



USAID BASA PILIPINAS

BASA PILIPINAS IMPACT EVALUATION

FINAL REPORT

November 2017

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

BASA PILIPINAS IMPACT EVALUATION

FINAL REPORT

November 2017

USAID/Philippines

GS-10F-0294C / AID-492-M-15-00011

This publication was produced at the request of the United States Agency for International Development (USAID). It was prepared independently by Jordan Robinson, Mike Duthie, and Andrea Hur on behalf of Social Impact, Inc.

Contact:

Social Impact, Inc.
2300 Clarendon Blvd., Suite 1000
Arlington, VA 22201
Jordan Robinson, Project Manager

jrobinson@socialimpact.com

DISCLAIMER

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

ACKNOWLEDGEMENTS

The authors gratefully acknowledge numerous individuals and organizations that contributed to this impact evaluation (IE).

We would first like to express our gratitude to the Philippine Department of Education (DepEd) for ongoing support of this IE and extensive engagement in briefings and reviews of draft reports. DepEd central and regional staff provided valuable input into the IE design, granted school access, participated in dissemination, and provided the evaluators access to administrative data.

We would also like to express our gratitude to all the school directors and teachers for their participation, including opening their doors to their classrooms to allow observation. We also thank the students and their parents. The participants' input provided us with valuable information for this IE, and we are very grateful.

We are very grateful to Tylor Nelson Sofres - Philippines (TNS Philippines) for their hard work and valuable data collection efforts over the course of this IE. In particular, we would like to recognize Yazmin Tolentino for her excellent management of data collection activities. At Social Impact headquarters, Miguel Albornoz and Andrea Hur provided critical support in data cleaning and data presentation. We also thank our local education specialist in the Philippines, Dr. Jessie Barrot, who provided valuable sector and contextual expertise over the course of the IE.

We thank the Basa Pilipinas implementing partner, particularly Marcial Salvatierra and Lisa Hartenberger, for their ongoing collaboration. Finally, we highly appreciate the support and guidance extended by USAID/Philippines. In particular, we thank Nancy Ebuenga for her cooperation and support throughout the study.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	II
EXECUTIVE SUMMARY	I
FINDINGS	2
CONCLUSIONS.....	3
RECOMMENDATIONS.....	4
INTRODUCTION	6
DEVELOPMENT INTERVENTION.....	6
EXISTING EVIDENCE	8
EVALUATION PURPOSE AND EVALUATION QUESTIONS	9
IMPACT EVALUATION METHODOLOGY	10
SCHOOL SAMPLING AND MATCHING	10
<i>DEVELOPMENT OF AN EVALUATION SAMPLE FRAME.....</i>	<i>10</i>
<i>SCHOOL MATCHING.....</i>	<i>10</i>
STUDENT SAMPLING	11
SAMPLE SIZE CALCULATION AND POWER ANALYSIS	11
DATA COLLECTION	12
<i>DATA COLLECTION TOOLS.....</i>	<i>12</i>
<i>FIELDWORKER TRAINING.....</i>	<i>13</i>
DATA ANALYSIS	14
LIMITATIONS	15
STRENGTHS OF THE EVALUATION APPROACH.....	15
FINDINGS: STUDENTS.....	17
OVERVIEW OF THE SAMPLE	17
SUMMARY OF EGRA FINDINGS	17
MOTHER TONGUE	19
FILIPINO	20
ENGLISH.....	22
PROGRESS TOWARD BENCHMARKS.....	24
PREDICTORS OF READING OUTCOMES	25
ZERO SCORES.....	27
EGMA.....	28

FINDINGS: TEACHERS AND SCHOOLS.....	29
CONCLUSIONS.....	32
STUDENTS.....	32
TEACHERS AND SCHOOLS.....	33
RECOMMENDATIONS.....	34
ANNEX 1 – EVALUATION STATEMENT OF WORK.....	35
ANNEX 2 – SAMPLED SCHOOLS.....	38
ANNEX 3 – POWER CALCULATIONS	45
ANNEX 4 – INSTRUMENTS.....	46
ANNEX 5 – EGMA FINDINGS	90
ANNEX 6 – COMPLETE REGRESSION TABLES	92
ANNEX 7 – ALTERNATE REGRESSION MODELS	119
ANNEX 8 – CORRELATIONS BETWEEN OBSERVED TEACHING PRACTICES AND ORF	143
ANNEX 9 – EGRA ASSESSMENT EQUATING.....	144
ANNEX 10 – REVIEW OF TEST ORDER EFFECTS	147
ANNEX 11 – HISTOGRAMS OF ORF SCORES	157
ANNEX 12 – DISCLOSURE OF CONFLICTS OF INTEREST	161

TABLE OF FIGURES

FIGURE 1. BASA PILIPINAS THEORY OF CHANGE.....	7
FIGURE 2. BASA PILIPINAS REGIONS	7
FIGURE 3. IMPACTS OF BASA ON GRADE 1 STUDENTS.....	20
FIGURE 4. IMPACTS OF BASA ON GRADE 2 STUDENTS - FILIPINO	21
FIGURE 5. IMPACTS OF BASA ON GRADE 3 STUDENTS - FILIPINO	21
FIGURE 6. IMPACTS OF BASA ON GRADE 4 STUDENTS - FILIPINO	22
FIGURE 7. IMPACTS OF BASA ON GRADE 2 STUDENTS - ENGLISH	23
FIGURE 8. IMPACTS OF BASA ON GRADE 3 STUDENTS – ENGLISH.....	23
FIGURE 9. IMPACTS OF BASA ON GRADE 4 STUDENTS - ENGLISH	24

TABLE OF TABLES

TABLE 1: ONE-YEAR IMPACTS OF BASA.....	2
TABLE 2: NATIONAL CURRICULUM STANDARDS FOR READING	6
TABLE 3: SAMPLED SCHOOLS.....	11
TABLE 4: EGRA TOOLS ADMINISTERED BY GRADE AND YEAR	12
TABLE 5: FIELD IRR RESULTS.....	14
TABLE 6: EVALUATION SAMPLE.....	17
TABLE 7: STUDENT CHARACTERISTICS	17
TABLE 8: ONE-YEAR IMPACTS OF BASA.....	18
TABLE 9: TWO-YEAR IMPACTS OF BASA.....	19
TABLE 10: PERCENT ATTAINING BENCHMARKS – FILIPINO.....	25
TABLE 11: PERCENT ATTAINING BENCHMARKS – ENGLISH.....	25
TABLE 12: PREDICTORS OF READING OUTCOMES	26
TABLE 13: ZERO SCORES – FILIPINO.....	27
TABLE 14: ZERO SCORES – ENGLISH.....	28
TABLE 15: EGMA	28
TABLE 16: SCHOOL-LEVEL OUTCOMES	29
TABLE 17: TEACHER-LEVEL OUTCOMES	30
TABLE 18: GENERAL BEST-PRACTICE TEACHING BEHAVIORS.....	30
TABLE 19: READING-SPECIFIC BEST-PRACTICE TEACHING BEHAVIORS	31

ACRONYMS

3ie	International Initiative for Impact Evaluation
Basa	Basa Pilipinas
BEIS	Basic Education Information System
CPM	Correct Per Minute
DepEd	Department of Education
EDC	Education Development Center
EGMA	Early Grade Math Assessments
EGRA	Early Grade Reading Assessments
ELLN	Early Language Literacy and Numeracy
IE	Impact Evaluation
IRR	Inter-Rater Reliability
JPAL	Abdul Latif Jameel Poverty Action Lab
LAC	Learning Action Cells
MTBMLE	Mother Tongue-Based Multilingual Education
NAT	National Achievement Test
OLS	Ordinary Least Squares
OR	Odds Ratio
PAD	Project Appraisal Document
PRIMR	Kenya Primary Math and Reading
RCT	Randomized Controlled Trial
RLL	Read-Learn-Lead Program
TE	Treatment Effect
TNS	Taylor Nelson Sofres

EXECUTIVE SUMMARY

Since 2009, the Philippine Department of Education (DepEd) began phasing in mother tongue-based multilingual education (MTBMLE) across the Philippines. Starting in the 2014 - 2015 school year, all public schools in the Philippines were implementing MTBMLE in grades K through 3. Per MTBMLE policy, mother tongue is the main language of instruction from Kinder to Grade 3, and Filipino and English are gradually introduced from Grade 2 onward. Building on its ongoing assistance to the education sector in the Philippines, with a special focus on early grade reading, USAID collaborated with DepEd to implement the Basa Pilipinas (Basa) program, a four-year early grade reading program implemented by Education Development Center (EDC) in five provinces in the Philippines—Cebu, La Union, Ilocos Norte, Ilocos Sur, and Bohol. Basa was designed to support DepEd's MTBMLE initiative by providing teacher training, improved instructional materials, and strengthened delivery systems. The intervention represents a blended strategy aiming to directly address the challenges to classroom-based MTBMLE reading instruction across grades 1 through 3.

Extensive literature supports the effectiveness of school-based interventions on improving student outcomes, though there is lack of consensus on which approaches are most effective and on whether effects persist over time. Basa's approach to improving student literacy is broadly aligned with approaches that have been effective in a variety of country contexts. Despite the wealth of literature on school-based early literacy interventions, limited evidence exists for literacy interventions within the context of multilingual education. This IE and two ongoing USAID mother tongue IEs in Guatemala and Peru will contribute to this literature.

USAID/Philippines has commissioned an impact evaluation (IE) of the Basa program to measure its impact and cost-effectiveness as an early grade reading intervention, in the context of MTBMLE. The IE (and cost analysis) of Basa will be used by USAID, DepEd, and other key stakeholders in the Philippines as the basis for policy and programming decisions about how reading interventions in support of MTBMLE can best be structured and implemented to improve early grade learning outcomes.

USAID/Philippines commissioned this evaluation to answer the following two evaluation questions:

1. What is the impact on student reading proficiency and comprehension of the Basa-supported early grade reading intervention relative to the standard approach?
2. Do any positive impacts of Basa justify additional funding?

This report examines Question 1, while a subsequent report focuses on the cost effectiveness analysis. This IE uses a quasi-experimental design to isolate the effect of Basa-supported early grade reading relative to non-Basa supported reading interventions (henceforth referred to as 'standard' MTBMLE). Under this design, students in Basa (treatment) schools and similar students in 'standard' MTBMLE (comparison) schools are selected for participation in the evaluation using a two-step sampling and matching methodology. The first step involves identifying matched treatment and comparison schools, while the second step entails controlling for differences between randomly sampled students within these treatment and comparison schools.

Data were collected longitudinally at three points in time from a panel of Basa and non-Basa students, teachers, and school principals. Additionally, data was collected from parents at baseline. Data include: reading and math assessments, principal interviews, classroom observations, teacher interviews, and

household surveys. Reading outcomes were measured in mother tongue in Grade 1 and Filipino and English for subsequent grades, as reading performance in Filipino and English were the main outcome indicators of interests to USAID. Baseline data were collected from September-October 2015; outcome data were collected between February and March of 2016 and 2017.

FINDINGS

STUDENTS

When looking at changes over one year of participation in Basa, we observe small, statistically significant effects of Basa in early grades, that reduce, and in some cases become negative, in later grades (Table 1). Specifically, Basa generates a statistically significant increase in letters correct per minute (cpm) (TE=2.15, $p=0.100$) and familiar words cpm (TE=4.05, $p=0.023$) in Grade 1 mother tongue. In Grade 2, Basa increases student scores by 1.5 words cpm in both familiar words ($p=0.085$) and unfamiliar words ($p=0.031$), and 4.2 words cpm in oral reading fluency in Filipino. In English, in Grade 2 Basa is associated with significant increases in letters cpm (TE=2.17, $p=0.006$) and unfamiliar words cpm (TE=1.37, $p=0.089$). Grade 3 Basa students perform similarly to comparison students in Filipino on all subtests, but in English, we find that Basa generates a significant increase in letters cpm (TE=2.08, $p=0.009$), familiar words cpm (TE=1.89, $p=0.090$), and unfamiliar words cpm (TE=1.37, $p=0.051$). Finally, we find no sustained impacts for students in Grade 4, who had received Basa support in prior grades, in most subtests in both Filipino and English, but statistically significant negative impacts in reading comprehension, with a 9.3 percentage points decrease in Filipino comprehension ($p=0.050$) and 6.9 percentage points decrease in English reading comprehension ($p=0.001$) relative to changes in the comparison group.

TABLE 1: ONE-YEAR IMPACTS OF BASA

	GRADE 1	GRADE 2		GRADE 3		GRADE 4	
	MT	FILIPINO	ENGLISH	FILIPINO	ENGLISH	FILIPINO	ENGLISH
Letters per minute	2.15*	1.06	2.17***	0.88	2.08***	0.30	1.09
Familiar words per minute	4.05**	1.52*	0.97	1.08	1.89*	-1.19	0.12
Unfamiliar words per minute	2.00	1.47**	1.37*	0.71	1.37*	-0.77	-0.40
ORF per minute	4.93	4.22**	2.50	-0.59	0.82	-1.44	0.99
Reading comprehension (% correct)	0.036	-0.001	0.034	-0.001	-0.061	-0.093***	-0.069*
Reading comprehension excl. non-readers (% correct)	-0.028	-0.023	0.017	0.003	-0.075*	-0.099***	-0.078**

* significant at 90% ** significant at 95% ***significant at 99%
 + $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

The two-year impacts of Basa follow a similar trend, with positive results in initial grades that dissipate in the later grades. Notably, we see greater indication of impact of Basa in Grade 2 over two years, with generally larger and more consistently positive treatment effects, indicating a larger effect of Basa in both Filipino and English combining gains from Grade 1 together with gains from Grade 2.

¹ Treatment effect (TE) represents our estimate of the program impact in the units of the outcome. The p-value represents the probability that result is due to chance or, in other words, the chance that the difference we measure does not reflect a true difference between the population of Basa and non-Basa students. So, in this case we estimate a 2.15 increase in letters per minute as a result of Basa, and we are 90% confident that this represents a true difference between Basa and non-Basa. Unless explicitly stated otherwise, we report a result as statistically significant if the p-value is equal to or less than 0.1.

The IE also measured the extent to which Basa and comparison students attained reading fluency and comprehension benchmarks and targets. These benchmarks and targets were developed jointly by DepEd and Basa to be used as a standard against which progress toward improving reading outcomes among Filipino children would be measured. Generally speaking, both Basa and comparison students fell short of these targets. In some cases, Basa students had greater odds of attaining benchmarks and in other cases, Basa students had lower odds.

As a part of the analysis, the evaluation team explored the extent to which various demographic, household, school, and teacher characteristics predict reading fluency and comprehension scores. The largest and most significant factors explaining reading scores are sex and region, with girls consistently outperforming boys, and students from Region 7 generally outperforming students in Region 1. Other factors that positively predict reading scores include: student math scores, teachers exhibiting reading best-practices, school and household assets, age at start of Kindergarten and at start of someone reading to the child, having access to reading material at home, and larger school enrollment. School closure and receiving help on homework were associated with lower reading scores.

Early Grade Math Assessments (EGMA) were administered to test for any effect of Basa on aptitude in mathematics. Though the Basa program is a literacy program and is not expected to generate changes in numeracy, it has been theorized that improved literacy outcomes may lead to improved numeracy outcomes. We observe positive statistically significant effects of Basa on one to two subtests per grade with null effects across the remaining subtests. We find positive treatment effects only for numbers identified cpm, for which Basa had statistically significant positive effects across all grades except for Grade 3.

TEACHERS AND SCHOOLS

On most fronts, Basa and comparison schools, principals, and teachers are generally statistically similar at follow-up, after controlling for relevant factors exogenous to the intervention.² At the end of the 2017 school year, Basa principals were more likely to participate in Learning Action Cells (LAC) (OR=2.12, $p=0.078$), but reported similar frequency convening LACs as standard schools. Many teacher-level outcomes show no effect of Basa, with two exceptions. Holding all else constant, teachers at Basa schools were more likely to have attended early grade reading training than equivalent peers at comparison schools (OR=1.83, $p=0.001$). However, among those teachers who did receive training, Basa teachers received one day less of training in both mother tongue ($p=0.003$) and training overall ($p=0.015$). Basa teachers are more likely to encourage students to sound out unfamiliar words and to put students into smaller groups several times per month, but otherwise exhibit statistically similar levels of general and reading-specific best practices as comparison teachers.

CONCLUSIONS

STUDENTS

Basa had small but statistically significant impacts on Grade 1 and Grade 2 students in reading and math, including reductions in English zero scores. Results are consistently more positive for the combined measure of the effect of Grade 1 Basa plus Grade 2 Basa than looking at the effect of a single year of Basa.

² Control variables for school analyses include: average school reading and math scores, enrollment, number of teachers, school assets, and principal sex, age, and qualifications. Control variables for teacher analyses include these variables as well as: class size and teacher sex, age, and qualifications.

Among Grade 3 students, we find some significant impacts on English but no impacts on Filipino. We find no significant impact of Basa among Grade 4 students in either language, apart from a significant *negative* impact on reading comprehension for Grade 4 students both in Filipino and English. Based on the results of this impact evaluation, we conclude that the Basa program resulted in some short-term gains in both pre-reading³ and oral reading fluency for treatment students, but these effects become null over time, with comparison students reaching parity with, and in some cases surpassing, Basa students by Grade 4. These results are consistent with evidence from other early grade literacy evaluations, which seems to indicate significant gaps in our knowledge of how to create sustainable improvements in reading outcomes. Additionally, Basa did not generate a positive impact on reading comprehension in any grade, and we find evidence of a negative effect on reading comprehension in G4. While we do not find a clear mechanism for the observed negative effects on Grade 4 reading comprehension, it may relate to differences in Basa versus non-Basa schools in the language used in class. Differences between Basa and non-Basa teachers in class time spent using mother tongue, Filipino, and English are negligible until Grade 4, when we see that Basa teachers spend significantly more time in mother tongue and almost significantly less time in English. While we do find some evidence that class time in mother tongue in Grades 3 and 4 is associated with decreased English and Filipino reading fluency and comprehension, the negative results for reading comprehension are still observed when controlling for class time in mother tongue and English. As we did not measure reading outcomes in mother tongue beyond Grade 1, we cannot say whether the program had an impact on mother tongue reading outcomes in grades 2 through 4.

TEACHERS AND SCHOOLS

Basa and comparison schools, principals, and teachers are generally statistically similar at follow-up, after controlling for relevant factors exogenous to the intervention. Considering the intervention's theory of change—impacting student scores through changing school leadership and teacher beliefs and practices—the modest results of this IE may be a result of limited observed impacts of Basa on schools and teachers.

RECOMMENDATIONS

- 1- **Explore mechanisms for sustainability in later grades.** Given that the IE found short-term but no lasting impact of Basa on student achievement in Filipino and English, the evaluation team recommends that USAID explore interventions that have the potential to sustain student achievement gains in future grades. This may include supporting teachers who instruct Grade 4 or higher as students in this stage may still be honing their reading skills and learning to comprehend increasingly complex text. This may also include providing follow-up and coaching support to teachers who received training to encourage continued use of the material.
- 2- **Investigate what works well in standard DepEd training.** We found that Grade 4 students who attended non-Basa schools performed better on reading comprehension than students who attended Basa schools, particularly among boys. This finding is statistically significant, controlling for baseline score and other explanatory variables. As such, we recommend investigating what the standard DepEd training is doing well that could be contributing to these higher gains relative to Basa students. Moreover, we recommend that this investigation utilize a gender lens to further investigate if there are certain methods or approaches that are working particularly well with boys.

³ Letter identification, familiar word and unfamiliar word subtests can be considered pre-reading subtests.

- 3- **Integrate evaluative thinking and evaluation planning at an early stage.** One limitation of this IE is that the evaluator was contracted several years after the start of implementation. Early planning allows better alignment between implementation and evaluation timelines, including collection of baseline data, and improves the feasibility of a randomized control trial, or even identification of a similar control group. Moreover, early planning helps to ensure evaluation findings are available to USAID at times when major programmatic decisions are to be made. Finally, by planning early, evaluators and implementers can work to ensure similarity in tools which facilitates comparison and knowledge generation. To maximize the usefulness of future evaluations, USAID should plan for evaluations as early as possible, ideally at the Project Appraisal Document (PAD) stage.
- 4- **Consider future research on the sustainability of effects of reading programs as well as on the null results on reading comprehension.** The Sa Aklat Sisikat Reading Program in the Philippines, the Nali Kali program in India, the USAID/Mali Read-Learn-Lead program, and this IE all found effects in early grades that did not hold in subsequent grades. The generally null and negative findings in Grades 3 and 4 could potentially result from teachers having received a less developed and refined version of the Basa training in the intervention startup years or some other factor. Additional research with the current Grade 3 cohort, which was matched prior to the start of Grade 1, or future cohorts would allow USAID to test whether results with this cohort are sustained or similarly diminish over time. Further, more research should be conducted on why the program generated impact on some measures of pre-reading and oral reading fluency but not in comprehension.

INTRODUCTION

Early grade literacy acquisition is critically important to both individual and national development. Not only does learning to read facilitate educational development and broaden the range of economic and other learning possibilities, it empowers the learner and leads to positive externalities in health and civic participation. While 97% of Filipinos have basic literacy, only 86% are functionally literate. One challenge to achieving higher levels of literacy has been that the primary education system in the Philippines previously focused on reading in English and Filipino; however, teaching children to read in languages that they do not speak at home can pose a substantial barrier for children who already struggle to learn to read.

To address this, the Philippine Department of Education (DepEd) officially adopted the implementation of mother tongue-based multi-lingual education (MTBMLE) across the Philippines at all levels of education, through the 2009 DepEd order 74 and the 2010 Strategic Plan for implementation of MTBMLE. The Enhanced Basic Education Act of 2013 lent further support to these policies by establishing mother tongue as the language of literacy and primary language nationwide. All public schools in the Philippines began implementing MTBMLE in grades K-3 in the 2014 - 2015 school year. Table 2 displays the national curriculum standards alongside the established language of instruction for each grade. Per MTBMLE policy, mother tongue is the main language of instruction from Kinder to Grade 3, and Filipino and English are gradually introduced from Grade 2 onward.

TABLE 2: NATIONAL CURRICULUM STANDARDS FOR READING

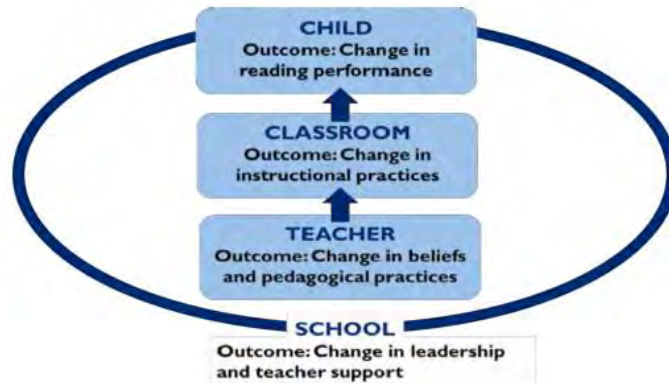
GRADE	MOTHER TONGUE	FILIPINO	ENGLISH
Kindergarten	• Oral fluency • Pre-reading activities • Medium of instruction		
Grade 1	• Oral fluency • Academic vocabulary • Reading and writing • Medium of instruction	• Oral (listening and speaking) in Q2 • Reading (Q4)	• Oral (listening and speaking) in Q3
Grade 2	• Oral fluency • Literacy development • Medium of instruction	• Oral (communicative competence) • Literacy development	• Oral (communicative competence) • Reading (Q2)
Grade 3	• Oral fluency • Literacy development • Medium of instruction for most subjects	• Oral (communicative competence) • Literacy development • Medium of instruction for Filipino subject only	• Oral (communicative competence) • Literacy development • Medium of instruction for English subject only

DEVELOPMENT INTERVENTION

Building on its ongoing assistance to the education sector in the Philippines, with a special focus on early grade reading, USAID collaborated with DepEd to implement the Basa Pilipinas (Basa) program, a four-year early grade reading program implemented by Education Development Center (EDC) in five provinces in the Philippines—Cebu, La Union, Ilocos Norte, Ilocos Sur, and Bohol. Basa was designed to support DepEd's MTBMLE initiative by providing teacher training, improved instructional materials, and strengthened delivery systems. Within these components are various additional activities aimed to

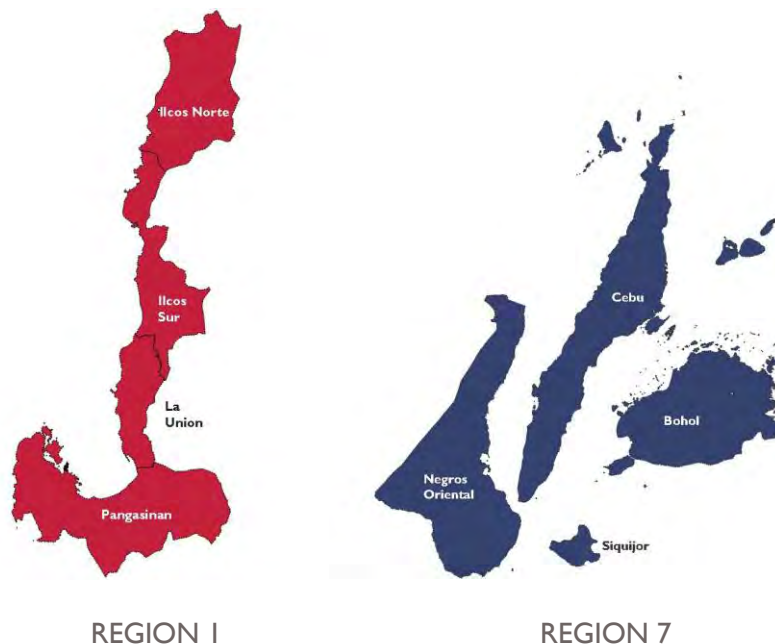
improve early grade reading ability, including: mentoring programs, development of a reading instruction training plan that defines which skills teachers should teach at each level and identification of appropriate grade level texts, and locally based activities such as a National Reading Month to promote reading across the country. As such, the intervention represents a blended strategy aiming to address directly the challenges to classroom-based MTBMLE reading instruction across grades 1 through 3. The evaluation team has developed a separate cost-effectiveness analysis report, which outlines the Basa program in greater detail.

Figure 1. Basa Pilipinas Theory of Change



The program began in January 2013 and was planned to conclude in December 2016, but USAID awarded EDC a one-year follow-on, which included reinforcing grade 1 through 3 training, implementing Kindergarten training, and provide post-training support and coaching to teachers and schools.

Figure 2. Basa Pilipinas Regions



EXISTING EVIDENCE

Extensive literature supports the effectiveness of school-based interventions on improving student outcomes, though there is lack of consensus on which approaches are most effective and on whether effects persist over time. A 2015 meta-analysis of 77 randomized experiments of school-based interventions on learning in developing country primary schools identifies the following types of interventions as having the largest mean effect sizes, among them both teacher training and instructional materials, though none stand out as far and away the most effective⁴: treatments with computers or instructional technology (0.15 standard deviations (SD)⁵); teacher training (0.12 SDs); smaller classes, smaller learning groups within classes, or ability grouping (0.12 SDs); contract or volunteer teachers (0.10 SDs); student and teacher performance incentives (0.09 SDs); and instructional materials (0.08 SDs).^{i ii} Similarly, a 2016 systematic review of the impact of education programs conducted by the International Initiative for Impact Evaluation (3ie) finds that programs designed to address constraints schools and teachers face in improving reading proficiency (referred to as structured pedagogy programs) had an average effect size of 0.23 SD units on literacy outcomes.ⁱⁱⁱ

One such study is a RCT of the USAID/Kenya Primary Math and Reading (PRIMR) program, which (similar to Basa) provided teachers training and practice implementing new instructional strategies, teacher observation and coaching, and development and distribution of learner books and teacher guides. The PRIMR IE found very large effects among Grade 1 and Grade 2 students in both English and Kiswahili. Specifically, this RCT observed gains between treatment and control students of 21.4 letters per minute (.73 SDs), 13.7 words per minute in reading fluency (.40 SDs), and 11.3% comprehension (.38 SDs).^{iv} The study did not test effects on Grade 3 students. The RCT of the USAID Mozambique Aprender a Ler program, an intensive structured pedagogy program, examined outcomes for a cross-section of Grade 2 and Grade 3 students and found positive treatment effects across all EGRA subtests.^v The IE included testing another cohort of Grade 2 and 3 students in treatment and control schools one year post-intervention, finding substantial drops in gains in that follow-up year, but still statistically significant effects in treatment schools relative to control schools. Another similar study is the USAID/Rwanda Literacy Boost RCT, which compared literacy outcomes between a control group and students who either received 1) teacher training, or 2) teacher training plus community activities. This IE found no impact of the program on meeting a basic literacy threshold in either treatment group, but positive impacts in both reading fluency and comprehension on students who did meet the basic literacy threshold, indicating an impact only on those students with basic proficiency.^{vi} The IE found larger impacts for those students who received the community activities in addition to the teacher training.

In the Philippines, the Abdul Latif Jameel Poverty Action Lab (JPAL) carried out a 2009 RCT of the Sa Aklat Sisikat Reading Program, a 31-day reading program targeted at Grade 4 students that provided age-appropriate reading material, trained teachers in their use, and supported teachers' initial efforts to encourage reading. This IE found modest reading performance gains of 0.13 SDs for treatment students relative to control immediately after the intervention, though the effect diminished over time to 0.06 SDs three months after conclusion of the intervention.^{vii} Similarly, an IE of the Nali Kali program in India—an Activity Based Learning pedagogical change program—found strong, significant effects on literacy scores

⁴ Indeed, the effect sizes reported are quite modest overall.

⁵ Standardized effect sizes are valuable in a meta-analysis as they allow comparison of interventions with varying outcomes.

though these achievements in early grades do not persist in later grades.^{viii} The study also found insignificant effects in math.

Despite the wealth of literature on school-based early literacy interventions, limited evidence exists for literacy interventions within the context of multilingual education. One exception is the USAID/Mali Read-Learn-Lead program (RLL), which provided schools and teachers with structured pedagogy in support of mother tongue instruction.^{ix} The IE of the RLL program found positive impact of the intervention on Grade 1 and Grade 2 students but no impacts on Grade 3 students, which the authors report as indicative that RLL gains may not have led to lasting advantages for students in subsequent years.

Basa's approach to improving student literacy is broadly aligned with approaches that have been effective in a variety of country contexts. This IE contributes to this existing literature on the effectiveness of school-based programs in improving student outcomes, particularly by tracking student outcomes over two years, which allows us to test both one-year versus two-year effects, as well as the impact on students one year post-intervention (see Grade 4 results). As several studies found that effects were not sustained beyond the early grades, this is an area of particular interest. This IE also contributes to the literature on the extent to which literacy interventions can lead to improved numeracy outcomes; evidence from existing literature is mixed. This IE and two ongoing USAID mother tongue IEs in Guatemala and Peru will contribute to this literature.

EVALUATION PURPOSE AND EVALUATION QUESTIONS

USAID/Philippines has commissioned an impact evaluation (IE) of the Basa program to measure its impact and cost-effectiveness as an early grade reading intervention, in the context of MTBMLE. The IE (and cost analysis) of Basa will be used by USAID, DepEd, and other key stakeholders in the Philippines as the basis for policy and programming decisions about how reading interventions in support of MTBMLE can best be structured and implemented to improve early grade learning outcomes.

USAID/Philippines commissioned this evaluation to answer the following two evaluation questions:

1. What is the impact on student reading proficiency and comprehension of the Basa-supported early grade reading intervention relative to the standard approach?
2. Do any positive impacts of Basa justify additional funding?

This report examines Question 1. We have used the results of question one, combined with an analysis of the program's cost data, to develop a second report that focuses specifically on Question 2. This IE serves as an accountability mechanism that measures the extent to which USAID investment has led to literacy gains, contributes to the literature on effectiveness of early grade reading programs, particularly those supporting MTBMLE, and, combined with results from ongoing USAID-funded IEs in Peru and Guatemala, will provide evidence from various contexts. Ultimately, the IE yields important information to inform how early grade reading programs can be best implemented, providing data for USAID and the Philippines government to make evidence-based decisions about effective programming to improve student reading achievement and access to education.

IMPACT EVALUATION METHODOLOGY

This IE uses a quasi-experimental, longitudinal design to isolate the effect of Basa-supported early grade reading relative to non-Basa supported reading interventions (henceforth referred to as ‘standard’ MTBMLE). Under this design, students in Basa (treatment) schools and similar students in ‘standard’ MTBMLE (comparison) schools are selected for participation in the evaluation using a two-step sampling and matching methodology. The first step involves identifying matched treatment and comparison schools, while the second step entails controlling for differences between randomly sampled students within these treatment and comparison schools.

SCHOOL SAMPLING AND MATCHING

While comparing students from the same schools, or from schools in the same school division⁶, would be preferred, Basa is implemented in all classrooms in all schools in the selected divisions. Accordingly, to construct a comparison group, we identify students from similar schools using the same mother tongue from nearby divisions through the following two steps.

DEVELOPMENT OF AN EVALUATION SAMPLE FRAME

In the treatment areas, we consider all schools with a few exceptions. Schools that have already been randomly selected by Basa for testing were excluded to avoid overburdening these schools. Excluding these schools should not affect the validity of the study in any way since these schools were randomly selected and represent only a small percentage of Basa schools. Additionally, however, two more groups of schools were excluded which will slightly reduce the external validity of the evaluation. First, the 100 lowest performing schools in each region (11% of schools in our sample frame) must be excluded as Basa has been requested by DepEd to provide streamlined support to the schools⁷. Second, there are 15 additional schools where DepEd has requested that Basa conduct additional research. These schools were also excluded to avoid overburdening students and teachers at these schools. Both changes are expected to slightly reduce the external validity of the evaluation. For our sample frame of potential control schools, we consider only schools in nearby divisions that use Ilokano or Cebuano as mother tongues (see Annex 2-Sampled Schools for the list of sampled schools).⁸

SCHOOL MATCHING

After applying the restrictions above, propensity scores were calculated for all possible treatment and comparison schools using the following secondary data sources:

- National Achievement Test (NAT) data: student testing data from 2011-2015;
- Basic Education Information System (BEIS) data: data collected from schools annually by DepEd on items such as enrollment, teachers, and school facilities; and

⁶ DepEd organizes schools within a province into school divisions.

⁷ The full Basa program is not implemented in these schools. Moreover, the sample size is too small to attempt to identify the additional impact of this streamlined approach, particularly considering the strict targeting of these schools and the resultant selection bias.

⁸ Verifications were done by obtaining lists of schools using Ilokano and Cebuano as mother tongue from divisions. Data collected at schools confirm that all of sampled schools use Ilokano or Cebuano as the mother tongue and that they are using mother tongue as the primary Language of Instruction (LOI) in early grades, in accordance with DepEd guidance.

- Census data: obtained at the municipality-level from the 2010 census.

Generating propensity scores for all schools in the evaluation sample frame models the Basa selection process, identifying which secondary data are associated with participation in the program. This process allows for efficient matching of schools along a wide range of variables related to program participation.

Next, all Basa schools were stratified by province, and 120 Basa schools were selected with probability proportional to grade 1-3 enrollment and the number of schools sampled from each province also proportional to the Basa grade 1-3 enrolment in that province. Finally, to select comparison schools, each Basa school was matched by propensity score to its nearest comparison school (without replacement), yielding 120 comparison schools. Table 3 shows the final outcome of the school sampling by Province.⁹

TABLE 3: SAMPLED SCHOOLS				
	PROVINCE	TREATMENT	COMPARISON	TOTAL
Region I	Ilocos Norte	8	10	18
	Ilocos Sur	10	3	13
	La Union	14	0	14
	Pangasinan	0	20	20
Region 7	Bohol	30	0	30
	Cebu	60	14	74
	Negros Oriental	0	44	44
	Siquijor	0	31	31
Total		122	122	244

STUDENT SAMPLING

Six students per grade from grades 1-3 were sampled from each treatment and comparison school for participation in the evaluation. The student sampling procedure involved two steps. First, in schools where there were more than one classrooms per grade, one classroom per grade was randomly selected using a Kish grid.¹⁰ Second, using the enrollment records for the sampled classrooms, a random start and sampling interval were calculated and used to randomly sample 3 female and 3 male students per grade.¹¹

SAMPLE SIZE CALCULATION AND POWER ANALYSIS

The minimum detectable effect size (MDES) represents the minimum change in an outcome required for us to be confident (at a given level of power) that we would conclude a statistically significant difference between the treatment and comparison groups given the sample size and other parameters. Being able to confidently measure smaller changes requires a larger sample size and more resources. The IE is sufficiently

⁹ Basa schools come from 8 divisions, while comparison schools come from 14 divisions. See Annex 2 for the list of schools and divisions.

¹⁰ A Kish grid is a table of random numbers with pre-assigned number selection used for random sampling. All elements in a population, classrooms in the case, are listed on the Kish grid. Following the number selection on the Kish grid, a classroom is selected.

¹¹ Replacement students were also sampled for absences or refusals.

powered to measure a 0.17 SD difference¹² in reading fluency and comprehension scores between Basa and non-Basa students across all grades combined, at the end of the 2015-2016 and 2016-2017 school years. This MDES was benchmarked against the smallest effect size (0.17 SD) EDC measured in their 2015 evaluation report, indicating that the sample size would be sufficient to measure EDC's anticipated changes for the grades taken together, with a high degree of confidence.¹³ SI performed post-hoc power analysis at endline and found all assumptions in the power analysis to be robust. Thus, the IE is sufficiently powered to the expected level to confidently measure the changes anticipated by the Basa program. See Annex 3- Power Calculations for details.

DATA COLLECTION

Data were collected longitudinally at three points in time from a panel of Basa and non-Basa students, their teachers, parents, and school principals. Data include: reading assessments, principal interviews, classroom observations, teacher interviews, and household surveys. Baseline data were collected from September-October 2015; outcome data were collected between February and March 2016 and 2017.¹⁴

DATA COLLECTION TOOLS

STUDENT LEARNING ASSESSMENTS were used to measure changes in student learning outcomes. SI used Early Grade Reading Assessments (EGRA) designed and tested by RTI in Cebuano, Ilokano, Filipino, and English, and Early Grade Math Assessments (EGMA) in mother tongue designed and tested by DepEd. Grade 1 students were tested in mother tongue, while grades 2 through 4 were tested in Filipino and English.

TABLE 4: EGRA TOOLS ADMINISTERED BY GRADE AND YEAR

	GRADE 1 MOTHER TONGUE	GRADE 2 FILIPINO & ENGLISH	GRADE 3 FILIPINO & ENGLISH	GRADE 4 FILIPINO & ENGLISH
Cohort 1	T ₀ : Sept. 2015 T ₁ : Feb. 2016	T ₂ : Feb. 2017		
Cohort 2		T ₀ : Sept. 2015 T ₁ : Feb. 2016	T ₂ : Feb. 2017	
Cohort 3			T ₀ : Sept. 2015 T ₁ : Feb. 2016	T ₂ : Feb. 2017

Results revealed ceiling effects¹⁵ of the Filipino tool with Grade 3 and Grade 4 student, and in English for Grade 4 students. To address the ceiling effects, the evaluation team developed more challenging Filipino and English reading passages and associated comprehension questions. We pilot tested these tools with a sample of 148 Grade 3 students in 2016 and a sample of 169 Grade 4 students in 2017 across regions 1 and 7 and found the revised tests to be more appropriately-leveled to our sample of students. Learning

¹² A minimum detectable effect size (MDES) of 0.2 SD is generally considered small. Meaning that a study that can measure a 0.2 SD change is generally considered highly powered (as it can detect what is commonly considered to be relatively small changes between a treatment and control group).

¹³ For each individual grade cohort, we expect to be able to measure a change of at least 0.21 SD.

¹⁴ Data are collected from schools in the same order for each round of data collection to ensure consistency.

¹⁵ Ceiling effects occur when there is an artificial upper limit on the possible values for a variable and participants score at or near this limit, restricting the variation in scores. In the context of an impact evaluation, if a student scores very high at baseline, it limits the ability to capture positive gains at follow-up.

assessments were administered electronically using tablets and the RTI-developed Tangerine software platform, following the standard EGRA and EMGA protocols.

TEACHER SURVEYS AND TEACHER OBSERVATIONS were conducted during each of the three data collection periods to gather information on teacher characteristics, experience, and exposure to training and Basa materials. SI developed a teacher observation protocol based on tools used successfully by SI in other early grade reading evaluations, to complement the teacher survey. The observation tool includes generally recognized good teaching practices across all subjects as well as widely recognized practices that are considered beneficial specifically for reading instruction. Besides teaching practices, the observation tool also captures observations regarding equal treatment of learners, presence of classroom resources, and student behavior.

Each surveyed teacher's classroom was observed three times in the school day, with priority given to language classes, in twenty-minute increments to capture teacher instructional practices and the literacy environment. The classroom observations were conducted by enumerators who were thoroughly and consistently trained on how to recognize each of the practices according to agreed-upon standards. See Annex 4-Instruments for the teacher survey and teacher observation instrument.

ADMINISTRATOR SURVEYS were conducted in each of the sampled schools during each of the three data collection periods to gather data on a variety of school characteristics, including student enrollment and attendance and school facilities and resources. The administrator survey is included in Annex 4-Instruments.

HOUSEHOLD SURVEYS captured socio-economic characteristics of student households at baseline only. The household survey was administered to the primary caregiver of the students using contact information obtained from schools. The data collection partner visited the households, obtained informed consent, and then interviewed the primary caregiver of the child. See Annex 4-Instruments for the household survey instrument.

FIELDWORKER TRAINING

SI contracted Taylor Nelson Sofres (TNS) Philippines to conduct data collection for the Basa Pilipinas IE at baseline, midline, and endline. TNS Philippines has extensive experience in school-based data collection, having carried out data collection for both the PhilEd and Basa projects. TNS and SI conducted two regionally-based trainings and school practice tests in Region 1 and Region 7 prior to the launch of each data collection period. Training for Region 1 and Region 7 consisted of a review of all instruments, mock assessments and interviews, introduction of the study and obtaining informed consent, sampling, inter-rater reliability (IRR) tests, and two days of field practice in practice schools. An SI team member participated in both trainings to provide support and oversight.

IRR tests were conducted during each enumerator training. At midline and endline, in accordance with the updated guidance in the USAID EGRA Toolkit 2.0, SI collected and analyzed IRR data over the course of fieldwork. Field IRRs were implemented for the first set of students assessed each day of fieldwork for the full data collection period, alternating between grades. During the first three weeks of fieldwork, SI analyzed IRR results overnight and submitted results to the field teams for debriefing the next day.

Table 5 presents the final IRR results for each region, with each entry representing the percent of questions for which the observing and scoring enumerators scored identically. Each round consists of several fieldwork days over which IRR results were analyzed. From the outset of fieldwork, IRR was consistently high. Enumerators consistently scored assessments with over 90% agreement during the first three weeks of fieldwork. Though IRR testing continued over the course of fieldwork for ongoing reinforcement, the evaluation team did not aggregate and analyze the data beyond the first three weeks of fieldwork, given the high levels of agreement.

TABLE 5: FIELD IRR RESULTS						
	REGION 1			REGION 7		
	G2	G3	G4	G2	G3	G4
Round 1	95%	93%	91%	99%	98%	98%
Round 2	94%	97%	96%	98%	99%	98%
Round 3	98%	94%	91%	98%	99%	99%

DATA ANALYSIS

EGRA and EGMA data have been analyzed using a multivariate Tobit regression model to measure: 1) effects of the Basa program on student learning outcomes, and 2) student, household and school predictors of reading outcomes. Tobit analysis was selected to account for flooring effects of reading assessment results resulting from zero scores. Impact estimates were calculated using a lagged dependent variable model, which controlled for student initial score in addition to other student, household, and school-level variables, using each of the EGRA and EGMA subtests as dependent variables. To make the treatment and comparison groups as similar as possible, we analytically control for differences in student demographics, household characteristics, as well as teacher and school characteristics across multiple regression models.

The evaluation team also implemented robustness checks using other model specifications, including models that control for schools who had teachers participating in the DepEd Early Language Literacy and Numeracy (ELLN) program (see Annex 7).¹⁶ Impact estimates obtained from these additional models are consistent with estimates obtained from our primary model, with a few exceptions, and thus provide additional support for the validity of the impact estimates. Student scores and regression results for each group are presented using sample weights to more accurately represent the population of Basa schools.

School and teacher-level outcome variables were analyzed using multivariate ordinary least squares (OLS), logistic, and ordered logistic regression models. These models were run on the outcome data alone as a cross-section, as many potential control variables collected at baseline could have already been influenced by the Basa program. Odds ratios are a way to interpret the coefficients of a logistic regression, which generally refer to the likelihood of an outcome occurring, for example the likelihood of a treatment versus comparison student scoring zero on a given assessment subtest. An odds ratio greater than one indicates that the odds are more likely that the treatment group exhibited the outcome relative to the comparison group, whereas an odds ratio less than one indicates that the comparison group was more likely to exhibit the outcome. Odds ratios close to one indicate no treatment effect (positive or negative). In contrast, for

¹⁶ Other robustness checks include performing analyses on unweighted and un-equated data, and additional model specifications such as: standard OLS, fixed-effects model, multi-level model, and coarsened exact matching.

an OLS regression coefficient, a negative number denotes an inverse relationship between treatment status and the outcome, while a positive number indicates a direct relationship.

LIMITATIONS

There are four main potential limitations to this IE. First, and related to external validity, given that some treatment schools were excluded from the evaluation sample frame, the Basa evaluation sample may not be fully representative of the Basa intervention schools. However, given that the non-randomly excluded schools are a small percentage (11%) of Basa schools, we do not expect this to significantly affect generalizability.

Second, given the timing of the start of the evaluation contract, baseline data were collected in September and October, though the school year starts in mid-June. To the extent that Basa generates significant reading improvements in the first few months of schools (relative to the gains generated under the standard approach), the impacts presented here may be under-estimated. However, we do not expect that program impacts would be solely or even predominantly generated in the first few months of school. Moreover, we also look at effects from the end of one school year until the end of the next year, which should fully capture all changes during the year.

Third, since the Basa program began implementation in target schools prior to the start of the evaluation, including up to two years of implementation in some areas, the evaluation baseline data collection cannot be considered a pre-intervention measurement at the school-level. However, at the student-level, the design still allows for measurement of both the first and second year of participation in Basa. For Grade 1 students, this will serve as a baseline for the students at the start of their participation in the Basa program, and the outcome measurement will estimate the effect of the first year of Basa participation for Grade 1 students. Grade 2 and 3 students in treatment schools will already have participated in Basa for one year or two years. Accordingly, outcome measurement for this group will measure the incremental effect of the second (or third) year of participation in the program.

Fourth, the length of time between baseline and 2016 follow-up data collection was relatively short for observing impacts, since baseline data collection took place in September and October, and follow-up in February and March (5 months). The 2017 round of follow-up data collection provided additional time for impacts to be observed.

STRENGTHS OF THE EVALUATION APPROACH

The evaluation design was developed in close consultation with USAID, DepEd, and Basa to measure the impact of Basa using a rigorous counterfactual, or what would have occurred in treatment schools had Basa not been implemented. While baseline data collection took place several years after the start of implementation, this IE design captured a student-level baseline. This consisted of a measure of the effect of the first year of Basa participation for Grade 1 students, and the incremental effect of a second or third year of Basa for students in Grades 2 and 3.

We are confident in the validity of the findings of this IE for the following reasons. First, balance tests performed after matching support that this quasi-experimental design succeeded in establishing a reasonable counterfactual since there are minimal differences between the treatment and comparison group at baseline, and we control for those differences in analysis. Thus, we can confidently attribute

observed outcomes to the Basa intervention. Second, post-hoc power calculations confirm the IE was sufficiently powered to the desired level. Third, the IE benefited from minimal attrition and no differential attrition between the treatment and comparison group, indicating that the observed results are generally devoid of selection bias. Finally, results are consistent across various model specifications (see Annex 7).

FINDINGS: STUDENTS

OVERVIEW OF THE SAMPLE

Table 6 displays the intended sample of this impact evaluation by grade, along with the sample actually achieved on a panel basis at the student-level at 2016 and 2017 follow-up. The overall attrition rate of 9.2% is well below the 16.67% attrition threshold needed to maintain the study's intended power. Attrition includes students who dropped out of school, transferred schools, refused participation, or were otherwise unable to be located at follow-up.

