ALL CHILDREN READING:
GRAND CHALLENGE FOR DEVELOPMENT

EVALUATION REPORT

Reading Beyond Sight: Improving Reading Scores of Children with Visual Impairment in the Philippines

Implemented by Resources for the Blind, Inc. in the Philippines

JULY 2017

Prepared by
School-to-School International (STS)
For All Children Reading: A Grand Challenge for Development

USAID FROM THE AMERICAN PEOPLE
World Vision
Australian Aid
SCHOOL-TO-SCHOOL INTERNATIONAL


ELEMENTARY DEPARTMENT
BUTUAN CITY

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List of Acronyms

ACR GCD	All Children Reading: A Grand Challenge for Development
CCTV	Closed-circuit Television
CLSP3M	Correct Letter Sounds per Three Minutes
CNWP3M	Correct Nonwords per Three Minutes
CWP3M	Correct Words per Three Minutes
DAISY	Digital Accessible Information SYstem
DepEd	Philippines' Department of Education
EGRA	Early Grade Reading Assessment
EOP	End-of-Project
FOI	Fidelity of Implementation
GoP	Government of the Philippines
IRB	Institutional Review Board
M&E	Monitoring and Evaluation
NICRA	Negotiated Indirect Cost Recovery Agreement
ORF	Oral Reading Fluency
RBI	Resources for the Blind, Inc.
SD	Standard Deviation
SPED	DepEd Special Education Division
STS	School-to-School International
USAID	United States Agency for International Development

I. Executive Summary

All Children Reading: A Grand Challenge for Development (ACR GCD)—a partnership between the United States Agency for International Development (USAID), World Vision, and the Australian Government—is an ongoing series of grant and prize competitions that leverage science and technology to source, test, and disseminate scalable solutions to improve literacy skills of early grade learners in developing countries. Round 2 of ACR GCD, which started in 2014 and continues through 2017, sources technology-based innovations to improve early grade reading outcomes in developing countries.[1] These technology-based innovations concentrate on three focus areas:

1. Mother tongue instruction and reading materials
2. Family and community engagement
3. Children with disabilities

ACR GCD increased its focus on the assessment of early grade reading skills to understand the ability of the technology-based innovations to improve the literacy skills of early grade learners. To measure this, ACR GCD uses the Early Grade Reading Assessment (EGRA) to systematically assess reading skills across all Round 2 grantees. The EGRA is an oral assessment that measures students' most basic foundation literacy skills in the early grades—specifically, recognizing letters of the alphabet, reading simple words, understanding sentences and paragraphs, and listening with comprehension. The EGRA methodology was developed under EdData II and has been applied in more than 30 countries and 60 languages.[2] The EGRA instruments used by ACR GCD grantees were adapted to reflect the specific context of each grantee's project, including adaptations for students who have low vision or are blind and students who are deaf or hard of hearing.

Resources for the Blind, Inc. (RBI)—an ACR GCD Round 2 grantee—implemented the Reading Beyond Sight project in collaboration with the Philippines' Department of Education (DepEd). The project's overall goal was to improve the literacy skills of students in Grades 1 through 3 who have low vision or are blind, by providing supplemental reading materials, lessons, assistive technologies, and training to project beneficiaries.

Leveraging science and technology, RBI used the DepEd's web-based portal to distribute early grade reading materials transcribed into braille to project teachers in remote locations. The project also provided participating schools a variety of hardware and software, including braille embossers with embossing paper, braille displays for computers, printers for large-font printing, portable closed-circuit televisions (CCTV), and Digital Accessible Information SYstem (DAISY)[3] audio players. RBI operated within a school environment and specifically sought to encourage students' development in pre-reading, foundational literacy, and fluency skills.

The Reading Beyond Sight project began in October 2015 and concluded implementation in schools in January 2017.[4] To understand how the project impacted the literacy outcomes of participating students, School-to-School International (STS) and RBI conducted EGRAs twice during the project: baseline data were collected in September and October 2015, and endline data were collected in February 2017. EGRAs in Filipino and English were administered to all 143 students.

1 Retrieved from: http://allchildrenreading.org/about-us/

2 EdData II was a contract mechanism funded by USAID from January 1, 2004, to December 31, 2013. Implemented by RTI International, the purpose of EdData II was to improve the accuracy, timeliness, accessibility, and use of data for education policy and program planning. See http://www.rti.org/sites/default/files/brochures/eddataii.pdf for additional details.

3 DAISY is a technical standard for digital talking books for people who have low vision or are blind or who have a print disability (e.g. dyslexia). DAISY is an audio substitute for print material that allows users to search, navigate, place bookmarks, and regulate the speaking speed of books found in the digital repository.

4 The project grant ends on June 30, 2017.

During endline data collection, STS also conducted end-of-project (EOP) interviews with Reading Beyond Sight project staff, school administrators, teachers, parents, guardians, students, and other stakeholders. The interviews sought to explore any lessons learned from project implementation, better understand how the project impacted students and teachers, and assess the potential scalability of the project.

The following report presents a summary of lessons learned from project implementation, comprehensive EGRA results,[5] and scalability assessment results.

Key Findings

Figure 1: **Average Gain Scores from Baseline to Endline by Subtask and Group—Filipino[6]**

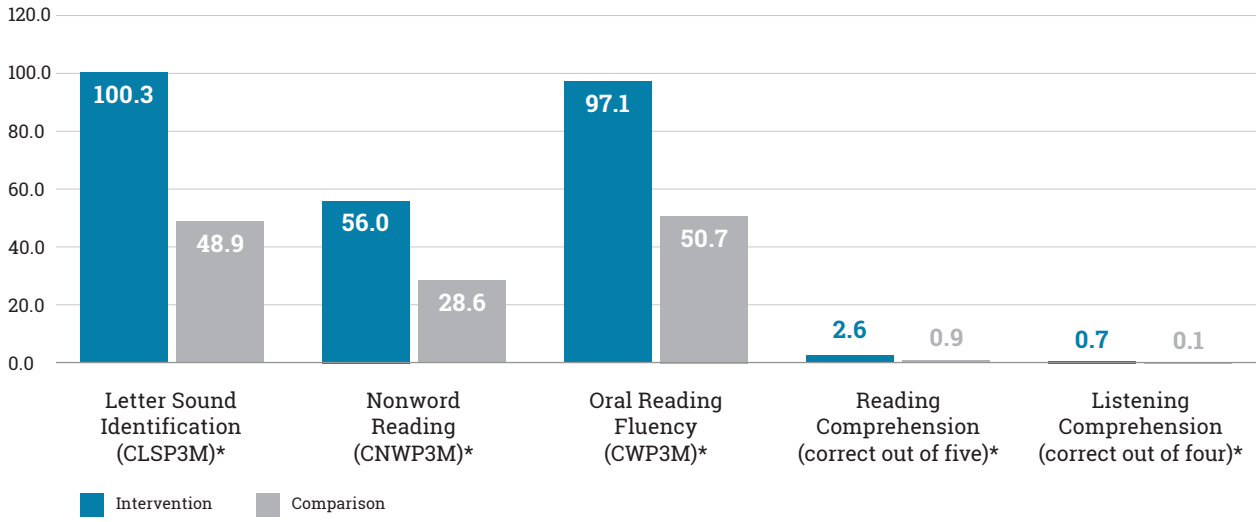
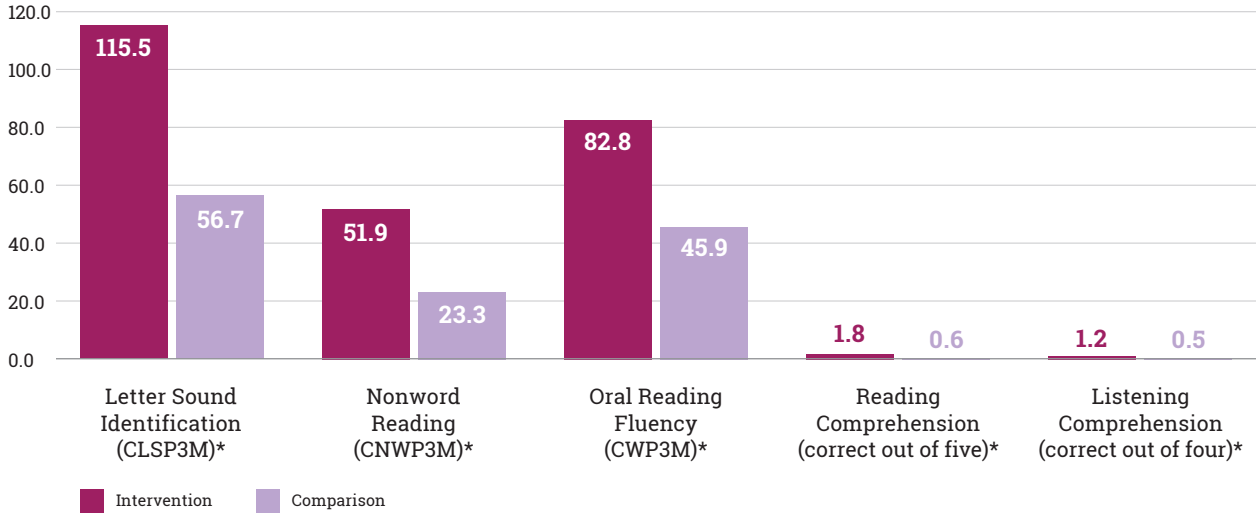


Figure 2: **Average Gain Scores from Baseline to Endline by Subtask and Group—English[7]**



5 Due to the variance in phonologies and orthographies of different languages, EGRA results should not be compared across languages. Accordingly, EGRA results in this report are presented separately for Filipino subtasks and English subtasks.

6 An asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at $p<0.05$. *N* sizes: $N_{Intervention}=71$; $N_{Comparison}=71$. See Appendix Tables D.1 to D.5 for variations in samples by subtask.

7 An asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at $p<0.05$. *N* sizes: $N_{Intervention}=71$; $N_{Comparison}=71$. See Appendix Tables D.9 to D.13 for variations in samples by subtask.

- Students in the Reading Beyond Sight project's intervention and comparison groups showed gains from baseline to endline on EGRA subtasks. **Students in the intervention group had significantly larger gains than their peers in the comparison group on all subtasks on both the Filipino and English EGRAs** (see Figures 1 and 2). On the Filipino oral reading fluency (ORF) subtask, intervention group students read an average of 97.1 additional words within three minutes at endline compared with 50.7 additional words within three minutes among students in the comparison group. Similarly, on the English ORF subtask, students in the intervention group read an average of 82.8 additional words within three minutes at endline compared with 45.9 additional words within three minutes by the comparison group.
- **On the Filipino EGRA, the proportion of students unable to correctly respond to a single item—or a zero score—at endline was significantly smaller in the intervention group than in the comparison group** on the letter sound identification, nonword reading, ORF, and reading comprehension subtasks. **This trend was consistent with students' performance on the English EGRA at endline.** The proportion of students receiving zero scores was significantly lower in the intervention group than in the comparison group on the same four subtasks on the English EGRA: letter sound identification, nonword reading, ORF, and reading comprehension. The difference in the proportion of intervention and comparison group students receiving zero scores on the listening comprehension subtask at endline was not statistically different on either the Filipino or English EGRA.
- **The proportion of zero scores from baseline to endline decreased more for students in the intervention group than their peers in the comparison group; this was true on both the Filipino and English EGRAs.** In the intervention group, the percentage of students who received zero scores on the Filipino EGRA decreased most on the reading comprehension (45.8 percentage-point decrease), ORF (19.7 percentage-point decrease), and nonword reading (19.7 percentage-point decrease) subtasks from baseline to endline. On the English EGRA, intervention group students had the largest decreases in the percentage of zero scores on the reading comprehension (55.5 percentage-point decrease), listening comprehension (37.5 percentage-point decrease), and ORF (24.0 percentage-point decrease) subtasks.
- **Students in the intervention group who used large-print materials experienced significantly larger gains than their peers in the comparison group on four of the five Filipino EGRA subtasks.** Specifically, students who used large-print materials, known as "large-print readers," in the intervention group identified 98.4 additional correct letter sounds per three minutes (CLSP3M) on the letter sound identification subtask, 60.8 additional correct nonwords per three minutes (CNWP3M) on the nonword reading subtask, and 116.6 additional correct words per three minutes (CWP3M) on the ORF subtask; they also answered 1.9 additional questions correctly on the reading comprehension subtask. **On the English EGRA, large-print readers in the intervention group experienced significantly greater gains than their peers in the comparison group on all five subtasks:** an additional 114.7 CLSP3M on the letter sound identification subtask, 58.8 CNWP3M on the nonword reading subtask, 103.9 CWP3M on the ORF subtask, 1.6 questions on the reading comprehension subtask, and 1.1 questions on the listening comprehension subtask.
- **On both the Filipino and English EGRAs, students who used braille materials in the intervention group had significantly higher gains on all five subtasks than their peers in the comparison group.** On the Filipino EGRA, braille readers in the intervention group gained an additional 101.5 CLSP3M on the letter sound identification subtask, 52.7 CNWP3M on the nonword reading subtask, 84.0 CWP3M on the ORF subtask, 3.2 questions on the reading comprehension subtask, and 0.9 questions on the listening comprehension subtask. On the English EGRA, braille readers in the intervention group gained an additional 116.0 CLSP3M on the letter sound identification subtask, 47.1 CNWP3M on the nonword reading subtask, 68.9 CWP3M on the ORF subtask, 1.9 questions on the reading comprehension subtask, and 1.2 questions on the listening comprehension subtask.

- **When comparing boys and girls within the intervention group, girls had significantly greater gains than boys on the reading comprehension subtask on the Filipino EGRA and on the letter sound identification subtask on the English EGRA.** Girls in the intervention group had significantly higher gains on all subtasks than girls in the comparison group on both the Filipino and English EGRAs. Boys in the intervention group had significantly greater gains on four of the five Filipino EGRA subtasks than boys in the comparison group. The exception was the listening comprehension subtask, on which there was no significant difference between the gains for boys in the intervention and comparison groups. On the English EGRA, boys in the intervention group had significantly higher gains on the letter sound identification, nonword reading, reading comprehension, and listening comprehension subtasks than boys in the comparison group.
- **Given the positive results of Reading Beyond Sight's EGRAs and scalability assessment, the project is a good candidate for continuation and scale-up within the Philippines.** The project proffers a comprehensive intervention that effectively addresses the needs of beneficiaries—including teachers, parents, guardians, and students—and has strong support from key stakeholders in the Government of the Philippines (GoP). The project's results are observable, and the problems addressed by the project are recognized and prioritized by DepEd. Though potentially difficult to scale in other countries with different contexts, the project provides a credible and relevant solution to the challenges faced by Filipino students who have low vision or are blind, their teachers, and their parents and guardians.

II. Project Description

The Reading Beyond Sight project supported students who have low vision or are blind and attend Grades 1 through 3 at public schools in the Philippines. The project was implemented in 15 schools in Luzon, Visayas, and Mindanao, and it reached 82 students[8] who have low vision or are blind.

In the Philippines, students who have low vision or are blind attend DepEd Special Education Division (SPED) classes exclusively during Grade 1 and then join classrooms with their sighted peers in Grade 2. Once mainstreamed, SPED centers continue to play a critical role by providing students with large-print or braille materials so they can participate in class and by offering follow-up lessons to help students who have low vision or are blind make appropriate progress.

For mainstreaming students who have low vision or are blind to be successful, SPED and classroom teachers must be able to produce appropriate and sufficient reading and classroom materials. However, few to none of DepEd's reading assessment tools or supplemental reading materials are accessible to students who have low vision or are blind. Through the Reading Beyond Sight project, RBI partnered with DepEd to address this resource gap by providing access to appropriate supplemental reading materials and lessons in Filipino, English, and 15 other languages used in the Philippines.

The Reading Beyond Sight project had three primary components:

1. Transcribing DepEd reading materials into formats accessible to students who have low vision or are blind
2. Providing assistive technologies to schools
3. Offering training on equipment and technology use to teachers; offering sensitivity and skills training to parents and guardians

8 Although the project reached 82 students, the number of students in the intervention group for analysis was 72. See Sample and Data Analysis sections.

To begin, RBI's Accessible Media Production team digitized the DepEd learning materials, which were then made available either for download and printing in the case of large-print copies, or for transcription to braille. Additionally, each participating school received a package containing the following: one desktop computer preloaded with Zoomtext, Duxbury Braille Translator, and Microsoft Office software; one braille embosser with embossing paper; one braille display for computers; one printer to produce large-print materials; one portable CCTV; and one DAISY audio player.

Students' visual status was assessed to categorize them as either large-print readers or braille readers, based on the medium of material most appropriate for their abilities.[9] They were then provided with optical devices (such as high-powered eyeglasses and magnifiers) or non-optical devices (such as bookstands) according to their needs. All students received reading guides and braille mats. Additionally, RBI worked with SPED teachers to create grade-level storybooks in large print and braille as additional reading materials for use after school or at home. These steps allowed the students who have low vision or are blind to access the same materials as their sighted classmates.

At the start of implementation, Reading Beyond Sight provided teachers with comprehensive trainings on the new equipment and technologies. For some teachers, it was their first time using any equipment or technology in the classroom. Teachers received supplemental trainings through the project on computer skills, teaching strategies, and reading approaches for students who have low vision or are blind. Additionally, the project regularly engaged parents and guardians through quarterly sensitivity and skills trainings plus monthly follow-ups. These activities sought to help parents and guardians learn how to support their childrens' reading skills development more effectively.

Project staff instructed teachers to provide at least 30 minutes of reading time per day, send appropriate reading materials home on a regular basis, and provide follow-up lessons based on the needs of individual students. Project staff and experts known to the teachers conducted monthly visits to each school. During these visits, teachers received one-on-one mentoring and coaching, including actionable feedback about the classroom environment, pedagogical approaches to reading, and materials development—especially in braille. The project staff also monitored teachers' implementation progress using school monitoring sheets that documented successes, challenges, and solutions. During these visits, teacher, parent, and student questionnaires were also completed. In addition to the questionnaires, teachers submitted reports on students' progress each month.

III. Research Purpose and Design

The goal of the Reading Beyond Sight project was to improve the literacy skills of students who have low vision or are blind in Grades 1 through 3 by providing accessible reading materials and assistive technologies. Because of the project design and types of technologies, it was not possible to assess technology dosage for the Reading Beyond Sight project. The technologies that students utilized were not standardized. Instead, each student could use appropriate project-provided technology or technologies based on their visual status, specific needs, or preferences. Since technologies were not standardized and specific dosage data were not tracked, it was not possible to assess the individual impact of a specific technology or dosage of technology on students' reading gains. Instead, the research design looked at the compound effects of the different components of the Reading Beyond Sight project.

9 The project categorized students as low vision or blind. Within the low vision category, students' eyesight varied greatly: some students used large-print and others used braille to read. For analysis, students are categorized by type of reader: large print or braille. Students in the braille category include students who are blind and students who have low vision but read braille due to the level of their vision. Students in the large-print category include students who have low vision and read using large-print materials.

The research conducted by STS and RBI sought to answer the following questions specific to the Reading Beyond Sight project:

1. Does students' performance in the two groups (intervention and comparison) differ?
2. Does students' performance in the two groups (intervention and comparison) differ by type of reader (large print or braille) or by gender?

In addition, EOP research was conducted to answer the following supplemental questions common to all ACR GCD grantees:

1. How successful was the rollout of the project?
2. How did the project influence or impact adults' (teachers, parents, guardians, community members) knowledge, skills, or attitude regarding their role in helping children read?
3. How did the project influence certain subsets of the student population more than others based on identifiable contextual factors?
4. How much did the development, implementation, and management aspects of the project cost?
5. Are the project and technology suitable for scaling?

To answer these research questions, STS and RBI collected EGRA data twice during the project. Baseline data were collected in September and October 2015; endline data were collected in February 2017. Qualitative and cost data were also collected to answer ACR GCD's supplemental questions.

Sample

Thirty schools with SPED centers on the three main island groups of the Philippines were selected to participate in the research study; 15 schools were randomly assigned to the intervention group and 15 schools to the comparison group. Before baseline operational data collection, RBI collaborated with DepEd to identify 45 schools with SPED centers that served students who have low vision or are blind and that could be accessed by the project. Out of the 45 potential schools, two schools—including one boarding school with larger proportions of students who have low vision or are blind—were removed because of the superior level of support those schools offered to their students.[10] From the remaining 43 schools, 15 were randomly assigned to the intervention group and 15 to the comparison group.

In total, 161 students were assessed at baseline, and 143 students were assessed at endline. Students transferring between schools, dropping out of school, and being absent from school during the data collection period are the primary reasons for attrition.[11] Also, several students received corrective surgeries after being identified by RBI, and they were no longer supported by the Reading Beyond Sight project at the time of the endline assessments. Table 1 provides characteristics of the student sample used in this final report.

10 The two schools that were removed have access to well-trained teachers, assistive devices, and more parental engagement than the SPED centers. One school is a boarding school that, because of its reputation, is attended by students from across the Philippines who have low vision or are blind.

11 Because only students with data from baseline and endline were used for gain score analyses, the number of students assessed may differ from the number of students included in results analysis (see Data Analysis and EGRA Results sections).

Table 1: **EGRA Sample Characteristics**

Characteristic		Intervention	Comparison	Total: All Students
Type of reader	Large print	30	30	**60**
	Braille	42	41	**83**
Gender	Boys	32	44	**76**
	Girls	40	27	**67**
Grade at baseline	Grade 1	36	33	**69**
	Grade 2	14	19	**33**
	Grade 3	22	19	**41**
Total		**72**	**71**	**143**

STS, with support from World Vision, conducted EOP interviews from February 6 through 24, 2017, during endline EGRA data collection (see Table 2). Interviews explored the contextual factors that may have impacted the project's implementation and student reading gains. Responses also identified considerations for the future scalability of the project. Twelve students were randomly selected to be interviewed. Parents and guardians were invited to the schools during EGRA data collection, and 23 were ultimately interviewed (21 from intervention schools and two from comparison schools). Seventeen teachers were interviewed (15 from intervention schools and two from comparison schools); four administrators from intervention schools were interviewed. Seven members of the project staff were interviewed. STS and RBI also purposively selected several key stakeholders for interviews, including individuals from DepEd, National Council on Disability Affairs, Parent Advocates for Visually Impaired Children, World Vision Philippines, USAID/Philippines, and the Department of Foreign Affairs and Trade of Australia.

Table 2: **EOP Interview Sample**

Type of Interview	*N*	Description
Student	12	12 students from intervention schools
Parent and guardian	23	21 intervention school parents or guardians, and two comparison school parents or guardians
Teacher and school administrator	21	15 intervention school teachers, two comparison school teachers, and four intervention school administrators
Project management	7	Two full-time project managers, and five support staff or consultants
Stakeholder	6	Representatives from DepEd, National Council on Disability Affairs, Parent Advocates for Visually Impaired Children, World Vision Philippines, USAID/Philippines, and the Department of Foreign Affairs and Trade of Australia
Total	**69**	

IV. Fieldwork Preparation and Data Collection

EGRA Instruments

Since students in the Philippines begin using both Filipino and English in Grade 1, and because RBI was interested in understanding reading skills in both languages, the project developed a Filipino-language and an English-language EGRA. Both were administered to all students at baseline and endline. The EGRA instruments used in the Reading Beyond Sight project were developed during an adaptation workshop in September 2015; both EGRAs were based on an earlier version originally used by the Basa Pilipinas project.[12]

12 Basa Pilipinas is USAID/Philippines' flagship basic education project that focuses on the implementation of the language and literacy components of the K-12 curriculum in Grades 1-3. https://www.usaid.gov/philippines/education/basa-pilipinas

EGRA subtasks were developed in Filipino and English, and instructions were available in Filipino and Cebuano, depending on each students' preference.[13] Students were provided with stimuli in either large print or braille, based on their visual status.

The final EGRA instruments consisted of the following five subtasks: letter sound identification, nonword reading, ORF, reading comprehension, and listening comprehension. Students were also asked a series of 14 questions to assess book awareness. The same EGRA instruments were used at baseline and endline.

Institutional Review Board

Institutional review boards (IRBs) are responsible for ascertaining the acceptability of proposed research regarding institutional commitments and regulations, applicable laws, standards of professional conduct and practice, and ethical and societal norms. IRBs examine subject recruitment procedures, proposed remuneration, and the informed consent process. IRBs also evaluate the potential risks and benefits to participants outlined in each protocol.

The IRB application to conduct this research study was submitted to Solutions IRB, and RBI's deputy director completed the required research ethics training. RBI received approval for their research project before the baseline data collection.

Baseline EGRA

STS and RBI led an assessor training from September 19 to 23, 2015 (see Table 3). Fourteen assessors, all of whom were former RBI field staff or teachers, were selected to conduct the baseline assessments. In addition to receiving training on Tangerine[14] and EGRA administration, assessors underwent assessor accuracy testing, which is conducted to ensure consistency in scoring between assessors and to measure the degree to which different assessors agree in their assessment decisions.[15] At least 90 percent consistency is considered the minimum requirement; this means that at least 90 percent of assessors' ratings must be consistent with the list of acceptable responses. All baseline assessors met the 90 percent threshold.

