

Baseline Report:
**Reading Beyond Sight - Improving Reading Scores of Children with
Visual Impairment in Early Primary Education**
Resources for the Blind, the Philippines

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For All Children Reading: A Grand Challenge for Development

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I. Executive Summary

Recognizing that literacy is fundamental to learning, skill acquisition, and success in primary school and beyond, education stakeholders are increasing their focus on the assessment of early grade reading skills. The Early Grade Reading Assessment (EGRA) is an oral student assessment designed to measure the most basic foundational skills for literacy acquisition in the early grades: recognizing letters of the alphabet, reading simple words, understanding sentences and paragraphs, and listening with comprehension.¹ The EGRA methodology was developed under EdData II, and has been applied in more than 30 countries and 60 languages.²

All Children Reading (ACR): A Grand Challenge for Development is a partnership between the United States Agency for International Development (USAID), World Vision, and the Australian Government. ACR has adopted the standard EGRA to systematically assess reading skills across all Round 2 grantees. The instrument is adapted according to each grantee's project context.

In the Philippines, Resources for the Blind Incorporated (RBI)'s Reading Beyond Sight project focused on Improving Reading Scores of Children with Visual Impairment³ in Early Primary Education will give first through third grade students with low vision or blindness access to age- and level-appropriate textbooks and reading materials.

To determine the learning levels of students prior to the start of the intervention, a baseline assessment was conducted using the EGRA. This assessment was adapted for students with low vision or blindness in the Filipino context. Students were assessed using the adapted tool, which included five reading tasks in two languages – Filipino and English. These students were assessed on phonological awareness (letter sounds), alphabetic knowledge (non-word reading fluency), oral reading fluency, reading comprehension, and listening comprehension.⁴

School-to-School International, in collaboration with RBI, a Filipino NGO, and the Department of Education (DepEd) in the Philippines conducted the EGRA baseline assessments in Filipino and English with 161 students with low vision/blindness in 30 schools (15 intervention schools and 15 control schools) for the Improving Reading Scores of Children with Visual Impairment in Primary Education project.⁵

¹ RTI International and International Rescue Committee. (2011). *Guidance Notes for Planning and Implementing Early Grade Reading Assessments*.

² USAID EdData II. Available at: <https://www.eddataglobal.org/reading/>

³ Visual impairment is defined by the Centers for Disease Control and Prevention (CDC) as eyesight that cannot be corrected to a "normal level." There is a spectrum of visual impairment with blindness as the most extreme end. For the purposes of the project each school will have materials for blind and low vision students depending on each school's needs.

http://www.cdc.gov/ncbddd/actearly/pdf/parents_pdfs/VisionLossFactSheet.pdf

⁴ RTI International and International Rescue Committee. (2011). *Guidance Notes for Planning and Implementing Early Grade Reading Assessments*.

⁵ Also referred to as the "project" for ease of reference.

This baseline report summarizes the methodology and findings from the baseline EGRA assessments and provides recommendations for implementation. Accommodations made specifically for students with low vision or blindness are noted in bold font.

Key Findings

Filipino EGRA

- **Type of visual impairment (disability status) impacted student performance in non-word fluency, oral reading fluency, and reading comprehension.** Students with low vision had higher fluency rates than students with blindness.
- **Even when students were able to read, they were not able to understand the meaning of the text.** Almost half of all students were reading with *limited* comprehension (read at least one word of a reading passage but answered less than three of five comprehension questions correctly); 15% of all students were reading fluently with comprehension (answered at least four out of five comprehension questions correctly).
- **One-fifth of all students were unable to read any of the reading passage** (i.e., students identified as ‘zero-scores’).
- **Students in both treatment and control groups had comparable performance on all tasks** (e.g., mean fluency rates for timed tasks: letter sounds, non-word reading and oral reading; proportion of zero-scores on all timed and untimed tasks; and mean scores on reading and listening comprehension questions answered correctly).

Mean fluency rates for all students and the number of zero-score students are reported in Table 1, below, for letter sounds, non-word reading and oral reading tasks in Filipino.

Executive Summary Table 1. Mean Fluency Rates for Timed Tasks on Filipino EGRA

| Task | N | Treatment | Control | All Students | Zero scores (n) |
|---|-----|-----------|---------|--------------|-----------------|
| Letter sound knowledge (correct letter sounds per three minutes) | 158 | 13.9 | 15.6 | 14.7 | 14 |
| Non-word reading (correct non-words read per three minutes) | 157 | 9.7 | 9.3 | 9.5 | 34 |
| Oral reading fluency (correct words per three minutes) | 153 | 14.8 | 14.7 | 14.8 | 33 |

English EGRA

- **Type of visual impairment (disability status) impacted student performance in non-word fluency and reading comprehension.** Students who are low vision had

higher fluency rates than students who are blind. Most notably, however, students who are blind had *higher* scores in listening comprehension than students who are low vision.

- **Even when students were able to read, they were not able to understand the meaning of the text.** Almost two-thirds of all students were reading with *limited* comprehension (read at least one word of a reading passage but answered less than three of five comprehension questions correctly); one percent or less of all students were reading fluently with comprehension (answered at least four out of five comprehension questions correctly).
- **One-third of all students were unable to read any of the reading passage** (i.e., students who were identified as ‘zero-scores’).
- **Students in both treatment and control groups had comparable performance on all tasks** (mean fluency rates for timed tasks: letter sounds, non-word and oral reading; proportion zero-scores on all timed and untimed tasks; and mean score on reading and listening comprehension questions answered correctly).

Mean fluency rates for all students and the number of zero-score students are reported in Table 2, below, for letter sounds, non-word reading and oral reading tasks in English.

Executive Summary Table 2. Mean Fluency Rates for Timed Tasks in English

| Task | N | Treatment | Control | All Students | Zero scores (n) |
|---|-----|-----------|---------|--------------|-----------------|
| Letter sound knowledge (correct letter sounds per three minutes) | 153 | 20.1 | 19.5 | 19.8 | 15 |
| Non-word reading (correct non-words read per three minutes) | 148 | 8.1 | 7.5 | 7.8 | 39 |
| Oral reading fluency (correct words per three minutes) | 150 | 10.6 | 10.2 | 10.4 | 46 |

II. Project Description

The project is designed to give students who are blind/low vision (defined as “visually impaired” by the Centers for Disease Control and Prevention)⁶ students in Grades 1 to 3 access to age- and level-appropriate textbooks and reading materials in schools in the Philippines. The project will also provide schools with access to technology including magnifying software, text-to-speech software, braille embosser machines, and braille displays to read text tactually that is typically displayed on a computer monitor, and

⁶ Visual impairment is defined by the Centers for Disease Control and Prevention (CDC) as eyesight that cannot be corrected to a “normal level.” There is a spectrum of visual impairment with blindness as the most extreme end. For the purposes of the project each school will have materials for students who are blind/low vision depending on each school’s needs.

http://www.cdc.gov/ncbddd/actearly/pdf/parents_pdfs/VisionLossFactSheet.pdf

portable digital magnifiers. Training for teachers and parents of students who are blind/low vision will show how to use the materials to improve reading at school and at home.

The project aims to improve access to these resources for students who are blind/low vision. Historically, the production of reading materials for students who are blind/ low vision has taken place in Manila on a small scale. Due to the distribution and logistical challenges that come with working in a nation of more than 7,000 islands, braille and large print resources have not always been available to students who are blind/low vision. Furthermore, not every student who is blind/low vision needs braille to read. Certain students who are low vision would benefit more from large print resources than braille. Providing accessible reading resources for students who are blind/low vision requires an array of options that can be quickly deployed depending on the needs of the student population.

III. Purpose

The purpose of the project is to improve the reading proficiency of children who are blind/low vision by making reading resources accessible to them. The project aims to accomplish this by providing technology and training to school teachers to provide critical learning materials to students who are blind/low vision. This technology includes a desktop computer, a braille embosser, an electronic braille display, text-to-speech software for English, magnifying software to enlarge text, portable digital audio players, and digital magnifiers. Equipment will be delivered to each school, as needed, based on the population they serve. Each school will receive training from RBI on the appropriate usage of this technology. All reading materials for this project were made available by the DepEd, which digitized and posted more than 500 grade-appropriate books in English, Filipino, and 15 other languages on a learning portal for open source use. The project aims to provide reading enhancement materials in accessible formats for children who are blind/low vision to increase access to a greater variety of reading materials and help the target population read at grade level.

Improving parent engagement in their children's reading is another key component of the project. Over the course of the project, workshops will help parents understand how to teach their children at home by providing training on basic braille reading and writing, as well as abacus-based mathematics.

To determine the impact of the project's interventions, Grade 1 to 3 students' reading skills were measured prior to the beginning of the project (hereafter referred to as baseline). Students in both project schools (hereafter referred to as treatment schools) and students in non-participating schools (hereafter referred to as control schools) were assessed at baseline, and will be reassessed at the end of the project to determine the

change in reading abilities of students in treatment and control schools; and subsequently, determine the difference in performance between students in treatment and control schools. This report summarizes findings from the baseline assessment of reading abilities for students in treatment and control schools.

IV. Evaluation Design and Methodology

To measure results of the program, Grade 1 to 3 students' reading skills were assessed at baseline using the Early Grade Reading Assessment (EGRA); students will be reassessed again at endline. The baseline assessment was conducted in September 2015 while the endline is scheduled for September 2016.⁷ Together, the baseline and endline will measure gains across all three grades. Results from students in 15 intervention schools will be compared to results from students in 15 control schools at baseline and at endline.

Research Questions

The research questions that the baseline assessment aimed to answer were:

1. Does student performance in the two groups (treatment and control) differ?
2. Does student performance in the two groups (treatment and control) differ by gender and visual disability?

Instrument Development

STS facilitated an EGRA adaptation workshop from September 14-18, 2015 (see Annex A). The workshop resulted in two EGRAs; one in English and one in Filipino. In both assessments, students were presented with instructions in either Cebuano or Filipino as appropriate.

All 161 children took both EGRAs during the baseline data collection since student reading abilities in both languages are of interest to the project.⁸

The EGRA tools consisted of five reading tasks in both the Filipino and English assessments:

1. Letter Sound Knowledge
2. Non-word Reading
3. Oral Reading Fluency
4. Reading Comprehension
5. Listening Comprehension

⁷ The school year in the Philippines lasts from June through April. This means that a student who starts the intervention in Grade 1 at baseline will be mid-way through their Grade 2 year by the project endline. The intervention continues through all school breaks.

⁸ In the Philippines, children begin using both English and Filipino from Grade 1. Filipino is not the home language of all students in the sample and the project will be supporting reading in both languages throughout the year. As a result, the project felt it important to assess in both languages. For both EGRAs, the team created stimuli in both large print for students who are low vision and braille for students who are blind.

These tasks were selected to ensure that students across each of the All Children Reading (ACR) grant-funded projects were assessed on core reading skills. To that end, School-to-School International (STS), in consultation with a literacy expert, determined that a minimum of four tasks should be included across projects: letter sound knowledge, non-word reading, oral reading fluency, and reading comprehension. The fifth task, listening comprehension, was selected because 1) it is widely considered a core EGRA task and 2) it would help measure vocabulary among students who are blind/low vision regardless of the degree of their impairment.

