les jours	6
		Ne sais pas/refuse de répondre	99

M067	Avez-vous reçu un ou des Guides de l'Enseignant Ciwaras Lisent ? Si oui, lesquels ?	Guides de l'Enseignant Niveau 1 reçu	a
		Guides de l'Enseignant Niveau 2 reçu	b
		[Si la réponse est "Non", mettez 0 (zero)]	
		Ne sait pas / Pas de réponse	99

M068	Avec quelle fréquence utilisez-vous le Guide de l'enseignant Ciwaras Lisent pour préparer ou pour mener votre cours?	Jamais, je n'ai pas reçu ce matériel	1
		Jamais, mais j'ai le matériel	2
		Rarement	3
		Une ou deux fois par mois	4
		Une ou deux fois par semaine	5
		Tous les jours	6
		Ne sais pas/refuse de répondre	99

M069	Les matériels didactiques Ciwaras Lisent suivants, sont-ils disponibles dans votre classe ou dans votre école [LIRE LA LISTE ET COCHER TOUTES LES CASES PERTINENTES] :	Oui	Non	
	Série de livrets (plusieurs titres) en langue nationale			a
	Jeu d'affiches didactiques			b
	Jeu de cartes-images			c
	Autres manipulables			d
	Autre			e
	Si "Autre", préciser: _____			
	Aucun de ces matériels didactiques reçu			88

INFORMATIONS SUR LES FORMATIONS EN PÉDAGOGIE DE LA LECTURE EN LANGUES NATIONALES REÇUES PAR L'ENSEIGNANT

M070	Cette année, avez-vous suivi la formation sur le programme Curriculum organisé par le CAP / le Ministère de l'éducation?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

M071	[SI OUI], La formation sur le programme Curriculum a duré combien de jours cette année?	Nombre de jours	
		[Si la réponse est "Non", mettez 0 (zero) jours]	
		Ne sait pas / Pas de réponse	99

M072	Avez-vous suivi une formation du programme PHARE / "Approche équilibrée" / EIR ?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

M073	[SI OUI], cette formation PHARE / "Approche équilibrée" / EIR a duré combien de jours?	Nombre de jours	
		[Si la réponse est "Non", mettez 0 (zero) jours]	
		Ne sait pas / Pas de réponse	99

M074	Avez-vous suivi une formation sur l'approche "Ciwaras Lisent" offerte par l'IEP?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

M075	[SI OUI], La formation "Ciwaras Lisent" a duré combien de jours?	Nombre de jours	
		[Si la réponse est "Non", mettez 0 (zero) jours]	
		Ne sait pas / Pas de réponse	99

M076	[SI OUI,] En quel mois de quelle année s'est passé cette formation sur Ciwaras Lisent? (Les estimations sont admissibles)	Mois:	Année :
		Ne sait pas / Pas de réponse	99
		Pas applicable	88

M077	Avez-vous reçu une autre formation spécifique à l'enseignement en langue nationale?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

M078	[SI OUI], Qui a organisé cette formation? [POSSIBLE REPONSES MULTIPLES]	L'école	1
		Le CAP	2
		Autre	3
		Si "Autre", préciser: _____	
		Ne sait pas / Pas de réponse	99
		Pas applicable	88

INFORMATIONS SUR L'ENCADREMENT / L'APPUI DISPONIBLE A L'ENSEIGNANT

M079	A qui vous adressez-vous lorsque vous souhaitez avoir un éclaircissement ou une réponse à une question spécifique relative à l'enseignement de la langue nationale?	Je n'ai jamais besoin d'aide	1
		Il n'y a personne pour m'aider	2
		Je demande à un autre enseignant	3
		Je demande au directeur	4
		Autre	5
		Si "Autre", préciser: _____	
		Ne sait pas / Refuse de répondre	99

M080	A quelle fréquence échangez-vous avec d'autres enseignants sur des idées ou supports pédagogiques (par exemple, lors de la préparation des leçons) ?	Jamais	1
		Une fois par an	2
		Une fois tous les 2-3 mois	3
		Une fois par mois	4
		2-3 fois par mois	5
		Chaque semaine	6
		Tous les jours	7
		Ne sait pas / Refuse de répondre	99

M081	Y a t-il un assistant (suppléant ou stagiaire)dans votre classe pour vous aider en classe ? Si oui, avec quelle fréquence?	Non	0
		Oui, une fois par mois ou moins	1
		Oui, 2-3 fois par mois	2
		Oui, 2-3 fois par semaine	3
		Oui, tous les jours	4

| M082 | [SI OUI] L'assistant vous appuie surtout en quels aspects? (Description) | Description: | |

M083	Vos fiches de séquence ou votre cahier de préparation, sont ils visés par quelqu'un? [SI OUI,] qui les vise?	Personne ne les vise	0
		Le Directeur	1
		Le Directeur Adjoint	2
		Autre	3
		Si "Autre", préciser: _____	
		Ne sait pas / Refuse de répondre	99

M084	A quelle fréquence votre préparation est-elle visée par quelqu'un d'autre?		Une fois par an		1
			Une fois tous les 2-3 mois		2
			Une fois par mois		3
			Une fois toutes les 2 semaines		4
			Chaque semaine		5
			Tous les jours		6
			Ne sait pas / Refuse de répondre		99
			Pas applicable		88

M085	Y a t-il quelqu'un qui observe vos leçons? [SI OUI,] qui les observe (non compris staff IEP)?		Personne ne les observe		1
			Directeur		2
			Directeur Adjoint		3
			Autre		4
		Si "Autre", préciser: _____			

M086	A quelle fréquence vos leçons sont-elles observées?		Une fois par an		1
			Une fois tous les 2-3 mois		2
			Une fois par mois		3
			2-3 fois par mois		4
			Chaque semaine		5
			Chaque jour		6
			Ne sait pas / Refuse de répondre		99
			Pas applicable		88

M087	Comment percevez-vous l'utilité de ces observations, dans l'amélioration de votre pratique d'enseignement?		Pas utile		0
			Assez utile		1
			Très utile		2
			Ne sait pas / Refuse de répondre		99
			Pas applicable		88

M088	Le CAP, vous a-t-il rendu visite de suivi-appui pédagogique cette année? Si oui, combien de fois?	Nbre de visites du CAP [ ] [Si la réponse est "Non", mettez 0 (zero) visites]

M089	[SI OUI,] La derniere visite du CAP a été effectué quand, à peu près? (Mois et Année)	Mois: [ ] Année : [ ] Ne sait pas / Pas de réponse [ ] 99 Pas applicable [ ] 88

M090	Dans le cadre du programme Ciwaras Lisent, IEP vous a-t-il rendu visite de suivi-appui pédagogique cette année? Si oui, combien de fois?	Nbre de visites IEP / Ciwaras Lisent [ ] [Si la réponse est "Non", mettez 0 (zero) jours]

M091	[SI OUI,] La derniere visite IEP dans le cadre de Ciwaras Lisent a été effectuée quand, à peu près? (Mois et Année)	Mois: [ ] Année : [ ] Ne sait pas / Pas de réponse [ ] 99 Pas applicable [ ] 88

INFORMATIONS SUR L'ABSENTÉISME ET L'ASSIDUITÉ DE L'ENSEIGNANT

M092	Au cours du mois dernier, combien de jours avez-vous eu à vous absenter de l'école pendant les jours ouvrables?	Nombre de jours [ ] Préciser les raisons:_____

M093	La semaine derniere, combien de jours etes-vous arrivé en retard à l'école?	Nombre de jours [ ] Préciser les raisons:_____

M094	La semaine derniere, combien de jours avez-vous quitté l'école avant l'heure?	Nombre de jours [ ] Préciser les raisons:_____

M095	Vous arrive-t-il de recevoir des coups de téléphone pendant que vous donnez cours? Si oui, avec quelle fréquence, à peu près?	Jamais	1
		Rarement	2
		Assez souvent	3
		Tous les jours	4
		Pas de réponse	99

ATTITUDES ET CROYANCES DE L'ENSEIGNANT VIS-A-VIS DE L'ENSEIGNEMENT-APPRENTISSAGE DE LA LECTURE

| M096 | Depuis son premier jour en 1ère année, combien de **mois** faut-il en moyenne pour qu'un élève de votre école soit capable de lire une phrase nouvelle sans aide? | Nombre de mois [   ]

[SI LA RÉPONSE EST "MOINS D'UN MOIS", INDIQUER "1" (MOIS)] |

| M097 | Depuis son premier jour en 1ère année, combien de **mois** faut-il en moyenne pour qu'un élève de votre école soit capable de réaliser une opération de calcul simple? | Nombre de mois [   ]

[SI LA RÉPONSE EST "MOINS D'UN MOIS", INDIQUER "1" (MOIS)] |

M098	Quel systeme educatif avez-vous choisi (ou choisiriez-vous) pour votre plus jeune enfant (ou pour votre prochain enfant)?	Curriculum (Publique ou Communautaire)	1
		Classique Publique	2
		Privé	3
		Ecole Franco-Arabe	4
		Autre	5
		Si "Autre", préciser: _____	

| M099 | Pourquoi (Expliquer votre réponse)? | Explication: |

M100	Lisez-vous souvent en-dehors de l'école? [SI OUI,] En quelle(s) langue(s)?	oui, en langue nationale et en Français	1
		oui, en langue nationale	2
		oui, en Français	3
		non	4

| M101 | Quelles sont vos 3 méthodes preferées pour aider les élèves à apprendre à lire? | 1ère méthode:_____
2ème méthode:_____
3ème méthode:_____
Ne sait pas / Refuse de répondre [ ] 99 |

| M102 | Quels sont le ou les facteurs majeurs qui, d'après-vous, limitent l'apprentissage de la lecture chez l'élève ? | 1er facteur :_____
2ème facteur:_____
3ème facteur:_____
Ne sait pas / Refuse de répondre [ ] 99 |

	Certaines personnes sont tres pessimistes à propos de l'enseignement au Mali. Pensez-vous qu'elles ont tort ou raison si elles disent:	Tort (1)	Raison (2)	Ni l'un ni l'autre (0)
M103	" Les apprenants sont trop faibles au Mali "			
M104	" Les communautés / les familles n'encouragent pas assez leurs enfants à l'école "			
M105	" Beaucoup d'enseignants ne sont pas assez motivés au Mali "			
M106	" Le système curriculum est moins performant que le système classique "			

Les questions qui suivent doivent etre posées uniquement dans les écoles avec le programme RLL.

M107	A quelle leçon RLL en êtes-vous?	_____
M108	Combien de leçons avez-vous couvertes?	_____
M109	Dans le programme RLL, il y a combien de "domaines"?	_____ *[Indiquer la réponse donnée, AVANT de fournir la bonne réponse ("5"). NE PAS CORRIGER les réponses érronnées!]*

M110	Citez les 5 domaines du Programme RLL	Domaine 1: _____
		Domaine 2: _____
		Domaine 3: _____
		Domaine 4: _____
		Domaine 5: _____
		Ne sait pas / Refuse de répondre ☐ 99

| M111 | Quel aspect du programme RLL prenez-vous le plus de plaisir à enseigner? | Décrire: |

| M112 | Combien de seances de lecture avez-vous organisees la semaine passee? | Nombre de seances ☐ |

M113	Combien de temps passiez-vous a preparer une séance de lecture au debut du programme RLL?	Moins de 15 minutes ☐ 1
		De 15 à 29 minutes ☐ 2
		De 30 à 59 minutes ☐ 3
		Une heure ou plus ☐ 4

M114	Combien de temps vous fallait-il pour compléter une leçon au debut du programme RLL?	Environ 20 minutes ☐ 1
		Environ 30 minutes ☐ 2
		Environ 40 minutes ☐ 3
		Environ 50 minutes ☐ 4
		Environ une heure ☐ 5
		Environ une heure 10 ☐ 6
		Environ une heure 20 ☐ 7
		Plus d'une heure 20 ☐ 8

M115	Combien de minutes en moyenne passez-vous actuellement à preparer une séance de lecture du programme RLL?	Moins de 15 minutes ☐ 1
		De 15 à 29 minutes ☐ 2
		De 30 à 59 minutes ☐ 3
		Une heure ou plus ☐ 4

M116	Combien de temps vous faut-il pour compléter une séance de lecture du programme RLL maintenant?	Environ 20 minutes ☐ 1
		Environ 30 minutes ☐ 2
		Environ 40 minutes ☐ 3
		Environ 50 minutes ☐ 4
		Environ une heure ☐ 5
		Environ une heure 10 ☐ 6
		Environ une heure 20 ☐ 7
		Plus d'une heure 20 ☐ 8

| M117 | Le materiel pedagogique du programme RLL vous semble-t-il adequat en terme de son contenu? | Non ☐ 0 |
| | | Oui ☐ 1 |

| M118 | Avez-vous des suggestions par rapport au matériel pédagogique fourni par IEP? | Suggestions relatives au matériel didactique: |

| M119 | Les formations en Ciwaras Lisent offertes par IEP vous semblent-elles adequates? | Non ☐ 0 |
| | | Oui ☐ 1 |

| M120 | Avez-vous des suggestions par rapport aux formations Ciwaras Lisent offertes par IEP? | Suggestions relatives aux formations: |

M121	Avec quelle fréquence l'équipe IEP rend-elle visite de suivi-appui pédagogique dans cette école?	jamais	☐	0
		moins d'une fois par trimestre	☐	1
		1 à 2 fois par trimestre	☐	2
		1 à 2 fois par mois	☐	3
		Plus de 2 fois par mois	☐	4

| M122 | Avez-vous des suggestions par rapport aux visites de suivi et autres actions de suivi menés par IEP? | Suggestions relatives au suivi-appui: |

| M123 | Pensez-vous avoir pleinement assimilé la nouvelle méthode d'enseignement du programme RLL? | Non ☐ 0
Oui ☐ 1 |

| M124 | Selon vous, quelles sont les qualités requises pour mettre en oeuvre le programme RLL de manière efficace: | 1. _____
2. _____
3. _____
Ne sait pas / Refuse de répondre ☐ 99 |

| M125 | IEP propose-t-il un système pour encourager les enseignants à appliquer efficacement le programme RLL? | Non ☐ 0
Oui ☐ 1
Expliquer:_____ |

| **MERCI BEAUCOUP !** | Heure d'achèvement de l'entretien : ☐ H ☐ min
SIGNATURE DU PASSATEUR : _____ |

IDENTIFIANTS

D001	**NOM DU CAP**	
D002	**NOM DE L'ÉCOLE**	
D003	**CODE DE L'ÉCOLE**	
D004	Nom du passateur	
D005	Date de la passation	J J M M A A A A
D006	Heure de la passation	☐ H ☐ Min
D007	Nom du Directeur / de la Directrice	_____
D008	[INDIQUEZ SI FEMME OU HOMME]	Femme ☐ 1 Homme ☐ 2
D009	Actuellement, cette école utilise quel système pédagogique (Curriculum / PC; Classique; Autre) ?	Curriculum / PC ☐ 1 Classique ☐ 2 Autre ☐ 3 Si "Autre", précisez: _____
D010	Dans cette école, l'enseignement de la lecture en 1ère et 2ème années, se fait en quelle(s) langue(s)? [COCHEZ TOUTES LES LANGUES CITÉS]	Bamanankan ☐ 1 Fulfulde ☐ 2 Songhoi ☐ 3 Bomu ☐ 4 Français ☐ 5
D011	Quel(s) sont les niveau(x) scolaires qui étudient en **langue nationale** cette année? *[COCHEZ TOUTES LES CASES APPLICABLES]*	1ère année ☐ a 2ème année ☐ b 3ème année ☐ c 4ème année ☐ d 5ème année ☐ e 6ème année ☐ f
D012	En quelle année cette école est-elle devenue curriculum?	Année ☐ Ne sait pas ☐ 99