Table 3: **Fieldwork Preparation and Data Collection Timeline**

Task	Dates
EGRA instrument adaptation workshop	September 14–18, 2015
Baseline assessor training, including pilot test and assessor agreement	September 19–23, 2015
Baseline EGRA operational data collection	September 29–October 9, 2015
Endline EGRA refresher training and operational data collection	February 1–24, 2017
EOP interviews	February 6–24, 2017

Following assessor training and pilot testing, assessors collected operational baseline EGRA data between September 29 and October 9, 2015.

13 EGRA instructions were offered in the primary mother-tongue languages of the participating students; therefore, instructions were not offered in English as it is not considered a mother-tongue language of the Philippines.

14 Tangerine® (http://tangerinecentral.org/) is an electronic data collection software designed for use on mobile computers, including netbooks, tablet computers, and smartphones. Its primary use is to enable recording of children's responses in oral early grade reading and mathematics skills assessments, specifically EGRA and Early Grade Mathematics Assessment, and interview responses from children, teachers, and principals on home and school context information.

15 Assessor accuracy testing is similar to interrater reliability testing. According to the EGRA Toolkit (2nd Edition), assessor accuracy refers to the testing conducted during training, while interrater reliability is conducted during operational data collection.

Endline EGRA

The endline EGRA data collection was conducted from February 6 to 17, 2017, at intervention and comparison schools. Before operational data collection, STS led a three-day refresher training for assessors, including assessor accuracy testing and review sessions on the EGRA instrument and administration. The assessors who collected endline EGRA data also participated in the baseline operational data collection. All assessors met the 90 percent consistency threshold on assessor accuracy tests.

End-of-Project Interviews

STS and World Vision conducted EOP interviews from February 6 to 24, 2017. The purpose of the interviews was to explore the contextual factors that may have impacted the variations in implementation and results between schools and students. They also explored the potential scalability of the project. EOP interviews were conducted with five groups: (1) students; (2) parents and guardians; (3) teachers and school administrators; (4) project managers and consultants; and (5) stakeholders. Stakeholders also participated in focus groups.

Project management and consultant interviews consisted of open-ended questions related to general project information, the intervention timeline, characteristics of the implementing organizations, perceptions of project design and implementation quality, and considerations for scalability. Stakeholder interviews were guided by key questions related to the scalability of the Reading Beyond Sight project, particularly regarding the relevance of the project to the GoP's priorities and the relative advantage of the project when compared to existing programs.

Teachers and administrators at intervention schools were asked 21 open-ended questions related to their use of technologies in the classroom, challenges faced in implementing the project with fidelity, the training received through the project, teaching practices for students who have low vision or are blind, and the project's potential for scalability. Parents and guardians of children at intervention schools were asked nine open-ended questions about the reading support they provide for their children and what they need to improve their support. Teachers, parents, and guardians from comparison schools were asked about the types of reading support they provide for students and about what they need to improve that support.

All students were asked eight open-ended questions related to their engagement in the Reading Beyond Sight project, disposition to reading, access to reading materials, and attitudes towards learning with assistive technologies.

V. Project Implementation

The Reading Beyond Sight project began on March 1, 2015, and implementation ended on March 24, 2017. This section presents implementation challenges, solutions, and successes that help answer the ACR GCD research question: *How successful was the rollout of the intervention?*

Development

A key component of the Reading Beyond Sight project was the provision of a variety of assistive technologies to teachers and to students who have low vision or are blind. Since all these technologies were pre-existing, there was no financial or time investment required to develop the technologies. The RBI project team experienced delays of about one month in startup due to challenges in technology procurement.

The component of the project that required the most significant development investment, both in terms of time and financial resources, was the creation of accessible and appropriate materials for students. The project design for Reading Beyond Sight relied heavily on collaboration with DepEd; among other tasks, they were expected to upload digital copies of reading materials onto the DepEd Learning Resources Portal website.[16] However, the project faced many challenges related to this activity, and DepEd did not independently complete this task. There were delays in acquiring copies of DepEd materials due to copyright concerns, though the RBI team offered to meet with the Filipinas Copyright Licensing Society, Inc. and create an action plan that could ensure against copyright infringement. Additionally, the Learning Resources Portal website was inaccessible for several months during the project. This made it impossible for either the DepEd to upload soft copies of materials or RBI to upload accessible formats to the website as well as for either the RBI team or teachers to download those materials. Although these challenges caused delays in the project, RBI's Accessible Media Production team managed to continue to transcribe supplemental books from previous reading programs into accessible formats so that teachers would not be without reading materials. Ultimately, RBI acquired reading materials directly from DepEd, transcribed those materials, and distributed flash drives containing transcribed materials directly to teachers.

Implementation

After completing the baseline EGRA data collection, RBI held a five-day teacher training from October 12 to 16, 2015, on the use of the assistive technologies and equipment, including embossers with braille paper, braille displays, computers, printers, scanners, portable CCTVs, DAISY players, and software. The training taught basic skills to use technologies effectively and the benefits they provide students. Equipment was delivered to schools a week after the training (October 21–27, 2015), and the RBI technical team visited schools to provide further details to teachers and administrative staff on the proper use, maintenance, and safekeeping of the equipment. The project team observed that some teachers immediately began using the technology with their students in their classrooms, while three teachers did not feel as comfortable with the new technologies. Some teachers were not aware of strategies to best allow their students to use the technologies. These barriers were partly mitigated through the monthly monitoring and coaching visits. Regardless, project staff highlighted the differences in teachers' capability with technology and willingness to incorporate new technology-based teaching strategies as a challenge.

RBI, in partnership with DepEd, held an additional two-day training for teachers on December 4 and 5, 2015, to discuss how to support students who have low vision or are blind. Parents and guardians were invited to attend the session on December 5. During the parent session, the Reading Beyond Sight team presented the project objectives and asked parents and guardians for their cooperation and participation. The team gave parents and

16 http://lrmds.deped.gov.ph/

guardians guidance on how to help their children learn at home and provided basic training in braille reading and writing. Throughout the project, RBI's staff engaged parents and guardians through skills trainings, home visits, and, if necessary, referrals for medical treatment. Despite this outreach, the project reported uneven support from parents and guardians. The project noted that although some parents, guardians, or even siblings were engaged enough to begin taking braille lessons, other students were left without any support at home. Increasing parent and guardian support remained a key priority throughout the Reading Beyond Sight project. During EOP interviews, all staff members identified parent and guardian support as one of the most important factors that impact students' ability to benefit from the project and also one of the biggest challenges the project faced. The project team expressed a desire to strengthen the parent and guardian component on any future iteration of the Reading Beyond Sight project.

Overall, the implementation of the Reading Beyond Sight project greatly benefitted from RBI's strength as a Filipino non-profit that had both expertise in working with students who have low vision or are blind and longstanding relationships with DepEd, schools, and communities. Despite the challenges described above, the components of the project were implemented well, and because of the focus on monitoring and learning, the RBI team could adapt and improve throughout the life of the project.

Management

The management of the Reading Beyond Sight project benefitted from RBI's structure and local staff. The project employed experts from RBI who had worked on similar projects in the past and had strong personal and professional relationships with participating schools, teachers, parents, and guardians. This allowed the project management to delegate responsibilities to staff effectively, and, because the beneficiaries highly regarded the RBI team, participants more readily accepted RBI's guidance and support.

Since RBI had experience implementing other projects with components in the Reading Beyond Sight project, the team could focus more attention on monitoring and managing the fidelity of implementation. The team invested resources in overseeing and managing teachers', parents', and guardians' abilities to implement components of the project. Monthly monitoring visits meant the project could course-correct and improve throughout its duration. As RBI staff conducted project monitoring and evaluation (M&E) rather than contracting an external firm, the project could integrate lessons learned and greatly improve the fidelity of implementation.

Although the RBI team did not express any serious management challenges, they recognized that they underestimated the level of effort required to run the Reading Beyond Sight project. During EOP interviews, staff noted that they had not anticipated how much time and personnel were needed. Further, the team noted that although government stakeholders were involved in the planning and implementation of the project, a stronger partnership with more engagement, participation, and buy-in from DepEd would have been beneficial.

Fidelity of Implementation

Fidelity of implementation (FOI), by definition, is the accurate and consistent application of an agreed upon procedure. FOI research is used to assess the degree to which a project is implemented as intended. Measuring FOI helps implementers and researchers understand and differentiate between what was supposed to happen and what actually happened during the life of a project. When FOI is high and an intervention group experiences gains, then it is sometimes possible to attribute impact to the intervention; this, in turn, makes it possible to recommend scaling the intervention. FOI also makes it possible to identify which components of an intervention are most

strongly associated with outcomes. When FOI is low, implementers and researchers are unable to assess the quality of the design of the project or to attribute any observed impacts to the project. Beyond attribution, FOI can also be coupled with M&E to provide feedback to implementers during the project cycle to improve adherence to project design in the case of low FOI.[17]

As part of their projects, all ACR GCD Round 2 grantees conduct FOI research during the implementation period. The primary objectives of FOI for grantees were to

1. Understand what FOI is and why it is important throughout the life of the project
2. Identify essential components, activities, and questions for each phase of project implementation
3. Create relevant, project-specific FOI tools to monitor participant adherence to the intervention plan

STS held a series of FOI meetings with each ACR GCD grantee to develop project-specific FOI tools and an implementation plan for FOI research. After finishing the FOI sessions, ACR GCD grantees were expected to pilot test their FOI tools and collect data. Grantees were advised to collect a minimum of one round of FOI data; two or more rounds of data collection were considered ideal.

The collected data served several purposes:

1. To indicate where revisions in data collection tools were necessary
2. To highlight where improvements in implementation were needed
3. To attribute impact when combined with assessment data

RBI staff involved in the Reading Beyond Sight project participated in a series of virtual FOI trainings, developed FOI tools, and collected FOI data. FOI data collection began in November 2015 and was collected monthly until the end of implementation in January 2017. RBI collected school-level data on such topics as the amount of materials downloaded or produced, the number of daily reading sessions, the amount of technology use, and the number of trainings attended by teachers, parents, or guardians (see the Additional Findings section for more details). Due to the limited number of students per school and the lack of student-level data, FOI data were not used in the analysis of student reading outcomes.

VI. EGRA Data Analysis

EGRA data were analyzed using Microsoft Excel and IBM SPSS Statistics software. Only students who had data at both baseline and endline were included in the analysis. EGRA subtask results for each language were matched by student and compared by time period to calculate reading gains over the life of the project.[18] Subtask mean fluencies and scores are reported, as are standard deviations (SD) relevant to the mean values.[19] Gain scores were computed as the difference between endline and baseline scores for each subtask, and student reading performance was calculated by comparing gain scores for students in the intervention group to gain scores for

17 Creative Associates International, Inc. (2015). *Fidelity of Implementation (FOI) How-to Guide* (unpublished). United States Agency for International Development (USAID). Washington, D.C.

18 Because of rounding, mean changes reported may not always equal endline value minus baseline value.

19 SD describes how much observed values vary from the mean. A smaller SD indicates that the majority of values are close to the mean; a larger SD indicates that values are further from the mean. This report provides mean fluencies and scores of the entire sample of students participating in the Reading Beyond Sight project and within specific subgroups of students. Standard deviations are listed to understand the variability of the scores within the sample.

students in the comparison group. Zero scores were also calculated for all subtasks.[20] Differences in gain scores between the intervention and comparison groups were tested for significance using independent samples t-test analysis,[21] and differences in the proportion of zero scores were tested for significance using the chi-square test.[22] Due to insufficient sample sizes, differences in the proportion of zero scores by subgroups—such as type of reader or students' gender—were not tested for significance (see Considerations section). Results with statistically significant differences are reported throughout with an asterisk. Where results are not statistically significant, it is not possible to assume any difference between the baseline and endline results.

For each subtask, decision rules were applied to assess whether outliers would need to be removed. For example, if the time remaining for a timed subtask 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 the time remaining were based on multiple factors, including the rate at which letters or words in the language tested are typically read, the distribution or relative performance of students in the sample, and the mean fluency rate with and without the outlier data points. After considering reasonable ranges in the data, no outliers were removed.

For timed subtasks, rates were calculated per second and multiplied by three minutes to compute the rate per three minutes. This assumes that, if there were additional items included on the timed subtask, the student would have continued responding at the same rate. As a result, for some subtasks, average rates were higher than the number of items on the subtask.

Table 4 provides details on the subtasks in Filipino and English EGRAs, including how results were calculated.

Table 4: **EGRA Subtask and Data Analysis Method**

Subtask	Type	Analysis
Letter sound identification	Timed	Letter sound identification is measured as correct letter sounds read in three minutes (CLSP3M). Letter sound identification is a measure of alphabet knowledge. Each student had the opportunity to read up to 100 upper- and lowercase letters on the Filipino and English EGRAs.
Nonword reading	Timed	Nonword reading is measured as correct nonwords read in three minutes (CNWP3M). Nonword reading measures decoding. Each student had the opportunity to read up to 50 one- and two-syllable nonwords on the Filipino and English EGRAs.
Oral reading fluency	Timed	ORF is measured as correct words read in three minutes (CWP3M). ORF is a decoding and reading fluency measure. Each student had the opportunity to read 59 words on the Filipino EGRA and 69 words on the English EGRA. The ORF passage formed the textual basis for the reading comprehension subtask.
Reading comprehension	Untimed	Reading comprehension is measured as the 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 up to five questions on the Filipino and English EGRAs.
Listening comprehension	Untimed	Listening comprehension is measured as the number of correct answers verbally delivered to the assessor. Listening comprehension is a measure of vocabulary. Each student had the opportunity to answer five questions based on a passage read to them by the assessor on the Filipino and English EGRAs.

20 Students receive a zero score if they are unable to correctly identify a single item on a subtask. In this report, zero scores are shown as the number of students or as the percent of the total students unable to correctly identify a single item on a subtask.

21 The independent-sample t-test compares the difference between the means of two independent groups on the same dependent variable.

22 The chi-square test is a statistical test comparing proportion of students with zero scores that were observed in the data against what was expected.

Considerations

Sample Size and Significance Testing

For the Reading Beyond Sight project, 143 students were tested at both baseline and endline. Significance testing was conducted on students' reading gains across the entire sample population and within identified subgroups (type of reader and gender); the proportion of zero scores was also tested for significance. However, given the small sample size, chi-square tests were not conducted on the proportion of zero scores between subgroups. Because of this, results in this report should be interpreted with an understanding of the limitations of the research sample. Without a larger sample size, it is not possible to conclusively determine if the proportions of zero scores between subgroups were significantly different.

Extended Time for Students Who Have Low Vision or are Blind

Timed EGRA subtasks are generally administered within a one-minute period, and results are reported as the number of correct items identified per minute. After consultation with special needs experts, it was decided that students in the Reading Beyond Sight project should receive three minutes to complete timed subtasks.[23] This gave the students, who conducted the subtasks using large-print or braille materials, enough time to complete the assessment. All timed subtask results presented in this report are identification, decoding, or fluency rates per three minutes—a consideration that should be taken into account when comparing results to subtask fluencies with sighted students timed at the one-minute mark.

Type of Reader and Technologies

During baseline data collection, students used the basic technologies available in their classroom prior to the intervention to enable their reading, most notably: bookstands and magnifiers. Assessors noted the technologies that each student used to replicate those conditions at endline. For example, even if students used a CCTV during the project to help them read large print, those students did not use the CCTV during the endline assessment if they did not use it during the baseline data collection. Instead, students used the same magnifier that they used during the baseline assessment. This eliminated the possibility of conflating students' reading improvements with the use of more sophisticated assistive devices. Additionally, several students underwent vision surgery, and, as a result, transitioned from reading with braille materials to reading with large-print materials or, in some cases, out of SPED entirely. These students' EGRA scores were removed from the analysis.

23 ACR GCD grantees Catholic Relief Services and Beneficent Technologies, Inc., also supported students who have low vision or are blind and administered EGRAs with three minutes for timed subtasks.

VII. Summary of EGRA Results

This section presents EGRA results to answer two research questions posed by the Reading Beyond Sight project: *Does student performance in the two groups (intervention and comparison) differ?* and *Does student performance in the two groups (intervention and comparison) differ by type of reader or gender?* The following section presents the results of the Filipino EGRA by subtask, type of reader, and gender, followed by the results of the English EGRA by subtask, type of reader, and gender. Because comparisons in reading acquisition across languages are not appropriate and not the focus of this project, results focus on student learning trends within each language.

Overall, the Filipino EGRA results presented in Figure 3 indicate that students in both the intervention and comparison groups made gains from baseline to endline on all subtasks. However, **gains for students in the intervention group were significantly greater than gains for students in the comparison group on all Filipino EGRA subtasks.**

Figure 3: **Mean Results by EGRA Subtask and Group at Baseline and Endline—Filipino**[24, 25]

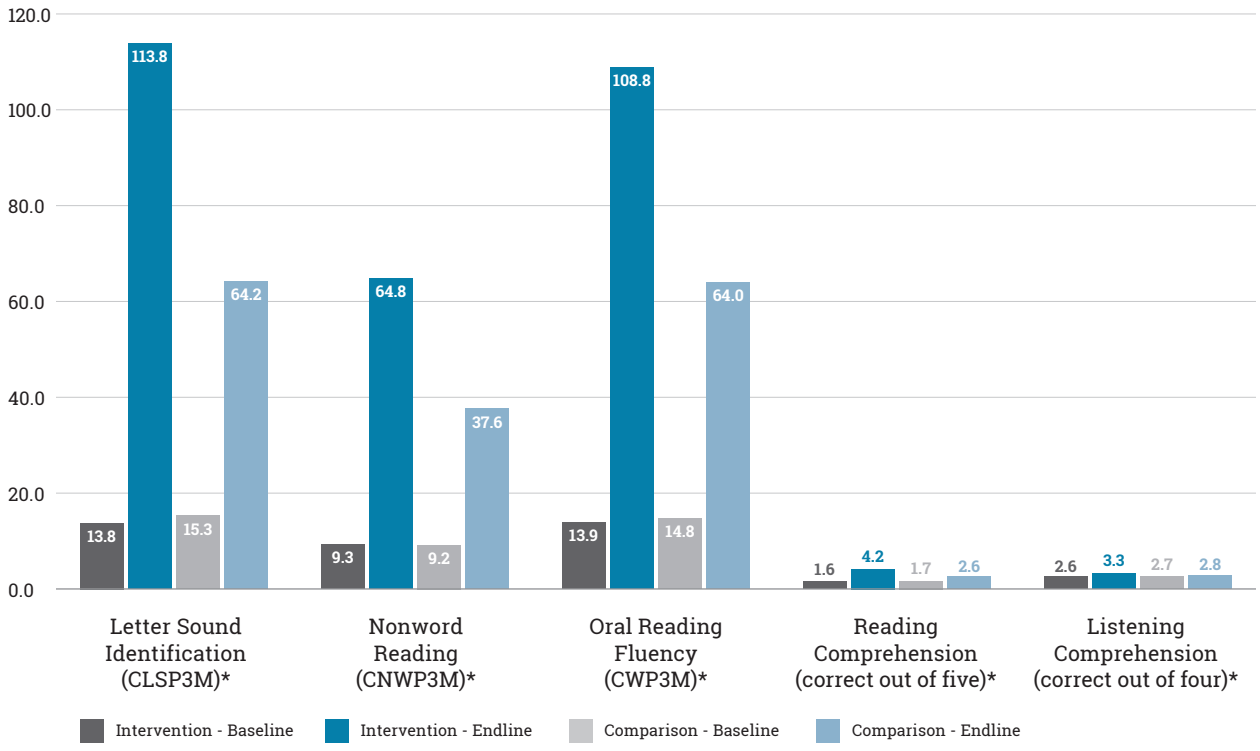
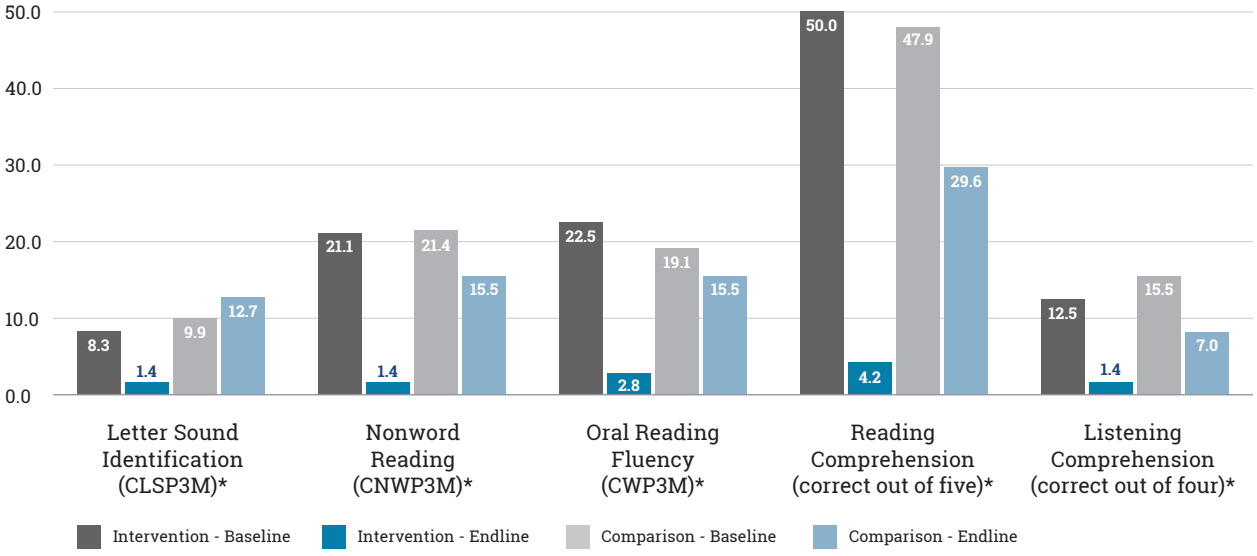


Figure 4 shows the percentage of students who received zero scores at baseline and endline on the Filipino EGRA. **At endline, the proportion of students in the intervention group who received zero scores was significantly lower than that of students in the comparison group** on four of the five subtasks: letter sound identification, nonword reading, ORF, and reading comprehension.

24 Identification, decoding, or fluency rates were calculated for all timed subtasks (letter sound identification, nonword reading, and ORF) per second and multiplied by three minutes to compute the rate per three minutes. This calculation considers the amount of time remaining and assumes that, if there were additional items included on the timed subtask, the child would have continued responding at the same rate. As a result, for some subtasks, average rates were higher than the number of items on the subtask.

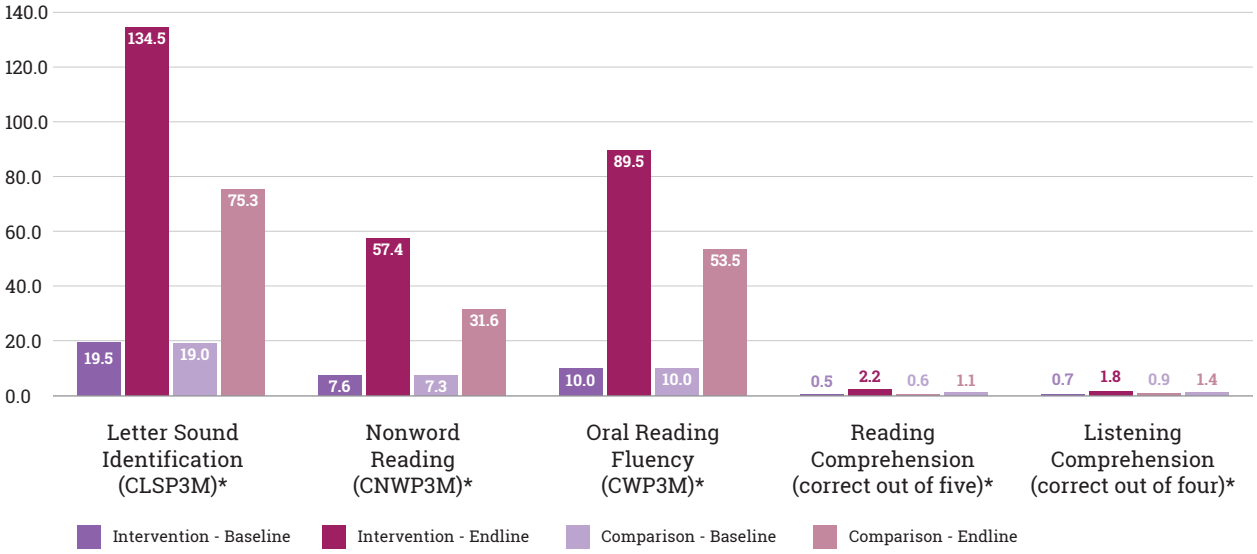
25 An asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at $p<0.05$. *N* sizes: Intervention Group *N*=72, Comparison Group *N*=71. See Appendix Tables D.1 to D.5 for variations in samples by subtask.