To develop the tools, STS conducted a five-day workshop to adapt an existing Filipino EGRA and to develop an English EGRA instrument. Workshop participants included:

- 2 – Braille Specialists
- 1 – EGRA Focal Person, Dept. of Education
- 2 – Special Education Program Supervisors, Dept. of Education
- 1 – Research Specialist, BASA Pilipinas (Reading Philippines)
- 1 – Chief Brailist, RBI
- 2 – Project Staff, RBI
- 2 – STS Trainer/Consultants

The team reviewed the subtasks and their objectives, pre-tested the assessment, and made final adjustments before conducting the baseline assessment. The goal of the workshop was to have two versions of the Filipino and English EGRA validated and equated to be used for the baseline and endline assessment. To achieve this objective, the participants developed the following:

1. Two letter sounds subtasks (one English, one Filipino)
2. Two non-word reading subtasks (one English, one Filipino)
3. Six reading passages for the oral reading fluency task with reading comprehension questions (three English and three Filipino)⁹
4. Four listening comprehension passages (two English, two Filipino)

The team created three different versions of the EGRA that included two stories each for the pre-test to ensure the maximum exposure for each of the three stories. **The stories were developed for students who are blind/low vision and avoided using visual references to support the narrative. For example, avoiding a story about a red balloon if the color of the balloon is a critical component to the story.**

To assess both the students who are low vision and those who are blind, the team developed stimuli in braille and large print. **The literacy and braille experts determined**

⁹The reading passages were utilized for both the Oral Reading Fluency (ORF) and Reading Comprehension tasks.

that students should have three minutes to read on the timed tests.¹⁰ Thirty-two point font was used on the largest print stimuli for children who are low vision. RBI staff chose this size because 32-point font is the standard size for large print text. There was discussion about whether or not to print the stimuli in a larger font but that would be an accommodation beyond what is normal for students to receive in school and not a valid measure of what they can read in their current school environments. Additionally, the team, which included a braille reading specialist, created **two different braille versions** of the stimuli. To support more fluent, quick reading, English and Filipino braille employ contractions, abbreviating vowels and other letter combinations in more complex texts. These braille contractions are introduced in Grade 2 for English and Grade 3 for Filipino. Both RBI and the DepEd thought students in Grades 1 and 2 should have uncontracted stimuli, and Grade 3 students should read the words and stories in their contracted form in English. The Filipino braille curriculum does not introduce contractions until Grade 3 and full contractions are not used until Grade 4. Therefore using contracted braille was not an issue on part of the EGRA.

Based on the feedback and scores from the pretesting and piloting, two complete versions of both the Filipino and English were finalized, one to be used for the baseline and the other for the endline. The team also learned that Grade 3 students were not exposed to contracted braille therefore all braille readers Grades 1-3 used an uncontracted braille stimulus in English. The EGRA is attached in Annex F.

Sampling Population

Out of a population of 45 schools that RBI staff deemed accessible to the project and that had a population of children who are blind/low vision, 30 schools were randomly selected. Of these 30, RBI randomly assigned schools to the treatment and control groups.¹¹ After randomization, the sample consisted of treatment and control schools on all three main island groups: Luzon, Visayas, and Mindanao.

The EGRA was administered to a total of 161 students in the 30 sampled schools. Once the schools were selected, assessors used national data to identify Grade 1-3 students with low vision or blindness at each school and conducted the baseline assessment with each of them. The average age of students who were tested was 10.2 years old and ranged from 5 years old to 19 years old. The sample, by gender, grade, treatment group, disability status, and location is presented in Table 1.

¹⁰ In consultation with braille reading experts and confirmed by the adaptation team, it was determined that students with visual impairment should have three minutes to read on their timed tests to account for the slower processing times. Traditionally students have one minute for each of the timed EGRA subtasks. As a result, fluency rates for letter-sound, non-word reading, and oral passage reading are less comparable to traditional EGRA results.

¹¹ The population of vision impaired students is divided between blind students and students deemed to have "low vision." These two groups have different learning needs and will receive different treatments to meet these needs. For the purposes of this analysis these two groups are combined and described as vision impaired. Results for each group will be disaggregated.

Table 1: Sample by gender, grade, and group

| | Number of Students (n) | Percentage of Sample (%) |
|---------------------|---------------------------|-----------------------------|
| Male | 84 | 52.2 |
| Female | 76 | 47.2 |
| Gender missing | 1 | 0.6 |
| Grade 1 | 72 | 44.7 |
| Grade 2 | 39 | 24.2 |
| Grade 3 | 49 | 30.4 |
| Grade missing | 1 | 0.6 |
| Intervention | 82 | 50.9 |
| Control | 79 | 49.1 |
| Low Vision | 80 | 49.7 |
| Blind | 81 | 50.3 |
| Luzon | 112 | 69.6 |
| Visayas | 40 | 24.8 |
| Mindanao | 9 | 5.6 |
| Total Sample | 161 | 100 |

**Analyses by gender throughout this report are based on 160 students for whom gender was reported.*

V. Fieldwork Preparation and Data Collection

Assessor Training

The EGRA assessor training workshop and piloting took place from September 19-23, 2015. The agenda for the training can be found in Annex B. The assessors were current or former RBI field workers or teachers who had experience working with students who are blind/low vision. Over the course of the training, participants:

- Reviewed the EGRA principles and gained a comprehensive understanding of the EGRA instrument components;
- Practiced EGRA administration and scoring procedures;
- Practiced conducting the EGRA assessment on tablets;
- Became familiar with the roles and responsibilities of both supervisors and assessors in the field;
- Participated in an Inter-Rater Reliability (IRR) test administration and scoring.

Inter-Rater Reliability (IRR) Test

Inter-Rater Reliability tests were performed at the end of the five-day training. IRR is a measure of reliability used to assess the degree to which different assessors agree in their assessment decisions. IRR tests ensured that the different assessors interpreted answers in the same way; assessors may disagree within an acceptable level (10%) and it will have minimal effect on the EGRA score for each student. The majority of RBI's assessors

performed well enough on the IRR tests administered during the training and the school practice sessions to meet and exceed the inter-rater reliability threshold of 90%. Those who were unable to reliably assess students above a 90% reliability level were placed on teams as assistants and did not conduct the EGRA with students.

Institutional Review Board for Human Participants (IRB)

The Institutional Review Board is responsible for ascertaining the acceptability of proposed research in terms of institutional commitments and regulations, applicable laws, standards of professional conduct and practice, and ethical and societal norms. The IRB examines subject recruitment procedures, proposed remuneration, and the informed consent process. The Board also evaluates the potential risks and benefits to participants outlined in each protocol.

In consultation with World Vision, RBI submitted the EGRA instruments and protocols to Solutions IRB and the RBI Deputy Director completed the required Research Ethics training. RBI received approval for their research project prior to the baseline data collection.

Data Analysis

The data were analyzed using STATA and Excel, which resulted in graphs and frequency tables. The final analytical sample consisted of 161 students. Differences between control and treatment groups were tested for significance; where found, these differences are noted in the results. Mean scores on each task were compared using ANOVA and differences in the proportion of zero-score students (or non-readers) was compared using the chi-square test for significance. ANOVA, which stands for Analysis of Variance, is a statistical model used to analyze the differences between group means, which helps identify differences in the sample that can be generalized to the population. Students who were missing data on the demographic variable of interest (such as one student missing a gender identification) were excluded from those analyses, but were included elsewhere.

Furthermore, for each task, decision rules were applied to exclude outliers. For example, if the time remaining for a timed task resulted in a fluency rate that was outside a reasonable range, then that student's fluency rate was not included in the analyses. Reasonable ranges for time remaining were based on multiple factors, including the rate at which letters or words in the language tested are typically read and the mean fluency rate with and without the outlier data point(s).

A description of each subtask is provided in Table 2.

Table 2. EGRA Subtask Names and Data Analysis Method

| Subtask | Type | Analysis |
|--|-------------|---|
| Letter Sound Knowledge¹² | Timed | Measured in correct letter sounds read at three minutes time. Letter sound knowledge is a measure of phonological awareness. Each student had the opportunity to read up to 100 upper and lower case letters. |
| Non-word Reading | Timed | Measured in correct “non-words” read at three minutes time. Non-Word Reading measures decoding. Each student had the opportunity to read up to 50 two and three syllable “non-words.” |
| Oral Reading Fluency (ORF) | Timed | Measured in correct words read at three minutes time. ORF is a decoding and reading fluency measure. Each student had the opportunity to read 59 words in Filipino and 69 words in English. The ORF passage formed the textual basis for the Reading Comprehension Subtask. |
| Listening Comprehension | Untimed | Measured in number of correct answers verbally delivered to the assessor. Listening Comprehension is a measure of vocabulary. Each student had the opportunity to answer four questions based on a passage read to them by the assessor. |
| Reading Comprehension | Untimed | Measured in number of correct answers verbally delivered to the assessor based on questions asked about the passage read as part of the ORF subtask. Each student had the opportunity to answer five questions. |

VI. Summary of Findings

This section summarizes findings from the Filipino and English EGRA baseline assessments that were administered to 161 students in Grades 1 to 3 in the 30 selected schools – 15 treatment and 15 control.

Results are presented for both timed and untimed tasks. Three of the five tasks were timed: letter-sound knowledge, non-word reading, and oral reading fluency. The reading and listening comprehension tasks were untimed. All student scores on the timed tasks were recorded at the three-minute mark. While EGRA administration traditionally calls for one-minute fluency rates, **three minutes were allotted for students** who are blind/low vision. The same adjustment was made in other ACR projects for students who are

¹² To accommodate the vision impaired students that are the focus of this intervention all three fluency tasks (letter sound knowledge, non-word reading, and oral reading fluency) were calculated at the three-minute mark as opposed to the more traditional one-minute mark.

blind/low vision. Upon discussion, the braille and EGRA specialists in the Philippines found the change appropriate in this context as well.

In this report, results are first presented for the test administered in Filipino followed by results for the test administered in English. For each test and task, results are presented by group (treatment or control) and within each group, by gender and by disability status (blind or low vision). Data tables by disability status are included in the body of the report; data tables by gender are presented in Annex C (Filipino) and Annex D (English). Item-level statistics for both assessments are provided in Annex E.

VII. Results by Group and Gender

Filipino EGRA

For each task in the Filipino EGRA, the following results are reported: the items attempted by students in both groups (treatment and control), the mean fluency rate (for timed tasks), proportion of zero-scores, and differences in fluency rates and proportion zero-scores by gender and disability status (low vision or blind).

Letter Sound Knowledge

In the three minutes allotted for this task, students in the control group were able to correctly identify up to 50.3 letter sounds with a range of 1 to 100 letters attempted. Students in the treatment group were able to correctly identify up to 55.3 letter sounds and attempted a range of 5 to 100 letters. The difference in the average fluency rate for letter sounds between treatment and control groups was not statistically significant; therefore, **the average letter sound fluency rate for students in both treatment and control groups was 14.7 correct letter sounds per three minutes.**

The proportion of zero-scores, or students unable to identify a single letter sound correctly, was also examined. **Overall, 9% of the sample (n=14) were unable to identify a single letter sound correctly.** By group, the proportion of students unable to identify a letter sound correctly was comparable (differences were not statistically significant). In other words, almost 1 out of 10 students in both treatment and control groups were unable to identify a single letter sound correctly.

Average fluency was also examined by disability status (blind versus low vision) and by gender. When examining the effect of disability status, no significant differences were observed in either group. Furthermore, by gender, there were no significant differences in the performance of boys and girls in either group on this task. Put simply, student performance on this task was comparable across gender, disability status and group. Table 3 shows the average letter sound fluency rates by disability status and by treatment group.

Table 3: Filipino Letter Sound Fluency by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD ¹³ | Zero Scores (n) ¹⁴ |
|--------------|-------------------|-----|--------------|------------------|-------------------------------|
| Treatment | Low Vision | 40 | 16.7 | 14.5 | 2 |
| | Blind | 40 | 11.0 | 10.3 | 5 |
| | Total | 80 | 13.9 | 12.8 | 7 |
| Control | Low Vision | 38 | 14.9 | 12.2 | 3 |
| | Blind | 40 | 16.3 | 14.1 | 4 |
| | Total | 78 | 15.6 | 13.2 | 7 |
| All Students | | 158 | 14.7 | 12.9 | 14 |

Non-Word Reading

Students in the control and treatment groups attempted between 1 and 50 non-words; the range of correct responses was also between 1 and 50 non-words in the three minutes allotted for this task. The difference in the average non-word fluency rate between treatment and control groups was not statistically significant; therefore, **the average non-word fluency rate for students in both treatment and control groups was 9.5 correct non-words per three minutes.**

The proportion of zero-scores, or students unable to read a single non-word correctly, was also examined. **Overall, 22% of the sample (n=34) were unable to identify a single non-word correctly.** By group, the proportion of students unable to identify a letter sound correctly was comparable. In other words, 1 out of 5 students in both treatment and control groups were unable to identify a single non-word correctly.