INFORMATIONS SUR LE PROFIL ET LA FORMATION DU DIRECTEUR DE L'ÉCOLE

D013	Quelle est votre fonction au sein de l'école?	Directeur ☐ 1 Directeur Adjoint ☐ 2 Autre ☐ 3 Si "Autre", précisez: _____
D014	Depuis combien d'années avez-vous commencé votre carriere d'enseignant?	Nombre d'année(s) ☐
D016	En tant qu'enseignant (avant de devenir directeur d'école), combien d'années avez-vous enseigné dans le systeme classique?	Nombre d'année(s) ☐
D016	En tant qu'enseignant (avant de devenir directeur d'école), combien d'années avez-vous enseigné dans des écoles en langue nationale (PC ou curriculum)?	Nombre d'année(s) ☐

D017	Depuis combien de temps avez-vous été nommé directeur (ou directeur adjoint)?	Nombre d'année(s) [ ]
D018	Combien d'années avez-vous passé comme directeur d'école en langue nationale (PC ou curriculum)?	Nombre d'année(s) [ ]
D019	Depuis combien de temps avez-vous été nommé directeur de <u>cette école</u>?	Nombre d'année(s) [ ]
D020	Quel est votre diplôme académique le plus élevé?	Diplome:
D021	***AU PASSATEUR:*** *COCHER LE NIVEAU AUQUEL LE DIPLÔME CORRESPOND*	Inferieur au DEF [ ] 0 Diplôme d'Etudes Fondamental [ ] 1 DEF+2 [ ] 2 DEF+4 [ ] 3 Baccalauréat (BAC) [ ] 4 BAC+2 [ ] 5 BAC+4 [ ] 6 Autre [ ] 7 Refuse de répondre [ ] 99
D022	Avez-vous reçu ou recevez-vous une formation particulière vous préparant à diriger une école?	Non [ ] 0 Oui [ ] 1 Ne sait pas / Pas de réponse [ ] 99
D023	[SI OUI,] Combien de **jours** au total, dure ou a duré cette formation?	[ ] jours Ne sait pas / Pas de réponse [ ] 99 Pas applicable [ ] 88
D024	[Si OUI] Qui a organisé cette formation?	Le Ministère ou Le CAP [ ] 1 Une ONG [ ] 2 Autre [ ] 3 Si "ONG" ou "Autre", préciser: _____ Pas applicable [ ] 88
D025	Avez-vous suivi une formation vous préparant à l'application du programme scolaire en langue(s) nationale(s)?	Non [ ] 0 Oui [ ] 1 Ne sait pas / Pas de réponse [ ] 99
D026	[SI OUI,] Combien de jours au total, dure ou a duré cette formation? (Les estimations sont admissibles)	[ ] jours Ne sait pas / Pas de réponse [ ] 99 Pas applicable [ ] 88
D027	[Si OUI] Qui a organisé cette formation?	Le Ministère ou Le CAP [ ] 1 Une ONG [ ] 2 Autre [ ] 3 Si "ONG" ou "Autre", préciser: _____ Pas applicable [ ] 88
D028	Avez-vous participé a une formation organisée par ou avec l'appui de IEP, sur le programme "Ciwaras Lisent"?	Non [ ] 0 Oui [ ] 1
D029	[SI OUI,] Combien de jours au total, a duré cette formation? (Les estimations sont admissibles)	[ ] jours

D030	[SI OUI,] En quel mois de quelle année s'est passé cette formation sur Ciwaras Lisent? (Les estimations sont admissibles)	Mois: ☐ Année : ☐
		Ne sait pas / Pas de réponse ☐ 99
		Pas applicable ☐ 88

INFORMATIONS SUR LES RESPONSABILITÉS ET CHARGES DU DIRECTEUR DE L'ÉCOLE

| D031 | Etes-vous chargé de cours? | Non ☐ 0 |
| | | Oui ☐ 1 |

| D032 | [SI CHARGÉ DE COURS:] À hauteur de combien d'heures par semaine enseignez-vous? | Nombre d'heure(s) par semaine ☐ heures |
| | | Pas applicable, n'est pas charge d'une classe ☐ 88 |

D033	[SI CHARGÉ DE COURS:] Quelle classe enseignez-vous cette année?	1ère année ☐ 1
		2ème année ☐ 2
		3ème année ☐ 3
		4ème année ☐ 4
		5ème année ☐ 5
		6ème année ☐ 6
		Pas applicable ☐ 88

| D034 | Au cours du mois dernier, combien de jours avez-vous eu à vous absenter de l'école pour régler des affaires liées à vos fonctions ? | Nombre de jours ☐ |

| D035 | Au cours du mois dernier, combien de jours avez-vous eu à vous absenter de l'école pour d'autres raisons? | Nombre de jours ☐ |

INFORMATIONS DE BASE SUR LE NOMBRE D'ENSEIGNANTS, D'ÉLÈVES ET DE CLASSES A L'ÉCOLE

D036	Il y a combien d'hommes et de femmes enseignants dans cette école, au total et pour les 1ère, 2ème et 3ème années dans cette école? (par genre)		Hommes	Femmes
		AU TOTAL - Nombre d'enseignants	☐	☐
		1ère Année - Nombre d'enseignants	☐	☐
		2ème Année - Nombre d'enseignants	☐	☐
		3ème Année - Nombre d'enseignants	☐	☐

D037	Il y a combien de filles et de garçons dans cette école, au total et pour les 3 premières années d'études?		Filles	Garçons
		TOTAL	☐	☐
		1ère année	☐	☐
		2ème année	☐	☐
		3ème année	☐	☐

| D038 | Quel est le niveau de classe le plus élevé dans l'école (y compris second cycle)? | Niveau de classe ☐ |

D039	S'il existe un second cycle dans votre école, dispose-t-il d'un directeur?	Non ☐ 0
		Oui ☐ 1
		Pas applicable ☐ 88

| D040 | Votre école fait-elle partie d'un groupe scolaire? | Non ☐ 0 |
| | | Oui ☐ 1 |

| D041 | Dans votre école, le recrutement est-il annuel ou tous les deux ans? | Annuel ☐ 1 |
| | | Tous les deux ans ☐ 2 |

| D042 | Les enseignants de cette école suivent-ils la même cohorte d'élèves pendant 6 ans? | Non ☐ 0 |
| | | Oui ☐ 1 |

D043	Il existe dans cette école cette année, combien de classes de 1ère, 2ème et 3ème années ? Citez le nbre pour <u>chaque</u> niveau.	1ère année - Nbre de classes: [ ] a 2ème année - Nbre de classes: [ ] b 3ème année - Nbre de classes: [ ] c
D044	Les éléves de première année restent à l'ecole combien de temps chaque jour? Est-ce: [LISEZ LES RÉPONSES A HAUTE VOIX, ET COCHEZ UNE SEULE RÉPONSE]	Le matin seulement, tous les jours [ ] 1 L'après-midi seulement, tous les jours [ ] 2 Toute la journée, sauf mercredi ou jeudi [ ] 3 Toute la journée, sauf mercredi ET jeudi [ ] 4 Toute la journée, tous les jours [ ] 5 Autre [ ] 6 Si "Autre", préciser: _____
D045	Depuis le début de l'année scolaire, cette école a t-elle été fermée pour cause de grève? Si oui, pendant combien de jours environs:? (Les estimations sont admissibles)	Nombre de jours [ ] [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [ ] 99
D046	Depuis le début de l'année scolaire, cette école a t-elle été fermée pour une autre raison, à part les vacances? Si oui, pendant combien de jours environs:? (Les estimations sont admissibles)	Nombre de jours [ ] [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [ ] 99
D047	[SI OUI,] Pourquoi l'école était-elle fermée?	Explication:

INFORMATIONS SUR LES FORMATIONS EN LANGUE NATIONALE ET EN LECTURE REÇUES PAR LES ENSEIGNANTS DE L'ÉCOLE

D048	Cette année, les enseignants de cette école ont-ils suivi la formation sur le programme Curriculum organisé par le CAP / le Ministère de l'éducation?	Non [ ] 0 Oui [ ] 1 Ne sait pas / Pas de réponse [ ] 99
D049	[SI OUI], La formation sur le programme Curriculum a duré combien de jours cette année?	Nombre de jours [ ] [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [ ] 99

D050	[SI OUI], Combien d'enseignants ont participé à cette formation cette année ? (par genre et année d'études)		Hommes	Femmes
		1ère Année - Nombre d'enseignants	[ ]	[ ]
		2ème Année - Nombre d'enseignants	[ ]	[ ]
		3ème Année - Nombre d'enseignants	[ ]	[ ]
		Autres niveaux - Nombre d'enseignants	[ ]	[ ]
		Pas applicable [ ] 88		

D051	Depuis que vous êtes directeur de cette école, combien de fois le CAP a-t-il organisé la formation annuelle des enseignants sur le programme Curriculum?	Nombre de fois [ ] [S'il n'y a pas eu de formation, mettez "0"]
D052	Des enseignants de votre école ont-ils suivi une formation du programme PHARE / "Approche équilibrée" / EIR ?	Non [ ] 0 Oui [ ] 1 Ne sait pas / Pas de réponse [ ] 99
D053	[SI OUI], La formation PHARE / "Approche équilibrée" / EIR a duré combien de jours?	Nombre de jours [ ] [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [ ] 99

			Hommes	Femmes
D054	[SI OUI], Combien d'enseignants ont participé à la formation PHARE ? (par genre et année d'études)	1ère Année - Nombre d'enseignants		
		2ème Année - Nombre d'enseignants		
		3ème Année - Nombre d'enseignants		
		Autres niveaux - Nombre d'enseignants		
		Pas applicable	88	

D055	Des enseignants de votre école ont-ils suivi une formation sur l'approche "Ciwaras Lisent" de l'IEP?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

D056	[SI OUI], La formation "Ciwaras Lisent" a duré combien de jours?	Nombre de jours
		[Si la réponse est "Non", mettez 0 (zero) jours]
		Ne sait pas / Pas de réponse 99

			Hommes	Femmes
D057	[SI OUI], Combien d'enseignants ont participé à la formation Ciwaras Lisent ? (par genre et année d'études)	1ère Année - Nombre d'enseignants		
		2ème Année - Nombre d'enseignants		
		3ème Année - Nombre d'enseignants		
		Autres niveaux - Nombre d'enseignants		
		Pas applicable	88	

D058	[SI OUI,] En quel mois de quelle année s'est passé cette formation sur Ciwaras Lisent? (Les estimations sont admissibles)	Mois: Année :
		Ne sait pas / Pas de réponse 99
		Pas applicable 88

D059	Des enseignants de cette école ont-ils reçu une autre formation spécifique à l'enseignement en langue nationale?	Non	0
		Oui	1
		Ne sait pas / Pas de réponse	99

D060	[SI OUI], Qui a organisé cette formation? [POSSIBLE REPONSES MULTIPLES]	L'école	1
		Le CAP	2
		Autre	3
		Si "Autre", préciser: _____	

D061	Avez-vous vous-même, eu à former des enseignants à l'application du programme Curriculum?	Non	0
		Oui	1

INFORMATIONS SUR L'ENCADREMENT ET LA GESTION DES ENSEIGNANTS DE L'ÉCOLE

D062	Qui vise les cahiers de préparation des maitres de votre école?	Personne ne vise	1
		Directeur	2
		Directeur Adjoint	3
		Autre	4
		Si "Autre", préciser: _____	

D063	Avec quelle fréquence les cahiers sont-ils visés?	Jamais	1
		Une fois par an	2
		Une fois tous les 2-3 mois	3
		Une fois par mois	4
		Une fois toutes les 2 semaines	5
		Chaque semaine	6
		Chaque jour	7
		Autre	8
		Si "Autre", préciser: _____	
		Ne sait pas / Pas de réponse	99
		Pas applicable	88

D064	En moyenne, combien de temps est consacré à viser la préparations d'un maitre (a chaque fois)?	[____] minutes Pas applicable [____] 88
D065	Comment jugez-vous les preparations des enseignants de 1ere et 2eme année dans votre école?	Elles sont très bonnes [____] 1 Elles sont bonnes mais pourraient etre ameliorées [____] 2 Elles ne sont pas bonnes [____] 3 La qualité des préparations varie par enseignant [____] 4
D066	Les enseignants de 1ere ou 2eme annee ont-ils des difficultés à mettre en application leurs préparations?	Non, personne n'a de difficulté [____] 0 Oui, un enseignant a des difficultés [____] 1 Deux ou plusieurs enseignants ont des difficultés [____] 2
D067	Dans cette école qui est chargé d'observer les classes?	Personne n'observe [____] 1 Le Directeur [____] 2 Le Directeur Adjoint [____] 3 Autre [____] 4 Si "Autre", préciser: _____
D068	Sur une periode d'un mois combien de fois avez vous eu l'opportunité d'observer l'enseignement de chaque enseignant, en moyenne?	Jamais [____] 1 Une fois [____] 2 Deux fois [____] 3 Trois fois [____] 4 Quatre fois ou plus [____] 5 Autre [____] 6 Si "Autre", préciser: _____ Ne sait pas / Pas de réponse [____] 99 Pas applicable [____] 88
D069	Au total, combien de classes avez-vous observées la semaine passée?	Nombre de classes [____] Pas applicable [____] 88
D070	[SI PLUS DE "ZERO",] Combien de temps avez-vous passé à l'observation de classes la semaine passée?	[____] heures [____] minutes Pas applicable [____] 88
D071	Organisez-vous des réunions techniques ou conseils des maitres au moins une fois par trimestre?	Non [____] 0 Oui [____] 1
D072	Comment faites-vous pour savoir si les élèves progressent? [NE PAS LIRE LES REPONSES POSSIBLES. SE CONTENTER DE COCHER LA CASE DE LA RÉPONSE DONNÉE]	Observation de la classe [____] 1 Résultats d'épreuves regulières admninistrées par l'enseignant [____] 2 J'évalue moi-même les élèves [____] 3 Correction des devoirs en classe et à la maison [____] 4 Les enseignants fournissent un rapport des progrès réalisés [____] 5 Autre [____] 6 Si "Autre", préciser: _____ Ne sait pas / Pas de réponse [____] 99
D073	Le CAP, a-t-il fait une ou des visites de suivi-appui pédagogique dans cette école cette année? Si oui, combien de fois?	Nbre de visites du CAP [____] [Si la réponse est "Non", mettez 0 (zero) visites]
D074	[SI OUI,] La derniere visite du CAP a été effectué quand, à peu près? (Mois et Année)	Mois: [____] Année : [____] Ne sait pas / Pas de réponse [____] 99 Pas applicable [____] 88