Figure 4: **Percentage of Students Receiving Zero Scores by EGRA Subtask and Group at Baseline and Endline (%)—Filipino**[26]



Similarly, the English EGRA results presented in Figure 5 indicate that students in both the intervention and comparison groups made gains from baseline to endline on all subtasks. However, **gain scores for students in the intervention group were significantly greater than gain scores for students in the comparison group on all subtasks on the English EGRA.**

Figure 5: **Mean Results by EGRA Subtask and Group at Baseline and Endline—English**[27, 28]



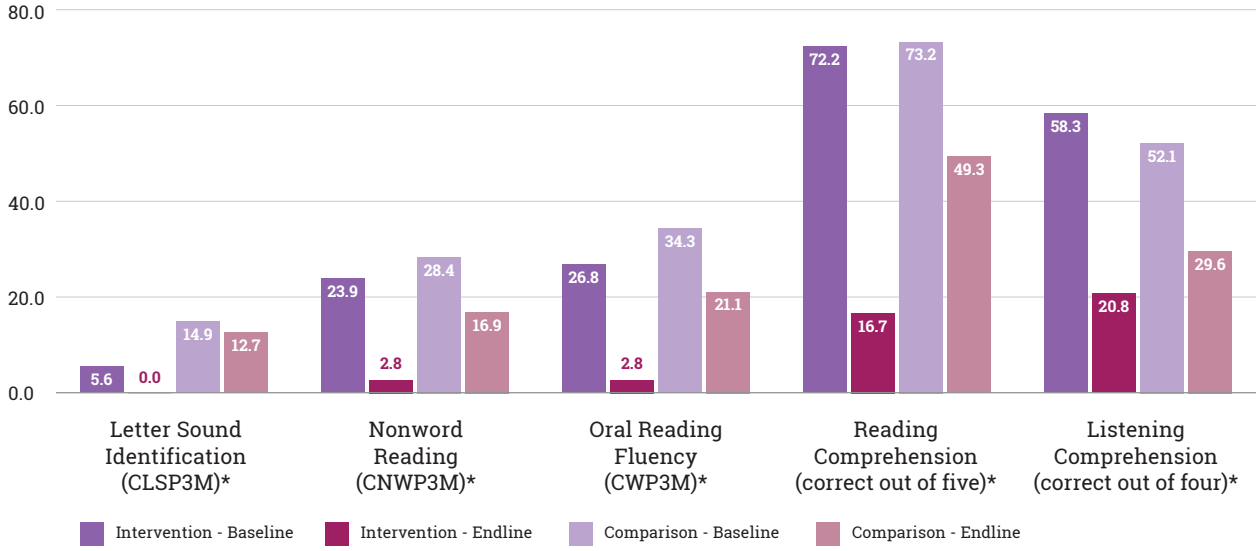
26 An asterisk (*) indicates the percentage of students receiving zero scores at the Endline EGRA was significantly different between the intervention and comparison groups at $p<0.05$. *N* sizes: Intervention Group *N*=72; Comparison Group *N*=71. See Appendix Tables D.1 to D.5 for variations in samples by subtask.

27 Identification, decoding, or fluency rates were calculated for all timed subtasks (letter sound identification, nonword reading and ORF) per second and multiplied by three minutes to compute the rate per three minutes. This calculation considers the amount of time remaining and assumes that, if there were additional items included on the timed subtask, the child would have continued responding at the same rate. As a result, for some subtasks, average rates were higher than the number of items on the subtask.

28 An asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at $p<0.05$. *N* sizes: Intervention Group *N*=72, Comparison Group *N*=71. See Appendix Tables D.9 to D.13 for variations in samples by subtask.

Figure 6 shows the percentage of students who received zero scores at baseline and endline on the English EGRA. **At endline, the proportion of students in the intervention group who received zero scores was significantly lower than that of students in the comparison group** on four of the five subtasks: letter sound identification, nonword reading, ORF, and reading comprehension.

Figure 6: **Percentage of Students Receiving Zero Scores by EGRA Subtask and Group at Baseline and Endline (%)—English**[29]



VIII. Filipino EGRA Results

This section presents detailed results for the Filipino EGRA. The description of each subtask is followed by student results as measured by gain scores, as well as the proportion of students receiving zero scores.[30] Results are presented by type of reader (large print or braille), followed by results by gender.[31]

Filipino EGRA Results by Subtask

Letter Sound Identification—Filipino EGRA

The letter sound identification subtask measures students' understanding of the alphabetic principle, which states that letters (orthography) correspond to sounds (phonology). In Filipino, this is a one-to-one correspondence, whereas in English, multiple sounds may correspond to the same letter. To demonstrate letter sound identification, students must identify the appropriate sound for each letter. The ability to match letters with correct sounds is critical to reading fluency and comprehension. For this subtask, students were presented with 100 letters and asked to read aloud as many of the sounds as they could in three minutes.[32] Results for this subtask are reported as a rate of CLSP3M.

29 An asterisk (*) indicates the percentage of students receiving zero scores at endline was significantly different between the intervention and comparison groups at $p<0.05$. *N* sizes: Intervention Group *N*=72; Comparison Group *N*=71. See Appendix Tables D.9 to D.13 for variations in samples by subtask.

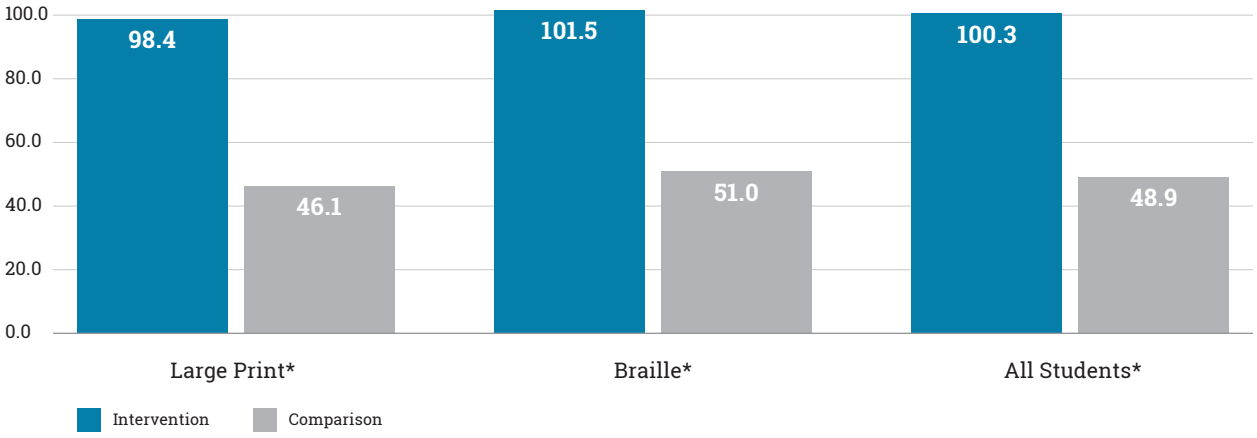
30 Differences in the proportion of zero scores were compared on the level of the entire sample using chi-square test for significance; due to sample size, differences in the proportion of zero scores between type of reader (large print, braille) were not tested for significance.

31 Filipino EGRA results should not be compared to English EGRA results.

32 There is an auto stop rule in all the timed EGRA subtasks. In this case, the test was discontinued if a student was unable to correctly name any of the first ten letters on the stimulus.

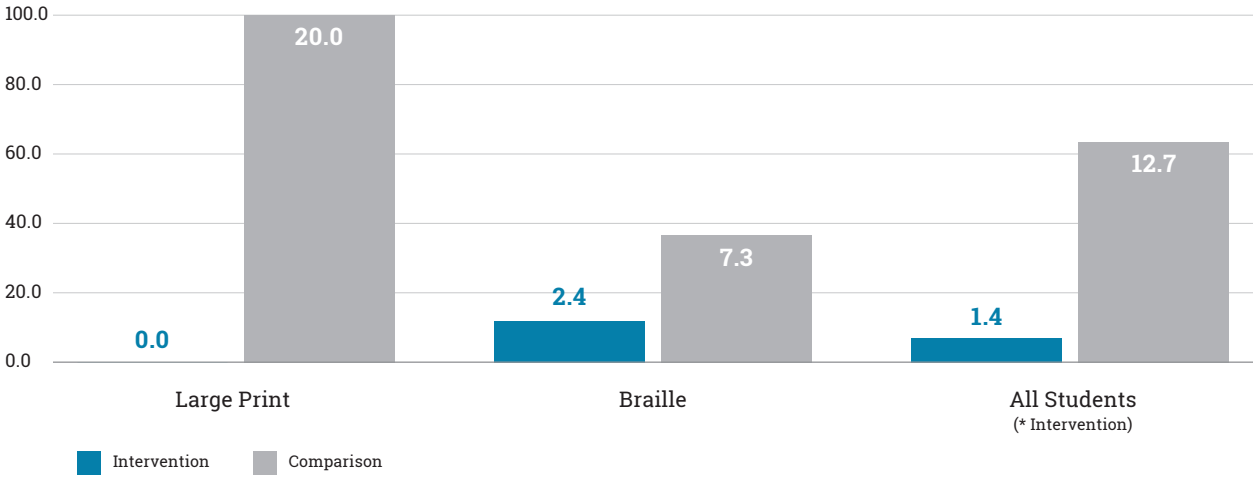
Average gains for the letter sound identification subtask are presented in Figure 7. On average, letter sound identification rates increased from baseline to endline for students in both groups; gains for students in the intervention group were significantly larger than those of students in the comparison group. **On average, students in the intervention group read 100.3 additional CLSP3M at endline than at baseline,** compared to 48.9 additional CLSP3M for students in the comparison group.

Figure 7: **Average Gain Scores by Group and Type of Reader—Filipino Letter Sound Identification (CLSP3M)**[33]



The percentage of students receiving zero scores at endline is presented in Figure 8. **Overall, 1.4 percent of students in the intervention group received zero scores on the letter sound identification subtask compared to 12.7 percent of students in the comparison group;** this difference is statistically significant. Results also show that no large-print readers in the intervention group received a zero score at endline, while 20.0 percent of their peers in the comparison group received zero scores at endline. Among braille readers, 2.4 percent of students in the intervention group received zero scores, compared with 7.3 percent of students in the comparison group.

Figure 8: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—Filipino Letter Sound Identification (%)**[34]



33 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=29, Comparison Group *n*=30; Braille—Intervention Group *n*=42, Comparison Group *n*=41; All Students—Intervention Group *N*=71, Comparison Group *N*=71.

34 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=29, Comparison Group *n*=30; Braille—Intervention Group *n*=42, Comparison Group *n*=41; All Students—Intervention Group *N*=71, Comparison Group *N*=71.

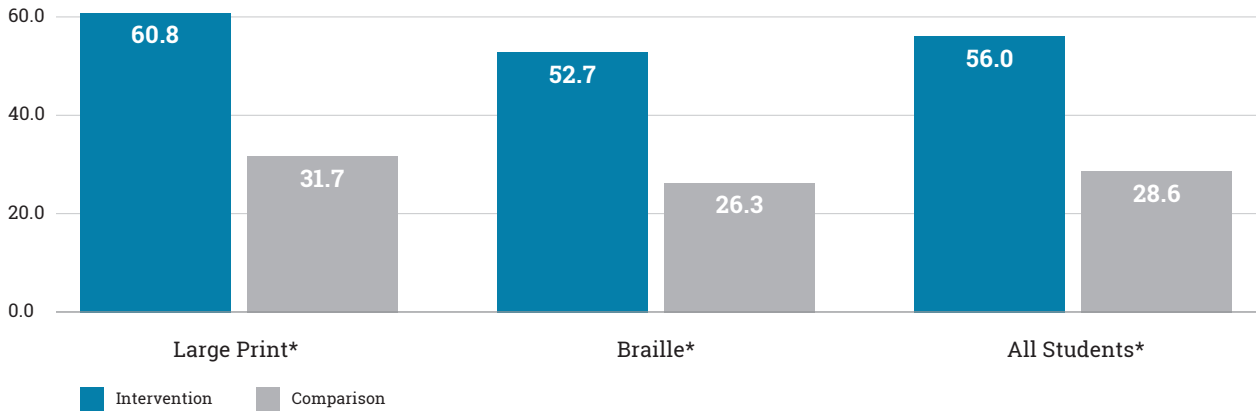
Between baseline and endline, the proportion of students in the intervention group that received zero scores on the letter sound identification subtask decreased from 8.3 percent to 1.4 percent, or a 6.9 percentage-point drop (see Figure 4). In comparison, the proportion of students in the comparison group who received zero scores on this subtask increased from 9.9 percent at baseline to 12.7 percent at endline, or a 2.8 percentage-point increase.

Nonword Reading—Filipino EGRA

The nonword reading subtask measures students' decoding ability by presenting them with words that they would not be able to recognize due to familiarity. Many students in the early grades learn to memorize or recognize a range of familiar words. Thus, to assess their decoding skills, students are presented with invented (nonwords) words, which require them to sound out each letter and syllable to decode a word. During this timed subtask, the assessor presented students with 50 nonwords and asked them to read aloud as many as possible in three minutes.[35]

Results for the nonword reading subtask, measured as CNWP3M, are presented in Figure 9. On average, nonword reading rates increased from baseline to endline for students in both groups. Students in the intervention group showed significantly larger gains than students in the comparison group. **Specifically, students in the intervention group read 56.0 additional CNWP3M at endline, compared to 28.6 additional CNWP3M for students in the comparison group.** The gains in nonword reading rates of large-print readers and braille readers in the intervention group were significantly larger than the gains of their peers in the comparison group.

Figure 9: **Average Gain Scores by Group and Type of Reader—Filipino Nonword Reading (CNWP3M)**[36]

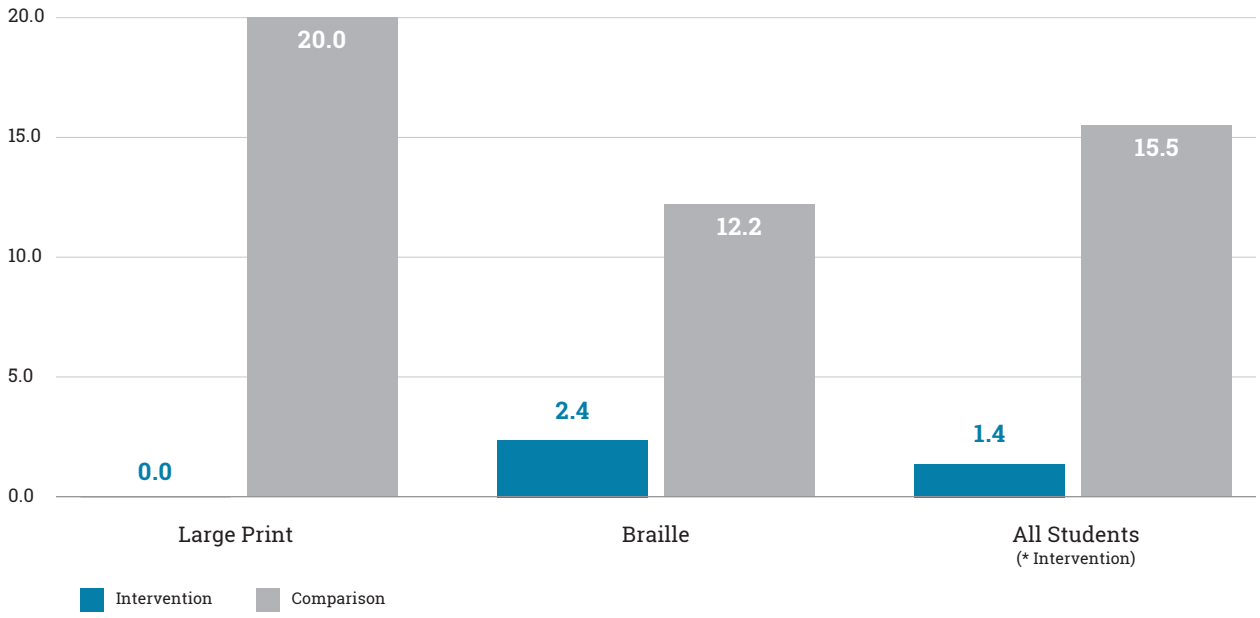


The percentage of students receiving zero scores at endline is presented in Figure 10. Like the letter sound identification subtask, the percentage of students who received zero scores on the nonword reading subtask at endline was significantly lower for students in the intervention group than for students in the comparison group. **Overall, 1.4 percent of students in the intervention group received zero scores at endline compared to 15.5 percent of students in the comparison group.** All large-print readers in the intervention group read at least one nonword at endline correctly, while 2.4 percent of braille readers in the intervention group received zero scores. In the comparison group, these percentages were 20.0 percent and 12.2 percent, respectively.

35 After three minutes, the student was asked to stop. The subtask was discontinued if a student was unable to correctly read any of the first five nonwords.

36 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=30$; Braille—Intervention Group $n=42$, Comparison Group $n=40$; All Students—Intervention Group $N=71$, Comparison Group $N=70$.

Figure 10: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—Filipino Nonword Reading (%)** [37]



While nearly the same percentage of students in the intervention and comparison groups received zero scores at baseline—21.1 percent and 21.4, respectively—only 1.4 percent of students in the intervention group received zero scores at endline; 15.5 percent of students in the comparison groups received zero scores at endline (see Figure 4). This represented a 19.7 percentage-point drop among students in the intervention group compared with a 5.9 percentage-point drop among students in the comparison group.

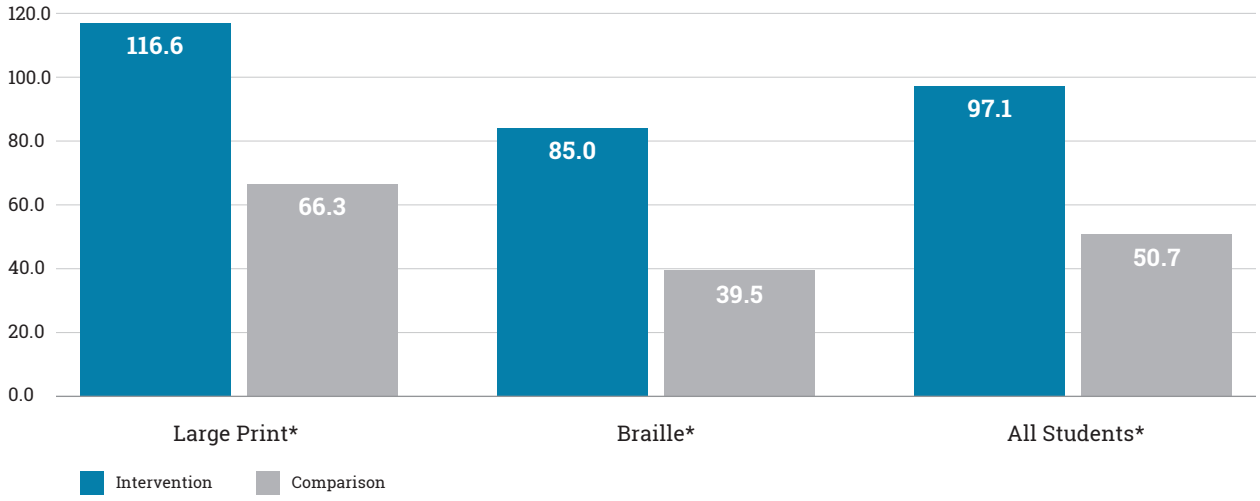
Oral Reading Fluency—Filipino EGRA

The ORF subtask measures students' overall reading competence. It is the culmination of translating letters into sounds, merging sounds to become words, linking words to become sentences, relating the text to meaning, and making inferences to fill in missing information. A student's ORF score is dependent on the skills in previous subtasks since students need to have some mastery of letter sounds and decoding of nonwords to read fluently. Results for this subtask are measured as a rate of CWP3M.

Average gains for ORF are presented in Figure 11. While ORF rates increased from baseline to endline for students in both the intervention and comparison groups, students in the intervention group showed significantly larger gains than students in the comparison group. **Specifically, students in the intervention group increased their fluency by 97.1 CWP3M at endline over baseline compared to a gain of 50.7 CWP3M for students in the comparison group.** When considering reader types, students using large-print or braille materials in the intervention group also saw significantly larger gains on the ORF subtask than their peers in the comparison group.

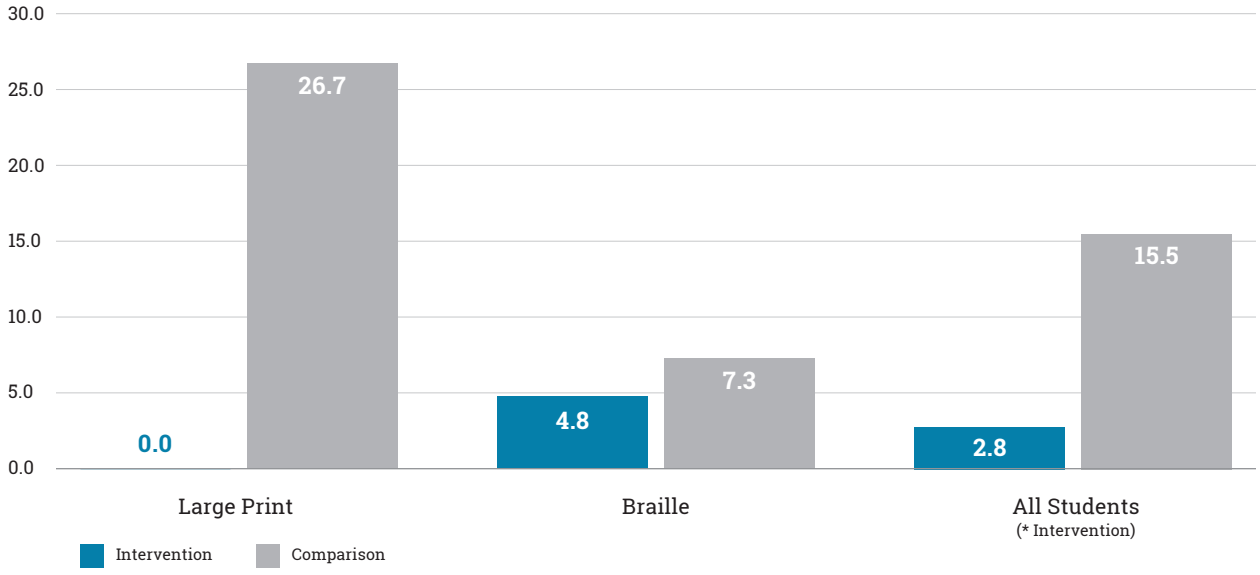
37 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=30$; Braille—Intervention Group $n=42$, Comparison Group $n=40$; All Students—Intervention Group $N=71$, Comparison Group $N=70$.

Figure 11: **Average Gain Scores by Group and Type of Reader—Filipino ORF (CWP3M)**[38]



The percentage of students who received zero scores at endline on the ORF subtask are presented in Figure 12. **At endline, 2.8 percent of students in the intervention group received zero scores, while 15.5 percent of students in the comparison group received zero scores.** As with the letter sound identification and nonword reading subtasks, the proportion of students receiving zero scores was significantly lower in the intervention group than in the comparison group. Additionally, all large-print readers in the intervention group correctly read at least one word at endline, while 26.7 percent of large-print readers in the comparison group received zero scores.

Figure 12: **Percentage of Students Receiving Zero Scores by Type of Reader at Endline—Filipino ORF (%)**[39]



38 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=28, Comparison Group *n*=28; Braille—Intervention Group *n*=42, Comparison Group *n*=39; All Students—Intervention Group *N*=70, Comparison Group *N*=67.

39 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=28, Comparison Group *n*=28; Braille—Intervention Group *n*=42, Comparison Group *n*=39; All Students—Intervention Group *N*=70, Comparison Group *N*=67.

From baseline to endline, the proportion of students who received zero scores decreased in both the intervention and comparison groups (see Figure 4). While the percentage of students in the intervention group who were unable to read a single word correctly decreased by 19.7 percentage points, the percentage of students in the comparison group who were unable to read a single word correctly decreased by only 3.6 percentage points.