TABLE 6: EVALUATION SAMPLE							
BASELINE		2016 FOLLOW-UP			2017 FOLLOW-UP		
GRADE	STUDENTS	GRADE	STUDENTS	ATTRITION	GRADE	STUDENTS	ATTRITION
Grade 1	1,440	Grade 1	1,377	4.4%	Grade 2	1,300	9.7%
Grade 2	1,440	Grade 2	1,382	4.0%	Grade 3	1,316	8.6%
Grade 3	1,440	Grade 3	1,372	4.7%	Grade 4	1,307	9.2%
Total	4,320	Total	4,131	4.4%	Total	3,923	9.2%

Table 7 displays basic characteristics of the treatment and comparison groups after sample weights are applied. The groups are comparable across all of these characteristics with the exception of grade 1 through 3 enrollment; Basa schools are generally smaller than standard MTBMLE schools.

TABLE 7: STUDENT CHARACTERISTICS		
	STANDARD MTBMLE	BASA
Female	48%	47%
Attended kindergarten	95%	92%
Speaks MT at home	98%	98%
Read to at home	84%	84%
Students missing school in last 4 weeks	48%	45%
Student has books at home	80%	80%
Student has books at home in MT	70%	67%
Parents that desire university-level education for student	94%	96%
Parents who feel comfortable at student's school	100%	100%
Parent involvement in student's school	86%	81%
Average class size	35.6	34.19
Total enrollment in grade 1 - grade 3	425.65	294.77

SUMMARY OF EGRA FINDINGS

Tables 8 & 9 summarize EGRA findings across grades and languages. The one-year impacts represent two distinct measurements of the effects of Basa over one school year: (1) from the baseline near the beginning of the 2015-2016 school year to the end of the same school year, and (2) from the end of school year 2015-2016 to the end of school year 2016-2017. We combine estimates from these two measurements to present our estimated impacts for each grade/language combination. The two-year impacts of Basa represent the treatment effects measured by comparing outcomes from baseline (2015) to end of school year 2016-2017. Regression coefficients were calculated using a multivariate Tobit regression model to

test the impact of Basa on literacy outcomes, controlling for any prior observed differences in student performance and various other factors associated with literacy outcomes. Results of this analysis estimate the average treatment effect (TE), or impact, of the intervention, on letters and words read correctly per minute (cpm) and reading comprehension.

Under the primary analytical approach measuring changes over one year, we observe small, statistically significant effects of Basa in early grades, that reduce, and in some cases become negative, over time. Specifically, Basa generates a statistically significant increase in letters cpm (TE¹⁷=2.15, p=0.100) and familiar words cpm (TE=4.05, p=0.023) in Grade 1 mother tongue. In Grade 2, Basa increases student scores by 1.5 words cpm in both familiar words (p=0.085) and unfamiliar words (p=0.031), and 4.2 words cpm in oral reading fluency in Filipino. In English, Basa is associated with significant increases in Grade 2 letters cpm (TE=2.17, p=0.006) and unfamiliar words cpm (TE=1.37, p=0.089). Grade 3 Basa students perform similarly to comparison students in Filipino on all subtests except for letters, but in English, we find that Basa generates a significant increase in letters cpm (TE=2.08, p=0.009), familiar words cpm (TE=1.89, p=0.090), and unfamiliar words cpm (TE=1.37, p=0.051). Finally, we find no sustained impacts for Grade 4 students in most subtests in both Filipino and English, but statistically significant negative impacts in reading comprehension, with a 9.3 percentage points decrease in Filipino comprehension (p=0.050) and 6.9 percentage points decrease in English reading comprehension (p=0.001) relative to changes in the comparison group.

TABLE 8: ONE-YEAR IMPACTS OF BASA

	GRADE 1	GRADE 2		GRADE 3		GRADE 4	
	MT	FILIPINO	ENGLISH	FILIPINO	ENGLISH	FILIPINO	ENGLISH
Letters per minute	2.15*	1.06	2.17***	0.88	2.08***	0.30	1.09
Familiar words per minute	4.05**	1.52*	0.97	1.08	1.89*	-1.19	0.12
Unfamiliar words per minute	2.00	1.47**	1.37*	0.71	1.37*	-0.77	-0.40
ORF per minute	4.93	4.22**	2.50	-0.59	0.82	-1.44	0.99
Reading comprehension (% correct)	0.036	-0.001	0.034	-0.001	-0.061	-0.093***	-0.069*
Reading comprehension excl. non-readers (% correct)	-0.028	-0.023	0.017	0.003	-0.075*	-0.099***	-0.078**

* significant at 90% ** significant at 95% ***significant at 99%
+ p < 0.1 + 0.1 < p < 0.2 - p < 0.1 - 0.1 < p < 0.2

The two-year impacts of Basa follow a similar trend, with positive results in initial grades that dissipate in the later grades. Notably, we see greater indication of impact of Basa in Grade 2 under this approach, with generally larger and more consistently positive treatment effects, indicating a larger effect of Basa in both Filipino and English combining gains from Grade 1 together with gains from Grade 2.

¹⁷ Treatment effect (TE) represents our estimate of the program impact in the units of the outcome. The p-value represents the probability that result is due to chance or, in other words, the chance that the difference we measure does not reflect a true difference between the population of Basa and non-Basa students. So, in this case we estimate a 2.15 increase in letters per minute as a result of Basa, and we are 90% confident that this represents a true difference between Basa and non-Basa. Unless explicitly stated otherwise, we report a result as statistically significant if the p-value is equal to or less than 0.1.

TABLE 9: TWO-YEAR IMPACTS OF BASA

	GRADE 2		GRADE 3		GRADE 4	
	FILIPINO	ENGLISH	FILIPINO	ENGLISH	FILIPINO	ENGLISH
Letters per minute	3.14*	4.56***	2.64	5.06***	1.94	1.47
Familiar words per minute	6.50***	5.19*	1.06	2.07	0.74	-0.23
Unfamiliar words per minute	4.36***	3.66**	3.33***	0.89	-0.73	0.86
ORF per minute	7.24***	6.81**	-1.22	-0.45	-1.37	0.07
Reading comprehension (% correct)	-0.03	-0.02	-0.04	-0.09	-0.08***	-0.06

* significant at 90% ** significant at 95% ***significant at 99%

+ $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

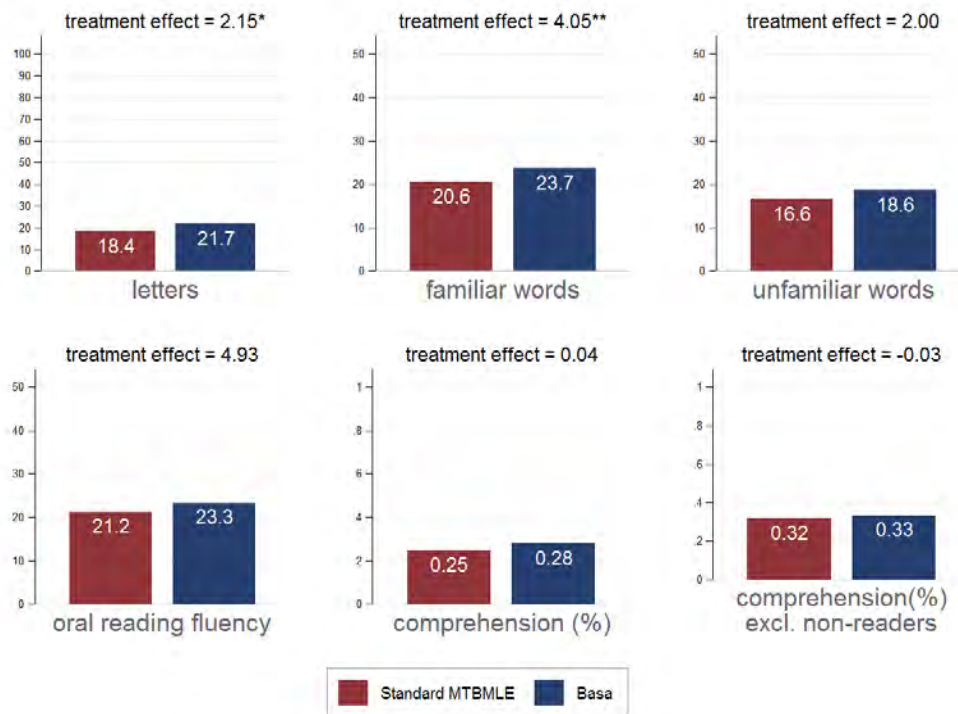
Below we present graphs of results of follow-up scores and impact estimates for each EGRA subtest from the one-year estimates for each grade, organized by the language of testing. The y-axis for each subtest shows the total number of items, which is roughly indicative of the total possible score on the subtest.¹⁸ We also display the regression treatment effect for each subtest, controlling for baseline scores and demographic, household, and school-level variables.

MOTHER TONGUE

Grade 1 Basa students scored higher on the mother tongue EGRA across all subtests at follow-up, before controlling for baseline scores and other control variables. After applying controls, these impacts are generally small and statistically insignificant except for letters and familiar words cpm, where Basa increased student scores by 2.15 letters cpm ($p=0.010$) and 4.05 more familiar words cpm ($p=0.230$). Regression results disaggregated by sex reveal that Basa is differentially impacting boys and girls. While program impact estimates are null for all subtests for boys, impact estimates are statistically significant at the 90% confidence level for girls on both familiar words ($p=0.035$) and unfamiliar words ($p=0.004$). We also observe differential treatment effects across language, with generally negative treatment effects in Ilokano and positive treatment effects in Cebuano. It is important to note that results in Ilokano and Cebuano are not comparable since the languages differ in complexity and structure. For instance, Ilokano has lengthier words than Cebuano.

¹⁸ The total number of items is only roughly indicative of the total possible score because total scores are calculated incorporating the time remaining after completing all items. Thus, if a student correctly reads all words or letters in a subtest and still has time remaining, that student would score higher than the total number of items.

Figure 3. Impacts of Basa on Grade 1 students



FILIPINO

Basa had a statistically significant impact on Grade 2 Filipino in three of the five subtests. Specifically, due to Basa, Grade 2 students read 1.52 more familiar words cpm than comparison students ($p=0.085$), and performed statistically better in unfamiliar words ($TE=1.47$, $p=0.031$), and oral reading fluency ($TE=4.22$, $p=0.026$). However, Basa had no impact on letters cpm or reading comprehension. Boys in Grade 2 benefited more than girls in Filipino; results are generally null for girls and significant for Basa boys in familiar words, unfamiliar words, and oral reading fluency, though negative and significant for reading comprehension. Basa had no impact on Grade 3 students in Filipino; sex-disaggregated results show this holds for both boys and girls. Grade 4 Filipino results show negative effects of Basa, though these are insignificant for all subsets except for reading comprehension, where Basa had a negative impact on student scores; Basa students scored 9.3 percentage points lower than comparison students, after controlling for baseline scores and other control variables.¹⁹ These negative results in reading comprehension are driven by Basa boys who are significantly negatively impacted by Basa, while Basa had no effect on Grade 4 girls.

¹⁹ This result is still negative and statistically significant controlling only for explanatory variables but not baseline scores, though with a slightly smaller magnitude ($TE=-0.081$, $p=0.003$).

Figure 4. Impacts of Basa on Grade 2 students - Filipino

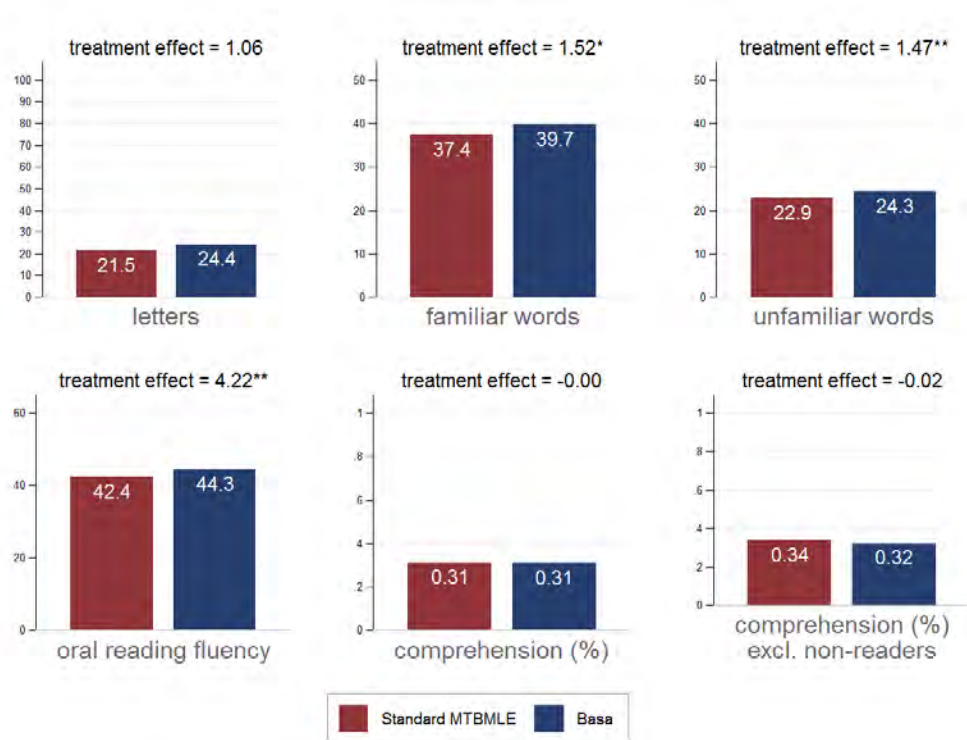


Figure 5. Impacts of Basa on Grade 3 students - Filipino

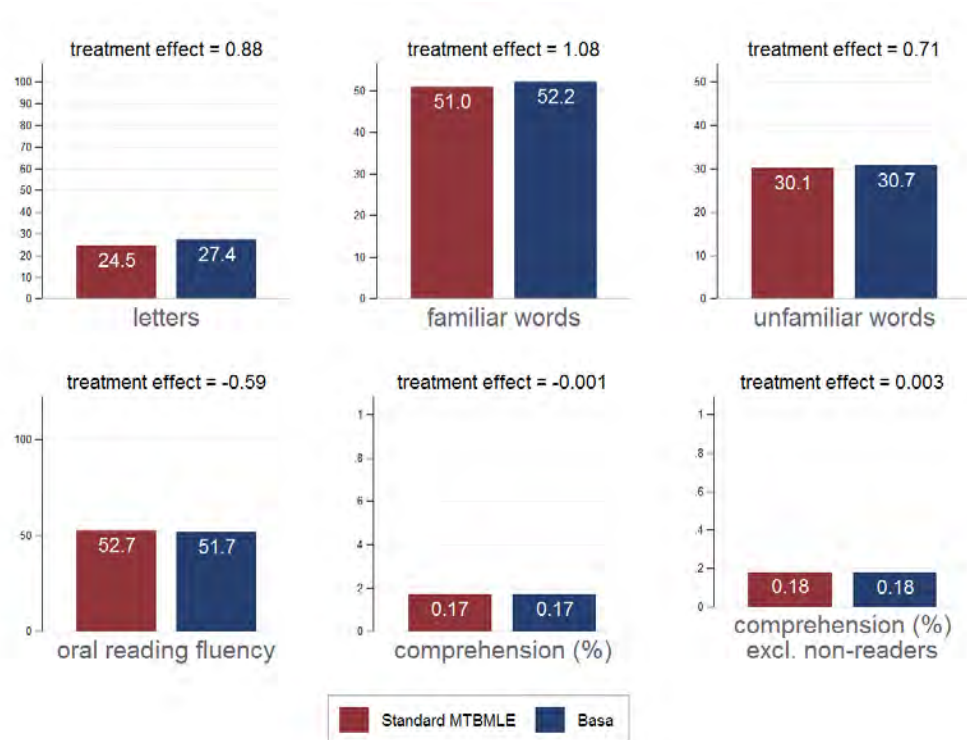
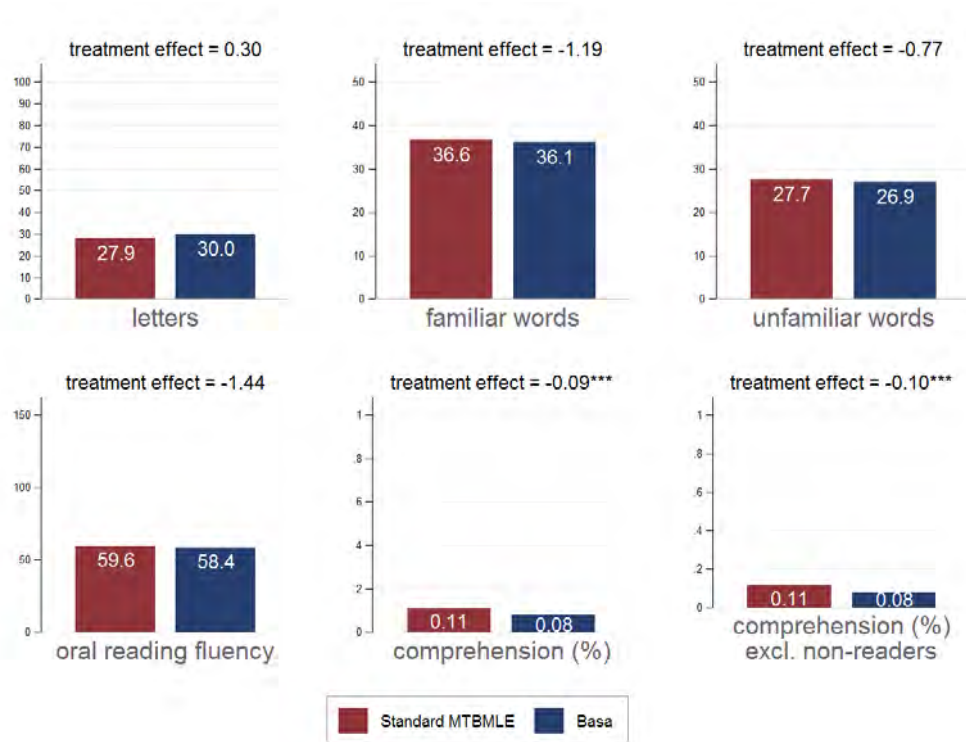


Figure 6. Impacts of Basa on Grade 4 students - Filipino



ENGLISH²⁰

Basa had a statistically significant, positive impact on Grade 2 students in English letters cpm (TE=2.17, $p=0.006$) and unfamiliar words cpm (TE=1.37, $p=0.089$), but no impact on Grade 2 students in familiar words, oral reading fluency, or reading comprehension. Grade 3 Basa students experienced positive results from Basa in letters cpm (TE=2.06, $p=0.009$), familiar words cpm (TE=1.89, $p=0.090$), and unfamiliar words cpm (TE=1.37, $p=0.051$), but results are null for oral reading fluency and negative for reading comprehension, with Basa students scoring 8 percentage points lower than comparison students ($p=0.087$) after controlling for baseline scores and other variables. Basa had no impact on Grade 4 students, except for reading comprehension, for which we also observe a negative impact of Basa (TE=-0.07, $p=0.083$).²¹

²⁰ It should be noted that reading in English only begins in Grade 3, per MTBMLE policy.

²¹ This result is still negative but just short of statistical significance controlling only for explanatory variables but not baseline scores (TE=-0.074, $p=0.108$).

Figure 7. Impacts of Basa on Grade 2 students - English

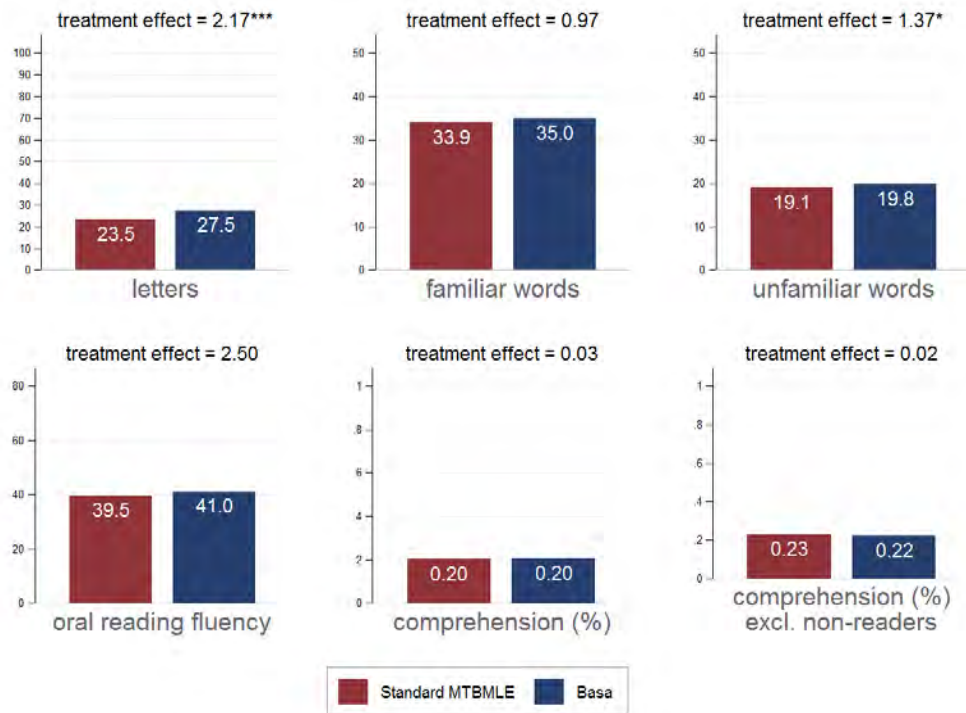


Figure 8. Impacts of Basa on Grade 3 students – English

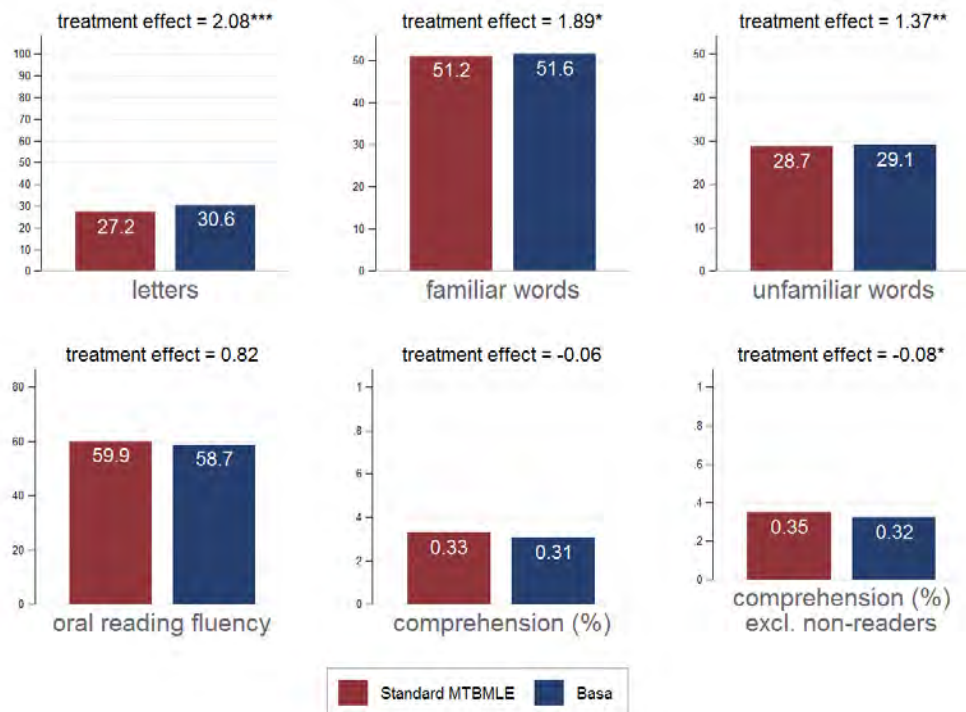
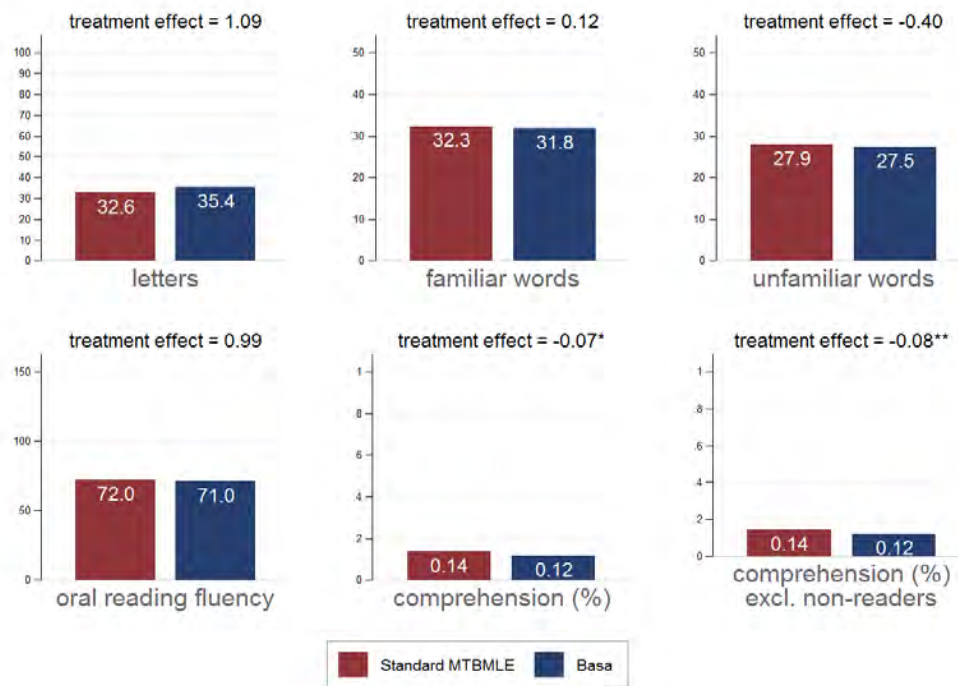


Figure 9. Impacts of Basa on Grade 4 students - English



PROGRESS TOWARD BENCHMARKS²²

In May 2015, Basa convened a working group to establish reading fluency and comprehension benchmarks and targets for each grade in Filipino and English. These benchmarks and targets were designed to be used as a standard against which progress toward improving reading outcomes among Filipino children would be measured. Table 10 & 11 show the percentage of Basa and comparison students meeting these targets for the standard EGRA benchmarks of reading proficiency in oral reading fluency and reading comprehension and impact estimates for the effect of Basa on attaining each target. Generally, both Basa and comparison students fell short of these targets. In some cases, Basa students had greater odds of attaining benchmarks and in other cases, Basa students had lower odds.

For Filipino, Grade 2 Basa students were significantly more likely to meet the reading fluency benchmarks of 40 words cpm (OR=1.57, $p=0.004$) and 60 words cpm (OR=1.37, $p=0.072$) but similarly likely to achieve reading comprehension benchmarks. Grade 3 Basa students were significantly less likely to meet the 60% and 80% comprehension benchmarks, though very few students in either group attained these benchmarks. Grade 4 Basa students were similarly likely to meet reading fluency and comprehension benchmarks. In English, Basa and comparison students are equally likely to achieve benchmarks across all grades, except Grade 4 Basa students have lower odds of attaining the 40% reading comprehension benchmark (OR=0.56, $p=0.041$).

²² The Grade 3 and Grade 4 EGRA tools are more challenging tools developed by SI. Lower performance against benchmarks in Grade 3 and Grade 4 therefore does not indicate lower reading proficiency among these students rather more modest performance given the more challenging assessment. See the methodology section of this report for further explanation.

TABLE 10: PERCENT ATTAINING BENCHMARKS – FILIPINO²³

BENCHMARK	GRADE	TARGET	STANDARD MTBMLE	BASA	IMPACT
40 words cpm	2	62%	51%	55%	1.57***
	3	75%	69%	69%	0.87
	4	--	82%	81%	0.76
60 words cpm	2	29%	27%	28%	1.37*
	3	47%	40%	38%	0.83
	4	--	44%	43%	1.13
40% comprehension	2	66%	48%	47%	0.92
	3	70%	12%	12%	0.80
	4	--	8%	5%	0.57
60% comprehension	2	36%	21%	22%	1.12
	3	44%	4%	2%	0.55**
	4	--	1%	1%	--
80% comprehension	2	16%	9%	9%	0.99
	3	20%	2%	1%	0.33**
	4	--	1%	0%	--

* significant at 90% ** significant at 95% ***significant at 99%
 $p < 0.1$  $0.1 < p < 0.2$  $p < 0.1$  $0.1 < p < 0.2$

TABLE 11: PERCENT ATTAINING BENCHMARKS – ENGLISH

BENCHMARK	GRADE	TARGET	STANDARD MTBMLE	BASA	IMPACT
40 wpm	2	61%	49%	50%	1.10
	3	72%	70%	70%	1.18
	4	--	85%	81%	1.01
60 wpm	2	36%	26%	26%	1.24
	3	54%	51%	48%	0.96
	4	--	68%	61%	0.76
40% comprehension	2	32%	18%	18%	1.20
	3	41%	31%	29%	0.86
	4	--	21%	16%	0.56**
60% comprehension	2	23%	15%	15%	1.27
	3	30%	28%	25%	0.83
	4	--	7%	8%	1.31
80% comprehension	2	13%	7%	7%	1.32
	3	20%	16%	14%	0.87
	4	--	4%	3%	--

* significant at 90% ** significant at 95% ***significant at 99%
 $p < 0.1$  $0.1 < p < 0.2$  $p < 0.1$  $0.1 < p < 0.2$

PREDICTORS OF READING OUTCOMES

As a part of the analysis, the evaluation team explored the extent to which various demographic, household, school, and teacher characteristics predict reading fluency and comprehension scores. Regressions were run using oral reading fluency and reading comprehension scores as dependent variables. Table 12 summarizes those factors we found to be consistently predictive of reading scores. The full results of these regressions can be found in Annex 6.

²³ Too few G4 students met the 60% and 80% Filipino comp. and 80% English comp. benchmark to run the regression.

TABLE 12: PREDICTORS OF READING OUTCOMES

	Region 7 students performed substantially better than Region 1 students in Grade 2, particularly in Filipino where students in Region 7 scored 29 words cpm higher than Grade 2 students in Region 1. The ORF disparity diminishes in grades 3 and 4, but remains for comprehension.
	Girls significantly outperformed boys in ORF by 11 to 14 words cpm, and score 5 to 15 percentage points higher in comprehension. This is roughly equivalent to the effect of one additional year of schooling.
	Household and school assets positively predict higher ORF and comprehension scores.
	Students who started Kindergarten at a younger age score higher than those who started at an older age. Notably, among Grade 2 students, each additional year in age at start of Kindergarten is associated with a 4 word drop in reading fluency in Filipino.
	Receiving homework help is inversely related to ORF and comprehension scores, though only statistically significant for Grade 2 and Grade 4 English comprehension, which could mean students with lower aptitude require more homework help or that students who receive homework help actually learn less of the material.
	Having reading material at home positively predicts ORF and comprehension scores for some grades and languages, though not consistently so. Notably, Grade 3 students who bring books home from school score 6 words cpm higher on Filipino ORF and 7 words cpm higher on English ORF, though results are null for other grades and for reading comprehension.
	Having someone reading to the child at home starting at a younger age is positively related to ORF scores and highly statistically significant across most languages and grades.
	School closure negatively predicts ORF and comprehension scores. One additional day of school closure is associated with a drop of 0.5 words cpm in Filipino and nearly 1 word cpm in English reading fluency among Grade 3 students, and 1 percentage point drop in reading comprehension among Grade 4 students. Results are null for other grades.
	Controlling for a student's class size, students in schools with higher enrollment have higher test scores across most languages and grades.
	Grade 2 students who have a teacher with a post-graduate degree score, on average, 15 words cpm higher in Filipino reading fluency. This variable does not explain reading scores for other grades or languages, but months of teacher experience has a significant positive effect on Grade 4 Filipino comprehension and a nearly significant effect on English comprehension in both Grade 3 and Grade 4.
	Grade 3 students whose teachers demonstrate reading-specific teaching best practices correctly read, on average, 5.9 words cpm more in Filipino and 7.7 words cpm more in English. This variable does not explain reading scores for other grades or languages.
	Math score is a highly statistically significant predictor of reading score across all languages and grades.

ZERO SCORES

In addition to mean scores on each EGRA subtest, the evaluation team also analyzed the percentage of Basa and comparison students scoring zero on a subtest, by language and grade at baseline and at 2016 and 2017 follow-up. Zero scores generally reduced from start of year to end of year for both Basa and comparison students in Filipino and English, though zero scores among comparison students generally reduced more than did zero scores for Basa students. It should be noted that more challenging Grade 3 and Grade 4 assessments were developed in order to capture gains attributable to the Basa intervention. Thus, higher zero scores in these grades do not indicate losses in proficiency, rather lower performance, across both groups, on a more challenging assessment.

Basa significantly reduced Grade 2 Filipino zero scores in unfamiliar words (OR=1.57, p=0.053) and reading fluency (OR=1.47, p=0.060) relative to changes in the comparison group. For Grade 3 students, Basa reduced zero scores in reading fluency only (OR=2.01, p=0.080). However, Basa increased zero scores among Grade 4 students in reading comprehension (OR=0.48, p=0.004) relative to the comparison group.

TABLE 13: ZERO SCORES – FILIPINO

	GRADE	STANDARD MTBMLE			BASA			IMPACT ODDS RATIO
		Start of Year	End of Year	Change	Star of Year	End of Year	Change	
Letters	2	19%	10%	9%	19%	10%	9%	1.04
	3	15%	8%	7%	11%	6%	5%	1.39
	4	--	4%	--	--	4%	--	1.16
Familiar words	2	17%	10%	7%	10%	7%	3%	1.32
	3	8%	5%	3%	4%	4%	0%	0.94
	4	--	4%	--	--	3%	--	0.64
Unfamiliar words	2	23%	14%	9%	15%	10%	5%	1.57*
	3	11%	8%	3%	6%	6%	0%	1.20
	4	--	7%	--	--	4%	--	4.33***
Reading fluency	2	27%	13%	14%	22%	12%	10%	1.47*
	3	7%	5%	2%	4%	4%	0%	2.01*
	4	--	2%	--	--	2%	--	2.97
Comprehension	2	48%	32%	16%	43%	32%	11%	1.26
	3	50%	39%	11%	39%	37%	2%	1.08
	4	--	56%	--	--	66%	--	0.48***

* significant at 90% ** significant at 95% ***significant at 99%
 p < 0.1  0.1 < p < 0.2  p < 0.1  0.1 < p < 0.2

For English, Basa reduced Grade 2 zero scores in letters (OR=1.75, p=0.024), unfamiliar words (OR=1.45, p=0.090), and reading fluency (OR=1.53, p=0.036). Results for Grade 3 and Grade 4 students were again more modest; Basa reduced Grade 3 zero scores in letters only (OR=1.87, p=0.027), and though not meeting the threshold of statistical significance, increased zero scores in Grade 4 English reading comprehension (OR=0.74, p=0.142).

TABLE 14: ZERO SCORES – ENGLISH

	GRADE	STANDARD MTBMLE			BASA			IMPACT ODDS RATIO
		Start of Year	End of Year	Change	Star of Year	End of Year	Change	
Letters	2	13%	9%	4%	17%	6%	11%	1.75**
	3	14%	6%	8%	12%	4%	8%	1.87**
	4	--	2%	--	--	2%	--	0.74
Familiar words	2	28%	19%	9%	20%	14%	6%	1.10
	3	13%	9%	4%	8%	7%	1%	1.34
	4	--	8%	--	--	8%	--	0.67
Unfamiliar words	2	32%	21%	11%	25%	16%	9%	1.45*
	3	18%	11%	7%	12%	10%	2%	0.95
	4	--	9%	--	--	9%	--	0.74
Reading fluency	2	20%	11%	9%	12%	8%	4%	1.53**
	3	9%	5%	4%	5%	5%	0%	1.10
	4	--	3%	--	--	2%	--	1.39
Comprehension	2	70%	58%	12%	65%	57%	8%	1.31
	3	57%	45%	12%	51%	46%	5%	0.87
	4	--	63%	--	--	69%	--	0.74

* significant at 90% ** significant at 95% *** significant at 99%

+ $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

EGMA

Early Grade Math Assessments (EGMA) were administered to test for any effect of Basa on learning in Mathematics. Though the Basa program is a literacy program and is not expected to generate changes in numeracy (and accordingly is not being evaluated according to numeracy outcomes), it has been theorized that improved literacy outcomes may lead to improved numeracy outcomes. We observe positive statistically significant effects of Basa on one to two subtests per grade with null effects across the remaining subtests. Positive treatment effects were most consistent for numbers identified cpm, for which Basa had statistically significant positive effects across all grades except for Grade 3.

TABLE 15: EGMA

	GRADE 1	GRADE 2	GRADE 3	GRADE 4
Number identification cpm	1.45**	2.07***	0.93	4.13***
Quantity comparison (% correct)	-0.007	0.023*	0.010	0.007
Missing number (% correct)	0.003	0.016	-0.011	-0.023
Addition level 1 cpm	0.03	0.42	-0.10	-0.40
Subtraction level 1 cpm	0.32	0.25	0.22	-0.07
Word problem (% correct)	0.114***	0.009	-0.004	-0.022
Addition level 2 (% correct)	--	0.034	0.044**	-0.029
Subtraction level 2 (% correct)	--	-0.014	0.001	0.006

* significant at 90% ** significant at 95% *** significant at 99%

+ $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

FINDINGS: TEACHERS AND SCHOOLS

School-level data were collected from principals and teachers at baseline and the 2016 and 2017 follow-ups. Results of the 2017 school data collection are shown in Tables 16 & 17. The regression coefficients indicate the effect of Basa on teacher- and school-level outcomes. The models were run on the 2017 data alone as a cross-section, and baseline data were not used in this analysis as many potential control variables collected at baseline could have already been influenced by the Basa program. Where the outcomes of interest are continuous variables, such as percentage of teachers absent, these coefficients are from a standard OLS regression and shown in the first effect column. They indicate the effect in terms of the units of the outcome variable. Where the outcomes of interest are binary, such as whether a principal checks a teacher lesson plan, these coefficients are from a logit model and represent the odds ratio (OR) of the outcome of interest being true for a principal (teacher) at a Basa school compared to a principal (teacher) at a comparison school. Odds ratios greater than one indicate that Basa principals (teachers) are more likely to report an outcome (after controlling for other characteristics), whereas values less than one indicate Basa principals (teachers) are less likely to report the outcome.

At the end of the 2017 school year, Basa principals were more likely to participate in LACs (OR=2.12, $p=0.078$), but reported similar frequency convening LACs as standard schools. These results differ somewhat from the end of the 2016 school year, where Basa principals reported much higher participation in LAC than Standard MTBMLE schools (OR=28.2, $p=0.003$), but convened LACs significantly less than Standard schools (OR=0.23, $p=0.002$). In 2016, Basa schools were much more likely to have a sufficient number of textbooks for Grade 1, Grade 2, and Grade 3, but in 2017, Basa principals reported significantly less Grade 3 textbooks than Standard schools (OR=0.18, $p=.085$). On most fronts, Basa and comparison schools and principals are generally statistically similar at follow-up, after controlling for relevant factors exogenous to the intervention.²⁴

TABLE 16: SCHOOL-LEVEL OUTCOMES

	STANDARD MTBMLE	BASA	EFFECT	
			Coef.	OR
Principal checks teacher lesson plans	48%	50%		0.91
Principal observes classroom 2-3+ times per week	60%	50%		0.56
Student can take books home	29%	17%		1.04
Teachers convene for LACs at least once a week	23%	15%		0.57
Principal participates in LAC	66%	75%		2.12*
School has copy of K-12 curriculum in MT	99%	100%		0.00
School had enough grade 2 textbooks at start of SY	96%	93%		0.79
School had enough grade 3 textbooks at start of SY	97%	88%		0.18*
% grade 1 teachers trained in MTBMLE	85%	81%	-0.06	
% grade 2 teachers trained in MTBMLE	87%	93%	0.04	
% grade 3 teachers trained in MTBMLE	79%	67%	-0.08	

* significant at 90% ** significant at 95% ***significant at 99%

+ $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

Table 17 shows mean values for various teacher-level outcomes of the Basa project in 2017. Many teacher-level outcomes show no effect of Basa, with three exceptions. Most notably, Grade 4 Basa teachers reported 35.9 more minutes of class time spent using mother tongue ($p=0.048$) and 18 fewer minutes of

²⁴ Control variables for school analyses include: average school reading and math scores, enrollment, number of teachers, school assets, and principal sex, age, and qualifications. Control variables for teacher analyses include these variables as well as: class size and teacher sex, age, and qualifications.

class time in English than comparison teachers ($p=0.204$). This finding may help explain the negative reading comprehension findings in Grade 4, though results still indicate a negative effect on Grade 4 reading comprehension even after controlling for this factor. Second, holding all else constant, teachers at Basa schools were more likely to have attended early grade reading training than equivalent peers at comparison schools ($OR=1.83$, $p=0.001$). However, among those teachers who did receive training, Basa teachers received one day less of training in both mother tongue ($p=0.003$) and training overall ($p=0.015$). Third, Basa teachers are statistically significantly more likely to put students into smaller groups several times per month ($OR=1.93$, $p=0.002$).

TABLE 17: TEACHER-LEVEL OUTCOMES

	STANDARD MTBMLE	BASA	EFFECT	
			Coef.	OR
Early grade reading training, % teachers attended	62%	75%		1.83***
Early grade reading training, days attended	8.86	8.05	-0.99**	
Early grade MT reading training, days attended	3.18	2.34	-1.14***	
Class time in MT, minutes	189.43	196.88	5.49	
Class time in Filipino, minutes	74.55	74.98	-0.22	
Class time in English, minutes	78.82	75.42	0.10	
Puts students into smaller groups several times per month	73%	83%		1.93***
Teachers displaying 75%+ of applicable reading behaviors	70%	62%		0.69
General teaching behavior index	91%	90%	0.01	
Reading teaching behavior index	83%	79%	-0.02	
Teachers very familiar with MT grammar	54%	50%		0.87
Teachers not comfortable providing instruction in MT	56%	61%		1.15

* significant at 90% ** significant at 95% ***significant at 99% + $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

Table 18 & 19 display the percent of teachers in Basa and comparison schools that demonstrated general and reading-specific “best-practice” behaviors, respectively, at follow-up. To be counted as demonstrating each behavior, the teacher must have been scored by an enumerator as displaying the behavior at least “sometimes” or “partially correct” in two or more out of the three times that they were observed. In order to determine the effect of teaching at a Basa school on the demonstration of these behaviors, each behavior was run as the dependent variable of a logistic regression. The coefficients in the table compare the odds of the behavior being displayed by a teacher at a Basa school compared to a comparison school, holding all else constant. Table 18 shows that Basa teachers demonstrated similar levels of general teaching best-practices, expect that Basa teachers were significantly less likely to engage students in cooperative learning strategies.

TABLE 18: GENERAL BEST-PRACTICE TEACHING BEHAVIORS

CATEGORY	BEHAVIOR	STANDARD MTBMLE	BASA	OR
Classroom materials	Uses different instructional resources	97%	98%	0.69
	Uses materials besides textbooks	90%	88%	0.89
Opportunities for Reflection and Application	Connects to previous lessons	75%	77%	1.43
	Asks probing questions	93%	95%	1.55
	Provides opportunities to apply learning	83%	82%	1.09
	Provides opportunities for critical thinking	90%	92%	1.25
Positive learning environment	Effective classroom management	100%	99%	--
	Treats students fairly	99%	100%	--

Other	Manages time effectively	100%	100%	--
	Assesses pupil learning	100%	100%	--
	Cooperative learning strategies	75%	59%	0.57**
	General teacher behavior index	91%	90%	--

* significant at 90% ** significant at 95% ***significant at 99% + $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

With respect to reading-specific teaching best-practices, Basa teachers were significantly more likely to ask students to sound out new words, possibly indicating greater emphasis among Basa teachers on phonetics. Though Basa and non-Basa teachers were equally likely to ask questions to assess student reading comprehension, Basa teachers were observed to do so more consistently than comparison teachers (OR=2.37, $p=0.005$). Similarly, while fewer Basa teachers provided varied methods for good writing, Basa teachers were significantly more likely than comparison teachers to display these behaviors consistently (OR=1.52, $p=0.061$).

TABLE 19: READING-SPECIFIC BEST-PRACTICE TEACHING BEHAVIORS

CATEGORY	BEHAVIOR	STANDARD MTBMLE	BASA	OR
Classroom materials	Asks pre-reading questions	79%	76%	0.98
	Asks learners to act something out	77%	63%	0.69
	Uses multiple methods for comp.	89%	84%	0.59
	Asks questions to assess reading comp.	98%	97%	1.46
	Asks questions to assess listening comp.	96%	93%	0.49
	Allows learners to retell story	66%	55%	0.85
Opportunities for learning to decode and spell words	Encourages sounding it out	81%	86%	2.08**
	Provides instructions to decode	76%	75%	1.24
	Asks learners to recognize letters	87%	76%	0.44
	Asks learners to recite alphabet	48%	50%	2.11
Positive learning environment	Avoids criticizing learners	99%	99%	--
	Encourages learners to help each other	71%	66%	0.98
Other	Reading-level appropriate activities	95%	92%	0.42
	Asks readers to read aloud	87%	89%	1.37
	Teaches learners new words	85%	87%	1.17
	Assigns individual reading	64%	50%	0.68
	Provides varied methods for good writing skills	91%	82%	0.55

* significant at 90% ** significant at 95% ***significant at 99%
+ $p < 0.1$ + $0.1 < p < 0.2$ - $p < 0.1$ - $0.1 < p < 0.2$

CONCLUSIONS

STUDENTS

Basa had small but statistically significant impacts on Grade 1 and Grade 2 students in reading and math, including reductions in English zero scores. Results are consistently more positive for the combined measure of the effect of Grade 1 Basa plus Grade 2 Basa than looking at the effect of a single year of Basa. Among Grade 3 students, we find some significant impacts on English but no impacts on Filipino. We find no significant impact of Basa among Grade 4 students in either language, apart from a significant *negative* impact on reading comprehension for Grade 4 students both in Filipino and English. Basa reduced zero scores for some Grade 3 and Grade 4 subtests, but increased zero scores for Grade 4 reading comprehension. While around half of Grade 3 and Grade 4 students score zero in reading comprehension due to the more challenging assessment, it is important to note that this does not bias our results for several reasons. First, both Basa and comparison students received the same assessment. Second, results are still null or negative among those who do not score zero. Third, we observe that zero scores reduced more among comparison students, and that Basa increased zero scores among Grade 4 students. Finally, results are consistent across a variety of model specifications (see Annex 7). Accordingly, we are confident that the results stand.

Based on the results of this impact evaluation, we conclude that the Basa program resulted in some short-term gains in both pre-reading²⁵ and oral reading fluency for treatment students, but these effects become null over time, with comparison students reaching parity with Basa students by Grade 4. These results are consistent with evidence from other early grade literacy evaluations, which seems to indicate significant gaps in our knowledge of how to create sustainable improvements in reading outcomes. Additionally, Basa did not have an impact on reading comprehension in any grade, and had a negative impact on reading comprehension in Grade 4. While we do not find a clear mechanism for the observed negative effects on Grade 4 reading comprehension, it may relate to differences in Basa versus non-Basa schools in the language used in class. Differences between Basa and non-Basa teachers in class time spent using mother tongue, Filipino, and English are negligible until Grade 4, when we see that Basa teachers spend significantly more time in mother tongue and almost significantly less time in English. While we do find some evidence that class time in mother tongue in Grades 3 and 4 is associated with decreased English and Filipino reading fluency and comprehension, the negative results for reading comprehension are still observed when controlling for class time in mother tongue and English. As we did not measure reading outcomes in mother tongue beyond Grade 1, we cannot say whether the program had an impact on mother tongue reading outcomes in grades 2 through 4.