D075	Dans le cadre du programme Ciwaras Lisent, IEP a-t-il fait une ou des visites de suivi-appui pédagogique dans cette école cette année? Si oui, combien de fois?	Nbre de visites IEP / Ciwaras Lisent [____] [Si la réponse est "Non", mettez 0 (zero) jours]
D076	[SI OUI,] La derniere visite IEP dans le cadre de Ciwaras Lisent a été effectué quand, à peu près? (Mois et Année)	Mois: [____] Année : [____] Ne sait pas / Pas de réponse [____] 99 Pas applicable [____] 88
D077	Le mois dernier, pendant combien de jours en moyenne, un enseignant de 1ère, 2ème, ou 3ème Année s'est-il absenté de l'école durant les jours ouvrables?	Nbre de jours d'absence EN MOYENNE [____]
D078	Et pour l'enseignant qui s'est absenté le plus le mois passé, c'etait pour combien de jours? (Les estimations sont admissibles)	Nbre de jours d'absence AU MAXIMUM pour un enseignant [____]
D079	Combien d'enseignants étaient absents hier (ou le jour ouvrable précédent)?	Nbre d'enseignant(s) absent(s) [____] Ne sait pas / Pas de réponse [____] 99
D080	Hier (ou le jour ouvrable précédent), combien d'enseignants sont venus en retard au travail?	Enseignant(s) venus en retard [____] Ne sait pas / Pas de réponse [____] 99
D081	Depuis le début de l'annee, y'a-t-il eu un enseignant qui était absent plus d'une semaine? Si oui, combien des enseignants etaient absents plus d'une semaine?	Nombre d'enseignants concernés [____] Si la réponse est "Non", mettez 0 (zero). Ne sait pas / Pas de réponse [____] 99

INFORMATIONS SUR LE MATÉRIEL DIDACTIQUE DISPONIBLE A L'ÉCOLE

D082	Votre école a t-elle reçu des livres scolaires de lecture en langue nationale? Si oui, combien, par année d'études? (Les estimations sont admissibles)	Livres de lecture LN reçus pour 1ère année - Nbre [____] a Livres de lecture LN reçus pour 2ème année - Nbre [____] b Livres de lecture LN reçus pour 3ème année - Nbre [____] c [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [____] 99
D083	[SI OUI,] Ces livres sont-ils arrivés à temps, c'est à dire, avant ou au début de l'année scolaire en cours?	Non - Arrivés trop tard [____] 0 Oui [____] 1 Ne sait pas / Pas de réponse [____] 99 Pas applicable [____] 88
D084	[SI OUI] Qui a fourni les livres scolaires de lecture en langue nationale? [NE PAS LIRE LES REPONSES POSSIBLES. SE CONTENTER DE COCHER LA CASE DE LA RÉPONSE DONNÉE]	Le Ministère ou le CAP [____] 1 L'école (en se servant de fonds privés) [____] 2 Les parents (de chaque enfant) [____] 3 Le comité ou conseil de l'école [____] 4 Autre [____] 5 Si "Autre", préciser: _____ Ne sait pas / Pas de réponse [____] 99
D085	Votre école a-t-elle reçu des livres de lecture de l'éleve Ciwaras Lisent en langue nationale? Si oui, en quel nombre par niveau?	Livres de lecture élève Ciwaras Lisent reçu Niveau 1 - Nbre [____] a Livres de lecture élève Ciwaras Lisent reçu Niveau 2 - Nbre [____] b [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [____] 99
D086	Votre école a-t-elle reçu des cahiers d'exercice d'écriture Ciwaras Lisent en langue nationale? Si oui, en quel nombre par niveau?	Cahier d'exercices d'écriture reçu Niveau 1 - Nbre [____] a Cahier d'exercices d'écriture reçu Niveau 2 - Nbre [____] b [Si la réponse est "Non", mettez 0 (zero) jours] Ne sait pas / Pas de réponse [____] 99

D087	Votre école a-t-elle reçu des Guides de l'Enseignant Ciwaras Lisent ? Si oui, en quel nombre par Niveau?	Guides de l'Enseignant Niveau 1 reçus - Nbre ☐ a
		Guides de l'Enseignant Niveau 2 reçus - Nbre ☐ b
		[Si la réponse est "Non", mettez 0 (zero) jours]
		Ne sait pas / Pas de réponse ☐ 99

D088	Votre école a-t-elle reçu les matériels didactiques Ciwaras Lisent suivants: [LIRE LA LISTE ET COCHER TOUTES LES CASES PERTINENTES]	Série de livrets (plusieurs titres) en langue nationale ☐ a
		Jeu d'affiches didactiques ☐ b
		Jeu de cartes-images ☐ c
		Autres manipulables ☐ d
		Autre ☐ e
		Si "Autre", préciser: _____
		Aucun de ces matériels didactiques reçu ☐ 88

D089	Qui vous soutient pour l'instruction en langue nationale? [NE PAS LIRE LES REPONSES POSSIBLES. SE CONTENTER DE COCHER LA CASE DE LA RÉPONSE DONNÉE]	Personne ☐ 1
		Le Ministère ou CAP ☐ 2
		Une ONG ☐ 3
		Autre ☐ 4
		Si "Autre", préciser: _____
		Ne sait pas / Pas de réponse ☐ 99

D090	Y aurait-il des services supplémentaires auxquels vous souhaiteriez avoir accès pour l'instruction en langue nationale? Si oui, dites lesquelles?	Non ☐ 0
		Oui ☐ 1
		Précisions:_____

D091	Y-a-t'il une ONG qui apporte de l'aide a cette école? Si oui, laquelle / lesquelles ?	Non ☐ 0
		Oui ☐ 1
		Précisions:_____

INFORMATIONS SUR LA GOUVERNANCE DE L'ÉCOLE ET SUR SA SITUATION PHYSIQUE

D092	Avec quelle frequence les membres du Comité / Conseil de gestion scolaire (CGE) se reunissent-ils? [NE PAS LIRE LES REPONSES POSSIBLES. SE CONTENTER DE COCHER LA CASE DE LA RÉPONSE DONNÉE]	Jamais ☐ 1
		Une fois par an ☐ 2
		Une fois tous les 2-3 mois ☐ 3
		Une fois par mois ☐ 4
		Une fois par semaine ☐ 5
		Autre ☐ 6
		Si "Autre", préciser: _____
		Ne sait pas / Pas de réponse ☐ 99
		Pas applicable ☐ 88

D093	Pour quelles activités le CGS a-t-il autorité ou est-il responsable? [NE PAS LIRE LES REPONSES POSSIBLES. SE CONTENTER DE COCHER LES CASES DES RÉPONSES DONNÉES. PLUSIEURS RÉPONSES SONT POSSIBLES] [SI LA REPONSE EST VAGUE, DEMANDE À L'INTERLOCUTEUR DE FOURNIR DES PRÉCISIONS]	Discuter de la direction de l'école ☐ a
		Discuter des problèmes élèves et apporter des solutions ☐ b
		Evaluer le progrès des projets d'amélioration de l'école ☐ c
		Evaluer la situation financière (budget) de l'école ☐ d
		Gérer les infrastructures et l'équipement ☐ e
		Discuter du programme scolaire ☐ f
		Collecter des fonds ☐ g
		Gérer l'approvisionnement-la distribution de livres scolaires ☐ h
		Construction ☐ i
		Autre ☐ j
		Si "Autre", préciser: _____
		Ne sait pas / Pas de réponse ☐ 99

D094	Y a-t-il une source d'eau potable accessible a l'école?	Non ☐ 0
		Oui ☐ 1

D095	Y a-t-il des latrines praticables dans votre école?	Non ☐ 0
		Oui ☐ 1

D096	Y a-t-il des latrines separées pour filles et garçons?	Non ☐ 0 Oui ☐ 1
D097	L'école a-t-elle de l'électricité?	Non ☐ 0 Oui ☐ 1
D098	L'école est-elle en ville (chef-lieu), dans un village, ou dans une zone péripherique de la ville ou du village?	En ville (Bamako ou autre chef lieu) ☐ 1 Dans un village ☐ 2 Dans la périphérie d'une ville / d'un village ☐ 3
D099	Quelle est la ville la plus proche? (Si l'école se situe en ville, indiquer le nom de la ville)	Ville: _____
D100	Combien de temps en nombre de **MINUTES** mettez-vous à pied pour atteindre la route bitumée la plus proche de l'école?	☐ minutes Pas applicable ☐ 88
D101	Combien y a-t-il de kilometres entre l'école et la route bitumée la plus proche?	☐ kilometres Pas applicable ☐ 88
D102	Combien de temps en nombre de **MINUTES,** mettez-vous en voiture pour arriver à la ville (chef lieu) la plus proche?	☐ minutes Pas applicable ☐ 88
D103	Combien y a-t-il de kilometres entre l'ecole et la ville la plus proche?	☐ kilometres Pas applicable ☐ 88
D104	Pour venir à l'école, combien de temps à pied, en nombre de **MINUTES**, prennent les enfants qui résident à l'endroit le plus éloigné de l'école?	☐ minutes Pas applicable ☐ 88
D105	Quelle pourcentage des élèves viennent des hameaux ou autres villages en dehors du village / du quartier de l'école?	% des élèves ☐ % Ne sait pas / Pas de réponse ☐ 99
D106	Y a-t-il une école classique à proximité desservant les mêmes villages que cette école?	Non ☐ 0 Oui ☐ 1
ATTITUDES ET CROYANCES DU DIRECTEUR VIS-A-VIS DE L'ENSEIGNEMENT-APPRENTISSAGE DE LA LECTURE		
D107	Depuis son premier jour en 1ère année, combien de **mois** faut-il en moyenne pour qu'un élève de votre école soit capable de lire une phrase nouvelle sans aide?	Nombre de mois ☐ [SI LA RÉPONSE EST "MOINS D'UN MOIS", INDIQUER "1" (MOIS)]
D108	Depuis son premier jour en 1ère année, combien de **mois** faut-il en moyenne pour qu'un élève de votre école soit capable de réaliser une opération de calcul simple?	Nombre de mois ☐ [SI LA RÉPONSE EST "MOINS D'UN MOIS", INDIQUER "1" (MOIS)]
D109	Quel systeme educatif avez-vous choisi (ou choisiriez-vous) pour votre plus jeune enfant (ou pour votre prochain enfant)?	Curriculum (Publique ou Communautaire) ☐ 1 Classique Publique ☐ 2 Privé ☐ 3 Ecole Franco-Arabe ☐ 4 Autre ☐ 5 Si "Autre", préciser: _____
D110	Pourquoi (Expliquer votre réponse)?	Explication:

Les questions suivantes doivent etre posées uniquement dans les écoles pratiquant le programme RLL.			
D111	Le materiel pedagogique du programme RLL vous semble-t-il adequat en terme de son contenu?	Non ☐ 0 Oui ☐ 1	
D112	Avez-vous des suggestions par rapport au matériel pédagogique fourni par IEP?	Suggestions relatives au matériel didactique:	
D113	Les formations en Ciwaras Lisent offertes par IEP vous semblent-elles adequates?	Non ☐ 0 Oui ☐ 1	
D114	Avez-vous des suggestions par rapport aux formations Ciwaras Lisent offertes par IEP?	Suggestions relatives aux formations:	
D115	Avec quelle fréquence l'équipe IEP rend-elle visite de suivi-appui pédagogique dans cette école?	jamais ☐ 0 moins d'une fois par trimestre ☐ 1 1 à 2 fois par trimestre ☐ 2 1 à 2 fois par mois ☐ 3 Plus de 2 fois par mois ☐ 4	
D116	Avez-vous des suggestions par rapport aux visites de suivi et autres actions de suivi menés par IEP?	Suggestions relatives au suivi-appui:	
MERCI BEAUCOUP !		Heure d'achèvement de l'entretien ☐ H ☐ min SIGNATURE DU PASSATEUR :	

NOTES AU BESOIN:

RTI – Evaluation IEP/RLL

Formulaire d'observation de classe – Lecture

1ème année

École IEP/RLL (Programme)

Code de l'enseignant _____

Nom de l'observateur _____

Code de l'école _____

Jour de l'observation _____

Classe _____ Effectif _____

Présents_____Absents_____

Leçon du jour _____

Langue d'instruction _____

Ce formulaire d'observation doit être rempli en classe pendant une leçon RLL.   Lorsque vous arrivez dans la classe, asseyez-vous au fond de la salle. Essayer de ne pas interrompre ou perturber la classe. Munissez-vous d'une montre pour chronométrer le temps nécessaire

Répondez à questions suivantes :

OC1	Il y a des élèves assis sur le plancher? Combien?	Non … 0 Quelques-uns . 1 La moitie . 2 Presque toutes . 3 Toutes les . 4						
OC2	Y-a-t'il assez des pupitres (table-bancs) pour toutes les élèves?	Non . 0 Oui . 1						
OC3	Y-a-t'il assez d'espace pour ce que l'enseignants peut circuler dans la sale de classe?	Non . 0 Oui . 1						
OC4 OC4.1	Indiquer l'agencement des pupitres (table-bancs)	Rangées . 0 Un cercle 2 Petits groups . 1 Autre (Préciser ci-dessous): 3 _____						

Est- ce que les matériaux suivants sont disponible pour les élèves à lire?