By gender, there were no significant differences in the performance of boys and girls in both groups on this task. However, when examining the effect of disability status, **students who are low vision had higher mean scores than students who are blind;** this held true for both groups. Table 4 shows the average non-word fluency rates by disability status and by treatment group.

Table 4: Filipino Non-Word Fluency by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD | Zero Scores (n) |
|-----------|-------------------|----|--------------|------|-----------------|
| Treatment | Low Vision | 39 | 12.5* | 12.4 | 6 |
| | Blind | 40 | 6.9 | 6.9 | 10 |

¹³ SD=Standard Deviation. The standard deviation of the measure of interest (here, mean fluency rates) describes how spread out the scores are. Smaller SD values indicate that the majority of values lie close to the mean; larger SD values indicate that mean fluency rates varied and were more spread out.

¹⁴ Zero-scores are the proportion of students who were unable to correctly identify a single letter sound.

| | | | | | | |
|---------|------------|--------------|-----|------|------|----|
| | | Total | 79 | 9.7 | 10.3 | 16 |
| Control | Low Vision | | 37 | 9.9* | 13.1 | 10 |
| | Blind | | 41 | 8.8 | 8.3 | 8 |
| | Total | | 78 | 9.3 | 10.5 | 18 |
| | | All Students | 157 | 9.5 | 10.5 | 34 |

**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

Oral Reading Fluency

Students in the two groups attempted between 1 and 59 words of the reading passage. **On average, the fluency rate for all students was 14.8 correct words per three minutes.** The fluency rates of students in the treatment and control groups were not significantly different.

Similar to the previous task, the proportion of zero-scores was comparable in both groups; **22% of students (n=33) were unable to read a single word.**

Average fluency was also examined by disability status (blind versus low vision) and by gender. When examining the effect of disability status, **students who are low vision significantly outperformed students who are blind**; this held true for both treatment and control groups. However, by gender, there were no significant differences. Table 5 shows the average letter sound fluency rates by disability status and by treatment group.

Table 5: Filipino Oral Reading Fluency (ORF) by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD | Zero Scores (n) | |
|-----------|-------------------|--------------|--------------|------|-----------------|----|
| Treatment | Low Vision | 38 | 22.6* | 23.2 | 6 | |
| | Blind | 40 | 7.5 | 9.7 | 12 | |
| | Total | 78 | 14.8 | 19.1 | 18 | |
| Control | Low Vision | 35 | 18.3* | 20.6 | 9 | |
| | Blind | 40 | 11.6 | 13.2 | 6 | |
| | Total | 75 | 14.7 | 17.2 | 15 | |
| | | All Students | 153 | 14.8 | 18.2 | 33 |

**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

Reading Comprehension

Students' reading comprehension scores are directly related to how far they read the passage in the previous task. As such, the results for this task are based on only those students who were not zero-score students in the oral reading fluency task.

On average, students in the control group answered 1.8 items out of 5 correctly; students in the treatment group answered 1.6 items out of 5 correctly. The difference between the two groups was not statistically significant.

Overall, almost half of the students (50%, n=79) were unable to answer a single comprehension question correctly; this includes students who were not asked a single question because they were not able to read any of the reading passage.

When examining the effect of disability status, **students who are low vision significantly outperformed students who are blind;** this was true for both treatment and control groups. However, by gender, there were no significant differences. Table 6 shows the average number of reading comprehension items answered correctly by disability status and by treatment group.

Table 6: Filipino Reading Comprehension by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Score | SD | Zero Scores (n) |
|--------------|-------------------|-----|------------|-----|-----------------|
| Treatment | Low Vision | 41 | 2.2* | 2.2 | 18 |
| | Blind | 40 | 1.0 | 1.6 | 24 |
| | Total | 81 | 1.6 | 1.9 | 42 |
| Control | Low Vision | 36 | 1.8* | 2.0 | 18 |
| | Blind | 40 | 1.7 | 1.9 | 19 |
| | Total | 76 | 1.8 | 1.9 | 37 |
| All Students | | 157 | 1.7 | 2.0 | 79 |

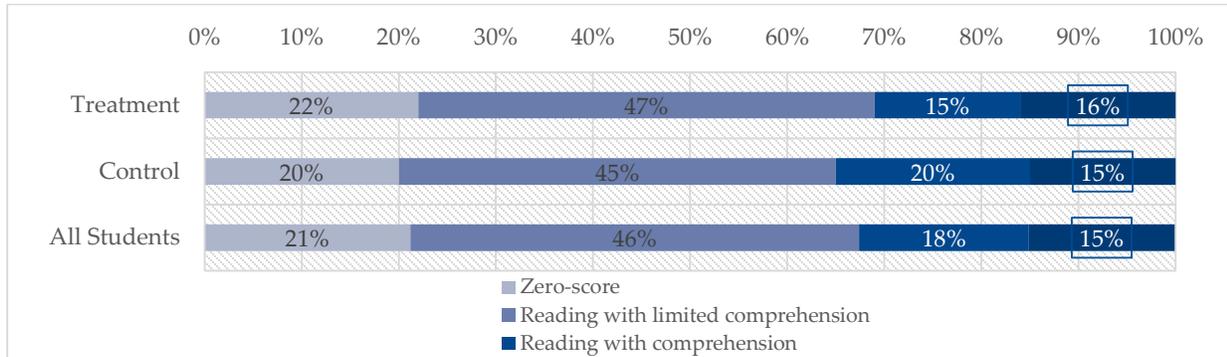
**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

Furthermore, oral reading fluency and reading comprehension were examined together to identify the proportion of students who are able to read *with* comprehension.

For students who were able to read at least one word of the reading passage, their comprehension levels were categorized into four groups as follows: students who were able to read at least one word of the passage but were unable to correctly answer 60% of the comprehension questions were identified as reading with *limited comprehension*; those who read at least one word and answered 60-80% of comprehension questions correctly were identified as reading *with comprehension*, and students who read at least one word and answered more than 80% of comprehension questions correctly were identified as reading *fluently* with comprehension.

The results show that the largest proportion – almost half of all students - were reading with limited comprehension at baseline; furthermore, one-fifth of all students were unable to read any of the reading passage (i.e., zero-scores). Figure 1 shows the proportion of students in each reading category by group and for all students.

Figure 1. Proportion of Students at Various Levels of Reading Proficiency in Filipino



Categories determined as follows: Non-reader = 0 on ORF portion; reading with limited comprehension = less than 60% on reading comprehension and more than 0 on ORF; reading with comprehension = between 60-80% on reading comprehension; and reading fluently with comprehension = reading comprehension score over 80%. N sizes were as follows for zero-scores, readers with limited comprehension, readers with comprehension, and fluent readers with comprehension, by group: treatment – 18, 38, 12, 13; control – 15, 34, 15, 11.

Listening Comprehension

On average, students in both the treatment and control groups answered 2.6 listening comprehension items out of 4 correctly. The difference between the two groups was not statistically significant.

Overall 16% of students (n=25) were unable to answer a single listening comprehension question correctly; this was the second lowest proportion of zero-scores for all Filipino language subtask (the lowest proportion of zero-scores was observed on the letter sound knowledge task).

When examining the effect of disability status, no significant differences were observed in either group. Furthermore, by gender, there were no significant differences in the performance of boys and girls in either group. In other words, student performance on listening comprehension (as with letter sound knowledge) was comparable across gender, disability status and group. Table 7 shows the average number of listening comprehension items answered correctly by disability status and group.

Table 7: Filipino Listening Comprehension by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Score | SD | Zero Scores (n) |
|--------------|-------------------|-----|------------|-----|-----------------|
| Treatment | Low Vision | 41 | 2.6 | 1.4 | 7 |
| | Blind | 40 | 2.6 | 1.4 | 5 |
| | Total | 81 | 2.6 | 1.4 | 12 |
| Control | Low Vision | 36 | 2.4 | 1.5 | 8 |
| | Blind | 40 | 2.8 | 1.3 | 5 |
| | Total | 76 | 2.6 | 1.4 | 13 |
| All Students | | 157 | 2.6 | 1.4 | 25 |

**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

English EGRA

This section presents results for the English EGRA. Since the same students were assessed for both tests, the total number of students was 161. Furthermore, the English EGRA included the same five subtasks.

Letter Sound Knowledge

In the three minutes allotted for this task, students in the control group were able to correctly identify up to 63.9 letter sounds correctly while students in the treatment group were able to correctly identify up to 69.9 letter sounds correctly and students in both groups attempted between 1 and 100 letter sounds. The difference in the average fluency rate for letter sounds between treatment and control groups was not statistically significant; therefore, the **average letter sound fluency rate for students in both treatment and control groups was 19.8 correct letter sounds per three minutes.**

Overall **10% of all students (n=15) were unable to identify a single letter sound correctly.** The proportion of zero-score students was comparable for both groups (differences were not statistically significant). Put simply, approximately 1 out of 10 students in both groups were unable to identify a single letter sound correctly. Table 8 shows the number and average score on letter sound knowledge of students by disability status and group.

When examining scores by disability status (blind versus low vision) and by gender, there were no significant differences for both groups, as explained through the two-way ANOVA statistical test- which accounts for artifacts in the sample (errors) which would take away from the true effect of varying performance across groups by disability. In other words, student performance on this task was comparable across gender, disability status and group. Table 8 shows the average letter sound fluency rates by disability status and by treatment group.

Table 8: English Letter Sound Fluency by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD | Zero Scores (n) |
|--------------|-------------------|-----|--------------|------|-----------------|
| Treatment | Low Vision | 38 | 24.3 | 16.7 | 1 |
| | Blind | 40 | 16.0 | 13.8 | 3 |
| | Total | 78 | 20.1 | 15.7 | 4 |
| Control | Low Vision | 35 | 19.7 | 16.3 | 6 |
| | Blind | 40 | 19.4 | 16.6 | 5 |
| | Total | 75 | 19.5 | 16.4 | 11 |
| All Students | | 153 | 19.8 | 15.9 | 15 |

Non-Word Reading

Students in the control and treatment groups attempted between 1 and 50 non-words; the range of correct responses was between 0 and 46 non-words in the three minutes allotted for this task. The difference in the average non-word fluency rate between treatment and control groups was not statistically significant; therefore, **the average non-word fluency rate for students in both treatment and control groups was 7.8 correct non-words per three minutes.**

Approximately **one quarter of students (26%, n=39) were unable to read a single English non-word correctly.** By group, the proportion of students unable to identify a letter sound correctly was comparable. In other words, 1 out of 4 students in both treatment and control groups were unable to identify a single English non-word correctly.

As with performance on the Filipino EGRA non-word task, **students who are low vision significantly outperformed students who are blind in both control and treatment groups.** By gender, there were no significant differences in the performance of boys and girls in both groups on this task. Table 9 shows the average non-word fluency rates by disability status and group.

Table 9: English Non-Word Reading by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD | Zero Scores (n) |
|--------------|-------------------|-----|--------------|------|-----------------|
| Treatment | Low Vision | 38 | 10.2* | 10.1 | 7 |
| | Blind | 38 | 6.0 | 6.3 | 11 |
| | Total | 76 | 8.1 | 8.6 | 18 |
| Control | Low Vision | 33 | 9.1* | 9.9 | 12 |
| | Blind | 39 | 6.1 | 5.8 | 9 |
| | Total | 72 | 7.5 | 8.1 | 21 |
| All Students | | 148 | 7.8 | 8.4 | 39 |

**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

Oral Reading Fluency

Students in the two groups attempted between 0 and 69 words of the reading passage. **On average, the fluency rate for all students was 10.4 correct words per three minutes.** The fluency rates of students in the treatment and control groups were not significantly different.

Overall, nearly one-third of students (31%, n=46) were unable to read a single word in the English passage correctly. The proportion of students who received zero-scores was comparable across both groups.

When examining the effect of disability status, **students who are low vision significantly outperformed students who are blind**; this held true for both treatment and control groups. However, by gender, there were no significant differences. Table 10 shows the average letter sound fluency rates by disability status and by treatment group.