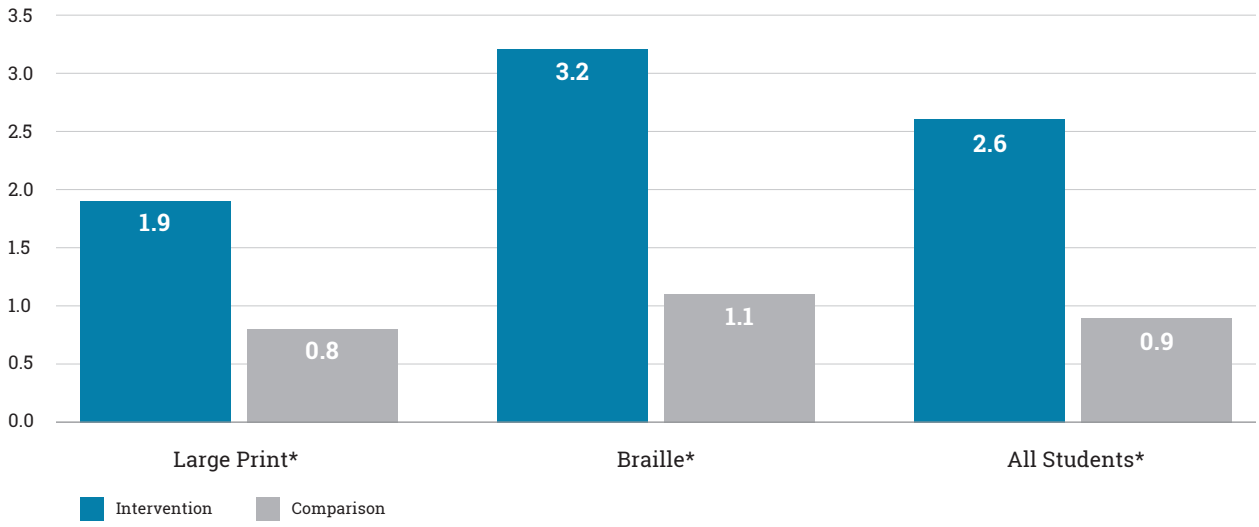
Reading Comprehension—Filipino EGRA

Comprehension is the purpose of reading. Once students learn the sound-letter relationship (alphabetic principle) and become able to decode and read with automaticity, they become increasingly able to understand the meaning of a text. This subtask assesses that ability.

For the reading comprehension subtask, the assessor removed the story used in the ORF subtask and then asked each student up to five comprehension questions based on what he or she read. The number of questions asked depended on how many words each student read on the ORF subtask. For instance, if a student read just the first ten words, he or she would be asked only the first comprehension question. Similarly, if a student read all 59 words, he or she would be asked all five questions. Students who received zero scores on the ORF subtask also received a zero score on the reading comprehension subtask because no questions were presented to them. Additionally, any student who could not correctly answer a single reading comprehension question also received a zero score on this subtask.

On average, reading comprehension scores increased from baseline to endline for students in both groups. However, students in the intervention group showed significantly larger gains than students in the comparison group. Results are presented in Figure 13 and indicate that **students in the intervention group on average answered 2.6 more questions correctly at endline over baseline; this compared to an additional 0.9 correct questions on average for students in the comparison group.** On average, large-print readers in the intervention group correctly answered 1.9 additional questions, while braille readers in the intervention group correctly answered 3.2 additional questions. Large-print and braille readers in the intervention group made significantly larger gains than their peers in the comparison group.

Figure 13: **Average Gain Scores by Group and Type of Reader—Filipino Reading Comprehension (correct out of five)**[40]

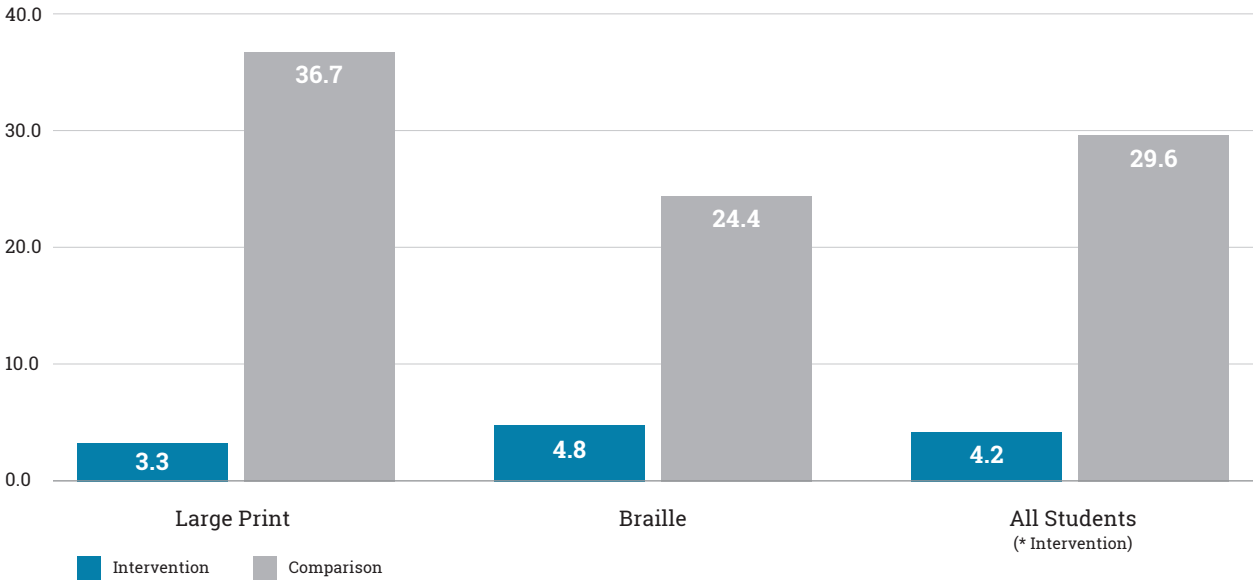


40 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=39$; All Students—Intervention Group $N=71$, Comparison Group $N=68$.

Following that students were, on average, able to read at a faster CWP3M rate at endline than baseline, they were also asked more reading comprehension questions (see Annex Table D.6). At baseline, 38.0 percent of students in both the intervention and comparison groups did not attempt a single reading comprehension question since they received a zero score on the ORF subtask or had not read far enough in the ORF passage. At endline, only about 4.2 percent of students in the intervention group and 19.7 percent of students in the comparison group did not attempt a single question. Moreover, while only 24.0 percent of students in either the intervention and comparison group attempted all five reading comprehension questions at baseline, 77.8 percent of intervention group students and 43.7 percent of comparison group students attempted all five reading comprehension questions at endline.

The proportions of students receiving zero scores on the reading comprehension subtask at endline are presented in Figure 14.[41] **Overall, 4.2 percent of intervention group students and 29.6 percent of comparison group students were unable to answer a single reading comprehension question correctly;** this difference was statistically significant. Additionally, 3.3 percent of large-print readers and 4.8 percent of braille readers in the intervention group received zero scores. This is compared to 36.7 percent and 24.4 percent in the comparison groups, respectively.

Figure 14: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—Filipino Reading Comprehension (%)**[42]



While approximately half of students in both the intervention and comparison groups received zero scores at baseline (50.0 percent and 47.9 percent, respectively), that proportion dropped to 4.2 percent for the intervention group compared to 29.6 percent for comparison group students at endline (see Figure 4). This represents a 45.8 percentage-point drop in the intervention group and an 18.3 percentage-point drop in the comparison group.

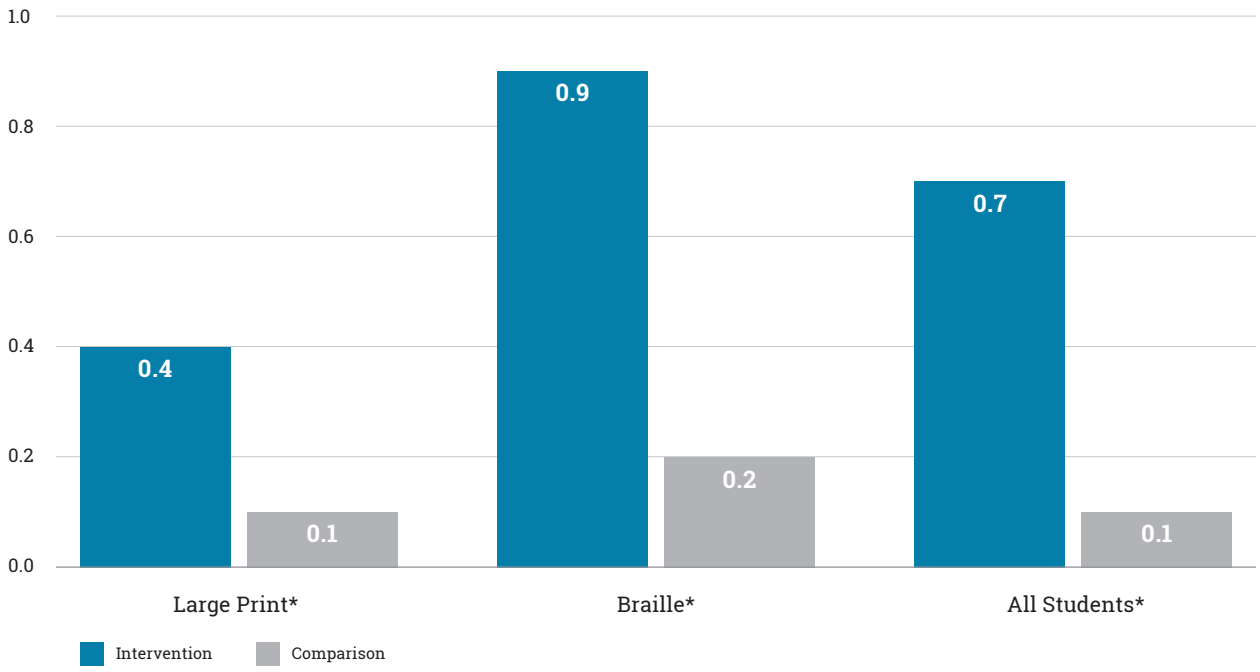
41 Zero scores on reading comprehension reflect two types of students: (1) those who did not read enough of the passage to be asked a single question, and (2) those who read enough to be asked at least one comprehension question but answered all questions incorrectly.

42 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=39$; All Students—Intervention Group $N=71$, Comparison Group $N=68$.

Listening Comprehension—Filipino EGRA

The untimed listening comprehension subtask measures students' ability to comprehend the meaning of a story read to them orally. Students do not need to know how to read to answer listening comprehension questions. As a result, this subtask is an important measure of students' pre-reading abilities because it helps detect obstacles to learning to read such as limited language proficiency, auditory problems, attention deficit, and other difficulties. In this subtask, the assessor reads a short passage to the student and asks them to answer four comprehension questions based on what they heard. Results for this subtask are presented as the number of questions correctly answered out of four.

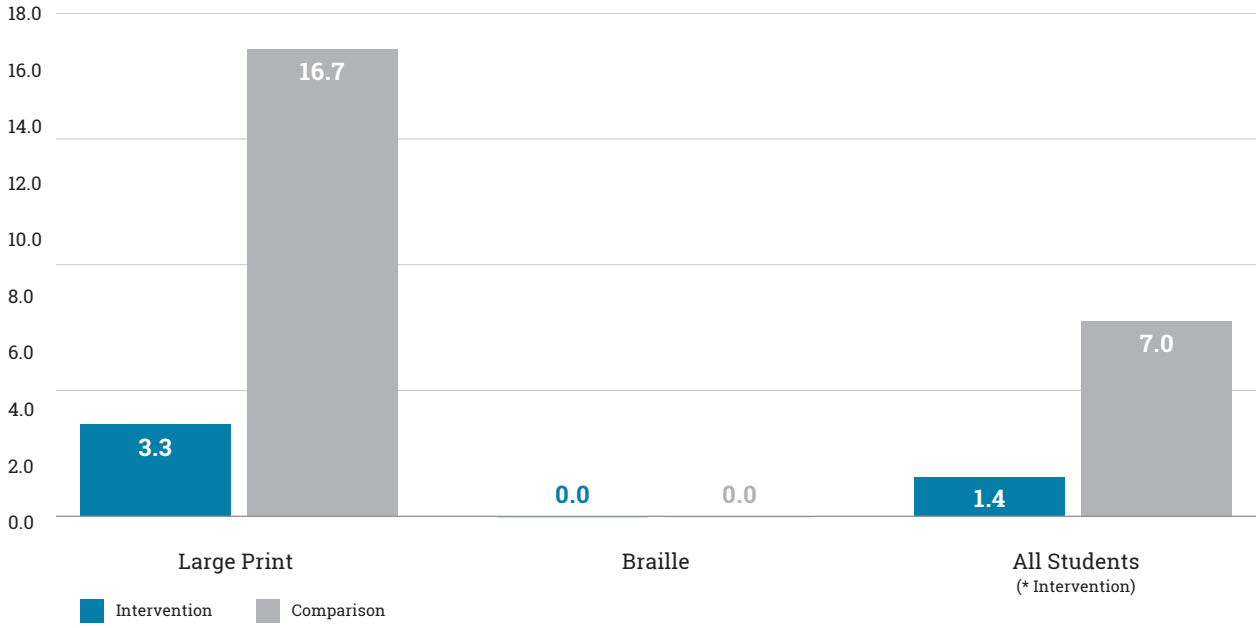
Figure 15: **Average Gain Scores by Group and Type of Reader—Filipino Listening Comprehension (correct out of four)**[43]



Average gains on listening comprehension are presented in Figure 15. Results show that on average, listening comprehension scores increased from baseline to endline for all students. **Students in the intervention group answered an average of 0.7 additional questions at endline, and students in the comparison group answered an average of 0.1 additional questions at endline.** This difference was statistically significant. Braille readers in the intervention group made significantly larger gains than braille readers in the comparison group; on average, braille readers in the intervention group correctly answered 0.9 additional questions, while braille readers in the comparison group correctly answered only 0.2 additional questions. Gain scores for large-print readers in the intervention and comparison groups were comparable; the difference in gain scores was not statistically significant.

43 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=39$; All Students—Intervention Group $N=71$, Comparison Group $N=68$.

Figure 16: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—Filipino Listening Comprehension (%)**[44]



The percentage of students receiving zero scores on the listening comprehension subtask at endline are presented in Figure 16. At endline, there was not a statistically significant difference in the proportion of students receiving zero scores between the intervention and comparison groups. Large-print readers showed a larger spread in the proportion of zero scores at endline; 3.3 percent of students in the intervention group and 16.7 percent of students in the comparison group received zero scores. At both baseline and endline, all braille readers in the intervention group answered at least one question correctly on this subtask. The decrease from baseline to endline in the proportions of students with zero scores was equal to 11.1 percentage points for the intervention group and 8.5 percentage points for the comparison group (see Figure 4).

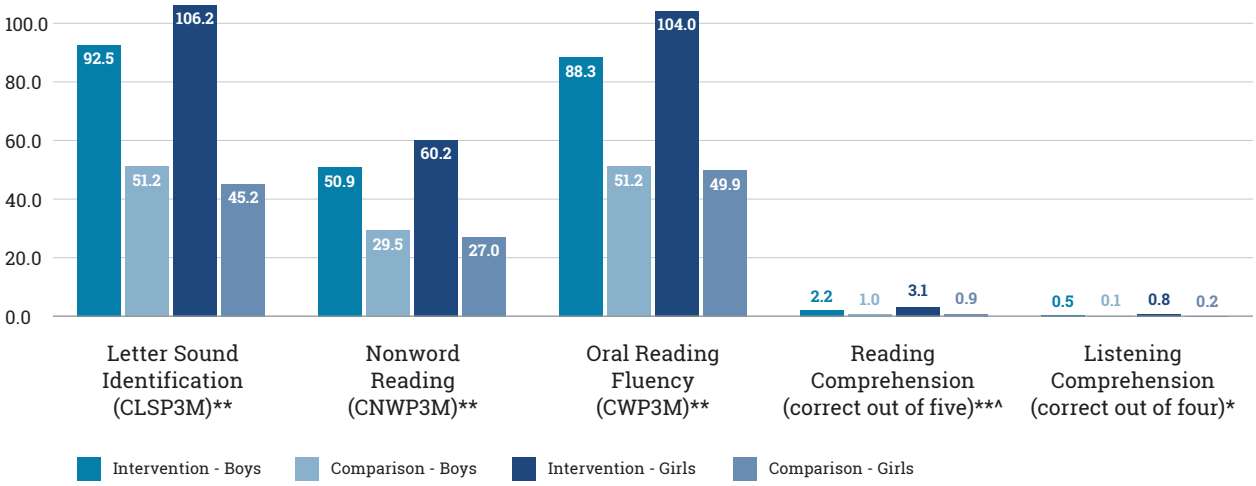
Filipino EGRA Results by Gender

Gain scores were analyzed by gender to understand if boys and girls benefitted differently from the Reading Beyond Sight project. There were 76 boys and 67 girls who completed baseline and endline Filipino EGRAs. Their subtask results are presented below (see Annex Table D.8 for more detailed results).

Average gain scores for boys and girls on all Filipino subtasks are presented in Figure 17. **Within the intervention group, girls made significantly higher gains than boys on only one subtask: reading comprehension.** Girls in the intervention group made significantly larger gains than girls in the comparison group on all five subtasks. Similarly, boys in the intervention group made significantly larger gains than boys in the comparison group on four out of five subtasks; the differences on the listening comprehension subtask were not statistically significant. Both girls and boys made their greatest gains on the letter sound identification and ORF subtasks.

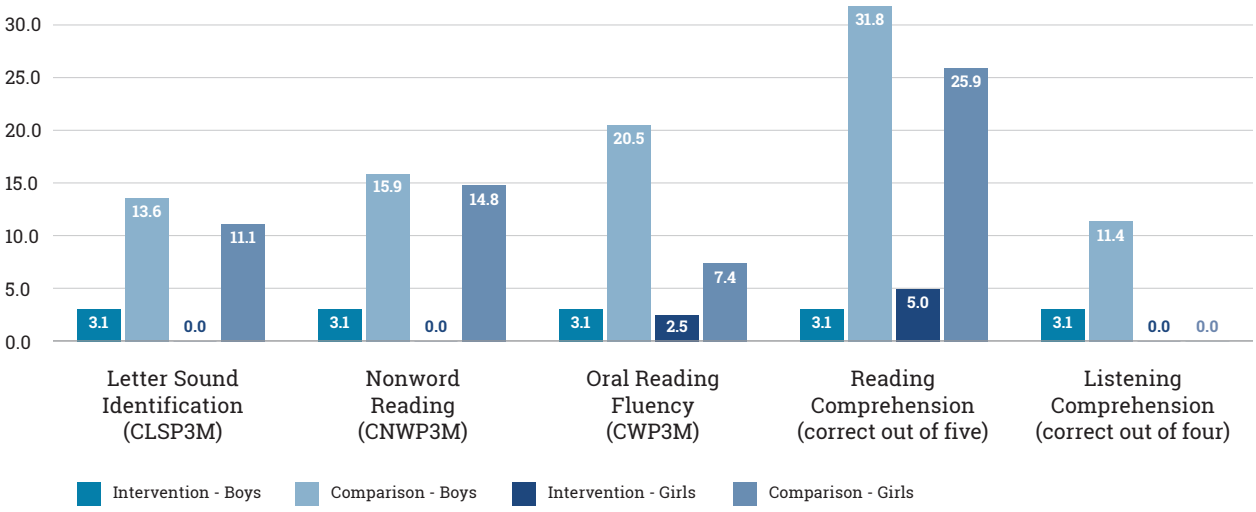
44 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=39$; All Students—Intervention Group $N=71$, Comparison Group $N=68$.

Figure 17: **Average Gain Scores from Baseline to Endline by Subtask, Gender, and Group—Filipino**[45, 46]



The percentage of boys and girls who received zero scores at endline are presented in Figure 18.[47] **At endline, no girls in the intervention group received zero scores on three subtasks: letter sound identification, nonword reading, and listening comprehension.** A small proportion of girls in the intervention group received zero scores on the ORF and reading comprehension subtasks—2.5 percent and 5.0 percent, respectively. Similarly, **the percentage of boys in the intervention group who received zero scores at endline was small and consistent across subtasks: 3.1 percent of boys in the intervention group received zero scores on all five subtasks.** A larger proportion of girls and boys in the comparison group received zero scores than their peers in the intervention group; this held true on all subtasks except the listening comprehension subtask, on which all girls in the comparison group answered at least one question correctly.

Figure 18: **Percentage of Students Receiving Zero Score at Endline by Subtask, Gender, and Group—Filipino**[48]



45 Two asterisks (**) indicates the gain scores for the intervention group was significantly higher than the gain score for the comparison group at p<0.05 for both boys and girls. One asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at p<0.05 for girls. *N* sizes: Boys – Intervention Group *n*=32, Comparison Group *n*=44; Girls – Intervention Group *n*=40, Comparison Group *n*=27.

46 A caret (^) indicates that the gain score for girls in the intervention group was significantly higher than the gain score for boys in the intervention group at p<0.05.

47 The differences in the proportion of zero scores for boys and girls between groups were not tested for significance due to small sample sizes.

48 *N* sizes: Boys – Intervention Group *n*=32, Comparison Group *n*=44; Girls – Intervention Group *n*=40, Comparison Group *n*=27.

IX. English EGRA Results

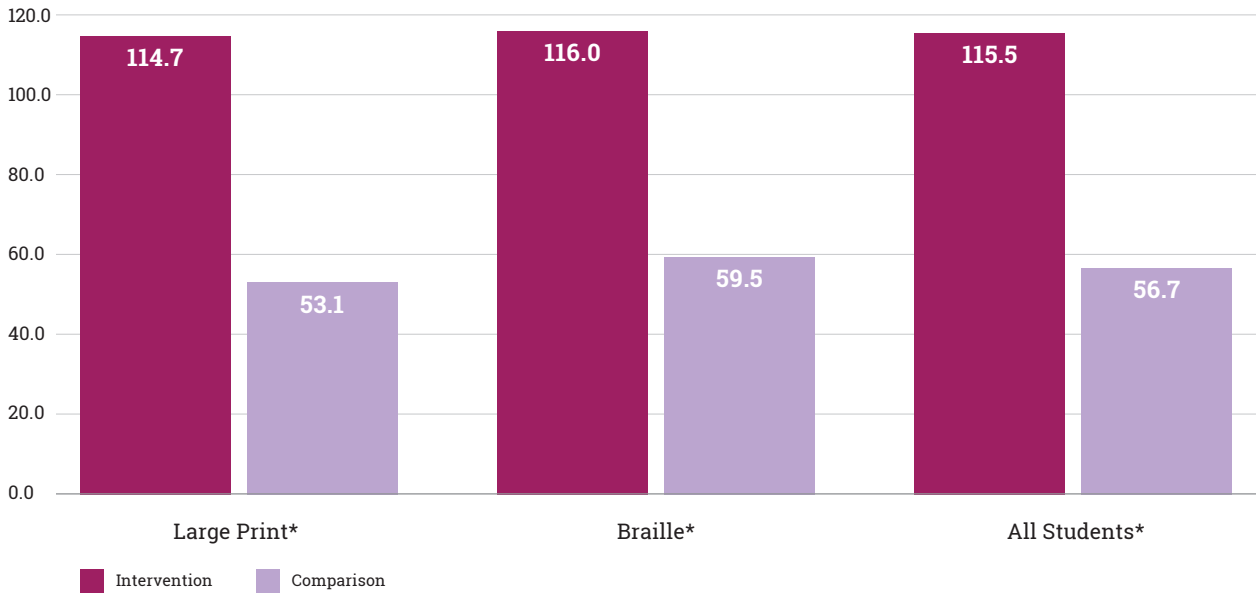
This section presents detailed results for the English EGRA, which consisted of the same five subtasks as the Filipino EGRA. Gain scores and the proportion of students receiving zero scores[49] for each subtask[50] are presented as subgroups by type of reader (large print or braille). Results are also presented by gender.

English EGRA Results by Subtask

Letter Sound Identification—English EGRA

Results for the letter sound identification subtask, measured as CLSP3M, are presented in Figure 19. On average, letter sound identification rates increased from baseline to endline for students in the intervention and comparison groups, though the gains of intervention group students were significantly greater than the gains of comparison group students. Specifically, **students in the intervention group read, on average, 115.5 additional CLSP3M at endline than at baseline, compared to 56.7 additional CLSP3M for students in the comparison group.** When considering medium, both large-print and braille readers in the intervention group had significantly greater gains than their peers in the comparison group.