OC5	Manuels scolaires	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Français	.	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude	1			
OC6	Livres (dehors de manuels scolaires)	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Français	.	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude	1			
OC7	Livrets (Programme RLL)	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Francais	1	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude	1			
OC8	Posters/Tableaux muraux	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Francais	.	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude	1			
OC9	Materiaux faites par l'enseignant	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Francais	.	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude	1			
OC10	Materiaux faites par les élèves	Non	0					
		Oui	1					
	Si oui, en quelles Langue(s)?	Francais	.	Bamanankan	1	Songhoy	1	
		Bomu	1	Fulfude				

Classroom Observation - IEP Eval 1ème année - RLL-PROGRAMME - Final Mars 2011

		Encerclez la réponse	

Utilisation de la méthode RLL- écoles programmes

		Oui	Non
	1ère étape- La révision- Relire le texte d'hier ***L'enseignant :***		
1	Lit d'abord le texte avant de demander aux apprenants de le lire	1	0
2	Demande aux apprenants de lire individuellement le livret de la vieille	1	0
	2ème étape- La conscience phonémique- les sons (exercice oral) ***L'enseignant :***		
3	Fait cet exercice oralement	1	0
4	Fait faire les apprenants des manipulations de sons et de lettres dans un mot	1	0
5	***L'apprenant*** fait combien de manipulations ?		
	3ème étape- La phonétique- le son et le nom de la lettre ***L'enseignant :***		
6	Montre et dis le nom puis dis le son de la lettre	1	0
7	Demande aux apprenants de lire et dire les sons et les noms d'autres lettres	1	0
	4ème étape- décodage- formation de mots ***L'enseignant :***		
8	Dis le son des lettres	1	0
9	Glisse son doigt sous les lettres pour les lire	1	0
10	Demande le sens de mot aux apprenants	1	0
11	Révise quelques mots décodable familiers déjà vus	1	0
	5ème étape- l'étude du mot courant-les mots fréquemment lus ***L'enseignant :***		
12	Utilise le mot dans une phrase	1	0
13	Écrit le mot au tableau	1	0
14	Fait répéter le mot	1	0
15	Demande aux apprenants le sen de mot	1	0
16	Révise quelques mots familiers déjà vus	`1	0
	6ème étape- La lecture expressive par l'enseignant et la compréhension du texte ***L'enseignant :***		
17	Lit le texte de manière expressive	1	0
18	Reprend la lecture en posant des questions de compréhension	1	0
19	Pose des questions de vocabulaire	1	0
20	Pose des questions dont les réponses se trouvent dans le livre	1	0
21	Pose des questions dont les réponses ne se trouvent pas dans le livre	1	0
	7ème étape- L'entraînement à la lecture courante et l'écriture ***L'enseignant :***		
22	Explique le sens des images si les phrases contiennent des images	1	0
23	Permet une lecture à voix basse par les apprenants (livrets)	1	0
24	Circule pour surveiller et aider les apprenants ayant des difficultés à lire correctement	1	0
25	Demande aux apprenants d'indiquer le mot contenant la lettre du jour	1	0
26	Fait les élèves écrire la lettre		
27	Demande aux apprenants d'indiquer le mot décodable du jour dans une phrase	1	0
28	Fait les élèves écrire le mot		
29	Demande aux apprenants de former des mots qui ont un sens avec les lettres citées	1	0
30	Est-ce que l'enseignant a suivi les étapes en ordre ?	1	0

Immédiatement après la leçon, indiquez si vous avez observé les pratiques suivantes :

Encerclez la réponse

		Jamais /NON	Quelques-fois	Toujours /OUI
	L'implication des apprenants			
1	La leçon est participative	0	1	2
2	Les apprenants entament une interaction avec l'enseignant	0	1	2
3	Les apprenants entament une interaction entre eux			
4	Les apprenants son motivés à apprendre	0	1	2
5	Les apprenants sont occupés	0	1	2
	L'alignement au programme			
6	La leçon est alignée avec la leçon du jour	0	1	2
7	La leçon est alignée avec le programme RLL	0	1	2
	Pratiques utilisés pour dispenser l'enseignement			
8	La leçon est préparée	0	1	2
9	L'enseignant fait des pauses pour permettre aux apprenants de mieux comprendre	0	1	2
10	L'enseignant accepte les réponses des apprenants	0	1	2
11	L'enseignant résume les réponses	0	1	2
12	L'enseignant fait attention aux erreurs et les corrige en respectant les consignes/instructions	0	1	2
13	L'enseignant circule entre les tables pour s'assurer que tous les apprenants lisent	0	1	2
14	L'enseignant donne du travail individuel ou par groupe	0	1	2
	L'environnement de la salle de classe			
15	La leçon est au tableau avant le début des cours	0	1	2
16	Il ya un environnement lettré dans la classe	0	1	2
17	L'espace physique est organisé et propice à l'apprentissage	0	1	2
	La culture en salle de classe			
18	Les routines de la classe sont établies	0	1	2
19	Il y a une atmosphère amicale et décontractée	0	1	2

RTI – Evaluation IEP/RLL
Formulaire d'observation de classe – Lecture

2ème année

Code de l'enseignant_____ _____

Nom de l'observateur _____

Code de l'école   ____ _____

Jour de l'observation_____

Classe _____ _____   Effectif _____

Présents _____   Absents____ _____

Leçon du jour :   _____

Langue d'instruction _____

Ce formulaire d'observation doit être rempli en classe pendant une leçon de lecture. Si l'enseignant vous informe qu'il n'enseigne pas la lecture séparément des autres matières, demandez d'observer une leçon qui portera au moins partiellement sur la lecture. Lorsque vous arrivez dans la classe, asseyez-vous au fond de la salle. Essayer de ne pas interrompre ou perturber la classe. Munissez-vous d'une montre pour chronométrer le temps nécessaire

Répondez à questions suivantes :

OC1	Il y a des élèves assis sur le plancher? Combien?	Non … 0 Quelques-uns . 1 La moitie . 2 Presque toutes . 3 Toutes les élèves . 4	
OC2	Y-a-t'il assez des pupitres (table-bancs) pour toutes les élèves?	Non . 0 Oui . 1	
OC3	Y-a-t'il assez d'espace pour ce que l'enseignants peut circuler dans la sale de classe?	Non . 0 Oui . 1	
OC4 OC4.1	Indiquer l'agencement des pupitres (table-bancs)	Rangées . 0 Un cercle 2 Petits groups . 1 Autre (Préciser ci-dessous): 3 _____	

Est- ce que les materiaux suivants sont disponible pour les élèves à lire?

OC5	Manuels scolaires	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	
OC6	Livres (dehors de manuels scolaires)	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	
OC7	Livrets (Programme RLL)	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	
OC8	Posters/Tableaux muraux	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	
OC9	Materiaux faites par l'enseignant	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	
OC10	Materiaux faites par les élèves	Non 0 Oui 1			
	Si oui, en quelles Langue(s)?	Francais 1 Bomu 1	Bamanankan 1 Fulfude 1	Songhoy 1	

Observation « Flash / Coup d'oeil»: Toutes les 3 minutes, **r**emplir le tableau « Flash / Coup d'oeil» sur cette page. Vous ferez en tout 16 observations pendant 48 minutes
- Pour les sections A et B, mettez une croix (X) dans la case correspondant le mieux à l'action de l'enseignant, des élèves, etc.
- Pour les sections C à E, notez le code correspondant à la langue utilisée : (Bamanka = Ba, Bomu = Bo, Fulfulde = Fu, Songhoy = So, Français = Fr)

Notez que pour les 8 observations vous devrez renseigner toutes les sections (A, B, C, D, E) à chaque « flash / coup d'oeil» (toutes les 3 minutes).
Ne pas oublier de noter l'heure à laquelle commence et se termine l'observation.

Heure de commence: _____	Observation n° :							
	1	2	3	4	5	6	7	8
A) Focus de l'enseignant : (mettez une seule X pour chaque flash)								
Toute la classe								
Petit groupe								
Un seul élève								
Autre/Ne s'occupe pas des élèves								
L'enseignant n'est pas dans la classe								
B) Contenu de l'enseignement : (une ou deux X possible)								
Travail sur les sons sans support écrit (à l'oral uniquement)								
Travail sur les Lettres et/ou les sons (avec support écrit)								
Lecture de mots isolés								
Lecture de phrases								
Vocabulaire (sens des mots)								
Ecriture / dictée								
Lecture de texte								
Compréhension de texte								
Ecriture – création de textes								
Autre / Vous ne savez pas								

Code langue :				
Bamankan	Ba	Songhoy		So
Bomu	Bo	Français		Fr
Fulfulde	Fu			

	Observation n° :							
	1	2	3	4	5	6	7	8
C) Action de l'enseignant (Code langue, une ou deux action possible)								
Lit à haute voix								
Ecrit								
Parle								
Écoute les élèves								
Surveille les élèves								
Autre (transition, corrige le comportement des élèves, etc.)								
D) Action des élèves (Code langue, une ou deux action possible)								
Lisent tous ensemble								
Un seul élève lit à haute voix								
Lisent en silence								
Parle								
Ecrivent sur leur cahier/ardoise								
Ecrit / Ecrivent au tableau								
Ecoutent / regardent								
Répètent / récitent								
Autre (jeux, etc.)								
E) Support(s) utilisé(s) (Code langue, un ou plusieurs supports)								
Tableau								
Livre (enseignant uniquement)								
Livres (élèves)								
Papier (feuilles de travail/photocopies)								
Cartes-éclairs (cartons)								
Posters / Tableaux muraux								
Ardoises								
Autre								
Non/Rien utilisé								

3

Observation « Flash / Coup d'oeil»: Toutes les 3 minutes, remplir le tableau « Flash / Coup d'oeil» sur cette page. Vous ferez en tout 16 observations pendant 48 minutes

- Pour les sections A et B, mettez une croix (X) dans la case correspondant le mieux à l'action de l'enseignant, des élèves, etc.
- Pour les sections C à E, notez le code correspondant à la langue utilisée : (Bamanka = Ba, Bomu = Bo, Fulfulde = Fu, Songhoy = So, Français = Fr)

Notez que pour les 8 observations vous devrez renseigner toutes les sections (A, B, C, D, E) à chaque « flash / coup d'oeil» (toutes les 3 minutes).

Ne pas oublier de noter l'heure à laquelle commence et se termine l'observation.

Heure de la fin : _____	Observation n° :							
	9	10	11	12	13	14	15	16
A) Focus de l'enseignant : (mettez une seule X pour chaque flash)								
Toute la classe								
Petit groupe								
Un seul élève								
Autre/Ne s'occupe pas des élèves								
L'enseignant n'est pas dans la classe								
B) Contenu de l'enseignement : (une ou deux X possible)								
Travail sur les sons sans support écrit (à l'oral uniquement)								
Travail sur les Lettres et/ou les sons (avec support écrit)								
Lecture de mots isolés								
Lecture de phrases								
Vocabulaire (sens des mots)								
Ecriture / dictée								
Lecture de texte								
Compréhension de texte								
Ecriture – création de textes								
Autre / Vous ne savez pas								

Code langue :				
Bamankan	Ba	Songhoy		So
Bomu	Bo	Français		Fr
Fulfulde	Fu			

	Observation n° :							
	9	10	11	12	13	14	15	16
C) Action de l'enseignant (Code langue, une ou deux action possible)								
Lit à haute voix								
Ecrit								
Parle								
Écoute les élèves								
Surveille les élèves								
Autre (transition, corrige le comportement des élèves, etc.)								
D) Action des élèves (Code langue, une seule action possible)								
Lisent tous ensemble								
Un seul élève lit à haute voix								
Lisent en silence								
Parle								
Ecrivent sur leur cahier/ardoise								
Ecrit / Ecrivent au tableau								
Ecoutent / regardent l'enseignant								
Répètent / récitent								
Autre (jeux, etc.)								
E) Support(s) utilisé(s) (Code langue, un ou plusieurs supports)								
Tableau								
Livre (enseignant uniquement)								
Livres (élèves)								
Papier (feuilles de travail/photocopies)								
Cartes-éclairs (cartons)								
Posters / Tableaux muraux								
Ardoises								
Autre								
Non/Rien utilisé								

4

Immédiatement après la leçon, indiquez si vous avez observé les pratiques suivantes :

Encerclez la réponse

		Jamais /NON	Quelques-fois	Toujours /OUI
	L'implication des apprenants			
1	La leçon est participative	0	1	2
2	Les apprenants entament une interaction avec l'enseignant	0	1	2
3	Les apprenants entament une interaction entre eux	0	1	2
4	Les apprenants son motivés à apprendre	0	1	2
5	Les apprenants sont occupés	0	1	2
	L'alignement au programme			
6	La leçon est alignée avec la leçon du jour	0	1	2
	Pratiques utilisés pour dispenser l'enseignement			
7	La leçon est préparée	0	1	2
8	L'enseignant fait des pauses pour permettre aux apprenants de mieux comprendre	0	1	2
9	L'enseignant accepte les réponses des apprenants	0	1	2
10	L'enseignant résume les réponses	0	1	2
11	L'enseignant fait attention aux erreurs et les corrige en respectant les consignes/instructions	0	1	2
12	L'enseignant circule entre les tables pour s'assurer que tous les apprenants lisent	0	1	2
13	L'enseignant donne du travail individuel ou par groupe	0	1	2
	L'environnement de la salle de classe			
14	La leçon est au tableau avant le début des cours	0	1	2
15	Il ya un environnement lettré dans la classe	0	1	2
16	L'espace physique est organisé et propice à l'apprentissage	0	1	2
	La culture en salle de classe			
17	Les routines de la classe sont établies	0	1	2
18	Il y a une atmosphère amicale et décontractée	0	1	2

Notes :

Attachment B: Content of Thematic Indices

The variable elements of each index shown below were included in initial analyses for each year for which data were available. Due to issues of multicollinearity and missing data for a given year, the final set of variables utilized in a given analysis may be a subset of these. For 2012 endline, Attachments C, D, and E provide the full list of variables used to represent each index in a given analysis, as well as detailed model results. Specific detail on other years is available upon request.

Variables shown shaded in the tables that follow were used to construct summary variables for the index but were not themselves directly included in analyses using the index.

B1.   Index of general school characteristics

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available 2009	2010	2011	2012
GENERAL SCHOOL CHARACTERISTICS								
GSCH_01	General school characteristics (Location relative to urban center; school size (enrollment); water; electricity)	B2_06	The school has drinking water	Director Survey	✓	✓	✓	✓
		B2_07	The school has electricity	Director Survey	✓	✓	✓	✓
		B2_11_urb	School setting (< 10 km from urban center = 1)	Director Survey	✓	✓	✓	✓
		G1G2G3_enroll	Total enrollment G1 G2 G3	Director Survey	✓			
		B1_05t	Total student enrollment	Director Survey		✓	✓	✓
		B1_05gpi	Gender parity in student enrollment (girls / boys)	Director Survey		✓	✓	✓

B2. Indices of general student characteristics

Index code	Index description	Variable name	Variables comprising index	Variable source	2009	2010	2011	2012
GENERAL STUDENT CHARACTERISTICS								
GSTU_01	Student's home material wealth (number of marker items)	SQ_10r	Is there a radio at your house?	Student survey	✓	✓		✓
		SQ_11r	Is there a telephone at your house?	Student survey	✓	✓		✓
		SQ_12r	Is there electricity at your house?	Student survey	✓	✓		✓
		SQ_13r	Is there a television at your house?	Student survey	✓	✓		✓
		SQ_14r	Is there a refrigerator at your house?	Student survey	✓	✓		✓
		SQ_15r	Is there a toilet at your house?	Student survey	✓	✓		✓
		SQ_16r	Is there a bicycle at your house?	Student survey	✓	✓		✓
		SQ_17r	Is there a motorcycle at your house?	Student survey	✓	✓		✓
		SQ_18r	Is there a rowboat, pinasse, or cart at your house?	Student survey	✓	✓		✓
		SQ_19r	Is there a car, truck, 4X4, or tractor at your house?	Student survey	✓	✓		✓
		SQ_home_mat	Alternate index: Count of existence of above ten types of items in the home	Student survey	✓	✓		✓
GSTU_02	Student's home language & literacy environment (ML=LOI; books in LOI; books in French; literate persons in family)	Stud_LOI	Student's maternal language is LOI (0-1 recode of language student speaks at home X LOI at school (1 = student's ML = LOI)	Student survey	✓	✓		✓
		SQ_05r	Do you have the school book?	Student survey	✓	✓		✓
		Books_LOI	Student reports having books at home in school's LOI (0-1 recode of SQ_072 / SQ_073 / SQ_074 / SQ_075)	Student survey	✓	✓		✓
		SQ_072r	Are there book(s) in Bamanankan language at home?	Student survey	✓	✓		✓
		SQ_073r	Are there book(s) in Fulfulde language?	Student survey	✓	✓		✓
		SQ_074r	Are there book(s) in Songhoi language?	Student survey	✓	✓		✓
		SQ_075r	Are there book(s) in Bomu language?	Student survey	✓	✓		✓
		SQ_071r	Are there books in French language at hour home?	Student survey	✓	✓		✓