Table 10: English Oral Reading Fluency (ORF) by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Fluency | SD | Zero Scores (n) |
|--------------|-------------------|-----|--------------|------|-----------------|
| Treatment | Low Vision | 37 | 16.8 | 20.1 | 8 |
| | Blind | 39 | 4.7 | 5.9 | 13 |
| | Total | 76 | 10.6 | 15.8 | 21 |
| Control | Low Vision | 34 | 14.7 | 17.5 | 12 |
| | Blind | 40 | 6.4 | 9.7 | 13 |
| | Total | 74 | 10.2 | 14.4 | 25 |
| All Students | | 150 | 10.4 | 15.1 | 46 |

Reading Comprehension

As noted for the reading comprehension task in Filipino, the results for this task are based on only those students who were not zero-score students in the oral reading fluency task.

On average, students in the control group answered 0.6 items out of 5 correctly; students in the treatment group answered 0.5 items out of 5 correctly. The difference between the two groups was not statistically significant.

Overall, almost three-fourths of students (76%, n=117) were unable to answer a single English comprehension question correctly. Of the students who were asked at least one comprehension question, the majority were unable to answer more than 1 question correctly.

When examining the effect of disability status, **students who are low vision significantly outperformed students who are blind**; this was true for both treatment and control groups. However, by gender, there were no significant differences. Table 11 shows the average number of reading comprehension items answered correctly by disability status and by treatment group.

Table 11: English Reading Comprehension by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Score | SD | Zero scores (n) |
|-----------|-------------------|----|------------|-----|-----------------|
| Treatment | Low Vision | 40 | 0.7* | 1.3 | 28 |
| | Blind | 40 | 0.3 | 0.5 | 32 |
| | Total | 80 | 0.5 | 1.0 | 60 |

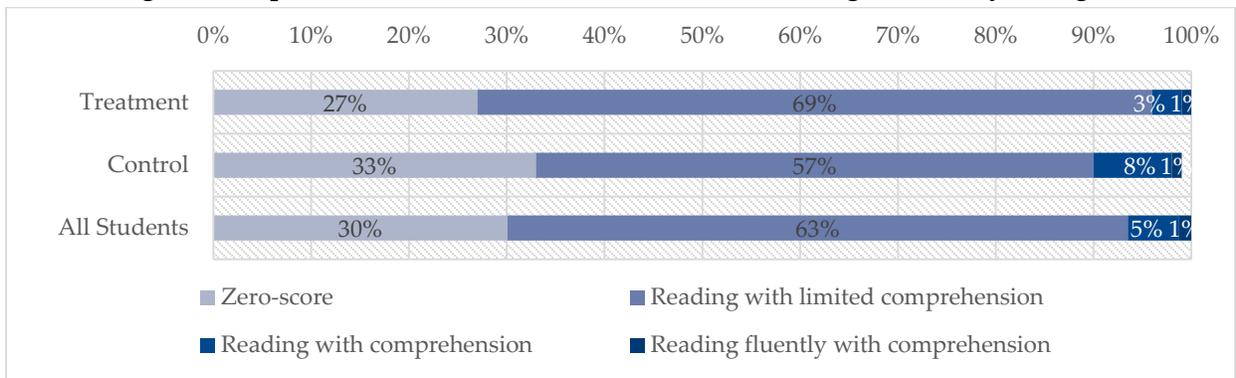
| | | | | | |
|--------------|------------|-----|------|-----|-----|
| Control | Low Vision | 35 | 0.8* | 1.3 | 27 |
| | Blind | 40 | 0.5 | 1.0 | 30 |
| | Total | 75 | 0.6 | 1.2 | 57 |
| All Students | | 155 | 0.6 | 1.1 | 117 |

*Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.

Furthermore, oral reading fluency and reading comprehension were examined together to identify the proportion of students who are able to read with comprehension. Categories were determined similar to those described in the Filipino reading comprehension section.

The results show that **the largest proportion – almost two-thirds of all students - were reading with limited comprehension**; almost one-third of all students were unable to read any of the reading passage (i.e., zero-scores). Figure 2 shows the proportion of students in each reading category by group and for all students.

Figure 2. Proportion of Students at Various Levels of Reading Proficiency in English



Categories determined as follows: Non-reader= 0 on ORF portion; reading with limited comprehension = less than 60% on reading comprehension and more than 0 on ORF; reading with comprehension = between 60-80% on reading comprehension; and reading fluently with comprehension = reading comprehension score over 80%. N sizes were as follows for zero-scores, readers with limited comprehension, readers with comprehension, and fluent readers with comprehension, by group: treatment – 21, 54, 2, 1; control – 25, 43, 6, 1.

Listening Comprehension

On average, students in the control group answered 0.9 listening comprehension items out of 4 correctly; students in the treatment group answered 0.6 items out of 4 correctly. The difference between the two groups was not statistically significant.

Overall, 58% of students (n=89) were unable to answer a single listening comprehension question correctly about a passage that was read to them in English. The proportion of zero-scores was comparable in both groups.

One possible explanation for the lower English listening comprehension scores is that students are not exposed to English in the home and do not begin studying English in school until Grade 2 or Grade 3. Students in the target population typically use a mother tongue in the home and have some access to Filipino through school, television, and social media, but understanding of English at this age is limited.

By disability status, results were notably different than for those observed in other tasks. **Most notably, the trend appears to reverse for this particular task with students who are blind significantly outperforming students who are low vision; this was true for both treatment and control groups.** By gender, however, there were no significant differences. Table 12 shows the number and percentage of students by group and disability status who answered a specific number of comprehension questions correctly.

Table 12: English Listening Comprehension by Treatment Group and Disability Status

| Group | Disability Status | N | Mean Score | SD | Zero Scores (n) |
|--------------|-------------------|-----|------------|-----|-----------------|
| Treatment | Low Vision | 39 | 0.5 | 0.7 | 28 |
| | Blind | 40 | 0.8* | 1.0 | 22 |
| | Total | 79 | 0.6 | 0.9 | 50 |
| Control | Low Vision | 35 | 0.7 | 0.9 | 22 |
| | Blind | 39 | 1.1* | 1.1 | 17 |
| | Total | 74 | 0.9 | 0.9 | 39 |
| All Students | | 153 | 0.8 | 1.0 | 89 |

**Indicates that the mean difference between the two groups was significant at the $p < 0.05$ level.*

VIII. Contextual Factors

To better understand students who are blind/low vision and their learning in the classroom, the following background information was captured through a student survey at the end of the EGRA. This also provided insight into the learning-teaching differences between students and teachers. The following factors may explain some factors contributing to the low reading scores of students who are blind/low vision.

Books in accessible format – At the school level, bi-weekly visits from field workers show that only 10% of the 30 schools have access to braille and other accessible reading materials provided by the DepEd, most of these schools are in the National Capital Region. The DepEd has limited capacity to meet the demand for braille reading materials in time. Also, textbooks for Grade 1-3 using the new K12 curriculum are not yet fully available for production and distribution.

Among the 30 target schools, 86% do not have braille embossers to immediately produce braille reading materials. Most of them manually produced braille reading materials using the Perkins Brailers, and slates and stylus. None of the 30 target schools have the complete set of adaptive equipment we provided to produce accessible materials and support the children’s reading activities.

In the home, the student survey found that over half (58%) of students had access to uncontracted braille materials, while a fifth (22%) had access to print and a fifth (20%) had access to large print. Nearly 54% of respondents reported having English materials at home, while 78% reported Filipino materials.

Parent/Family Involvement: Information on parent/family involvement in student reading was collected through a student survey at the beginning of the EGRA as well as through bi-weekly visits from RBI field staff.

The student survey found that 40% of respondents said their mothers helped them read at home; however, frequency or extent of support is not clear. More than 16% of respondents said that their older sisters helped them read at home and over 7% received reading support from their fathers. Of those, the mother was the most common figure identified in the home as being able to read braille. Twenty respondents (13%) said their mothers could read braille. However, the largest proportion of respondents (nearly 17%) said no one could read braille in the home.

Interviews with parents and bi-weekly visits from field staff provide a more detailed picture of the reading conditions at home. These interviews suggest that roughly 90% of the target population’s students do not receive regular encouragement to read at home, nor set aside time to read at home on a daily basis. (Table 13) Because of limited braille books, teachers do not always allow children to bring their books home to practice reading. Parents also disclosed they are not familiar with braille and could not support their children’s reading activities at home.

Table 13: Frequency of Reading Support and in the Home Based on Parent Interviews

| | Number of Parents (n) | Percentage of Sample (%) |
|--|-----------------------|--------------------------|
| Daily reading at home with family | 16 | 10.7 |
| Irregular reading schedule at home with family | 58 | 38.7 |
| No reading follow-up at home | 76 | 50.6 |
| Total Sample | 150 | 100 |

Sample of 150 parents, based on parent interviews and bi-weekly visits from field workers.

Adaptive Reading Aids: Children who are blind/low vision need adaptive reading devices to read text out loud. The digital books and DAISY player provided to the 15

intervention schools help facilitate decoding, reading fluency, and comprehension. However, 95% of the 30 target schools did not have access of these adaptive reading aids before this project began. Only 16% of the target schools have magnifiers, high powered prescription glasses, and Closed Circuit Television available for children with low vision.

IX. Conclusions

Overall results reveal that students in both treatment and control groups had comparable performance in all timed and untimed tasks—letter sound knowledge, non-word reading, oral reading fluency, reading comprehension and listening comprehension. However, the results show significant differences by type of disability: low vision and blindness. Students who are low vision had higher fluency rates than students who are blind, specifically in terms of letter sound knowledge, non-word decoding, oral reading fluency and reading comprehension.

While some students are able to read words on the page, it is also evident that their ability to comprehend the meaning of the text is low. Almost half of the students were reading with limited comprehensions. As the results show, only 15% of all students were reading fluently with comprehension, particularly in English.

Contextual factors affecting the results include: availability of equipment, parent support and accessible materials.

X. Recommendations

Based on the results observed in the baseline assessment, the following recommendations should be addressed by RBI project staff

1. **Strengthen the support for classrooms and teachers.** There are many activities to support the needs of students who are blind/low vision. As such, teachers need expertise on a variety of techniques and technology. This is a critical part of Activity No. 3 from the proposal, which provides teachers with training on the use of technology to assist students, access content and convert materials into formats that are usable in the classroom by students who are blind/low vision. Teachers often prioritize the interventions they are most comfortable with as opposed to those that are best for the student. The bi-weekly visits should ensure this is not happening.
2. **Provide domain specific resources and training.** There was a noticeable gap between students who are low vision and students who are blind. These different groups need different support. Teachers who are working with each of these populations need to have ability-specific interventions prepared.

3. **Preempt braille bottleneck.** At the proposal stage, RBI noted that any hardcopy materials to be translated to braille would require the use of special software, a labor intensive process. RBI project staff will need to ensure that demand is not outpacing the supply of braille books.