Results from this evaluation confirm that girls generally out-perform boys across grades and subtests. We observe no consistent trend in Basa either reducing or exacerbating the gender gap; in some instances, girls benefit from Basa more than boys and in others, boys benefit more than girls. Notably, Grade 1 girls generally benefit more than boys from the intervention. Girls in Grade 4 generally experienced no benefit from Basa, while Basa boys in Grade 4 generally experienced a negative effect (i.e. benefited more from standard MTBMLE). Results from this IE also illuminate factors that explain reading achievement. Aside from sex and region, other factors that positively predict reading scores include: student EGMA scores, teachers exhibiting reading best-practices, school and household assets, age at start of Kindergarten and

²⁵ Letter identification, familiar word and unfamiliar word subtests can be considered pre-reading subtests.

at start of someone reading to the child, having access to reading material at home, and larger school enrollment. School closure and receiving help on homework are associated with lower reading scores.

TEACHERS AND SCHOOLS

Basa and comparison schools, principals, and teachers are generally statistically similar at follow-up, after controlling for relevant factors exogenous to the intervention. Considering the intervention's theory of change—impacting student scores through changing school leadership and teacher beliefs and practices—the modest results of this IE may be a result of limited observed impacts of Basa on schools and teachers. Basa principals were no more likely to check teacher lesson plans, observe classrooms, convene LACs, have access to the mother tongue curriculum, or allow students to bring books home from school. However, Basa principals were more likely to participate in LACs.

As we would expect, Basa teachers were significantly more likely to have attended early grade reading training. Of those who reported attending early grade training, Basa teachers received significantly fewer training days, which is consistent with our understanding of the Basa training, which is shorter in duration than standard DepEd trainings. Basa teachers are more likely to encourage students to sound out unfamiliar words and to put students into smaller groups several times per month, but otherwise exhibit statistically similar levels of general and reading-specific best practices as comparison teachers.

RECOMMENDATIONS

- 1- **Explore mechanisms for sustainability in later grades.** Given that the IE found short-term but no lasting impact of Basa on student achievement in Filipino and English, the evaluation team recommends that USAID explore interventions that have the potential to sustain student achievement gains in future grades. This may include supporting teachers who instruct Grade 4 or higher as students in this stage may still be honing their reading skills and learning to comprehend increasingly complex text. This may also include providing follow-up and coaching support to teachers who received training to encourage continued use of the material.
- 2- **Investigate what works well in standard DepEd training.** We found that Grade 4 students who attended non-Basa schools performed better on Filipino reading comprehension than students who attended Basa schools, particularly among boys. This finding is statistically significant, controlling for baseline score and other explanatory variables. As such, we recommend investigating what the standard DepEd training is doing well that could be contributing to these higher gains relative to Basa students. Moreover, we recommend that this investigation utilize a gender lens to further investigate if there are certain methods or approaches that are working particularly well with boys.
- 3- **Integrate evaluative thinking and evaluation planning at an early stage.** One limitation of this IE is that the evaluator was contracted several years after the start of implementation. Thus, the baseline is for the student-level rather than the school or project-level. Early planning allows better alignment between implementation and evaluation timelines and improves the feasibility of a randomized control trial, which is the gold standard of impact evaluation methodologies. Moreover, early planning helps to ensure evaluation findings are available to USAID at times when major programmatic decisions are to be made. Finally, by planning early, evaluators and implementers can work to ensure similarity in tools which facilitates comparison and knowledge generation. To maximize the usefulness of future evaluations, USAID should plan for evaluations as early as possible, ideally at the Project Appraisal Document (PAD) stage.
- 4- **Consider future research on the sustainability of effects of reading programs as well as on the null results on reading comprehension.** The Sa Aklat Sisikat Reading Program in the Philippines, the Nali Kali program in India, the USAID/Mali Read-Learn-Lead program, and this IE all found effects in early grades that did not hold in subsequent grades. The generally null and negative findings in Grades 3 and 4 could potentially result from teachers having received a less developed and refined version of the Basa training in the intervention startup years, differences in language use during class time, or some other factor(s). Additional research with the current Grade 3 cohort, which was matched prior to the start of Grade 1, or future cohorts would allow USAID to test whether results with this cohort are sustained or similarly diminish over time. Further, more research should be conducted on why the program generated impact on some measures of pre-reading and oral reading fluency but not in comprehension.

ANNEX I – EVALUATION STATEMENT OF WORK

A. IMPACT EVALUATION PARAMETERS

A rigorous evaluation design must be used to the greatest extent possible in assessing the impact of Basa Pilipinas and of mother-tongue reading instruction and for related cost analyses.

1. Methodological Options

The methodological options for conducting a rigorous impact evaluation include:

- a. Experimental designs in which the contractor establishes treatment and control groups for comparison from the beginning of program implementation with random assignment of eligible participants into treatment and control groups; and
- b. Quasi-experimental designs in which the contractor constructs comparison groups that resemble treatment groups, at least in observed characteristics, through some kind of matching method, such as propensity scoring or multivariate correlation. Difference-in-difference methodology can then be used to compare between treatment and comparison groups before and after program implementation. Other analytical options, such as instrumental variable and regression discontinuity designs, may be considered if appropriate and in consultation with USAID.

2. Qualitative Data

Qualitative data analysis must also be used to compliment quantitative data and enhance the depth of the evaluation study. This may include data from administrative records and secondary sources on the implementation of MTBMLE and Basa Pilipinas, observation of MTBMLE and Basa Pilipinas activities (teaching, training, etc.), as well as selected individual and/or group interviews (with administrators, teachers, trainers, material developers, students, and other stakeholders).

3. Cost Analysis

Several different aspects of cost analysis must be included such as cost-effectiveness, cost-benefit, cost utility and cost feasibility analyses. While it is expected that the bulk of the cost analysis under this contract will look at cost-effectiveness, cost-benefit, cost utility and cost feasibility analysis are also relevant. The overall goal of cost analysis in this evaluation is to provide timely data to USAID, the GPH, and other relevant stakeholders to support decision-making about rollout and scaling up of the reading interventions evaluated.

4. Measuring Outcomes

As noted previously, the Basa Pilipinas activity supports MTBMLE in six (6) provinces encompassing instruction in three (3) mother tongues (Ilocano, Cebuano and Maguindanaoan). It is anticipated that the Basa Pilipinas Impact Evaluation will collect data on reading performance from a statistically significant sample (at least a 95% confidence level) or higher of students receiving USAID assistance and those not receiving USAID assistance. Although the size of that sample will vary depending on the number of causal variables being examined in the proposed evaluation design, this has been

estimated as approximately 1,000 students receiving USAID assistance and 1,000 not receiving USAID assistance each year.

Reading performance (in English and Filipino) must be used as the main outcome indicator in assessing Basa Pilipinas. Many established reading achievement tests exist to measure this indicator including the Early Grade Reading Assessment (EGRA) developed through funding support

from USAID and the World Bank, government-sponsored reading achievement tests such as the Philippine Informal Reading Inventory (Phil-IRI), the National Achievement Test (NAT), and others. The Contractor must be able to use or modify existing reading performance instruments and/or existing reading performance data (from DepEd, administrative records, etc.). In all cases, the Contractor must select or create the best tool to measure reading achievement in this context in close consultation with USAID and DepEd. This may involve a combination of tools, such as EGRA to measure performance for control and comparisons groups and GPH surveys to provide baseline and national comparisons. The Contractor must also determine (in consultation with USAID and DepEd) how data on reading achievement can best be disaggregated (e.g., with regard to gender, location, indigenous affiliation, initial reading ability etc.). Gender disaggregation is of particular priority to help USAID and DepEd better understand gender differences in reading achievement and how performance gaps that exist between girls and boys in different sub-regions can best be addressed.

5. Coordination

Significant coordination is required to carry out this evaluation. The Contractor will work closely with the Basa Pilipinas implementer (Education Development Center), the implementer of USAID's PhilEd Data activity (RTI) that collects related educational statistics, USAID, and other important education program partners. The Contractor will also work closely with DepEd officials who are implementing the country-wide MTBMLE program and whose approval will be needed to collect data in the field. In addition, the Contractor will work closely with relevant USAID technical staff and technical staff of other bilateral and multilateral donors implementing related education programs in the Philippines.

a. Coordination with USAID's Basa Pilipinas Contractor

The Contractor is responsible for designing and implementing the Basa Pilipinas impact evaluation -- providing oversight, maintaining quality, and assuring independence. Under the Basa Pilipinas contract, the implementer (EDC) collected baseline data on outputs and outcomes for program participants (those receiving USAID assistance) that can be aggregated at the classroom, school and division levels. To the extent possible, the Contractor must utilize this baseline and follow-up data collected by the Basa contractor, while also identifying or constructing comparison or control groups and collecting outcome data from these groups as necessary, appropriate and feasible to provide the basis for analyzing Basa Pilipinas' impacts and costs.

The Contractor will work closely with the Basa Pilipinas implementer (EDC) and USAID in finalizing the evaluation design, coordinating program implementation, and articulating their joint

and separate responsibilities for data collection, analysis and reporting. To the greatest extent possible, the Contractor will utilize the same instruments and procedures for collecting output and outcome data as the Basa contractor and/or work closely with the Basa contractor to modify those instruments and data collection procedures as necessary and appropriate. The evaluation contractor will also work closely with the Basa contractor and USAID to modify program implementation (e.g., program roll out, phasing, site and participant selection, etc.) as possible and appropriate to ensure the most credible and powerful evaluation design and analysis.

b. Coordination with the USAID's PhilEd Data Contractor

The evaluation Contractor will also work closely with the implementer (RTI) of USAID's PhilEd Data activity to make the best possible use of the country-wide reading performance data being collected. To the greatest extent possible, the Contractor will use this data as a basis for controlled comparisons or, where appropriate, collect similar data itself

ANNEX 2 – SAMPLED SCHOOLS

Sampled Schools, Standard MTBMLE

	School	Division	Municipality
1	anapao es	pangasinan i lingayen	burgos
2	aurelio ibero mes (jugno es)	negros oriental	amlan (ayuquitan)
3	ayusan-paoa elementary school	vigan city	city of vigan (capital)
4	b. durano es	danao city	danao city
5	b. enriquez es	danao city	danao city
6	baay es	ilocos norte	city of batac
7	badiang ps	negros oriental	valencia (luzurriaga)
8	bais city west es	bais city	bais city
9	balaas ps	negros oriental	jimalalud
10	baligat es	ilocos norte	city of batac
11	balili ps	negros oriental	valencia (luzurriaga)
12	bal-loy es	pangasinan ii binalonan	santa maria
13	balugo es	negros oriental	valencia (luzurriaga)
14	banawe e/s	negros oriental	pamplona
15	bangcal es	negros oriental	jimalalud
16	baoa east es	ilocos norte	city of batac
17	baoa es	ilocos norte	city of batac
18	basac elementary school	siquijor	larena
19	biningan es	ilocos norte	city of batac
20	bio-os es	negros oriental	amlan (ayuquitan)
21	bogo elementary school	siquijor	maria
22	bolos elementary school	siquijor	siquijor (capital)
23	bongalanan es	negros oriental	basay
24	buttong es	laoag city	laoag city (capital)
25	buyong es	lapu-lapu city	lapu-lapu city (opon)
26	caaoacan es	laoag city	laoag city (capital)
27	cabang es	negros oriental	jimalalud
28	calabnugan es	negros oriental	sibulan
29	calango es	negros oriental	zamboanguita
30	calapugan es	pangasinan ii binalonan	natividad
31	camangaan es	vigan city	city of vigan (capital)
32	cambajao es	negros oriental	sibulan
33	can-asagan es	negros oriental	san juan
34	candanay elementary school	siquijor	siquijor (capital)
35	candaping elementary school	siquijor	maria
36	candigum elementary school	siquijor	larena
37	cangabo es	negros oriental	la libertad

	School	Division	Municipality
38	cangclaran elementary school	siquijor	lazi
39	cangmunag elementary school	siquijor	san juan
40	canjulao es	lapu-lapu city	lapu-lapu city (opon)
41	cantaroc elementary school	siquijor	maria
42	cantugbas ps	siquijor	maria
43	capalasanan elementary school	siquijor	lazi
44	dapdap elementary school	siquijor	lazi
45	dariwdiw es	ilocos norte	city of batac
46	datagon es	negros oriental	pamplona
47	delfin dawes	danao city	danao city
48	don pablo carmen blanco utzurum mes	negros oriental	basay
49	fatima es	negros oriental	pamplona
50	felix m. tio memorial e/s (bangcolotan es)	negros oriental	zamboanguita
51	gregorio elmaga mes (nasig-id es)	negros oriental	zamboanguita
52	guadalupe es	bogo city	city of bogo
53	hawanay es	talisay city	city of talisay
54	inmalog es	pangasinan ii binalonan	sison
55	jilabangan es	negros oriental	tayasan
56	jose r. remollo es (cambalocot es)	negros oriental	san jose
57	lacaon es	negros oriental	jimalalud
58	langtad es	city of naga cebu	city of naga
59	lebueg es	pangasinan ii binalonan	laoac
60	libo elementary school	siquijor	enrique villanueva
61	lico-an elementary school	siquijor	maria
62	logucan elementary school	siquijor	maria
63	lo-oc es	negros oriental	sibulan
64	maayong tubig es	negros oriental	dauin
65	mabini es	pangasinan ii binalonan	balungao
66	magallanes es	pangasinan ii binalonan	tayug
67	mag-aso es	negros oriental	dauin
68	maglinao es	negros oriental	basay
69	magnuang es	ilocos norte	city of batac
70	magsaysay mes	negros oriental	sibulan
71	malabo ps	negros oriental	valencia (luzurriaga)
72	malaunay es	negros oriental	valencia (luzurriaga)
73	malongcay es	negros oriental	zamboanguita
74	mapalasan es	negros oriental	la libertad
75	maria central elementary school	siquijor	maria
76	martin benjamin mes (tambojangin es)	negros oriental	amlan (ayuquitan)
77	minabuntod ps	negros oriental	canlaon city

	School	Division	Municipality
78	minalulan elementary school	siquijor	maria
79	nabago es	negros oriental	zamboanguita
80	naga central es	city of naga cebu	city of naga
81	naguirangan-capacuan es	ilocos norte	city of batac
82	napo elementary school	carcar city	city of carcar
83	nasuji ps	negros oriental	valencia (luzurriaga)
84	new bataan elementary school	siquijor	larena
85	new corregidor elementary school	siquijor	larena
86	palinpinon es	negros oriental	valencia (luzurriaga)
87	pangi elementary school	siquijor	siquijor (capital)
88	papallasen es	pangasinan i lingayen	burgos
89	pisong a elementary school	siquijor	maria
90	ponong elementary school	siquijor	larena
91	ponong elementary school	siquijor	siquijor (capital)
92	po-o elementary school	siquijor	lazi
93	portland es	danao city	danao city
94	puhagan es	negros oriental	valencia (luzurriaga)
95	pulangbato es	negros oriental	valencia (luzurriaga)
96	raois es	vigan city	city of vigan (capital)
97	roxas elementary school	siquijor	enrique villanueva
98	sa-ay elementary school	carcar city	city of carcar
99	sabang es	danao city	danao city
100	sacsac es	negros oriental	bacong
101	saleng es	pangasinan ii binalonan	tayug
102	salngan es	negros oriental	zamboanguita
103	salvacion es	pangasinan ii binalonan	santo tomas
104	san andres es	pangasinan iibinalonan	balungao
105	san antonio elementary school	siquijor	siquijor (capital)
106	san antonio west es	pangasinan ii binalonan	san nicolas
107	san isidro es	pangasinan ii binalonan	san nicolas
108	san joaquin es	pangasinan ii binalonan	balungao
109	san leon es	pangasinan ii binalonan	balungao
110	san miguel es	pangasinan i lingayen	burgos
111	san miguel es	negros oriental	bacong
112	san roque es	pangasinan ii binalonan	san manuel
113	sobol es	pangasinan ii binalonan	san nicolas
114	solangon es	siquijor	san juan
115	sra. ascion es	negros oriental	san jose
116	sta. cruz integrated school	pangasinan ii binalonan	santa maria
117	suba basbas es	lapu-lapu city	lapu-lapu city (opon)

	School	Division	Municipality
I18	tag-ibo elementary school	siquijor	san juan
I19	tagmanocan elementary school	siquijor	lazi
I20	tambisan elementary school	siquijor	san juan
I21	vicente i. villa ms	negros oriental	valencia (luzurriaga)
I22	villa jose es	pangasinan ii binalonan	san nicolas

Sampled Schools, Basa Participants

	School	Division	Municipality
1	ablayan es	cebu	dalaguete
2	abucay es	bohol	sikatuna
3	alburquerque central es	bohol	alburquerque
4	alcoy central es	cebu	alcoy
5	alicia ces annex	bohol	alicia
6	altavista es	cebu	poro
7	argao i central es	cebu	argao
8	arpili es	cebu	balamban
9	bacay es	cebu	minglanilla
10	bacong es	bohol	anda
11	bangar ces	la union	bangar
12	basdio es	bohol	guindulman
13	batuan central es - annex	bohol	batuan
14	bauang north cs	la union	bauang
15	bayog es	bohol	pres. carlos p. garcia (pitogo)
16	bongoyan es	cebu	borbon
17	borbon central es	cebu	borbon
18	botigues es	cebu	bantayan
19	buenasuerte es	bohol	pilar
20	bugtong kawayan es	cebu	barili
21	burgos central school	ilocos sur	burgos
22	butubut norte es	la union	balaoan
23	buyog es	bohol	jetafe
24	cabancalan ii es	mandaue city	mandaue city
25	cabawan elementary school	tagbilaran city	tagbilaran city (capital)
26	caleriohan es	cebu	dalaguete
27	calioet es	ilocos norte	bacarra
28	canhaway es	bohol	guindulman
29	canlambong es	bohol	dimiao
30	can-olin es	bohol	candijay
31	cansaga elementary	cebu	consolacion
32	capariaan es	ilocos sur	santa cruz
33	carmen central es	cebu	carmen

	School	Division	Municipality
34	catmon integrated school	cebu	catmon
35	city east elementary school	tagbilaran city	tagbilaran city (capital)
36	concepcion es	bohol	danao
37	cordova central es	cebu	cordoba
38	cubacub es	mandaue city	mandaue city
39	dait norte es	bohol	buenavista
40	dalid es	mandaue city	tabuelan
41	dalumpinas es	san fernando city	city of san fernando (capital)
42	day-as es	cebu	cordoba
43	don mariano marcos mem. sch.	ilocos norte	pinili
44	don tomas r. mendoza es	la union	naguilian
45	dumalan es	cebu	dalaguete
46	garcia park es	bohol	talibon
47	getafe central es	bohol	jetafe
48	gibitngil is	cebu	medellin
49	hanopol es	bohol	balilihan
50	ilocanos es	san fernando city	city of san fernando (capital)
51	jose chona jo es (cambuhawe)	cebu	balamban
52	kagsing es	cebu	ginatilan
53	kal-anan es	cebu	tabogon
54	kalangahan es	cebu	tuburan
55	kanlungcab ps	cebu	tabuelan
56	kinan-oan es	bohol	trinidad
57	labogon es	mandaue city	mandaue city
58	langtad es	cebu	argao
59	lantag es	ilocos sur	santa cruz
60	lila central es	bohol	lila
61	lipata central es	cebu	minglanilla
62	luna central school	la union	luna
63	madridejos central es	cebu	madridejos
64	magcalape es	cebu	asturias
65	maguikay es	mandaue city	mandaue city
66	malacorong ps	cebu	argao
67	mandaue city cs	mandaue city	mandaue city
68	mandaue city cs sped center	mandaue city	mandaue city
69	mandaug es	bohol	calape
70	mangga es	cebu	tuburan
71	maoasoas es	la union	pugo
72	mohon es	cebu	sogod
73	montañita ps	bohol	baclayon

	School	Division	Municipality
74	nalvo norte es	la union	luna
75	namoroc-mabanbanag es	ilocos norte	vintar
76	nocnocan es	bohol	talibon
77	olivo es	cebu	tabuelan
78	opao es	mandaue city	mandaue city
79	ora west es	ilocos sur	bantay
80	oya-oy es	la union	bacnotan
81	paculob es	cebu	dumanjug
82	pagangpang es	ilocos sur	galimuyod
83	pagudpud central elementary school	ilocos norte	pagudpud
84	paknaan elementary school	mandaue city	mandaue city
85	palanas es	cebu	ginatilan
86	pangada-cabaroan es	ilocos sur	santa catalina
87	pinipin es	ilocos sur	santa cruz
88	rizal es	bohol	talibon
89	ronda central es	cebu	ronda
90	sacsac es	cebu	dalaguete
91	sagayad es	san fernando city	city of san fernando (capital)
92	sagpatan es	ilocos norte	dingras
93	sal-ing es	bohol	balilihan
94	sambagon es	cebu	pinamungahan
95	san cornelio es	la union	caba
96	san francisco central es	cebu	san francisco
97	san juan north cs	ilocos sur	san juan (lapog)
98	san marcelino es	ilocos norte	dingras
99	san pedro es	bohol	talibon
100	san sebastian es	cebu	samboan
101	san vicente-san agustin es	la union	agoo
102	santa fe central es	cebu	santa fe
103	santiago south central school	ilocos sur	santiago
104	sibago es	cebu	pinamungahan
105	sillon es	cebu	bantayan
106	sta. cruz cs	ilocos sur	santa cruz
107	talugtug elementary school	ilocos norte	solsona
108	tampaan es	cebu	aloguinsan
109	tan-awan es	cebu	oslob
110	tanglag es	la union	rosario
111	tanibag es	cebu	pinamungahan
112	taytay es	bohol	jetafe
113	tingub es	mandaue city	mandaue city

	School	Division	Municipality
I 14	tonoton es	ilocos norte	piddig
I 15	trinidad central es	bohol	trinidad
I 16	tubigagmanok es	cebu	asturias
I 17	tuble es	cebu	moalboal
I 18	union es	bohol	ubay
I 19	upper tunghaan es	cebu	minglanilla
I 20	vito es	cebu	minglanilla
I 21	yati es	cebu	liloan
I 22	zaragosa es	cebu	badian

ANNEX 3 – POWER CALCULATIONS

The following assumptions were used to determine the number of schools and students in the sample:

- Clustering: intra-cluster correlation (ICC)=0.1762 (the highest ICC reported by EDC from their most recent EGRA testing for the 2015 evaluation report)
- Power: 80%
- Significance Level: 95% (using a two-sided test)
- Correlation between baseline and outcome measures: 30% (a conservative estimate based on the findings of several reading assessment studies across developing countries that have examined the variables that impact student reading scores, including a recent EGRA study conducted by SI in Malawi which identified access to books at home, socioeconomic status, and absenteeism as having large impacts on student reading scores.²⁶)
- Attrition: 16.67% (a very high estimate, which we expect to be much lower, likely less than 5% in practice, though maintaining a high estimate initially ensures we do not underpower the study due to larger than anticipated attrition). To keep attrition as low as possible, we are collecting household data, including various points of contact for each student, so that if students drop out or change schools, we should still be able to track them. For any students that migrate and are no longer reachable, we can perform analysis using baseline data to determine if there are any covariates that predict migration (including treatment), and control for these factors in future analyses.

²⁶ USAID Malawi. (2010). Early Grade Reading Assessment: National Baseline Report. <www.eddataglobal.org/reading/index.cfm/Malawi%20National%20Baseline%20EGRA%202010.pdf?fuseaction=throwpub&ID=354>.

ANNEX 4 – INSTRUMENTS

Student Items²⁷

Student background

1. [Code student gender] ☐ Male ☐ Female
2. What is your age? _____
3. What language to you speak most at home? (*Don't read these options to the student. If the student is slow to respond, wait up to 8 seconds before prompting "what language do you speak when you talk to your mother, father, siblings, etc.?"*).
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
4. What language do you usually speak with your friends?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
5. Did you attend Kindergarten?
 - a. No
 - b. Yes
 - c. Don't know
 - d. Refused

Reading

6. Does anyone at home read to you?
 - a. No (*Skip to QUESTION 8*)
 - b. Yes
 - c. Don't know (*Skip to QUESTION 8*)
 - d. Refuse to answer (*Skip to QUESTION 8*)
7. How often does someone at home read to you?
 - a. Hardly ever
 - b. Only sometimes
 - c. 2-3 times a week
 - d. Every day
 - e. Don't know
 - f. Refuse to answer
8. Do you read on your own at home?

²⁷ These items were requested of students alongside EGRA and EGMA instruments. The EGRA and EGMA tools are omitted, since they are too long to practically include. These tools are available upon request.

- a. No
 - b. Yes
 - c. Don't know
 - d. Refuse to answer
9. Do you do homework at home?
- a. No (*Skip to QUESTION 11*)
 - b. Yes
 - c. Don't know (*Skip to QUESTION 11*)
 - d. Refuse to answer (*Skip to QUESTION 11*)
10. Does anyone at home help you with your homework?
- a. No
 - b. Yes
 - c. Don't know
 - d. Refuse to answer
11. How do you feel about reading?
- a. Happy
 - b. Neutral
 - c. Unhappy
 - d. Don't know
 - e. Refuse to answer

Feelings about school

12. Do you feel happy or sad about coming to school?
- a. Happy
 - b. Sad
 - c. Don't know
 - d. Refuse to answer
13. How much do you think you learn at school?
- a. Not anything
 - b. Not much
 - c. Some
 - d. A lot
 - e. Don't know
 - f. Refuse to answer
14. Do you think school is boring?
- a. No
 - b. Sometimes
 - c. Yes
 - d. Don't know
 - e. Refuse to answer

TEACHER SURVEY

Start Time/End Time: _____

Region: ☐ Region I ☐ Region VII

Division: _____

District: _____

Barangay: _____

DepEd School ID: _____

Survey Date: _____

Enumerator ID: _____

Grade: ☐ Grade 1 ☐ Grade 2 ☐ Grade 3

This classroom is: ☐ Mixed Level ☐ High Performing ☐ Low Performing

Note to administrator: ☐ =single choice allowed ☐ =Multiple choice allowed

STOP: ADMINISTER CONSENT DOCUMENT

Hi, my name is _____, and I am from TNS, an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact of a project that supports teachers and schools in their efforts to teach children using the mother tongue. This school and your classroom has been selected through a process of statistical sampling to take part in this study. Your participation would involve an interview lasting approximately 30 minutes, followed by observation of your classroom throughout the day. The results of our analysis will be used by DepEd and USAID to help identify additional support that is needed to help ensure that all children in the Philippines become good readers.

If you choose to participate, your responses will be strictly confidential. Your responses will be combined with those from other schools in the study and presented in the form of summary tables. Neither you nor your school will be individually identified or named in the report. There are no anticipated risks or benefits to you personally for participating in this study, though information collected in this study may benefit others in the future by helping to identify areas where additional support is needed.

You do not have to participate if you do not wish to. Once we begin, if you don't want to answer a question, that's ok.

Do you have any questions? Do you agree to participate?

CONSENT STATEMENT: I understand and agree to participate in this reading research study.

SIGNATURE _____

Please feel free to contact Yazmin Tolentino (63(2)5484577) or James Fremming from Social Impact (001703-465-1884 ext.208) at should you have questions about the study.

Was consent obtained? ☐ Yes ☐ No

1.	Teacher's Sex: ☐ Male ☐ Female
2.	Teacher Name: First _____ Middle _____ Last _____
3.	What is your age? _____ years
4.	What is the highest academic degree you have received? ☐ Diploma ☐ Bachelor's Degree ☐ Higher Diploma (Post-graduate) ☐ Master's Degree ☐ Doctorate Degree ☐ Other (specify) : _____ ☐ Don't know ☐ Refuse
5.	What is your professional status? ☐ Holder of DepEd regular/plantilla post ☐ LGU-funded (MLGU, BLGU) ☐ Community-recruited and paid teacher (PTA, other stakeholders) ☐ Volunteer ☐ Don't know ☐ Refuse
6.	What is your native language? (Native language is the one that has been used most since birth). ☐ [Ilokano/Cebuano] ☐ Filipino/Tagalog ☐ English ☐ Other Please list: _____ ☐ Don't know

	☐ Refuse
7.	Are you familiar with grammar rules, alphabet sounds, spelling, and pronunciation in [Ilokano/Cebuano]? ☐ Very ☐ Somewhat ☐ Not at all ☐ Don't know ☐ Refuse
8.	How long have you been teaching? <i>(includes all types of schools)</i> _____ years _____ months
9.	How many years have you been teaching using [Ilokano/Cebuano] as the main medium of instruction? ☐ This is the first year ☐ 2 years (this year and last) ☐ More than 2 years ☐ Don't know ☐ Refuse
10.	a. Have you attended any in-service training or professional development sessions on <u>early grade reading and writing</u> either this school year or last school year? ☐ Yes ☐ No [☞ to 11] ☐ Don't know [☞ to 11] ☐ Refuse b. About how many training days did you receive in total over the past school year? _____ days c. How many of these training days, if any, were for mother tongue reading instruction? _____ days d. Who facilitated the training(s)? <i>(Do not prompt, select all that respondent mentions).</i> ☐ USAID Basa Pilipinas/EDC ☐ DepED ☐ NGO or community organization ☐ Private sector/company ☐ Church or religious institution ☐ Other: Please list: _____ ☐ Don't know ☐ Refuse
11.	What is the main language of instruction (Medium of Instruction/MOI) used in your classroom? ☐ [Ilokano/Cebuano] ☐ Filipino/Tagalog ☐ English ☐ Other Please list: _____
12.	How much time each day is spent using the following languages?

	[Ilokano/Cebuano] Filipino/Tagalog English hours _____ minutes _____ hours _____ minutes _____ hours _____ minutes _____ Other Please list: _____ hours _____ minutes _____
13.	Do you have a copy of each of the K to 12 curricula in Mother Tongue, Filipino and English that you can consult regularly? For Mother Tongue ☐ Yes ☐ No For Filipino ☐ Yes ☐ No For English ☐ Yes ☐ No
14.	Do you have a copy of the DepEd Teacher's Manual for [grade]? ☐ Yes ☐ No ☐ Don't know ☐ Refused
15.	How many reading learners' manuals in [mother tongue] do you have for your students at present? ☐ None ☐ Enough so that each student has one ☐ Enough so that 2 students share one book ☐ Enough so that 3 students share one book ☐ 4 or more students have to share a book
16.	How many reading learners' manuals in Filipino do you have for your students at present? ☐ None ☐ Enough so that each student has one ☐ Enough so that 2 students share one book ☐ Enough so that 3 students share one book ☐ 4 or more students have to share a book

17.	How many other reading materials, apart from learners' manuals (for instance, picture books, story cards, and so on) do you have for your students in [mother tongue]? ☐ None ☐ Enough so that each student has one ☐ Enough so that 2 students share one book ☐ Enough so that 3 students share one book ☐ 4 or more students have to share a book
18.	How many other reading materials, apart from learners' manuals (for instance, picture books, story cards, and so on) do you have for your students in Filipino? ☐ None ☐ Enough so that each student has one ☐ Enough so that 2 students share one book ☐ Enough so that 3 students share one book ☐ 4 or more students have to share a book
19.	Do you ever use lesson plans? If so, how often? ☐ No, never ☐ Yes, sometimes ☐ Yes, most of the time ☐ Yes, always
20.	Please rate your level of comfort providing instruction in [Ilokano/Cebuano]: ☐ Not at all comfortable ☐ Slightly comfortable ☐ Moderately comfortable ☐ Very comfortable ☐ Don't know

	☐ Refused
21.	Do you put students into smaller groups by their reading level? ☐ Yes ☐ No b. If YES, how often do put them in groups: ☐ Once a year ☐ 1-3 times a year ☐ Every month ☐ Multiple times a month c. If YES, how much of the literacy instruction time is conducted in smaller groups? ☐ All the time ☐ Most of the time ☐ Some of the time ☐ Not very often
22.	Do you maintain written attendance records? ☐ Yes ☐ No ☐ Refused  Observe student records and note whether they are: ☐ Fully complete ☐ Mostly complete ☐ Partially complete ☐ Records not available
23.	Do you read for pleasure outside the classroom? ☐ Yes, 1 or 2 times a week ☐ Yes, 3 times a week or more ☐ No ☐ Don't know ☐ Refuse
24.	Regularly read any of the following? (select all that apply) ☐ Newspapers or magazines ☐ Websites ☐ Bible, Koran, or other religious text ☐ Email or text messages ☐ Novels ☐ Professional materials ☐ Other (specify): _____ ☐ Don't know ☐ Refuse

25.	Is there a place in your community where you can borrow books to read (a library or reading center)? ☐ Yes ☐ No ☐ Don't know ☐ Refuse
26.	In the last six months, have you borrowed books from a library or reading center? ☐ Yes ☐ No ☐ Don't know ☐ Refuse

I. Classroom literacy environment

27. There are reading materials in the classroom in these languages:
[Select all that apply]
- | | |
|-------------------|---------|
| [Ilokano/Cebuano] | 1 |
| English | 2 |
| Filipino/Tagalog | 3 |
| Other local | 4 |
28. If there are [Ilokano/Cebuano] materials around the classroom, how many are visible (displayed on walls):
- | | |
|------------------------|---------|
| None | 0 |
| Few (1 -3) | 1 |
| Some (between 3 and 8) | 2 |
| Many (more than 8) | 3 |
29. Children have their own books corresponding to the subject to be observed
- | | |
|------|---------|
| None | 1 |
| Some | 2 |
| All | 3 |
30. If some or all children have subject-matter books, which language are they in?
- | | |
|-------------------|---------|
| [Ilokano/Cebuano] | 1 |
| English | 2 |
| Filipino/Tagalog | 3 |
| Other local | 4 |
31. If we would like to hear more from you or if a follow up is required, could we contact you again in the near future?
Contact information: _____

THANK YOU VERY MUCH FOR YOUR TIME!

TEACHER OBSERVATION FORM

Region: ☐ Region I ☐ Region VII

DepEd School ID: _____

Survey Date: _____

Start Time/End Time: _____

Enumerator ID: _____

Grade: ☐ Grade 1 ☐ Grade 2 ☐ Grade 3

Teacher Name: First _____ Middle _____ Last _____

Teacher's Sex: ☐ Male ☐ Female

II. Observation Protocol (To be completed for each of the 3 lessons observed)

Select the subject to be observed: *(Note: reading or language class preferred, social studies is second best option)*

[Ilokano/Cebuano]	1
English	2
Filipino	3
Social studies (AP)	4
Math	5
MAPEH	6
Other (Specify)	-98

What is the main language of instruction in this subject

[Ilokano/Cebuano]	1
English	2
Filipino/Tagalog	3

How many girls are present? _____

How many boys are present? _____

TEACHER BEHAVIOR OBSERVED	1 Do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Behavior is not relevant to the subject being taught
1. Connects to what learners have learned previously				
2. Manages instructional time effectively				
3. Demonstrates effective classroom management skills				
4. Makes effective use of different instructional resources and strategies				
5. Treats all students equally/fairly				
6. Engages learners in carefully planned cooperative learning strategies				
7. Asks probing, open-ended questions				
8. Provides learners with structured opportunities to apply their understanding and skills to everyday life and problems				
9. Provides opportunities for learners to develop higher-order and critical thinking skills				
10. Uses appropriate learning materials besides textbooks				
11. Assesses pupil learning				
BIAS or MISTREATMENT				

TEACHER BEHAVIOR OBSERVED	1 Do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Behavior is not relevant to the subject being taught
12. Avoids using gender biased language				
13. Avoids using abusive language				
14. Provides positive, encouraging feedback				
15. Does not allow learners to use gender biased language				
16. Does not allow learners to use abusive language				
17. Promotes equal access to desks, learning materials, etc. especially for girls				
READING PRACTICE <i>(May need to mark Option 4 for many of these, if not observing a reading class)</i>				
18. Engages learners in reading activities or games appropriate to their reading level				
19. Encourages learners to “ sound it out ” when they don’t know a word				
20. Avoids criticizing learners who don’t answer correctly or read poorly				
21. Asks learners pre-reading questions such as “What do you think the story will be about				

TEACHER BEHAVIOR OBSERVED	1 Do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Behavior is not relevant to the subject being taught
based on the pictures and/or title of the book?” when learners themselves or teacher reads a story.				
22. Asks learners to make appropriate sounds or act something out, such as the roar a lion makes or the way a frog hops after learners themselves or teacher read a story.				
23. Applies multiple methods to support comprehension , including games, group work, etc.				
24. Encourages learners to help each other				
25. Asks individual learners to read aloud				
26. Provides instructions on how to decode syllables and words				
27. Teaches learners meanings of new words				
28. Asks learners questions to assess their understanding of something the learner(s) or teacher have/has read				
29. Asks learners questions to assess their understanding of stories they hear				
30. Asks learners to recognize letters and say letter names and/or sound				

TEACHER BEHAVIOR OBSERVED	1 Do not see the behavior described	2 See the behavior sometimes or partially correct	3 See the behavior done very well and consistently where appropriate	4 Behavior is not relevant to the subject being taught
31. Allows learners to retell the story they have read or read by their teacher.				
32. Asks learners to recite the alphabet				
33. Assigns reading for learners to do on their own during school time				
34. Provides a variety of methods for learners to establish good writing skills (<i>includes both composition skills such as dictating stories, expressing stories through pictures, and explaining how writing helps us communicate, as well as mechanical writing such as letter and word scripting, tracing, etc.</i>)				
PUPIL BEHAVIOR				
35. Most learners are actively engaged in the lesson				
36. Most learners are actively engaged when working in small groups or in pairs				
37. Learners appear to understand what the teacher is saying				

III. Lesson Summary Questions

At the end of the observation, answer the following questions based on your impression of the overall lesson content. Circle the number that corresponds to the answer in the column at left.

How consistently did the <u>teacher</u> use [language] during the lesson?	None.....0
	Very little (1-25%).....1
	Some of the time (25-75%) 2
	Most of the time (75-95%) 3
	All or nearly all of the time (95-100%).....4
How consistently did the <u>students</u> use [language] during the lesson?	None.....0
	Very little (1-25%).....1
	Some of the time (25-75%) 2
	Most of the time (75-95%) 3
	All or nearly all of the time (95-100%).....4
How actively did students participate in the lesson?	Pupils participated when called on but did not volunteer 1
	Pupils participated when called on and some pupils volunteered.....2
	Most pupils participated actively (including showing a willingness to ask and answer questions, make guesses.) 3
How did the teacher support the pupils' understanding and use of [language]?	Did not use or support the use of [language].....0
	By code-switching in a different language 1
	By modeling the proper language use for pupil to repeat or emulate. 2
<i>Multiple responses allowed</i>	By scolding or punishing pupils for lack of or incorrect use of the language.....3
	By praising or rewarding pupils for using the language appropriately 4
	By pointing out or correcting language errors and misunderstandings 5
	By monitoring comprehension (e.g. 'Do you understand?' 'Is that helpful?' 'Need more explanation?') 6
	By using simpler language to explain more difficult language.....7
	Using visual aids like pictures and charts 8
	Other (specify below).....9
If the teacher used a different language during the class (code-switching), what language was used?	[Ilokano/Cebuano].....1
	English.....2
	Filipino/Tagalog.....3
	Other local language 4
<i>Multiple responses allowed</i>	Not applicable.....5
If the teacher used a different language during the class (code-switching), why was it used?	To clarify/emphasize a concept explained first in [language] 1
	To introduce a concept before introducing it in [language] 2
	To give procedural directions.....3
	To discipline 4
	Other (Specify below) 5
	Not applicable.....6

PRINCIPAL SURVEY

Symbols used in this booklet:

 Silent reading: instructions for the assessor

➡ (Move on)

Note to administrator: ☐ =single choice allowed ☐ =Multiple choice allowed

Questions to fill out before beginning the survey

1.  Province Name: ☐ Bahol ☐ Cebu ☐ Ilocos Norte ☐ Ilocos Sur
☐ La Union ☐ Mandaue City
2.  School Name: _____
3.  DepED School ID _____
4.  Municipality Name _____
5.  Barangay Name _____
6.  Type of school ☐ Elementary ☐ Central ☐ Integrated
7.  Enumerator ID _____
8.  School GPS Coordinates _____
9. Survey Date (mm/dd/yyyy): _____
10. Time survey started: _____

STOP: ADMINISTER CONSENT DOCUMENT

As previously mentioned, I am from [DATA COLLECTION FIRM], an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact of a project that supports teachers and schools in their efforts to teach children using the mother tongue. This school has been selected through a process of statistical sampling to take part in this study, which will involve an interview with you. The results of our analysis will be used by DepEd and USAID to help identify additional support that is needed to help ensure that all children in the Philippines become good readers.

If you choose to participate, your responses will be strictly confidential. Your responses will be combined with those from other schools in the study and presented in the form of summary tables. Neither you nor your school will be individually identified or named in the report. There are no anticipated risks or benefits to you personally for participating in this study, though information

collected in this study may benefit others in the future by helping to identify areas where additional support is needed. The interview will last approximately 45 minutes. We will return to this school at the end of this school year and the end of next school year to repeat the same procedures.

You do not have to participate if you do not wish to. Once we begin, if you don't want to answer a question, that's ok.

Do you have any questions? Do you agree to participate?

CONSENT STATEMENT: I understand and agree to participate in this reading research study.

SIGNATURE: _____

Please feel free to contact Yazmin Tolentino (63(2)5484577) or James Fremming from Social Impact (001-703-465-1884 ext.208) at should you have questions about the study.

11. Check box if consent is obtained: ☐ Yes ☐ No

12. What is the gender of the respondent? ☐ Male ☐ Female

13. What is your name? "Please be advised that all your responses will be kept confidential and will not be individually linked to your school, nor will it show up in our report. We will, however, request for your full name for the purpose of re-visiting the school later this school year and next school year."

First Name _____

Middle Name _____

Last Name _____

14. What is your designation at this school?

☐ School Head/Principal

- ☐ Teacher-in-Charge
- ☐ Assistant Principal
- ☐ Other (specify) _____

15. How long have you been in your position as School Head/Principal/TIC or Assistant Principal (years and months)?

Number of Years: Number of months:

16. May I know what is your highest level of qualification?

☐ Less than Bachelor's ☐ Bachelor's Degree ☐ Master's Degree ☐ Doctorate

17. Have you received special training or taken courses in school management?

☐ Yes ☐ No [➡ to Q.19] ☐ Don't know [➡ to Q.19]

18. If **yes**, how many training days in school management did you receive in total over the past school year?

Days: ☐ Don't know

19. In the last four weeks, how many days were you.... (answer each option, for 0 enter 0)

Physically present at school

Officially away

Sick/personal leave

Public/Non-working holiday

Other _____

20. What was the first day of school this school year? Month _____ Day _____ Year 2015

21. Since the start of the current school year, was this school closed or were there days when classes were not being taught, during the regular school calendar (other than holidays)?

☐ Yes ☐ No [➡ to Q.24] ☐ Don't Know [➡ to Q.24]

22. If **yes**, how many days was school closed or were classes not being taught?

Number of Days:

☐ Don't know

23. Why was the school closed?

☐ Professional days

☐ Natural disaster

☐ Other _____

24. A: At what time does the school day start?

Hours

Minutes

24. B: At what time does the school day end?

Hours

Minutes

25. How many minutes are allocated for assembly, break and lunch each day? (enter 0, for 0 minutes)

Assembly (Minutes)

Breaks (Minutes)

Lunch (Minutes)

26. What is the highest grade instructed at this school? Grade: _____

27. What is the lowest grade instructed at this school? Grade: _____

Teachers at the School

28. How many of the following teachers are currently employed at your school?

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Plantilla (DepEd payroll) Teachers						
Volunteer Teachers						
Local Government Paid Teachers						
Other						
Total						

29. How many of the following teachers are female?

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Plantilla (DepEd payroll) Teachers						
Volunteer Teachers						
Local Government Paid Teachers						
Other						
Total						

30. How many plantilla teachers were absent today (or on the last day school was in session)?
[Enter 0, for 0]

Grade 1:

Grade 2:

Grade 3:

31. How many plantilla teachers arrived after the start of classes (late) today? [Enter 0, for 0]

Grade 1:

Grade 2:

Grade 3:

32. What do you do with a class whose teacher is absent? [DO NOT READ OPTIONS! JUST MARK BASED ON ANSWER(S)]

Principal takes class ☐

Let class proceed without the teachers ☐

Join all the students in one class (under other teacher) ☐

Assign a school volunteer ☐

Other: _____ ☐

33. Does your school take teacher attendance?

☐ Yes ☐ No ☐ Don't know

34. Who records teacher attendance information?

Principal ☐

Assistant Principal ☐

Other (please specify): _____

35. Could I please see your teacher attendance records for the previous month?

(How frequently was the attendance completed?)

Records not available ☐

Attendance completed DAILY ☐

Attendance completed WEEKLY ☐

Attendance completed BI-WEEKLY ☐

Attendance completed MONTHLY ☐

Other (please specify): _____ ☐

36. Do you have a copy of each of the K to 12 (or applicable grades) curricula in Mother Tongue, Filipino and English that teachers can consult regularly?

For Mother Tongue ☐ Yes ☐ No

For Filipino ☐ Yes ☐ No

For English ☐ Yes ☐ No

37. How many Grade 1, Grade 2 and Grade 3 teachers have been trained in the current mother tongue-based DepEd curriculum?

Grade 1: _____ Grade 2: _____ Grade 3: _____

38. Who provided this training?

- ☐ DepEd
- ☐ USAID Basa Pilipinas/EDC
- ☐ Other, specify: _____

39. Do you or one of your staff check teachers' lesson/log plans? If so, how frequently?

- No, never ☐
- Yes, once a year ☐
- Yes, 2-3 times a year ☐
- Yes, 1-2 times every month ☐
- Yes, once every week ☐
- Yes, 2-3 times a week ☐
- Yes, daily ☐
- Other ☐
- Don't know ☐

40. How often do you visit / observe classrooms?

- Never ☐
- Once a year ☐
- Yes, 2-3 times a year ☐
- 1-2 times every month ☐
- Once every week ☐
- 2-3 times a week ☐
- Daily ☐
- Others: _____ ☐
- Don't know ☐

School Resources and Facilities

41. At the beginning of this school year, did your school have textbooks or learners manuals for Grade 1, Grade 2 and Grade 3 students in the appropriate language of instruction, according to current DepEd MTB-MLE policy? [If yes to all ➡ to Q.43]

Grade 1: ☐ Yes ☐ No

Grade 2: ☐ Yes ☐ No

Grade 3: ☐ Yes ☐ No

42. If NO, how long after the beginning of the school year did you receive the appropriate textbooks or learners manuals?

Grade 1: Months: _____ Weeks: _____

Grade 2: Months: _____ Weeks: _____

Grade 3: Months: _____ Weeks: _____

43. At the beginning of this school year, did your school have the appropriate number of textbooks or learners manual for all your Grade 1, Grade 2, and Grade 3 students, according to current Department of Education (DepEd) policy? [If yes to all, ➡ to Q.45]

Grade 1: ☐ Yes ☐ No

Grade 2: ☐ Yes ☐ No

Grade 3: ☐ Yes ☐ No

44. If **NO**, how long after the beginning of the school year did you receive the missing textbooks or learners manuals?

Grade 1: Months: _____ Weeks: _____

Grade 2: Months: _____ Weeks: _____

Grade 3: Months: _____ Weeks: _____

45. Do you have a school library?

Yes ☐ No ☐ [➡ to Q.47] Don't know ☐ [➡ to Q.47]

46. How frequently does a class visit a library?

_____ times per _____

47. Can the children read library books in the following locations? [READ OUT OPTIONS AND CHECK ALL THAT APPLY]

	Yes	No
In the school library	☐	☐
In the classroom	☐	☐
At home	☐	☐
In other school locations	☐	☐

48. How many Grade 1 and Grade 2 classrooms does this school have? (Refers to physical space, defining classroom as a space divided by walls on all sides and a door).