Index code	Index description	Variable name	Variables comprising index	Variable source	2009	2010	2011	2012
					Years available			
		litpers_home	Scale of literate persons in the family (0 = none ; 3 = 3 or more)	Student survey	✓	✓		✓
		SQ_08r	Does anyone at home know how to read?	Student survey	✓	✓		✓
		SQ_091r	Mother knows how to read	Student survey	✓	✓		✓
		SQ_092r	Father knows how to read	Student survey	✓	✓		✓
		SQ_093r	Sister(s) / Brother(s) know how to read	Student survey	✓	✓		✓

B3. Indices of school pedagogical environment

Index code	Index description	Variable name	Variables comprising index	Variable source	2009	2010	2011	2012
					Years available			
INDICES OF SCHOOLS GENERAL PEDAGOGICAL ENVIRONMENT								
GPED_01	General Teacher qualifications (Years experience, DEF, Higher degree)	C1_04	Years of teaching experience	Teacher Survey	✓	✓	✓	✓
		C2_01	Teacher possesses DEF	Teacher Survey	✓	✓	✓	✓
		C2_02	Teachers possesses higher degree (DEF+4 or Bac+4)	Teacher Survey	✓	✓	✓	✓
GPED_02	Teacher's ease of teaching in LOI (own maternal language; use of French; years of teaching in national language; views on Curriculum method)	C1_02_TQ	Teacher's own maternal language (TQ)	Teacher Survey		✓	✓	✓
		C1_05	Years of teaching experience in national language	Teacher Survey	✓	✓	✓	✓
		C1_07a	Language of instruction is Teacher's maternal language (Recode of C1_02_TQ X school LOI)	Teacher Survey		✓	✓	✓
		C2_03a	Teacher reports having received training in national language	Teacher Survey	✓	✓	✓	✓
		C3_03a	Teacher seldom or never uses French in class	Teacher Survey		✓	✓	✓
		C3_03b	Teacher often or always uses French in class	Teacher Survey		✓	✓	✓
		C9_04	T considers that Curriculum system performs less well than Classic	Teacher Survey		✓	✓	✓

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available			
					2009	2010	2011	2012
GPED_03	Teacher's use of student-centered activities in teaching	C5_05	Teacher focuses on a small group	Class observation	✓		G2	
		C5_06	Teacher focuses on a single student	Class observation	✓		G2	
		C5_11	Reading together (aloud)	Class observation	✓		G2	
		C5_12	Individual reading (Aloud)	Class observation	✓		G2	
		C5_14	Student(s) writing on board	Class observation	✓		G2	
		C5_15	Student(s) writing on paper	Class observation	✓		G2	
		C5_17	Students repeat what teacher says	Class observation	✓		G2	
GPED_04	Signs of active student engagement	OCP3_2	Students are engaged interactively with the teacher	Class observation		✓	✓	
		OCP3_3	Students are engaged interactively with other students (2011 only)	Class observation		✓	✓	
		OCP3_4	Students appear motivated to learn	Class observation		✓	✓	
		OCP3_5	Students are busy	Class observation		✓	✓	
		B3_09a	Fewer than 25% of students have chalk and slate	Teacher survey		✓	✓	✓
		B3_09b	Over 75% of students have chalk and slate	Teacher survey		✓	✓	✓
GPED 05	School pedagogical management and oversight	A1_06	School Principal's years of being a School Principal	Director survey	✓	✓	✓	✓
		A1_11	School Principal received training to be a School Principal	Director survey	✓	✓	✓	✓
		A2_02	School Principal or other reviews teachers' lesson plans	Director survey	✓	✓	✓	✓
		A2_03a	School Principal or other observes classrooms	Director survey	✓	✓	✓	✓
		A2_03b	Number of classes observed by School Principal in previous week	Director survey		✓	✓	✓
		A2_04	School Principal organized Conseil des maîtres in past 3 months	Director survey	✓	✓	✓	✓

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available 2009	2010	2011	2012
		C4_05a	Fewer than 80% of students are present in class on day of visit	Teacher survey		✓	✓	✓
		C4_05b	Over 95% of students are present in class on day of visit	Teacher survey		✓	✓	✓
		C6_01	Director reviews lesson plan (per Teacher)	Teacher survey	✓	✓	✓	✓
		C6_02	No one reviews lesson plan (per Teacher)	Teacher survey	✓	✓	✓	✓
		C6_03a	Lesson plans reviewed every 2-3 months or less	Teacher survey		✓	✓	✓
		C6_03b	Lesson plans reviewed every week or more often	Teacher survey		✓	✓	✓
		C6_04	Director or Assistant Director observes classrooms (per Teacher)	Director survey	✓	✓	✓	✓
		C6_05	No one observes classrooms (per Teacher)	Teacher survey	✓	✓	✓	✓
		C6_06a	Classes are observed every 2-3 months or less	Teacher survey	✓	✓	✓	✓
		C6_06b	Classes are observed every week or more often	Teacher survey	✓	✓	✓	✓
		C6_07a	Teacher received a pedagogical support visit in previous week (per Teacher)	Teacher survey		✓	✓	
		B2_20	Frequency of SMC meetings	Director survey		✓	✓	✓
GPED_06	School's Curriculum program experience and resources	A1_12a	School Principal trained in national languages teaching	Director survey	✓	✓	✓	✓
		A2_01	School Principal trained teachers in applying curriculum program	Director Survey	✓	✓	✓	✓
		B1_03	Years since school became a curriculum school	Director Survey	✓	✓	✓	✓
		B2_04p	Percentage of teachers who received training in NL instruction	Director Survey	✓		✓	✓
		B2_05_1	School received G1 textbooks in national language	Director Survey	✓	✓	✓	✓
		B2_05_2	School received G2 textbooks in national language	Director Survey	✓	✓	✓	✓

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available			
					2009	2010	2011	2012
		B2_05_3	School received G3 textbooks in national language	Director Survey	✓	✓	✓	✓
		B2_14	Teachers received training from CAP / Min in Curriculum this year?	Teacher & Director Surveys		TS	DS	DS
		B3_04a	Received books from Ministry for teaching in national language	Teacher Survey	✓	✓	✓	✓
		B3_07a	Not a single student in class has schoolbook in national language	Teacher Survey	✓	✓	✓	✓
		B3_07c	Over 75% of students in class have schoolbook in national language	Teacher Survey	✓	✓	✓	✓
		C1_07_French	Teacher reports using French as LOI	Teacher Survey	✓	✓	✓	✓
		C2_03a	Teacher reports having received training in national language	Teacher Survey	✓	✓	✓	✓
		OCF_05lc	Textbooks are available in language of instruction	Class observation			✓	
		OCF_06lc	Other books are available in language of instruction	Class observation			✓	
		OCF_08lc	Wall displays are available in language of instruction	Class observation			✓	
		OCF_09lc	Teacher-made materials are available in language o (f instruction	Class observation			✓	
		OCF_scale_LOI	Proportion of 4 types of reading materials available in LOI, excluding RLL books	Class observation			✓	

NOTE: "TS" = Teacher survey; "DS" = Director survey.

B4. Indices of RLL implementation fidelity

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available			
					2009	2010	2011	2012
RLLF_01	Fidelity to RLL capacity development inputs	A1_12c	School Principal participated in an IEP/RLL training	Director Survey		✓	✓	✓
		C2_05	Teacher followed training with IEP (RLL)	Teacher Survey		✓	✓	✓
		D1_99_k	Teachers received RLL training this year	Director Survey				✓
		D1_99_l	Length of RLL training provided (days)	Director Survey				✓
		D1_99_m	Number of G1 teachers who received RLL trg this year	Director Survey				✓
		D1_99_n	Number of G2 teachers who received RLL trg this year	Director Survey				✓
		D1_99_r	Number of IEP / RLL support visits received this year	Director Survey				✓
		R3_01	Total number of RLL support visits received	Cost Register				✓
RLLF_02	Fidelity to RLL material inputs	OCF_07lc	RLL books are available in language of instruction	Class observation			✓	
		B3_a	Number of RLL Livre 1 available to children in class	Teacher Survey				✓
		B3_b	Number of RLL Livre 2 available to children in class	Teacher Survey				✓
		B3_c	Number of RLL writing workbooks 1 available in class	Teacher Survey				✓
		B3_d	Number of RLL writing workbooks 2 available in class	Teacher Survey				✓
		B3_e	Teacher has RLL Teacher's guide Level 1?	Teacher Survey				✓
		B3_f	Teacher has RLL Teacher's guide Level 2?	Teacher Survey				✓
		B3_g	Per teacher: RLL nat. lang reading booklets available at school	Teacher Survey				✓
		B3_h	Per teacher: Set of RLL instructional posters available at school	Teacher Survey				✓
		B3_i	Per teacher: RLL picture cards set available at school	Teacher Survey				✓
		B3_j	Per teacher: Other RLL instructional materials available at school	Teacher Survey				✓
		D1_99_a	Number of RLL student Book 1 received	Director Survey				✓

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available			
					2009	2010	2011	2012
		D1_99_b	Number of RLL student Book 2 received	Director Survey				✓
		D1_99_c	Number of RLL student's writing workbook 1 received	Director Survey				✓
		D1_99_d	Number of RLL student's writing workbook 2 received	Director Survey				✓
		D1_99_e	Number of RLL Teacher's Guide Level 1 received	Director Survey				✓
		D1_99_f	Number of RLL Teacher's Guide Level 2 received	Director Survey				✓
		D1_99_g	Set of RLL readers in national language received?	Director Survey				✓
		D1_99_h	Set of RLL pedagogical posters received?	Director Survey				✓
		D1_99_i	Set of RLL picture-cards received?	Director Survey				✓
		D1_99_j	Other RLL instructional materials received?	Director Survey				✓
RLLF_03	Fidelity to general RLL-supported instructional practices	OCP3_1	Lesson is participatory	Class observation		✓	✓	
		OCP3_6	Lesson is aligned with program's "lesson of the day"	Class observation		✓	✓	
		OCP3_8	Lesson was prepared before class	Class observation		✓	✓	
		OCP3_9	T pauses to ensure that students understand	Class observation		✓	✓	
		OCP3_10	T accepts the responses of students	Class observation		✓	✓	
		OCP3_11	T summarizes students responses	Class observation		✓	✓	
		OCP3_12	T is attentive to errors & corrects them per instructions	Class observation		✓	✓	
		OCP3_13	T circulates in class to make sure all students are reading	Class observation		✓	✓	
		OCP3_14	T gives independent work to individual learners and groups	Class observation		✓	✓	
		OCP3_15	Lesson is written on blackboard before the start of class	Class observation		✓	✓	
		OCP3_16	There is a literate environment in the classroom	Class observation		✓	✓	
		OCP3_17	The physical space is organized to favor learning	Class observation		✓	✓	
		OCP3_18	Class routines have been established	Class observation		✓	✓	
		OCP3_19	Class atmosphere is friendly and relaxed	Class observation		✓	✓	

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available 2009	2010	2011	2012
RLLF_04	Fidelity to general RLL-supported instructional practices	RLL1_pct	RLL Step 1 actions (Review of previous day's text) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL2_pct	RLL Step 2 actions (phonemic awareness exercises) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL3_pct	RLL Step 3 actions (phonetic exercises) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL4_pct	RLL Step 4 actions (decoding exercises) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL5_pct	RLL Step 5 actions (study of familiar words) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL6_pct	RLL Step 6 actions (teacher models expressive reading) observed in at least 10% of observation moments	Class observation		✔	G1	
		RLL7_pct	RLL Step 7 actions (practice in fluent reading and in writing letters and decodable words) observed in at least 10% of observation moments	Class observation		✔	G1	
		OCP2_01	T first reads the text (aloud) before asking students to read (RLL-1)	Class observation		✔	G1	
		OCP2_02	T asks students to read previous day's booklet individually (RLL-1)	Class observation		✔	G1	
		OCP2_03	T conducts phonemic awareness section orally (RLL-02)	Class observation		✔	G1	
		OCP2_04	T asks students to manipulate sounds & letters in a word (RLL-2)	Class observation		✔	G1	
		OCP2_06	T shows the letter, says its name then its sound (RLL-3)	Class observation		✔	G1	
		OCP2_07	T asks students to read, say sounds & names of other letters (RLL-3)	Class observation		✔	G1	
		OCP2_09	T underlines letters with finger while reading (RLL-4)	Class observation		✔	G1	
		OCP2_10	T asks students the meaning of words (RLL-4)	Class observation		✔	G1	

Index code	Index description	Variable name	Variables comprising index	Variable source	Years available			
					2009	2010	2011	2012
		OCP2_11	T reviews decoded & sight words already studied with students (RLL-4)	Class observation		✓	G1	
		OCP2_12	T uses the word in a phrase (RLL-5)	Class observation		RLL only		
		OCP2_13	T writes the word on the blackboard (RLL-5)	Class observation		RLL only		
		OCP2_14	T makes students repeat the word (RLL-5)	Class observation		RLL only		
		OCP2_15	T asks students the meaning of words (RLL-5)	Class observation		RLL only		
		OCP2_16	T reviews words already studied with students (RLL-5)	Class observation		RLL only		
		OCP2_17	T reads the text in an expressive manner (RLL-6)	Class observation		✓	G1	
		OCP2_18	T re-reads text and asks comprehension & vocab questions (RLL-6)	Class observation		✓	G1	
		OCP2_20	T asks questions whose answers can be found in the text (RLL-6)	Class observation		✓	G1	
		OCP2_21	T asks inferential questions - answers are NOT in the text (RLL-6)	Class observation		✓	G1	
		OCP2_23	T permits students to read booklets in a low voice (RLL-7)	Class observation		✓	G1	
		OCP2_24	T helps students having difficulties to read correctly (RLL-7)	Class observation		✓	G1	
		OCP2_25	T asks students to find a word with "letter of the day" in it (RLL-7)	Class observation		✓	G1	
		OCP2_27	T asks students to find the "word of the day" in a sentence (RLL-7)	Class observation		✓	G1	
		OCP2_29	T asks students to make meaningful words with specific letters (RLL-7)	Class observation		✓	G1	

Attachment C.   **Results of 2012 Logistic Regression Models Estimating Strength of Thematic Index Associations with RLL treatment**

NOTE: Index results shown are for analyses on 2012 endline period only. Results for 2009, 2010, and 2011 models are available on request.