XI. Annex A. Adaption Workshop and Instrument Pre-Testing

| Date | Activity |
|------------------|---|
| Mon., Sept. 14 | Overview of EGRA instrument and revision of Subtasks 1 and 2 (Letter Sound and non-word reading). Adaptation of Filipino and English Letter Sounds and Non-words to braille. |
| Tues., Sept. 15 | Review and revision of Subtasks 3-4 (Oral Reading Fluency, Reading Comprehension). Adaptation of Filipino and English Oral Reading Fluency and Reading Comprehension to VIS context and braille. |
| Wed., Sept. 16 | Review and revision of Subtask 5 (Listening Comprehension). Adaptation of Filipino and English Listening Comprehension to VIS context; Review and finalization of all subtasks; Administration Procedures, Pilot-Testing Prep; Tangerine training |
| Thurs., Sept. 17 | Pilot-testing of Filipino and English instruments with blind and low vision children in Philippines National School for the Blind and Commonwealth School. |
| Fri., Sept. 18 | Debriefing session on pretest and instrument revision. Presentation of Pre-Test results to DepEd and RBI stakeholders |

XII. Annex B: Assessor Training Piloting Schedule

| Date | Activity |
|-----------------|---|
| Mon., Sept. 19 | Opening ceremony Presentation of adaptation workshop and pretest results Introduction to EGRA Training session 1: Administering EGRA in Tangerine Training session 2: Letter Sounds in Filipino |
| Tues., Sept. 20 | Training session 3: Letter Sounds in English Training session 4: Non-word Reading in Filipino Training session 5: Non-word Reading in English Training session 6: Oral Reading Fluency in Filipino |
| Wed., Sept. 21 | Training session 7: Oral Reading Fluency in English Training session 8: Listening Comprehension in Filipino Training session 9: Listening Comprehension in English Training session 10: Student Questionnaire and Book Awareness Training session 11: Full practice of EGRA administration in Tangerine |

| | |
|-------------------------|--|
| | Preparations for pilot |
| Thurs., Sept. 22 | Pilot in 6 schools around Manila Debriefing meeting |
| Fri., Sept. 23 | Assessor goal setting Practice sessions in Tangerine Training session 12: Administering paper-based EGRA Final Inter-Rater Reliability session Selection of Assessors & Assistants Preparations for data collection |

XIII. Annex C. Filipino EGRA Results by Gender

Table 15: Filipino Letter Sound Knowledge by Treatment Group and Gender

| Group | Gender | N | Mean Fluency | SD | Zero Scores (n) |
|--------------|---------------|----------|---------------------|-----------|------------------------|
| Treatment | Male | 35 | 14.8 | 12.8 | 2 |
| | Female | 45 | 13.1 | 12.9 | 5 |
| | Total | 80 | 13.9 | 12.8 | 7 |
| Control | Male | 48 | 15.3 | 13.7 | 6 |
| | Female | 30 | 16.2 | 12.5 | 1 |
| | Total | 78 | 15.6 | 13.2 | 7 |
| Sample Total | | 158 | 14.7 | 12.9 | 14 |

Table 16: Filipino Non-Word Reading by Treatment Group and Gender

| Group | Gender | N | Mean (3 min fluency) | SD | Zero Scores (n) |
|--------------|---------------|----------|-----------------------------|-----------|------------------------|
| Treatment | Male | 36 | 10.9 | 9.9 | 5 |
| | Female | 43 | 8.6 | 10.6 | 11 |
| | Total | 79 | 9.7 | 10.3 | 16 |
| Control | Male | 48 | 8.6 | 11.3 | 13 |
| | Female | 29 | 10.5 | 10.1 | 5 |
| | Total | 77 | 9.3 | 10.5 | 18 |
| Sample Total | | 156 | 9.5 | 10.5 | 34 |

Table 17: Filipino ORF by Treatment Group and Disability Status

| Group | Gender | N | Mean Fluency | SD | Zero scores (n) |
|--------------|--------|-----|--------------|------|-----------------|
| Treatment | Male | 35 | 16.5 | 17.2 | 7 |
| | Female | 43 | 13.5 | 20.6 | 11 |
| | Total | 78 | 14.8 | 19.1 | 18 |
| Control | Male | 46 | 14.7 | 18.1 | 11 |
| | Female | 28 | 14.9 | 16.3 | 4 |
| | Total | 74 | 14.7 | 17.2 | 15 |
| Sample Total | | 152 | 14.8 | 18.2 | 33 |

Table 18: Filipino Reading Comprehensions Questions Correct

| Group | Number of Questions Correct | Male | | Female | | N Total | % Total |
|-----------|-----------------------------|------|-------|--------|-------|---------|---------|
| | | N | % | N | % | | |
| Treatment | 0 | 16 | 44.4% | 25 | 55.6% | 42 | 50.6% |
| | 1 | 4 | 11.1% | 5 | 11.1% | 9 | 11.1% |
| | 2 | 4 | 11.1% | 2 | 4.4% | 6 | 7.4% |
| | 3 | 0 | 0.0% | 4 | 8.9% | 4 | 4.9% |
| | 4 | 6 | 16.7% | 2 | 4.4% | 8 | 9.9% |
| | 5 | 6 | 16.7% | 7 | 15.6% | 13 | 16.1% |
| | Total | 36 | 100% | 45 | 100% | 82 | 100% |
| Control | 0 | 23 | 48.9% | 11 | 39.3% | 37 | 45.3% |
| | 1 | 5 | 10.6% | 2 | 7.1% | 7 | 9.3% |
| | 2 | 4 | 8.5% | 4 | 14.3% | 9 | 10.7% |
| | 3 | 2 | 4.3% | 4 | 14.3% | 6 | 8.0% |
| | 4 | 7 | 14.9% | 2 | 7.1% | 9 | 12.0% |
| | 5 | 6 | 12.8% | 5 | 17.9% | 11 | 14.7% |
| | Total | 47 | 100% | 28 | 100% | 79 | 100% |

Table 19: Filipino Listening Comprehensions Questions Correct

| Group | Number of Questions Correct | Male | | Female | | N Total | % Total |
|-----------|-----------------------------|------|-------|--------|-------|---------|---------|
| | | N | % | N | % | | |
| Treatment | 0 | 3 | 8.3% | 8 | 17.8% | 11 | 13.6% |
| | 1 | 2 | 5.6% | 5 | 11.1% | 7 | 8.6% |
| | 2 | 7 | 19.4% | 8 | 17.8% | 15 | 18.5% |
| | 3 | 10 | 27.8% | 11 | 24.4% | 21 | 25.9% |
| | 4 | 14 | 38.9% | 13 | 28.9% | 27 | 33.3% |
| | Total | 36 | 100% | 45 | 100% | 81 | 100% |
| Control | 0 | 9 | 19.2% | 1 | 3.6% | 10 | 13.3% |
| | 1 | 3 | 6.4% | 3 | 10.7% | 6 | 8.0% |
| | 2 | 7 | 14.9% | 6 | 21.4% | 13 | 17.3% |
| | 3 | 13 | 27.6% | 4 | 14.3% | 17 | 22.7% |
| | 4 | 15 | 31.9% | 14 | 50.0% | 29 | 38.7% |
| | Total | 47 | 100% | 28 | 100% | 75 | 100% |

XIV. Annex D. English EGRA Results by Gender

Table 20: English Letter Sound by Treatment Group and Gender

| Group | Gender | N | Mean (3 min fluency) | SD | Zero scores |
|--------------|--------|-----|----------------------|------|-------------|
| Treatment | Male | 36 | 20.9 | 14.3 | 1 |
| | Female | 42 | 19.3 | 17.0 | 3 |
| | Total | 78 | 20.1 | 15.7 | 4 |
| Control | Male | 46 | 18.9 | 17.7 | 9 |
| | Female | 28 | 20.6 | 15.6 | 2 |
| | Total | 74 | 19.5 | 16.4 | 11 |
| Sample Total | | 152 | 19.8 | 15.9 | 15 |

Table 21: English Non-Word Reading by Treatment Group and Gender

| Group | Gender | N | Mean Fluency | SD | Zero scores (n) |
|--------------|--------|-----|--------------|------|-----------------|
| Treatment | Male | 35 | 7.9 | 6.8 | 7 |
| | Female | 41 | 8.2 | 10.1 | 11 |
| | Total | 76 | 8.1 | 8.6 | 18 |
| Control | Male | 44 | 7.2 | 7.6 | 13 |
| | Female | 27 | 7.8 | 9.1 | 8 |
| | Total | 71 | 7.5 | 8.1 | 21 |
| Sample Total | | 147 | 7.8 | 8.4 | 39 |

Table 22: English ORF Reading by Treatment Group and Gender

| Group | Gender | N | Mean (3 min fluency) | SD | Zero Scores |
|--------------|--------|-----|----------------------|------|-------------|
| Treatment | Male | 34 | 12.4 | 15.1 | 10 |
| | Female | 42 | 9.1 | 16.4 | 11 |
| | Total | 76 | 10.6 | 15.8 | 21 |
| Control | Male | 46 | 10.2 | 14.6 | 17 |
| | Female | 27 | 10.6 | 14.4 | 8 |
| | Total | 73 | 10.2 | 14.4 | 25 |
| Sample Total | | 149 | 10.4 | 15.1 | 46 |

Table 23: English Reading Comprehensions Questions Correct

| Group | Number of Questions Correct | Male | | Female | | N | % |
|-----------|-----------------------------|------|-------|--------|-------|-------|-------|
| | | N | % | N | % | Total | Total |
| Treatment | 0 | 24 | 66.7% | 36 | 78.3% | 60 | 73.2% |
| | 1 | 9 | 25.0% | 5 | 10.9% | 14 | 17.1% |
| | 2 | 0 | 0.0% | 4 | 8.7% | 4 | 4.9% |
| | 3 | 2 | 5.6% | 0 | 0.0% | 2 | 2.4% |
| | 4 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| | 5 | 1 | 2.8% | 1 | 2.2% | 2 | 2.4% |
| | Total | 36 | 100% | 46 | 100% | 82 | 100% |
| Control | 0 | 35 | 72.9% | 22 | 73.3% | 57 | 73.1% |
| | 1 | 6 | 12.5% | 3 | 10.0% | 9 | 11.5% |

| | | | | | | |
|-------|----|------|----|------|----|------|
| 2 | 3 | 6.3% | 2 | 6.7% | 5 | 6.4% |
| 3 | 1 | 2.4% | 2 | 6.7% | 3 | 3.9% |
| 4 | 2 | 4.2% | 1 | 3.3% | 3 | 3.9% |
| 5 | 1 | 2.1% | 0 | 0.0% | 1 | 1.2% |
| Total | 48 | 100% | 30 | 100% | 78 | 100% |

Table 24: English Listening Comprehensions Questions Correct

| Group | Number of Questions Correct | Male | | Female | | N Total | % Total |
|-----------|-----------------------------|------|-------|--------|-------|---------|---------|
| | | N | % | N | % | | |
| Treatment | 0 | 21 | 58.3% | 29 | 63.0% | 50 | 61.0% |
| | 1 | 8 | 22.2% | 8 | 17.4% | 16 | 19.5% |
| | 2 | 6 | 16.7% | 7 | 15.2% | 13 | 15.9% |
| | 3 | 1 | 2.8% | 2 | 4.4% | 3 | 3.7% |
| | 4 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| | Total | 36 | 100% | 46 | 100% | 82 | 100% |
| Control | 0 | 23 | 47.9% | 16 | 53.3% | 39 | 50.0% |
| | 1 | 13 | 27.1% | 5 | 16.7% | 18 | 23.1% |
| | 2 | 8 | 16.7% | 7 | 23.3% | 15 | 19.2% |
| | 3 | 3 | 6.3% | 2 | 6.7% | 5 | 6.4% |
| | 4 | 1 | 2.1% | 0 | 0.0% | 1 | 1.3% |
| | Total | 48 | 100% | 30 | 100% | 78 | 100% |

Table 25: Number of Students Included in Results for Each Task by Group

| Language | Subtask | Control/ Treatment | Zero/ Non- Zero Score | Visual Impairment | Gender |
|----------|--------------|-----------------------|--------------------------|----------------------|--------|
| Filipino | Letter Sound | 158 | 160 | 158 | 158 |
| | Non-Word | 157 | 159 | 157 | 156 |
| | ORF | 153 | 157 | 153 | 152 |
| | R Comp | 157 | N/A | 161 | 156 |
| | List Comp | 157 | N/A | 161 | 156 |
| English | Letter Sound | 153 | 156 | 153 | 152 |
| | Non-Word | 148 | 154 | 148 | 147 |
| | ORF | 150 | 155 | 150 | 149 |
| | R Comp | 155 | N/A | 161 | 160 |
| | List Comp | 153 | N/A | 161 | 160 |

XV. Annex E. Item-Level Statistics

Filipino Item Level Statistics

Item-Test Correlation and Cronbach Alpha by Item

| Task | Alpha |
|-------------------------|-------|
| Letter sound | 0.989 |
| Non-word reading | 0.985 |
| Reading comprehension | 0.896 |
| Listening comprehension | 0.770 |