Grade 1: _____ Grade 2: _____ Grade 3: _____

49. Do any classes or grades share a classroom?

Yes ☐ No ☐ [➡ to Q.51]

50. If **yes**, please explain: _____

51. Do you have communal or classroom toilets? [CHECK ALL THAT APPLY]

Communal toilets ☐ [If unchecked, ➡ to Q.53]
 Classroom toilets ☐
 Other: _____

52. Are your communal toilets separate for boys and girls?

Yes ☐ No ☐ Other(s) _____

53. Does this school have electricity?

Yes ☐ No ☐ [➡ to Q.55]

54. If **yes**, what type of electricity? [CHECK ALL THAT APPLY]

☐ Grid supply ☐ Generator ☐ Solar power

55. How often does this school have electricity?

☐ Reliable ☐ Usually ☐ Rarely

56. Does this school have water supply?

Yes ☐ No ☐ [➡ to Q.58]

57. If **yes**, what type of water supply does this school have? [CHECK ALL THAT APPLY]

- ☐ Local Piped Water ☐ Well/Deep Well
- ☐ Rainwater Catchment ☐ Natural Source

58. Is there a school feeding program?

Yes ☐ No ☐ [➡ to Q.61]

59. If **yes**, is the feeding program offered every day?

Yes ☐ No ☐ [➡ to Q.61]

60. What time of day does the feeding program occur?

Before school ☐ Middle of the day ☐ After school ☐

61. Does this school have one or more computers?

Yes ☐ No ☐ [➡ to Q.64]

62. If **yes**, how many computers? _____

63. Who can use the computer(s)?

☐ Principal ☐ Teachers ☐ Students

64. Does this school have internet?

Yes ☐ No ☐ [➡ to Q.66]

65. If **yes**, who can use the internet?

☐ Principal ☐ Teachers ☐ Students

66. Building materials:

	Steel	Concrete	Wood	Nipa
--	-------	----------	------	------

Flooring				
Roofing				
Walls				

Building condition:

	Excellent	Good	Fair	Poor
Flooring				
Roofing				
Walls				

Community Involvement in the School

67. Is there a Parent Teachers Association (PTA) at this school?

Yes ☐ No ☐ [→ to Q.73] Don't know ☐ [→ to Q.73]

68. If **yes**, how many times did the PTA meet in this past school year?

Number of Days

69. On average, what percent of the pupils' parents and guardians did you meet with during the school year?

About less than 25% of parents ☐
 About 26% to 50% of parents ☐
 About 51% to 75% ☐
 About 76% to 100% ☐
 Don't know/remember ☐

70. What are the roles of the PTA at your school? [DO NOT READ OUT OPTIONS AND CHECK ALL THAT APPLY]

Discuss school management problems ☐
 Discuss students' problems and solutions ☐
 Manage partnerships with organizations ☐
 Review progress of school improvement efforts ☐
 Approve school policy ☐
 Manage school infrastructure and equipment ☐
 Discuss school curriculum ☐
 Raise funds (for materials, construction, etc.) ☐

- Manage procurement or distribution of textbooks ☐
- Implement/build PTA infrastructure projects ☐
- Other (specify): _____ ☐
- Don't know ☐

71. How satisfied are you with the level of support the PTA provides to the school?

- Very Satisfied ☐
- Satisfied ☐
- Somewhat Satisfied ☐
- Not satisfied ☐
- Don't know ☐

72. How satisfied are you with parents' (PTA or non-PTA) involvement in their children's school work?

- Very Satisfied ☐
- Satisfied ☐
- Somewhat Satisfied ☐
- Not satisfied ☐
- Don't know ☐

73. What types of DepEd officials (roles) visited your school in the last school year (July 2013-March 2014)? [CHECK ALL THAT APPLY-CROSS CHECK WITH LOG BOOK]

- District Supervisors ☐
- Other Supervisors ☐
- Medical staff ☐
- Engineers ☐
- Other _____ ☐

74. What activities have DepEd officials undertaken during his or her visits? [DO NOT READ RESPONSES – CHECK ALL THAT APPLY]

- No visit ☐
- Check the school's financial records and lesson plans ☐
- Check the infrastructure (water, toilets, etc.) ☐
- Sit in the class and observe a class in session ☐
- Check recent student assessment tests and evaluation processes ☐
- Provide information on curriculum innovations ☐
- Provide information on professional development opportunities ☐

Give advice on school health and sanitary practices ☐

Give advice to principals ☐

Other _____ ☐

75. Do teachers in your school participate in LAC (Learning Action Cells)?
 Yes ☐ No ☐ [➡ to Q.78] Don't know ☐ [➡ to Q.79]

76. If **yes**, what role do you play in convening the Learning Action Cell at your school?
 Lead Instructor ☐
 Overseer or Manager ☐
 Observer ☐
 Other(s): _____ ☐

77. If **yes**, how often do the teachers convene for the Learning Action Cell?
 Never ☐
 Once a year ☐
 Yes, 2-3 times a year ☐
 1-2 times every month ☐
 Once every week ☐
 2-3 times a week ☐
 Daily ☐
 Don't know ☐
 Others: _____ ☐

78. If **no**, why not? [DO NOT READ RESPONSES – CHECK ALL THAT APPLY]
 School does not have one ☐
 Teachers do not have time ☐
 Teachers do not like the notion of a LAC ☐
 Not enough teachers in school to engage in a LAC ☐
 Other(s) _____ ☐

79. Has your school ever undergone an Early Grade Reading Assessment (EGRA) test in the past?
☐ Yes ☐ No [➡ to Q.81] ☐ Don't know [➡ to Q.81]

80. If **yes**, when did your school undergo an Early Grade Reading Assessment (EGRA) in the past?
 Year _____ Month _____

81. Is this school receiving support from any organizations, programs, or businesses other than DepEd or Local Government?
☐ Yes ☐ No [➡ to Q.83] ☐ Don't know [➡ to Q.83]

82. If **yes**, who is providing support? _____

Now we would like to review your enrollment and attendance records.

Student Enrollment, Attendance and Dropout

83. Enrollment (observe in records):

	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	M	F	M	M	M	M	M	F	M	F	M	F
Section 1												
Section 2												
Section 3												
Section 4												
Section 5												

84. How are Grade 1 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

85. How are Grade 2 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

86. How are Grade 3 students assigned to sections? *(Applies only if the school has more than one Grade 1 section)*

- ☐ Randomly assigned to a section
- ☐ Assigned to section based on ability/level
- ☐ Assigned to section based on some other criteria.

Specify: _____

87. If we would like to hear more from you or if a follow up is required, could we contact you again in the near future?

Yes ☐ No ☐ [➡ to Q.89]

88. If **yes**, contact number: _____

89. Was there a class / section excluded in the sampling for Grade 1? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐

No ☐ [➡ to Q.92]

90. If **yes**, how many? _____

91. If **yes**, why? _____

92. Was there a class / section excluded in the sampling for Grade 2? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐

No ☐ [➡ to Q.95]

93. If **yes**, how many? _____

94. If **yes**, why? _____

95. Was there a class / section excluded in the sampling for Grade 3? [DO NOT ASK PRINCIPAL. JUST ANSWER BASED ON HOW SAMPLING WAS DONE EARLIER IN THE DAY, CONSULT TEAM LEADER IF DON'T KNOW ANSWER.]

Yes ☐

No ☐ [➡ to end]

96. If **yes**, how many? _____

97. If **yes**, why? _____

Thank you very much!

Time Interview ended: _____

Move on to student sampling.



Basa Pilipinas Household Survey

The following information should be pre-coded into the survey, with as much information as possible auto-populating (only 1-6 must appear to the enumerator; 7-13 can be hidden, if preferred):

1. Division: _____
2. District: _____
3. Barangay: _____
4. Name of Student: _____
5. Grade of Student: _____
6. Student ID number: _____
7. School ID Number: _____
8. Enumerator ID: _____
9. Household ID: _____
10. Date: _____
11. Time Start: _____
12. Time End: _____
13. GPS Coordinates: _____

Section A. Approaching the Household

Hi, <smile and greet the respondent>. My name is _____, and I am from TNS, an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact a project that supports teachers and schools in their efforts to teach children using the language spoken at home. The first part of our study involved testing student reading abilities at randomly selected schools in or near areas where the new education project is being implemented. [STUDENT'S NAME] was randomly selected to take part in this study. We visited his/her school recently to assess his/her reading ability. But, now we want to understand more about the various factors that may be affecting [STUDENT'S NAME]'s ability to read.

We would like to speak with the person who would be most knowledgeable about [STUDENT'S NAME]'s schooling.

14. Is the most knowledgeable person about [STUDENT'S NAME] schooling available?

- a. No - **(SCHEDULE A TIME TO RETURN TO THE HOUSEHOLD)**
- b. Yes - **(SKIP TO SECTION B. CONSENT)**

15. Visits:

Visit 1 Date: _____ Time: _____ Result: _____

Visit 2 Date: _____ Time: _____ Result: _____

Visit 3 Date: _____ Time: _____ Result: _____

Final Visit Date: _____ Time: _____

Result: _____

Total Number of Visits: _____

RESULT CODES

- a. Primary Caregiver Available
- b. Nobody at home or no one who is capable of responding.
- c. Respondent asked to postpone the visit.
- d. Respondent refused to participate.
- e. Dwelling vacant or location not a dwelling.
- f. Dwelling destroyed.
- g. Dwelling not found.

Section B. Consent of Respondent

Hi, *<smile and greet the respondent>*. My name is _____, and I am from TNS, an independent data collection firm working with USAID and the Department of Education (DepEd) in the Philippines. We are conducting a study to assess the impact of a project that supports teachers and schools in their efforts to teach children using the language spoken at home. The first part of our study involved testing student reading abilities at randomly selected schools in or near areas where the new education project is being implemented. [STUDENT'S NAME] was randomly selected to take part in this study as one of 4,320 students in the study. We visited his/her school recently to assess his/her reading ability. But, now we want to understand more about the various factors that may be affecting [STUDENT'S NAME]'s ability to read by visiting the households of each of these 4,320 students. We will ask you questions about the people who live in your household, your student's education, and your experiences with his/her school.

We would like your help in this. But you do not have to take part if you do not want to, and you are free to opt out of any questions you do not feel comfortable answering. You may also end your participation in the study at any time without consequence. If you decide to take part, your responses will be confidential. Your name will not be mentioned anywhere in the survey data or report, and it will not be reported to DepEd or USAID. There are no anticipated risks to you or your student for participating in this study. Although your participation will not benefit you personally, the results of our analysis will be used by DepEd to help identify additional support that is needed to help ensure that all children in the Philippines become good readers. However, your student's name will not be included in this or any report and will be kept confidential.

If you agree to help with this study, I will read you a consent statement and ask for your oral consent to participate in the interview. This interview will take approximately 30 minutes to complete. Do you have any questions? Do you provide your consent to begin?

CONSENT STATEMENT: I understand and agree to participate in this reading research study.

Please feel free to contact Yazmin Tolentino(63(2)5484577) or James Fremming from Social Impact (001-706-465-1884 ext. 208) should you have questions about the study.

I. Household Roster: Please list each of the members who live in your household – including all the infants, children, adults, and elderly. Please start with yourself.

	1	2	3	4	5	6	7	8	9	10	11	12 If yes to 11	13
	Name (given name and surname)	What is [NAME's] relationship to the head of household? SEE CODES	What is [NAME's] relationship to [STUDENT'S NAME]? SEE CODES	What is [NAME'S] sex? (Only ask if not obvious) 0: Male 1: Female	How old is [NAME]? GO TO NEXT PERSON ON ROSTER if person is under the age of 2	Did [NAME] attend school this year? (Only ask this question if the person is older than 2) 0-No (SKIP TO COLUMN 9) 1-Yes	What level of school did he or she attend this year? SEE CODES	Did he or she repeat this year? 0 – No 1 - Yes	If column 6 is coded with a "0", ask what is the highest level of education completed by [NAME]? SEE CODES	If the answer in column 9 is coded as less than 1 AND column 6 is coded as "0" ask "why didn't he/she attend school this year?" If column 9 is coded as 1-11 AND column 6 is coded as "0", ask "why did he or she drop out of school?" SEE CODES	Can [NAME] read? 0 – No 1 – A little (e.g. can read signs but not books) 2 - Yes	If yes for Col. 11, then, ask: Can [NAME] read a one page letter in any language 0 – Not at all 1 –Yes, with some difficulty 2- Yes, fluently	Is [NAME] employed? 0-No, unemployed 1-No, retired 2-No, too young to work 3-Yes, employed 4-Yes, self-employed
A													
B													
C													
D													
E													
F													
G													
H													
I													
J													

A. CODES FOR (Q1.2) RELATIONSHIP TO HEAD
1=HEAD OF HOUSEHOLD
2=SPOUSE OF HEAD OF HOUSE
3=CHILD OF HEAD
4=GRANDCHILD OF HEAD OF HOUSE
5=NIECE/NEPHEW OF HEAD OF HOUSE
6=PARENT OF HEAD OF HOUSE
7=SIBLING OF HEAD OF HOUSE
8=UNCLE/AUNT-IN-LAW OF HEAD
9=SON/DAUGHTER-IN-LAW OF HEAD
10=BROTHER/SISTER-IN-LAW OF HEAD
11=GRANDFATHER/GRD.MOTHER OF HEAD
12=AUNT/UNCLE OF HEAD
13=STEPFATHER/STEPMOTHER OF HEAD
14=STEPBROTHER/STEPSISTER OF HEAD
15=OTHER RELATIVE
16=NON-RELATIVE

B. CODES FOR (Q1.3) RELATIONSHIP TO THE STUDENT
1=FATHER OF STUDENT
2=MOTHER OF STUDENT
3=SIBLING OF STUDENT
4=GRANDFATHER OR GRANDMOTHER OF STUDENT
5=COUSIN OF STUDENT
6=UNCLE OF STUDENT
7=AUNT OF STUDENT
8=SISTER-IN-LAW OF STUDENT
9=BROTHER-IN-LAW OF STUDENT
10=GREAT GRANDFATHER OR GREAT GRANDMOTHER
11=STEPFATHER/STEPMOTHER OF STUDENT
12=NIECE/NEPHEW OF STUDENT
13=FAMILY FRIEND
14=STUDENT
97=OTHER

C. CODES FOR LEVEL OF SCHOOL ATTENDED THIS YEAR and HIGHEST LEVEL OF EDUCATION COMPLETED (Questions 1.7 & 1.9)
0 = NONE
1 = KINDERGARTEN
2 = GRADE 1
3 = GRADE 2
4 = GRADE 3
5 = GRADE 4
6 = GRADE 5
7 = GRADE 6
8 = GRADE 7
9 = GRADE 8
10 = GRADE 9
11 = GRADE 10
12 =VOCATIONAL TRAINING
13 =UNIVERSITY OR HIGHER
-97 =OTHER

D. REASON PERSON DIDN'T ATTEND SCHOOL OR DROPPED OUT (Q1.10)
1 = LIMITED AVAILABILITY OF TEACHERS
2 = EMPLOYMENT/HELPING FAMILY WITH WORK
3 = TAKING CARE OF SIBLINGS OR OTHER RELATIVES
4 = FEES/COST/COULDN'T AFFORD
5 = DISTANCE (THE CLOSEST SCHOOL WAS TOO FAR AWAY)
6 = MARRIAGE
7 = POOR SCHOOL FACILITIES
8 = PREGNANCY
9 = SICKNESS
10 = CONCERN OVER VIOLENCE/BULLYING/TEASING
11 = NOT MOTIVATED/DIDN'T VALUE EDUCATION
12 = CURRICULUM TOO DIFFICULT OR NOT PERFORMING WELL
97 = OTHER

BACKGROUND ON HOUSEHOLD – I would like to ask you some general background questions about your household.

1. Which languages are spoken in your household? *(Select all that apply; multiple responses possible)*
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
2. Which is the primary (ie. extensively and most frequently used) language spoken in your home?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
3. What language does [STUDENT'S NAME] most commonly use with his/her friends?
 - a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
 - f. Refuse to respond
4. How long have you been living in your current barangay?
 - a. < 1 year
 - b. 1-2 years
 - c. 2-3 years
 - d. more than 3 years **(SKIP TO QUESTION 7)**
 - e. Don't know = 98
 - f. Refuse to respond = 99
5. Where did you live before? *(If the respondent does not know the zone, write down the other information and add the zone in later)*
 - a. Province: _____
 - b. Barangay: _____
 - c. School name that [STUDENT'S NAME] attended previously, if relevant: _____

HOUSING CONDITION AND HOUSEHOLD ASSETS – Now, I would like to ask about some assets you may have at your house.

6. What type of construction materials are the house's walls made of? *(Observe, don't ask, if possible)*
 - a. Light (cogon, nipa, sawali, bamboo, anahaw)
 - b. Strong (iron, aluminum, tile. Concrete, brick, stone, wood, asbestos)
7. What type of construction materials is the house's roof made of? *(Observe, don't ask, if possible)*

- a. Light (cogon, nipa, or anahaw), salvaged/makeshift materials, mixed but predominantly light materials or salvaged materials
 - b. Strong (galvanized iron, aluminum, tile, concrete, brick, stone, asbestos, mixed but predominantly strong materials)
- 8. What kind of toilet facility does the family use?
 - a. None, open pit, closed pit or other
 - b. Flush toilet (water sealed)
- 9. How many radios does the family own?
 - a. Zero
 - b. One
 - c. Two or more
- 10. How many television sets does the family own?
 - a. Zero
 - b. One
 - c. Two or more
- 11. Does the family own a gas stove or a gas range?
 - a. No
 - b. Yes
- 12. Does the family own a sala set?
 - a. No
 - b. Yes
- 13. Does the family own a motorcycle or scooter?
 - a. No
 - b. Yes
- 14. Is this household (or any member) a beneficiary of Pantawid Pamilyan Pilipino Program (4Ps) or a recipient of Conditional Cash Transfer?
 - a. No
 - b. Yes
- 15. Does this household have a refrigerator (note: must be functioning)?
 - a. No
 - b. Yes

STUDENT SCHOOLING – Now I would like to talk about [STUDENT'S NAME]'s schooling.

- 16. Did [STUDENT'S NAME] attend a kindergarten?
 - a. Yes
 - b. No
 - c. Don't know
 - d. Refuse to respond
- 17. If yes, what type of kindergarten?
 - a. Play group

- b. Day Care
- c. Nursery
- d. Other, specify

18. If yes, How long did [STUDENT'S NAME] attend kindergarten?

- a. 4 months or less
- b. More than 4 months but less than a school year
- c. One school year
- d. Two school years
- e. Three or more school years
- f. Don't know
- g. Refuse to respond

19. What was the primary language spoken in [STUDENT'S NAME]'s kindergarten?

- a. Ilokano
- b. Cebuano
- c. Filipino
- d. English
- e. Other, please specify _____
- f. Refuse to respond

20.

A: Do you know [STUDENT NAME'S] age when he/she first attended Grade 1?

- a. Yes
- b. Don't know
- c. Refuse to respond

B: How old was [STUDENT'S NAME] (in years)? _____

21. Has [STUDENT'S NAME'S] repeated a grade?

- a. No = 0 (**SKIP TO QUESTION 24**)
- b. Yes = 1
- c. Don't know (**SKIP TO QUESTION 2**)
- d. Refuse to respond

22. Which grade(s) was it/ were they and why?

Standard	1 - Repeated (No = 0, Yes = 1)	2 – Number of years repeated (including current year, if applicable)	3 – Reason for repeating (see codes below; multiple selections possible)
A – Kindergarten			
B - Grade 1			
C - Grade 2			

CODES

Too many absences = 1

Poor quality teaching = 2

Classroom was too crowded = 3

No/not enough textbooks = 4

Child isn't smart = 5
 Child didn't study/pay attention = 6
 I didn't know how to help him/her = 7
 I didn't have time to help him/her = 8
 He/she was too hungry to learn = 9
 Teacher didn't like him/her = 10
 Child didn't sit for the exam = 11
 Lack of money to send the child to school = 12
 Family crisis = 13
 Natural disaster = 14
 Family or child relocated or moved = 15
 Student did not master the material = 16
 Student did not learn to read = 17
 Student did not want to go to school = 18
 Don't know = 98
 Refuse to answer = 99

23. Did [STUDENT'S NAME] miss one or more days of school in the past four weeks?

- a. No (**SKIP TO QUESTION 26**)
- b. Yes
- c. Don't know (**SKIP TO QUESTION 26**)
- d. Refuse to respond (**SKIP TO QUESTION 26**)

24. Why did [STUDENT'S NAME] miss some school in the past four weeks? (*Select all that apply; multiple responses possible*)

- a. He/she needed to stay home to complete domestic chores such as helping to care for younger children or elderly or sick relatives, cooking, cleaning, fetching water or wood, etc.
- b. He/she needed to tend animals or work on the family farm or in the family business.
- c. He/she did not want to go to school.
- d. He/she was ill/sick.
- e. He/she needed to attend a funeral.
- f. He/she was too hungry to go to school.
- g. He/she did not have any clothes to wear or his/her clothes were dirty.
- h. He/she missed school for another reason, please specify:
- i. _____
- j. Don't know
- k. Refuse to respond

25. What are the things you (or someone in your household) do or have done to help [STUDENT'S NAME] learn? (*Don't read the options but check all options the respondent offers; multiple responses possible*)

- a. Help with their homework
- b. Buy or borrow books and other reading materials for them to read
- c. Take them to the library
- d. Take them to a reading event
- e. Talk with their teacher or head teacher about the child's learning progress
- f. Participate in the PTA
- g. Participate in the School Committee
- h. Regularly read to the child (*can be in the past when the child was younger*)

- i. Encourage child to read
 - j. Communicate to your child that you have high expectations for him/her
 - k. Hire a private tutor
26. Does [STUDENT'S NAME] ever do homework outside of school?
- a. No **(SKIP TO QUESTION 30)**
 - b. Yes
 - c. Don't know **(SKIP TO QUESTION 30)**
 - d. Refuse to respond **(SKIP TO QUESTION 30)**
27. About how many hours per week does [STUDENT'S NAME] spend doing homework outside of school? _____
28. Do you or anyone else in the ever help [STUDENT'S NAME] with his/her homework? If so, how often?
- a. No
 - b. Yes, rarely
 - c. Yes, sometimes
 - d. Yes, frequently
 - e. Don't know
 - f. Refuse to respond
29. Are there any books or other reading materials that [STUDENT'S NAME] can read at home?
- a. No **(SKIP TO QUESTION 34)**
 - b. Yes
 - c. Don't know **(SKIP TO QUESTION 34)**
 - d. Refuse to respond **(SKIP TO QUESTION 34)**
30. If yes, how many books or other reading materials are available in your household?
- a. Between 1 - 10
 - b. Between 11- 20
 - c. Between 21-50
 - d. Between 51 - 100
 - e. More than 100

31. If yes, how does your family obtain the following reading materials?

	Buy	From Library/ School/ Community Center	Gift	From family/ friends	From Gov. / NGO	Other
Newspaper						
Magazines						
Books						

32. If yes, are any of these books in [MOTHER TONGUE]?
- a. No
 - b. Yes
 - c. Don't know
 - d. Refuse to respond

33. Has anyone in your household ever read to [STUDENT'S NAME]? *(Including family members who no longer live in the household)*

- a. No **(SKIP TO QUESTION 37)**
- b. Yes
- c. Don't know **(SKIP TO QUESTION 37)**
- d. Refuse to respond **(SKIP TO QUESTION 37)**

34. How often does someone usually read to [STUDENT'S NAME]?

- a. Nobody reads to him/her anymore
- b. Once a month
- c. A few times a week
- d. Once a week
- e. More than once a week
- f. Don't know
- g. Refuse to respond

35.

A: Do you know [STUDENT NAME'S] age when someone in this household began to read to him/her?

- a. _____ age
- b. Don't know
- c. Refuse to respond

B: How old was [STUDENT'S NAME] (in years)? _____

36. Does [STUDENT'S NAME] ever bring any books home from school?

- a. No
- b. Yes
- c. Don't know
- d. Refuse to respond

37.

A: What is the highest level of education you would like [STUDENT'S NAME] to achieve?

- a. Grade School
- b. Vocational **(SKIP TO NUMBER 39)**
- c. University higher **(SKIP TO NUMBER 39)**
- d. B: Please specify what Grade in Grade School: _____
- e. A: What is the highest level of education you expect [STUDENT'S NAME] to achieve?
- f. Grade School
- g. Vocational
- h. University or higher

B: Please specify what Grade in Grade School: _____

COMMUNITY-SCHOOL INVOLVEMENT IN EDUCATION

38. Does [STUDENT'S NAME'S] school have a PTA or School Committee?

- a. No **(SKIP TO QUESTION 43)**
- b. Yes, a PTA **(PROCEED TO 41 BUT THEN SKIP TO QUESTION 43)**
- c. Yes, a School Committee **(SKIP TO QUESTION 42)**

- d. Yes, both
- e. Don't know (**SKIP TO QUESTION 43**)
- f. Refuse to respond (**SKIP TO QUESTION 43**)

39. Please describe the types of things the PTA at [STUDENT'S NAME's] school does? *(Read the response options to the respondent. Select all that apply; multiple responses possible)*

- a. Monitors teacher absences
- b. Buys, or raises money to buy learning materials (other than books) for the school
- c. Buys books for the classrooms or raises money to buy books
- d. Reads to students
- e. Provides tutoring for students who are having difficulty learning to read
- f. Tries to motivate the community to get involved in supporting the school
- g. Raises money and/or encourages parents and/or community members to repair/maintain the school and/or build new classrooms or teacher housing
- h. Helps organize book fairs
- i. Hosts after-school book clubs
- j. Works with the school staff to find ways to improve the school and the teaching-learning process
- k. Helps set policy
- l. Other, please specify _____
- m. Don't know
- n. Refuse to respond

40. What types of things does the School Committee at (STUDENT'S NAME) do? *(Let them respond on their own for about 20-30 seconds and then ask about the items below for those they haven't already given. Report all that apply; multiple responses possible)*

- a. Monitors teacher absences
- b. Buys, or raises money to buy learning materials (other than books) for the school
- c. Buys books for the classrooms or raises money to buy books
- d. Reads to students
- e. Provides tutoring for students who are having difficulty learning to read
- f. Tries to motivate the community to get involved in supporting the school
- g. Raises money and/or encourages parents and/or community members to repair/maintain the school and/or build new classrooms or teacher housing
- h. Helps organize book fairs
- i. Hosts after-school book clubs
- j. Works with the school staff to find ways to improve the school and the teaching-learning process
- k. Helps set policy
- l. Other, please specify _____
- m. Don't know
- n. Refuse to respond

41. Do you or others in the household feel welcome in (STUDENT'S NAME) school?

- a. No
- b. Yes (**SKIP TO QUESTION 45**)
- c. I/We have never gone to his/her school (**SKIP TO QUESTION 45**)
- d. Don't know (**SKIP TO QUESTION 45**)
- e. Refuse to answer (**SKIP TO QUESTION 45**)

42. Why do you or they not feel welcome in (STUDENT'S NAME) school? (*Don't read options, but record all options they give; multiple responses possible*)
- a. Because I/we can't read
 - b. Because I/we don't know anything about schools – or I never went to school
 - c. Because the teachers and head teachers at the school don't want me/us there
 - d. Because education is best left to the educators
 - e. Because I don't have time
 - f. I can't think of any way I can be helpful or make a difference
 - g. I'd be involved if someone told me how I could be helpful
 - h. Other, please list _____
 - i. Don't know
 - j. Refuse to respond
43. Have you and/or any member of your family ever been invited to or asked to be involved in [STUDENT'S NAME'S] school in any way?
- a. No (**SKIP TO QUESTION 47**)
 - b. Yes
 - c. Don't know (**SKIP TO QUESTION 47**)
 - d. Refuse to respond (**SKIP TO QUESTION 47**)
44. Who invited you/them to be involved? (*Multiple responses possible; select all that apply*)
- a. Headteacher
 - b. Teacher
 - c. PTA Member
 - d. School Committee Member
 - e. Letter from school
 - f. Neighbor
 - g. Friend
 - h. Relative
 - i. [STUDENT'S NAME]
 - j. The EGRA Project
 - k. The TIANA Project
 - l. The Literacy Boost Project
 - m. The ASPIRE Project
 - n. Other, please list _____
 - o. Don't know or don't remember
 - p. Refuse to respond
45. Are you (and/or any member of the household) involved in the school in any way?
- a. No (**SKIP TO END**)
 - b. Yes
 - c. Don't know (**SKIP TO END**)
 - d. Refuse to respond (**SKIP TO END**)
46. How are you (and/or someone in your household) involved? (*Multiple responses possible; select all that apply*)
- a. Help in [STUDENT'S NAME's] classroom
 - b. Participate in PTA
 - c. Participate on School Committee

- d. In a group helping to increase support for reading
 - e. Host after-school book club
 - f. Donate books, magazines, and other reading materials
 - g. Donate food for school meals
 - h. Encourage families to send their girls to school or to let them stay in school
 - i. Encourage families to send disabled child(ren) to school or to let them stay in school
 - j. Provide financial support to families who can't afford to children to school
 - k. Provide (buy and/or make) learning materials for use in the classroom
 - l. Helped to construct, maintain and/or refurbish a building (e.g., classroom, teacher housing, latrine)
 - m. Help in school garden
 - n. Other, please specify _____
 - o. Don't know = -98
 - p. Refuse to respond = -99
47. Approximately how much time do you spend on these activities?
- a. Number of hours: _____
 - b. Per: _____
48. Language of Interview:
- a. Ilokano
 - b. Cebuano
 - c. Filipino
 - d. English
 - e. Other, please specify _____
49. In case we need to get in touch with you, would it be possible to call you?
- a. Yes
 - b. No
 - c. Specify: _____

Thank you for your participation! You have been very helpful

ANNEX 5 – EGMA FINDINGS

Grade 1

CATEGORY	IMPACT
Number identification cpm	1.448** (0.0473)
Quantity comparison (% correct)	-0.00671 (0.710)
Missing number (% correct)	0.00343 (0.774)
Addition level 1 cpm	0.0347 (0.914)
Subtraction level 1 cpm	0.318 (0.451)
Word problem (% correct)	0.114*** (7.46e-06)

Grade 2

CATEGORY	IMPACT
Number identification cpm	4.133*** (0.00454)
Quantity comparison (% correct)	0.00693 (0.401)
Missing number (% correct)	-0.0225 (0.152)
Addition level 1 cpm	-0.401 (0.537)
Subtraction level 1 cpm	-0.0722 (0.884)
Word problem (% correct)	-0.0215 (0.380)
Addition level 2 (% correct)	-0.0292 (0.238)
Subtraction level 2 (% correct)	0.00554 (0.836)

Grade 3

CATEGORY	IMPACT
Number identification cpm	0.934 (0.213)
Quantity comparison (% correct)	0.0102 (0.108)
Missing number (% correct)	-0.0113 (0.450)
Addition level 1 cpm	-0.102

	(0.728)
Subtraction level 1 cpm	0.224
	(0.482)
Word problem (% correct)	-0.00409
	(0.844)
Addition level 2 (% correct)	0.0441**
	(0.0382)
Subtraction level 2 (% correct)	0.000857
	(0.965)

Grade 4

CATEGORY	IMPACT
Number identification cpm	4.133***
	(0.00454)
Quantity comparison (% correct)	0.00693
	(0.401)
Missing number (% correct)	-0.0225
	(0.152)
Addition level 1 cpm	-0.401
	(0.537)
Subtraction level 1 cpm	-0.0722
	(0.884)
Word problem (% correct)	-0.0215
	(0.380)
Addition level 2 (% correct)	-0.0292
	(0.238)
Subtraction level 2 (% correct)	0.00554
	(0.836)

ANNEX 6 – COMPLETE REGRESSION TABLES

Predictors of Reading Outcomes:

Oral Reading Fluency

	Filipino ORF	Filipino ORF	Filipino ORF	English ORF	English ORF	English ORF	Filipino RC	Filipino RC	Filipino RC	English RC	English RC	English RC
VARIABLES	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4
G2 Filipino ORF - t1	0.180***											
	(0.00219)											
G2 average class size	-0.193**			0.00521			0.00186*			-0.00133		
	(0.0372)			(0.944)			(0.0667)			(0.435)		
2017 outcomes	2.720	1.153		6.069***	4.759**		0.0943**	0.0974**		-0.118**	-0.0409	
	(0.265)	(0.421)		(0.00753)	(0.0216)		(0.000523)	(4.28e-05)		(0.0249)	(0.397)	
Age of student	-0.448	0.0293	1.089	0.0110	-1.115*	0.453	-0.0118	-0.00429	0.0446***	0.0287	-0.0114	0.0399
	(0.667)	(0.949)	(0.417)	(0.989)	(0.0797)	(0.777)	(0.444)	(0.630)	(0.00812)	(0.327)	(0.599)	(0.215)
Sex of student	10.49***	5.837***	3.787***	8.603***	4.738***	3.286*	0.0701**	0.0547**	-0.00455	0.0783**	0.0978***	0.0917
	(1.44e-09)	(3.27e-08)	(0.00666)	(8.29e-06)	(3.26e-05)	(0.0976)	(0.00272)	(2.78e-05)	(0.871)	(0.0329)	(0.00467)	(0.104)
Region 7	23.78***	6.074***	-1.021	3.598	-0.679	4.081	0.00923	0.0736**	-0.248***	0.109*	0.126*	-0.0207
	(4.98e-09)	(0.000161)	(0.693)	(0.127)	(0.667)	(0.207)	(0.766)	(0.00165)	(2.84e-05)	(0.0908)	(0.0543)	(0.837)
Mother tongue	-0.819	1.631	-1.355	-0.824	3.179	-4.140	-0.0494	0.0380	-0.0295	0.179*	0.139	0.148
	(0.873)	(0.279)	(0.560)	(0.794)	(0.171)	(0.508)	(0.297)	(0.169)	(0.811)	(0.0664)	(0.156)	(0.518)
Household assets index	0.705	-0.310	-0.619	1.473***	0.0268	-0.0199	0.0105*	0.00235	-0.00951	0.0267**	0.0336***	0.0184
	(0.147)	(0.322)	(0.118)	(0.000243)	(0.935)	(0.970)	(0.0580)	(0.592)	(0.313)	(0.0163)	(0.00479)	(0.309)
Student attended Kindergarten	-8.114	0.595	3.954	6.665	1.127	2.309	0.0564	-0.0262	0.0821*	0.0989	0.0537	0.0370
	(0.492)	(0.742)	(0.108)	(0.211)	(0.506)	(0.474)	(0.392)	(0.312)	(0.0890)	(0.418)	(0.442)	(0.720)
Student's age when first attended Kindergarten	-3.864	0.466	-0.999	-2.179**	0.240	-2.410	-0.0112	-0.0118	-0.0343	-0.0773*	0.0212	-0.0418
	(0.112)	(0.609)	(0.442)	(0.0318)	(0.826)	(0.181)	(0.546)	(0.414)	(0.200)	(0.0547)	(0.468)	(0.422)
Student does homework	0.230	-0.0143	-0.409	0.0430	0.274	1.072**	-0.00417	0.00199	-0.0159	0.0198*	0.00966	0.0157
	(0.713)	(0.965)	(0.258)	(0.910)	(0.394)	(0.0256)	(0.523)	(0.623)	(0.118)	(0.0928)	(0.483)	(0.263)
Student receives homework help from a family member	0.661	-0.693	1.308	-0.0181	-0.417	-2.032	0.0134	-0.00163	0.0406	-0.0651*	0.0141	-0.125**
	(0.724)	(0.557)	(0.314)	(0.989)	(0.678)	(0.234)	(0.504)	(0.923)	(0.173)	(0.0664)	(0.704)	(0.0345)
Student has books at home	-0.360	-0.883	1.179	3.755***	-1.992*	-0.295	0.0750**	0.00937	0.0319	0.0375	-0.00217	0.0492
	(0.855)	(0.470)	(0.495)	(0.00399)	(0.0728)	(0.908)	(0.00583)	(0.571)	(0.257)	(0.380)	(0.959)	(0.493)

Student brings books home from school	1.287 (0.671)	4.867*** (0.00352)	-0.0570 (0.979)	4.490* (0.0740)	4.378** (0.0126)	-0.303 (0.953)	0.0551* (0.0903)	0.0308 (0.238)	0.0418 (0.389)	0.101 (0.115)	-0.0305 (0.608)	-0.0355 (0.667)
Highest level of education in the household	1.081 (0.390)	0.0216 (0.981)	-0.242 (0.620)	0.614 (0.591)	0.799 (0.432)	-0.517 (0.397)	-0.00552 (0.524)	0.00183 (0.836)	0.0130* (0.0647)	0.0239 (0.260)	0.00603 (0.868)	0.0118 (0.703)
Student's age when someone began to read to him/her	0.0252 (0.982)	-0.696 (0.162)	-0.802 (0.317)	-0.657 (0.293)	-0.471 (0.421)	-0.905 (0.291)	-0.00468 (0.681)	-0.00624 (0.486)	0.00480 (0.735)	-0.0402* (0.0571)	-0.0232 (0.237)	-0.0333 (0.321)
School assets index	-1.059 (0.327)	0.395 (0.431)	-2.052* (0.0551)	-0.358 (0.659)	-0.0654 (0.912)	-0.481 (0.702)	0.0141 (0.190)	0.00513 (0.455)	-0.0370** (0.0275)	0.0243 (0.244)	0.0272 (0.170)	-0.0102 (0.780)
Highest grade instructed at this school	0.996 (0.389)	3.891 (0.107)	4.089 (0.142)	-0.231 (0.906)	3.757** (0.0375)	8.212** (0.0106)	0.0324** (0.0107)	-0.0131 (0.718)	-0.0574* (0.0876)	-0.0317 (0.487)	0.0445 (0.459)	-0.0608 (0.447)
Number of days school was closed this year	-0.239 (0.424)	-0.404 (0.108)	0.253** (0.0447)	0.0421 (0.842)	-0.189 (0.301)	-0.162 (0.522)	0.00103 (0.701)	-0.00376 (0.297)	-0.000147 (0.957)	-0.00103 (0.846)	-0.000448 (0.944)	0.0151*** (0.00423)
Total school enrollment at baseline	0.0122** (7.97e-05)	0.000386 (0.829)	0.00578* (0.0524)	0.00624* (0.0125)	0.00438** (0.00127)	0.00434 (0.146)	4.89e-05** (0.0131)	1.58e-06 (0.936)	0.000215* (2.16e-08)	0.000134* (0.00813)	1.11e-06 (0.984)	0.000196* (0.00144)
Months of teaching experience	0.00133 (0.873)	-0.00468 (0.382)	0.00487 (0.339)	0.000734 (0.920)	0.000887 (0.884)	0.00299 (0.734)	-7.49e-05 (0.422)	4.50e-05 (0.507)	0.000249* (0.0416)	6.59e-05 (0.712)	0.000345* (0.0563)	0.000328 (0.165)
Students are put into small reading groups	0.770 (0.809)	0.377 (0.816)	-0.458 (0.748)	1.637 (0.513)	-1.852 (0.214)	3.756 (0.249)	0.0337 (0.444)	-0.0263 (0.301)	0.0448 (0.225)	0.00140 (0.983)	0.0545 (0.562)	0.110 (0.211)
Teacher has post-graduate degree	13.37*** (0.000419)	3.679* (0.0520)	2.104 (0.248)	1.507 (0.389)	-0.985 (0.569)	1.746 (0.495)	0.0510 (0.107)	0.00682 (0.764)	-0.0867* (0.0660)	-0.0200 (0.734)	-0.0338 (0.519)	-0.00957 (0.910)
General teacher behavior index	11.71 (0.289)	4.574 (0.335)	1.074 (0.856)	-0.972 (0.856)	0.186 (0.964)	-3.267 (0.717)	0.00426 (0.958)	0.0589 (0.301)	-0.254** (0.0308)	-0.0579 (0.754)	0.0948 (0.536)	-0.0177 (0.949)
Reading-specific practices index	-2.595 (0.652)	2.652 (0.272)	-3.638 (0.403)	-0.793 (0.798)	5.977** (0.0323)	-4.163 (0.477)	-0.0312 (0.533)	0.0267 (0.435)	0.162* (0.0968)	0.0415 (0.650)	0.0164 (0.835)	0.202 (0.368)
Minutes of class time using MT	0.00981	- 0.000791	- 0.000912	- -0.00478	- 0.00931*	-0.00445	-2.42e-05	- 0.000113*	- 0.000195	- 0.000386*	- 0.000435**	- 0.000361

	(0.276)	(0.877)	(0.879)	(0.394)	(0.0935)	(0.572)	(0.786)	(0.0640)	(0.160)	(0.0266)	(0.00661)	(0.133)
Minutes of class time using Filipino	0.0123	-0.000262	-0.0212**	0.0202	0.00802	-0.0159	0.000326	0.000268	-0.000138	-0.000495	-0.000623	-0.000425
	(0.726)	(0.992)	(0.00260)	(0.531)	(0.544)	(0.157)	(0.435)	(0.473)	(0.422)	(0.562)	(0.302)	(0.193)
Minutes of class time using English	0.000380	0.0159	-0.00715	-0.00398	0.00233	-0.00580	0.000161	1.82e-05	0.000288	0.000111	0.00128**	0.000471*
	(0.980)	(0.481)	(0.335)	(0.796)	(0.803)	(0.638)	(0.173)	(0.959)	(0.138)	(0.697)	(0.00495)	(0.0776)
Numbers - t2	1.011***	0.557***	0.333***	0.887***	0.555***	0.476***	0.00762*	0.00531*	0.00277**	0.0111***	0.00947**	0.0110***
	(0)	(0)	(1.54e-09)	(2.32e-09)	(0)	(3.39e-10)	(0)	(0)	(0.000122)	(0)	(0)	(1.39e-10)
Filipino ORF - t1		0.505***	0.744***									
		(0)	(0)									
G3 average class size		0.0507			-0.0765			0.00182*			-0.000925	
		(0.410)			(0.167)			(0.0111)			(0.486)	
G4 average class size			0.0636			0.113*			0.000155			0.000130
			(0.148)			(0.0697)			(0.885)			(0.950)
G2 English ORF - t1				0.454***								
				(0.000723)								
English ORF - t1					0.702***	0.745***						
					(0)	(0)						
G2 Filipino reading comp - t1							0.450***					
							(0)					
Filipino reading comp - t1								0.254***	0.725***			
								(0)	(0)			
G2 English reading comp - t1										0.542***		
										(0)		
English reading comp - t1											0.612***	0.410***
											(0)	(4.00e-10)
Constant	-4.456	-35.05*	-28.69	-9.713	-26.20*	-44.06	0.174	0.000339	-0.119	-0.225	-1.080*	-0.974
	(0.870)	(0.0629)	(0.245)	(0.590)	(0.0873)	(0.132)	(0.387)	(0.999)	(0.733)	(0.636)	(0.0621)	(0.194)
Observations	2,018	2,082	715	2,020	2,083	715	2,024	2,083	715	2,024	2,083	715

Predictors of Oral Reading Fluency by Treatment Status

Filipino

	Filipino ORF Basa	Filipino ORF Basa	Filipino ORF Basa	Filipino ORF non-Basa	Filipino ORF non-Basa	Filipino ORF non-Basa
LABELS	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4
2017 outcomes	0.286	-0.725		3.786	-1.689	

	(0.912)	(0.709)		(0.335)	(0.456)	
Age of student	-0.503	-0.263	1.472	1.356	0.704	3.219
	(0.656)	(0.702)	(0.401)	(0.618)	(0.467)	(0.116)
Gender of student	11.87***	11.41***	10.75***	11.26***	14.25***	18.61***
	(0)	(0)	(1.53e-05)	(1.59e-05)	(0)	(2.56e-07)
Region 7	29.38***	-0.711	-6.087	21.31***	7.650***	-1.617
	(0)	(0.761)	(0.288)	(5.37e-06)	(0.000175)	(0.746)
Mother tongue	-0.635	2.092	2.863	20.30**	0.181	-4.718
	(0.905)	(0.377)	(0.665)	(0.0114)	(0.943)	(0.411)
Household assets index	0.997*	-0.443	0.556	0.957	1.391***	0.651
	(0.0523)	(0.316)	(0.435)	(0.260)	(0.00640)	(0.314)
Student attended Kindergarten	-7.907	1.500	6.659*	6.290	5.627**	8.920**
	(0.515)	(0.533)	(0.0726)	(0.147)	(0.0256)	(0.0285)
Student's age when first attended Kindergarten	-4.083*	0.352	-1.766	0.530	1.445	4.625
	(0.0998)	(0.776)	(0.343)	(0.836)	(0.366)	(0.278)
Student does homework	0.329	0.138	-0.417	-0.376	-1.079	0.543
	(0.617)	(0.753)	(0.525)	(0.735)	(0.215)	(0.600)
Student receives homework help from a family member	0.427	-0.548	-0.308	4.509**	-0.611	-0.892
	(0.830)	(0.700)	(0.885)	(0.0331)	(0.744)	(0.774)
Student has books at home	-0.348	-1.375	-0.802	3.757*	-1.528	1.304
	(0.872)	(0.373)	(0.745)	(0.0752)	(0.374)	(0.658)
Student brings books home from school	1.530	6.030**	3.663	2.865	-2.235	9.404*
	(0.634)	(0.0126)	(0.311)	(0.423)	(0.497)	(0.0646)
Highest level of education in the household	1.283	-0.101	-0.0549	-4.519***	-1.233	-0.115
	(0.320)	(0.940)	(0.954)	(0.00891)	(0.198)	(0.910)
Student's age when someone began to read to him/her	-0.284	-1.441**	-1.329	0.641	-3.682***	-3.246**
	(0.796)	(0.0391)	(0.261)	(0.659)	(0.000608)	(0.0282)
School assets index	-1.157	1.670**	-5.017***	0.227	0.312	-5.023***
	(0.342)	(0.0376)	(0.00770)	(0.753)	(0.563)	(0.00699)
Highest grade instructed at this school	1.024	1.274	2.800	-0.325	0.816	-0.516
	(0.401)	(0.695)	(0.549)	(0.887)	(0.744)	(0.874)
Number of days school was closed this year	-0.267	-0.575*	-0.100	0.350	0.509**	0.805*
	(0.411)	(0.0595)	(0.645)	(0.535)	(0.0213)	(0.0603)
Total school enrollment at baseline	0.0126***	0.00121	6.20e-05	0.00220	-0.00117	0.0165***
	(3.74e-07)	(0.587)	(0.986)	(0.491)	(0.471)	(0.00596)
Months of teaching experience	0.00135	-0.0125	0.000892	0.0231**	0.00695	0.0198
	(0.883)	(0.114)	(0.942)	(0.0496)	(0.319)	(0.365)
Students are put into small reading groups	0.731	2.334	0.0212	2.773	-4.472**	0.498
	(0.848)	(0.296)	(0.996)	(0.396)	(0.0341)	(0.911)
Teacher has post-graduate degree	15.57***	-0.841	-5.718	6.430*	3.029**	6.408*
	(0.000218)	(0.710)	(0.185)	(0.0952)	(0.0317)	(0.0749)
General teacher behavior index	11.26	-0.737	-2.453	41.87***	-1.012	1.005
	(0.352)	(0.906)	(0.801)	(5.35e-07)	(0.878)	(0.937)
Reading-specific practices index	-2.890	5.734*	-4.623	-18.03***	1.898	11.70
	(0.638)	(0.0715)	(0.478)	(0.00177)	(0.675)	(0.226)
Minutes of class time using MT	0.00975	-0.00166	0.0129	-0.0210**	-0.00930	-0.0240
	(0.308)	(0.787)	(0.266)	(0.0374)	(0.282)	(0.127)
Minutes of class time using Filipino	0.0240	0.00632	-0.0223**	-0.00323	-0.00102	-0.0329

	(0.648)	(0.855)	(0.0462)	(0.898)	(0.967)	(0.109)
Minutes of class time using English	0.00104	0.0129	0.0112	0.00980	0.0131	-0.0401
	(0.946)	(0.596)	(0.439)	(0.431)	(0.652)	(0.105)
Numbers correct per minute	1.172***	1.030***	0.960***	1.224***	0.980***	0.704***
	(0)	(0)	(0)	(0)	(0)	(8.48e-09)
Average G2 class size (G2 enrollment/number of G2 sections)	-0.198**			-0.234***		
	(0.0481)			(0.00714)		
Average G3 class size (G3 enrollment/number of G3 sections)		0.00598			-0.106	
		(0.945)			(0.168)	
Average G4 class size (G4 enrollment/number of G4 sections)			-0.0200			-0.0837
			(0.830)			(0.174)
Constant	-5.959	-11.08	-9.744	-87.86***	2.734	-39.96
	(0.830)	(0.661)	(0.807)	(0.00371)	(0.912)	(0.314)
	978	1,011	332	1,044	1,071	378