C.1 RLL Treatment X Index GSCH_01 (General school characteristics)

2012 GSCH_01	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**5**	**68**	**2.76**	**.025**		
(Intercept)	1	72	2.08	.154	-.929	.645
B1_05t	1	72	4.81	.032	.001	.001
B1_05gpi	1	72	3.03	.086	1.346	.774
B2_06	1	72	4.67	.034	-.807	.374
B2_07	1	72	6.27	.015	-.776	.310
B2_11_urb	1	72	0.29	.590	-.148	.274

C.2 RLL Treatment X Index GSTU_01a (Student's home material wealth items)

2012 GSTU_01a	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**10**	**65**	**3.26**	**.002**		
(Intercept)	1	74	3.30	.073	-.855	.471
SQ_10r	1	74	14.35	.000	1.778	.469
SQ_11r	1	74	3.76	.056	.852	.439
SQ_12r	1	74	10.04	.002	.985	.311
SQ_13r	1	74	11.96	.001	1.327	.384
SQ_14r	1	74	11.39	.001	1.268	.376
SQ_15r	1	74	1.74	.191	-.435	.330
SQ_16r	1	74	1.23	.271	-.344	.310
SQ_17r	1	74	3.67	.059	-.876	.457
SQ_18r	1	74	1.44	.233	-.395	.329
SQ_19r	1	74	0.00	.965	-.012	.282

C.3 RLL Treatment X Index GSTU_01b (Student's home material wealth expressed as additive scale)

2012 GSTU_01b	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**1**	**74**	**22.54**	**.000**		
(Intercept)	1	74	0.02	.875	-.108	.685
stud_home_mat	1	74	22.54	.000	.418	.088

C.4 RLL Treatment X Index GSTU_02 (Student's home language and literacy environment)

2012 GSTU_02	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**5**	**68**	**4.06**	**.003**		
(Intercept)	1	72	0.94	.335	-.748	.771
stud_LOI	1	72	7.29	.009	2.551	.945
SQ_05r	1	72	2.86	.095	.661	.391
books_LOI	1	72	17.36	.000	1.706	.409
SQ_071r	1	72	6.83	.011	-2.483	.950
litpers_home	1	72	3.06	.085	.213	.122

C.5 RLL Treatment X Index GPED_01 (Teacher's general qualifications and experience)

2012 GPED_01	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**3**	**65**	**1.11**	**.352**		
(Intercept)	1	67	1.02	.317	0.523	0.519
C1_04	1	67	0.14	.706	0.014	0.036
C2_01	1	67	3.33	.072	-0.628	0.344
C2_02	1	67	0.00	.960	0.017	0.331

C.6 RLL Treatment X Index GPED_02 (Teacher's ease of teaching in school's Language of Instruction)

2012 GPED_02	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**5**	**63**	**1.09**	**.374**		
(Intercept)	1	67	0.37	.543	-.287	.469
C1_07a	1	67	0.75	.389	.334	.385
C1_05	1	67	0.01	.905	-.006	.047
C3_03a	1	67	0.96	.332	.273	.279
C3_03b	1	67	1.27	.264	-.362	.322
C9_04	1	67	0.02	.889	-.042	.303

C.7 RLL Treatment X Index GPED_05 (School pedagogical management and oversight)

2012 GPED_05	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	**8**	**54**	**1.77**	**.103**		
(Intercept)	1	61	6.15	.016	3.046	1.228
A1_06	1	61	0.54	.465	-.023	.031
A2_03b	1	61	5.08	.028	-.195	.087
A2_04	1	61	2.08	.154	-1.387	.961
C4_05a	1	61	2.00	.163	-.454	.322
C6_03b	1	61	0.47	.494	-.297	.432
C6_04	1	61	0.35	.555	-.262	.442
C6_06b	1	61	1.61	.210	-.369	.291
B2_20	1	61	2.30	.135	-.597	.394

C.8 RLL Treatment X Index GPED_06 (School's Curriculum program experience and resources)

2012 GPED_06	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	11	31	2.97	.008		
(Intercept)	1	41	0.01	.927	.144	1.554
A1_12a	1	41	0.44	.512	.581	.877
A2_01	1	41	0.44	.513	-.464	.702
B1_03	1	41	2.06	.159	-.233	.163
B2_05_1	1	41	17.28	.000	-.137	.033
B2_05_2	1	41	17.86	.000	.220	.052
B2_05_3	1	41	0.10	.749	-.009	.028
B3_04a	1	41	1.15	.290	.513	.479
B3_07a	1	41	0.00	.945	.029	.421
B3_07c	1	41	0.33	.569	.320	.557
C1_07_French	1	41	9.64	.003	-1.321	.426
B2_04p	1	41	0.63	.432	.647	.815

C.9 RLL Treatment X Index RLLF_01 (Implementation fidelity to RLL capacity development inputs)

2012 RLLF_01	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	6	61	9.67	.000		
(Intercept)	1	66	22.01	.000	-2.022	.431
A1_12c	1	66	15.00	.000	2.242	.579
C2_05	1	66	0.08	.781	-.109	.391
D1_99_k	1	66	11.95	.001	2.205	.638
D1_99_l	1	66	0.50	.483	-.038	.053
D1_99_m	1	66	1.85	.178	.640	.470
D1_99_n	1	66	12.65	.001	-1.541	.433

C.10 RLL Treatment X Index RLLF_02 (Implementation fidelity to RLL instructional material inputs)

2012 RLLF_02	Parameter Estimates - Association with RLL Group = Yes					
Source	df1	df2	Wald F	Sig.	B	Std. Error
(Corrected Model)	7	59	15.13	.000		
(Intercept)	1	65	37.22	.000	-2.460	.403
B3_e_01	1	65	0.48	.489	.215	.309
B3_f_01	1	65	0.85	.361	.519	.564
D1_99a_01	1	65	0.94	.337	.494	.510
D1_99b_01	1	65	17.08	.000	2.009	.486
D1_99e_01	1	65	1.10	.298	.614	.585
D1_99f_01	1	65	10.41	.002	2.363	.732
D1_99g	1	65	7.76	.007	1.235	.443

D.1 Results of "Full" GSCH_01 index model (including base variables and RLL group) to predict CLSPM

GSCH_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12	61	31.566	0.000				
(Intercept)	1	72	54.515	.000	21.954	2.973	16.027	27.882
RLL_yes	1	72	29.418	.000	5.921	1.092	8.097	3.745
LOI_Bomu	1	72	.866	.355	1.642	1.765	-1.877	5.161
LOI_Fulfulde	1	72	.303	.583	-1.032	1.874	-4.767	2.703
grade_1	1	72	58.996	.000	-6.935	.903	-8.735	-5.135
grade_3	1	72	29.833	.000	6.262	1.146	3.977	8.547
gender_F	1	72	3.906	.052	-.777	.393	-1.561	.007
B1_05t	1	72	.799	.374	-.004	.004	-.011	.004
B1_05gpi	1	72	.028	.867	-.367	2.182	-4.716	3.982
B2_06	1	72	.447	.506	-.954	1.426	-3.798	1.889
B2_07	1	72	.519	.474	1.000	1.388	-1.766	3.766
B2_11_urb	1	72	9.993	.002	5.015	1.586	1.852	8.177
clspm_base_mean	1	72	.281	.598	.036	.068	-.100	.172

D.2 Results of "Full" GSTU_01a index model (including base variables and RLL group) to predict CLSPM

GSTU_01a	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	17	56	19.898	.000				
(Intercept)	1	72	26.491	.000	10.288	1.999	6.303	14.272
RLL_yes	1	72	22.445	.000	5.581	1.178	3.233	7.929
LOI_Bomu	1	72	.020	.889	.256	1.821	-3.375	3.887
LOI_Fulfulde	1	72	3.447	.067	-3.445	1.856	-7.145	.254
grade_1	1	72	60.516	.000	-6.938	.892	-8.715	-5.160
grade_3	1	72	26.993	.000	5.890	1.134	3.630	8.150
gender_F	1	72	2.481	.120	-.628	.399	-1.423	.167
clspm_base_mean	1	72	.527	.470	.051	.070	-.089	.191
SQ_10r	1	72	1.171	.283	.713	.659	-.601	2.027
SQ_11r	1	72	.237	.628	.388	.796	-1.200	1.976
SQ_12r	1	72	.089	.766	-.164	.550	-1.260	.932
SQ_13r	1	72	.504	.480	.477	.671	-.862	1.815
SQ_14r	1	72	1.577	.213	-.971	.773	-2.513	.571
SQ_15r	1	72	.445	.507	-.671	1.007	-2.678	1.335
SQ_16r	1	72	.396	.531	.459	.730	-.996	1.915
SQ_17r	1	72	1.646	.204	.901	.702	-.499	2.300
SQ_18r	1	72	14.414	.000	-2.238	.590	-3.414	-1.063
SQ_19r	1	72	.028	.868	-.128	.770	-1.663	1.407

D.3 Results of "Full" GSTU_01b index model (including base variables and RLL group) to predict CLSPM

GSTU_01b	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	8	65	39.949	0.000				
(Intercept)	1	72	34.747	.000	10.892	1.848	7.209	14.576
RLL_yes	1	72	23.024	.000	5.506	1.148	3.219	7.794
LOI_Bomu	1	72	.077	.782	-.473	1.704	-3.870	2.923
LOI_Fulfulde	1	72	3.464	.067	-3.198	1.718	-6.623	.227
grade_1	1	72	58.475	.000	-6.957	.910	-8.770	-5.143
grade_3	1	72	28.690	.000	6.172	1.152	3.875	8.469
gender_F	1	72	2.074	.154	-.586	.407	-1.396	.225
clspm_base_mean	1	72	.571	.452	.052	.069	-.086	.191
stud_home_mat	1	72	.092	.763	-.046	.151	-.346	.255

D.4 Results of "Full" GSTU_02 index model (including base variables and RLL group) to predict CLSPM

GSTU_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12	61	29.587	0.000				
(Intercept)	1	72	6.083	.016	5.251	2.129	1.007	9.494
RLL_yes	1	72	21.192	.000	5.307	1.153	3.009	7.605
LOI_Bomu	1	72	.041	.841	.364	1.804	-3.233	3.961
LOI_Fulfulde	1	72	1.564	.215	-1.989	1.590	-5.159	1.181
grade_1	1	72	51.490	.000	-6.608	.921	-8.444	-4.772
grade_3	1	72	25.197	.000	5.808	1.157	3.501	8.114
gender_F	1	72	1.881	.175	-.599	.437	-1.470	.272
clspm_base_mean	1	72	.222	.639	.033	.071	-.108	.174
stud_LOI	1	72	8.792	.004	3.437	1.159	1.126	5.748
SQ_05r	1	72	11.268	.001	3.023	.901	1.228	4.818
books_LOI	1	72	1.429	.236	1.613	1.350	-1.077	4.304
SQ_071r	1	72	3.611	.061	-2.092	1.101	-4.287	.103
litpers_home	1	72	4.002	.049	.613	.306	.002	1.224

D.5 Results of "Full" GPED_01 index model (including base variables and RLL group) to predict CLSPM

GPED_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	10	58	29.049	.000				
(Intercept)	1	67	32.077	.000	13.092	2.312	8.478	17.706
RLL_yes	1	67	19.548	.000	5.156	1.166	2.828	7.484
LOI_Bomu	1	67	.148	.701	-.607	1.576	-3.752	2.538
LOI_Fulfulde	1	67	2.037	.158	-2.447	1.715	-5.870	.976
grade_1	1	67	47.200	.000	-6.480	.943	-8.363	-4.598
grade_3	1	67	22.632	.000	6.565	1.380	3.811	9.319
gender_F	1	67	2.258	.138	-.659	.439	-1.535	.217
clspm_base_mean	1	67	.436	.511	.050	.076	-.102	.203
C1_04	1	67	2.579	.113	-.110	.068	-.246	.027
C2_01	1	67	.596	.443	-1.260	1.632	-4.518	1.997
C2_02	1	67	3.070	.084	-2.084	1.190	-4.459	.290

D.6 Results of "Full" GPED_02 index model (including base variables and RLL group) to predict CLSPM

GPED_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12	56	21.500	.000				
(Intercept)	1	67	11.788	.001	7.890	2.298	3.303	12.476
RLL_yes	1	67	29.471	.000	6.057	1.116	3.830	8.285
LOI_Bomu	1	67	.031	.861	-.317	1.806	-3.922	3.288
LOI_Fulfulde	1	67	6.723	.012	-3.308	1.276	-5.855	-.762
grade_1	1	67	53.516	.000	-7.508	1.026	-9.556	-5.459
grade_3	1	67	37.321	.000	7.057	1.155	4.751	9.363
gender_F	1	67	1.249	.268	-.438	.392	-1.221	.344
clspm_base_mean	1	67	.529	.470	.047	.065	-.083	.177
C1_05	1	67	.790	.377	-.112	.126	-.364	.140
C1_07a	1	67	.013	.908	.162	1.394	-2.621	2.944
C3_03a	1	67	7.977	.006	3.442	1.219	1.009	5.875
C3_03b	1	67	.106	.745	.474	1.452	-2.425	3.372
C9_04	1	67	.908	.344	1.249	1.311	-1.367	3.866

D.7 Results of "Full" GPED_05 index model (including base variables and RLL group) to predict CLSPM

GPED_05	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	15	53	23.146	.000				
(Intercept)	1	67	4.078	.047	9.838	4.872	.114	19.561
RLL_yes	1	67	34.151	.000	6.838	1.170	4.502	9.173
LOI_Bomu	1	67	.348	.557	1.013	1.716	-2.413	4.439
LOI_Fulfulde	1	67	.015	.903	.295	2.406	-4.507	5.097
grade_1	1	67	41.589	.000	-6.672	1.035	-8.737	-4.607
grade_3	1	67	26.765	.000	6.289	1.216	3.863	8.716
gender_F	1	67	.287	.594	-.228	.425	-1.077	.621
clspm_base_mean	1	67	2.407	.126	.121	.078	-.035	.276
A1_06	1	67	2.256	.138	.162	.108	-.053	.377
A2_03b	1	67	1.005	.320	.256	.256	-.254	.767
A2_04	1	67	.000	.998	.006	2.468	-4.920	4.932
C4_05a	1	67	2.551	.115	-1.846	1.156	-4.154	.461
C6_03b	1	67	2.119	.150	-2.638	1.812	-6.256	.979
C6_04	1	67	.307	.581	-1.235	2.228	-5.683	3.212
C6_06b	1	67	1.916	.171	1.433	1.035	-.633	3.499
B2_20	1	67	.685	.411	.999	1.207	-1.410	3.408

D.8 Results of "Full" GPED_06 index model (including base variables and RLL group) to predict CLSPM

GPED_06	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	18	49	22.740	.000				
(Intercept)	1	66	22.975	.000	8.621	1.799	5.030	12.212
RLL_yes	1	66	27.465	.000	5.599	1.068	3.466	7.732
LOI_Bomu	1	66	.781	.380	-1.331	1.507	-4.340	1.677
LOI_Fulfulde	1	66	.063	.802	-.531	2.112	-4.748	3.685
grade_1	1	66	49.219	.000	-7.095	1.011	-9.114	-5.076
grade_3	1	66	20.838	.000	6.387	1.399	3.594	9.181
gender_F	1	66	.866	.356	-.406	.436	-1.276	.465
clspm_base_mean	1	66	.670	.416	.064	.079	-.093	.221
A1_12a	1	66	5.280	.025	2.870	1.249	.376	5.365
A2_01	1	66	2.848	.096	-1.695	1.004	-3.700	.310
B1_03	1	66	.855	.359	-.250	.271	-.791	.290
B2_05_1	1	66	.404	.527	.041	.064	-.087	.169
B2_05_2	1	66	.217	.643	.052	.111	-.169	.272
B2_05_3	1	66	3.112	.082	-.107	.061	-.228	.014
B3_04a	1	66	.211	.648	.580	1.264	-1.943	3.104
B3_07a	1	66	2.494	.119	1.909	1.209	-.504	4.323
B3_07c	1	66	1.252	.267	1.855	1.658	-1.455	5.164
C1_07_French	1	66	.056	.814	-.332	1.409	-3.146	2.481
B2_04p	1	66	1.040	.311	-1.558	1.527	-4.607	1.491