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|-------------------------|-----|-------|-----------|-----|-----|
| Letter sound | 161 | 39.75 | 31.87 | 0 | 98 |
| Non-word reading | 161 | 21.05 | 17.96 | 0 | 49 |
| Oral reading fluency | 161 | 26.34 | 23.98 | 0 | 59 |
| Reading comprehension | 157 | 1.68 | 1.951 | 0 | 5 |
| Listening comprehension | 157 | 2.59 | 1.395 | 0 | 4 |

Sound Identification Item Statistics

Item difficulty (p) and discrimination (d) for non-word reading in Filipino

| | p | d |
|--------|----------|--------|
| Item1 | .7639752 | 0.4422 |
| Item2 | .6521739 | 0.6382 |
| Item3 | .6149068 | 0.5964 |
| Item4 | .5403727 | 0.6661 |
| Item5 | .6832298 | 0.5879 |
| Item6 | .7204969 | 0.5593 |
| Item7 | .5217391 | 0.6666 |
| Item8 | .5341615 | 0.6169 |
| Item9 | .6708075 | 0.5269 |
| Item10 | .5590062 | 0.5329 |
| Item11 | .5900621 | 0.5708 |
| Item12 | .6086957 | 0.6696 |
| Item13 | .6708075 | 0.5870 |
| Item14 | .484472 | 0.6716 |
| Item15 | .4968944 | 0.5945 |
| Item16 | .552795 | 0.6430 |
| Item17 | .6770186 | 0.5591 |
| Item18 | .5714286 | 0.6360 |
| Item19 | .5031056 | 0.7244 |
| Item20 | .5652174 | 0.6347 |
| Item21 | .5465839 | 0.4981 |
| Item22 | .689441 | 0.6218 |

| | | |
|--------|----------|--------|
| Item23 | .515528 | 0.6553 |
| Item24 | .7204969 | 0.5779 |
| Item25 | .757764 | 0.5689 |
| Item26 | .4720497 | 0.5763 |
| Item27 | .6149068 | 0.5923 |
| Item28 | .3602484 | 0.5329 |
| Item29 | .7329193 | 0.6088 |
| Item30 | .4968944 | 0.7083 |
| Item31 | .5093168 | 0.6750 |
| Item32 | .4720497 | 0.6902 |
| Item33 | .5217391 | 0.7194 |
| Item34 | .5217391 | 0.7154 |
| Item35 | .4720497 | 0.7587 |
| Item36 | .4037267 | 0.7380 |
| Item37 | .5590062 | 0.7572 |
| Item38 | .5279503 | 0.6983 |
| Item39 | .4285714 | 0.7379 |
| Item40 | .3975155 | 0.6839 |
| Item41 | .4347826 | 0.7439 |
| Item42 | .5465839 | 0.6826 |
| Item43 | .4347826 | 0.7451 |
| Item44 | .4409938 | 0.7323 |
| Item45 | .4223602 | 0.7660 |
| Item46 | .3850932 | 0.7071 |
| Item47 | .3975155 | 0.8123 |
| Item48 | .4037267 | 0.8078 |
| Item49 | .4161491 | 0.8298 |
| Item50 | .4782609 | 0.7139 |
| Item51 | .378882 | 0.7955 |
| Item52 | .4161491 | 0.7899 |
| Item53 | .3664596 | 0.8167 |
| Item54 | .3540373 | 0.7626 |
| Item55 | .3913043 | 0.8117 |
| Item56 | .3664596 | 0.8225 |
| Item57 | .3726708 | 0.8408 |
| Item58 | .3975155 | 0.7309 |
| Item59 | .3043478 | 0.7486 |
| Item60 | .3850932 | 0.8223 |
| Item61 | .310559 | 0.8334 |
| Item62 | .2981366 | 0.7640 |
| Item63 | .2981366 | 0.7907 |
| Item64 | .2981366 | 0.6693 |
| Item65 | .3416149 | 0.7636 |
| Item66 | .2732919 | 0.8092 |

| | | |
|---------|----------|--------|
| Item67 | .2608696 | 0.7469 |
| Item68 | .2670807 | 0.8048 |
| Item69 | .3354037 | 0.7408 |
| Item70 | .2670807 | 0.7935 |
| Item71 | .2795031 | 0.8080 |
| Item72 | .2732919 | 0.7810 |
| Item73 | .3167702 | 0.7601 |
| Item74 | .2919255 | 0.7332 |
| Item75 | .2049689 | 0.7046 |
| Item76 | .242236 | 0.7882 |
| Item77 | .2546584 | 0.7895 |
| Item78 | .1801242 | 0.6560 |
| Item79 | .242236 | 0.7849 |
| Item80 | .2049689 | 0.7480 |
| Item81 | .242236 | 0.7169 |
| Item82 | .2298137 | 0.7607 |
| Item83 | .1118012 | 0.4853 |
| Item84 | .242236 | 0.7104 |
| Item85 | .2360248 | 0.6845 |
| Item86 | .2049689 | 0.7110 |
| Item87 | .2173913 | 0.6998 |
| Item88 | .1925466 | 0.6173 |
| Item89 | .1863354 | 0.7055 |
| Item90 | .1925466 | 0.7076 |
| Item91 | .1677019 | 0.6221 |
| Item92 | .1801242 | 0.6824 |
| Item93 | .1490683 | 0.6171 |
| Item94 | .1863354 | 0.6442 |
| Item95 | .0807453 | 0.3666 |
| Item96 | .1490683 | 0.6076 |
| Item97 | .1304348 | 0.5646 |
| Item98 | .1614907 | 0.6437 |
| Item99 | .136646 | 0.5770 |
| Item100 | .1242236 | 0.5804 |

Non-Word Reading Item Statistics

Item difficulty (p) and discrimination (d) for non-word reading in Filipino

| | p | d |
|-------|----------|----------|
| Item1 | .7391304 | 0.6259 |
| Item2 | .5900621 | 0.7435 |
| Item3 | .5093168 | 0.7585 |
| Item4 | .4658385 | 0.6484 |
| Item5 | .5341615 | 0.7333 |

| | | |
|--------|----------|--------|
| Item6 | .4906832 | 0.6986 |
| Item7 | .552795 | 0.7096 |
| Item8 | .6459627 | 0.6783 |
| Item9 | .5341615 | 0.7297 |
| Item10 | .5900621 | 0.7038 |
| Item11 | .4658385 | 0.8340 |
| Item12 | .4037267 | 0.6021 |
| Item13 | .5403727 | 0.7282 |
| Item14 | .5031056 | 0.8303 |
| Item15 | .4534161 | 0.8053 |
| Item16 | .6024845 | 0.7518 |
| Item17 | .6273292 | 0.7032 |
| Item18 | .552795 | 0.8064 |
| Item19 | .5279503 | 0.7980 |
| Item20 | .4347826 | 0.8266 |
| Item21 | .5776398 | 0.7966 |
| Item22 | .5031056 | 0.7650 |
| Item23 | .4658385 | 0.8333 |
| Item24 | .4409938 | 0.7100 |
| Item25 | .5590062 | 0.8251 |
| Item26 | .4037267 | 0.8116 |
| Item27 | .5031056 | 0.8259 |
| Item28 | .2857143 | 0.5881 |
| Item29 | .4037267 | 0.8190 |
| Item30 | .3913043 | 0.7777 |
| Item31 | .4285714 | 0.8091 |
| Item32 | .3850932 | 0.8196 |
| Item33 | .3726708 | 0.8036 |
| Item34 | .3664596 | 0.8254 |
| Item35 | .3229814 | 0.7380 |
| Item36 | .3291925 | 0.7910 |
| Item37 | .3416149 | 0.8244 |
| Item38 | .3416149 | 0.8359 |
| Item39 | .2981366 | 0.7526 |
| Item40 | .2546584 | 0.7114 |
| Item41 | .2919255 | 0.7727 |
| Item42 | .3043478 | 0.8005 |
| Item43 | .1925466 | 0.6128 |
| Item44 | .2795031 | 0.7435 |
| Item45 | .2236025 | 0.6534 |
| Item46 | .2546584 | 0.7130 |
| Item47 | .1304348 | 0.5027 |
| Item48 | .2360248 | 0.6494 |
| Item49 | .1925466 | 0.6001 |

| | | |
|--------|----------|--------|
| Item50 | .2111801 | 0.6707 |
|--------|----------|--------|

Reading Comprehension Item Statistics

Item difficulty (p) and discrimination (d) for reading comprehension in Filipino

| | p | d |
|-------|----------|----------|
| Item1 | .2981366 | 0.6553 |
| Item2 | .4968944 | 0.6992 |
| Item3 | .2795031 | 0.7953 |
| Item4 | .3229814 | 0.8164 |
| Item5 | .242236 | 0.7709 |

Listening Comprehension Item Statistics

Item difficulty (p) and discrimination (d) for listening comprehension in Filipino

| | p | d |
|-------|----------|----------|
| Item1 | .6397516 | 0.5840 |
| Item2 | .7391304 | 0.6402 |
| Item3 | .6956522 | 0.6096 |
| Item4 | .447205 | 0.4651 |

English Item Level Statistics

Item-Test Correlation and Cronbach Alpha by Item

| Task | Alpha |
|-------------------------|--------------|
| Letter sound | 0.992 |
| Non-word reading | 0.978 |
| Reading comprehension | 0.762 |
| Listening comprehension | 0.579 |

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|-------------------------|------------|-------------|------------------|------------|------------|
| Letter sound | 161 | 47.71 | 35.44 | 0 | 100 |
| Non-word reading | 160 | 16.63 | 15.54 | 0 | 50 |
| Oral reading fluency | 161 | 20.14 | 23.18 | 0 | 69 |
| Reading comprehension | 155 | 0.54 | 1.09 | 0 | 5 |
| Listening comprehension | 153 | 0.78 | 0.97 | 0 | 4 |

Sound Identification Item Statistics

Item difficulty (p) and discrimination (d) for letter sound knowledge in English

| | p | d |
|-------|----------|----------|
| Item1 | .6770186 | 0.6067 |
| Item2 | .689441 | 0.5352 |

| | | |
|--------|----------|--------|
| Item3 | .689441 | 0.6246 |
| Item4 | .6024845 | 0.6529 |
| Item5 | .689441 | 0.6511 |
| Item6 | .621118 | 0.6668 |
| Item7 | .6086957 | 0.6746 |
| Item8 | .6459627 | 0.6776 |
| Item9 | .7515528 | 0.6346 |
| Item10 | .4968944 | 0.6939 |
| Item11 | .5403727 | 0.5641 |
| Item12 | .4720497 | 0.6561 |
| Item13 | .5031056 | 0.6795 |
| Item14 | .5962733 | 0.7076 |
| Item15 | .6273292 | 0.6501 |
| Item16 | .5093168 | 0.7101 |
| Item17 | .5962733 | 0.7865 |
| Item18 | .7204969 | 0.7125 |
| Item19 | .6273292 | 0.7371 |
| Item20 | .5279503 | 0.6846 |
| Item21 | .552795 | 0.7478 |
| Item22 | .3478261 | 0.5569 |
| Item23 | .5652174 | 0.7592 |
| Item24 | .7018634 | 0.7029 |
| Item25 | .7080745 | 0.6845 |
| Item26 | .5590062 | 0.7660 |
| Item27 | .5465839 | 0.7151 |
| Item28 | .4906832 | 0.7153 |
| Item29 | .6149068 | 0.7296 |
| Item30 | .6708075 | 0.6186 |
| Item31 | .5031056 | 0.7334 |
| Item32 | .6645963 | 0.7054 |
| Item33 | .5776398 | 0.7252 |
| Item34 | .621118 | 0.7271 |
| Item35 | .6086957 | 0.6735 |
| Item36 | .6521739 | 0.6998 |
| Item37 | .552795 | 0.7489 |
| Item38 | .5714286 | 0.7409 |
| Item39 | .4720497 | 0.6982 |
| Item40 | .5900621 | 0.7335 |
| Item41 | .484472 | 0.7242 |
| Item42 | .5900621 | 0.7111 |
| Item43 | .5279503 | 0.8324 |
| Item44 | .5652174 | 0.7242 |
| Item45 | .484472 | 0.7718 |
| Item46 | .4906832 | 0.7849 |