English

	English ORF Basa	English ORF Basa	English ORF Basa	English ORF non-Basa	English ORF non-Basa	English ORF non-Basa
LABELS	Grade 2	Grade 3	Grade 4	Grade 2	Grade 3	Grade 4
2017 outcomes	-0.855	-4.752*		-6.158*	-5.577*	
	(0.737)	(0.0609)		(0.0700)	(0.0529)	
Age of student	0.0242	-0.827	-0.0765	-0.423	-0.0942	0.674
	(0.980)	(0.407)	(0.973)	(0.851)	(0.956)	(0.698)
Gender of student	12.44***	14.54***	14.02***	11.29***	17.25***	16.35***
	(0)	(0)	(0.000186)	(4.70e-05)	(1.07e-08)	(1.11e-07)
Region 7	8.290**	1.067	2.453	12.95***	9.702**	3.316
	(0.0136)	(0.693)	(0.751)	(6.02e-05)	(0.0143)	(0.600)
Mother tongue	0.986	4.047	-6.282	-7.966*	-2.227	-8.457
	(0.808)	(0.258)	(0.547)	(0.0544)	(0.537)	(0.238)
Household assets index	1.831***	0.511	2.515**	2.931***	1.466	1.973***
	(0.000118)	(0.412)	(0.0133)	(3.92e-05)	(0.122)	(0.00933)
Student attended Kindergarten	5.682	2.631	7.214	0.468	-0.942	2.197
	(0.187)	(0.371)	(0.140)	(0.926)	(0.819)	(0.608)
Student's age when first attended Kindergarten	-2.495*	-0.307	-4.344	1.016	2.120	3.901
	(0.0671)	(0.849)	(0.113)	(0.594)	(0.266)	(0.329)
Student does homework	0.282	0.277	0.221	-0.226	-0.655	-1.539
	(0.597)	(0.631)	(0.795)	(0.772)	(0.384)	(0.119)
Student receives homework help from a family member	-1.155	-0.982	-3.135	1.685	2.050	-0.671
	(0.480)	(0.540)	(0.288)	(0.347)	(0.351)	(0.840)
Student has books at home	3.226*	-2.006	-2.864	2.619	-1.798	-2.817
	(0.0717)	(0.270)	(0.522)	(0.220)	(0.369)	(0.386)
Student brings books home from school	1.579	7.427**	6.550	4.478	-5.930	14.94***
	(0.557)	(0.0148)	(0.250)	(0.125)	(0.236)	(7.78e-05)
Highest level of education in the household	1.368	0.864	-0.0514	-0.0164	0.210	-0.491
	(0.437)	(0.713)	(0.972)	(0.963)	(0.874)	(0.618)

Student's age when someone began to read to him/her	-1.964*** (0.00912)	-1.879** (0.0418)	-0.353 (0.797)	0.851 (0.560)	-5.103*** (0.000465)	-4.396*** (0.00837)
School assets index	0.422 (0.717)	2.559*** (0.00213)	-3.571 (0.207)	0.183 (0.783)	0.245 (0.716)	-7.170*** (0.000931)
Highest grade instructed at this school	0.00276 (0.999)	-2.662 (0.387)	11.33** (0.0360)	-2.573 (0.274)	3.602 (0.213)	4.071 (0.513)
Number of days school was closed this year	0.162 (0.615)	-0.966*** (0.00248)	-0.407 (0.239)	1.222** (0.0276)	0.142 (0.625)	0.236 (0.614)
Total school enrollment at baseline	0.0121*** (1.02e-06)	0.00508*** (0.00117)	0.00156 (0.734)	0.01000*** (0.00222)	0.00784*** (8.75e-05)	0.0126*** (0.00806)
Months of teaching experience	0.00335 (0.746)	-0.00762 (0.469)	0.00874 (0.623)	0.0249** (0.0326)	0.00670 (0.509)	0.0395* (0.0994)
Students are put into small reading groups	5.120 (0.139)	2.582 (0.399)	2.275 (0.726)	0.0627 (0.979)	-5.059* (0.0863)	3.631 (0.475)
Teacher has post-graduate degree	1.339 (0.577)	-0.288 (0.911)	-6.444 (0.278)	5.970** (0.0296)	4.215 (0.209)	5.588 (0.234)
General teacher behavior index	-4.176 (0.603)	1.971 (0.780)	-15.04 (0.331)	13.38* (0.0832)	3.615 (0.686)	7.184 (0.650)
Reading-specific practices index	3.422 (0.380)	7.546* (0.0596)	-7.899 (0.444)	-4.525 (0.417)	0.833 (0.842)	10.95 (0.318)
Minutes of class time using MT	0.000604 (0.940)	-0.0140* (0.0861)	0.0110 (0.545)	-0.0404*** (0.000142)	0.00123 (0.886)	-0.0285 (0.131)
Minutes of class time using Filipino	0.0612 (0.313)	-0.00802 (0.718)	-0.0297* (0.0895)	0.00627 (0.836)	0.0307 (0.197)	-0.0387* (0.0895)
Minutes of class time using English	0.00544 (0.801)	0.0171 (0.262)	0.0157 (0.430)	-0.0214 (0.363)	0.00716 (0.784)	-0.0553* (0.0546)
num_ids_permin_t2	1.287*** (0)	1.453*** (0)	1.400*** (0)	1.363*** (0)	1.391*** (0)	1.171*** (0)
Average G2 class size (G2 enrollment/number of G2 sections)	-0.128 (0.246)			-0.0822 (0.383)		
Average G3 class size (G3 enrollment/number of G3 sections)		-0.108 (0.175)			-0.145 (0.163)	
Average G4 class size (G4 enrollment/number of G4 sections)			-0.00347 (0.980)			0.166* (0.0776)
Constant	-8.031 (0.716)	12.39 (0.632)	-44.71 (0.330)	-8.322 (0.760)	-16.81 (0.566)	-54.05 (0.295)
	979	1,011	332	1,045	1,072	378

Treatment Effects:

Regressions – Mother Tongue

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	2.145* (0.0996)	4.051** (0.0231)	2.004 (0.110)	4.934 (0.256)	0.0360 (0.230)	-0.0288 (0.237)
Letters - Mother Tongue	0.604*** (0)					
Class size in the beginning of the school year	0.0402 (0.568)	0.0557 (0.536)	0.00926 (0.906)	0.0121 (0.903)	-0.000710 (0.721)	-0.000860 (0.540)
Household assets index	0.455 (0.202)	0.334 (0.389)	0.632 (0.134)	0.215 (0.664)	0.00519 (0.574)	0.000812 (0.906)
Student attended kindergarten	2.647 (0.420)	1.332 (0.581)	2.919 (0.316)	6.713* (0.0643)	0.124 (0.139)	0.0550 (0.517)
Student's age when first attended kindergarten	0.0272 (0.978)	-0.951 (0.360)	0.126 (0.902)	-1.051 (0.419)	-0.00203 (0.950)	-0.0120 (0.723)
Student does homework	-0.724* (0.0597)	0.0687 (0.835)	-0.267 (0.426)	-0.133 (0.736)	-0.00696 (0.392)	-0.00952 (0.306)
Student receives homework help from a family member	1.713 (0.125)	2.261** (0.0365)	2.015* (0.0659)	2.089 (0.179)	0.0174 (0.546)	0.0122 (0.668)
Student has books at home	-1.776 (0.268)	1.740 (0.355)	2.567 (0.223)	1.794 (0.228)	0.0773* (0.0791)	0.0580* (0.0989)
Student brings books home from school	0.108 (0.957)	0.277 (0.857)	0.114 (0.934)	0.668 (0.689)	-0.0324 (0.504)	-0.0801 (0.103)
Highest level of education in the household	0.384 (0.701)	0.382 (0.724)	0.658 (0.557)	0.323 (0.741)	0.0142 (0.623)	0.0155 (0.569)
Age when student was first read to	-1.535* (0.0535)	-0.615 (0.310)	-1.327* (0.0673)	-0.921 (0.169)	-0.0169 (0.346)	0.0102 (0.544)
School assets index	0.619 (0.238)	0.169 (0.819)	-0.158 (0.829)	-0.148 (0.835)	0.0104 (0.514)	0.0163 (0.133)
Highest grade instructed	-2.691*** (0.00281)	-0.246 (0.845)	-0.313 (0.756)	0.223 (0.834)	-0.0275 (0.308)	-0.0373 (0.229)
# of days school is closed	-0.212 (0.552)	0.328 (0.322)	0.374 (0.359)	0.565* (0.0918)	0.0104 (0.333)	0.0100 (0.300)
Total enrollment	-0.00155 (0.313)	-0.000364 (0.794)	0.000938 (0.526)	0.00134 (0.402)	3.07e-05 (0.429)	-1.17e-05 (0.734)
Months of teaching experience	0.00243 (0.717)	0.00644 (0.321)	0.0107 (0.124)	0.00837 (0.223)	0.000408** (0.0412)	0.000143 (0.418)
Students are put into small reading groups	1.175 (0.565)	1.525 (0.473)	1.260 (0.582)	0.623 (0.810)	0.0494 (0.402)	0.0605 (0.227)
Teacher has post-graduate degree	-1.887 (0.397)	0.630 (0.760)	0.0655 (0.980)	0.489 (0.796)	-0.0364 (0.497)	-0.0463 (0.374)
Age of student	0.318 (0.712)	-0.359 (0.657)	-0.176 (0.807)	-0.640 (0.456)	-0.0622** (0.0236)	-0.0498* (0.0564)
Sex of student	2.109* (0.0553)	6.247*** (2.93e-05)	6.131*** (0.000540)	5.915*** (8.89e-05)	0.132*** (8.38e-06)	0.0738** (0.0144)
Region 7 at the end of school year	3.269* (0.0759)	1.830 (0.367)	0.198 (0.918)	3.316 (0.146)	0.0548 (0.241)	-0.0329 (0.413)
Mother tongue at the end of school year	-8.201 (0.131)	-1.428 (0.396)	-2.229 (0.231)	-1.803 (0.349)	0.00570 (0.926)	0.0411 (0.513)
Familiar words		0.990*** (0)				
Unfamiliar words			0.826*** (0.000196)			
ORF				0.914*** (0)		
Reading comprehension					1.190*** (0)	
Reading comprehension excl. non-readers						0.914***

Constant	34.40*** (0.00153)	6.403 (0.600)	4.442 (0.719)	2.887 (0.833)	0.311 (0.376)	(0) 0.688** (0.0384)
Observations	1,362	1,361	1,360	1,361	1,366	879

Regressions – Filipino G2

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	1.059 (0.248)	1.521* (0.0845)	1.466** (0.0308)	4.222** (0.0262)	-0.000892 (0.964)	-0.0225 (0.253)
Filipino letters per minute	0.641*** (0)					
Grade 2 average class size	-0.0633 (0.343)	-0.0751* (0.0820)	-0.00726 (0.807)	-0.200** (0.0132)	-0.00255*** (0.00713)	-0.00221** (0.0131)
Household assets index	0.528 (0.189)	0.0110 (0.968)	0.0242 (0.899)	0.565 (0.266)	0.00962 (0.102)	0.00195 (0.767)
Student attended kindergarten	8.505*** (0.00192)	0.633 (0.798)	0.420 (0.803)	-2.565 (0.783)	0.0925 (0.181)	0.0346 (0.620)
Student's age when first attended kindergarten	-0.291 (0.747)	0.359 (0.696)	0.0337 (0.959)	-1.860 (0.402)	0.00488 (0.799)	0.0378 (0.113)
Student does homework	0.285 (0.463)	0.262 (0.354)	0.139 (0.478)	0.0391 (0.939)	-0.0122* (0.0644)	-0.0151* (0.0682)
Student receives homework help from a family member	0.478 (0.634)	-0.508 (0.543)	0.640 (0.291)	-0.0387 (0.983)	0.00271 (0.898)	-0.00644 (0.779)
Student has books at home	0.939 (0.479)	-0.0709 (0.939)	-0.299 (0.718)	-0.557 (0.759)	0.0598** (0.0181)	0.0597** (0.0377)
Student brings books home from school	-0.605 (0.658)	1.405 (0.225)	1.495 (0.158)	3.131 (0.306)	0.0651* (0.0737)	-0.0142 (0.735)
Highest level of education in the household	1.338*** (0.00556)	-0.250 (0.610)	0.142 (0.634)	1.971* (0.0959)	0.00283 (0.794)	0.0655*** (0.00875)
Age when student was first read to	-0.414 (0.488)	-0.654 (0.110)	-0.355 (0.286)	-0.624 (0.599)	-0.0105 (0.341)	-0.00478 (0.720)
School assets index	0.0571 (0.939)	0.699 (0.129)	0.428 (0.193)	0.217 (0.823)	0.0241** (0.0343)	0.0135 (0.226)
Highest grade instructed	-1.534 (0.149)	-0.0367 (0.977)	-0.514 (0.544)	1.177 (0.330)	0.000466 (0.972)	0.00141 (0.939)
# of days school is closed	-0.0612 (0.783)	0.228 (0.189)	0.257** (0.0446)	0.275 (0.296)	0.00276 (0.275)	0.000372 (0.869)
Student does homework	0.00203 (0.338)	-0.000131 (0.914)	0.00168** (0.0492)	0.00746*** (0.00118)	8.71e-05*** (5.58e-05)	7.69e-05*** (0.000178)
Total enrollment	-0.00295 (0.652)	0.00222 (0.618)	0.00117 (0.679)	0.00739 (0.370)	-5.76e-05 (0.555)	-5.57e-05 (0.606)
Months of teaching experience	2.970 (0.141)	-0.0970 (0.941)	-0.529 (0.589)	-0.727 (0.778)	-0.00365 (0.932)	0.0179 (0.668)
Students are put into small reading groups	0.509 (0.756)	1.584 (0.175)	0.0240 (0.981)	11.89*** (0.00101)	0.0473 (0.139)	-0.00616 (0.877)
Teacher has post-graduate degree	-4.369***	5.531***	0.453	7.740***	-0.0661**	-0.0942***
2017 outcomes						

	(0.00326)	(1.49e-07)	(0.548)	(0.00110)	(0.0135)	(0.00291)
Age of student	0.384	-0.605	-0.534	-0.601	-0.00801	-0.0153
	(0.591)	(0.317)	(0.240)	(0.579)	(0.597)	(0.335)
Sex of student	2.925***	2.837***	2.030***	9.098***	0.0702***	0.0584**
	(0.000965)	(0.00109)	(0.000691)	(5.46e-08)	(0.000625)	(0.0146)
Region 7	3.922*	6.013***	4.066***	16.35***	0.00594	-0.138***
	(0.0992)	(1.29e-05)	(2.25e-05)	(1.75e-05)	(0.860)	(0.00523)
Mother tongue at the end of school year	-2.999	-0.383	0.458	-1.061	-0.0672	-0.0644
	(0.390)	(0.828)	(0.780)	(0.810)	(0.165)	(0.249)
Familiar words – G2		0.994***				
		(0)				
Unfamiliar words – G2			0.843***			
			(0)			
ORF – G2				0.622***		
				(0)		
Reading comp – G2					0.643***	
					(0)	
Reading comp excl. non-readers – G2						0.492***
						(0)
Constant	11.24	7.043	7.593	11.78	0.0822	0.247
	(0.285)	(0.549)	(0.353)	(0.658)	(0.697)	(0.316)
Observations	2,529	2,534	2,532	2,530	2,536	1,823

Regressions – Filipino G3

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	0.876	1.080	0.713	-0.593	-0.00142	0.00336
	(0.309)	(0.251)	(0.154)	(0.673)	(0.914)	(0.803)
Household assets index	0.538**	0.128	0.246	0.279	0.00759*	0.00638
	(0.0428)	(0.570)	(0.136)	(0.338)	(0.0562)	(0.109)
Student attended kindergarten	-0.215	1.711	-1.407	0.849	-0.00955	-0.00276
	(0.922)	(0.271)	(0.191)	(0.681)	(0.751)	(0.926)
Student's age when first attended kindergarten	0.551	-0.200	0.116	0.290	-0.00895	-0.00801
	(0.520)	(0.777)	(0.785)	(0.765)	(0.513)	(0.582)
Student does homework	0.893**	-0.346	0.134	0.280	0.00468	0.00347
	(0.0113)	(0.210)	(0.456)	(0.473)	(0.317)	(0.501)
Student receives homework help from a family member	0.0409	0.495	-0.184	-1.630	-0.00433	0.00452
	(0.965)	(0.477)	(0.738)	(0.154)	(0.796)	(0.799)
Student has books at home	-1.150	-1.670*	-0.800	-0.545	0.00737	0.0141
	(0.353)	(0.0580)	(0.175)	(0.682)	(0.623)	(0.370)
Student brings books home from school	-2.637**	1.896*	0.315	5.010***	0.0128	0.00686
	(0.0254)	(0.0783)	(0.740)	(0.000958)	(0.625)	(0.804)
Highest level of education in the household	1.040	1.148**	0.252	1.302	0.0208***	0.0129**
	(0.104)	(0.0168)	(0.445)	(0.227)	(0.00565)	(0.0121)

Age when student was first read to	-0.924 (0.143)	-0.517 (0.161)	-0.423* (0.0663)	-1.464*** (0.00194)	-0.0116 (0.209)	-0.00892 (0.351)
School assets index	0.0125 (0.975)	-0.862** (0.0448)	-0.762** (0.0158)	0.210 (0.676)	0.00233 (0.731)	0.00301 (0.664)
Highest grade instructed	-1.061 (0.340)	-2.647** (0.0270)	-1.156* (0.0901)	1.361 (0.295)	0.00288 (0.897)	0.000166 (0.994)
# of days school is closed	-0.142 (0.417)	0.103 (0.419)	0.0188 (0.838)	-0.356 (0.126)	-0.00295 (0.386)	-0.00225 (0.552)
Student does homework	-0.000319 (0.716)	0.00161** (0.0352)	-0.000104 (0.873)	0.00126 (0.476)	1.97e-05 (0.399)	2.09e-05 (0.347)
Months of teaching experience	0.00894* (0.0746)	0.00672 (0.103)	0.00342 (0.203)	0.00140 (0.801)	0.000106 (0.141)	7.44e-05 (0.304)
Students are put into small reading groups	0.508 (0.717)	-1.284 (0.317)	-0.875 (0.296)	0.651 (0.735)	-0.0190 (0.440)	-0.0195 (0.512)
Teacher has post-graduate degree	-3.550** (0.0141)	-3.025*** (0.00577)	0.120 (0.885)	4.199** (0.0155)	0.0120 (0.608)	0.0106 (0.691)
2017 outcomes	-3.074** (0.0204)	6.317*** (5.61e-10)	3.435*** (1.29e-07)	3.351*** (0.00696)	-0.116*** (8.05e-10)	-0.110*** (3.03e-08)
Age of student	-0.966 (0.112)	-0.675* (0.0681)	-0.708** (0.0104)	0.323 (0.503)	-0.00885 (0.297)	-0.00807 (0.359)
Sex of student	2.615*** (0.00336)	1.742** (0.0220)	1.607*** (0.00221)	4.942*** (1.33e-06)	0.0513*** (0.000127)	0.0465*** (0.000671)
Region 7	2.662* (0.0874)	-0.0788 (0.948)	0.985 (0.238)	-4.093*** (0.00761)	-0.0213 (0.330)	-0.0359 (0.115)
Mother tongue	-0.269 (0.912)	0.0398 (0.968)	0.544 (0.648)	-1.036 (0.584)	0.0332 (0.277)	0.0423 (0.174)
Filipino letters	0.607*** (0)					
G3 average class size	0.0624 (0.127)	0.00354 (0.924)	0.0497* (0.0796)	0.0271 (0.674)	0.00115 (0.127)	0.000922 (0.224)
Filipino familiar words		0.912*** (0)				
Filipino unfamiliar words			0.897*** (0)			
Filipino ORF				0.670*** (0)		
Filipino reading comp					0.410*** (0)	
Filipino reading comp excl. non-readers						0.372*** (0)
Constant	24.12** (0.0248)	32.13*** (0.00201)	17.42*** (0.00525)	6.983 (0.565)	0.125 (0.519)	0.143 (0.453)
Observations	2,562	2,565	2,566	2,565	2,566	2,241

Regressions – Filipino G4

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	0.300 (0.817)	-1.185 (0.180)	-0.767 (0.390)	-1.442 (0.204)	-0.0931*** (0.00149)	-0.0992*** (0.00104)
Household assets index	0.964** (0.0120)	0.186 (0.546)	-0.270 (0.213)	-0.348 (0.329)	-0.00554 (0.546)	-0.00453 (0.604)
Student attended kindergarten	2.217 (0.408)	0.931 (0.601)	-0.224 (0.882)	0.412 (0.893)	0.0261 (0.588)	0.0232 (0.625)
Student's age when first attended kindergarten	-1.055 (0.443)	-0.880 (0.330)	-0.400 (0.558)	-0.168 (0.884)	-0.0197 (0.408)	-0.0143 (0.555)
Student does homework	0.180 (0.665)	0.0904 (0.734)	-0.0821 (0.691)	0.0534 (0.860)	-0.0118 (0.198)	-0.0129 (0.164)
Student receives homework help from a family member	0.959 (0.474)	-0.260 (0.780)	0.180 (0.790)	0.151 (0.894)	0.0137 (0.618)	0.00902 (0.735)
Student has books at home	0.958 (0.567)	1.665* (0.0980)	0.825 (0.231)	1.770 (0.157)	0.0395 (0.212)	0.0369 (0.247)
Student brings books home from school	1.603 (0.327)	2.700 (0.137)	0.345 (0.832)	-1.767 (0.371)	0.00596 (0.905)	0.00510 (0.921)
Highest level of education in the household	-0.600 (0.294)	0.367 (0.671)	0.261 (0.420)	0.696 (0.338)	0.0282** (0.0117)	0.0283** (0.0126)
Age when student was first read to	0.0987 (0.900)	-0.156 (0.752)	-0.186 (0.629)	-0.817 (0.221)	-0.00447 (0.736)	0.000478 (0.970)
School assets index	-0.915 (0.222)	-0.942* (0.0697)	0.268 (0.520)	-0.332 (0.690)	-0.00710 (0.741)	-0.00462 (0.827)
Highest grade instructed	-1.440 (0.529)	0.911 (0.709)	-0.385 (0.784)	2.246 (0.391)	-0.124*** (0.00240)	-0.118*** (0.00329)
# of days school is closed	-0.0779 (0.661)	-0.0589 (0.637)	-0.00835 (0.914)	0.162 (0.200)	-0.00220 (0.439)	-0.00121 (0.671)
Total enrollment	0.00676*** (0.000136)	0.00483*** (0.00240)	0.00546*** (0.000636)	0.00346 (0.316)	0.000143*** (0.000474)	0.000118*** (0.000231)
Months of teaching experience	0.000329 (0.953)	0.00140 (0.769)	0.00100 (0.757)	0.00980** (0.0408)	0.000101 (0.451)	6.49e-05 (0.621)
Students are put into small reading groups	2.213 (0.169)	1.074 (0.440)	-0.452 (0.718)	1.297 (0.514)	0.00843 (0.850)	0.00678 (0.879)
Teacher has post-graduate degree	-3.262** (0.0161)	-0.584 (0.699)	-1.741* (0.0952)	-0.0941 (0.941)	-0.0277 (0.582)	-0.0182 (0.718)
Age of student	0.499 (0.593)	0.591 (0.312)	0.583 (0.251)	0.844 (0.407)	0.0221 (0.174)	0.0155 (0.323)
Sex of student	5.413*** (2.17e-05)	3.999*** (1.43e-05)	2.307*** (0.000159)	3.364*** (0.00198)	0.0294 (0.309)	0.0302 (0.293)
Region 7	1.410 (0.381)	-0.379 (0.815)	-1.920* (0.0573)	0.137 (0.931)	-0.136** (0.0158)	-0.138** (0.0134)
Mother tongue	0.669 (0.868)	1.098 (0.566)	2.122 (0.224)	0.840 (0.717)	-0.0215 (0.816)	-0.0191 (0.835)

Filipino letters	0.647*** (0)					
Filipino familiar words		0.533*** (0)				
Filipino unfamiliar words			0.673*** (0)			
Filipino ORF				0.813*** (0)		
Filipino reading comp					0.623*** (0)	
Filipino reading comp excl. non-readers						0.604*** (0)
G4 average class size	-0.125** (0.0126)	-0.0229 (0.600)	-0.0484 (0.162)	0.0591 (0.302)	0.000759 (0.558)	0.00106 (0.403)
Constant	14.60 (0.513)	-5.448 (0.780)	5.972 (0.627)	-9.608 (0.659)	0.673* (0.0745)	0.656* (0.0848)
Observations	1,177	1,178	1,177	1,177	1,178	1,119

Regressions – English G2

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	2.169*** (0.00577)	0.970 (0.398)	1.374* (0.0891)	2.501 (0.140)	0.0343 (0.408)	0.0173 (0.674)
English letters	0.552*** (0)					
G2 average class size	-0.142*** (0.00319)	-0.00291 (0.961)	0.0915** (0.0181)	-0.0312 (0.710)	-0.000578 (0.705)	-0.000693 (0.662)
Household assets index	0.936*** (0.00118)	0.788 (0.132)	0.430* (0.0713)	1.485*** (0.00510)	0.0273** (0.0144)	0.0251** (0.0297)
Student attended kindergarten	6.790*** (0.00236)	4.676 (0.177)	3.897** (0.0356)	9.002 (0.140)	0.237** (0.0437)	0.212* (0.0813)
Student's age when first attended kindergarten	0.0156 (0.986)	-0.245 (0.830)	-0.0225 (0.979)	-1.163 (0.376)	-0.0218 (0.565)	-0.0204 (0.566)
Student does homework	0.176 (0.544)	0.101 (0.814)	0.317 (0.174)	0.158 (0.719)	0.0120 (0.268)	0.0165 (0.163)
Student receives homework help from a family member	-1.095 (0.248)	0.610 (0.633)	-0.942 (0.219)	-0.918 (0.456)	-0.0537 (0.137)	-0.0766** (0.0304)
Student has books at home	-0.0558 (0.965)	0.821 (0.664)	-0.642 (0.437)	2.636 (0.106)	0.00705 (0.861)	-0.00392 (0.923)
Student brings books home from school	2.137 (0.119)	0.628 (0.741)	1.333 (0.372)	7.351** (0.0455)	0.0840 (0.175)	0.0527 (0.385)
Highest level of education in the household	0.462 (0.220)	0.306 (0.662)	0.438 (0.339)	1.046 (0.293)	0.0218 (0.239)	0.0211 (0.287)
Age when student was first read to	0.128 (0.792)	-1.019 (0.114)	-0.232 (0.532)	-1.246 (0.181)	-0.0467** (0.0235)	-0.0439** (0.0293)
School assets index	1.014 (0.126)	0.468 (0.504)	0.116 (0.816)	0.572 (0.450)	0.0370** (0.0444)	0.0228 (0.232)

Highest grade instructed	-2.208 (0.153)	0.221 (0.889)	-0.391 (0.653)	0.868 (0.622)	0.00831 (0.835)	0.0217 (0.614)
# of days school is closed	-0.145 (0.311)	0.128 (0.421)	0.191* (0.0905)	0.240 (0.341)	-0.000148 (0.978)	-0.00199 (0.704)
Student does homework	0.00268** (0.0171)	-0.000591 (0.768)	0.000262 (0.773)	0.00278 (0.270)	0.000136*** (0.00141)	0.000142*** (0.000467)
Months of teaching experience	-0.00123 (0.819)	0.00597 (0.477)	0.00139 (0.695)	0.00712 (0.411)	0.000190 (0.266)	0.000194 (0.258)
Students are put into small reading groups	-0.212 (0.913)	1.721 (0.326)	-0.0205 (0.988)	-0.345 (0.885)	-0.0163 (0.785)	0.00862 (0.887)
Teacher has post-graduate degree	-0.386 (0.812)	2.403 (0.129)	0.605 (0.622)	3.669* (0.0756)	0.00714 (0.899)	0.000322 (0.995)
2017 outcomes	0.280 (0.802)	1.285 (0.321)	-5.777*** (5.71e-09)	9.151*** (0.000115)	-0.131*** (0.00564)	-0.121** (0.0105)
Age of student	0.483 (0.461)	-1.232* (0.0843)	-0.407 (0.436)	-0.0544 (0.959)	0.00642 (0.814)	0.0140 (0.611)
Sex of student	2.576*** (0.000574)	5.872*** (0.00609)	2.490*** (0.000686)	8.870*** (0.000440)	0.0752** (0.0194)	0.0484 (0.156)
Region 7	3.658** (0.0313)	6.540*** (0.000503)	5.319*** (1.88e-05)	4.864* (0.0861)	0.100* (0.0679)	0.0696 (0.225)
Mother tongue	-0.286 (0.912)	-1.143 (0.650)	2.042 (0.204)	-1.448 (0.585)	0.165 (0.132)	0.190* (0.0651)
English familiar words – G2		0.955*** (0)				
English unfamiliar words - G2			0.890*** (0)			
English ORF - G2				0.736*** (1.99e-06)		
English reading comp - G2					0.769*** (0)	
English reading comp excl. non-readers - G2						0.621*** (0)
Constant	16.35 (0.218)	4.927 (0.742)	-3.837 (0.676)	-7.233 (0.658)	-0.578 (0.152)	-0.569 (0.175)
Observations	2,529	2,531	2,530	2,531	2,536	2,056

Regressions – English G3

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	2.081*** (0.00911)	1.888* (0.0904)	1.370* (0.0514)	0.815 (0.396)	-0.0605 (0.198)	-0.0752* (0.0870)
Household assets index	0.307 (0.170)	0.135 (0.709)	0.264 (0.333)	0.262 (0.429)	0.0365*** (0.000170)	0.0346*** (0.000243)
Student attended kindergarten	2.998 (0.106)	2.042 (0.444)	2.441 (0.215)	-0.0911 (0.963)	0.0945 (0.160)	0.0730 (0.280)
Student's age when first attended kindergarten	0.550 (0.478)	-1.412 (0.136)	-0.778 (0.266)	0.184 (0.852)	0.0126 (0.665)	0.0309 (0.284)

Student does homework	0.662** (0.0166)	-0.190 (0.618)	0.0275 (0.912)	0.187 (0.580)	0.00755 (0.579)	0.00740 (0.596)
Student receives homework help from a family member	-0.650 (0.396)	-0.0653 (0.947)	-0.944 (0.213)	-0.849 (0.412)	0.00886 (0.793)	0.0224 (0.504)
Student has books at home	-0.971 (0.384)	1.651 (0.197)	-0.162 (0.872)	-1.697 (0.140)	-0.0310 (0.399)	-0.0179 (0.645)
Student brings books home from school	0.444 (0.714)	4.282** (0.0492)	0.0955 (0.937)	3.361* (0.0923)	-0.0358 (0.553)	-0.0702 (0.224)
Highest level of education in the household	1.127* (0.0883)	1.436** (0.0219)	0.719* (0.0581)	1.281** (0.0265)	0.0223 (0.278)	0.0166 (0.401)
Age when student was first read to	-1.488*** (0.000573)	-0.615 (0.208)	-0.628 (0.129)	-0.801 (0.104)	-0.0403** (0.0228)	-0.0342** (0.0466)
School assets index	0.184 (0.667)	-1.088* (0.0666)	-0.244 (0.549)	-0.740 (0.216)	0.00300 (0.862)	0.00485 (0.791)
Highest grade instructed	-1.262 (0.329)	-1.195 (0.482)	0.255 (0.842)	1.468 (0.536)	-0.0491 (0.369)	-0.0613 (0.229)
# of days school is closed	0.0359 (0.769)	-0.361 (0.148)	-0.191 (0.295)	-0.306 (0.127)	-0.00977 (0.106)	-0.00779 (0.169)
Total enrollment	0.000497 (0.566)	0.00227* (0.0903)	0.00144 (0.321)	0.00616*** (1.73e-06)	4.37e-05 (0.310)	3.02e-05 (0.494)
Months of teaching experience	0.00235 (0.577)	0.00261 (0.638)	0.00344 (0.344)	0.00330 (0.575)	0.000281 (0.118)	0.000297* (0.0735)
Students are put into small reading groups	-0.639 (0.697)	-0.493 (0.761)	0.0246 (0.986)	-1.204 (0.333)	0.0637 (0.455)	0.0875 (0.336)
Teacher has post-graduate degree	-1.874 (0.103)	-3.101* (0.0584)	-2.572** (0.0453)	-3.021* (0.0912)	-0.0647 (0.202)	-0.0500 (0.318)
2017 outcomes	-4.746*** (3.21e-06)	6.194*** (1.37e-05)	0.401 (0.702)	10.85*** (0)	0.0176 (0.643)	0.00587 (0.880)
Age of student	-0.529 (0.406)	-1.146 (0.126)	-1.118* (0.0572)	-1.243* (0.0703)	-0.0210 (0.338)	-0.0278 (0.213)
Sex of student	1.997** (0.0116)	0.520 (0.628)	1.828*** (0.00813)	3.213*** (0.00168)	0.136*** (2.23e-05)	0.120*** (0.000114)
Region 7	4.062*** (0.000743)	2.195 (0.214)	2.935** (0.0148)	0.815 (0.634)	0.153** (0.0181)	0.147** (0.0161)
Mother tongue	1.409 (0.439)	-0.997 (0.686)	-0.320 (0.879)	0.450 (0.824)	0.0703 (0.454)	0.0939 (0.302)
English letters	0.625*** (0)					
G3 average class size at the end of the school year	0.00772 (0.828)	-0.00127 (0.979)	-0.0128 (0.768)	-0.0490 (0.374)	-0.000812 (0.552)	-0.00123 (0.402)
English familiar words		0.896*** (0)				
English unfamiliar words			0.856*** (0)			
English ORF				0.894*** (0)		
English reading comp.					0.772*** (0)	

English reading comp. excl. non-readers						0.696*** (0)
Constant	22.24** (0.0407)	31.89** (0.0408)	17.94* (0.0932)	9.420 (0.637)	0.244 (0.619)	0.337 (0.464)
Observations	2,562	2,566	2,566	2,566	2,566	2,317

Regressions – English G4

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Treatment = Basa	1.090 (0.314)	0.124 (0.919)	-0.404 (0.715)	0.988 (0.603)	-0.0688* (0.0829)	-0.0776** (0.0489)
Household assets index	0.203 (0.608)	0.380 (0.320)	0.0297 (0.925)	-0.347 (0.418)	0.0192 (0.147)	0.0206 (0.124)
Student attended kindergarten	-1.627 (0.477)	-2.442 (0.274)	-3.343* (0.0764)	0.0634 (0.985)	0.0569 (0.554)	0.0524 (0.584)
Student's age when first attended kindergarten	-2.733** (0.0434)	-0.217 (0.827)	-0.182 (0.836)	-0.811 (0.591)	-0.0672 (0.129)	-0.0598 (0.181)
Student does homework	0.191 (0.610)	0.496 (0.171)	0.691** (0.0150)	0.528 (0.300)	0.000690 (0.955)	0.000595 (0.961)
Student receives homework help from a family member	1.014 (0.428)	-1.604 (0.203)	-1.132 (0.281)	0.890 (0.546)	-0.0981** (0.0216)	-0.105** (0.0139)
Student has books at home	1.302 (0.357)	1.538 (0.244)	0.0627 (0.953)	1.514 (0.339)	0.0280 (0.579)	0.0272 (0.600)
Student brings books home from school	-3.250 (0.342)	-4.056* (0.0994)	0.439 (0.854)	-1.326 (0.732)	-0.0196 (0.775)	-0.0357 (0.600)
Highest level of education in the household	0.102 (0.907)	0.749 (0.469)	0.632 (0.218)	0.648 (0.427)	0.0506 (0.163)	0.0524 (0.162)
Age when student was first read to	-0.508 (0.424)	-1.101 (0.115)	-1.670*** (0.000758)	-1.338 (0.101)	-0.0178 (0.512)	-0.0114 (0.678)
School assets index	-0.0878 (0.935)	-1.030 (0.172)	-1.000* (0.0611)	0.370 (0.711)	-0.0352 (0.138)	-0.0307 (0.196)
Highest grade instructed	-2.705 (0.364)	0.142 (0.961)	2.430 (0.407)	6.303** (0.0249)	-0.173* (0.0808)	-0.177* (0.0760)
# of days school is closed	-0.182 (0.433)	-0.143 (0.378)	-0.152 (0.201)	0.231 (0.382)	-0.0103** (0.0330)	-0.0105** (0.0370)
Student does homework						
Total enrollment	0.00428* (0.0667)	0.00632** (0.0125)	0.00507*** (0.00847)	0.00755*** (0.00827)	0.000235*** (5.90e-08)	0.000198*** (1.17e-05)
Months of teaching experience	-0.000251 (0.970)	0.00311 (0.581)	-0.000699 (0.886)	-0.00132 (0.844)	0.000285 (0.164)	0.000273 (0.185)
Students in small groups by reading level	2.264 (0.376)	3.025* (0.0911)	0.754 (0.605)	1.370 (0.557)	0.119** (0.0306)	0.128** (0.0211)
Teacher has a post-bachelor degree	-1.999 (0.431)	-0.0912 (0.966)	0.470 (0.756)	-0.162 (0.934)	-0.0356 (0.523)	-0.0261 (0.652)
2017 outcomes						
Age of student	-0.323	0.454	0.185	1.172	0.0458	0.0383

Sex of student	(0.730)	(0.636)	(0.841)	(0.403)	(0.102)	(0.170)
	3.036**	2.762**	2.703***	1.158	0.0804*	0.0800*
Region 7	(0.0236)	(0.0218)	(0.00811)	(0.445)	(0.0859)	(0.0892)
	1.619	4.623*	5.429***	0.881	0.0165	0.0147
Mother tongue	(0.511)	(0.0530)	(0.000310)	(0.717)	(0.818)	(0.843)
	-1.442	1.115	-4.269**	-13.25*	0.000789	0.00510
	(0.612)	(0.708)	(0.0225)	(0.0845)	(0.996)	(0.975)
	0.623***					
G3 average class size at the end of the school year	(0)					
English familiar words		0.569***				
English unfamiliar words		(0)				
			0.732***			
English ORF			(0)			
				0.901***		
English reading comp.				(0)		
					0.598***	
English reading comp. excl. non-readers					(0)	
						0.588***
G4 average class size at the end of the school year						(0)
	-0.104*	0.00279	0.00207	0.131**	0.000731	0.000988
	(0.0726)	(0.961)	(0.961)	(0.0451)	(0.705)	(0.614)
Constant	57.88**	-3.665	-5.766	-25.62	0.695	0.742
	(0.0193)	(0.874)	(0.808)	(0.302)	(0.376)	(0.347)
Observations	1,178	1,177	1,178	1,178	1,178	1,117

EGRA Zero Scores

English

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp., % correct	Reading comp., % correct
VARIABLE	Grade 2	Grade 2	Grade 2	Grade 2	Grade 3	Grade 3	Grade 3	Grade 3	Grade 4	Grade 4	Grade 4	Grade 4	Grade 2	Grade 3	Grade 4
Treatment = Basa	1.751**	1.103	1.448*	1.532**	1.874**	1.344	0.950	1.103	0.737	0.674	0.742	1.386	1.308	0.865	0.735
	(0.0244)	(0.602)	(0.0899)	(0.0357)	(0.0273)	(0.332)	(0.820)	(0.813)	(0.617)	(0.350)	(0.444)	(0.747)	(0.201)	(0.315)	(0.142)
G2 English letters zero scores	3.650***														
	(1.82e-05)														
G2 average class size	0.982	0.999	1.012	1.010									0.984		
	(0.200)	(0.882)	(0.167)	(0.363)									(0.122)		
2017 outcomes	1.046	1.275	1.720**	1.071	0.436**	1.711	1.059	1.947*						0.973	
	(0.901)	(0.251)	(0.0451)	(0.818)	(0.0231)	(0.158)	(0.845)	(0.0876)						(0.849)	
Age of student	0.992	1.144	1.085	0.946	1.023	0.760**	0.792**	0.714**	0.959	1.330	1.174	1.071	1.220	0.925	1.249*
	(0.973)	(0.237)	(0.473)	(0.658)	(0.885)	(0.0346)	(0.0133)	(0.0236)	(0.886)	(0.286)	(0.458)	(0.931)	(0.131)	(0.345)	(0.0963)
Sex of student	2.435***	2.016***	1.494*	1.989**	1.418	1.351	1.830***	1.883	0.898	1.933	2.091**	0.502	1.407*	1.525***	1.512**
	(0.000718)	(0.00542)	(0.0761)	(0.0130)	(0.233)	(0.286)	(0.00849)	(0.111)	(0.849)	(0.106)	(0.0233)	(0.323)	(0.0606)	(0.00114)	(0.0474)
Region 7	0.771	2.131**	1.868*	0.888	1.953*	2.268*	1.817*	1.861	11.03***	7.457***	2.353	5.150	1.743**	1.557*	1.755
	(0.582)	(0.0107)	(0.0604)	(0.801)	(0.0919)	(0.0716)	(0.0952)	(0.330)	(0.00844)	(0.000292)	(0.239)	(0.208)	(0.0486)	(0.0874)	(0.170)
Mother tongue	0.558	0.627	0.669	0.447	0.638	0.348	0.625	0.0598***		0.0226***	0.124***		2.335*	1.049	0.842
	(0.537)	(0.501)	(0.591)	(0.447)	(0.663)	(0.388)	(0.629)	(0.000709)		(0.00185)	(0.00957)		(0.0723)	(0.875)	(0.822)
Households assets index	1.249**	1.103	1.151**	1.097	0.960	0.970	1.011	1.001	1.090	1.027	1.151	1.285	1.057	1.102**	1.131*
	(0.0164)	(0.154)	(0.0357)	(0.261)	(0.646)	(0.778)	(0.889)	(0.996)	(0.629)	(0.865)	(0.287)	(0.521)	(0.336)	(0.0174)	(0.0515)
Student attended kindergarten	1.988	4.167***	2.378**	1.153	3.327***	0.523	0.784	0.115**	0.659	2.298	0.281	0.208	2.947*	1.266	1.237
	(0.215)	(0.001000)	(0.0401)	(0.811)	(0.00995)	(0.395)	(0.579)	(0.0341)	(0.643)	(0.260)	(0.266)	(0.425)	(0.0541)	(0.379)	(0.624)
Student's age when first	1.126	0.859	0.981	0.895	0.765	1.033	1.318	1.151	0.435	0.700	0.589	0.353	0.867	1.123	0.713*

attended kindergarten															
Student does homework	(0.690)	(0.485)	(0.936)	(0.680)	(0.406)	(0.905)	(0.246)	(0.688)	(0.240)	(0.354)	(0.117)	(0.380)	(0.476)	(0.350)	(0.0958)
Student receives homework help	0.923	0.909	1.029	0.919	1.029	1.203**	1.105	1.050	1.512*	1.046	1.185	0.789	1.114*	0.982	1.030
Student has books at home	(0.291)	(0.193)	(0.629)	(0.145)	(0.756)	(0.0490)	(0.309)	(0.686)	(0.0772)	(0.786)	(0.200)	(0.299)	(0.0721)	(0.723)	(0.647)
Student brings books home from school	0.821	1.388	1.517*	1.121	0.731	0.367***	0.427***	0.572	0.623	0.569	1.146	0.0905***	0.911	0.991	0.595***
Highest level of education in the household	(0.530)	(0.223)	(0.0555)	(0.666)	(0.290)	(0.00435)	(0.00423)	(0.141)	(0.503)	(0.212)	(0.760)	(0.00307)	(0.614)	(0.942)	(0.00979)
Student's age when first read to	1.067	1.194	0.746	1.332	1.172	0.783	0.867	0.573	2.277	1.187	0.978	1.980	1.094	0.979	0.991
School assets index	(0.842)	(0.474)	(0.184)	(0.350)	(0.683)	(0.468)	(0.602)	(0.243)	(0.254)	(0.678)	(0.952)	(0.450)	(0.673)	(0.880)	(0.971)
Highest grade instructed	0.944	1.470	1.983*	2.017**	0.180*	2.029**	1.367	1.350	0.0257***	1.292	3.797**	1.189	1.081	0.977	0.863
# of days school is closed	(0.885)	(0.291)	(0.0683)	(0.0326)	(0.0850)	(0.0285)	(0.357)	(0.641)	(0.00244)	(0.646)	(0.0185)	(0.879)	(0.825)	(0.921)	(0.698)
Total enrollment	1.221	0.963	0.999	1.080	1.211	1.063	1.517	1.944	1.401	1.497	0.994	0.710	1.045	1.111	1.237
	(0.496)	(0.683)	(0.997)	(0.369)	(0.722)	(0.667)	(0.123)	(0.131)	(0.659)	(0.463)	(0.981)	(0.107)	(0.667)	(0.242)	(0.218)
	1.191	0.885	0.843*	0.848	0.841	0.774*	0.771**	0.633**	0.909	0.691	0.517***	3.069**	0.721***	0.793***	0.862
	(0.153)	(0.253)	(0.0875)	(0.189)	(0.282)	(0.0826)	(0.0478)	(0.0289)	(0.819)	(0.223)	(0.000238)	(0.0422)	(0.00168)	(0.00212)	(0.242)
	1.041	1.151	0.958	1.231	0.949	0.628**	1.080	0.796	1.071	0.763	0.774	0.939	1.196*	0.950	0.886
	(0.794)	(0.215)	(0.718)	(0.302)	(0.696)	(0.0354)	(0.554)	(0.409)	(0.893)	(0.386)	(0.338)	(0.866)	(0.0662)	(0.428)	(0.347)
	1.165	0.627	0.706	0.158***	1.147	2.212**	1.505	0.264	0.00822**	0.553	1.009	20.27***	0.398*	1.059	0.514
	(0.602)	(0.194)	(0.328)	(0.000737)	(0.728)	(0.0276)	(0.234)	(0.233)	(0.0389)	(0.657)	(0.993)	(0.00498)	(0.0647)	(0.748)	(0.196)
	1.007	1.038	1.045	1.117	1.073	1.014	1.023	0.949	0.819**	0.962	0.968	0.914	1.007	0.988	0.969
	(0.885)	(0.248)	(0.296)	(0.172)	(0.342)	(0.754)	(0.460)	(0.355)	(0.0359)	(0.532)	(0.483)	(0.425)	(0.914)	(0.590)	(0.200)
	1.001	1.000	1.000	0.999	1.001	1.000	1.000	1.000	1.001	1.001	1.002*	1.010*	1.000	1.000	1.001***
	(0.260)	(0.587)	(0.614)	(0.124)	(0.244)	(0.758)	(0.949)	(0.442)	(0.332)	(0.303)	(0.0578)	(0.0535)	(0.156)	(0.147)	(4.52e-05)

Months of teaching experience	0.999 (0.471)	1.002* (0.0618)	1.001 (0.494)	0.999 (0.657)	0.998 (0.356)	1.001 (0.474)	0.999 (0.360)	0.998 (0.371)	1.006 (0.125)	1.001 (0.721)	0.999 (0.486)	0.996 (0.318)	1.001 (0.183)	1.001 (0.224)	1.001 (0.203)
Students in small groups by reading level	0.653 (0.373)	0.909 (0.838)	0.947 (0.887)	1.512 (0.370)	0.151*** (0.000994)	0.114* (0.0566)	2.057* (0.0660)	0.732 (0.761)	1.425 (0.728)	0.690 (0.586)	0.918 (0.914)	37.16*** (0.000130)	0.856 (0.593)	1.480 (0.212)	1.435 (0.198)
Post-bachelor degree	0.704 (0.468)	1.325 (0.313)	1.523 (0.120)	0.634 (0.218)	1.062 (0.877)	0.800 (0.635)	1.499 (0.265)	0.712 (0.509)	0.665 (0.480)	2.139 (0.177)	0.768 (0.710)	0.521 (0.329)	0.698 (0.315)	0.695* (0.0837)	1.089 (0.805)
English familiar words zero scores – G2		29.20*** (0)													
English unfamiliar words zero scores – G2			23.30*** (0)												
English ORF zero scores				14.12*** (0)											
English letters zero scores					6.216*** (1.54e-05)				4.723** (0.0255)						
G3 average class size					0.990 (0.454)	1.016 (0.156)	0.995 (0.640)	1.007 (0.684)						0.995 (0.273)	
English familiar words zero scores						109.8*** (0)				62.44*** (0)					
English unfamiliar words zero scores							33.00*** (0)				37.15*** (0)				
English ORF zero scores								43.68***				29,901***			