D.9 Results of "Full" RLLF_01 index model (including base variables and RLL group) to predict CLSPM

RLLF_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	13	54	29.416	.000				
(Intercept)	1	66	37.818	.000	8.503	1.383	5.742	11.263
RLL_yes	1	66	7.888	.007	4.199	1.495	1.214	7.185
LOI_Bomu	1	66	.145	.705	.697	1.831	-2.959	4.353
LOI_Fulfulde	1	66	6.657	.012	-3.422	1.326	-6.070	-.774
grade_1	1	66	54.238	.000	-6.328	.859	-8.043	-4.612
grade_3	1	66	22.008	.000	5.873	1.252	3.374	8.373
gender_F	1	66	1.397	.241	-.511	.432	-1.374	.352
clspm_base_mean	1	66	2.435	.123	.099	.063	-.028	.225
A1_12c	1	66	.807	.372	-1.421	1.581	-4.578	1.737
C2_05	1	66	.080	.778	.387	1.367	-2.343	3.117
D1_99_k	1	66	.246	.622	.976	1.968	-2.953	4.906
D1_99_l	1	66	.008	.930	.015	.171	-.327	.357
D1_99_m	1	66	6.838	.011	3.156	1.207	.746	5.565
D1_99_n	1	66	.018	.895	.241	1.811	-3.375	3.856

D.10 Results of "Full" RLLF_02 index model (including base variables and RLL group) to predict CLSPM

RLLF_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	14	52	20.625	.000				
(Intercept)	1	65	49.863	.000	9.691	1.372	6.950	12.432
RLL_yes	1	65	1.399	.241	1.542	1.304	-1.062	4.146
LOI_Bomu	1	65	.006	.940	-.101	1.332	-2.761	2.559
LOI_Fulfulde	1	65	7.294	.009	-4.796	1.776	-8.342	-1.249
grade_1	1	65	52.250	.000	-6.731	.931	-8.591	-4.871
grade_3	1	65	31.009	.000	6.266	1.125	4.018	8.513
gender_F	1	65	1.825	.181	-.594	.440	-1.472	.284
clspm_base_mean	1	65	1.482	.228	.084	.069	-.054	.221
B3_e_01	1	65	.028	.867	-.157	.933	-2.020	1.706
B3_f_01	1	65	.709	.403	1.243	1.477	-1.707	4.194
D1_99a_01	1	65	.000	.999	.002	3.433	-6.853	6.858
D1_99b_01	1	65	.009	.923	-.323	3.339	-6.991	6.344
D1_99e_01	1	65	.023	.881	.233	1.552	-2.867	3.332
D1_99f_01	1	65	5.048	.028	3.965	1.765	.441	7.490
D1_99g	1	65	2.813	.098	2.614	1.558	-.498	5.726

D.11 Results of "Full" RLLF_01 & RLLF_02 index model to predict CLSPM

RLLF_01+RLLF_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	20	41	19.108	.000				
(Intercept)	1	60	41.542	.000	8.238	1.278	5.681	10.794
RLL_yes	1	60	.752	.389	1.413	1.629	-1.846	4.672
LOI_Bomu	1	60	.154	.697	.563	1.437	-2.311	3.437
LOI_Fulfulde	1	60	13.769	.000	-5.348	1.441	-8.230	-2.465
grade_1	1	60	44.503	.000	-6.305	.945	-8.196	-4.415
grade_3	1	60	26.753	.000	5.966	1.153	3.659	8.273
gender_F	1	60	1.306	.258	-.513	.449	-1.411	.385
clspm_base_mean	1	60	3.763	.057	.117	.061	-.004	.238
A1_12c	1	60	.663	.419c	-1.189	1.460	-4.110c	1.732
C2_05	1	60	.046	.831	.281	1.307	-2.334	2.895
D1_99_k	1	60	.547	.462	1.680	2.271	-2.862	6.221
D1_99_l	1	60	.185	.669	-.077	.180	-.437	.282
D1_99_m	1	60	3.462	.068	2.469	1.327	-.185	5.123
D1_99_n	1	60	.010	.921	.197	1.986	-3.776	4.170
B3_e_01	1	60	.010	.922	-.115	1.168	-2.450	2.221
B3_f_01	1	60	.223	.638	.687	1.455	-2.223	3.597
D1_99a_01	1	60	.141	.708	-1.263	3.362	-7.987	5.461
D1_99b_01	1	60	.049	.825	.729	3.284	-5.841	7.298
D1_99e_01	1	60	.174	.678	-.611	1.464	-3.540	2.318
D1_99f_01	1	60	4.721	.034	3.576	1.646	.284	6.869
D1_99g	1	60	3.074	.085	2.639	1.505	-.372	5.650

a. Model: clspm clspm = (Intercept) + RLL_yes + LOI_Bomu + LOI_Fulfulde +
~~grade_1 + grade_3 + gender_F + clspm_base_mean + A1_12c + C2_05 +~~

D.12 Results of "Full" RLLF_01 index model to predict CLSPM - RLL schools only

RLLF_01 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	14	21	19.523	.000			Lower	Upper
(Intercept)	1	34	8.296	.007	15.075	5.234	4.439	25.712
LOI_Bomu	1	34	.162	.689	1.322	3.281	-5.345	7.990
LOI_Fulfulde	1	34	.838	.366	-2.738	2.991	-8.816	3.340
grade_1	1	34	53.633	.000	-9.004	1.229	-11.503	-6.505
grade_3	1	34	14.253	.001	5.756	1.525	2.657	8.854
gender_F	1	34	5.312	.027	-1.178	.511	-2.217	-.139
clspm_base_mean	1	34	.002	.962	.004	.074	-.147	.154
A1_12c	1	34	.806	.376	-2.209	2.461	-7.212	2.793
C2_05	1	34	.160	.691	.766	1.913	-3.122	4.654
D1_99_k	1	34	.913	.346	3.456	3.616	-3.894	10.806
D1_99_l	1	34	3.533	.069	.369	.197	-.030	.769
D1_99_m	1	34	12.597	.001	4.646	1.309	1.986	7.306
D1_99_n	1	34	.015	.902	.236	1.902	-3.629	4.102
vsa_TOT	1	34	.044	.835	-.010	.048	-.108	.088
vsa_2012	1	34	2.442	.127	-.366	.234	-.842	.110

Subpopulation: RLL_yes RLL_yes = 1

D.13 Results of "Full" RLLF_02 index model to predict CLSPM - RLL schools only

RLLF_02 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	13	20	14.225	.000			Lower	Upper
(Intercept)	1	32	26.379	.000	9.991	1.945	6.028	13.953
LOI_Bomu	1	32	.178	.676	-.916	2.174	-5.345	3.513
LOI_Fulfulde	1	32	5.522	.025	-6.547	2.786	-12.223	-.872
grade_1	1	32	53.510	.000	-9.467	1.294	-12.103	-6.831
grade_3	1	32	19.469	.000	6.835	1.549	3.680	9.990
gender_F	1	32	5.256	.029	-1.178	.514	-2.224	-.131
clspm_base_mean	1	32	.224	.639	.053	.113	-.176	.283
B3_e_01	1	32	1.884	.179	1.872	1.364	-.906	4.650
B3_f_01	1	32	1.665	.206	1.929	1.495	-1.116	4.975
D1_99a_01	1	32	1.084	.306	-3.930	3.776	-11.621	3.760
D1_99b_01	1	32	.228	.636	1.586	3.323	-5.183	8.356
D1_99e_01	1	32	7.527	.010	6.918	2.521	1.782	12.054
D1_99f_01	1	32	.220	.642	1.324	2.821	-4.423	7.070
D1_99g	1	32	1.058	.311	2.231	2.169	-2.187	6.649

Subpopulation: RLL_yes RLL_yes = 1

D.14 Results of "Full" RLLF_01 & RLLF_02 index model to predict CLSPM - RLL schools only

RLLF_01 & RLLF_02 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	19	13	10.494	.000				
(Intercept)	1	31	16.217	.000	7.820	1.942	3.860	11.781
LOI_Bomu	1	31	.000	.998	.008	2.451	-4.991	5.006
LOI_Fulfulde	1	31	3.335	.077	-5.066	2.774	-10.723	.591
grade_1	1	31	43.595	.000	-9.057	1.372	-11.855	-6.259
grade_3	1	31	16.871	.000	6.312	1.537	3.178	9.447
gender_F	1	31	5.544	.025	-1.162	.494	-2.169	-.156
clspm_base_mean	1	31	.164	.688	.039	.096	-.157	.235
A1_12c	1	31	.089	.767	.940	3.148	-5.482	7.361
C2_05	1	31	.013	.909	.222	1.932	-3.719	4.164
D1_99_k	1	31	.345	.561	2.414	4.108	-5.965	10.792
D1_99_l	1	31	.224	.640	-.132	.280	-.704	.439
D1_99_m	1	31	1.747	.196	2.756	2.085	-1.496	7.008
D1_99_n	1	31	.230	.635	1.135	2.366	-3.691	5.961
B3_e_01	1	31	.700	.409	1.375	1.644	-1.977	4.727
B3_f_01	1	31	.840	.367	1.605	1.751	-1.967	5.176
D1_99a_01	1	31	2.198	.148	-5.614	3.786	-13.336	2.109
D1_99b_01	1	31	.460	.503	2.347	3.461	-4.711	9.405
D1_99e_01	1	31	3.769	.061	5.370	2.766	-.271	11.011
D1_99f_01	1	31	.034	.856	-.549	2.993	-6.654	5.555
D1_99g	1	31	.964	.334	2.411	2.456	-2.598	7.420

Subpopulation: RLL_yes RLL_yes = 1

ATTACHMENT E   **Results of Multiple Regression Models Estimating strength of thematic indices in predicting students' Oral Reading Fluency (ORF) at endline**

E.1 Results of "Full" GSCH_01 index model (including base variables and RLL group) to predict ORF

GSCH_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12	61	15.385	.000				
(Intercept)	1	72	10.906	.001	4.288	1.298	1.700	6.876
RLL_yes	1	72	21.403	.000	3.379	.730	1.923	4.836
LOI_Bomu	1	72	1.331	.252	.958	.830	-.697	2.613
LOI_Fulfulde	1	72	18.721	.000	-3.997	.924	-5.839	-2.156
grade_1	1	72	21.818	.000	-2.666	.571	-3.803	-1.528
grade_3	1	72	21.933	.000	3.824	.816	2.196	5.451
gender_F	1	72	.593	.444	-.252	.327	-.904	.400
orf_base_mean	1	72	.000	.988	-.002	.101	-.202	.199
B1_05t	1	72	.174	.678	-.001	.003	-.007	.005
B1_05gpi	1	72	.377	.541	.683	1.112	-1.534	2.900
B2_06	1	72	.124	.726	-.339	.965	-2.263	1.584
B2_07	1	72	1.346	.250	1.303	1.123	-.936	3.541
B2_11_urb	1	72	2.689	.105	2.246	1.370	-.485	4.977

E.2 Results of "Full" GSTU_01a index model (including base variables and RLL group) to predict ORF

GSTU_01a	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	17	56	11.097	.000				
(Intercept)	1	72	32.402	.000	7.532	1.323	4.894	10.170
RLL_yes	1	72	19.770	.000	3.332	.749	1.838	4.826
LOI_Bomu	1	72	.188	.666	-.415	.957	-2.323	1.494
LOI_Fulfulde	1	72	31.848	.000	-5.476	.970	-7.411	-3.542
grade_1	1	72	23.001	.000	-2.755	.574	-3.900	-1.610
grade_3	1	72	20.024	.000	3.676	.822	2.039	5.314
gender_F	1	72	.312	.578	-.177	.316	-.808	.454
orf_base_mean	1	72	.017	.897	.011	.085	-.158	.180
SQ_10r	1	72	1.434	.235	-.575	.480	-1.533	.382
SQ_11r	1	72	.010	.921	.051	.515	-.976	1.078
SQ_12r	1	72	1.195	.278	-.440	.403	-1.242	.362
SQ_13r	1	72	.986	.324	-.480	.483	-1.443	.483
SQ_14r	1	72	.000	.994	.005	.651	-1.292	1.302
SQ_15r	1	72	3.972	.050	-1.253	.629	-2.506	.000
SQ_16r	1	72	.020	.888	-.077	.545	-1.163	1.009
SQ_17r	1	72	5.483	.022	.973	.415	.145	1.800
SQ_18r	1	72	10.699	.002	-1.700	.520	-2.736	-.664
SQ_19r	1	72	.002	.961	.023	.474	-.922	.968

E.3 Results of "Full" GSTU_01b index model (including base variables and RLL group) to predict ORF

GSTU_01b	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	8.000	65.000	20.223	.000				
(Intercept)	1.000	72.000	43.256	.000	7.421	1.128	5.172	9.670
RLL_yes	1.000	72.000	19.146	.000	3.183	.727	1.733	4.633
LOI_Bomu	1.000	72.000	.683	.411	-.722	.874	-2.465	1.020
LOI_Fulfulde	1.000	72.000	32.234	.000	-5.222	.920	-7.056	-3.389
grade_1	1.000	72.000	23.355	.000	-2.753	.570	-3.889	-1.618
grade_3	1.000	72.000	21.197	.000	3.763	.817	2.134	5.392
gender_F	1.000	72.000	.122	.728	-.115	.328	-.769	.539
orf_base_mean	1.000	72.000	.082	.776	.023	.082	-.140	.187
stud_home_mat	1.000	72.000	6.483	.013	-.275	.108	-.491	-.060

E.4 Results of "Full" GSTU_02 index model (including base variables and RLL group) to predict ORF

GSTU_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12.000	61.000	15.643	.000				
(Intercept)	1.000	72.000	7.212	.009	3.349	1.247	.863	5.834
RLL_yes	1.000	72.000	15.607	.000	2.767	.700	1.371	4.164
LOI_Bomu	1.000	72.000	.712	.402	.621	.736	-.847	2.089
LOI_Fulfulde	1.000	72.000	26.242	.000	-4.411	.861	-6.127	-2.694
grade_1	1.000	72.000	15.753	.000	-2.228	.561	-3.348	-1.109
grade_3	1.000	72.000	19.579	.000	3.471	.785	1.907	5.035
gender_F	1.000	72.000	.047	.829	-.070	.322	-.711	.572
orf_base_mean	1.000	72.000	.014	.907	.010	.084	-.158	.178
stud_LOI	1.000	72.000	2.913	.092	1.297	.760	-.218	2.811
SQ_05r	1.000	72.000	26.217	.000	3.549	.693	2.167	4.931
books_LOI	1.000	72.000	4.702	.033	3.358	1.548	.271	6.445
SQ_071r	1.000	72.000	8.814	.004	-2.137	.720	-3.572	-.702
litpers_home	1.000	72.000	.505	.480	-.153	.215	-.582	.276