| | | |
|--------|----------|--------|
| Item47 | .6024845 | 0.7691 |
| Item48 | .5590062 | 0.7988 |
| Item49 | .4658385 | 0.7691 |
| Item50 | .552795 | 0.7586 |
| Item51 | .5403727 | 0.7668 |
| Item52 | .5341615 | 0.7812 |
| Item53 | .4658385 | 0.7995 |
| Item54 | .515528 | 0.8461 |
| Item55 | .5652174 | 0.8093 |
| Item56 | .4968944 | 0.8312 |
| Item57 | .447205 | 0.7826 |
| Item58 | .4223602 | 0.7601 |
| Item59 | .5279503 | 0.8127 |
| Item60 | .4534161 | 0.8192 |
| Item61 | .3975155 | 0.7349 |
| Item62 | .4037267 | 0.8056 |
| Item63 | .447205 | 0.7794 |
| Item64 | .3850932 | 0.7946 |
| Item65 | .4099379 | 0.8107 |
| Item66 | .3664596 | 0.7962 |
| Item67 | .4285714 | 0.7732 |
| Item68 | .3975155 | 0.8320 |
| Item69 | .4285714 | 0.8097 |
| Item70 | .4223602 | 0.8024 |
| Item71 | .4347826 | 0.8045 |
| Item72 | .3602484 | 0.8024 |
| Item73 | .3043478 | 0.7120 |
| Item74 | .3913043 | 0.7979 |
| Item75 | .3291925 | 0.7050 |
| Item76 | .378882 | 0.7605 |
| Item77 | .3975155 | 0.7816 |
| Item78 | .3291925 | 0.8189 |
| Item79 | .3043478 | 0.7767 |
| Item80 | .3664596 | 0.7829 |
| Item81 | .3354037 | 0.8015 |
| Item82 | .3167702 | 0.7867 |
| Item83 | .3043478 | 0.7608 |
| Item84 | .3664596 | 0.7640 |
| Item85 | .3354037 | 0.7879 |
| Item86 | .2919255 | 0.7373 |
| Item87 | .2795031 | 0.7227 |
| Item88 | .2546584 | 0.7026 |
| Item89 | .3291925 | 0.7316 |
| Item90 | .242236 | 0.6891 |

| | | |
|---------|----------|--------|
| Item91 | .2732919 | 0.7293 |
| Item92 | .242236 | 0.6895 |
| Item93 | .2732919 | 0.7245 |
| Item94 | .3043478 | 0.7159 |
| Item95 | .2795031 | 0.7572 |
| Item96 | .2670807 | 0.7052 |
| Item97 | .2732919 | 0.7077 |
| Item98 | .2857143 | 0.6722 |
| Item99 | .2049689 | 0.6469 |
| Item100 | .2608696 | 0.6461 |

Non-Word Reading Item Statistics

Item difficulty (p) and discrimination (d) for non-word reading in English

| | p | d |
|--------|----------|----------|
| Item1 | .552795 | 0.6468 |
| Item2 | .5962733 | 0.7294 |
| Item3 | .5962733 | 0.7294 |
| Item4 | .5465839 | 0.6832 |
| Item5 | .447205 | 0.6510 |
| Item6 | .4223602 | 0.7051 |
| Item7 | .5652174 | 0.7078 |
| Item8 | .5590062 | 0.6569 |
| Item9 | .3850932 | 0.6833 |
| Item10 | .4037267 | 0.7031 |
| Item11 | .4161491 | 0.7770 |
| Item12 | .4968944 | 0.6891 |
| Item13 | .2732919 | 0.5423 |
| Item14 | .2298137 | 0.5784 |
| Item15 | .515528 | 0.6838 |
| Item16 | .447205 | 0.6249 |
| Item17 | .2670807 | 0.5300 |
| Item18 | .5838509 | 0.7793 |
| Item19 | .3913043 | 0.7093 |
| Item20 | .4161491 | 0.7282 |
| Item21 | .2546584 | 0.6350 |
| Item22 | .2484472 | 0.6399 |
| Item23 | .1242236 | 0.4974 |
| Item24 | .378882 | 0.6737 |
| Item25 | .3291925 | 0.6877 |
| Item26 | .4099379 | 0.7765 |
| Item27 | .3602484 | 0.7654 |
| Item28 | .4223602 | 0.8128 |
| Item29 | .2236025 | 0.7118 |

| | | |
|--------|----------|--------|
| Item30 | .2919255 | 0.7668 |
| Item31 | .1863354 | 0.6396 |
| Item32 | .2608696 | 0.6236 |
| Item33 | .1677019 | 0.6251 |
| Item34 | .2981366 | 0.7294 |
| Item35 | .310559 | 0.7708 |
| Item36 | .2919255 | 0.7483 |
| Item37 | .1925466 | 0.6507 |
| Item38 | .2857143 | 0.7723 |
| Item39 | .1677019 | 0.6907 |
| Item40 | .2111801 | 0.7201 |
| Item41 | .1801242 | 0.6750 |
| Item42 | .1925466 | 0.6856 |
| Item43 | .2670807 | 0.7620 |
| Item44 | .242236 | 0.7369 |
| Item45 | .1552795 | 0.6584 |
| Item46 | .2298137 | 0.7151 |
| Item47 | .1304348 | 0.5715 |
| Item48 | .1490683 | 0.6682 |
| Item49 | .1055901 | 0.5539 |
| Item50 | .0559006 | 0.4357 |

Reading Comprehension Item Statistics

Item difficulty (p) and discrimination (d) for reading comprehension in English

| | p | d |
|------------|----------|----------|
| comp_eng_1 | .2298137 | 0.4961 |
| comp_eng_2 | .068323 | 0.5038 |
| comp_eng_3 | .0869565 | 0.6548 |
| comp_eng_4 | .0496894 | 0.6224 |
| comp_eng_5 | .0931677 | 0.5116 |

Listening Comprehension Item Statistics

Item difficulty (p) and discrimination (d) for listening comprehension in English

| | p | d |
|-------|----------|----------|
| Item1 | .3975155 | 0.5162 |
| Item2 | .0496894 | 0.2964 |
| Item3 | .173913 | 0.5406 |
| Item4 | .0745342 | 0.1809 |

XVI. Annex F. Instruments



RBI Baseline EGRA.pdf

Rbi Baseline Filipino

Last Updated: 1443428744000

Enumerator Name

Date and Time

Date

Time

School Location

Area

Region

District

School

ID

ID

ID

Consent

Magandang [Umaga / Hapon]! Ako si _____. Naririto ako ngayon para malaman kung papaano magbasa ang mga bata.

Kailangan namin ang tulong mo. Pero kung ayaw mo, hindi ka namin pipilitin.

Magbabasa tayo ng mga titik, mga salita at maikling kwento sa Filipino at English.

Gagamit ako ng **tablet**. Oorasan kita sa iyong pagbabasa.

Hindi ito pagsusulit / test at hindi ito makaaapekto sa iyong marka sa paaralan.

Tatanungin kita tungkol sa iyong pamilya at sa iyong nakagawian sa pagbasa.

Hindi nila malalaman ang iyong pangalan at walang makaaalam sa iyong mga sagot.

Muli, kung ayaw mong sumali, hindi kita pipilitin. Gayun din kung ayaw mong sumagot sa mga tanong.

Mayroon ka bang tanong?

Pumapayag ka bang sumali?

Did the student consent?

Student Information

1. What is the student's gender?

Male

Female

2. What is your full name?

3. How old are you?

4. What is your grade level?

Student Questionnaire

1. Level of visual impairment ((Info from teacher))

- Low Vision: Print Reader (Font Size 16) with Low Vision Device Low Vision: Print Reader (Font Size 16) with no Low Vision Device
- Low Vision: Large Print reader (Font size 24) (with Low Vision Device) Low Vision: Large Print reader (Font size 24) (With No LVD)
- Low Vision: Large Print reader (Font size 32)With Low Vision Device Low Vision: Large Print reader (Font size 32)(With No LVD)
- Low Vision: Braille reader Uncontracted Low Vision: Braille reader Contracted Blind: Braille Uncontracted
- Blind: Braille Contracted

2. Anong gamit mong salita sa bahay?

- Tagalog English Ilokano Hiligaynon Cebuano Other

3. Nag kinder ka ba?

- Yes No No Response

4. Kung Oo, na ka "self-contained" ka ba o regular class?

- Self-Contained Regular No Response

5. Gaano katagal kang nag Kinder?

6. Meron ka bang babasahin sa bahay?

- Yes No No response

7. Kung meron alin sa mga sumusunod?

- Braille: Uncontracted Braille: Contracted Print Large Print Audio No Response

8. Sa anong wika?

- English Filipino Other Don't Know

9. May mga babasahin ka ba sa silid-aralan?

Yes No No response

10. Kung meron alin sa mga sumusunod?

Braille: Uncontracted Braille: Contracted Print Large Print Audio No response

11. Sa anong wika?

Filipino English Other No response

12. Sino ang tumutulong sa iyo sa pagbasa sa bahay?

Nanay Tatay Ate Kuya Nakakabatang kapatid Iba pa No one No response

13. Sino sa kapamilya mo ang marunong magbasa ng Braille?

Nanay Tatay Ate Kuya Nakakabatang kapatid Iba pa No one No response

14. Gumagamit ka ba ng LVDs sa malapitang pagbasa?

Yes No No response

15. Anong LVDs ang ginagamit mo?

Stand magnifier Hand magnifier Eye glasses Book stand Reading guide Other No response

Book Awareness

1. Ang mga bata ba ay gumagamit ng braille o large print na aklat?

Braille Book Large Print Book

2. Hawakan nang wasto ang aklat (binding sa kaliwa) (Ilagay ang aklat sa patag na lugar malapit sa bata at sabihin kunin ang aklat na parang magbabasa.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

3. Nabubuklat ang aklat mula kanan pakaliwa. (Sabihin sa bata na bukatin ang aklat sa isang pahina.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

4. Tingnan ang pahina at tingnan kung may mga nakasulat dito. (Sabihin sa bata, tingnan ang pahina at tingnan kung may mga nakasulat dito.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

5. Paghanap sa itaas na bahagi ng aklat (Sabihin sa bata na hanapin ang itaas na bahagi ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

6. Paghanap sa ibabang bahagi ng aklat (Sabihin sa bata na hanapin ang ibabang bahagi ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

7. Paghanap sa kanang bahagi ng aklat (Sabihin sa bata na hanapin ang kanang bahagi ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

8. Paghanap sa kaliwang bahagi ng aklat (Sabihin sa bata na hanapin ang kaliwang bahagi ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

9. Paghanap sa unang pahina ng aklat (Sabihin sa bata na hanapin ang unang pahina ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

10. Paghanap sa huling pahina ng aklat (Sabihin sa bata na hanapin ang huling pahina ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

11. Paghanap ng pahina ng pamagat ng aklat (Sabihin sa bata na hanapin ang pahina ng pamagat ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

12. Paghanap sa unang linya sa pahina ng aklat (Sabihin sa bata na hanapin ang unang linya sa pahina ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

13. Paghanap sa huling linya sa pahina ng aklat (Sabihin sa bata na hanapin ang huling linya sa pahina ng aklat.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

14. Pagkilala sa mga salita (Sabihin sa bata na basahin ang anumang salita sa pahina.)

Nagagawang mag-isa ang gawain Nagagawa ang gawain nang may tulong Hindi nagagawang mag-isa ang gawain

Letter Sound Knowledge-Filipino

Narito ang isang pahina ng mga letra ng **Alpabetong Filipino**. Sabihin mo sa akin ang **TUNOG** ng lahat ng mga letra na kaya mo. Inuulit ko, **TUNOG** at **hindi PANGALAN** ng letra ang iyong ibibigay.

Halimbawa, ang tunog ng letra na ito [point to "S"] **ay "S"**.

1. **Ngayon ay subukin mo ito. Sabihin mo sa akin ang tunog ng letra na ito** [point to "m"]:

[If correct] : **Magaling, ang tunog ng letra na ito ay / m /**.

[If incorrect] : **Ang tunog ng letra na ito ay / m /**.