</														

Filipino

	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp., % correct	Reading comp., % correct
VARIABLE	Grade 2	Grade 2	Grade 2	Grade 2	Grade 3	Grade 3	Grade 3	Grade 3	Grade 4	Grade 4	Grade 4	Grade 4	Grade 2	Grade 3	Grade 4
Treatment = Basa	1.038	1.316	1.574*	1.466*	1.394	0.942	1.204	2.012*	1.155	0.638	4.333***	2.971	1.261	1.077	0.480***
	(0.894)	(0.302)	(0.0528)	(0.0600)	(0.208)	(0.886)	(0.565)	(0.0800)	(0.746)	(0.538)	(0.00794)	(0.334)	(0.227)	(0.572)	(0.00432)
Filipino letters zero scores – G2	5.923***														
	(3.75e-08)														
G2 average class size	0.970**	0.991	0.999	0.981*									0.967***		
	(0.0104)	(0.562)	(0.953)	(0.0715)									(0.000833)		
2017 outcomes	0.495**	3.332***	2.811***	2.988***	0.751	0.955	1.132	2.736**						0.503***	
	(0.0133)	(0.00743)	(0.00271)	(0.00276)	(0.340)	(0.910)	(0.725)	(0.0213)						(2.87e-05)	
Age of student	0.904	1.060	0.987	1.034	1.123	1.057	0.809	0.989	0.871	5.537***	1.236	0.562*	1.072	0.878	1.172
	(0.403)	(0.769)	(0.927)	(0.862)	(0.484)	(0.849)	(0.183)	(0.963)	(0.661)	(0.000228)	(0.680)	(0.0671)	(0.633)	(0.174)	(0.221)
Sex of student	1.367*	1.475	2.003**	1.683**	1.291	2.664**	1.138	2.773**	1.716	1.022	0.580	3.069	1.720**	1.532***	1.373
	(0.0679)	(0.246)	(0.0192)	(0.0134)	(0.260)	(0.0132)	(0.705)	(0.0371)	(0.166)	(0.977)	(0.369)	(0.176)	(0.0137)	(0.000889)	(0.154)
Region 7	2.660**	2.945**	2.076	16.81***	3.541***	3.301**	0.953	0.964	2.146	10.90**	0.197*	38.57*	1.438	0.860	0.277***
	(0.0265)	(0.0315)	(0.102)	(7.53e-11)	(0.000989)	(0.0278)	(0.926)	(0.944)	(0.351)	(0.0306)	(0.0793)	(0.0614)	(0.210)	(0.482)	(0.00680)
Mother tongue	0.0224***	0.417	0.409	0.883	0.987	0.0580**	1.055	0.0362***	2.910		0.0704		0.542	1.264	1.383
	(3.06e-09)	(0.319)	(0.540)	(0.788)	(0.985)	(0.0189)	(0.966)	(0.00384)	(0.157)		(0.103)		(0.252)	(0.504)	(0.661)
Households assets index	1.078	1.102	1.065	1.121*	1.040	1.131	0.965	1.115	1.191	0.969	0.537**	0.899	1.004	1.046	0.951
	(0.347)	(0.360)	(0.497)	(0.0815)	(0.700)	(0.434)	(0.735)	(0.340)	(0.237)	(0.897)	(0.0213)	(0.574)	(0.952)	(0.285)	(0.520)
Student attended kindergarten	1.883	1.975	0.720	1.241	1.790	0.462	0.894	1.527	1.574	1.059	0.745	0.0158*	1.964	0.754	1.274
	(0.189)	(0.466)	(0.563)	(0.753)	(0.218)	(0.519)	(0.855)	(0.604)	(0.546)	(0.974)	(0.892)	(0.0556)	(0.210)	(0.395)	(0.512)
Student's age when first attended kindergarten	0.796	1.162	0.745	0.943	1.044	0.634	0.878	0.868	0.388**	0.0396***	0.222**	1.183	1.026	0.889	0.885

		(0.320)	(0.616)	(0.321)	(0.740)	(0.860)	(0.194)	(0.644)	(0.678)	(0.0290)	(0.00123)	(0.0222)	(0.786)	(0.883)	(0.357)	(0.486)
Student does homework		1.043	1.157	0.997	1.018	0.968	1.009	0.950	1.089	1.084	1.528*	0.817	2.484***	0.917	1.069	0.885*
		(0.638)	(0.223)	(0.972)	(0.774)	(0.662)	(0.935)	(0.635)	(0.294)	(0.642)	(0.0597)	(0.355)	(5.69e-05)	(0.143)	(0.136)	(0.0844)
Student receives homework help		1.388	0.893	2.159***	1.105	1.209	0.523	0.645	0.580	1.213	1.121	0.858	0.341	0.816	0.858	1.110
		(0.173)	(0.744)	(0.000473)	(0.647)	(0.472)	(0.167)	(0.191)	(0.142)	(0.688)	(0.886)	(0.830)	(0.237)	(0.325)	(0.252)	(0.607)
Student has books at home		1.044	1.100	0.871	1.086	0.741	0.616	1.155	1.275	1.995	0.470	0.517	1.417	1.556**	1.220	1.207
		(0.882)	(0.775)	(0.614)	(0.773)	(0.343)	(0.294)	(0.719)	(0.639)	(0.159)	(0.345)	(0.333)	(0.621)	(0.0441)	(0.142)	(0.436)
Student brings books home from school		0.576	1.134	2.244*	1.616*	0.628	2.804	1.776	1.503	0.557	4.105***	2.770*	1.042	1.711*	1.268	1.146
		(0.126)	(0.747)	(0.0599)	(0.0990)	(0.462)	(0.138)	(0.160)	(0.558)	(0.443)	(0.00208)	(0.0624)	(0.972)	(0.0880)	(0.300)	(0.736)
Highest level of education in the household		1.607	1.009	1.081	1.131	1.250	1.186	0.961	1.565	1.027	1.944	0.802	2.993	1.043	1.497***	1.630**
		(0.125)	(0.943)	(0.649)	(0.155)	(0.618)	(0.738)	(0.862)	(0.334)	(0.924)	(0.431)	(0.145)	(0.335)	(0.752)	(0.00215)	(0.0258)
Student's age when first read to		0.894	0.893	0.895	0.950	0.654***	0.751	0.655***	0.709	0.982	0.552*	1.937***	0.331***	0.868	0.924	0.902
		(0.361)	(0.483)	(0.405)	(0.680)	(0.00297)	(0.285)	(0.00464)	(0.122)	(0.944)	(0.0811)	(0.000560)	(0.00525)	(0.231)	(0.344)	(0.342)
School assets index		0.687*	1.376*	1.042	1.050	0.748**	0.873	0.848	1.317	0.546*	0.366	0.253**	0.242**	1.025	1.009	0.910
		(0.0696)	(0.0660)	(0.751)	(0.661)	(0.0381)	(0.610)	(0.444)	(0.106)	(0.0971)	(0.120)	(0.0185)	(0.0114)	(0.819)	(0.905)	(0.559)
Highest grade instructed		1.249	0.148***	1.215	0.497	1.493	0.392	0.787	2.331	2.355	0.546	1.152	8.480	1.273	0.852	0.307***
		(0.486)	(0.00640)	(0.505)	(0.417)	(0.243)	(0.216)	(0.733)	(0.203)	(0.129)	(0.515)	(0.902)	(0.337)	(0.547)	(0.470)	(0.000198)
# of days school is closed		0.995	0.951	1.089	0.984	0.976	1.007	1.015	1.003	1.004	1.093	1.003	0.874	1.082	0.975	0.987
		(0.899)	(0.408)	(0.175)	(0.714)	(0.549)	(0.883)	(0.730)	(0.969)	(0.912)	(0.155)	(0.972)	(0.140)	(0.323)	(0.386)	(0.561)
Total enrollment		1.001**	1.000	0.999	1.001	1.000	1.000*	1.000*	0.999***	1.003**	1.001	1.001*	0.999	1.000	1.000	1.001***
		(0.0445)	(0.717)	(0.185)	(0.273)	(0.235)	(0.0663)	(0.0684)	(0.000878)	(0.0380)	(0.172)	(0.0684)	(0.295)	(0.162)	(0.629)	(0.00179)
Months of teaching experience		1.001	1.002	1.000	1.000	1.000	0.999	0.999	0.999	0.998	0.991*	1.000	1.007**	1.001	1.001*	1.000
		(0.332)	(0.194)	(0.690)	(0.759)	(0.716)	(0.474)	(0.515)	(0.575)	(0.258)	(0.0708)	(0.986)	(0.0492)	(0.330)	(0.0833)	(0.855)

Students in small groups by reading level	1.503	0.544	0.399*	0.518*	0.857	1.224	0.463	0.0627***	0.332	0.915	0.463	0.123**	0.900	0.651**	1.088
	(0.513)	(0.408)	(0.0954)	(0.0972)	(0.752)	(0.805)	(0.381)	(0.000447)	(0.242)	(0.882)	(0.236)	(0.0452)	(0.776)	(0.0320)	(0.810)
Post-bachelor degree	0.821	1.037	1.249	2.706**	0.972	6.588*	1.147	1.531	0.405	0.602	0.507	0.0893**	1.707	1.121	0.841
	(0.586)	(0.943)	(0.612)	(0.0171)	(0.926)	(0.0529)	(0.791)	(0.419)	(0.217)	(0.524)	(0.284)	(0.0141)	(0.267)	(0.564)	(0.639)
Filipino familiar words zero scores – G2	91.49***														
	(0)														
English unfamiliar words zero scores – G2	75.34***														
	(0)														
Filipino ORF zero scores	1.099														
	(0.798)														
Filipino letters zero scores	6.803***														
	(0)														
G3 average class size	0.987														
	(0.390)														
Filipino familiar words zero scores	305.8***														
	(0)														
Filipino unfamiliar words zero scores	97.71***														
	(0)														
Filipino ORF zero scores	123.1***														
	(8.32e-10)														
	948.4***														
	(7.37e-06)														
	2,990***														
	(0)														
	599.1***														
	(9.36e-07)														

G4 average class size									0.979	0.965*	0.974	0.974			1.008
									(0.296)	(0.0980)	(0.407)	(0.399)			(0.398)
Filipino reading comp													9.278***	3.948***	4.219***
													(0)	(0)	(2.53e-09)
Constant	142.0*	83,900*	1.330	112.2	0.349	35,899*	348.5	1.439	17.59	70,390	966.7	0.156	0.0997	11.76	630.4**
	(0.0805)	(0.0567)	(0.935)	(0.482)	(0.728)	(0.0801)	(0.306)	(0.953)	(0.637)	(0.123)	(0.493)	(0.902)	(0.455)	(0.185)	(0.0241)
Observations	2,537	2,537	2,537	2,537	2,568	2,568	2,568	2,568	1,180	1,149	1,180	1,149	1,309	2,568	1,180

Teacher Regression Results

VARIABLES	Attended session on early grade reading/writing this/past year	# of training days received in tot last year	# of training days received for mother tongue reading	Have a copy of DepEd Teacher's manual	Puts students in small groups several times per month	Very familiar with grammar rules and alphabet in MT	1:1 ratio reading learners' manuals in MT	1:1 ratio of other reading materials in MT	very comfortabl e providing instruction in MT	Minutes of class time using MT	Minutes of class time using Filipino	Minutes of class time using Filipino	Teacher displayed 75%+ of relevant general teaching behaviors	General teacher behavior index	Reading- specific practices index
Treatment = Basa	1.826***	1.282	1.565**	0.426**	1.926***	0.874	0.921	1.211	1.151	5.479	-0.234	0.104	-0.00980	0.00583	-0.0149
	(0.00155)	(0.214)	(0.0449)	(0.0361)	(0.00241)	(0.428)	(0.670)	(0.402)	(0.407)	(0.621)	(0.961)	(0.986)	(0.796)	(0.592)	(0.290)
School reading average	1.288	1.245	1.878	1.100	1.656	0.972	1.051	0.997	0.983	12.69***	-1.854	-2.527*	-0.00834	0.00235	-0.0144
	(0.380)	(0.476)	(0.119)	(0.692)	(0.168)	(0.761)	(0.584)	(0.972)	(0.851)	(0.00305)	(0.279)	(0.0845)	(0.734)	(0.764)	(0.219)
School math average	1.166	1.267	0.865	0.837	1.082	1.066	1.120	1.269	1.192	-3.032	-0.0142	-3.123	-0.00612	0.00226	0.0124
	(0.340)	(0.169)	(0.359)	(0.458)	(0.654)	(0.608)	(0.454)	(0.167)	(0.174)	(0.682)	(0.998)	(0.424)	(0.888)	(0.846)	(0.469)
Mother tongue is native language	0.643	0.457	1.065	0.962	0.334*	2.157*	2.294**	0.909	1.307	14.37	-27.54	-3.416	0.0448	-0.0260	0.0658
	(0.421)	(0.147)	(0.894)	(0.958)	(0.0918)	(0.0944)	(0.0343)	(0.827)	(0.525)	(0.559)	(0.129)	(0.785)	(0.770)	(0.404)	(0.256)
1:1 ratio reading learners' manuals in Filipino	1.547*	1.291	1.112	2.471**	2.189***	0.796	11.12***	1.638	0.996	3.181	-7.610	-2.586	-0.000272	0.00392	0.0121
	(0.0747)	(0.323)	(0.701)	(0.0369)	(0.00511)	(0.289)	(0)	(0.119)	(0.986)	(0.828)	(0.385)	(0.742)	(0.996)	(0.799)	(0.530)
1:1 ratio of other	1.042	1.129	0.921	0.579	0.587*	1.785***	1.983***	19.51***	1.197	15.91	-15.88**	-15.08**	-0.114**	-0.0263*	-0.0478**

reading materials in Filipino															
Sex of teacher	(0.871)	(0.652)	(0.755)	(0.197)	(0.0580)	(0.00515)	(0.00266)	(0)	(0.388)	(0.230)	(0.0343)	(0.0384)	(0.0456)	(0.0849)	(0.0174)
	1.195	1.133	1.534	0.818	2.454**	1.421	3.042***	1.233	0.863	0.127	-16.10	-7.499	-0.105	-0.0309	-0.0481
School assets index	(0.654)	(0.775)	(0.311)	(0.752)	(0.0191)	(0.316)	(0.00657)	(0.673)	(0.680)	(0.996)	(0.269)	(0.599)	(0.122)	(0.125)	(0.120)
	0.679**	0.680**	0.779	1.294	1.031	1.011	0.870	0.924	1.010	-6.109	2.952	6.332*	-0.0321	-0.0125*	-0.0220**
Low-level classroom	(0.0312)	(0.0213)	(0.125)	(0.226)	(0.871)	(0.933)	(0.307)	(0.618)	(0.940)	(0.432)	(0.545)	(0.0579)	(0.221)	(0.0701)	(0.0155)
	1.039	0.895	0.754	0.855	1.791	0.714	0.493*	0.314**	0.791	9.520	-2.772	-0.769	-0.0822	-0.0862***	-0.0495
Age of teacher	(0.930)	(0.805)	(0.556)	(0.831)	(0.213)	(0.346)	(0.0632)	(0.0173)	(0.528)	(0.667)	(0.794)	(0.934)	(0.475)	(0.00643)	(0.200)
	1.016	1.014	1.022*	1.063**	0.988	1.016	0.991	1.016	0.998	0.496	0.326	-0.363	-0.00482*	0.000517	-0.00170*
Post-bachelor degree	(0.168)	(0.237)	(0.0883)	(0.0135)	(0.362)	(0.107)	(0.430)	(0.231)	(0.849)	(0.437)	(0.277)	(0.347)	(0.0659)	(0.489)	(0.0995)
	0.767	0.999	0.841	0.825	0.856	0.986	0.627**	0.707	0.976	-35.61**	9.917	8.468	-0.0775	-0.0493***	-0.0561***
Reports reading for pleasure outside the classroom	(0.270)	(0.998)	(0.522)	(0.681)	(0.596)	(0.949)	(0.0494)	(0.231)	(0.910)	(0.0102)	(0.187)	(0.299)	(0.173)	(0.00182)	(0.00403)
	1.149	1.036	1.407	1.497	1.522	0.745	0.859	1.338	0.977	-46.71***	1.543	6.169	0.0677	-0.0109	0.00723
Total enrollment	(0.631)	(0.907)	(0.300)	(0.358)	(0.167)	(0.201)	(0.545)	(0.362)	(0.919)	(0.000506)	(0.823)	(0.295)	(0.307)	(0.554)	(0.766)
	1.000	1.000	1.001	1.000	0.999***	1.000	1.000	1.000	1.000	-0.0640***	-0.0214***	-0.0129	-1.95e-05	1.19e-05	2.83e-05
G2 average class size	(0.416)	(0.933)	(0.126)	(0.911)	(0.000157)	(0.218)	(0.992)	(0.551)	(0.200)	(0.00288)	(0.00771)	(0.131)	(0.801)	(0.617)	(0.340)
	1.000	0.994	0.974*	1.001	1.011	1.025**	0.990	1.002	0.994	-1.008	0.109	0.554*	0.00564*	0.00182*	0.00275**
G3 average class size	(0.986)	(0.686)	(0.0724)	(0.969)	(0.398)	(0.0370)	(0.432)	(0.925)	(0.587)	(0.154)	(0.759)	(0.0541)	(0.0611)	(0.0659)	(0.0207)
	1.021*	1.020	1.025**	1.016	0.997	0.994	0.994	1.014	1.008	0.312	0.319	-0.0404	0.00168	-8.43e-05	-0.000231
G4 average class size	(0.0906)	(0.132)	(0.0238)	(0.289)	(0.801)	(0.530)	(0.645)	(0.331)	(0.428)	(0.622)	(0.212)	(0.883)	(0.444)	(0.895)	(0.792)
	1.007	1.007	1.003	0.978	0.996	0.996	1.025**	0.997	0.997	1.933**	-0.713	-0.563*	0.00106	-0.000342	0.000658
	(0.618)	(0.657)	(0.824)	(0.168)	(0.800)	(0.712)	(0.0437)	(0.853)	(0.802)	(0.0224)	(0.109)	(0.0564)	(0.697)	(0.642)	(0.496)
Constant	0.379	0.685	0.0715**	2.324	4.204	0.179**	0.0462***	0.0150***	1.477	169.9***	126.4***	108.0***	0.793***	0.924***	0.836***
	(0.302)	(0.698)	(0.0125)	(0.620)	(0.199)	(0.0357)	(0.000362)	(5.96e-05)	(0.629)	(0.000549)	(6.49e-06)	(3.56e-07)	(0.00108)	(0)	(0)
Observations	982	816	702	983	983	972	983	983	959	983	983	983	651	651	651
R-squared										0.086	0.058	0.039	0.114	0.144	0.186

Grade-disaggregated Teacher Regression Results

	Attended session on early grade reading and writing this/last yr				# of training days did you received in tot last yr				# of training days for mother tongue reading instruction			
Mean	Total	G2	G3	G4	Total	G2	G3	G4	Total	G2	G3	G4
Standard	0.62	0.65	0.66	0.53	8.85	8.86	8.7	9.03	3.18	4.54	3	1.49
Basa	0.75	0.86	0.87	0.47	8.04	8.72	7.86	7.14	2.34	3.01	2.5	1.07
Total	0.74	0.85	0.86	0.47	8.07	8.73	7.89	7.23	2.38	3.08	2.52	1.09
Trt effect		4.933***	1.218	1.588		2.225	0.0146	0.013		1.682	-0.0181	-1.474
	Minutes of class time using Filipino				Minutes of class time using English				Puts students in small groups several times per mo.			
Mean	Total	G2	G3	G4	Total	G2	G3	G4	Total	G2	G3	G4
Standard	74.55	56.66	56.3	120.33	78.82	55.22	58.02	135.7	0.73	0.74	0.7	0.75
Basa	74.98	56.52	52.37	125.97	75.42	55.89	62.51	115.93	0.83	0.82	0.88	0.78
Total	74.96	56.52	52.5	125.75	75.55	55.86	62.35	116.69	0.82	0.82	0.87	0.78
Trt effect		-0.462	-0.843	35.91**		-1.492*	9.702	0.39		1.729	0.572	0.549
	Reading-specific practices index				Very familiar with grammar rules and alphabet in mother tongue				1:1 ratio reading learners' manuals in mother tongue			
Mean	Total	G2	G3	G4	Total	G2	G3	G4	Total	G2	G3	G4
Standard	0.83	0.84	0.84	0.83	0.54	0.53	0.57	0.54	0.56	0.69	0.85	0.07
Basa	0.79	0.80	0.79	0.78	0.5	0.55	0.52	0.41	0.56	0.78	0.7	0.11
Total	0.79	0.80	0.79	0.78	0.5	0.54	0.52	0.42	0.56	0.78	0.7	0.1
Trt effect		-0.010	0.008	-0.031		0.834	5.550***	0.535		1.315	0.862	1.542
	Have a copy of DepEd Teacher's manual				Teacher displayed 75%+ of relevant reading-specific teaching behaviors				1:1 ratio of other reading materials in Mother Tongue			
Mean	Total	G2	G3	G4	Total	G2	G3	G4	Total	G2	G3	G4
Standard	0.97	0.99	0.96	0.95	0.7	0.71	0.73	0.65	0.21	0.25	0.29	0.06
Basa	0.92	0.91	0.94	0.91	0.62	0.67	0.61	0.57	0.3	0.46	0.34	0.07

Total	0.92	0.91	0.94	0.91	0.62	0.67	0.61	0.57	0.3	0.45	0.34	0.07
Trt effect		0.0986**	4.147***	1.197		0.845	0.646	0.680		0.829	0.853	0.737
	Minutes of class time using MT				General teacher behavior index				Teacher very comfortable providing instruction in mother tongue			
Mean	Total	G2	G3	G4	Total	G2	G3	G4	Total	G2	G3	G4
Standard	189.43	242.56	226.7	71.79	0.91	0.91	0.91	0.91	0.56	0.55	0.52	0.62
Basa	196.88	235.51	229.61	107.97	0.9	0.91	0.9	0.89	0.61	0.65	0.58	0.61
Total	196.59	235.82	229.51	106.59	0.9	0.91	0.9	0.89	0.61	0.65	0.58	0.61
Trt effect		1.121	-0.883	-0.66		0.015	0.008	-0.001		1.658	0.413*	0.542

ANNEX 7 – ALTERNATE REGRESSION MODELS

	Grade 2						Grade 3						Grade 4					
	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
Regression Results																		
2 Year Results - English	4.564*** (0.00328)	5.191* (0.0665)	3.662** (0.0163)	6.810** (0.0165)	-0.0233 (0.653)		5.056*** (0.000480)	2.073 (0.454)	0.890 (0.606)	-0.448 (0.889)	-0.0923 (0.166)		1.473 (0.221)	-0.232 (0.867)	0.861 (0.579)	0.0721 (0.977)	-0.0591 (0.103)	
2 Year Results - Filipino	3.142* (0.0619)	6.497*** (0.000649)	4.356*** (0.000575)	7.239*** (0.00206)	-0.0327 (0.255)		2.637 (0.138)	1.058 (0.566)	3.330*** (0.00825)	-1.219 (0.640)	-0.0367 (0.150)		1.936 (0.262)	0.738 (0.708)	-0.734 (0.481)	-1.369 (0.279)	-0.0778*** (0.00489)	
Nonequated 2 Year Results - English	4.856*** (0.00244)	5.917** (0.0428)	4.205*** (0.00796)	7.735** (0.0130)	-0.0178 (0.650)		5.110*** (0.000572)	2.178 (0.454)	1.036 (0.571)	-1.044 (0.757)	-0.0643 (0.188)		1.018 (0.401)	-0.264 (0.853)	0.907 (0.566)	-0.577 (0.808)	-0.0485 (0.215)	
Nonequated 2 Year Results - Filipino	3.205* (0.0703)	6.927*** (0.000333)	4.474*** (0.000269)	7.513*** (0.00150)	-0.0229 (0.394)		2.729 (0.124)	1.007 (0.587)	2.968** (0.0202)	-1.991 (0.435)	-0.0361 (0.167)		1.624 (0.353)	0.622 (0.755)	-0.97 (0.356)	-1.72 (0.172)	-0.0761*** (0.00520)	
Unweighted - English	2.424*** (0.000113)	1.502* (0.0755)	0.793 (0.165)	1.170 (0.196)	0.0163 (0.556)	-0.0136 (0.633)	1.722*** (0.00386)	1.572* (0.0543)	1.628*** (0.00528)	0.177 (0.820)	0.0308 (0.242)	0.0158 (0.548)	1.617* (0.0868)	-0.140 (0.876)	-0.719 (0.359)	-0.293 (0.794)	-0.0666* (0.0606)	-0.0661* (0.0649)
Unweighted - Filipino	1.327** (0.0372)	1.297** (0.0318)	1.040** (0.0180)	1.665 (0.143)	-0.00960 (0.518)	-0.0289* (0.0736)	0.763 (0.195)	1.155** (0.0496)	0.806** (0.0351)	0.692 (0.352)	0.00186 (0.857)	-0.00234 (0.826)	0.850 (0.320)	-0.922 (0.147)	-0.870* (0.0751)	-1.432 (0.112)	-0.0769*** (0.000118)	-0.0797*** (6.43e-05)
Sex disaggregated - English	3.528*** (0.00289)	2.250 (0.135)	2.594** (0.0326)	2.411 (0.239)	0.0508 (0.369)	0.0241 (0.678)	2.678** (0.0346)	1.369 (0.363)	1.590* (0.0613)	1.196 (0.382)	-0.0587 (0.294)	-0.0765 (0.121)	-0.0951 (0.955)	1.050 (0.634)	-0.421 (0.790)	1.624 (0.513)	-0.0364 (0.624)	-0.0487 (0.507)
Sex disaggregated - Filipino	1.521 (0.234)	1.344 (0.188)	1.905* (0.0570)	4.902** (0.0455)	-0.0196 (0.436)	-0.0488* (0.0717)	1.272 (0.257)	0.304 (0.798)	0.708 (0.309)	-1.975 (0.353)	-0.00957 (0.677)	0.00255 (0.907)	-1.408 (0.408)	-0.410 (0.774)	-0.423 (0.735)	0.423 (0.813)	-0.0798** (0.0295)	-0.0899** (0.0156)
Controlling for ELLN schools - English	2.067** (0.0197)	1.462 (0.232)	1.053 (0.239)	1.739 (0.217)	0.0169 (0.690)	-0.00377 (0.930)	1.717* (0.0522)	0.758 (0.532)	1.055 (0.152)	-0.0440 (0.964)	-0.00172 (0.964)	-0.0257 (0.520)	2.192* (0.0671)	0.152 (0.900)	0.0802 (0.945)	-0.471 (0.696)	-0.0746* (0.0916)	-0.0820* (0.0680)
Controlling for ELLN schools - Filipino	1.104 (0.268)	1.249 (0.159)	1.287* (0.0542)	3.078* (0.0748)	0.00640 (0.773)	-0.0150 (0.518)	0.385 (0.687)	-0.108 (0.915)	0.418 (0.485)	-2.003 (0.193)	-0.00964 (0.493)	-0.00702 (0.612)	-0.167 (0.880)	-0.449 (0.533)	-0.207 (0.766)	-0.655 (0.556)	-0.0653** (0.0210)	-0.0686** (0.0177)
Excluding ELLN Schools - English	2.026** (0.0236)	1.334 (0.279)	1.017 (0.259)	1.508 (0.283)	0.0137 (0.746)	-0.00495 (0.909)	1.728* (0.0540)	0.783 (0.521)	1.038 (0.163)	-0.0864 (0.929)	-0.00510 (0.897)	-0.0292 (0.475)	1.953* (0.0912)	-0.448 (0.687)	-0.225 (0.838)	0.230 (0.851)	-0.0833* (0.0652)	-0.0891* (0.0553)
Excluding ELLN Schools - Filipino	1.104 (0.272)	1.133 (0.203)	1.208* (0.0720)	2.954* (0.0870)	0.00533 (0.811)	-0.0148 (0.521)	0.496 (0.605)	-0.0566 (0.955)	0.417 (0.488)	-1.992 (0.198)	-0.00963 (0.492)	-0.00714 (0.607)	-0.394 (0.725)	-0.585 (0.413)	-0.211 (0.767)	-0.758 (0.505)	-0.0519* (0.0543)	-0.0546** (0.0441)

ELLN

The DepEd Early Language Literacy and Numeracy (ELLN) program is a DepEd program intended to develop literacy and numeracy skills among Kinder to Grade 3 pupils. Of our sample of 122 comparison schools, 20 are also ELLN schools, representing 16% of our comparison sample. To test the robustness of our findings, we analyze the data 1) controlling for ELLN participation, and 2) excluding ELLN schools. The results below show regression results controlling for participation in ELLN, followed by a table of impact estimates excluding the 20 ELLN schools. The impact estimates resulting from both of these alternate models are consistent with our primary model, lending further support for our findings and conclusions.

Controlling for ELLN – Filipino:

Grade 2

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Treatment = Basa	1.104 (0.268)	1.249 (0.159)	1.287* (0.0542)	3.078* (0.0748)	0.00640 (0.773)	-0.0150 (0.518)
ELLN school	0.137 (0.942)	-1.174 (0.545)	-0.773 (0.609)	-4.157 (0.311)	0.0236 (0.552)	0.0228 (0.556)
Filipino letters – G2	0.642*** (0)					
G2 average class size	-0.0605 (0.368)	-0.0750* (0.0835)	-0.00660 (0.823)	-0.197** (0.0135)	-0.00245** (0.0104)	-0.00213** (0.0178)
Households assets index	0.493 (0.215)	-0.0566 (0.833)	-0.0191 (0.920)	0.582 (0.243)	0.00931 (0.115)	0.00206 (0.754)
Student attended Kindergarten	8.414*** (0.00198)	0.671 (0.787)	0.474 (0.780)	-2.504 (0.788)	0.0903 (0.192)	0.0360 (0.605)
Student's age when first attended Kindergarten	-0.230 (0.797)	0.234 (0.797)	-0.0743 (0.910)	-2.114 (0.336)	0.00796 (0.674)	0.0395* (0.0963)
Student does homework	0.277 (0.475)	0.262 (0.357)	0.145 (0.455)	0.0492 (0.923)	-0.0120* (0.0695)	-0.0145* (0.0773)
Student receives homework help from a family member	0.564 (0.573)	-0.387 (0.635)	0.710 (0.232)	-0.00205 (0.999)	0.00554 (0.790)	-0.00468 (0.837)
Student has books at home	1.245 (0.355)	-0.114 (0.901)	-0.332 (0.686)	-0.902 (0.612)	0.0641*** (0.00849)	0.0638** (0.0203)
Student brings books home from school	-0.711 (0.602)	1.443 (0.212)	1.519 (0.149)	3.209 (0.289)	0.0613* (0.0916)	-0.0163 (0.694)
Highest level of education in the household	1.461*** (0.00230)	-0.242 (0.615)	0.132 (0.658)	1.961* (0.0956)	0.00535 (0.617)	0.0645*** (0.00987)

Age when student was first read to	-0.420 (0.483)	-0.626 (0.126)	-0.338 (0.312)	-0.572 (0.628)	-0.0104 (0.349)	-0.00453 (0.733)
School assets index	0.0109 (0.988)	0.714 (0.116)	0.472 (0.149)	0.147 (0.877)	0.0230** (0.0434)	0.0120 (0.272)
Highest grade instructed at this school	-1.544 (0.146)	0.00452 (0.997)	-0.502 (0.546)	1.177 (0.325)	0.000136 (0.992)	0.000978 (0.957)
# of days school is closed	-0.0642 (0.773)	0.226 (0.193)	0.254** (0.0474)	0.290 (0.268)	0.00277 (0.275)	0.000430 (0.849)
Total enrollment	0.00207 (0.346)	2.77e-05 (0.983)	0.00178** (0.0395)	0.00763*** (0.000746)	8.30e-05*** (6.60e-05)	7.31e-05*** (0.000224)
Months of teaching experience	-0.00333 (0.609)	0.00273 (0.541)	0.00143 (0.610)	0.00748 (0.362)	-5.67e-05 (0.559)	-4.63e-05 (0.666)
Students are put into small reading groups	2.826 (0.160)	-0.100 (0.939)	-0.511 (0.606)	-0.717 (0.779)	-0.00963 (0.823)	0.0123 (0.766)
Teacher has post-graduate degree	0.539 (0.739)	1.299 (0.263)	-0.165 (0.868)	11.71*** (0.000984)	0.0498 (0.120)	-0.00354 (0.928)
2017 outcomes	-4.495*** (0.00233)	5.639*** (7.81e-08)	0.550 (0.464)	7.691*** (0.000986)	-0.0702*** (0.00870)	-0.0977*** (0.00211)
Age of student	0.363 (0.613)	-0.649 (0.281)	-0.564 (0.214)	-0.519 (0.631)	-0.00817 (0.588)	-0.0142 (0.369)
Sex of student	2.992*** (0.000675)	2.829*** (0.000942)	1.990*** (0.000814)	9.006*** (4.38e-08)	0.0700*** (0.000643)	0.0564** (0.0176)
Region 7	3.897 (0.100)	5.874*** (1.92e-05)	3.974*** (2.37e-05)	16.00*** (1.67e-05)	0.00647 (0.848)	-0.134*** (0.00621)
Filipino familiar words – G2		0.994*** (0)				
Filipino unfamiliar words – G2			0.840*** (0)			
Filipino ORF – G2				0.622*** (0)		
Filipino reading comp. – G2					0.649*** (0)	
Filipino reading comp excl. non-readers –G2						0.500*** (0)

Constant	8.105 (0.434)	7.480 (0.515)	8.849 (0.265)	12.90 (0.627)	-0.00519 (0.979)	0.153 (0.512)
Observations	2,550	2,555	2,553	2,551	2,557	1,836

Grade 3

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Treatment = Basa	0.385 (0.687)	-0.108 (0.915)	0.418 (0.485)	-2.003 (0.193)	-0.00964 (0.493)	-0.00702 (0.612)
ELLN school	-1.624 (0.347)	-4.261*** (0.00309)	-1.081 (0.140)	-5.079** (0.0462)	-0.0287 (0.275)	-0.0362 (0.158)
Filipino letters – G2						
G2 average class size						
Households assets index	0.546** (0.0364)	0.146 (0.505)	0.260 (0.113)	0.286 (0.314)	0.00808** (0.0424)	0.00704* (0.0747)
Student attended Kindergarten	-0.308 (0.886)	1.407 (0.358)	-1.456 (0.159)	-0.0437 (0.983)	-0.00539 (0.854)	0.00255 (0.930)
Student's age when first attended Kindergarten	0.604 (0.476)	-0.186 (0.790)	0.153 (0.711)	0.262 (0.788)	-0.00935 (0.494)	-0.00761 (0.599)
Student does homework	0.899** (0.0105)	-0.326 (0.235)	0.148 (0.413)	0.334 (0.393)	0.00471 (0.312)	0.00325 (0.524)
Student receives homework help from a family member	0.0385 (0.967)	0.333 (0.630)	-0.183 (0.737)	-1.710 (0.133)	-0.00507 (0.763)	0.00444 (0.804)
Student has books at home	-1.265 (0.301)	-1.684* (0.0532)	-0.895 (0.128)	-0.502 (0.704)	0.00586 (0.695)	0.0135 (0.396)
Student brings books home from school	-2.541** (0.0300)	2.040* (0.0581)	0.346 (0.717)	5.214*** (0.000620)	0.0138 (0.597)	0.00544 (0.845)
Highest level of education in the household	1.077* (0.0896)	1.159** (0.0138)	0.262 (0.424)	1.380 (0.198)	0.0201*** (0.00605)	0.0118** (0.0120)
Age when student was first read to	-0.946 (0.131)	-0.585 (0.110)	-0.448* (0.0511)	-1.568*** (0.000883)	-0.0119 (0.193)	-0.00840 (0.376)
School assets index	-0.0439 (0.911)	-0.941** (0.0283)	-0.771** (0.0155)	0.118 (0.813)	0.00116 (0.864)	0.00171 (0.804)
Highest grade instructed at this school	-0.958 (0.373)	-2.355* (0.0544)	-1.029 (0.155)	1.696 (0.213)	0.00445 (0.840)	0.000844 (0.970)

# of days school is closed	-0.136 (0.439)	0.115 (0.373)	0.0222 (0.810)	-0.336 (0.147)	-0.00290 (0.397)	-0.00205 (0.589)
Total enrollment	-0.000267 (0.764)	0.00176** (0.0252)	-8.72e-05 (0.896)	0.00141 (0.452)	2.06e-05 (0.390)	2.17e-05 (0.342)
Months of teaching experience	0.00856* (0.0890)	0.00660 (0.108)	0.00355 (0.187)	0.00106 (0.849)	0.000110 (0.129)	7.30e-05 (0.321)
Students are put into small reading groups	0.509 (0.716)	-1.242 (0.330)	-0.896 (0.281)	0.669 (0.723)	-0.0196 (0.433)	-0.0200 (0.507)
Teacher has post-graduate degree	-3.702*** (0.00997)	-2.959*** (0.00705)	0.203 (0.807)	4.180** (0.0159)	0.0152 (0.513)	0.0129 (0.628)
2017 outcomes	-3.071** (0.0187)	6.299*** (4.88e-10)	3.428*** (1.29e-07)	3.196*** (0.00826)	-0.117*** (8.19e-10)	-0.110*** (3.75e-08)
Age of student	-1.019* (0.0914)	-0.703* (0.0557)	-0.741*** (0.00712)	0.201 (0.692)	-0.00831 (0.317)	-0.00712 (0.406)
Sex of student	2.746*** (0.00188)	1.844** (0.0144)	1.613*** (0.00182)	5.036*** (8.05e-07)	0.0523*** (0.000118)	0.0482*** (0.000519)
Region 7	2.595* (0.0890)	0.0212 (0.986)	1.170 (0.163)	-3.915*** (0.00911)	-0.0162 (0.450)	-0.0322 (0.157)
Filipino letters	0.609*** (0)					
G3 average class size	0.0637 (0.118)	4.28e-05 (0.999)	0.0489* (0.0849)	0.0246 (0.702)	0.00114 (0.130)	0.000920 (0.228)
Filipino familiar words		0.913*** (0)				
Filipino unfamiliar words			0.900*** (0)			
Filipino ORF				0.672*** (0)		
Filipino reading comp					0.411*** (0)	
Filipino reading comp excl. non-readers						0.371*** (0)
Constant	23.83**	31.89***	17.34***	7.107	0.145	0.170

	(0.0235)	(0.00224)	(0.00547)	(0.560)	(0.446)	(0.366)
Observations	2,575	2,578	2,579	2,578	2,579	2,250

Grade 4

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Treatment = Basa	-0.167 (0.880)	-0.449 (0.533)	-0.207 (0.766)	-0.655 (0.556)	-0.0653** (0.0210)	-0.0686** (0.0177)
ELLN school	-2.333 (0.425)	2.584 (0.258)	1.863 (0.403)	2.783 (0.223)	0.0955* (0.0973)	0.102* (0.0917)
Households assets index	0.972** (0.0104)	0.148 (0.631)	-0.316 (0.152)	-0.411 (0.239)	-0.00703 (0.439)	-0.00580 (0.503)
Student attended Kindergarten	2.220 (0.412)	0.968 (0.585)	-0.165 (0.914)	0.374 (0.902)	0.0250 (0.602)	0.0231 (0.626)
Student's age when first attended Kindergarten	-1.015 (0.452)	-1.073 (0.235)	-0.459 (0.502)	-0.222 (0.844)	-0.0215 (0.369)	-0.0147 (0.545)
Student does homework	0.0753 (0.857)	0.103 (0.700)	-0.0867 (0.672)	0.0335 (0.910)	-0.0115 (0.212)	-0.0127 (0.172)
Student receives homework help from a family member	1.141 (0.411)	-0.367 (0.691)	0.193 (0.772)	0.213 (0.848)	0.0162 (0.551)	0.0125 (0.635)
Student has books at home	0.961 (0.563)	1.568 (0.116)	0.756 (0.275)	1.693 (0.174)	0.0386 (0.224)	0.0371 (0.245)
Student brings books home from school	1.810 (0.246)	2.853 (0.109)	0.512 (0.747)	-1.557 (0.420)	0.00972 (0.842)	0.00567 (0.911)
Highest level of education in the household	-0.502 (0.395)	0.371 (0.667)	0.286 (0.387)	0.746 (0.319)	0.0285** (0.0128)	0.0282** (0.0136)
Age when student was first read to	0.000825 (0.999)	-0.127 (0.804)	-0.264 (0.483)	-0.970 (0.124)	-0.00858 (0.495)	-0.00302 (0.806)
School assets index	-0.832 (0.281)	-0.967* (0.0644)	0.223 (0.588)	-0.383 (0.644)	-0.00932 (0.659)	-0.00672 (0.747)
Highest grade instructed at this school	-1.506 (0.503)	1.024 (0.671)	-0.388 (0.776)	2.270 (0.374)	-0.122*** (0.00208)	-0.117*** (0.00284)
# of days school is closed	-0.0760 (0.666)	-0.0439 (0.724)	-0.00468 (0.949)	0.173 (0.156)	-0.00190 (0.499)	-0.00101 (0.721)
Total enrollment	0.00678*** (0.000154)	0.00478*** (0.00323)	0.00539*** (0.00100)	0.00343 (0.330)	0.000141*** (0.000622)	0.000116*** (0.000299)

Months of teaching experience	5.33e-05 (0.992)	0.00142 (0.767)	0.000818 (0.800)	0.00967** (0.0437)	9.60e-05 (0.471)	6.05e-05 (0.643)
Students are put into small reading groups	1.576 (0.360)	1.077 (0.430)	-0.503 (0.683)	1.289 (0.509)	0.0144 (0.742)	0.0134 (0.758)
Teacher has post-graduate degree	-2.926** (0.0306)	-0.535 (0.726)	-1.658 (0.105)	0.0942 (0.938)	-0.0263 (0.597)	-0.0187 (0.707)
2017 outcomes						
Age of student	0.574 (0.536)	0.596 (0.307)	0.561 (0.266)	0.816 (0.422)	0.0205 (0.211)	0.0138 (0.387)
Sex of student	5.718*** (5.29e-06)	3.945*** (1.61e-05)	2.306*** (0.000133)	3.373*** (0.00199)	0.0273 (0.341)	0.0273 (0.335)
Region 7	1.332 (0.401)	-0.206 (0.902)	-1.709* (0.0759)	0.238 (0.876)	-0.135** (0.0153)	-0.139** (0.0117)
Filipino letters	0.653*** (0)					
Filipino familiar words		0.535*** (0)				
Filipino unfamiliar words			0.674*** (0)			
Filipino ORF				0.817*** (0)		
Filipino reading comp					0.634*** (0)	
Filipino reading comp excl. non-readers						0.615*** (0)
G4 average class size	-0.123** (0.0142)	-0.0199 (0.652)	-0.0464 (0.183)	0.0633 (0.267)	0.000821 (0.527)	0.00111 (0.381)
Constant	15.85 (0.457)	-5.398 (0.779)	8.082 (0.489)	-8.981 (0.672)	0.643* (0.0737)	0.622* (0.0881)
Observations	1,186	1,187	1,186	1,186	1,187	1,125

Controlling for ELLN – English:

Grade 2

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Treatment = Basa	2.067** (0.0197)	1.462 (0.232)	1.053 (0.239)	1.739 (0.217)	0.0169 (0.690)	-0.00377 (0.930)
ELLN school	-0.465 (0.713)	1.282 (0.648)	-1.089 (0.497)	-3.061 (0.437)	-0.0590 (0.489)	-0.0642 (0.418)
English letters – G2	0.554*** (0)					
G2 average class size	-0.139*** (0.00391)	-0.00490 (0.935)	0.0934** (0.0158)	-0.0285 (0.734)	-0.000636 (0.685)	-0.000782 (0.634)
Households assets index	0.925*** (0.00126)	0.725 (0.166)	0.404* (0.0925)	1.434*** (0.00664)	0.0278** (0.0112)	0.0257** (0.0235)
Student attended Kindergarten	6.803*** (0.00220)	4.675 (0.178)	3.990** (0.0321)	9.048 (0.138)	0.246** (0.0369)	0.223* (0.0683)
Student's age when first attended Kindergarten	-0.0778 (0.929)	-0.339 (0.767)	-0.0503 (0.952)	-1.243 (0.339)	-0.0170 (0.655)	-0.0140 (0.695)
Student does homework	0.164 (0.572)	0.0874 (0.839)	0.316 (0.174)	0.161 (0.715)	0.0123 (0.251)	0.0169 (0.150)
Student receives homework help from a family member	-1.072 (0.249)	0.679 (0.594)	-0.964 (0.206)	-0.763 (0.532)	-0.0574 (0.109)	-0.0812** (0.0212)
Student has books at home	-0.177 (0.887)	0.867 (0.638)	-0.599 (0.469)	2.472 (0.126)	-0.00174 (0.965)	-0.0130 (0.747)
Student brings books home from school	2.138 (0.120)	0.759 (0.688)	1.314 (0.377)	7.314** (0.0462)	0.0791 (0.201)	0.0482 (0.428)
Highest level of education in the household	0.466 (0.197)	0.330 (0.637)	0.382 (0.427)	1.086 (0.282)	0.0171 (0.319)	0.0154 (0.391)
Age when student was first read to	0.156 (0.748)	-1.015 (0.111)	-0.246 (0.507)	-1.186 (0.200)	-0.0440** (0.0323)	-0.0413** (0.0401)
School assets index	0.974 (0.147)	0.429 (0.536)	0.169 (0.736)	0.523 (0.483)	0.0380** (0.0356)	0.0251 (0.172)
Highest grade instructed at this school	-2.212 (0.151)	0.279 (0.858)	-0.415 (0.633)	0.921 (0.594)	0.00920 (0.816)	0.0223 (0.603)
# of days school is closed	-0.140	0.122	0.188*	0.243	-0.000149	-0.00202

	(0.331)	(0.444)	(0.0945)	(0.337)	(0.978)	(0.698)
Total enrollment	0.00273**	-0.000424	0.000382	0.00295	0.000138***	0.000144***
	(0.0188)	(0.839)	(0.683)	(0.241)	(0.00115)	(0.000394)
Months of teaching experience	-0.00125	0.00641	0.00172	0.00775	0.000195	0.000200
	(0.815)	(0.447)	(0.627)	(0.374)	(0.254)	(0.248)
Students are put into small reading groups	-0.252	1.788	0.0628	-0.485	-0.0124	0.0144
	(0.896)	(0.306)	(0.963)	(0.838)	(0.839)	(0.815)
Teacher has post-graduate degree	-0.446	2.125	0.535	3.497*	0.0135	0.00692
	(0.782)	(0.179)	(0.661)	(0.0891)	(0.810)	(0.901)
2017 outcomes	0.257	1.396	-5.692***	9.177***	-0.130***	-0.120**
	(0.818)	(0.281)	(8.85e-09)	(0.000100)	(0.00559)	(0.0103)
Age of student	0.497	-1.275*	-0.440	-0.104	0.00303	0.00969
	(0.444)	(0.0735)	(0.398)	(0.921)	(0.912)	(0.728)
Sex of student	2.612***	5.924***	2.523***	8.901***	0.0814**	0.0551
	(0.000478)	(0.00542)	(0.000445)	(0.000380)	(0.0106)	(0.102)
Region 7	3.528**	6.418***	5.377***	4.691*	0.110**	0.0823
	(0.0360)	(0.000563)	(1.62e-05)	(0.0973)	(0.0472)	(0.153)
English familiar words – G2		0.955***				
		(0)				
English unfamiliar words – G2			0.885***			
			(0)			
English ORF – G2				0.737***		
				(1.85e-06)		
English reading comp. – G2					0.770***	
					(0)	
English reading comp excl. non-readers –G2						0.624***
						(0)
Constant	16.59	3.575	-1.235	-7.657	-0.433	-0.403
	(0.208)	(0.807)	(0.889)	(0.625)	(0.256)	(0.311)
Observations	2,550	2,552	2,551	2,552	2,557	2,070

Grade 3

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
-----------	--	---	---	---	-----------------------------	---