Figure 19: **Average Gain Scores by Group and Type of Reader—English Letter Sound Identification (CLSP3M)**[51]



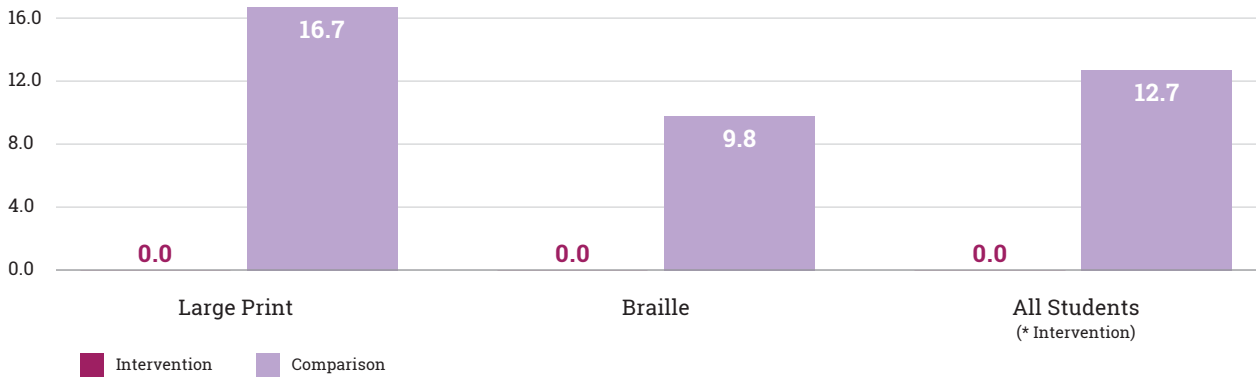
The percentage of students receiving zero scores at endline is presented in Figure 20. **No students in the intervention group received zero scores on the letter sound identification subtask, while 12.7 percent of students in the comparison group received zero scores;** this difference is statistically significant. Similarly, results show that the neither large-print readers nor braille readers in the intervention group received zero scores, but 16.7 percent of large-print readers and 9.8 percent of braille readers in the comparison group did receive zero scores.

49 Differences in the proportion of zero scores were compared on the level of the entire sample using chi-square test for significance; due to sample size, differences in the proportion of zero scores between type of reader (large print, braille) were not tested for significance.

50 Because the structure and administration of subtasks are the same across languages, descriptions are not repeated in this section.

51 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=28$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=38$; All Students—Intervention Group $N=70$, Comparison Group $N=67$.

Figure 20: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—English Letter Sound Knowledge (%)**[52, 53]

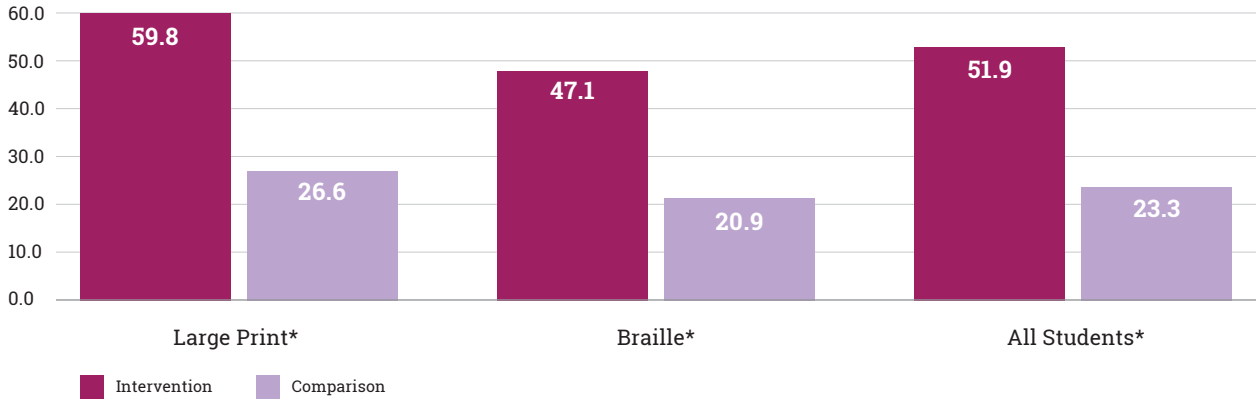


On the letter sound identification subtask, the percentage of students who received zero scores at baseline and endline dropped for intervention and comparison group students. (see Figure 6). For students in the intervention group, the proportion of zero scores decreased from 5.6 percent at baseline to 0.0 percent at endline, a 5.6 percentage-point drop. However, the proportion of zero scores in the comparison group fell from 15.0 percent at baseline to 12.7 percent at endline, a 2.3 percentage-point decrease.

Nonword Reading—English EGRA

Results for the nonword reading subtask, measured CNWP3M, are presented in Figure 21. On average, nonword reading rates increased from baseline to endline for students in both groups; students in the intervention group showed significantly larger rate gains than students in the comparison group. Specifically, **students in the intervention group read 51.9 additional CNWP3M at endline than at baseline compared to 23.3 additional CNWP3M among students in the comparison group.** The gains in the nonword reading rate for both large-print and braille readers in the intervention group were significantly larger than the gains achieved by their peers in the comparison group.

Figure 21: **Average Gain Scores by Group and Type of Reader—English Nonword Reading (CNWP3M)**[54]



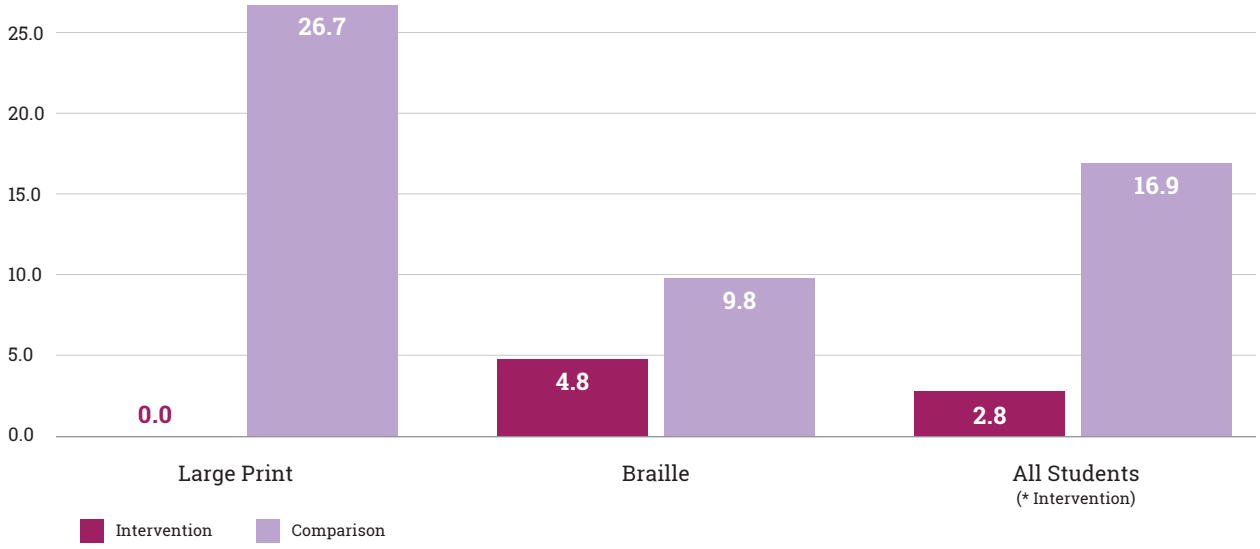
52 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=28, Comparison Group *n*=29; Braille—Intervention Group *n*=42, Comparison Group *n*=38; All Students—Intervention Group *N*=70, Comparison Group *N*=67.

53 Difference in the proportion of zero scores were compared on the level of the entire sample using chi-square test for significance; due to sample size, differences in the proportion of zero scores between intervention type subgroups (large print, braille) were not tested for significance.

54 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=28, Comparison Group *n*=28; Braille—Intervention Group *n*=40, Comparison Group *n*=37; All Students—Intervention Group *N*=68, Comparison Group *N*=65.

The percentage of students receiving zero scores at endline are presented in Figure 22. As with the letter sound identification subtask, the proportion of students receiving zero scores on the nonword reading subtask was significantly lower at endline among students in the intervention group than students in the comparison group. **At endline, 2.8 percent of students in the intervention group received zero scores compared to 16.9 percent in the comparison group.** Additionally, no large-print readers in the intervention group received zero scores at endline, while 26.7 percent of large-print readers in the comparison group received zero scores.

Figure 22: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—English Nonword Reading (%)**[55]



The percentage of students who received zero scores at baseline and endline are presented in Figure 6. While approximately the same percentage of students in the intervention and comparison groups received zero scores at baseline—23.9 and 28.4 percent, respectively—only 2.8 percent of students in the intervention group received zero scores at endline compared to 16.9 percent of students in the comparison groups. This is equal to a 21.1 percentage-point decrease in the intervention group and an 11.5 percentage-point decrease in the comparison group.

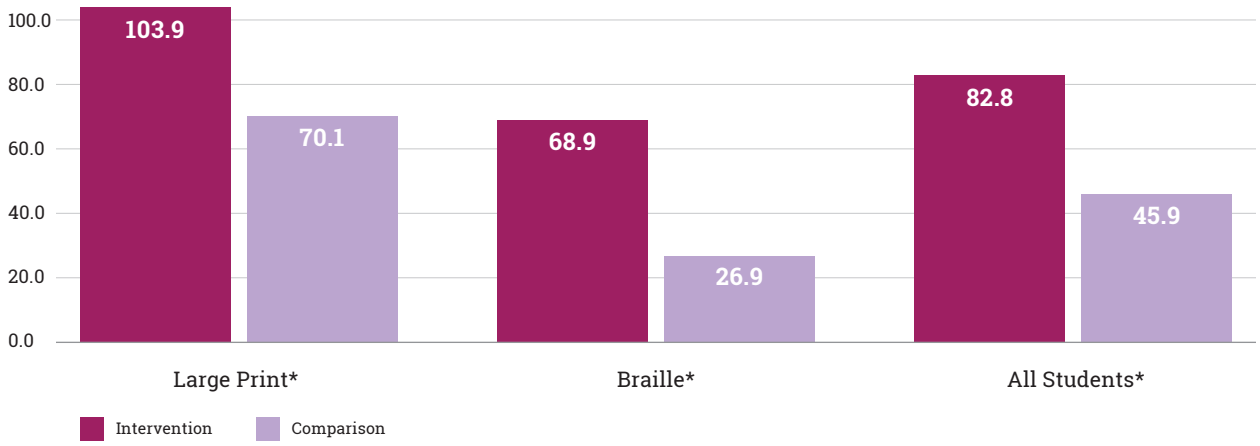
Oral Reading Fluency—English EGRA

Results for the ORF subtask, measured CWP3M, are presented in Figure 23.[56] While fluency scores increased from baseline to endline for students in both intervention and comparison groups, students in the intervention group showed significantly larger gains than students in the comparison group. **Specifically, students in the intervention group increased their fluency by 82.8 CWP3M at endline compared to a gain of about 45.9 CWP3M for students in the comparison group.** Large-print and braille readers in the intervention group saw significantly larger gains in the fluency than their peers in the comparison group.

55 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=28$, Comparison Group $n=28$; Braille—Intervention Group $n=40$, Comparison Group $n=37$; All Students—Intervention Group $N=68$, Comparison Group $N=65$.

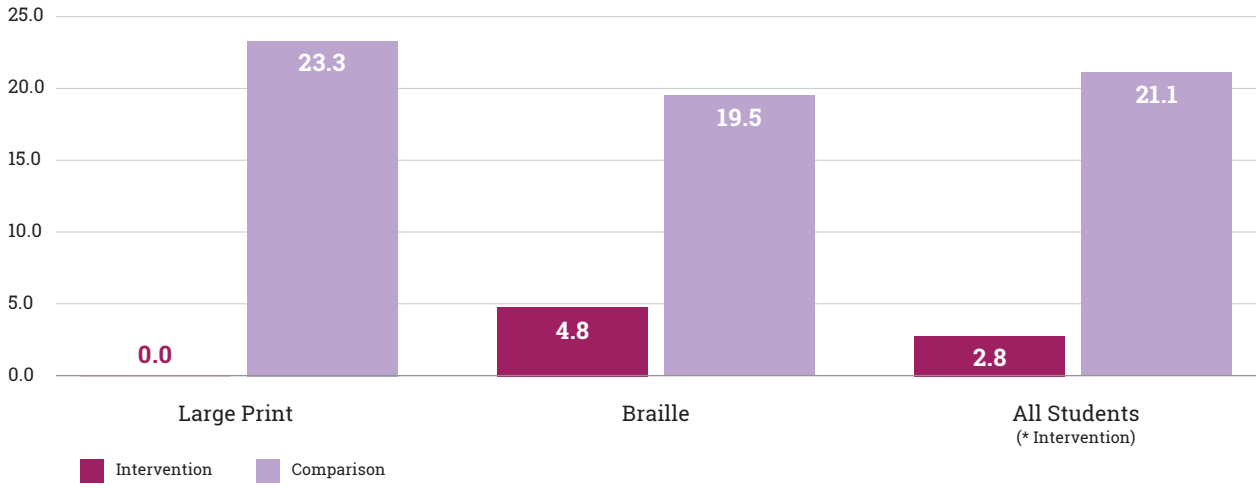
56 The English ORF subtask contained 69 words.

Figure 23: **Average Gain Scores by Group and Type of Reader—English ORF (CWP3M)**[57]



The proportion of students who received zero scores at endline for the ORF subtask is presented in Figure 24. As with the letter sound identification and nonword reading subtasks, the proportion of students receiving zero scores at endline was significantly lower for students in the intervention group than in the comparison group. Specifically, **2.8 percent of students in the intervention group received zero scores, and 21.1 percent of students in the comparison group received zero scores.** No large-print readers in the intervention group received zero scores at endline, but 23.3 percent of large-print readers in the comparison group did receive zero scores. Additionally, a lower proportion of braille readers in the intervention group received zero scores than did their peers in the comparison group—4.8 percent and 19.5 percent, respectively.

Figure 24: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—English ORF (%)**[58]



57 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=27$, Comparison Group $n=29$; Braille—Intervention Group $n=41$, Comparison Group $n=37$; All Students—Intervention Group $N=68$, Comparison Group $N=66$.

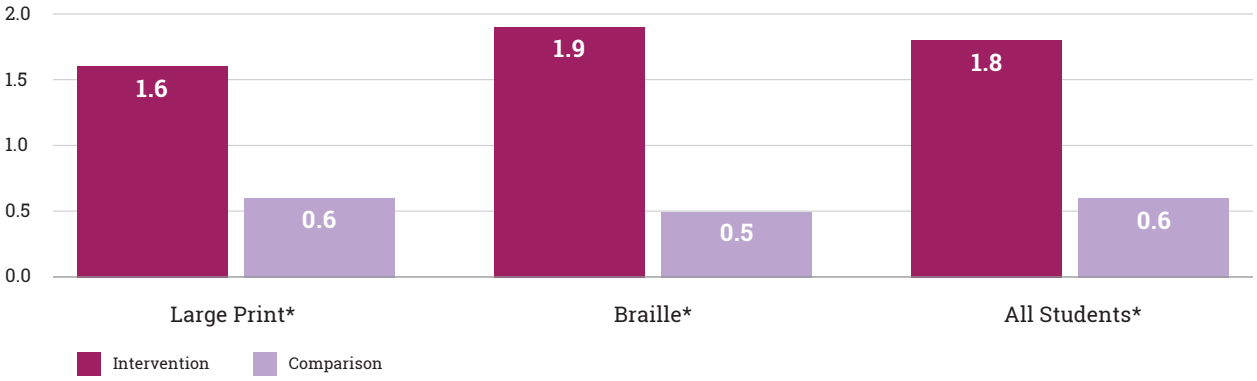
58 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=27$, Comparison Group $n=29$; Braille—Intervention Group $n=41$, Comparison Group $n=37$; All Students—Intervention Group $N=68$, Comparison Group $N=66$.

There was a drop in zero scores from baseline to endline on the ORF subtask for both the intervention and comparison groups (see Figure 6). In the intervention group, the proportion of students who received zero scores decreased from 26.8 percent at baseline to 2.8 percent at endline, equal to a 24.0 percentage-point decrease. In the comparison group, the proportion of students who received zero scores was 34.4 percent at baseline and 21.1 percent at endline, equal to a 13.3 percentage-point decrease.

Reading Comprehension—English EGRA

On average, reading comprehension scores increased from baseline to endline for students in both groups, with students in the intervention group showing significantly larger gains than students in the comparison group. Results are presented in Figure 25 and indicate that **students in the intervention group made an average gain of 1.8 correct questions at endline over baseline compared to a gain of 0.6 correct questions for students in the comparison group.** Large-print and braille readers in the intervention group made significantly larger gains than their peers in the comparison group. On average, large-print readers in the intervention group correctly answered 1.6 additional questions at endline compared with 0.6 additional questions by the comparison group, on average; braille readers in the intervention group correctly answered 1.9 additional questions compared to 0.5 additional questions by the comparison group.

Figure 25: **Average Gain Scores by Group and Type of Reader—English Reading Comprehension (correct out of five)**[59]

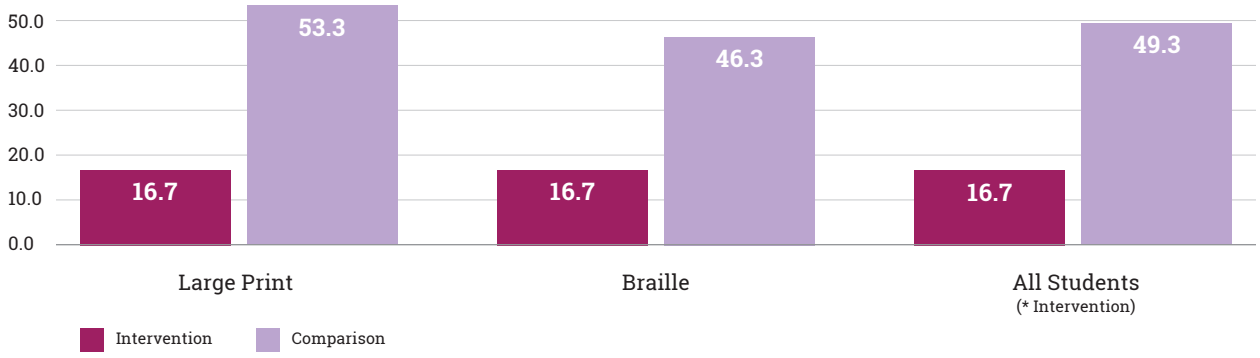


The number of students who did not attempt a single reading comprehension question was lower at endline than at baseline (see Annex Table D.12). While 61.1 percent of students in the intervention group and 67.6 percent of students in the comparison group did not attempt a single reading comprehension question at baseline, those proportions dropped at endline to 11.1 percent of students in the intervention group and 36.6 percent of students in the comparison group. Moreover, less than seven percent of students in the intervention and comparison groups attempted all five reading comprehension questions at baseline. However, at endline, 34.7 percent of intervention group students and 15.5 percent of students in the comparison group attempted all five questions.

The percentage of students receiving zero scores on the reading comprehension subtask at endline are presented in Figure 26. The difference between the intervention group and comparison group was statistically significant: **16.7 percent of students in the intervention group compared to about 49.3 percent for the comparison group were unable to answer a single reading comprehension question correctly.** The proportion of zero scores among both large-print and braille readers in the intervention group was 16.7 percent, compared to 53.3 percent of large-print readers and 46.3 percent of braille readers in the comparison group.

59 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=29$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=38$; All Students—Intervention Group $N=71$, Comparison Group $N=67$.

Figure 26: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—English Reading Comprehension (%)**[60]

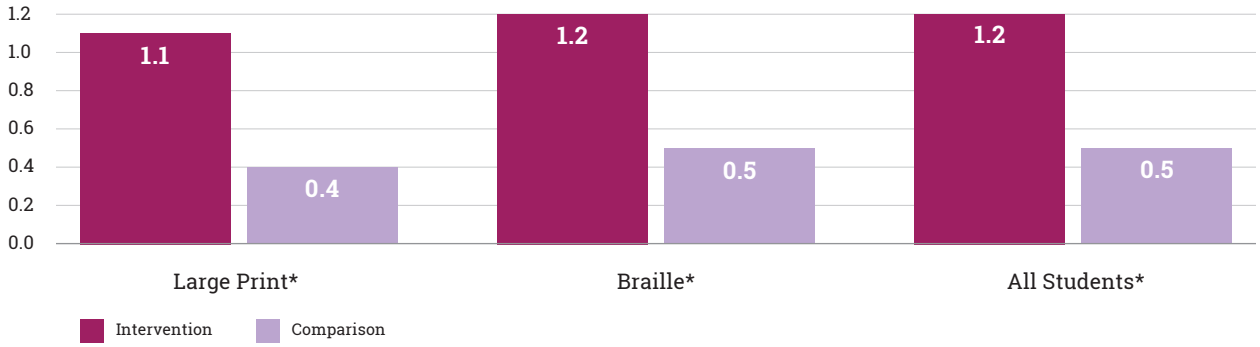


While about the same proportion of students in the intervention and comparison groups received zero scores at baseline—72.2 percent and 73.2 percent, respectively—only 16.7 percent of students in the intervention group and 49.3 percent of students in the comparison groups received zero scores at endline (Figure 6). This represents a 55.5 percentage-point decrease in the intervention group compared with a 23.9 percentage-point decrease in the comparison group.

Listening Comprehension—English EGRA

Average gains on listening comprehension are presented in Figure 27. Results showed that on average, listening comprehension scores increased from baseline to endline for all students. **On average, students in the intervention group correctly answered 1.2 additional questions at endline, and students in the comparison group correctly answered 0.5 additional questions at endline.** This difference was statistically significant. Both large-print and braille readers in the intervention groups made significantly greater gains than students in the comparison group on the listening comprehension subtask. On average, large-print readers in the intervention group answered 1.1 additional questions correctly, and braille readers in the intervention group answered 1.2 additional questions. In the comparison group, large-print readers correctly answered 0.4 additional questions, and braille readers correctly answered 0.5 additional questions, on average.

Figure 27: **Average Gain Scores by Group and Type of Reader—English Listening Comprehension (correct out of four)**[61]

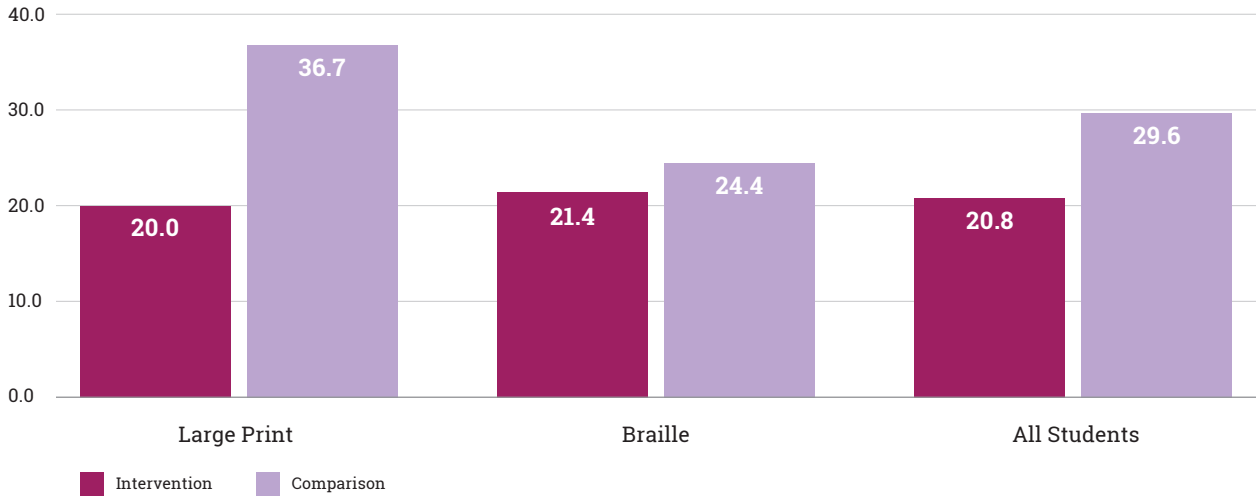


60 An asterisk (*) indicates the percentage of students receiving zero scores in the intervention group was significantly smaller than the percentage of students receiving zero scores in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=29, Comparison Group *n*=29; Braille—Intervention Group *n*=42, Comparison Group *n*=38; All Students—Intervention Group *N*=71, Comparison Group *N*=67.

61 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at p<0.05. *N* sizes: Large Print—Intervention Group *n*=28, Comparison Group *n*=29; Braille—Intervention Group *n* n=42, Comparison Group *n*=37; All Students—Intervention Group *N*=70, Comparison Group *N*=66.

The percentage of students receiving zero scores on the listening comprehension subtask at endline are presented in Figure 28. At endline, the difference in the proportion of students receiving zero scores in the intervention and comparison groups was not statistically significant. Specifically, 20.8 percent of students in the intervention group and 29.6 percent of students in the comparison group received zero scores. The drop in the proportion of students receiving zero scores from baseline to endline was 37.5 percentage points for the intervention group and 22.5 percentage points for the comparison group (see Figure 6).