E.5 Results of "Full" GPED_01 index model (including base variables and RLL group) to predict ORF

GPED_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	10.000	58.000	15.636	.000				
(Intercept)	1.000	67.000	17.645	.000	4.864	1.158	2.553	7.175
RLL_yes	1.000	67.000	14.667	.000	2.843	.742	1.361	4.325
LOI_Bomu	1.000	67.000	.034	.855	-.149	.816	-1.778	1.480
LOI_Fulfulde	1.000	67.000	27.850	.000	-4.663	.884	-6.426	-2.899
grade_1	1.000	67.000	18.301	.000	-2.451	.573	-3.594	-1.307
grade_3	1.000	67.000	19.215	.000	4.375	.998	2.383	6.367
gender_F	1.000	67.000	.355	.554	-.213	.357	-.926	.500
orf_base_mean	1.000	67.000	.242	.624	-.045	.092	-.229	.138
C1_04	1.000	67.000	1.642	.204	-.057	.044	-.145	.032
C2_01	1.000	67.000	1.511	.223	1.210	.985	-.755	3.176
C2_02	1.000	67.000	.203	.654	.431	.956	-1.478	2.340

E.6 Results of "Full" GPED_02 index model (including base variables and RLL group) to predict ORF

GPED_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	12	56	12.548	.000				
(Intercept)	1	67	12.703	.001	6.914	1.940	3.042	10.786
RLL_yes	1	67	16.748	.000	3.343	.817	1.712	4.973
LOI_Bomu	1	67	.414	.522	-.664	1.031	-2.721	1.394
LOI_Fulfulde	1	67	31.324	.000	-4.935	.882	-6.694	-3.175
grade_1	1	67	17.967	.000	-2.657	.627	-3.908	-1.406
grade_3	1	67	12.491	.001	3.169	.897	1.379	4.959
gender_F	1	67	.009	.927	-.033	.353	-.736	.671
orf_base_mean	1	67	.532	.468	.064	.088	-.111	.239
C1_05	1	67	1.160	.285	-.104	.096	-.296	.089
C1_07a	1	67	1.113	.295	-1.389	1.316	-4.016	1.238
C3_03a	1	67	1.235	.270	1.110	.999	-.884	3.105
C3_03b	1	67	.468	.496	1.059	1.547	-2.029	4.148
C9_04	1	67	.845	.361	-.713	.776	-2.261	.835

E.7 Results of "Full" GPED_05 index model (including base variables and RLL group) to predict ORF

GPED_05	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	15	53	9.968	.000				
(Intercept)	1	67	6.823	.011	7.207	2.759	1.700	12.714
RLL_yes	1	67	19.773	.000	3.424	.770	1.887	4.960
LOI_Bomu	1	67	.112	.738	.295	.879	-1.460	2.049
LOI_Fulfulde	1	67	9.058	.004	-4.412	1.466	-7.339	-1.486
grade_1	1	67	17.870	.000	-2.776	.657	-4.087	-1.465
grade_3	1	67	20.791	.000	3.928	.862	2.209	5.648
gender_F	1	67	.119	.731	.115	.332	-.549	.778
orf_base_mean	1	67	.664	.418	.073	.090	-.106	.252
A1_06	1	67	.223	.638	.030	.063	-.096	.155
A2_03b	1	67	.308	.581	-.125	.225	-.574	.324
A2_04	1	67	.446	.507	.715	1.071	-1.423	2.853
C4_05a	1	67	1.254	.267	-.833	.744	-2.319	.652
C6_03b	1	67	1.378	.245	-1.699	1.447	-4.587	1.190
C6_04	1	67	1.059	.307	-1.869	1.816	-5.494	1.756
C6_06b	1	67	.943	.335	.725	.747	-.765	2.216
B2_20	1	67	1.519	.222	1.064	.863	-.659	2.787

E.8 Results of "Full" GPED_06 index model (including base variables and RLL group) to predict ORF

GPED_06	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	18	49	8.369	.000				
(Intercept)	1	66	7.958	.006	5.248	1.860	1.533	8.962
RLL_yes	1	66	18.539	.000	3.124	.726	1.676	4.573
LOI_Bomu	1	66	.004	.949	.065	1.001	-1.935	2.064
LOI_Fulfulde	1	66	8.661	.004	-4.806	1.633	-8.067	-1.545
grade_1	1	66	15.145	.000	-2.759	.709	-4.175	-1.344
grade_3	1	66	14.761	.000	3.712	.966	1.783	5.640
gender_F	1	66	.000	.998	.001	.344	-.685	.687
orf_base_mean	1	66	.246	.622	.049	.099	-.149	.247
A1_12a	1	66	.037	.848	-.220	1.143	-2.502	2.062
A2_01	1	66	1.006	.319	.839	.836	-.830	2.508
B1_03	1	66	.084	.773	-.057	.198	-.453	.338
B2_05_1	1	66	.811	.371	-.047	.052	-.152	.057
B2_05_2	1	66	1.574	.214	.106	.084	-.063	.275
B2_05_3	1	66	3.847	.054	-.081	.041	-.164	.001
B3_04a	1	66	1.226	.272	1.029	.929	-.826	2.884
B3_07a	1	66	1.188	.280	1.163	1.067	-.967	3.292
B3_07c	1	66	.962	.330	1.423	1.451	-1.474	4.320
C1_07_French	1	66	.044	.834	-.234	1.112	-2.454	1.986
B2_04p	1	66	.855	.358	-1.087	1.176	-3.435	1.260

E.9 Results of "Full" RLLF_01 index model (including base variables and RLL group) to predict ORF

RLLF_01	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	13	54	13.034	.000				
(Intercept)	1	66	57.637	.000	5.151	.679	3.796	6.506
RLL_yes	1	66	6.263	.015	2.180	.871	.441	3.918
LOI_Bomu	1	66	.030	.862	-.144	.826	-1.793	1.505
LOI_Fulfulde	1	66	32.895	.000	-4.635	.808	-6.249	-3.022
grade_1	1	66	17.670	.000	-2.483	.591	-3.662	-1.304
grade_3	1	66	16.553	.000	3.825	.940	1.948	5.702
gender_F	1	66	.180	.673	-.143	.336	-.814	.529
orf_base_mean	1	66	.585	.447	.056	.073	-.090	.201
A1_12c	1	66	1.025	.315	1.007	.994	-.979	2.992
C2_05	1	66	.327	.569	-.594	1.040	-2.670	1.482
D1_99_k	1	66	.416	.521	-.581	.900	-2.378	1.217
D1_99_l	1	66	.022	.883	.029	.198	-.365	.423
D1_99_m	1	66	2.682	.106	1.203	.735	-.264	2.670
D1_99_n	1	66	.014	.907	.172	1.465	-2.752	3.097

E.10 Results of "Full" RLLF_02 index model (including base variables and RLL group) to predict ORF

RLLF_02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	14	52	14.159	.000				
(Intercept)	1	65	65.498	.000	6.651	.822	5.010	8.292
RLL_yes	1	65	5.574	.021	2.389	1.012	.368	4.410
LOI_Bomu	1	65	.000	.998	-.002	.753	-1.505	1.501
LOI_Fulfulde	1	65	21.957	.000	-5.475	1.168	-7.809	-3.142
grade_1	1	65	27.132	.000	-3.329	.639	-4.605	-2.053
grade_3	1	65	12.402	.001	2.815	.799	1.218	4.411
gender_F	1	65	.064	.801	-.087	.346	-.779	.604
orf_base_mean	1	65	.001	.972	.003	.085	-.167	.173
B3_e_01	1	65	3.537	.064	-1.492	.793	-3.077	.092
B3_f_01	1	65	4.658	.035	-2.101	.974	-4.045	-.157
D1_99a_01	1	65	2.218	.141	2.124	1.426	-.724	4.973
D1_99b_01	1	65	1.776	.187	-2.409	1.808	-6.019	1.201
D1_99e_01	1	65	1.298	.259	-1.033	.907	-2.845	.778
D1_99f_01	1	65	3.168	.080	2.595	1.458	-.317	5.506
D1_99g	1	65	3.564	.063	2.683	1.421	-.155	5.521

E.11 Results of "Full" RLLF_01 & RLLF_02 index model to predict ORF

RLLF_01 & _02	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	20	41	9.013	.000				
(Intercept)	1	60	68.117	.000	6.175	.748	4.679	7.672
RLL_yes	1	60	3.688	.060	2.213	1.152	-.092	4.518
LOI_Bomu	1	60	.003	.959	.041	.807	-1.574	1.656
LOI_Fulfulde	1	60	28.825	.000	-5.371	1.000	-7.372	-3.370
grade_1	1	60	18.458	.000	-3.027	.705	-4.436	-1.618
grade_3	1	60	10.423	.002	2.753	.853	1.047	4.459
gender_F	1	60	.044	.835	-.075	.357	-.790	.640
orf_base_mean	1	60	.266	.608	.039	.076	-.113	.191
A1_12c	1	60	.763	.386	.972	1.113	-1.254	3.199
C2_05	1	60	.006	.941	.099	1.325	-2.550	2.749
D1_99_k	1	60	.405	.527	-.744	1.169	-3.081	1.594
D1_99_l	1	60	.052	.821	.042	.187	-.331	.416
D1_99_m	1	60	2.966	.090	1.650	.958	-.266	3.566
D1_99_n	1	60	.000	.998	-.005	1.932	-3.870	3.860
B3_e_01	1	60	4.751	.033	-2.197	1.008	-4.214	-.181
B3_f_01	1	60	3.227	.077	-1.751	.975	-3.700	.199
D1_99a_01	1	60	1.635	.206	1.758	1.375	-.992	4.507
D1_99b_01	1	60	1.136	.291	-2.350	2.205	-6.760	2.061
D1_99e_01	1	60	.995	.323	-1.079	1.082	-3.244	1.085
D1_99f_01	1	60	2.109	.152	1.848	1.273	-.698	4.393
D1_99g	1	60	2.860	.096	2.119	1.253	-.387	4.626

E.12 Results of "Full" RLLF_01 index model to predict ORF - RLL schools only

RLLF_01 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	14	21	6.197	.000			Lower	Upper
(Intercept)	1	34	7.508	.010				
LOI_Bomu	1	34	2.799	.103	-3.143	1.878	-6.960	.675
LOI_Fulfulde	1	34	9.002	.005	-6.630	2.210	-11.120	-2.139
grade_1	1	34	18.495	.000	-4.393	1.021	-6.469	-2.317
grade_3	1	34	11.212	.002	3.976	1.187	1.563	6.389
gender_F	1	34	2.103	.156	-.807	.556	-1.937	.324
orf_base_mean	1	34	.001	.974	.003	.095	-.189	.195
A1_12c	1	34	.085	.773	.331	1.137	-1.980	2.642
C2_05	1	34	.017	.898	-.175	1.353	-2.924	2.574
D1_99_k	1	34	.095	.760	-.494	1.604	-3.754	2.766
D1_99_l	1	34	.966	.333	.228	.231	-.243	.698
D1_99_m	1	34	2.447	.127	1.645	1.051	-.492	3.781
D1_99_n	1	34	.076	.785	.451	1.638	-2.878	3.780
vsa_TOT	1	34	.014	.907	-.005	.040	-.087	.077
vsa_2012	1	34	.332	.568	-.144	.249	-.650	.363

Subpopulation: RLL_yes RLL_yes = 1

E.13 Results of "Full" RLLF_02 index model to predict ORF - RLL schools only

RLLF_02 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	13	20	9.281	.000				
(Intercept)	1	32	36.371	.000	9.654	1.601	6.393	12.914
LOI_Bomu	1	32	4.390	.044	-2.855	1.363	-5.631	-.080
LOI_Fulfulde	1	32	23.294	.000	-7.704	1.596	-10.955	-4.453
grade_1	1	32	20.654	.000	-5.317	1.170	-7.700	-2.934
grade_3	1	32	13.325	.001	2.524	.692	1.116	3.933
gender_F	1	32	3.145	.086	-.923	.520	-1.983	.137
orf_base_mean	1	32	.644	.428	.111	.139	-.171	.393
B3_e_01	1	32	1.364	.251	-1.288	1.103	-3.534	.958
B3_f_01	1	32	2.411	.130	-2.222	1.431	-5.137	.693
D1_99a_01	1	32	.177	.677	.866	2.061	-3.332	5.065
D1_99b_01	1	32	1.624	.212	-3.204	2.514	-8.324	1.917
D1_99e_01	1	32	2.993	.093	2.392	1.382	-.424	5.208
D1_99f_01	1	32	1.101	.302	2.330	2.221	-2.194	6.855
D1_99g	1	32	3.149	.085	3.569	2.011	-.528	7.665

Subpopulation: RLL_yes RLL_yes = 1

E.14 Results of "Full" RLLF_01 & RLLF_02 index model to predict ORF - RLL schools only

RLLF_01 & RLLF_02 - RLL schools only	Tests of Model Effects				Parameter estimate	Std. Error	95% Conf. Interval	
Source	df1	df2	Wald F	Sig.			Lower	Upper
(Corrected Model)	19	13	5.968	.001				
(Intercept)	1	31	22.532	.000	9.365	1.973	5.341	13.388
LOI_Bomu	1	31	3.982	.055	-2.906	1.457	-5.877	.064
LOI_Fulfulde	1	31	4.712	.038	-4.118	1.897	-7.987	-.249
grade_1	1	31	18.722	.000	-4.862	1.124	-7.153	-2.570
grade_3	1	31	4.293	.047	2.092	1.010	.033	4.152
gender_F	1	31	1.832	.186	-.686	.507	-1.719	.348
orf_base_mean	1	31	.973	.332	.109	.111	-.117	.336
A1_12c	1	31	1.181	.286	2.413	2.221	-2.117	6.943
C2_05	1	31	.613	.439	1.646	2.102	-2.641	5.933
D1_99_k	1	31	2.650	.114	-4.017	2.468	-9.050	1.015
D1_99_l	1	31	.137	.714	.084	.226	-.377	.545
D1_99_m	1	31	11.295	.002	4.329	1.288	1.702	6.957
D1_99_n	1	31	.766	.388	1.692	1.934	-2.251	5.636
B3_e_01	1	31	4.948	.034	-3.194	1.436	-6.123	-.266
B3_f_01	1	31	2.509	.123	-2.491	1.573	-5.698	.717
D1_99a_01	1	31	.309	.582	-.992	1.784	-4.630	2.646
D1_99b_01	1	31	1.238	.274	-3.045	2.736	-8.626	2.536
D1_99e_01	1	31	5.166	.030	4.022	1.770	.413	7.631
D1_99f_01	1	31	.397	.533	-1.201	1.907	-5.090	2.687
D1_99g	1	31	.959	.335	1.977	2.020	-2.141	6.096

Subpopulation: RLL_yes RLL_yes = 1