Treatment = Basa	1.717*	0.758	1.055	-0.0440	-0.00172	-0.0257
	(0.0522)	(0.532)	(0.152)	(0.964)	(0.964)	(0.520)
ELLN school	-1.381	-4.029**	-1.109	-3.129*	0.202**	0.169**
	(0.372)	(0.0384)	(0.415)	(0.0579)	(0.0305)	(0.0439)
Households assets index	0.344	0.148	0.272	0.288	0.0355***	0.0340***
	(0.125)	(0.680)	(0.314)	(0.377)	(0.000229)	(0.000284)
Student attended Kindergarten	2.300	1.523	2.080	-0.775	0.112*	0.0938
	(0.225)	(0.557)	(0.279)	(0.696)	(0.0934)	(0.159)
Student's age when first attended Kindergarten	0.517	-1.384	-0.759	0.294	0.0136	0.0333
	(0.503)	(0.133)	(0.276)	(0.765)	(0.640)	(0.254)
Student does homework	0.688**	-0.152	0.0512	0.225	0.00728	0.00665
	(0.0131)	(0.692)	(0.838)	(0.509)	(0.586)	(0.627)
Student receives homework help from a family member	-0.661	-0.156	-0.946	-0.910	0.0100	0.0253
	(0.386)	(0.873)	(0.212)	(0.375)	(0.764)	(0.446)
Student has books at home	-0.915	1.647	-0.201	-1.648	-0.0324	-0.0183
	(0.412)	(0.194)	(0.842)	(0.153)	(0.373)	(0.637)
Student brings books home from school	0.535	4.374**	0.184	3.472*	-0.0358	-0.0721
	(0.660)	(0.0441)	(0.881)	(0.0830)	(0.550)	(0.208)
Highest level of education in the household	1.119*	1.502**	0.764**	1.314**	0.0230	0.0166
	(0.0790)	(0.0178)	(0.0470)	(0.0219)	(0.255)	(0.390)
Age when student was first read to	-1.534***	-0.676	-0.667	-0.888*	-0.0399**	-0.0322*
	(0.000401)	(0.168)	(0.110)	(0.0745)	(0.0243)	(0.0631)
School assets index	0.120	-1.187**	-0.325	-0.872	0.00302	0.00547
	(0.776)	(0.0434)	(0.420)	(0.137)	(0.860)	(0.763)
Highest grade instructed at this school	-1.063	-0.929	0.445	1.839	-0.0483	-0.0638
	(0.405)	(0.595)	(0.739)	(0.446)	(0.392)	(0.211)
# of days school is closed	0.0368	-0.332	-0.178	-0.288	-0.00996	-0.00808
	(0.763)	(0.185)	(0.329)	(0.153)	(0.100)	(0.152)
Total enrollment	0.000548	0.00234*	0.00147	0.00625***	3.60e-05	2.16e-05
	(0.526)	(0.0979)	(0.327)	(4.99e-07)	(0.364)	(0.608)
Months of teaching experience	0.00219	0.00218	0.00317	0.00307	0.000275	0.000285*
	(0.600)	(0.692)	(0.376)	(0.599)	(0.120)	(0.0812)
Students are put into small reading groups	-0.556	-0.547	0.0107	-1.201	0.0594	0.0815
	(0.735)	(0.737)	(0.994)	(0.340)	(0.487)	(0.372)
Teacher has post-graduate degree	-1.841	-3.122*	-2.660**	-3.013*	-0.0719	-0.0585
	(0.106)	(0.0591)	(0.0388)	(0.0896)	(0.155)	(0.239)
2017 outcomes	-4.834***	6.036***	0.299	10.67***	0.0193	0.00952
	(2.25e-06)	(1.66e-05)	(0.770)	(0)	(0.610)	(0.807)

Age of student	-0.584 (0.358)	-1.231* (0.0992)	-1.192** (0.0411)	-1.370** (0.0461)	-0.0223 (0.314)	-0.0285 (0.204)
Sex of student	2.039*** (0.00950)	0.617 (0.565)	1.937*** (0.00440)	3.382*** (0.000895)	0.138*** (1.32e-05)	0.121*** (7.45e-05)
Region 7	4.341*** (0.000269)	2.346 (0.177)	2.988** (0.0128)	1.085 (0.521)	0.158** (0.0132)	0.152** (0.0122)
English letters	0.628*** (0)					
G3 average class size	0.00381 (0.913)	-0.000885 (0.985)	-0.0119 (0.784)	-0.0520 (0.342)	-0.000707 (0.597)	-0.00113 (0.436)
English familiar words		0.898*** (0)				
English unfamiliar words			0.858*** (0)			
English ORF				0.897*** (0)		
English reading comp					0.777*** (0)	
English reading comp excl. non-readers						0.702*** (0)
Constant	23.79** (0.0267)	31.21** (0.0441)	17.42 (0.112)	9.134 (0.647)	0.231 (0.636)	0.360 (0.424)
Observations	2,575	2,579	2,579	2,579	2,579	2,327

Grade 4

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Treatment = Basa	2.192* (0.0671)	0.152 (0.900)	0.0802 (0.945)	-0.471 (0.696)	-0.0746* (0.0916)	-0.0820* (0.0680)
ELLN school	4.342* (0.0585)	-0.0652 (0.985)	1.985 (0.520)	-4.840 (0.325)	-0.0153 (0.820)	-0.0118 (0.854)

Households assets index	0.205 (0.600)	0.401 (0.287)	0.0417 (0.894)	-0.405 (0.361)	0.0155 (0.237)	0.0169 (0.199)
Student attended Kindergarten	-1.794 (0.427)	-2.396 (0.281)	-3.585* (0.0607)	-0.648 (0.854)	0.0534 (0.575)	0.0498 (0.599)
Student's age when first attended Kindergarten	-2.635** (0.0473)	-0.211 (0.832)	-0.260 (0.764)	-1.142 (0.452)	-0.0656 (0.137)	-0.0575 (0.197)
Student does homework	0.188 (0.607)	0.508 (0.155)	0.739*** (0.00747)	0.619 (0.213)	-0.000984 (0.934)	-0.00114 (0.924)
Student receives homework help from a family member	0.883 (0.483)	-1.685 (0.177)	-1.304 (0.213)	0.958 (0.523)	-0.0887** (0.0469)	-0.0941** (0.0356)
Student has books at home	1.194 (0.398)	1.484 (0.262)	-0.00929 (0.993)	1.514 (0.346)	0.0265 (0.601)	0.0262 (0.614)
Student brings books home from school	-3.095 (0.355)	-3.862 (0.115)	0.616 (0.791)	-0.841 (0.827)	-0.0132 (0.845)	-0.0310 (0.647)
Highest level of education in the household	0.168 (0.850)	0.778 (0.454)	0.648 (0.220)	0.677 (0.447)	0.0528 (0.163)	0.0542 (0.164)
Age when student was first read to	-0.564 (0.357)	-1.096 (0.107)	-1.666*** (0.000453)	-1.663** (0.0355)	-0.0328 (0.179)	-0.0264 (0.292)
School assets index	-0.231 (0.831)	-1.077 (0.159)	-1.065** (0.0410)	0.457 (0.636)	-0.0366 (0.121)	-0.0319 (0.179)
Highest grade instructed at this school	-2.693 (0.361)	0.103 (0.971)	2.563 (0.379)	6.581** (0.0208)	-0.175* (0.0698)	-0.180* (0.0649)
# of days school is closed	-0.159 (0.488)	-0.142 (0.383)	-0.129 (0.275)	0.256 (0.377)	-0.0105** (0.0296)	-0.0109** (0.0320)
Total enrollment	0.00430* (0.0698)	0.00626** (0.0142)	0.00516*** (0.00797)	0.00801*** (0.00544)	0.000240*** (1.99e-08)	0.000203*** (6.45e-06)
Months of teaching experience	-0.000215 (0.975)	0.00285 (0.615)	-0.000584 (0.905)	-0.00103 (0.877)	0.000293 (0.152)	0.000280 (0.173)
Students are put into small reading groups	2.431 (0.341)	2.864 (0.108)	1.003 (0.475)	1.881 (0.405)	0.126** (0.0179)	0.136** (0.0116)
Teacher has post-graduate degree	-1.917 (0.450)	-0.0344 (0.987)	0.546 (0.720)	0.334 (0.869)	-0.0297 (0.586)	-0.0213 (0.708)
2017 outcomes						
Age of student	-0.318 (0.733)	0.460 (0.633)	0.197 (0.832)	1.147 (0.418)	0.0437 (0.113)	0.0360 (0.191)
Sex of student	3.184** (0.0173)	2.861** (0.0163)	2.693*** (0.00774)	0.906 (0.558)	0.0811* (0.0938)	0.0797 (0.102)
Region 7	1.437	4.852**	5.297***	0.644	0.0180	0.0154

	(0.558)	(0.0436)	(0.000601)	(0.802)	(0.797)	(0.834)
English letters	0.627*** (0)					
English familiar words		0.566*** (0)				
English unfamiliar words			0.735*** (0)			
English ORF				0.907*** (0)		
English reading comp					0.597*** (0)	
English reading comp excl. non-readers						0.587*** (0)
G4 average class size	-0.0991* (0.0866)	0.00131 (0.982)	0.00362 (0.932)	0.133** (0.0411)	0.000864 (0.652)	0.00110 (0.573)
Constant	54.52** (0.0261)	-2.461 (0.915)	-11.32 (0.628)	-36.09 (0.174)	0.786 (0.291)	0.837 (0.265)
Observations	1,187	1,186	1,187	1,187	1,187	1,123

Sex Disaggregated Results – Mother Tongue

VARIABLES	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading Comp. (no zeros), % correct
Basa boys	0.172 (0.898)	0.906 (0.546)	-0.760 (0.621)	2.602 (0.215)	0.00252 (0.948)	-0.0509 (0.115)
Letters	0.604*** (0)					
Basa girls	4.111 (0.114)	6.367** (0.0351)	5.636*** (0.00414)	4.723 (0.485)	0.0654 (0.204)	0.0403 (0.359)
Class size	0.0402 (0.568)	0.0558 (0.535)	0.00929 (0.906)	0.0122 (0.902)	-0.000705 (0.722)	-0.000859 (0.541)
Households assets index	0.458 (0.200)	0.338 (0.382)	0.635 (0.132)	0.217 (0.653)	0.00523 (0.571)	0.000836 (0.903)

Student attended kindergarten	2.676 (0.414)	1.389 (0.566)	2.967 (0.308)	6.751* (0.0623)	0.125 (0.138)	0.0556 (0.513)
Student's age when first attended kindergarten	0.0289 (0.977)	-0.948 (0.360)	0.129 (0.899)	-1.048 (0.420)	-0.00201 (0.950)	-0.0120 (0.723)
Student does homework	-0.720* (0.0612)	0.0756 (0.819)	-0.261 (0.436)	-0.129 (0.745)	-0.00688 (0.398)	-0.00946 (0.309)
Student receives homework help from a family member	1.707 (0.126)	2.257** (0.0364)	2.010* (0.0663)	2.086 (0.172)	0.0174 (0.546)	0.0122 (0.670)
Student has books at home	-1.762 (0.272)	1.753 (0.352)	2.586 (0.221)	1.806 (0.228)	0.0775* (0.0788)	0.0582* (0.0983)
Student brings books home from school	0.109 (0.957)	0.271 (0.860)	0.116 (0.933)	0.665 (0.683)	-0.0324 (0.505)	-0.0799 (0.104)
Highest level of education in the household	0.368 (0.712)	0.354 (0.742)	0.636 (0.569)	0.302 (0.752)	0.0139 (0.631)	0.0154 (0.572)
Age when student was first read to	-1.532* (0.0537)	-0.610 (0.313)	-1.324* (0.0675)	-0.918 (0.175)	-0.0169 (0.347)	0.0103 (0.541)
School assets index	0.610 (0.244)	0.156 (0.833)	-0.170 (0.817)	-0.158 (0.824)	0.0103 (0.519)	0.0162 (0.135)
Highest grade instructed at this school	-2.682*** (0.00287)	-0.232 (0.854)	-0.302 (0.765)	0.232 (0.827)	-0.0274 (0.309)	-0.0373 (0.230)
# of days school is closed	-0.214 (0.546)	0.325 (0.324)	0.372 (0.361)	0.562* (0.0894)	0.0103 (0.334)	0.0101 (0.298)
Total enrollment	-0.00152 (0.320)	-0.000321 (0.818)	0.000979 (0.510)	0.00137 (0.388)	3.11e-05 (0.422)	-1.15e-05 (0.739)
Months of teaching experience	0.00251 (0.707)	0.00654 (0.313)	0.0109 (0.121)	0.00846 (0.212)	0.000409** (0.0405)	0.000143 (0.417)
Students are put into small reading groups	1.164 (0.569)	1.510 (0.477)	1.245 (0.586)	0.612 (0.813)	0.0493 (0.403)	0.0604 (0.228)
Teacher has post-graduate degree	-1.856 (0.404)	0.679 (0.741)	0.107 (0.967)	0.523 (0.782)	-0.0359 (0.502)	-0.0461 (0.376)
Age of student	0.330 (0.702)	-0.340 (0.674)	-0.160 (0.825)	-0.628 (0.465)	-0.0621** (0.0240)	-0.0497* (0.0569)
Sex of student	-1.832 (0.431)	0.139 (0.961)	0.723 (0.705)	1.386 (0.854)	0.0687 (0.113)	0.0351 (0.287)
Region 7	3.259* (0.0765)	1.821 (0.370)	0.189 (0.922)	3.305 (0.148)	0.0547 (0.242)	-0.0328 (0.414)
Mother tongue	-8.205 (0.131)	-1.430 (0.393)	-2.235 (0.226)	-1.808 (0.347)	0.00567 (0.927)	0.0411 (0.512)
Familiar words		0.991*** (0)				
Unfamiliar words			0.826***			

			(0.000193)			
ORF				0.915***		
				(0)		
Reading comp					1.190***	
					(0)	
Reading comp. excl. non-readers						0.914***
						(0)
Constant	36.10***	9.099	6.814	4.906	0.341	0.707**
	(0.000891)	(0.449)	(0.579)	(0.704)	(0.331)	(0.0322)
Observations	1,362	1,361	1,360	1,361	1,366	879

Sex-Disaggregated Results – Filipino

Regressi on Results	Letter sounds correct per minute	Familiar words correct per minute	Unfamili ar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamili ar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamili ar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 3	Grade 3	Grade 3	Grade 3	Grade 3	Grade 3	Grade 4	Grade 4	Grade 4	Grade 4	Grade 4	Grade 4
Basa boys	1.521 (0.234)	1.344 (0.188)	1.905* (0.0570)	4.902** (0.0455)	-0.0196 (0.436)	-0.0488* (0.0717)	1.272 (0.257)	0.304 (0.798)	0.708 (0.309)	-1.975 (0.353)	-0.00957 (0.677)	0.00255 (0.907)	-1.408 (0.408)	-0.410 (0.774)	-0.423 (0.735)	0.423 (0.813)	0.0798** (0.0295)	- (0.0156)
Filipino letters – G2	0.640*** (0)																	
Basa girls	-0.901 (0.629)	0.401 (0.786)	-0.856 (0.426)	-1.352 (0.595)	0.0362 (0.352)	0.0489 (0.174)	-0.801 (0.544)	1.640 (0.260)	0.0733 (0.939)	2.889 (0.239)	0.0168 (0.601)	0.00209 (0.947)	3.691 (0.175)	-1.552 (0.467)	-0.654 (0.633)	-3.824 (0.234)	-0.0290 (0.465)	-0.0207 (0.599)
G2 average class size	-0.0630 (0.346)	-0.0747* (0.0847)	-0.00699 (0.814)	-0.200** (0.0132)	- 0.00256* **	- 0.00223* *												
Househol ds assets index	0.521 (0.194)	0.00175 (0.995)	0.0185 (0.923)	0.562 (0.268)	0.00979* (0.0957)	0.00210 (0.749)	0.536** (0.0436)	0.127 (0.572)	0.251 (0.128)	0.279 (0.337)	0.00765* (0.0542)	0.00640 (0.108)	0.967** (0.0116)	0.184 (0.551)	-0.271 (0.212)	-0.352 (0.323)	-0.00559 (0.542)	-0.00457 (0.601)
Student attended kindergar ten	8.520*** (0.00186)	0.663 (0.790)	0.433 (0.797)	-2.563 (0.784)	0.0922 (0.182)	0.0341 (0.625)	-0.176 (0.937)	1.736 (0.264)	-1.455 (0.177)	0.867 (0.675)	-0.0102 (0.734)	-0.00279 (0.926)	2.177 (0.417)	0.945 (0.596)	-0.218 (0.885)	0.449 (0.883)	0.0267 (0.580)	0.0237 (0.619)
Student's age when first attended kindergar ten	-0.322 (0.722)	0.301 (0.745)	0.00476 (0.994)	-1.873 (0.398)	0.00561 (0.771)	0.0388 (0.106)	0.546 (0.524)	-0.207 (0.770)	0.130 (0.760)	0.281 (0.772)	-0.00883 (0.519)	-0.00796 (0.584)	-1.036 (0.451)	-0.885 (0.327)	-0.402 (0.557)	-0.185 (0.872)	-0.0202 (0.397)	-0.0147 (0.543)
Student does homewo rk	0.278 (0.473)	0.250 (0.378)	0.132 (0.498)	0.0364 (0.943)	-0.0121* (0.0674)	-0.0149* (0.0708)	0.887** (0.0115)	-0.355 (0.199)	0.143 (0.426)	0.269 (0.491)	0.00477 (0.309)	0.00347 (0.501)	0.175 (0.674)	0.0919 (0.730)	-0.0816 (0.693)	0.0577 (0.849)	-0.0118 (0.200)	-0.0128 (0.166)
Student receives homewo rk help	0.461	-0.540	0.625	-0.0439	0.00308	-0.00598	0.0267	0.466	-0.157	-1.667	-0.00411	0.00453	0.936	-0.254	0.182	0.168	0.0140	0.00927

from a
family
member

	(0.646)	(0.516)	(0.301)	(0.980)	(0.884)	(0.794)	(0.977)	(0.503)	(0.776)	(0.145)	(0.806)	(0.799)	(0.485)	(0.784)	(0.789)	(0.882)	(0.610)	(0.728)
Student has books at home	0.947	-0.0538	-0.291	-0.555	0.0596**	0.0597**	-1.138	-1.654*	-0.821	-0.525	0.00714	0.0141	0.945	1.668*	0.825	1.779	0.0397	0.0370
	(0.475)	(0.954)	(0.726)	(0.760)	(0.0185)	(0.0381)	(0.358)	(0.0599)	(0.166)	(0.693)	(0.634)	(0.370)	(0.573)	(0.0971)	(0.231)	(0.156)	(0.210)	(0.245)
Student brings books home from school	-0.587	1.438	1.513	3.139	0.0647*	-0.0147	-2.617**	1.910*	0.294	5.022*** (0.00091 8)	0.0125	0.00684	1.593	2.703	0.346	-1.758	0.00607	0.00517
	(0.668)	(0.216)	(0.154)	(0.304)	(0.0752)	(0.726)	(0.0266)	(0.0751)	(0.758)		(0.634)	(0.805)	(0.330)	(0.137)	(0.832)	(0.373)	(0.903)	(0.920)
Highest level of educatio n in the househol d	1.341***	-0.252	0.145	1.975*	0.00273	0.0658** *	1.036	1.136**	0.259	1.285	0.0208** *	0.0129**	-0.605	0.367	0.260	0.696	0.0282**	0.0283**
	(0.00549)	(0.607)	(0.630)	(0.0947)	(0.802)	(0.00846)	(0.102)	(0.0164)	(0.438)	(0.227)	(0.00524)	(0.0121)	(0.289)	(0.672)	(0.422)	(0.341)	(0.0121)	(0.0129)
Age when student was first read to	-0.413	-0.652	-0.355	-0.625	-0.0105	-0.00473	-0.918	-0.503	-0.430*	1.445***	-0.0117	-0.00890	0.109	-0.161	-0.188	-0.828	-0.00452	0.000438
	(0.489)	(0.112)	(0.286)	(0.599)	(0.343)	(0.723)	(0.146)	(0.174)	(0.0623)	(0.00218)	(0.207)	(0.353)	(0.889)	(0.746)	(0.626)	(0.215)	(0.734)	(0.973)
School assets INDEX	0.0464	0.679	0.418	0.214	0.0244**	0.0138	-0.00369	-0.884**	-0.740**	0.185	0.00257	0.00301	-0.922	-0.942*	0.267	-0.329	-0.00703	-0.00458
	(0.951)	(0.141)	(0.203)	(0.825)	(0.0326)	(0.215)	(0.993)	(0.0384)	(0.0193)	(0.713)	(0.706)	(0.665)	(0.219)	(0.0697)	(0.521)	(0.692)	(0.743)	(0.829)
Highest grade instructe d at this school	-1.534	-0.0303	-0.514	1.175	0.000471	0.00140	-1.063	-2.651**	-1.145*	1.357	0.00294	0.000203	-1.434	0.905	-0.389	2.237	0.124***	0.118***
	(0.149)	(0.981)	(0.545)	(0.331)	(0.971)	(0.939)	(0.336)	(0.0261)	(0.0937)	(0.296)	(0.896)	(0.993)	(0.530)	(0.711)	(0.781)	(0.393)	(0.00242)	(0.00333)
# of days school is closed	-0.0628	0.225	0.256**	0.274	0.00281	0.000419	-0.143	0.102	0.0196	-0.356	-0.00295	-0.00225	-0.0771	-0.0593	-0.00857	0.161	-0.00221	-0.00122
	(0.777)	(0.193)	(0.0457)	(0.297)	(0.268)	(0.852)	(0.415)	(0.422)	(0.832)	(0.125)	(0.388)	(0.552)	(0.665)	(0.634)	(0.912)	(0.203)	(0.437)	(0.670)
Total enrollme nt	0.00209	3.88e-06	0.00175* *	0.00749* **	8.56e- 05*** (3.32e- 05)	7.54e- 05*** (9.90e- 05)	- 0.000308	0.00163* *	- 0.000124	0.00129	1.97e-05	2.09e-05	0.00677* **	0.00483* **	0.00546* **	0.00346	0.000143 ***	0.000118 ***
	(0.328)	(0.998)	(0.0417)	(0.00115)			(0.725)	(0.0327)	(0.850)	(0.467)	(0.401)	(0.347)	(0.00013 0)	(0.00239)	(0.00063 2)	(0.317)	(0.00047 5)	(0.00023 3)
Months of teaching	-0.00300	0.00217	0.00112	0.00736	-5.62e-05	-5.39e-05	0.00884*	0.00665	0.00350	0.00135	0.000108	7.44e-05	0.000297	0.00140	0.000997	0.00980* *	9.99e-05	6.43e-05

experience																		
Students are put into small reading groups	(0.645)	(0.626)	(0.691)	(0.372)	(0.564)	(0.617)	(0.0790)	(0.106)	(0.194)	(0.809)	(0.136)	(0.304)	(0.958)	(0.769)	(0.758)	(0.0409)	(0.454)	(0.624)
Teacher has post-graduate degree	2.987	-0.0580	-0.514	-0.724	-0.00406	0.0175	0.532	-1.262	-0.881	0.660	-0.0192	-0.0194	2.218	1.069	-0.456	1.287	0.00847	0.00684
2017 outcomes	(0.139)	(0.965)	(0.600)	(0.779)	(0.924)	(0.674)	(0.706)	(0.324)	(0.294)	(0.731)	(0.436)	(0.514)	(0.168)	(0.442)	(0.716)	(0.518)	(0.849)	(0.878)
Age of student	0.485	1.548	0.00482	11.88***	0.0479	-0.00562	-3.589**	3.072***	0.184	4.135**	0.0127	0.0107	-3.275**	-0.576	-1.738*	-0.0758	-0.0275	-0.0181
Sex of student	(0.767)	(0.186)	(0.996)	(0.00101)	(0.133)	(0.887)	(0.0127)	(0.00501)	(0.825)	(0.0174)	(0.586)	(0.690)	(0.0156)	(0.703)	(0.0962)	(0.953)	(0.584)	(0.720)
Region 7	4.348***	5.557***	0.471	7.745***	0.0667**	0.0950**	-3.038**	6.357***	3.411***	3.424***	0.117***	0.109***						
Mother tongue	(1.29e-07)	(0.532)	(0.00109)	(0.0128)	(0.00269)	(0.0211)	(0.00577)	(4.66e-10)	(2.17e-07)	(0.00577)	(6.50e-10)	(3.10e-08)						
Filipino familiar words – G2	0.377	-0.616	-0.540	-0.604	-0.00784	-0.0151	-0.957	-0.662*	0.722***	0.338	-0.00900	-0.00807	0.508	0.589	0.582	0.838	0.0220	0.0155
Filipino unfamiliar words – G2	(0.598)	(0.309)	(0.235)	(0.577)	(0.604)	(0.340)	(0.116)	(0.0736)	(0.00938)	(0.483)	(0.289)	(0.359)	(0.585)	(0.313)	(0.251)	(0.410)	(0.175)	(0.325)
Filipino ORF -G2	3.812**	2.501**	2.876***	10.41***	0.0349	0.0108	3.403***	0.200	1.500*	2.212	0.0349	0.0445	1.893	5.485***	2.934**	7.018**	0.0568**	0.0496**
Filipino reading	(0.0244)	(0.0352)	(0.00157)	(2.02e-06)	(0.280)	(0.687)	(0.00136)	(0.878)	(0.0735)	(0.328)	(0.234)	(0.115)	(0.423)	(0.00436)	(0.0165)	(0.0216)	(0.0229)	(0.0470)
	3.897	5.969***	4.044***	16.34***	0.00659	0.137***	2.596*	-0.160	1.082	4.183***	-0.0203	-0.0359	1.376	-0.372	-1.919*	0.159	-0.136**	-0.138**
	(0.101)	(1.55e-05)	(2.46e-05)	(1.76e-05)	(0.844)	(0.00527)	(0.0951)	(0.894)	(0.199)	(0.00631)	(0.353)	(0.115)	(0.392)	(0.819)	(0.0578)	(0.920)	(0.0161)	(0.0136)
	-2.988	-0.377	0.469	-1.049	-0.0676	-0.0650	-0.568	-0.320	0.929	-1.447	0.0375	0.0423	0.658	1.100	2.121	0.847	-0.0215	-0.0190
	(0.392)	(0.831)	(0.775)	(0.812)	(0.163)	(0.245)	(0.816)	(0.760)	(0.429)	(0.440)	(0.218)	(0.174)	(0.870)	(0.565)	(0.224)	(0.715)	(0.816)	(0.835)
		0.993***																
		(0)																
			0.842***															
			(0)															
				0.621***														
				(0)														
					0.645***													

comp –
G2

(0)

Filipino
reading
comp
excl.
non-
readers
G2

0.494***

(0)

Filipino
letters

0.606***

0.647***

(0)

(0)

G3
average
class size

0.0625

0.00354

0.0495*

0.0270

0.00115

0.000921

(0.126)

(0.925)

(0.0820)

(0.675)

(0.129)

(0.225)

Filipino
familiar
words

0.911***

0.534***

(0)

(0)

Filipino
unfamilia
r words

0.899***

0.673***

(0)

(0)

Filipino
ORF

0.669***

0.813***

(0)

(0)

Filipino
reading
comp.

0.410***

0.623***

(0)

(0)

Filipino
reading
comp
excl.
non-
readers

0.372***

0.604***

(0)

(0)

G4
average
class size

-0.125**

-0.0229

-0.0483

0.0591

0.000755

0.00106

(0.0129)

(0.601)

(0.163)

(0.302)

(0.560)

(0.405)

Constant	10.98	7.527	7.353	11.23	0.0954	0.266	23.96**	33.16***	16.99*** (0.00652)	8.646	0.129	0.143	16.03	-6.110	5.679	-11.21	0.662*	0.649*
Observations	(0.295)	(0.523)	(0.373)	(0.671)	(0.650)	(0.279)	(0.0262)	(0.00143)		(0.480)	(0.507)	(0.452)	(0.473)	(0.754)	(0.645)	(0.607)	(0.0779)	(0.0868)
	2,530	2,535	2,533	2,531	2,537	1,824	2,564	2,567	2,568	2,567	2,568	2,242	1,179	1,180	1,179	1,179	1,180	1,121

Sex-Disaggregated Results – English

Regression Results	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct	Letter sounds correct per minute	Familiar words correct per minute	Unfamiliar words correct per minute	Oral reading fluency, correct per minute	Reading comp., % correct	Reading comp. (no zeros), % correct
	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 2	Grade 3	Grade 3	Grade 3	Grade 3	Grade 3	Grade 3	Grade 4	Grade 4	Grade 4	Grade 4	Grade 4	Grade 4
Basa boys	3.528***	2.250	2.594**	2.411	0.0508	0.0241	2.678**	1.369	1.590*	1.196	-0.0587	-0.0765	-0.0951	1.050	-0.421	1.624	-0.0364	-0.0487
English letters	(0.00289)	(0.135)	(0.0326)	(0.239)	(0.369)	(0.678)	(0.0346)	(0.363)	(0.0613)	(0.382)	(0.294)	(0.121)	(0.955)	(0.634)	(0.790)	(0.513)	(0.624)	(0.507)
	0.552***																	
	(0)																	
Basa girls	-2.707*	-2.478	-2.373*	0.222	-0.0302	-0.0118	-1.242	1.122	-0.433	-0.776	-0.00456	0.00155	2.535	-1.817	0.115	-1.255	-0.0591	-0.0519
	(0.0938)	(0.218)	(0.0773)	(0.909)	(0.592)	(0.838)	(0.404)	(0.666)	(0.745)	(0.654)	(0.930)	(0.975)	(0.308)	(0.507)	(0.949)	(0.611)	(0.548)	(0.603)
G2 average	-				-	-												
Class size	0.142***	-0.00209	0.0920**	-0.0308	0.000568	0.000684												
	(0.00329)	(0.972)	(0.0174)	(0.714)	(0.710)	(0.666)												
Households assets index	0.928***	0.773	0.421*	1.475***	0.0271**	0.0249**	0.307	0.135	0.262	0.260	0.0365**	0.0346**	0.206	0.377	0.0295	-0.349	0.0192	0.0206
	(0.00131)	(0.141)	(0.0774)	(0.00551)	(0.0150)	(0.0304)	(0.170)	(0.709)	(0.337)	(0.432)	(0.000171)	(0.000244)	(0.604)	(0.323)	(0.926)	(0.416)	(0.148)	(0.125)
Student attended kindergarten	6.798***	4.715	3.915**	9.026	0.237**	0.213*	3.010	2.069	2.479	-0.0561	0.0936	0.0720	-1.654	-2.427	-3.347*	0.0739	0.0575	0.0529
	(0.00233)	(0.175)	(0.0348)	(0.139)	(0.0437)	(0.0811)	(0.105)	(0.439)	(0.208)	(0.978)	(0.164)	(0.288)	(0.470)	(0.277)	(0.0763)	(0.983)	(0.550)	(0.580)
Student's age when first attended kindergarten	-0.0144	-0.319	-0.0613	-1.223	-0.0228	-0.0211	0.551	-1.417	-0.784	0.179	0.0127	0.0310	-2.724**	-0.222	-0.180	-0.814	-0.0674	-0.0599
	(0.987)	(0.781)	(0.942)	(0.353)	(0.548)	(0.551)	(0.477)	(0.135)	(0.263)	(0.856)	(0.663)	(0.283)	(0.0442)	(0.824)	(0.838)	(0.589)	(0.128)	(0.180)
Student does	0.170	0.0857	0.308	0.146	0.0118	0.0163	0.662**	-0.198	0.0201	0.181	0.00771	0.00756	0.188	0.498	0.691**	0.529	0.000709	0.000613

homework																		
Student receives homework help from a family member	(0.559)	(0.843)	(0.186)	(0.741)	(0.276)	(0.166)	(0.0164)	(0.603)	(0.936)	(0.591)	(0.571)	(0.588)	(0.615)	(0.170)	(0.0151)	(0.299)	(0.953)	(0.960)
	-1.108	0.571	-0.962	-0.953	-0.0541	-0.0770**	-0.647	-0.0904	-0.962	-0.862	0.00923	0.0228	0.999	-1.598	-1.135	0.895	-0.0979**	-0.105**
Student has books at home	(0.242)	(0.655)	(0.209)	(0.440)	(0.133)	(0.0292)	(0.398)	(0.927)	(0.204)	(0.404)	(0.785)	(0.498)	(0.435)	(0.205)	(0.280)	(0.544)	(0.0219)	(0.0140)
	-0.0483	0.836	-0.634	2.649	0.00730	-0.00374	-0.970	1.665	-0.148	-1.685	-0.0312	-0.0182	1.294	1.541	0.0611	1.516	0.0282	0.0273
Student brings books home from school	(0.969)	(0.658)	(0.443)	(0.105)	(0.856)	(0.927)	(0.384)	(0.193)	(0.883)	(0.142)	(0.395)	(0.640)	(0.360)	(0.243)	(0.954)	(0.338)	(0.578)	(0.600)
	2.158	0.676	1.358	7.381**	0.0845	0.0531	0.450	4.297**	0.116	3.379*	-0.0362	-0.0706	-3.256	-4.054*	0.437	-1.324	-0.0194	-0.0356
Highest level of education in the household	(0.117)	(0.723)	(0.364)	(0.0445)	(0.173)	(0.382)	(0.711)	(0.0486)	(0.924)	(0.0905)	(0.549)	(0.221)	(0.341)	(0.0996)	(0.855)	(0.732)	(0.777)	(0.601)
	0.470	0.313	0.445	1.044	0.0219	0.0212	1.131*	1.426**	0.715*	1.279**	0.0225	0.0167	0.100	0.748	0.630	0.647	0.0506	0.0523
Age when student was first read to	(0.212)	(0.655)	(0.331)	(0.294)	(0.236)	(0.285)	(0.0870)	(0.0221)	(0.0595)	(0.0263)	(0.276)	(0.400)	(0.908)	(0.470)	(0.218)	(0.428)	(0.164)	(0.162)
	0.128	-1.019	-0.233	-1.244	-0.0467**	-0.0438**	-0.1492*** (0.000571)	-0.601	-0.620	-0.796	0.0405**	0.0344**	-0.500	-1.106	1.670*** (0.000766)	-1.342	-0.0179	-0.0116
School assets INDEX	(0.792)	(0.114)	(0.529)	(0.181)	(0.0234)	(0.0293)	(0.219)	(0.136)	(0.107)	(0.0220)	(0.0452)	(0.432)	(0.113)		(0.101)	(0.509)	(0.674)	
	1.006	0.443	0.104	0.550	0.0367**	0.0225	0.183	-1.109*	-0.264	-0.756	0.00337	0.00523	-0.0920	-1.030	-1.002*	0.370	-0.0353	-0.0308
Highest grade instructed at this school	(0.130)	(0.528)	(0.836)	(0.468)	(0.0459)	(0.237)	(0.669)	(0.0605)	(0.515)	(0.204)	(0.845)	(0.776)	(0.932)	(0.172)	(0.0605)	(0.711)	(0.137)	(0.195)
	-2.213	0.221	-0.393	0.874	0.00839	0.0218	-1.263	-1.198	0.254	1.467	-0.0492	-0.0614	-2.700	0.134	2.427	6.297**	-0.173*	-0.177*
# of days school is closed	(0.152)	(0.889)	(0.651)	(0.620)	(0.833)	(0.612)	(0.329)	(0.480)	(0.843)	(0.536)	(0.367)	(0.228)	(0.364)	(0.963)	(0.407)	(0.0249)	(0.0800)	(0.0752)
	-0.147	0.124	0.189*	0.238	-0.000183	-0.00202	0.0358	-0.361	-0.191	-0.306	-0.00975	-0.00777	-0.181	-0.144	-0.152	0.231	0.0104**	0.0106**
	(0.306)	(0.435)	(0.0936)	(0.346)	(0.973)	(0.700)	(0.769)	(0.147)	(0.293)	(0.126)	(0.107)	(0.170)	(0.434)	(0.377)	(0.201)	(0.382)	(0.0324)	(0.0363)

Total enrollment	0.00273* *	- 0.000427	0.000344	0.00292	0.000138 ***	0.000144 *** (0.000412)	0.000493	0.00229*	0.00146	0.00616* ** (1.69e-06)	4.34e-05	2.99e-05	0.00429*	0.00632* *	0.00507* **	0.00755* **	0.000235 *** (5.93e-08)	0.000198 *** (1.15e-05)	
Months of teaching experience	(0.0170)	(0.835)	(0.712)	(0.249)	(0.00131)		(0.570)	(0.0879)	(0.317)		(0.313)	(0.499)	(0.0662)	(0.0125)	(0.00844)	(0.00825)			
	-0.00132	0.00584	0.00131	0.00704	0.000188	0.000193	0.00232	0.00253	0.00333	0.00321	0.000284	0.000300* -	0.000280	0.00311	-	0.000713	-0.00132	0.000285	0.000272
	(0.807)	(0.487)	(0.711)	(0.416)	(0.272)	(0.262)	(0.583)	(0.649)	(0.359)	(0.586)	(0.115)	(0.0711)	(0.967)	(0.581)	(0.884)	(0.844)	(0.164)	(0.185)	
Students are put into small reading groups	-0.207	1.761	-0.00401	-0.301	-0.0159	0.00905	-0.629	-0.467	0.0491	-1.181	0.0632	0.0870	2.268	3.017*	0.751	1.365	0.119**	0.127**	
	(0.916)	(0.316)	(0.998)	(0.900)	(0.790)	(0.881)	(0.702)	(0.773)	(0.972)	(0.344)	(0.457)	(0.338)	(0.375)	(0.0919)	(0.607)	(0.559)	(0.0308)	(0.0212)	
Teacher has post-graduate degree	-0.409	2.351	0.578	3.628*	0.00646	-	-1.880	-3.147*	-2.620**	-3.062*	-0.0639	-0.0492	-2.007	-0.0826	0.471	-0.155	-0.0356	-0.0261	
	(0.801)	(0.138)	(0.638)	(0.0789)	(0.909)	(0.998)	(0.102)	(0.0548)	(0.0411)	(0.0863)	(0.208)	(0.327)	(0.429)	(0.969)	(0.755)	(0.937)	(0.523)	(0.652)	
2017 outcomes	0.294	1.319	-	9.164***	-	-0.121**	-	6.237***	0.441	10.88***	0.0165	0.00477							
	(0.792)	(0.309)	(6.30e-09)	(0.000112)	(0.00595)	(0.0109)	(3.14e-06)	(1.16e-05)	(0.673)	(0)	(0.664)	(0.903)							
Age of student	0.475	-1.248*	-0.416	-0.0660	0.00625	0.0138	-0.529	-1.133	-1.107*	-1.234*	-0.0212	-0.0281	-0.317	0.451	0.187	1.171	0.0458	0.0383	
	(0.468)	(0.0814)	(0.427)	(0.950)	(0.819)	(0.615)	(0.406)	(0.130)	(0.0593)	(0.0722)	(0.333)	(0.209)	(0.735)	(0.638)	(0.839)	(0.403)	(0.102)	(0.170)	
Sex of student	5.195***	8.310***	4.800***	8.702***	0.105**	0.0603	3.188**	-0.526	2.270*	3.980***	0.140***	0.118***	0.616	4.501*	2.596*	2.359	0.137	0.130	
	(0.000301)	(1.26e-07)	(2.67e-05)	(8.09e-05)	(0.0263)	(0.202)	(0.0119)	(0.823)	(0.0500)	(0.00764)	(0.000678)	(0.00269)	(0.765)	(0.0673)	(0.0911)	(0.229)	(0.108)	(0.136)	
Region 7	3.635**	6.485***	5.289***	4.819*	0.0998*	0.0691	4.058***	2.120	2.861**	0.753	0.154**	0.149**	1.598	4.629*	5.424***	0.885	0.0165	0.0146	
	(0.0326)	(0.000584)	(2.14e-05)	(0.0895)	(0.0696)	(0.229)	(0.000733)	(0.230)	(0.0173)	(0.657)	(0.0173)	(0.0153)	(0.517)	(0.0528)	(0.000318)	(0.716)	(0.818)	(0.843)	
Mother tongue	-0.264	-1.112	2.063	-1.439	0.165	0.190*	1.380	-1.348	-0.653	0.173	0.0772	0.101	-1.449	1.115	-4.271**	-13.25*	0.000645	0.00497	
	(0.919)	(0.659)	(0.199)	(0.587)	(0.131)	(0.0649)	(0.441)	(0.588)	(0.760)	(0.934)	(0.408)	(0.265)	(0.609)	(0.708)	(0.0224)	(0.0845)	(0.997)	(0.975)	
English familiar words – G2		0.954***																	
		(0)																	
English unfamiliar words – G2			0.889***																
			(0)																

Constant	15.27	4.151	-4.741	-6.804	-0.588	-0.571	21.69**	32.64**	17.97*	9.257	0.239	0.335	58.88**	-4.456	-5.753	-26.16	0.668	0.717
	(0.251)	(0.781)	(0.609)	(0.678)	(0.150)	(0.178)	(0.0480)	(0.0356)	(0.0938)	(0.642)	(0.629)	(0.470)	(0.0173)	(0.847)	(0.809)	(0.293)	(0.395)	(0.363)
Observations	2,530	2,532	2,531	2,532	2,537	2,057	2,564	2,568	2,568	2,568	2,568	2,319	1,180	1,179	1,180	1,180	1,180	1,119

ANNEX 8 – CORRELATIONS BETWEEN OBSERVED TEACHING PRACTICES AND ORF

Category	General "best practice" teaching behavior	Correlation with ORF
Classroom Materials	Uses different instructional resources	.05
	Uses materials besides textbooks	.06
Opportunities for Reflection and Application	Connects to previous lessons	.04
	Asks probing questions	.13
	Provides opportunities to apply learning	.03
	Provides opportunities for critical thinking	.13
Positive Learning Environment	Effective classroom management	.06
	Treats students fairly	.02
Other	Manages time effectively	.03
	Assesses pupil learning	.10
	Cooperative learning strategies	.10
Category	Reading-Specific teaching behavior	
Opportunities for Developing Comprehension	Asks pre-reading questions	.10
	Asks learners to act something out	.10
	Uses multiple methods for comp.	.06
	Asks questions to assess reading comp.	.09
	Asks questions to assess listening comp.	.08
	Allows learners to retell story	.10
Opportunities for Learning to Decode and Spell Words	Encourages sounding it out	.09
	Provides instructions to decode	.02
	Asks learners to recognize letters	.03
	Asks learners to recite alphabet	.03
Positive Learning Environment	Avoids criticizing learners	.01
	Encourages learners to help each other	.09
Other	Uses reading-level appropriate activities	.04
	Asks readers to read aloud	.12
	Teaches learners new words	.05
	Assigns individual reading	.12
	Provides methods for good writing skills	.05

ANNEX 9 – EGRA ASSESSMENT EQUATING

SI is using Early Grade Reading Assessments (EGRA) designed and tested by RTI in Cebuano, Ilokano, Filipino, and English, and Early Grade Math Assessments (EGMA) in mother tongue designed and tested by DepEd. When learning scores are compared across time from a panel of students to infer impacts, scores are obtained through different versions of EGRA tools used across data collection rounds. RTI provided SI with two equivalent versions of the mother tongue EGRA instruments and DepEd provided three equivalent versions of the EGMA instruments. SI developed alternate Filipino and English instruments, as these were not available from either RTI or DepEd. These alternate versions were developed following guidance from RTI to scramble items in the letters, familiar words, and unfamiliar words subtests, and swap in a similar oral reading passage and accompanying reading comprehension questions, which were constructed keeping sentence structure and length the same, only altering main nouns and verbs with nouns and verbs of equal syntactic and lexical complexity. A third version of English was introduced at follow-up, following the same procedure.

DECISION TO EQUATE

The two test versions for each instrument were compared during pilot testing to determine if students were scoring systematically higher on either version of any test. No systematic differences were found between the two test forms for any of the tests in the pilot sample. Rather than using a baseline version and an endline version as is done in many EGRA studies, we took an added precaution of randomizing both test versions at baseline. At follow-up, each student takes an alternate version that she/he did not receive previously. This method allows us to identify and correct for any effects resulting from differences in test difficulty or comparability.

Analysis of the full sample data confirms that the versions were successfully assigned at random, though some discrepancies in difficulty were found in the EGRA and EGMA instruments. Table I displays equivalence data with the full sample at baseline, and shows that statistically significant differences are observed across each of the tools.

Table I: Baseline EGRA tool differences

EGRA Grade 1		Form A		Form B		t-test	
		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Ilokano	Letters correct per minute	12.17	13.04	12.71	12.81	0.697	
	Familiar words correct per minute	12.32	13.76	13.64	15.49	0.398	
	Unfamiliar words correct per minute	8.93	12.78	11.44	14.84	0.087	*
	Oral reading words correct per minute	8.26	10.98	11.48	13.53	0.013	**
	Reading comprehension (pct correct)	7%	0.18	10%	0.19	0.096	*
Cebuano	Letters correct per minute	15.82	15.47	17.20	16.87	0.178	
	Familiar words correct per minute	11.15	12.88	11.22	13.25	0.930	
	Unfamiliar words correct per minute	9.13	10.55	8.44	10.13	0.293	
	Oral reading words correct per minute	11.65	13.97	14.06	14.68	0.008	***
	Reading comprehension (pct correct)	10%	0.19	16%	0.24	0.000	***
EGRA Grade 2		Form A		Form B		t-test	

		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Filipino	Letters correct per minute	17.80	16.67	17.98	16.42	0.841	
	Familiar words correct per minute	31.23	23.49	32.22	21.93	0.428	
	Unfamiliar words correct per minute	18.94	14.47	18.38	13.44	0.459	
	Oral reading words correct per minute	34.92	23.83	27.12	26.38	0.000	***
	Reading comprehension (pct correct)	24%	0.23	20%	0.26	0.002	***
English	Letters correct per minute	19.97	18.38	22.97	18.31	0.003	***
	Familiar words correct per minute	25.74	25.52	26.19	26.28	0.753	
	Unfamiliar words correct per minute	14.19	14.51	14.27	15.76	0.925	
	Oral reading words correct per minute	33.42	28.80	37.57	32.02	0.013	**
	Reading comprehension (pct correct)	12%	0.22	10%	0.18	0.038	**
EGRA Grade 3		Form A		Form B		t-test	
		Mean	Standard deviation	Mean	Standard deviation	p-value	Level of significance
Filipino	Letters correct per minute	21.35	17.74	19.33	17.17	0.035	**
	Familiar words correct per minute	48.07	25.36	45.63	25.87	0.083	*
	Unfamiliar words correct per minute	28.34	15.64	25.89	15.62	0.004	***
	Oral reading words correct per minute	48.35	25.69	46.79	25.53	0.268	
	Reading comprehension (pct correct)	14%	0.15	16%	0.19	0.134	
English	Letters correct per minute	22.81	17.99	25.06	17.79	0.022	**
	Familiar words correct per minute	43.81	30.00	44.95	30.90	0.495	
	Unfamiliar words correct per minute	23.99	18.76	24.45	18.72	0.657	
	Oral reading words correct per minute	53.80	34.76	61.59	37.74	0.000	***
	Reading comprehension (pct correct)	23%	0.29	15%	0.22	0.000	***

Equating Method

SI will apply means equating to convert scores from multiple forms of a test to the same common measurement scale. The conversion process obtained through equating adjusts for any difficulty differences existing between forms so that a score on one form can be equated to its equivalent value on another form. As a result, equating makes it possible to estimate the score that a person taking one test form would have received had they taken a different test form. In other words, equating ensures that any differences in scores between students taking different test versions are due to student ability as opposed to differences in test difficulty. The most commonly equated EGRA measure has consistently been ORF (USAID, EdData).

SI that calibrated the tools for equivalence with means equating method and obtained the following conversion factors. These factors were then applied on baseline and midline student scores for analysis. These conversion factors are shown below.