Figure 28: **Percentage of Students Receiving Zero Scores by Group and Type of Reader at Endline—English Listening Comprehension (%)**[62]



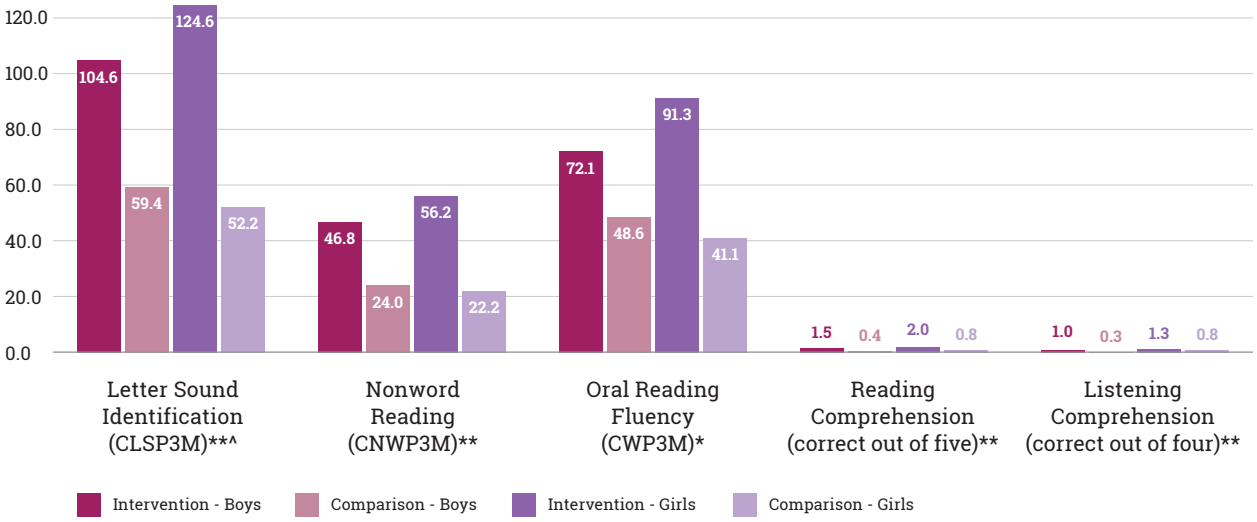
English EGRA Results by Gender

Gain scores by gender were explored to understand if boys and girls benefitted differently from the Reading Beyond Sight project. There were 76 boys and 67 girls who completed both the baseline and endline English EGRA, and results are presented below (see Annex Table D.16 for more detailed results).

Average gain scores for boys and girls on all Filipino subtasks are presented in Figure 29. **In the intervention group, girls made significantly higher gains than boys on only one subtask: letter sound identification.** Although girls and boys in intervention and comparison groups made improvements from baseline to endline, those in the intervention group made greater gains. **Girls in the intervention group made significantly greater gains than girls in the comparison group on all five subtasks. Boys in the intervention group made significantly greater gains than boys in the comparison group on four out of five subtasks;** there was no significant difference in gains on the ORF subtask for boys. Girls and boys in both groups made their greatest gains on the letter sound identification subtask.

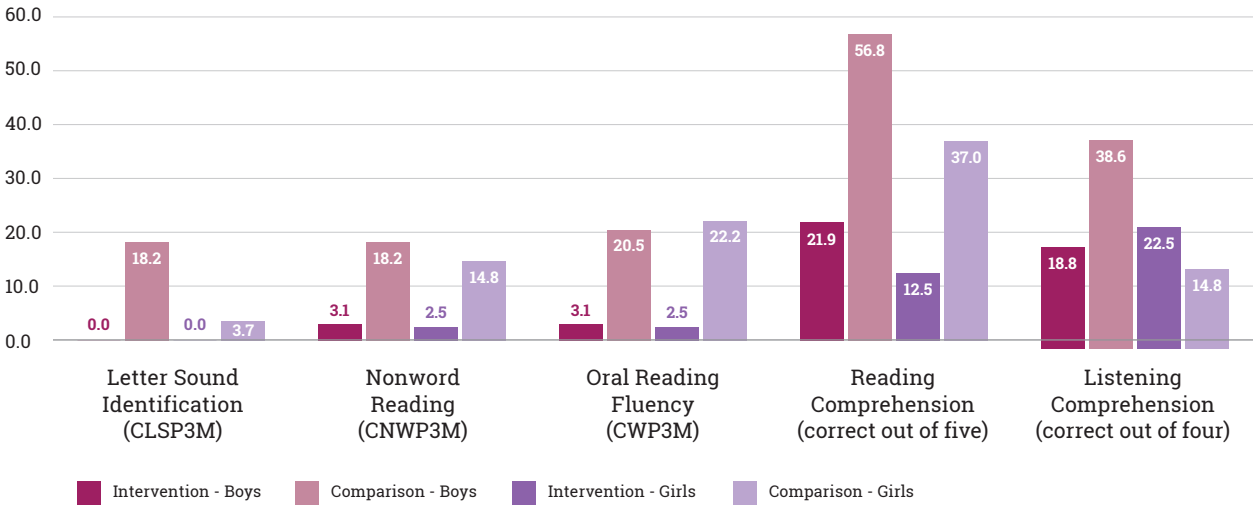
62 An asterisk (*) indicates the average gain score among students in the intervention group was significantly larger than the gain score for students in the comparison group at $p<0.05$. *N* sizes: Large Print—Intervention Group $n=28$, Comparison Group $n=29$; Braille—Intervention Group $n=42$, Comparison Group $n=37$; All Students—Intervention Group $N=70$, Comparison Group $N=66$.

Figure 29: **Average Gain Scores from Baseline to Endline by Subtask, Gender, and Group—English**[63, 64, 65]



The percentage of students receiving zero scores at endline is presented by gender in Figure 30.[66] At endline, the proportion of girls in the intervention group receiving zero scores was smaller than the proportion of girls in the comparison group on four of the five subtasks. Only on the listening comprehension subtask was the proportion of girls in the intervention group receiving zero scores somewhat higher than the comparison group—22.5 percent in the intervention group compared with 14.8 percent in the comparison group. On all five subtasks, the proportion of boys in the intervention group receiving zero scores was smaller than the proportion of boys in the comparison group.

Figure 30: **Percentage of Students Receiving Zero Score at Endline by Subtask, Gender, and Group—English**[67]



63 One asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at p<0.05 for girls. *N* sizes: Girls—Intervention Group *n*=40; Comparison Group *n*=27.

64 Two asterisks (**) indicates the gain scores for the intervention group were significantly higher than the gain score for the comparison group at p<0.05 for both boys and girls. One asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at p<0.05 for girls. *N* sizes: Boys—Intervention Group *n*=32, Comparison Group *n* =44; Girls—Intervention Group *n*=40; Comparison Group *n*=27.

65 A caret (^) indicates that the gain score for girls in the intervention group was significantly higher than the gain score for boys in the intervention group at p<0.05.

66 The differences in the proportion of zero scores for boys and girls between groups were not tested for significance due to small sample sizes.

67 *N* sizes: Boys—Intervention Group *n*=32, Comparison Group *n*=44; Girls—Intervention Group *n*=40, Comparison Group *n*=27.

X. Additional Findings

Additional data were collected through the EGRA instrument, a student questionnaire, and FOI tools. The following section details the results most relevant to student reading performance.

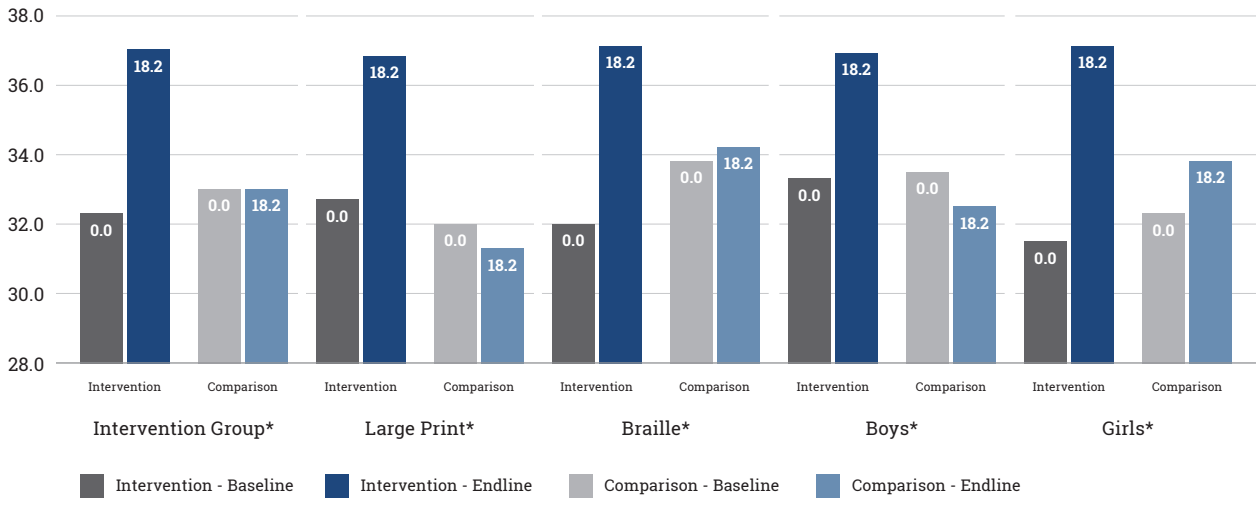
Book Awareness

Book awareness assesses a student's recognition of written materials and their ability to identify physical markers on or in a book. The book awareness subtask is a modified version of the orientation to print subtask, which measures students' knowledge of how words are organized on a page; this is more appropriate for students who have low vision or are blind. During the EGRA, assessors asked students to perform a series of 13 tasks, including: opening the book from right to left; looking at the pages and saying if there are written words on the page; finding the top and bottom of the book; finding the first and last pages of the book; and finding the first and last lines of the book. Students were scored on each task using three possible options: able to complete the task alone (three points), able to complete the task with help (two points), or not able to complete the task (one point). The book awareness composite was calculated as the sum of the scores on the 13 tasks, with a maximum score of 39.0 points.

The average book awareness scores at baseline and endline are presented in Figure 31. **Students in the intervention group had significantly larger gains on the book awareness tasks than their peers in the comparison group; specifically, students' book awareness scores increased by 4.7 points on average, while scores for students in the comparison group remained about the same.** Both large-print and braille readers in the intervention group showed significantly greater gains than their peers in the comparison group from baseline to endline. Further, both boys and girls in the intervention group showed significantly greater gains than their peers in the comparison group. In fact, average scores for boys in the comparison group decreased from baseline to endline. Girls in the comparison group improved their average book awareness score over time.

While students in the intervention group had greater gains in book awareness than students in the comparison group, book awareness did not have a statistically significant relationship to student performance on the EGRA.

Figure 31: **Average Book Awareness Score at Baseline and Endline by Group and Subgroup**[68]



68 An asterisk (*) indicates the gain score for the intervention group was significantly higher than the gain score for the comparison group at $p<0.05$. *N* sizes: Research Group—Intervention Group $n=72$, Comparison Group $n=71$; Large Print—Intervention Group $n=30$, Comparison Group $n=30$; Braille—Intervention Group $n=41$, Comparison Group $n=41$; Girls—Intervention Group $n=40$, Comparison Group $n=24$; Boys—Intervention Group $n=32$, Comparison Group $n=44$.

Student Questionnaire Composites

To better understand the factors that may have influenced changes in students' EGRA scores from baseline to endline, questions from the student questionnaire were compiled into nine composites, or groups, of questions related to each other. Each composite consists of a series of items related to a specific theme that may have affected students' early grade reading skill acquisition. Composites were then assigned a maximum score equal to the total number of items in the composite.[69]

The composites for the Reading Beyond Sight project include

1. Language exposure (Filipino and English)
2. Socioeconomic status
3. Parental or guardian literacy (Filipino and English)
4. Family reading support
5. Reading materials access
6. Teacher reading support
7. Disposition to reading
8. Technology use
9. Engagement in program

Because the EGRAs used in the Reading Beyond Sight project tested reading skills in both Filipino and English, the language exposure and the parental or guardian literacy composites are disaggregated by language. Descriptive statistics for the student questionnaire composites are presented in Table 5 (see Annex C for full composite questions, response options, and frequencies).

Table 5: **Descriptive Statistics for Student Questionnaire Composites**[70]

Composite Category	*N* Items	Intervention			Comparison			All Students		
		n	Mean	SD	*n*	Mean	SD	*n*	Mean	SD
Language exposure (Filipino)	7	71	6.5	1.1	65	5.3	2.3	136	5.9	1.9
Language exposure (English)	7	70	4.4	1.6	64	4.0	2.0	134	4.2	1.8
Socioeconomic status	10	62	7.8	1.3	52	7.2	1.2	114	7.5	1.3
Parental or guardian literacy (Filipino)	5	17	3.1	1.1	24	3.0	1.1	41	3.1	1.1
Parental or guardian literacy (English)	5	17	3.0	1.3	25	2.9	1.2	42	2.9	1.2
Family reading support	3	70	2.0	0.7	61	1.6	0.9	131	1.8	0.8
Reading materials access	3	70	2.8	0.4	63	2.3	0.8	133	2.6	0.7
Teacher reading support	7	69	6.2	0.7	58	5.9	1.2	127	6.1	0.9
Disposition to reading	3	70	2.5	0.6	67	2.0	0.5	137	2.2	0.6
Technology use (intervention group)	3	71	2.8	0.3						
Technology use (comparison group)	2				67	0.6	0.9			
Engagement in program (intervention group)	7	69	6.9	0.2						

69 Non-responses were given a '0'.

70 Because students were not required to answer all questions on the student questionnaire, the number of student respondents varies across composites.

On average, scores for all composites were higher for the intervention group than the comparison group. A large difference was observed on language exposure in Filipino; intervention group students had a mean score of 6.5 out of 7.0, compared to 5.3 for the comparison group. Also, students in the intervention group had a slightly higher mean score on the socioeconomic composite than students in the comparison group (7.8 out of 10.0 compared to 7.2 out of 10.0, respectively).

On the technology use composite, 29.6 percent of students in the comparison group responded that they had used technology to help them learn while 100.0 percent of students in the intervention group reported the same (see Annex Tables C.10 and C.11). Further, **77.5 percent of students in the intervention group said they felt very comfortable using technologies to learn, and only 2.8 percent said they were not comfortable using technologies to learn.**

A regression analysis was conducted to determine what relationships, if any, existed between mean composite scores and EGRA reading gains. None of the composites showed any significant relationship with subtasks on either the Filipino or English EGRA.

Reading Materials Production in Schools

Prior to the Reading Beyond Sight project, reading materials in formats appropriate for students who have low vision or are blind were very limited. In the initial weeks of the program, feedback from staff's biweekly visits indicated that only 10.0 percent of the 30 schools involved in the project had access to any appropriate reading materials provided by DepEd.

As part of the project, teachers were provided with the resources necessary to download and produce accessible reading materials for their students. The RBI team tracked the number of materials produced each month by intervention school teachers through FOI data collection tools (Table 6). During the period of project implementation, teachers downloaded and produced an average of about 22.3 unique book titles per month and produced about 104.1 copies of book titles or reference materials in an accessible format for their students on a weekly basis.

Table 6: **Reading Materials Production by Intervention School Teachers**

Reading Materials Category	Mean	SD	Minimum	Maximum
Unique book titles downloaded and produced for students per month by teachers per school	22.3	13.0	10.1	59.1
Copies of book titles and reference materials produced in accessible formats by teachers per week	104.1	36.9	40.6	168.0


FIL Story #1:
Kaarawan ni Toni. Biglang dumating ang
nyang mga kamag-aral. Nagluto si
unsit at manok. Bumili ng
etes si Tatay. Hinipan ni
na kandila sa cake.
ang pamilya ni Toni at
nag-aral. Tuwang-
anggap na
lan.
SINAG SPED

XI. Scalability

Stakeholders are increasingly interested in assessing the scalability of interventions in addition to their results or impacts. To scale up a project means to expand, replicate, adapt, and sustain a successful project in a new geographic area and to reach more beneficiaries over time.[71] ACR GCD grantees have implemented small-scale pilot projects, and an important consideration after each project is the feasibility of replicating or expanding the technology-based innovation and project models to a different or larger population or area.

To inform this decision, STS conducted a scalability assessment guided by the following research question: *Are this project and technology suitable for scaling?* STS used an indirect approach that relies on qualitative descriptions of project performance around seven parameters of sustainability:

- Credibility
- Observability
- Relevance
- Relative Advantage
- Ease of Transfer and Adoption
- Testability
- Sustainability of Funding

The seven parameters were adapted from the USAID-funded Scalability Assessment Tool developed by Management Systems International.[72] The tool includes seven sections and 28 questions. STS used data from EOP interviews, EGRA results, literature reviews, and project M&E to assess scalability parameters. These results are meant to inform local program staff, stakeholders, and donors about key considerations to consider before scaling the Reading Beyond Sight's project's model and technologies to a larger or different beneficiary population.

Credibility

An intervention or innovation must be credible to be supported and taken to scale through either replication or expansion. This aspect of scalability assesses if various stakeholders—including potential adopters, funders, implementers, and beneficiaries—believe that the model has a strong evidence base that may include existing empirical research or anecdotal information.

Key Considerations:

1. What evidence was used to develop the intervention?
2. What evaluations have been conducted on the intervention?
3. In what social contexts does the intervention work?
4. What individuals and institutions support the intervention?

71 Cooley, L., & Linn, J. F. (2014). *Taking Innovations to Scale: Methods, Applications and Lessons*. Results for Development Institute. Washington, D.C. Retrieved from: https://www.usaid.gov/sites/default/files/documents/1865/v5web_R4D_MSI-BrookingsSynthPaper0914-3.pdf

72 Ibid.

RBI has worked to support the low-vision and blind community in the Philippines for almost 30 years, developing a deep understanding of the realities facing children and adults who have low vision or are blind—especially in the education system. RBI used this understanding to conceptualize and design the three primary components of the Reading Beyond Sight project: accessible reading materials, provision of assistive technologies to schools, and training and ongoing coaching for teachers, parents, and guardians. While RBI could not identify any existing projects that combined these components in one intervention, there is a consensus among experts that increasing access to reading materials contributes to reading gains and that students benefit when their teachers, parents, and guardians are actively engaged in and committed to providing quality reading instruction and regular practice. Additionally, the technologies used in the project are specifically designed to support reading.

The Reading Beyond Sight project represented the first time that RBI has implemented a project that incorporated all three components into the same initiative. In the past, they had focused on referrals for student medical treatments and teachers' training and coaching. RBI had also loaned manual braillers and laptops to university students and teachers, but only on a limited basis. While these interventions provided anecdotal evidence, RBI had not conducted any rigorous evaluations to determine their impact on student reading gains.

Although the Reading Beyond Sight project is a new intervention and has not been tested beyond the intervention schools in the Philippines, the individual components are relevant to a variety of social contexts. In the Philippines, families with children who have low vision or are blind often lack the resources and knowledge to best support their learning. Because a lack of resources and knowledge is not unique to the Philippines, it is reasonable to assume that the parental engagement component would be needed in other developing country contexts. Further, in many countries, neither students who have low vision or are blind nor their teachers have access to assistive technologies that support student needs. Because of this, **the provision of the specific technologies selected by RBI for this project would also be appropriate outside the Philippines.** Finally, **the project also sensitized teachers to the needs of their students who have low vision or are blind and encouraged them to set high expectations for their students regardless of their visual status.** Although this component has the potential to benefit teachers beyond the Philippines, it should be noted that the capacity of teachers in this project was relatively high due the strength of RBI and DepEd's collaboration over decades. The Reading Beyond Sight project was successful in aligning intervention components to the social dynamics and beneficiaries' needs in the Philippines. There is a strong potential for the components to be relevant to more social contexts; however, the exact combination of inputs would need to be modified to ensure that they were effectively addressing the needs of students who have low vision or are blind, their teachers, and their families in new contexts.

GoP stakeholders, school personnel, parents, guardians, and students expressed strong support for the intervention. The project aligns well with the policy directives from DepEd, who have had a policy since 1997 to institutionalize SPED programs in all school divisions to provide basic education to students with special needs, including "the visually impaired."[73] GoP officials acknowledged in EOP interviews that while they have a mandate to support students with disabilities, they lack the resources and capacity to adequately provide SPED centers with teacher trainings and assistive technologies like embossers and CCTVs. GoP officials welcomed the Reading Beyond Sight project to better support their work. **The project also garnered wide-spread support from teachers who did not realize how much their students who have low vision or are blind could progress in a school year because they had never received sufficient training and resources to provide a text-rich environment for those students.** Finally, parents and guardians reported notable changes in their perspectives and engagement levels because of the project. **Most of the parents and guardians interviewed expressed a renewed sense of hope for their child's future,** crediting students' increased motivation and reading improvements.

73 http://www.deped.gov.ph/sites/default/files/order/2000/DO_s2000_11.pdf

Credibility Conclusion

Credibility for the Reading Beyond Sight project is high. The project combined widely acknowledged and well-established components into a comprehensive intervention that effectively addresses the needs of all beneficiaries. In addition, the components have the capacity to be useful in a variety of social contexts. The approach is also strongly supported by key GoP stakeholders. To further increase credibility, the project could research reading outcomes of each component separately—for example, the reading gains associated with technology use versus the gains associated with additional reading materials in accessible formats. This would allow for a better understanding of the individual and combined impact of the project's components.

Observability

For an intervention or innovation to be scaled, it should have observable results that show efficacy or impact. Observability of results is key to providing non-technical audiences with proof that an intervention or innovation achieved its intended outcomes and therefore will have positive impacts on beneficiaries.

Key Considerations:

1. Are the results visual and observable?
2. What is the relationship (if any) between results and the intervention?
3. Is there any emotional appeal associated with the evidence?

The results of the Reading Beyond Sight project are observable and positive: students who attended intervention schools demonstrated significant reading gains on both the Filipino and English EGRAs. Notably, on the ORF subtasks, intervention group students correctly read 97.1 additional Filipino words per three minutes and 82.8 additional English words per three minutes at endline compared to 50.7 additional Filipino words per three minutes and 45.9 additional English words per three minutes in the comparison group. Because the project's research design included a comparison group, it was possible to separate the reading gains of an additional year of schooling from the reading gains attributable to the project. This further supports the observability and the relationship of the results to the intervention. A limitation of the research design is the inability to isolate the gains associated with the separate components of the project—accessible reading materials, technologies, and trainings for teachers, parents, and guardians.

Additionally, before EGRA findings were known, stakeholders and beneficiaries recognized the visibility of the reading improvements for students who participated in the project and noted the emotional impact of these improvements. In EOP interviews, many parents and guardians said that before the project they did not believe that their children could learn to read fluently, but during the project they observed their students' motivation and reading abilities improve significantly. Teachers expressed similar sentiments and reported that their students could complete tasks more independently and had improved their study habits. Teachers also talked about how quickly they could produce appropriate reading materials for their students, allowing them to better support their students' progress. Some teachers even reported that these students who have low vision or are blind were outperforming their sighted peers. Students said that this year was the first time they had so many books available to them and that they were reading at home and school much more than before the Reading Beyond Sight project. Students, teachers, parents, and guardians all strongly credited the project with the positive changes in reading. The large reading gains observed in students who participated in the project—as well as the testimonies of parents, guardians, and teachers—strengthen the emotional appeal of the project.

Observability Conclusion

The observability of the Reading Beyond Sight project is high. Quantitative results show significant reading gains that are clearly linked to the intervention. All who worked on the project—including teachers, parents, guardians, and students—noted improvements in students' reading. They also described other benefits of the project, such as greater motivation, better study habits, and a stronger understanding of the capacities of students who have low vision or are blind. The qualitative and quantitative evidence strongly supports the observability of the project results.

Relevance

An intervention must be relevant to the context in which it is being implemented to be scalable. It should effectively address a problem that is recognizable and considered important by stakeholders.

Key Considerations:

1. What is the level of significance of the problem that the intervention is trying to address?
2. Does the intervention address a priority on the policy agenda for potential adopters?
3. Does the intervention address a need felt by the potential beneficiaries?

RBI began working with DepEd in 1992 to provide training to teachers who worked in the SPED system. As a result of this long-term relationship, RBI has an acute understanding of the challenges confronting students who have low vision or are blind, as well as those faced by their educators and families. According to findings from the *Third National Survey on Blindness in the Philippines*, the most recent national study, the prevalence of blindness declined between 1987 and 2002 due to GoP policies and blindness prevention programs; yet, over two million Filipinos are categorized as low vision or blind.[74] Additional studies reported that 12,620 children aged five to nine and 13,431 children aged ten to 14 had low vision, partial blindness, or total blindness as of 2000.[75] DepEd and RBI are unsure of how many students who have low vision or are blind are unschooled and unsupported by the education system. They continue to conduct community visits to locate and enroll students who do not attend school. Even among those in the education system—and despite the GoP's investment in SPED education and centers—students who have low vision or are blind have not been systematically included in national assessments, thus limiting the evidence about the magnitude of challenges in their learning environment. Stakeholders, school administrators, and teachers widely acknowledge that there are insufficient reading materials for students who have low vision or are blind and that teachers do not have the equipment necessary to create appropriate materials in large print or braille.