2. **Subukin natin ang isa pa. Sabihin mo sa akin ang tunog ng letra na ito** [point to "i"]:

[If correct] : **Magaling, ang tunog ng letra na ito ay / i /**.

[If incorrect] : **Ang tunog ng letra na ito ay / i /**.

Kapag sinabi kong **simulan**, sabihin mo ang **TUNOG** ng mga letra sa abot ng iyong makakaya. Ako ay makikinig sa iyo. Sabihin ang tunog ng mga letra **SA FILIPINO**.

Naiintindihan mo na ba?

Handa ka na ba?

Simulan mo na.

| | | | | | | | | | |
|---|---|----|---|---|---|---|---|---|---|
| a | n | k | T | m | s | F | p | e | b |
| L | n | a | d | y | g | i | n | f | r |
| u | a | j | i | o | h | u | q | o | w |
| c | V | t | R | M | z | S | E | P | D |
| Y | O | L | g | B | h | F | C | n | i |
| L | A | n | m | s | G | J | i | H | a |
| T | d | R | U | i | n | r | k | A | p |
| N | s | a | i | v | M | S | Q | n | b |
| a | s | ng | o | a | g | u | l | t | L |
| z | p | X | l | ñ | d | Y | N | K | w |

Time Remaining

Autostop?

Simple Nonword Decoding-Filipino

Narito ang ilang mga imbentong salita. Basahin mo sa akin ang mga ito sa abot ng iyong makakaya. Huwag mong baybayin o i-spell ang mga ito. [Point to the word "ut"]. Halimbawa, ang imbentong salitang ito ay "ut."

1. Ngayon subukin mo ito. Pakibasa ang salitang ito [point to the word "dil"]

[If correct] : **Magaling, ang salita ay "dil"**

[If incorrect] : **Ang salita ay "dil"**

2. Subukin mo pa ang isa. Pakibasa ang salitang ito [point to the word "mab"]

[If correct] : **Magaling, ang salita ay "mab"**

[If incorrect] : **Ang salita ay "mab"**

Kapag sinabi kong simulan, basahin mo nang malakas ang mga salita. Ako ay makikinig sa iyo. Naiintindihan mo ba?

Handa ka na ba?

Simulan mo na.

| | | | | |
|-------|-------|-------|-------|-------|
| ta | sib | pla | nomi | paw |
| talis | lab | gu | pawa | yat |
| kra | ayga | kibas | plu | guyon |
| min | ru | im | hin | plik |
| ap | og | rit | sanlo | ik |
| trula | sik | laig | pras | kanit |
| tig | bapo | damin | bru | ngar |
| kla | yama | kipa | gitsa | syon |
| tras | ning | buob | lano | dabup |
| ngip | goong | nam | taag | krit |

Time Remaining

Autostop?

Oral Reading Fluency-Filipino Toni's Birthday

Show the child the story in the student stimuli booklet. Say:

Narito ang isang maikling kwento. Basahin mo ito nang malakas. Pagkatapos mong magbasa ay may mga katanungan akong ibibigay na sasagutin mo.

Kapag sinabi kong simulan mo na, basahin mo na ang kwento.

Naiintindihan mo ba?

Handa ka na ba?

Simulan mo na.

| | | | |
|-------------|----------|-------------|-------------|
| Masaya | si | Toni. | Ngayon |
| ay | kaarawan | niya. | Biglang |
| dumating | ang | kanyang | mga |
| kamag-aral. | Nagluto | si | Nanay |
| ng | pansit | at | manok. |
| Bumili | ng | cake | at |
| sorbetes | si | Tatay. | Hinipan |
| ni | Toni | ang | anim |
| na | kandila | sa | cake. |
| Masayang | kumain | ang | pamilya |
| ni | Toni | at | ang |
| kanyang | mga | kamag-aral. | Tuwang-tuwa |
| si | Toni | sa | mga |
| natanggap | na | regalo | na |
| gamit | sa | paaralan. | |

Time Remaining

Autostop?

Reading Comprehension-Filipino Toni's Birthday

May ilang katanungan ako tungkol sa kwento. Sagutin mo ang mga ito sa abot ng iyong makakaya.

1. Bakit masaya si Toni? (Correct answer: [kaarawan niya])

Correct Incorrect No response

2. Anu-ano ang mga niluto ng nanay ni Toni? (Possible answer/s: [pansit; manok])

Correct Incorrect No response

3. Ilan ang mga kandila sa cake? (Correct answer: [anim])

Correct Incorrect No response

4. Sinu-sino ang kasamang kumain ni Toni ? (Correct answer: [pamilya at/o mga kamag-aral])

Correct Incorrect No response

5. Ano ang naramdaman ni Toni sa pagdating ng kanyang mga kamag-aral? (Possible answer/s: [masaya, nasorpresa])

Correct Incorrect No response

Listening Comprehension-Filipino Rosa

Magbabasa ako nang maikling kwento ng **ISANG BESES**. Makinig kang mabuti at pagkatapos sasagutin mo ang aking mga katanungan.

Naiintindihan mo ba?

Si Rosa ay may alagang aso.

Pogi ang kanyang pangalan. Malusog siya.

Isang araw, hindi na siya kumain. May sakit pala siya.

Inalagaan niya ito hanggang sa ito ay gumaling.

Ngayon may mga katanungan ako sayo tungkol sa kwentong iyong narinig.

Handa ka na ba?

1. Ano ang pangalan ng alaga ni Rosa? (Correct answer: [Pogi])

Correct Incorrect No Response

2. Bakit hindi kumain ang aso? (Possible answer/s: [may sakit; nagkasakit])

Correct Incorrect No Response

3. Ano ang ginawa ni Rosa? (Possible answer/s: [inalagaan; ginamot])

Correct Incorrect No Response

4. Paano kaya inalagaan ni Rosa si Pogi? (Possible answer/s: [pinainom ng gamot; pinakain; dinala sa beteryaryo])

Correct Incorrect No Response

Letter Sound Knowledge-English

Tapos na tayo sa Filipino. Pumunta naman tayo ngayon sa English. Handa ka na ba?

Narito ang isang pahina ng mga letra ng **Alpabetong ENGLISH**. Sabihin mo sa akin ang **TUNOG** ng lahat ng mga letra na kaya mo. Inuulit ko, **TUNOG** at **hindi PANGALAN** ng letra ang iyong ibibigay.

Halimbawa, ang tunog ng letra na ito [point to "o"] ay "OH".

1. **Ngayon ay subukin mo ito. Sabihin mo sa akin ang tunog ng letra na ito [point to "v"]:**

[If correct] : **Magaling, ang tunog ng letra na ito ay / v /.**

[If incorrect] : **Ang tunog ng letra na ito ay / v /.**

2. **Subukin natin ang isa pa. Sabihin mo sa akin ang tunog ng letra na ito [point to "L"]:**

[If correct] : **Magaling, ang tunog ng letra na ito ay / L /.**

[If incorrect] : **Ang tunog ng letra na ito ay / L /.**

Kapag sinabi kong **simulan**, sabihin mo ang **TUNOG** ng mga letra sa abot ng iyong makakaya. Ako ay makikinig sa iyo. Sabihin ang tunog ng mga letra **SA ENGLISH**.

Naiintindihan mo na ba?

Handa ka na ba?

Simulan mo na.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| n | i | S | t | E | n | r | L | a | f |
| l | H | y | g | A | z | n | o | m | w |
| d | Q | N | a | e | M | R | W | s | i |
| T | a | L | s | u | e | t | L | h | A |
| t | i | k | u | t | v | O | s | J | E |
| O | E | r | s | o | c | r | B | a | n |
| r | b | A | r | l | F | i | s | E | a |
| e | p | H | E | l | u | o | d | t | E |
| s | t | w | e | C | y | T | H | o | h |
| D | X | p | e | m | G | N | e | h | o |

Time Remaining

Autostop?

Simple Nonword Decoding-English

Narito ang ilang mga imbentong salita. Basahin mo sa akin ang mga ito sa abot ng iyong makakaya. Huwag mong baybayin o i-spell ang mga ito. [Point to the word "dif"]. **Halimbawa, ang imbentong salitang ito ay "dif."**

1. **Ngayon subukin mo ito. Pakibasa ang salitang ito [point to the word "ba"]**

[If correct] : **Magaling, ang salita ay "ba"**

[If incorrect] : Ang salita ay "ba"

2. Subukin mo pa ang isa. Pakibasa ang salitang ito [point to the word "tro"]

[If correct] : Magaling, ang salita ay "tro"

[If incorrect] : Ang salita ay "tro"

Kapag sinabi kong simulan, basahin mo nang malakas ang mga salita. Ako ay makikinig sa iyo. Naiintindihan mo ba?

Handa ka na ba?

Simulan mo na.

| | | | | |
|-------|--------|------|-------|-------|
| af | ig | yat | tib | sen |
| zom | wa | gar | jaf | fing |
| blan | yik | moke | veat | tob |
| rel | niph | sig | elt | dro |
| wrog | trenk | tace | pask | palt |
| tra | wix | lar | brish | pling |
| clade | plick | fobe | lod | sant |
| jid | wunk | han | shomp | plex |
| strun | chal | dit | tib | prole |
| pem | throme | vash | murst | stive |

Time Remaining

Autostop?

Oral Reading Fluency-English Mother's Birthday

Show the child the story in the student stimuli booklet. Say:

Narito ang isang maikling kwento. Basahin mo ito nang malakas. Pagkatapos mong magbasa ay may mga katanungan akong ibibigay na sasagutin mo.

Kapag sinabi kong simulan mo na, basahin mo na ang kwento.

Naiintindihan mo ba?

Handa ka na ba?

| | | | | |
|---------|---------|----------|-----------|--------|
| It | is | mother's | birthday. | Ann |
| does | not | have | a | gift |
| for | mother. | She | walks | to |
| her | room. | Ann | finds | a |
| box | of | crayons | and | pieces |
| of | colored | paper. | She | gets |
| out | her | scissors | and | glue. |
| She | folds | the | paper | in |
| half | to | make | a | card. |
| She | colors | and | cuts | small |
| flowers | and | puts | them | on |
| the | card. | Ann | gives | the |
| card | to | mother | and | kisses |
| her. | Mother | hugs | Ann. | |

Time Remaining

Autostop?

Reading Comprehension-English Mother's Birthday

May ilang katanungan ako tungkol sa kwento. Sagutin mo ang mga ito sa abot ng iyong makakaya.

1. Whose birthday is it? (Correct answer: [mother])

Correct Incorrect No response

2. What did Ann find in her room? (Possible answer/s: [crayons; colored paper; scissors; glue])

Correct Incorrect No response

3. What does Ann make? (Possible answer/s: [a card; gift for mother])

Correct Incorrect No response

4. What does Ann put on the card? (Possible answer/s: [flowers; small flowers])

Correct Incorrect No response

5. How does mother feel? (Possible answer/s: [happy; loved; surprised])

Correct Incorrect No response

Listening Comprehension-English The Farm

Magbabasa ako nang maikling kwento ng **ISANG BESES**. Makinig kang mabuti at pagkatapos sasagutin mo ang aking mga katanungan.

Naiintindihan mo ba?

Adel and Roy are at the farm.

They see hens. They see cows, too.

Adel feeds the hens.

Roy helps Father milk the cows.

They enjoy helping on the farm!

Ngayon may mga katanungan ako sayo tungkol sa kwentong iyong narinig.

Handa ka na ba?

1. Where are Adel and Roy? (Correct answer: [farm])

Correct Incorrect No Response

2. What did Adel do? (Correct answer: [fed the hens])

Correct Incorrect No response

3. Who helped Father milk the cows? (Correct answer: [Roy])

Correct Incorrect No response

4. Why did Adel and Roy help at the farm? (Possible answer/s: [see the animals; milk the cows; help father])

Correct Incorrect No response

Stimulus

What Stimuli did you use with the child?

Low Vision 16 Font Low Vision 24 Font Low Vision 32 Font Braille Uncontracted Braille Contracted

Any special accommodations you made for the child? (Please list anything you did to help the child do the assessment.)