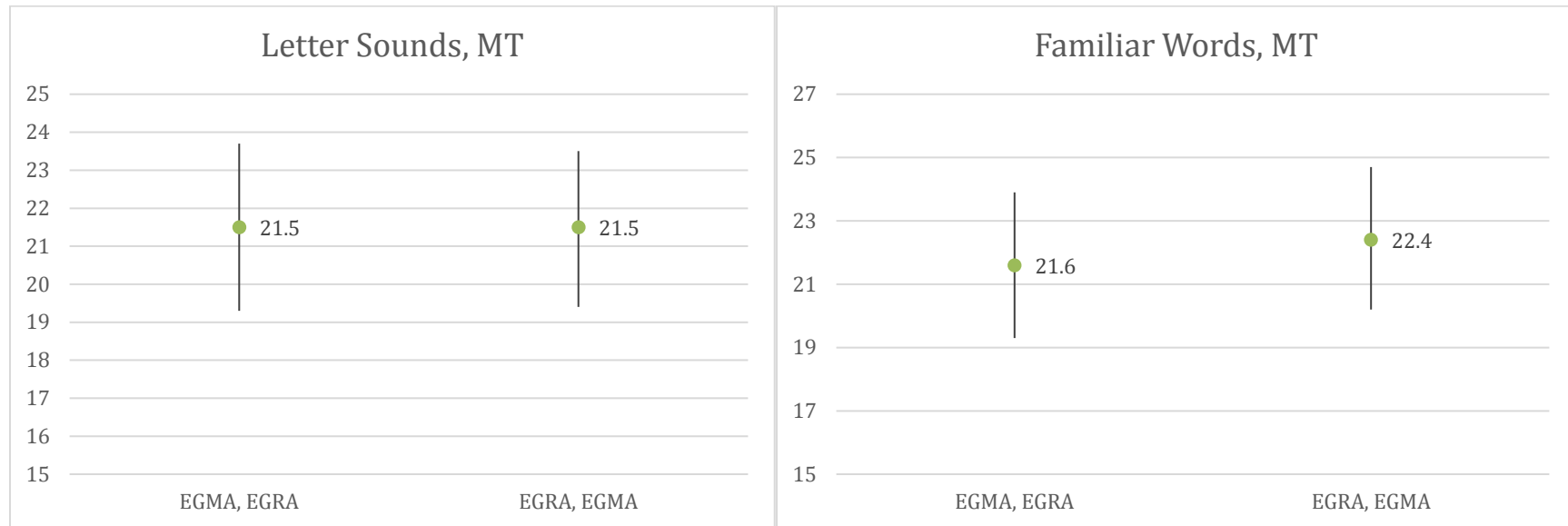
Table 2: Equating conversion factors for EGRA subtests

EGRA Ilokano	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.958	0.991
Familiar Word Reading	0.904	1.101
Unfamiliar Word Reading	0.781	1.085
Oral Reading Fluency	0.719	1.023
Reading Comprehension	0.671	1.265
EGRA Cebuano	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.900	1.006
Familiar Word Reading	0.980	1.051
Unfamiliar Word Reading	1.037	1.080
Oral Reading Fluency	0.815	0.934
Reading Comprehension	0.619	0.773
EGRA Filipino Grade 2	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.979	1.100
Familiar Word Reading	0.955	1.066
Unfamiliar Word Reading	1.023	1.130
Oral Reading Fluency	1.314	1.375
Reading Comprehension	1.203	1.010
EGRA Filipino Grade 3	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	1.099	0.958
Familiar Word Reading	1.047	0.980
Unfamiliar Word Reading	1.091	1.006
Oral Reading Fluency	1.042	0.959
Reading Comprehension	0.912	0.865
EGRA English (Version B)	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	0.887	0.956
Familiar Word Reading	0.991	0.983
Unfamiliar Word Reading	0.990	1.024
Oral Reading Fluency	0.869	0.876
Reading Comprehension	1.436	1.515
EGRA English (Version C)	Conversion factors used on baseline scores	Conversion factors used on midline scores
Letter Sounds	--	0.995
Familiar Word Reading	--	1.010
Unfamiliar Word Reading	--	1.044
Oral Reading Fluency	--	0.983
Reading Comprehension	--	1.631

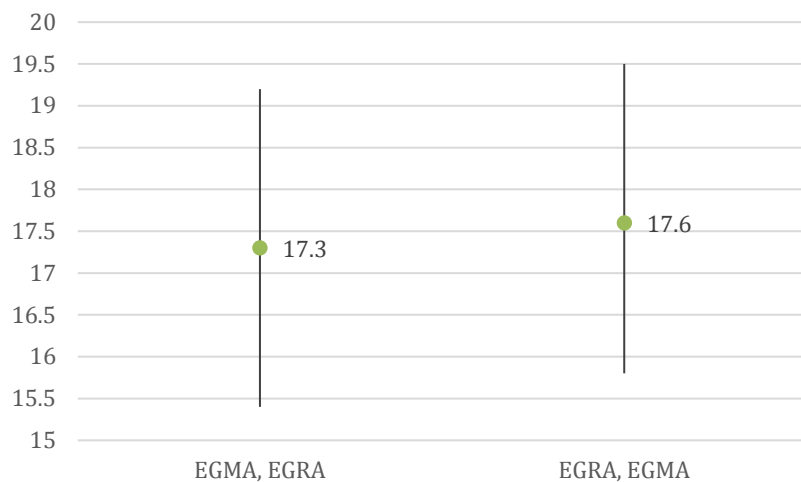
ANNEX 10 – REVIEW OF TEST ORDER EFFECTS

The order of EGRA and EGMA assessments were randomly assigned in the Tangerine survey platform to mitigate against any biases that could result due to the order in which assessments were administered. We analyzed scores on each EGRA and EGMA outcome variable, by grade, to see how the order of tests effected scores. We do not observe any consistent trends on how the order of assessments affects student scores.

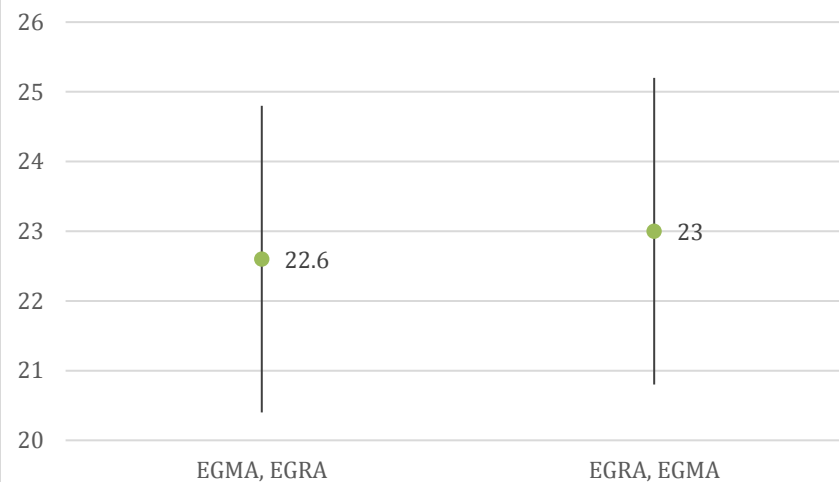
GI EGRA:



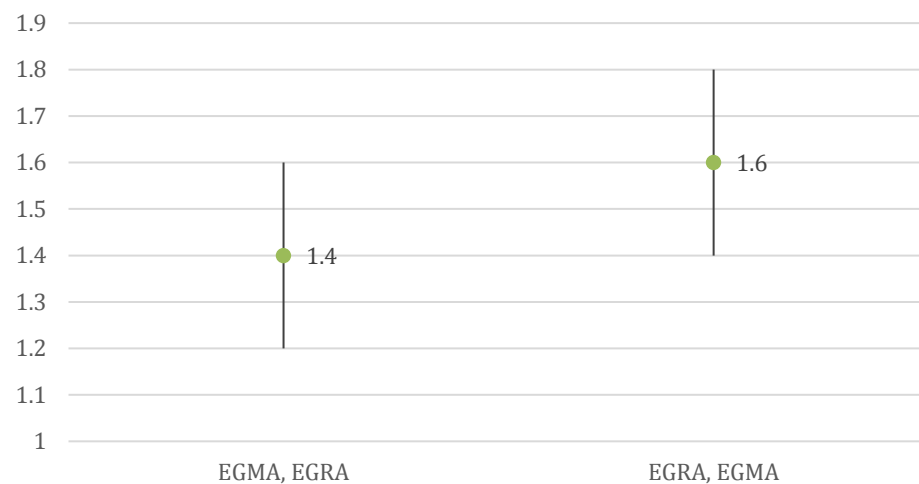
Unfamiliar Words, MT



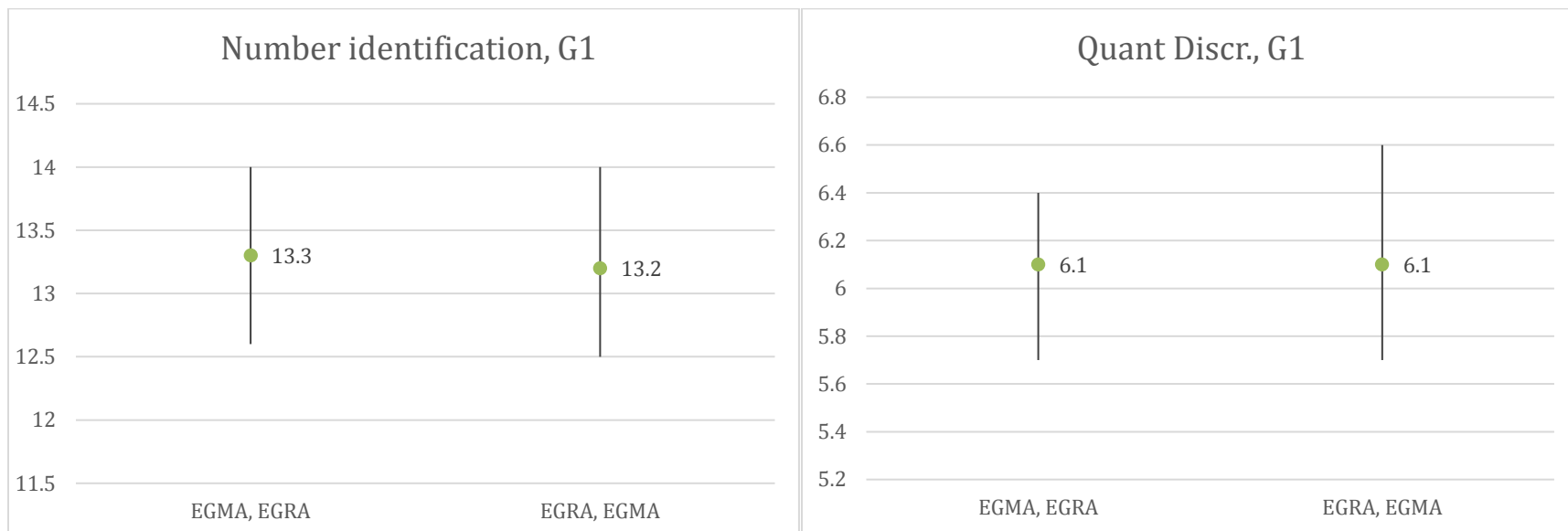
ORF, MT



Reading Comprehension, MT

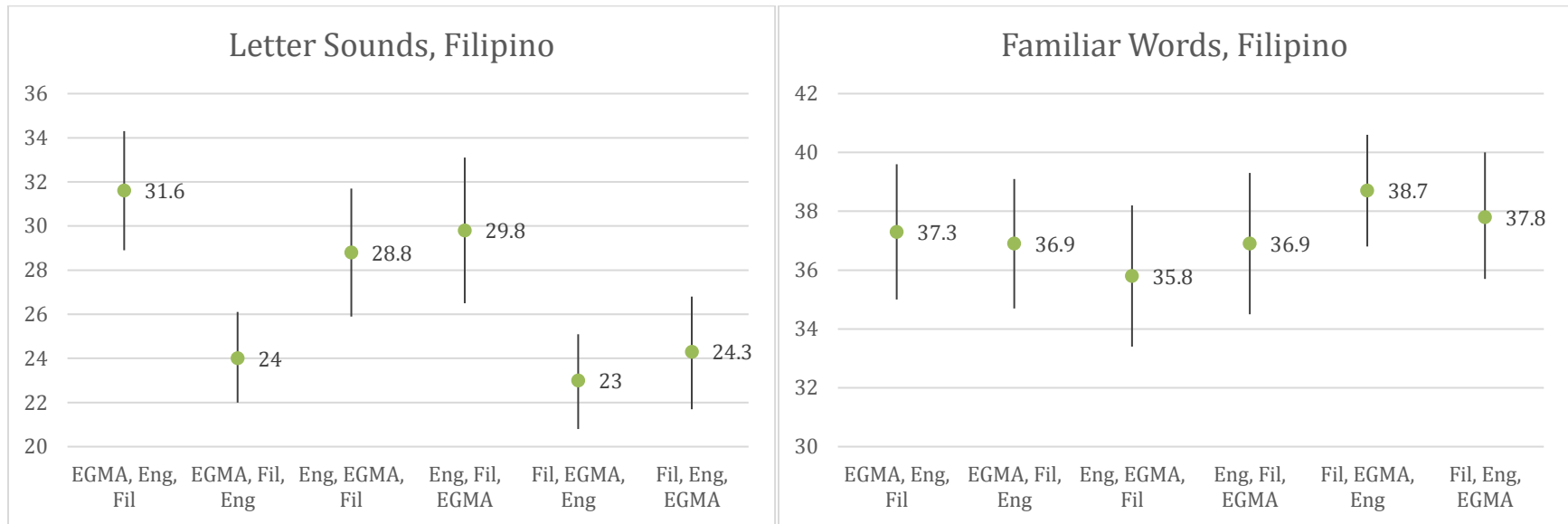


GI EGMA:

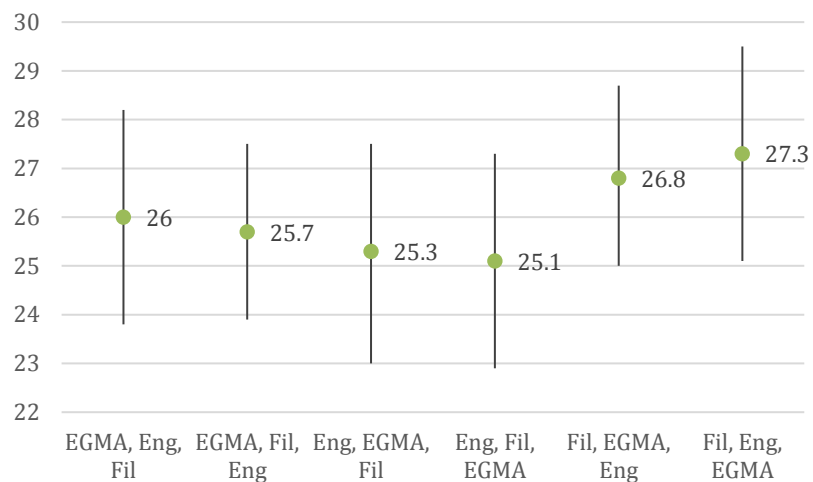




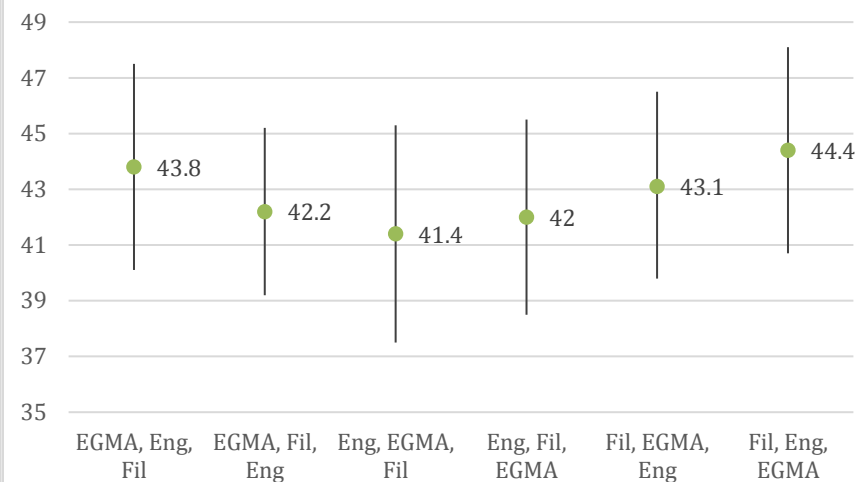
G2/G3 Filipino EGRA:



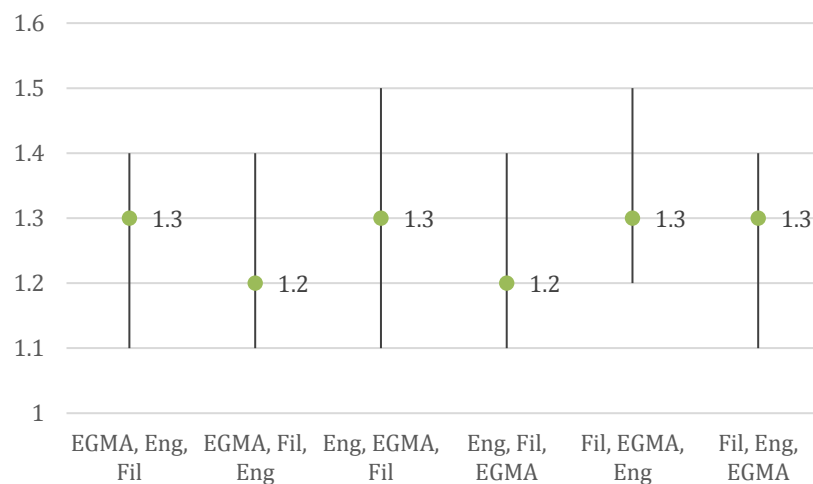
Unfamiliar Words, Filipino



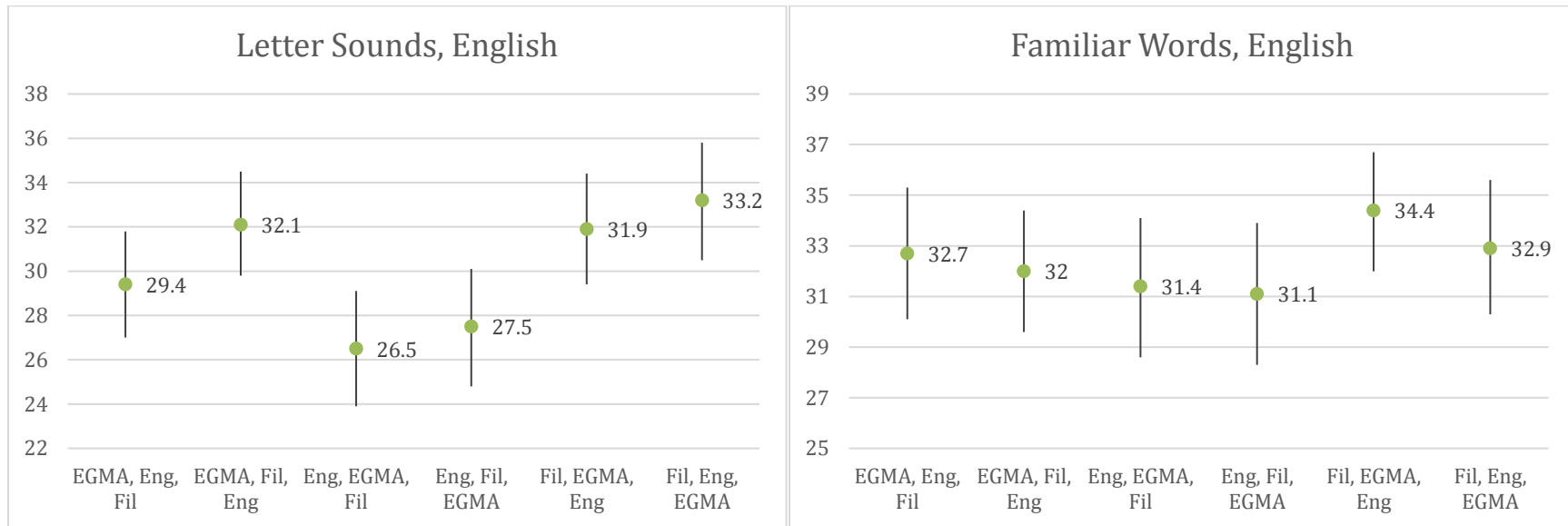
ORE, Filipino



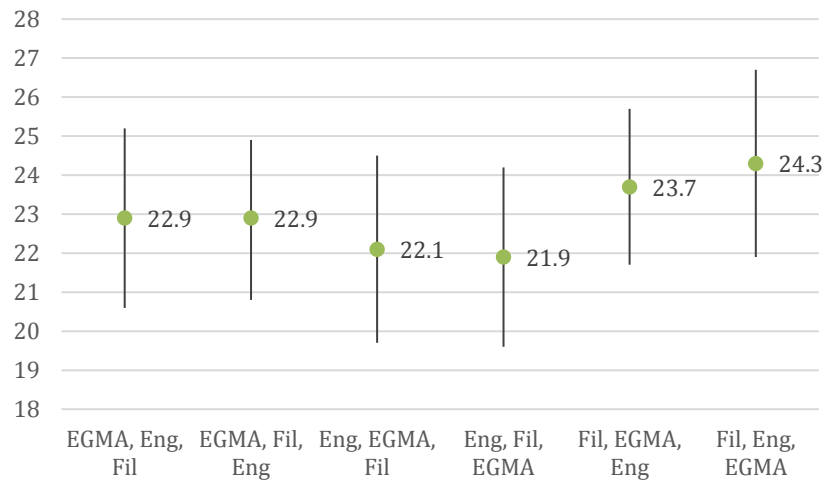
Reading Comprehension, Filipino



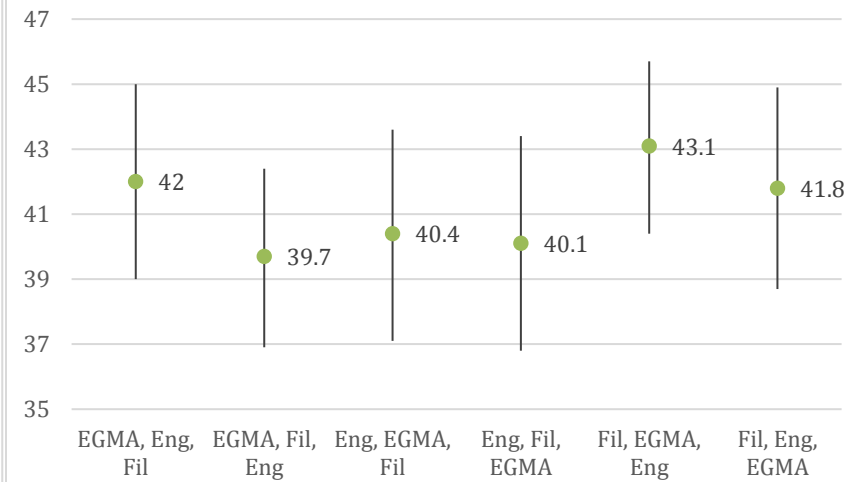
G2/G3 English EGRA:



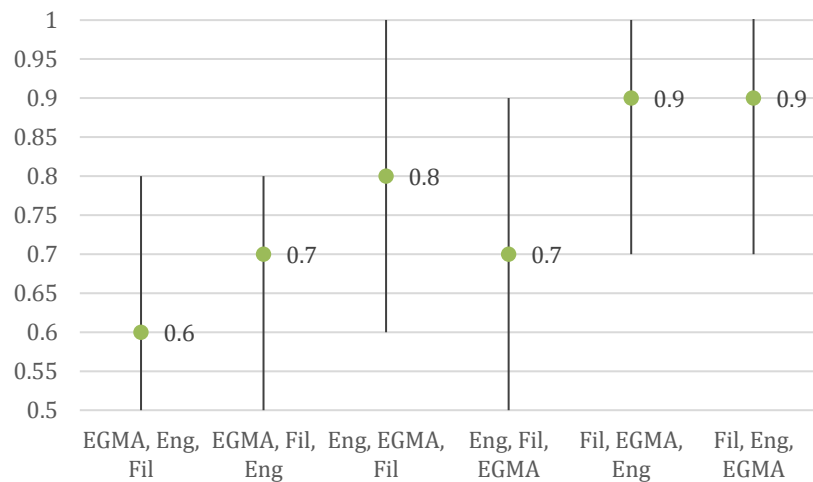
Unfamiliar Words, English



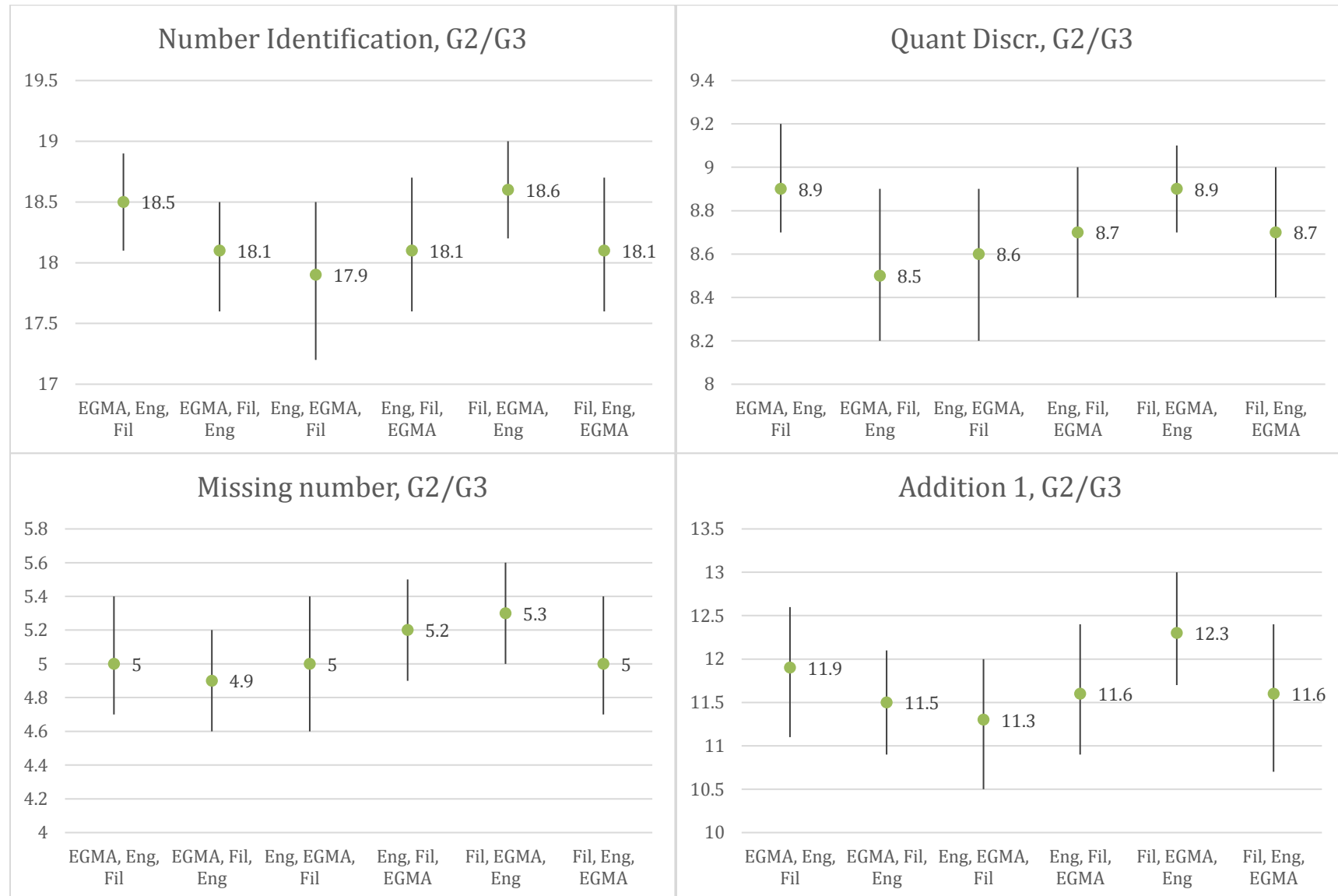
ORF, English

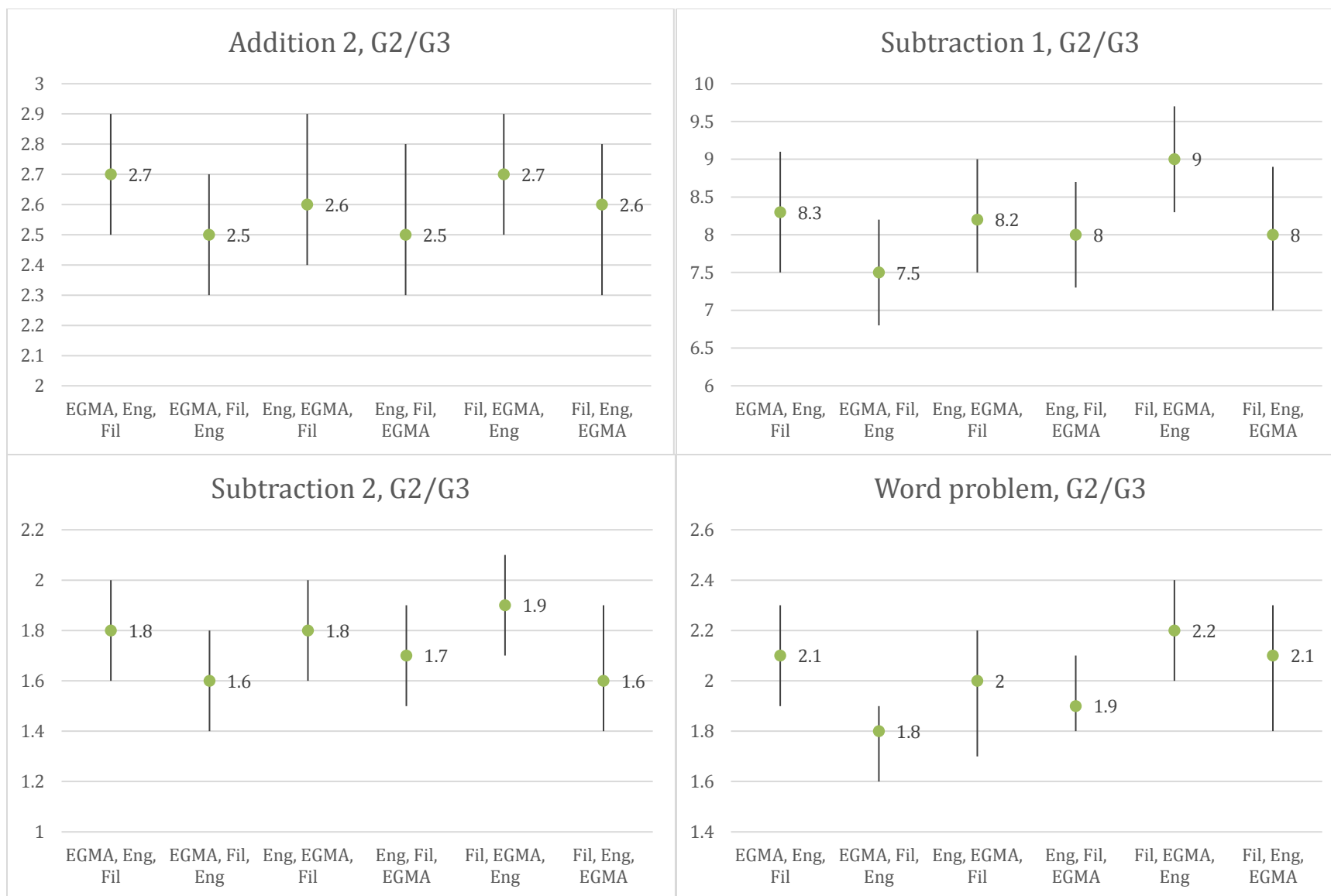


English Reading Comp



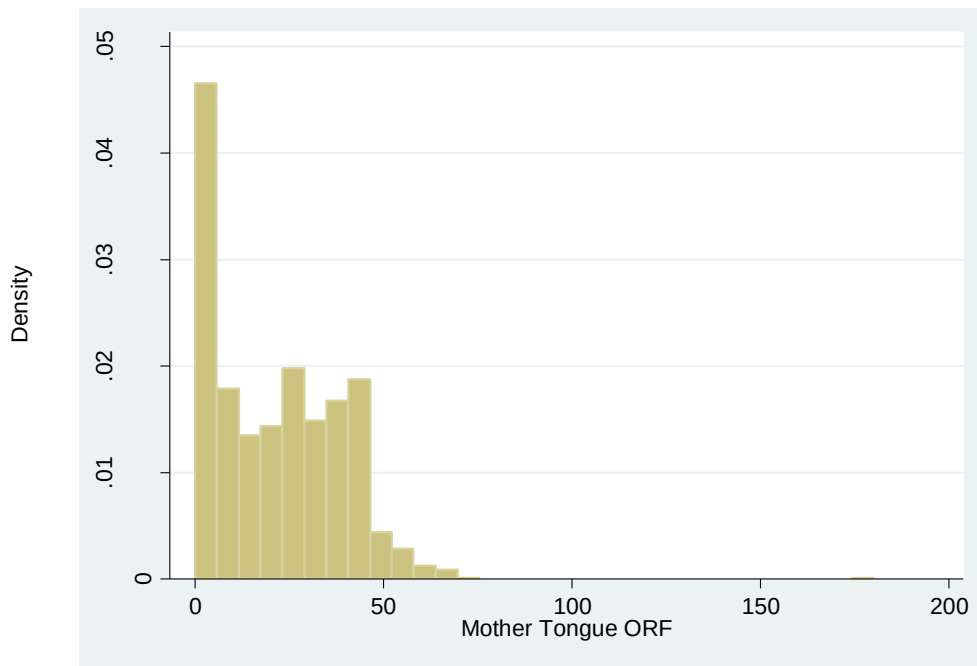
G2/G3 EGMA:



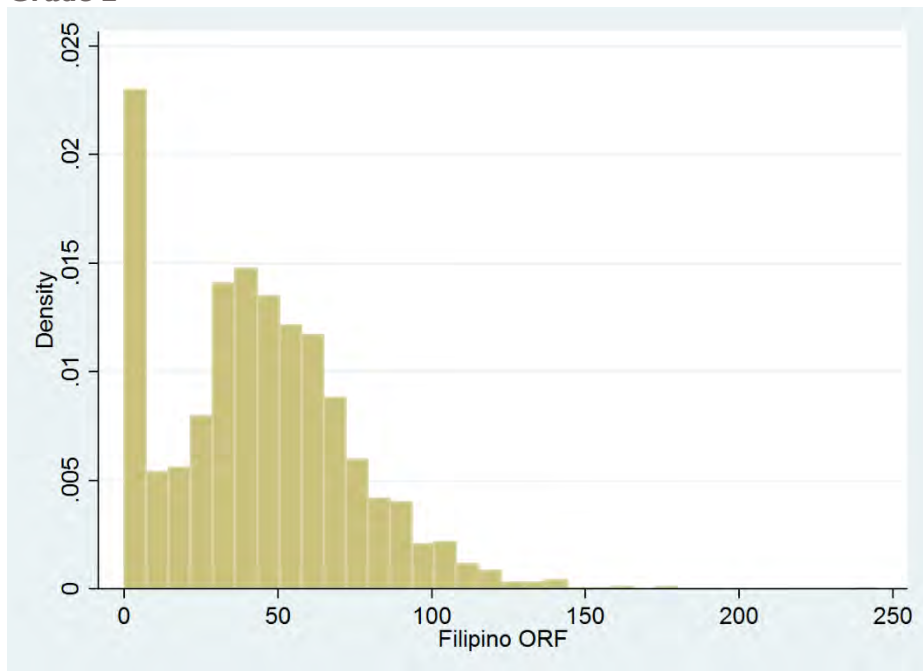


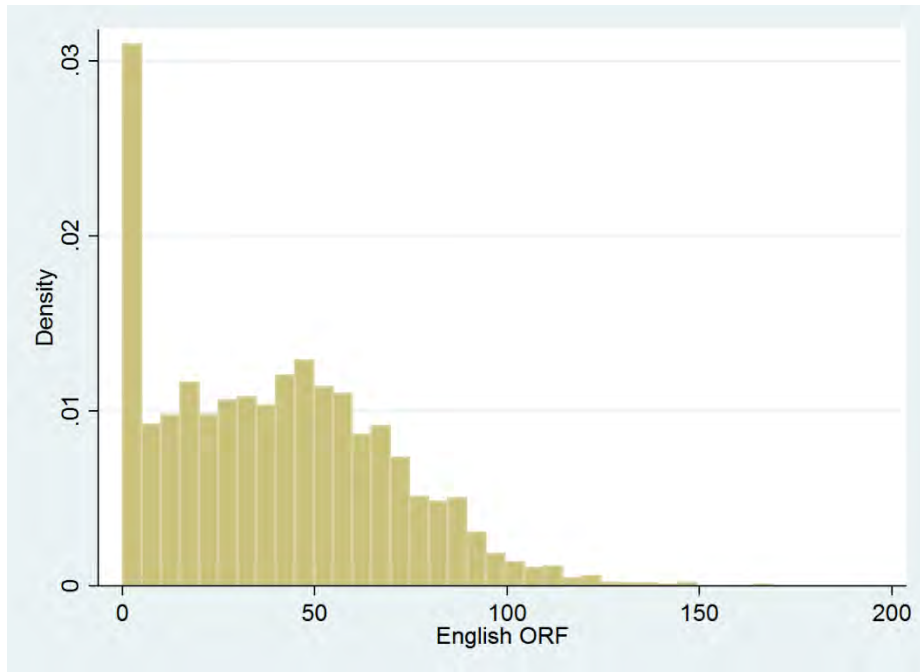
ANNEX II – HISTOGRAMS OF ORF SCORES

Grade 1

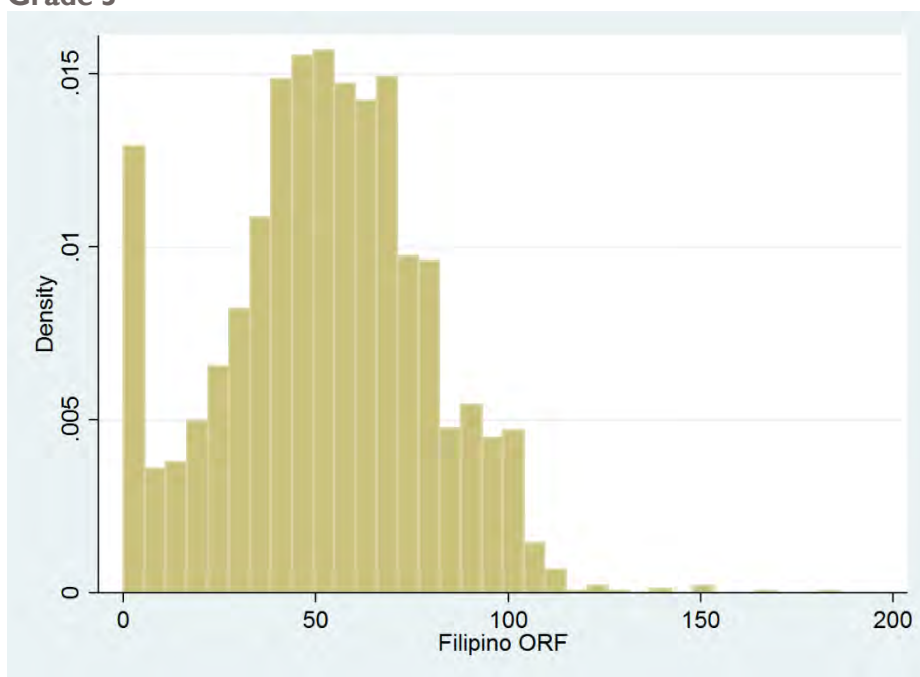


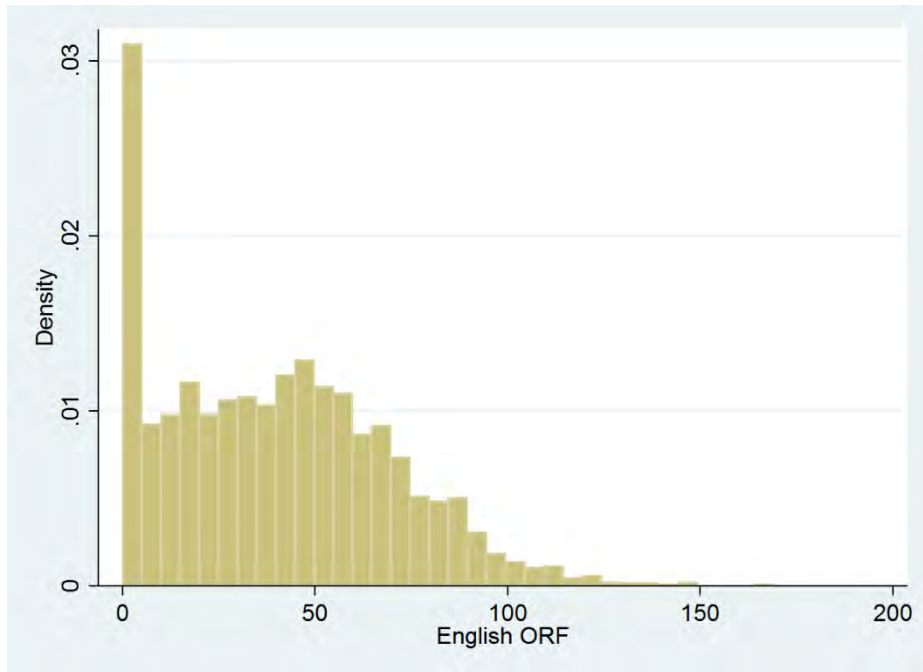
Grade 2



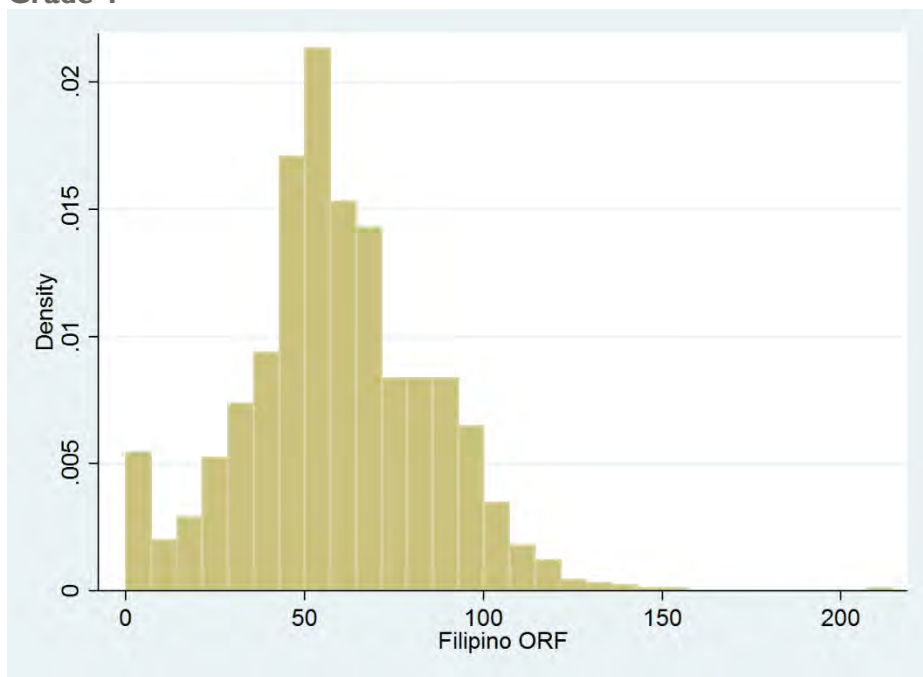


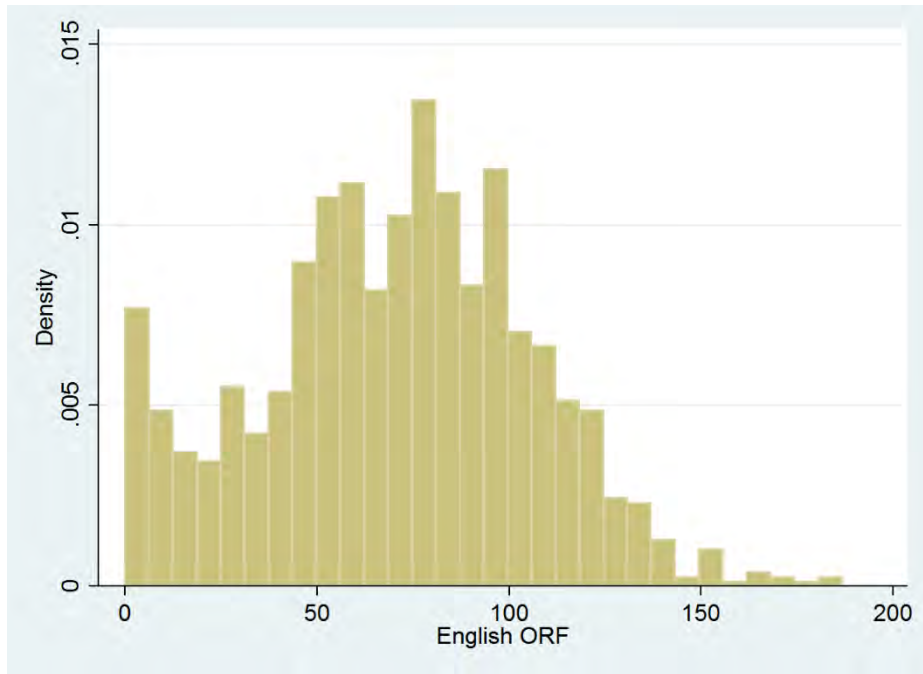
Grade 3





Grade 4





ANNEX 12 – DISCLOSURE OF CONFLICTS OF INTEREST

The evaluation team members disclosed that they had no potential conflicts of interest to conduct this evaluation. Their Conflict of Interest forms are available upon request.

ENDNOTES

ⁱ McEwan, P. J. (2015). Improving learning in primary schools of developing countries: a meta-analysis of randomized experiments. <http://academics.wellesley.edu/Economics/mcewan/PDF/meta.pdf>

ⁱⁱ Özler, B., Fernald, L.C.H., Kariger, P., McConnell, C., Neuman, M., & Fraga, E. (2017). Combining preschool teacher training with parenting education: a cluster-randomized controlled trial. <https://drive.google.com/file/d/0B274-JLBCKcdWVJDN1BNX05udkU/view>

ⁱⁱⁱ Snilstveit, B., Stevenson, J., Menon, R., Phillips, D., Gallagher, E., Geleen, M., Jobse, H., Schmidt, T., & Jimenez, E. (2016). The impact of education programmes on learning and school participation in low- and middle-income countries. http://www.3ieimpact.org/media/filer_public/2016/09/20/srs7-education-report.pdf

^{iv} Piper B. & Mugenda, A. (2014). The Primary Math and Reading (PRIMR) Initiative: endline impact evaluation. http://pdf.usaid.gov/pdf_docs/PA00K27S.pdf

^v Raupp, M., Newman, B., Reves, L., Lauchande, C., Allan, E.J., Jordan, M.A. (2016). Impact Evaluation of the USAID Aprender a Ler project in Mozambique. http://pdf.usaid.gov/pdf_docs/pa00m5d4.pdf

^{vi} Elliott, F. & Goldenberg, C. (2016). Literacy Boost in Rwanda: impact evaluation of a 2-year randomized control trial. <https://globalreadingnetwork.net/publications-and-research/literacy-boost-rwanda-impact-evaluation-2-year-randomized-control-trial>

^{vii} Abeberese, A. B., Kumler, T. J., & Linden, L.L. (2013). Improving Reading Skills by Encouraging Children to Read in School: A Randomized Evaluation of the Sa Aklat Sisikat Reading Program in the Philippines. White Paper. <http://www.leighlinden.com/SAS%20Reading.pdf>

^{viii} Gowda, K., Kochar, A., Nagabhushana, C., & Raghunathan, N. (2013). Curriculum change and early learning: an evaluation of an activity based learning program in Karnataka, India. http://scid.stanford.edu/sites/default/files/publications/475wp_0.pdf

^{ix} Spratt, J., King, S., & Bulant, J. (2013). Evaluation of Mali's Read-Learn-Lead program: endline report. https://www.rti.org/sites/default/files/resources/mali_rll_eval_endline_report.pdf