The Reading Beyond Sight project aligns closely with DepEd's commitment to inclusive education. DepEd's policy on improving special education includes a focus on early intervention through access to help and care; removing barriers to learning in all schools; raising expectations and achievement including the development of appropriate teaching skills and strategies; and delivering improvement in partnership with parents and guardians and the community.[76] The goal of SPED in the Philippines is to mainstream students with special needs, which requires an investment in curriculum and evaluation; the provision of teaching aids, materials and equipment; and support from parents or guardians.[77] The Reading Beyond Sight project comprehensively addressed these priorities.

74 Cubillan, L.D.P. & Oliver-Santos, E.O. (2006). Third National Survey on Blindness. *Philippine Journal of Ophthalmology*, 30(3), 100-114. Retrieved from http://www.paojournal.com/archives/Vol30%20No3.pdf.

75 National Statistics Office. (2008). Statistics on Filipino Children. *Journal of Philippine Statistics*, 59(4). Retrieved from https://psa.gov.ph/sites/default/files/4thQ2008_0.pdf.

76 Department of Education Order No. 38. Guidelines on the Utilization of Support Funds for the Special Education (SPED) Program. 19 August 2015. Retrieved from http://www.deped.gov.ph/sites/default/files/order/2015/DO_s2015_38.pdf.

77 Ibid.

The policy context supports quality inclusive education, yet representatives from Filipino advocacy groups that support people with disabilities have reported a need for much greater documentation of the challenges that students in mainstreamed and SPED classrooms face ensuring that appropriate resources—both financial and in training—are provided. When asked during EOP interviews, students, teachers, and parents or guardians all expressed frustration with the learning opportunities before the Reading Beyond Sight project. Most parents or guardians interviewed, who had been reached by RBI through community visits or outreach workshops to support parents with students who have low vision or are blind, had very few large-print or braille materials before the project, and they had seen their students falling behind sighted peers in the mainstream classes. Parents and guardians wanted their children to receive a quality education, but they did not know what expectations were realistic or how to provide additional support. They reported a significant difference in the educational experience for their students and themselves due to their participation in the project.

During the EOP interviews, teachers reported that they had been asking DepEd for more braillers, assistive technologies, and reading materials for years; however, it was only through sponsorship by private foundations that schools obtained these items. Teachers showed interviewers examples of materials they had produced in the past using a slate and stylus versus the braille printed with the embossers provided by the project. Several teachers became emotional talking about how difficult braille production had been in the past and how significantly the lack of reading materials had negatively impacted their students' learning over the years.

Relevance Conclusion

The Reading Beyond Sight project addresses a significant and recognized problem in the Philippines. DepEd's policies highlight the importance of providing quality inclusive education to students who have low vision or are blind. However, because of challenges with teacher shortages and capacity, scarcity of teaching and learning materials, lack of assistive technologies and school resources, and inadequate community engagement, the practical implementation of the policy has not been sufficient. Many of the priorities of DepEd's SPED policy are directly addressed by the Reading Beyond Sight project; indeed, students, teachers, and parents and guardians all identified the project as a solution to their needs. The Reading Beyond Sight project is highly relevant for this population in the Philippines.

Relative Advantage

Relative advantage relates to whether the intervention offers an improvement over current or alternative solutions to the problem.

Key Considerations:

1. How adequate are the current solutions to the problem?
2. Is this intervention more effective than the current solutions?
3. Is this intervention more effective than other established innovative models?

The current approaches to inclusive education for students who have low vision or are blind are inadequate. Although DepEd policies outline appropriate priorities, in practice, services are insufficient. Regarding access, there is usually only one SPED center per district, meaning that students may need to travel long distances to attend the center nearest to them. Additionally, SPED programming generally ends after primary school, meaning

that students who have low vision or are blind who have graduated primary school no longer have access to programming that supports their learning needs. Regarding quality, some teachers responsible for providing inclusive education for students who have low vision or are blind reported that they do not have sufficient training or support from DepEd to meet their students' reading needs adequately.

The Reading Beyond Sight project provides a more comprehensive and effective approach to supporting the needs of students who have low vision or are blind, as well as their families and educators. Other interventions have addressed one aspect of the problem—such as lack of reading materials, low parental engagement, insufficient teacher training, or low access to schools—or have provided advocacy for policy and resources. However, there are few models that address the same combination of needs and beneficiaries as the Reading Beyond Sight project. To fill this gap, the Reading Beyond Sight project provided accessible reading materials and assistive technologies to schools and training and ongoing coaching for teachers, parents, and guardians. Through interviews with stakeholders, it was clear that RBI is the only organization in the Philippines providing this level of support and advocacy for students who have low vision and are blind.

Relative Advantage Conclusion

The Reading Beyond Sight project has an advantage over other solutions aimed at addressing the reading challenges of students in the Philippines who have low vision or are blind. The project's comprehensive approach, coupled with RBI's long established support to DepEd and the beneficiary population, effectively fills resource and knowledge gaps given the lack of existing solutions.

Ease of Transfer and Adoption

Ease of transfer and adoption relates to whether the characteristics and components of the intervention lend themselves to being adopted by organizations other than the original implementer. This parameter of scalability looks at how complex or resource-heavy an intervention is, as well as if specific elements of the intervention may be deemed inappropriate or unattractive to other implementers.

Key Considerations: [78]

1. What is the level of technical sophistication of the components and activities of the intervention?
2. What is the level of complexity of the intervention?
3. What level of supervision and monitoring is needed?

The Reading Beyond Sight project was developed by RBI, an organization with a long history of working with the target population. Although a non-technical population easily understands the components of the project, RBI designed their activities by drawing upon significant technical expertise coupled with historical knowledge of the challenges faced by the students, teachers, and families that the project served. RBI used their technical expertise to provide targeted trainings to teachers; engage parents and guardians in effective sensitization activities; provide appropriate technologies for students who have low vision or are blind; offer in-house troubleshooting for the technologies; and, conduct monitoring and coaching visits using experts known and respected by the teachers. By relying on this expertise and knowledge, the RBI team delivered a package of components that addressed the needs of the beneficiaries with a robust and technically appropriate set of input activities. Indeed, project participants praised the synergies produced through the combination of components and inputs. In the absence

78 In the original tool, this section includes 11 questions. This analysis includes the questions deemed most relevant for the intervention model and context.

of this technical expertise, historical knowledge, or the combination of these two components, it is difficult to envision that the project would have had the same level of impact—a sentiment echoed by project staff and beneficiaries. Further, the project built upon a unique policy environment in which the government was highly committed to supporting the student population. As a result, the Reading Beyond Sight project is a complex and effective solution that would require high levels of technical sophistication and contextual knowledge for effective transfer and adoption by a different implementer.

When designing the Reading Beyond Sight project, RBI intentionally included resources for project supervision and implementation, teacher coaching and monitoring, parental and guardian engagement, and results analysis. Project staff spent significant time and resources on monitoring and coaching visits, which allowed the RBI team to both track how teachers were implementing the project and conduct home visits with the beneficiary families. The level of support ultimately provided was not fully anticipated during the conceptualization of the project, but the project staff recognized that this investment would allow them to implement the project components more fully. The project also dispatched staff, when needed, to fix equipment or provide individual follow-up training to those individuals struggling to utilize the technologies. Ultimately, the Reading Beyond Sight project invested high levels of supervision and monitoring to ensure fidelity of implementation and sufficient support for participants. Though it is unclear if this level of resources would be necessary for future iterations of the project, it is clear that the investment made by RBI on supervision and monitoring supported the project's success.

Ease of Transfer and Adoption Conclusion

The Reading Beyond Sight intervention is complex and requires a high level of technical sophistication and deep contextual knowledge to implement. Further, significant resources were invested in supervision and monitoring to ensure fidelity of implementation. As a result, this project would be challenging for other organizations to adopt unless they had high technical capacity and a sufficient budget.

Testability

The testability parameter examines how easy it is for organizations to pilot the intervention on a small scale before full adoption. Testability assesses whether potential adopters would need to commit significant resources or time to test the model if they chose to pilot it in a new context.

Key Consideration:

1. Is the model able to be tested on a limited scale?

The Reading Beyond Sight project was piloted in 15 intervention schools, which is relatively small scale for a pilot. Nevertheless, the project inputs were labor intensive. If a different organization were to pilot a similar model outside of the Philippines, it would need a strong understanding of the challenges facing students who have low vision or are blind in that context; rapport with stakeholders, teachers, parents, and guardians; and, technical experts to serve as mentors. Also, similar investments in resources or time would be required to test the model on activities such as developing materials, procuring technologies, and supervising and monitoring fidelity of implementation. It would be possible for an organization to implement the components of the Reading Beyond Sight project separately. However, without knowledge of the reading gains from individual components of the project, it is not clear which components would provide the highest return on investment or if there is value in implementing the components separately.

Testability Conclusion

The Reading Beyond Sight project model is not easy to test in new contexts or with new organizations. The project would require significant resources even if RBI were to replicate the model in a different part of the Philippines. A new organization would need to commit the same or more resources and time to test in a new context.

Sustainability of Funding

Sustainability of funding refers to how cost effective the intervention is and whether there are funds available to scale the intervention, either through government or other organizations.

Key Considerations:

1. Is the model more cost effective than other solutions?
2. What kind of funding commitment is required to scale the model?
3. Is there any potential for internal revenue from the model (i.e. service fees)?

No comprehensive cost-effectiveness analysis was conducted on Reading Beyond Sight; instead, a cost analysis was performed. A cost analysis is often a component of scalability assessments, as it helps decision makers and stakeholders understand the feasibility of replication, given budgetary constraints. Since ACR GCD grantees implemented new approaches, they often allotted significant financial resources to develop new materials that could be used on a recurring basis. To better understand the funding requirements of the Reading Beyond Sight project, a cost analysis was conducted to present the total cost of the intervention and to understand the investments that would be needed for project replication or scale-up.

USAID guidance on conducting cost analyses on early grade reading projects suggests that the "ingredients method"[79] be used to calculate costs in the following categories:

- Management and associated technical costs
- Development costs
- Implementation costs

Project staff completed a costing template with guidance from World Vision and STS. Costs were outlined based on the activities from the project work plan, and each expenditure was classified based on the three categories above. Development and implementation costs were categorized by activity, while management costs were considered cross-cutting and, therefore, not categorized by activity.

Invoiced costs were used for analysis from the beginning of the project through March 2017. Though costs specific to the close-out of the project are not included in this analysis, these would be categorized as implementation and management costs.[80] The absences of these costs should be considered when comparing the proportion of project budget spent on the three categories.

79 Research Triangle Institute International (2015). *Measurement and Research Support to Education Strategy Goal 1: Early Grade Reading Costing Template and Guidance*. United States Agency for International Development (USAID). Washington, D.C. Accessed via: http://www.youblisher.com/p/1362487-Early-Grade-Reading-Costing-Template-and-Guidance/

80 The costs and proportions in Table 7 do not include close-out costs from Quarter 3 of Fiscal Year 2017. RBI has estimated that they will spend an additional $2,802.41 on management costs and $28,024.11 on implementation and development costs in the quarter.

Table 7: **Cost Analysis**[81, 82]

Activity	Management	Development	Implementation
Activity 1.1 - Collaborate with DepEd in intervention schools to orient school administrators, teachers, and staff to the project	$ -	$ -	$ 3,376
Activity 1.2 - Transcribe DepEd soft copies of reading materials into accessible formats for students who have low vision or are blind and upload to the Learning Resources website	$ -	$ 44,731	$ -
Activity 1.3 - Download and produce accessible reading materials for students who have low vision or are blind	$ -	$ 821	$ -
Activity 1.4 - Conduct quarterly evaluation of the project	$ -	$ -	$ 42,833
Activity 2.1 - Modify the existing EGRA tool	$ -	$ 9,981	$ -
Activity 2.2 - Collect baseline EGRA data	$ -	$ -	$ 6,790
Activity 2.3 - Monitor the students' progress in reading activities through reading proficiency intervention	$ -	$ -	$ 33,887
Activity 2.4 - Monitor the inclusion and performance of students who have low vision or are blind in DepEd's Annual Reading Test	$ -	$ -	$ 525
Activity 2.5 - Collect endline EGRA data	$ -	$ -	$ 12,352
Activity 3.1 - Purchase and deliver equipment and materials (computer, Braille embossers, Braille displays, portable digital audio players, portable digital magnifiers, etc.) to intervention schools	$ -	$ -	$ 124,466
Activity 3.2 - Train teachers on the use of equipment and technology	$ -	$ -	$ 7,107
Activity 3.3 - Conduct monthly monitoring visits to teachers in the project	$ -	$ -	$ 10,695
International Travel	$ -	$ -	$ 3,297
Total	**$ 64,022**	**$ 55,533**	**$ 245,328**
Percentage of Total (%)	**17.5**	**15.2**	**67.2**

81 As of March 31, 2016, the Reading Beyond Sight had spent $364,887.40 compared with the $364,884.50 included in the costing analysis.

82 Due to rounding, the proportions may not equal 100 percent.

The management category includes costs that are not directly related to implementation; these are likely to vary widely based on who is overseeing the implementation of the intervention. **Management costs for Reading Beyond Sight represent 17.5 percent of the costs expended** and include the cost of maintaining the project office in Quezon City; personnel salaries; travel, lodging, and per-diem costs for technical consultants; and other indirect rates and fees.[83]

Development includes the costs related to the development of materials, survey instruments, programs, and other content that would not need to be redeveloped in the scale-up of a project. **The development costs for the Reading Beyond Sight project represent 15.2 percent of the costs expended.** The major expenses within this category were the transcription of reading materials into accessible formats accessible for students who have low vision or are blind as well as the adaptation of the EGRA. These costs are one-off expenditures that would not need to be incurred again if a project were implemented in the same social contexts in the Philippines but likely would be if implemented in another country or language.

The implementation cost category is arguably the most relevant for stakeholders who are considering scaling up a project or intervention. This category includes all the recurrent activities and costs that would need to be expensed should the project be replicated, including materials printing and distribution, training, M&E, events and presentations, workshops, and human resources activities. **For the Reading Beyond Sight project, implementation costs represented 67.2 percent of the total project cost.** Within this cost category, the largest expenses were quarterly program evaluations, reading proficiency interventions, and the purchase of equipment and materials.

Projects sometimes benefit from in-kind services, institutional support, or preexisting relationships with stakeholders or governments that may provide the project with tangible benefits, although it may be difficult or not possible to monetize the costs. Examples of this include local volunteers, strong capacity or support from a large non-governmental organization, or relationships with local governments that could ease logistics and procedures. The Reading Beyond Sight project employed well-known technical experts in education for students who have low vision or are blind. These experts did not need to be trained and received only small remuneration for their services, which may be an undervaluation of their services. Also, the project recycled many resources for teachers and parents that had been produced for past projects.

Sustainability of Funding Conclusion

Implementation costs for the Reading Beyond Sight project represented a larger proportion of the overall cost of the project than management or development costs. This is an important consideration given that implementation costs would most likely need to be re-incurred in the case of a scale-up of the project. Once the project has stabilized, additional analysis should be conducted to assess the cost effectiveness of the model.

83 Management costs are inclusive of a 17% flat fee charged for Negotiated Indirect Cost Recovery Agreement (NICRA), which captures indirect costs including regional management and technical support, the local RBI country representative, Overseas Operations management (RBI headquarters), Program Quality and Support (RBI headquarters), and shipping and procurement costs. This also captures miscellaneous headquarters-based services that were provided to the project including finance, internal auditing, human resources, executive management, board, and global knowledge and information management. This analysis assumes that no NICRA expenses were also billed as independent line items, although it should be recognized that some double-counting may have occurred.

XII. Conclusions

RBI built upon its deep understanding of the realities facing students in the Philippines who have low vision or are blind to develop a strong, effective, and impactful project that benefitted students, parents, guardians, and teachers. Through the transcription of reading materials into formats accessible to students who have low vision or are blind, the provision of assistive technologies, and the training of teachers and families, the Reading Beyond Sight project significantly increased students' reading skills, teacher capacity, and quality of parental support.

The intervention was well aligned with GoP and DepEd policies and priorities for SPED in the Philippines. By effectively identifying and addressing many of the most pressing needs of the beneficiary population, the Reading Beyond Sight project filled gaps in government-provided services to provide a stronger and more inclusive education program to students who have low vision or are blind. Based on the EGRA results and the scalability assessment, there is a strong potential for the Reading Beyond Sight project to be replicated. The following are lessons that should be considered for any future interventions incorporating components of the Reading Beyond Sight project.

Lessons Learned

The combination of components of the Reading Beyond Sight project led to observable, impactful, and significant reading gains for students who have low vision or are blind.

The gains for students in the intervention group were significantly higher on all subtasks on both the Filipino and English EGRAs. In many cases, the gains of intervention students were double those of comparison group students. Notably, students in the intervention group read an average of 97.1 additional CWP3M on the Filipino ORF subtask compared with 50.7 additional CWP3M in the comparison group. On the English ORF subtask, intervention group students read an average of 82.8 additional CWP3M compared with 45.9 additional CWP3M in the comparison group. Trends were similar for large-print and braille readers in the intervention, who had significantly greater gains on nearly all subtasks than their peers in the comparison group. There did not appear to be a difference in how the project impacted the reading gains of boys versus girls in the intervention group.

A project and research design that allows for separating components of the Reading Beyond Sight project could further strengthen its scalability.

Due to the fact that the project was implemented as a complete package of components, it was not possible to separate the reading gains associated with specific components of the project. This is particularly important when considering the costs of each component of the project. The Reading Beyond Sight project spent a relatively small proportion of its budget on management and development activities (17.5 and 15.2 percent, respectively), meaning that the largest proportion of costs were spent on implementation. These would need to be incurred again if the project were to be replicated or scaled. It is clear from findings that the full Reading Beyond Sight project had a significant impact on students' reading development. However, without results specific to the three components of the project, it is not possible to understand if certain parts of the project have a higher return on investment. Given the high implementation costs of the project, this may prove to be relevant information for potential scalers. Further research into reading gains per component, as well as a cost-effectiveness analysis, would provide the additional details needed to create the most effective model of the project.

Strong relationships with stakeholders and beneficiary populations, as well as an acute understanding of the challenges facing students, are critical when developing projects that serve students who have low vision or are blind.

RBI had over 30 years of experience working the beneficiary communities and with DepEd when it designed the Reading Beyond Sight project. That experience allowed RBI to design components that better addressed the gaps in GoP services to meet the needs of students who have low vision or are blind as well as their teachers and families. Through interviews with these populations, it was clear that the participants felt that the project components had effectively addressed their needs, and they respected and valued the coaching and training provided by the project staff. Further, because RBI worked closely with DepEd officials throughout the process, they could engage GoP stakeholders and leverage their buy-in to minimize implementation challenges. GoP officials acknowledged their lack of resources and capacity to serve SPED Center classrooms, and they welcomed the Reading Beyond Sight project to better support their work.

Off-the-shelf technologies provide quality solutions for students who have low vision or are blind and for their teachers.

The technologies—such as embossers, computers, DAISY players, and CCTVs—that better serve these students and their teachers have been tested and widely-used. Teachers who work with students who have low vision or are blind frequently cite a lack of appropriate reading materials and a lack of ability to produce appropriate reading materials as some of their biggest challenges. Providing low-tech, off-the-shelf technologies like these may provide the best value for these teachers over time to ensure the reading materials are grade appropriate and suitable for the students. Only 15.2 percent of the Reading Beyond Sight project budget was spent on development, and most of those resources were dedicated to the production of reading materials. By focusing funds on implementation rather than in developing new technologies, the project may have better served the project beneficiaries.

Parental and guardian engagement is a crucial, if sometimes overlooked, component of student reading projects. It has the potential to impact student reading gains and fundamentally change parents' or guardians' perceptions of their role in their children's lives.

During interviews, parents and guardians frequently cited the project's impact on their perceptions of what their children could achieve in their life beyond their reading skills. In addition, many parents had received little, if any, training on the needs of their children in school or how to best support their children's reading development. Since the Reading Beyond Sight project incorporated parent and guardian sensitivity trainings and home visits, families could better understand their child's capacities—and, in many cases, parents or guardians began learning braille to be able to support their child better. More important is the understanding parents and guardians developed that they can have an active role in their students' education—that the education of students does not stop at the end of the school day and that they can be catalysts for their child's success.

Annexes

Annex A: **Baseline and Endline EGRA Instrument**

Enumerator Name	
Date and Time	
Date	
Time	
School Location	
Area	
Region	
District	
School	
School ID	
Student Name	
Student 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? ☐

IRR

Is this administration to measure IRR?	☐ Yes	☐ No

Student Information

1. What is the student's gender?

☐ Male ☐ Female

2. How old are you?

3. 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 Low Vision Device
- ☐ Low Vision: Large Print reader (Font size 32) with Low Vision Device
- ☐ Low Vision: Large Print reader (Font size 32) with no Low Vision Device
- ☐ 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

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

☐ Braille Book ☐ Large Print Book

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

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

2. Nabubuklat ang aklat mula kanan pakaliwa. (Sabihin sa bata na buklatin ang aklat sa isang pahina.)

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

3. 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

4. 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

5. 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

6. 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

7. 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

8. 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

9. 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

10. 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

11. 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

12. 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

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

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 Non-Word 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 beterinaryo])

☐ 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
I	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	I	F	i	s	E	a
e	p	H	E	I	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 Non-Word 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.)

Annex B: **Student Questionnaire**

Enumerator Name	

Date and Time

Date	
Time	

School Location

Area	
Region	
District	
School	
School ID	
Student Name	
Student ID	

Student Information

1. What is the student's gender?

☐ Male ☐ Female

2. What is your full name?

2. How old are you?

3. What is your grade level?

Is the student blind or low vision?

☐ Blind ☐ Low vision

1. *Sa paaralan, kinakausap ka ba ng guro mo sa Filipino?*
   At school does your teacher talk to you in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

2. *Sa paaralan, kinakausap ka ba ng mga kaibigan mo sa Filipino?*
   At school do your friends speak to you in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

3. *Sa paaralan, kinakausap mo ba ang mga kaibigan mo sa Filipino?*
   At school do you speak to your friends in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

4. *Sa paaralan, mayroon bang mga babasahin sa Filipino?*
   At school are there reading materials in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

5. *Kung may ibang mga bata sa bahay, kinakausap mo ba sila sa Filipino?*
   If there are other children at home, do you speak to them in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

☐ Walang ibang kasamang bata sa bahay

6. *Sa bahay, kinakausap mo ba ang mga nakatatanda sa Filipino?*
   At home do you speak to the adults in your home in Filipino?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

7. *Sa bahay o sa paaralan may mga babasahin ba sa Filipino Braille o large print?*
   At home or at school are there reading materials in Filipino in either low vision or braille?

☐ Oo, marami ☐ Oo, kaunti ☐ Wala ☐ Hindi alam, walang sagot

8. *Sa paaralan, kinakausap ka ba ng iyong guro sa English?*
   At school does your teacher talk to you in English?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

9. *Sa paaralan, kinakausap ka ba ng mga kaibigan mo sa English?*
   At school do your friends speak to you in English?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

10. *Sa paaralan, kinakausap mo ba ang iyong mga kaibigan sa English?*
At school do you speak to your friends in English?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

11. *Sa paaralan, may mga babasahin ba sa English?*
At school are there reading materials in English?

☐ Oo, marami ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

12. *Sa bahay, kinakausap mo ba ang ibang mga bata sa English?*
At home do you speak to other children in English?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

☐ Walang ibang kasamang bata sa bahay

13. *Sa bahay, kinakausap mo ba ang mga nakatatanda sa English?*
At home do you speak to the adults in your home in English?

☐ Oo ☐ Minsan ☐ Hindi ☐ Hindi alam, walang sagot

14. *Sa bahay, may mga babasahin ba sa English Braille o large print?*
At home or at school are there reading materials in English braille or English large print?

☐ Oo, marami ☐ Oo, kaunti ☐ Wala ☐ Hindi alam, walang sagot

15. *May radio ba kayo sa bahay?*
At your house, do you have a radio?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

16. *May telepono/cell phone ba kayo?*
At your house, do you have a telephone/mobile phone?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

17. *May kuryente ba kayo?*
At your house, do you have electricity?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

18. *May telebisyon ba kayo?*
At your house, do you have a television?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

19. *May palikuran (kubeta, toilet, cr) ba kayo sa loob ng inyong bahay?*
Do you have a toilet inside your house?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

20. *May bisikleta ba kayo?*
At your house, do you have a bicycle?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

21. *May motorsiklo ba kayo?*
At your house, do you have a motorcycle?

☐ Oo, marami ☐ Wala ☐ Hindi alam, walang sagot

22. *Mayroon ba kayong kahit alin dito: tricycle, jeep, kotse, trak, 4x4, traktora, o bangkang de motor?*
At your house, do you have a car, truck, 4x4, tractor, or engine boat?

☐ Oo ☐ Wala ☐ Hindi alam, walang sagot

23. *Gaano katagal kang naglalakad papunta sa tindahan mula sa inyong bahay?*
How long does it take - on foot - to travel to a shopping area (or center) from your home?

☐ Kulang sa 20 minuto ☐ Mahigit sa 20 minuto ☐ Isang oras o higit pa ☐ Hindi alam, walang sagot

24. *Kagabi, gaano katagal bago mo natapos ang gawaing bahay (sa bahay o paaralan)?*
Last night, how much time did you spend on household chores (at home or school)?

☐ Sandali ☐ Matagal ☐ Wala ☐ Hindi alam, walang sagot

25. *Nakababasa ba ang nanay/tita/lola mo ng Filipino?*
Can your mother/aunt/grandmother read in Filipino? ((for any female family member who they live with))

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot ☐ Walang ibang kasamang babae sa bahay

26. *Nakababasa ba ang nanay mo ng Braille sa Filipino?*
Can your mother/aunt/grandmother read Filipino braille? ((only for blind children))

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

27. *Nakababasa ba ang tatay/lolo/tito/kuya mo ng Filipino?*
Can your father/uncle/grandmother read in Filipino? ((for any male family member who they live with))

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot ☐ Walang ibang kasamang babae sa bahay

28. *Nakababasa ba ang tatay/lolo/tito/kuya mo ng Braille sa Filipino?*
Can your father/uncle/grandfather read Filipino braille?

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

29. *Nakababasa ba ang nanay/tita/lola mo ng English?*
Can your mother/aunt/grandmother read in English?

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

30. *Nakababasa ba ang nanay/tita/lola mo ng English Braille?*
Can your mother/aunt/grandmother read English braille?

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

31. *Nakababasa ba ang tatay/lolo/ tito mo ng English?*
Can your father/uncle/grandfather read in English?

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

32. *Nakababasa ba ang tatay/lolo/tito mo ng English Braille?*
Can your father/uncle/grandfather read English braille?

☐ Oo ☐ Hindi ☐ Hindi alam, walang sagot

33. *Ano ang pinakamataas na antas sa pag-aaral ang natapos ng mga magulang mo?*
(markahan ang pinakamataas na natapos ng alin man sa magulang)
What is the highest level of education your parents have achieved? (mark the highest of either parent)

☐ Elementary ☐ High School ☐ Post-Secondary ☐ Diploma or above

☐ Kolehiyo ☐ Master's ☐ Hindi alam, walang sagot

34. *May nagbabasa ba sa iyo ng kuwento sa bahay?*
Does someone from home read stories to you?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

35. *Sa bahay, may sumusubaybay ba sa iyong mga gawain sa paaralan?*
Does someone from home look at your school work?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

36. *Noong isang linggo pagkatapos ng iyong klase, ilang araw kang nagbasa nang may kasama?*
Last week, how many days did you read with someone outside of classtime?

☐ 1-3 araw ☐ 4-6 araw ☐ 7 araw

☐ Hindi ako nakabasa ng may kasama sa bahay nakaraang linggo ☐ Hindi alam, walang sagot

37. *May mga gamit ka ba sa pag-aaral sa paaralan o sa bahay na nakatutulong sa iyo sa pag-aaral ng Braille o large print?*
Do you have learning materials - at school or at home - that help you learn to read in braille or large print?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

38. *May mga babasahin ka ba sa paaralan o sa bahay na naka-braille o large print?*
Do you have reading materials - at school or at home - in braille or large print?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

39. *May mga babasahin ka ba sa paaralan o sa bahay na naka-braille o large print na nakatutulong sa pag-aaral ng Math?*
Do you have learning materials - at school or at home - that help you learn Math (in braille or large print)?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

40. *Gaano kadalas sa bawat linggo ka tinuturuang magbasa ng iyong guro?*
How often does your teacher teach you to read each week?

☐ Minsan ☐ Araw-araw ☐ Hindi kailanman ☐ Hindi alam, walang sagot

41. *Gaano kadalas sa bawat linggo ka tinuturuang magsulat ng iyong guro?*
How often does your teacher teach you to write each week?

☐ Minsan ☐ Araw-araw ☐ Hindi kailanman ☐ Hindi alam, walang sagot

42. *Ano ang mga kagamitan na ginagamit ng iyong guro upang maturuan kang magsulat?*
What instruments does your teacher use to teach you to write?

☐ Slate and Stylus ☐ Technology ☐ Iba pa ☐ Hindi alam, walang sagot

43. *Sa paaralan, gaano kadalas kang nagkakaroon ng pagkakataon na makapagbasa nang tahimik?*
At school, how often do you get time to read silently by yourself?

☐ Minsan ☐ Araw-araw ☐ Hindi kailanman ☐ Hindi alam, walang sagot

44. *Sa paaralan, tinatanong ka ba ng iyong guro tungkol sa iyong binabasa?*
At school, does your teacher ask you questions about what you are reading?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

45. *Gaano kadalas kang tinutulungan ng iyong guro kapag ikaw ay nahihirapan sa pagbabasa?*
How often does your teacher help you when you are struggling with reading?

☐ Minsan ☐ Araw-araw ☐ Hindi ko kailangan ang tulong sa pagbasa ☐ Hindi kailanman

☐ Hindi alam, walang sagot

46. *Tinutulungan ka ba ng iyong guro upang ikaw ay makabasa nang mabuti?*
Does your teacher work with you to help you become a better reader?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

47. *Gustong-gusto, gusto, ayaw, ayaw na ayaw mo ba ang pagbabasa?*
Do you love, like, dislike or hate reading?

☐ Ayaw ang pagbabasa ☐ Gusto ang pagbabasa ☐ Gustong-gusto ang pagbabasa Ayaw na ayaw ang pagbabasa

☐ Hindi alam, walang sagot

48. *Ano ang nararamdaman mo nang ikaw ay natututo nang magbasa sa paaralan?*
How do you feel when you are learning to read at school?

☐ Nag-aalala ☐ Masaya / may tiwala sa sarili ☐ Hindi ko gustong matutong magbasa ☐ Hindi alam, walang sagot

49. *Mahalaga ang pagbabasa sa aking kinabukasan.*
Reading is important to my future.

☐ Sumasang-ayon ☐ Matinding sumasang-ayon ☐ Hindi sumasang-ayon ☐ Hindi alam, walang sagot

50. *Nag-nursery ka ba o nag-kinder bago nag-grade 1?*
Did you go to nursey or pre-school before Class 1?

☐ Oo ☐ Hindi / wala ☐ Hindi alam, walang sagot

51. *Anong grade ka noong isang taon?*
What class were you in last year?

☐ Kinder / Level 1 ☐ Grade 1 ☐ Grade 2 ☐ Grade 3

☐ Hindi nag-aral ☐ Hindi alam, walang sagot

52. *Ilang beses kang hindi pumasok sa paaralan noong isang buwan?*
How many times were you absent from school in the last month?

☐ 1-3 araw ☐ 3-5 araw ☐ Mahigit 5 araw ☐ Walang absent

☐ Hindi alam, walang sagot

53. *Ilang araw ka pumasok sa reading class mo noong isang linggo?*
How many days did you attend reading class last week?

☐ Kulang 2 araw ☐ 3-4 araw ☐ 5 araw ☐ Wala

☐ Walang reading class noong isang linggo ☐ Hindi alam, walang sagot

54. *Anong teknolohiya ang ginamit mo upang makatulong sa iyong pag-aaral noong isang taon?*
What technology have you used to help you learn before this year?

☐ Mobile phone / cell phone ☐ Computer ☐ Tablet ☐ Iba pa

☐ Hindi alam, walang sagot

55. *Alin sa mga sumusunod na teknolohiya sa pag-aaral ang nagamit mo na ngayong taong ito?*
Which of the following learning technologies did you use this school year? ((choose all that apply))

- ☐ Zoomtext
- ☐ CCTV
- ☐ DAISY Player
- ☐ Optical devices: high-powered eyeglasses and/or magnifier
- ☐ Non-optical supports: bookstand, reading guide, braille mat
- ☐ Braille display
- ☐ Wala
- ☐ Iba pa
- ☐ Hindi alam, walang sagot

56. *Gaano kakumportable/kaginhawa ang nararamdaman mo habang ginagamit ang (teknolohiya)? (Piliin ang lahat ng angkop)*
How comfortable do you feel using the technologies? ((choose all that apply))

- ☐ Medyo kumportable / medyo maginhawa
- ☐ Napaka kumportable / napaka ginhawa
- ☐ Hindi kumportable / hindi maginhawa
- ☐ Hindi alam, walang sagot

57. *Ginamit mo ba ang (teknolohiya) upang makatulong sa iyong pagbabasa?*
Did you use the technologies to help you read?

- ☐ Oo
- ☐ Hindi
- ☐ Hindi alam, walang sagot

58. *Gamit ang (teknolohiya) ay nakaganyak/nakadagdag sa pagnanais ko na makabasa.*
Using the technologies increased my motivation to read.

- ☐ Sumasang-ayon
- ☐ Matinding sumasang-ayon
- ☐ Hindi sumasang-ayon
- ☐ Walang pasya

59. *Gusto mong ituloy ang paggamit ng (teknolohiya) upang matulungan kang matutong nang higit sa pagbasa.*
You want to continue to use the technologies to help you learn to read better.

- ☐ Sumasang-ayon
- ☐ Matinding sumasang-ayon
- ☐ Hindi sumasang-ayon
- ☐ Walang pasya

60. *Ang mga binasa mo noong nakaraan at taong ito sa tulong ng (teknolohiya) ay naging:*
The things you've read last year and this year with the help of the technologies were:

- ☐ Madali
- ☐ Minsan mahirap
- ☐ Laging mahirap
- ☐ Hindi alam, walang sagot

61. *Nagustuhan mo ang mga (teknolohiya).*
You like the technologies.

- ☐ Sumasang-ayon
- ☐ Matinding sumasang-ayon
- ☐ Hindi sumasang-ayon
- ☐ Walang pasya

62. *Gusto mo na ang pagbabasa sa paaralan.*
You like the reading sessions at school.

☐ Sumasang-ayon ☐ Matinding sumasang-ayon ☐ Hindi sumasang-ayon ☐ Walang pasya

63. *Binago ba ng mga klase mo sa pagbabasa sa paaralan ang saloobin mo sa pagbasa?*
Did the reading sessions at school change your attitude toward reading?

☐ Oo, negatibo ☐ Oo, positibo ☐ Hindi binago ang saloobin ko tungkol sa pagbabasa ☐ Hindi alam, walang sagot

64. *Ang paggamit ng (teknolohiya) ay nakadagdag sa kabuuan ng oras ko sa pagbabasa.*
Using the technologies increased your reading time overall.

☐ Sumasang-ayon ☐ Matinding sumasang-ayon ☐ Hindi sumasang-ayon ☐ Walang pasya

65. *Noong isang linggo, gaano kadalas mong ginusto na gamitin ang (teknolohiya) ngunit hindi mo nagamit?*
Last week, how often did you want to use one of the technologies but couldn't access it?

☐ Isang beses / minsan ☐ Dalawang beses ☐ Tatlong beses ☐ Araw-araw

☐ Hindi kailanman ☐ Hindi sinubukang gumamit ☐ Hindi alam, walang sagot

66. *Kung ihahambing sa iba, gaano kadalas mong nagagamit ang (teknolohiya)?*
Compared with other students or friends, how often do you use the technologies?

☐ Katulad / kapareho ng iba ☐ Higit pa sa iba ☐ Mas mababa / kaunti sa iba ☐ Hindi alam, walang sagot

Annex C: **Student Questionnaire Results and Composites**

Table C.1: **Language Exposure Composite—Filipino**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
At school, does your teacher talk to you in Filipino?	No	2	2.8	8	11.3
	Yes	67	94.4	55	77.5
	Sometimes	2	2.8	4	5.6
	Don't know / No response	0	0.0	4	5.6
At school, do your friends speak to you in Filipino?	No	3	4.2	17	23.9
	Yes	65	91.5	51	71.8
	Sometimes	3	4.2	1	1.4
	Don't know / No response	0	0.0	2	2.8
At school, do you speak to your friends in Filipino?	No	4	5.6	21	29.6
	Yes	64	90.1	50	70.4
	Sometimes	3	4.2	0	0.0
	Don't know / No response	0	0.0	0	0.0
At school, are there reading materials in Filipino?	None	0	0.0	4	5.6
	Yes, a lot	66	93.0	59	83.1
	Some	5	7.0	8	11.3
	Don't know / No response	0	0.0	0	0.0
If there are other children at home, do you speak to them in Filipino?	No	8	11.3	19	26.8
	Yes	59	83.1	47	66.2
	Sometimes	4	5.6	1	1.4
	Doesn't have other children at home	0	0.0	4	5.6
	Don't know / No response	0	0.0	0	0.0
At home, do you speak to the adults in your home in Filipino?	No	8	11.3	18	25.4
	Yes	60	84.5	48	67.6
	Sometimes	3	4.2	4	5.6
	Don't know / No response	0	0.0	1	1.4
At home or at school, are there reading materials in Filipino in either large print or braille?	No	0	0.0	11	15.5
	Yes, a lot	65	91.5	47	66.2
	Some	6	8.5	12	16.9
	Don't know / No response	0	0.0	1	1.4

Table C.2: **Language Exposure Composite—English**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
At school, does your teacher talk to you in English?	No	6	8.5	9	12.7
	Yes	49	69.0	48	67.6
	Sometimes	16	22.5	14	19.7
	Don't know / No response	0	0.0	0	0.0
At school, do your friends speak to you in English?	No	26	36.6	33	46.5
	Yes	23	32.4	29	40.8
	Sometimes	22	31.0	8	11.3
	Don't know / No response	0	0.0	1	1.4
At school, do you speak to your friends in English?	No	25	35.2	32	45.1
	Yes	25	35.2	24	33.8
	Sometimes	21	29.6	14	19.7
	Don't know / No response	0	0.0	1	1.4
At school, are there reading materials in English?	None	2	2.8	4	5.6
	Yes, a lot	68	95.8	56	78.9
	Some	1	1.4	10	14.1
	Don't know / No response	0	0.0	1	1.4
At home, do you speak to other children in English?	No	34	47.9	34	47.9
	Yes	16	22.5	19	26.8
	Sometimes	20	28.2	12	16.9
	Doesn't have other children at home	1	1.4	3	4.2
	Don't know / No response	0	0.0	3	4.2
At home, do you speak to the adults in your home in English?	No	38	53.5	38	53.5
	Yes	18	25.4	24	33.8
	Sometimes	15	21.1	8	11.3
	Don't know / No response	0	0.0	1	1.4
At home or at school, are there reading materials in English braille or English large print?	No	2	2.8	17	23.9
	Yes, a lot	53	74.6	36	50.7
	Some	16	22.5	18	25.4
	Don't know / No response	0	0.0	0	0.0

Table C.3: **Socioeconomic Status Composite**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
At your house, do you have a radio?	No	19	26.8	17	23.9
	Yes	52	73.2	48	67.6
	Don't know / No response	0	0.0	6	8.5
At your house, do you have a telephone/mobile phone?	No	0	0.0	10	14.1
	Yes	71	100.0	58	81.7
	Don't know / No response	0	0.0	3	4.2
At your house, do you have electricity?	No	1	1.4	1	1.4
	Yes	70	98.6	68	95.8
	Don't know / No response	0	0.0	2	2.8
At your house, do you have a television?	No	5	7.0	7	9.9
	Yes	66	93.0	64	90.1
Do you have a toilet inside your house?	No	3	4.2	5	7.0
	Yes	68	95.8	62	87.3
	Don't know / No response	0	0.0	4	5.6
At your house, do you have a bicycle?	No	38	53.5	48	67.6
	Yes	33	46.5	23	32.4
At your house, do you have a motorcycle?	No	44	62.0	40	56.3
	Yes, a lot	27	38.0	30	42.3
	Don't know / No response	0	0.0	1	1.4
At your house, do you have a car, truck, 4x4, tractor, or engine boat?	No	35	49.3	57	80.3
	Yes, a lot	35	49.3	13	18.3
	Don't know / No response	1	1.4	1	1.4
How long does it take—on foot—to travel to a shopping area (or center) from your home?	Less than 20 minutes	56	78.9	53	74.6
	More than 20 minutes but less than an hour	7	9.9	5	7.0
	One hour or more	1	1.4	2	2.8
	Don't know / No response	7	9.9	11	15.5
Last night, how much time did you spend on household chores (at home or school)?	None	10	14.1	12	16.9
	Some	53	74.6	31	43.7
	A lot	7	9.9	24	33.8
	Don't know / No response	1	1.4	4	5.6

Table C.4: **Parental or Guardian Literacy Composite—Filipino**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Can your mother, aunt, or grandmother (or any female family member who they live with) read in Filipino?	No	3	4.2	1	1.4
	Yes	67	94.4	70	98.6
	Doesn't live with a female family member	1	1.4	0	0.0
	Don't know / No response	0	0.0	0	0.0
Only for blind children: Can your mother, aunt, or grandmother (or any female family member who they live with) read Filipino braille?	No	14	19.7	20	28.2
	Yes	19	26.8	11	15.5
	Don't know / No response	0	0.0	0	0.0
	Skipped	38	53.5	40	56.3
Can your father, uncle, or grandfather (or any male famliy member who they live with) read in Filipino?	No	5	7.0	7	9.9
	Yes	65	91.5	59	83.1
	Doesn't live with a male family member	1	1.4	3	4.2
	Don't know / No response	0	0.0	2	2.8
Only for blind children: Can your father, uncle, or grandfather (or any male famliy member who they live with) read Filipino braille?	No	29	40.8	22	31.0
	Yes	5	7.0	5	7.0
	Don't know / No response	0	0.0	2	2.8
	Skipped	37	52.1	42	59.2
What is the highest level of education your parents have achieved?	Primary	4	5.6	13	18.3
	Secondary	16	22.5	27	38.0
	Post-secondary	1	1.4	0	0.0
	Diploma or above	2	2.8	1	1.4
	Bachelors	22	31.0	16	22.5
	Masters	0	0.0	3	4.2
	Don't know / No response	26	36.6	11	15.5

Table C.5: **Parental or Guardian Literacy Composite—English**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Can your mother, aunt, or grandmother read in English?	No	8	11.3	6	8.5
	Yes	62	87.3	64	90.1
	Don't know / No response	0	0.0	1	1.4
	Skipped	1	1.4	0	0.0
Can your mother, aunt, or grandmother read English braille?	No	13	18.3	20	28.2
	Yes	19	26.8	10	14.1
	Don't know / No response	1	1.4	1	1.4
	Skipped	38	53.5	40	56.3
Can your father, uncle, or grandfather read in English?	No	10	14.1	12	16.9
	Yes	59	83.1	53	74.6
	Don't know / No response	1	1.4	3	4.2
	Skipped	1	1.4	3	4.2
Can your father, uncle, or grandfather read English braille?	No	30	42.3	23	32.4
	Yes	3	4.2	6	8.5
	Don't know / No response	1	1.4	0	0.0
	Skipped	37	52.1	42	59.2
What is the highest level of education your parents have achieved?	Primary	4	5.6	13	18.3
	Secondary	16	22.5	27	38.0
	Post-secondary	1	1.4	0	0.0
	Diploma or above	2	2.8	1	1.4
	Bachelors	22	31.0	16	22.5
	Masters	0	0.0	3	4.2
	Don't know / No response	26	36.6	11	15.5

Table C.6: **Family Reading Support Composite**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Does someone from home read stories to you?	No	26	36.6	33	46.5
	Yes	45	63.4	35	49.3
	Don't know / No response	0	0.0	3	4.2
Does someone from home look at your school work?	No	7	9.9	18	25.4
	Yes	64	90.1	51	71.8
	Don't know / No response	0	0.0	2	2.8
Last week, how many days did you read with someone outside of classtime?	I did not read at all with someone from home last week	13	18.3	14	19.7
	1 to 3 days	33	46.5	26	36.6
	4 to 6 days	12	16.9	23	32.4
	All 7 days	12	16.9	2	2.8
	Don't know / No response	1	1.4	6	8.5

Table C.7: **Reading Materials Access Composite**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Do you have learning materials—at school or at home—that help you learn to read in braille or large print?	No	2	2.8	10	14.1
	Yes	68	95.8	57	80.3
	Don't know / No response	1	1.4	4	5.6
Do you have reading materials—at school or at home—in braille or large print?	No	1	1.4	9	12.7
	Yes	70	98.6	58	81.7
	Don't know / No response	0	0.0	4	5.6
Do you have learning materials—at school or at home—that help you learn math (in braille or large print)?	No	13	18.3	26	36.6
	Yes	58	81.7	42	59.2
	Don't know / No response	0	0.0	3	4.2

Table C.8: **Teacher Reading Support Composite**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
How often does your teacher teach you to read each week?	Never	2	2.8	1	1.4
	Sometimes	11	15.5	23	32.4
	Everyday	58	81.7	47	66.2
How often does your teacher teach you to write each week?	Never	0	0.0	6	8.5
	Sometimes	27	38.0	19	26.8
	Everyday	43	60.6	42	59.2
	Don't know / No response	1	1.4	4	5.6
What instruments does your teacher use to teach you to write?	Slate and stylus	32	45.1	34	47.9
	A technology	16	22.5	1	1.4
	Other	23	32.4	30	42.3
	Don't know / No response	0	0.0	6	8.5
At school, how often do you get time to read silently by yourself?	Never	2	2.8	8	11.3
	Sometimes	33	46.5	33	46.5
	Everyday	36	50.7	26	36.6
	Don't know / No response	0	0.0	4	5.6
At school, does your teacher ask you questions about what you are reading?	No	4	5.6	9	12.7
	Yes	67	94.4	58	81.7
	Don't know / No response	0	0.0	4	5.6
How often does your teacher help you when you are struggling with reading?	Never	0	0.0	4	5.6
	Sometimes	26	36.6	21	29.6
	Everyday	44	62.0	43	60.6
	I don't think I need help with reading	0	0.0	2	2.8
	Don't know / No response	1	1.4	1	1.4
Does your teacher work with you to help you become a better reader?	No	2	2.8	3	4.2
	Yes	69	97.2	67	94.4
	Don't know / No response	0	0.0	1	1.4

Table C.9: **Disposition to Reading Composite**

Questions and Response Options		Research Group			
		Intervention		Comparison	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Do you love, like, dislike, or hate reading?	Hate reading	1	1.4	0	0.0
	Dislike reading	1	1.4	2	2.8
	Like reading	20	28.2	24	33.8
	Love reading	49	69.0	45	63.4
	Don't know / No response	0	0.0	0	0.0
How do you feel when you are learning to read at school?	I did not like to learn to read	1	1.4	1	1.4
	I feel anxious	0	0.0	2	2.8
	I feel confident	69	97.2	66	93.0
	Don't know / No response	1	1.4	2	2.8
Reading is important to my future.	Disagree	0	0.0	1	1.4
	Agree	27	38.0	58	81.7
	Strongly agree	44	62.0	10	14.1
	Undecided	0	0.0	2	2.8

Table C.10: **Technology Use Composite—Intervention Group**

Questions and Response Options		Intervention	
		Frequency	Percentage (%)
Did you use technology this school year?	Yes	71	100.0
	No	0	0.0
How comfortable do you feel using the technologies?	Not comfortable	2	2.8
	Somewhat comfortable	14	19.7
	Very comfortable	55	77.5
Did you use the technologies to help you read?	No	2	2.8
	Yes	69	97.2
	Don't know / No response	0	0.0

Table C.11: **Technology Use Composite—Comparison Group**

Questions and Response Options		Comparison	
		Frequency	Percentage (%)
Do you use technology to help you learn?	No	46	64.8
	Yes	21	29.6
	Don't know / No response	4	5.6
If yes, how often did you use the technology in the last week?	Everyday	19	26.8
	Twice a week	5	7.0
	Once a week	2	2.8
	Not at all	44	62.0
	Don't know / No response	1	1.4

Table C.12: **Engagement in Program Composite—Intervention Group**

Questions and Response Options		Intervention	
		Frequency	Percentage (%)
Using the technologies increased my motivation to read.	Disagree	0	0.0
	Agree	31	43.7
	Strongly agree	40	56.3
	Don't know / No response	0	0.0
You want to continue to use the technologies to help you learn to read better.	Disagree	1	1.4
	Agree	31	43.7
	Strongly agree	39	54.9
	Don't know / No response	0	0.0
The things you have read last year and this year with the help of the technologies were:	Easy	59	83.1
	Sometimes hard	12	16.9
	Always hard	0	0.0
	Don't know / No response	0	0.0
You like the technologies.	Disagree	0	0.0
	Agree	26	36.6
	Strongly agree	45	63.4
	Don't know / No response	0	0.0
You like the reading sessions at school.	Disagree	0	0.0
	Agree	22	31.0
	Strongly agree	49	69.0
	Don't know / No response	0	0.0
Did the reading sessions at school change your attitude toward reading?	It didn't change my attitude toward reading	1	1.4
	Yes, negatively	3	4.2
	Yes, positively	65	91.5
	Don't know / No response	2	2.8
Using the technologies increased your reading time overall.	Disagree	0	0.0
	Agree	32	45.1
	Strongly agree	38	53.5
	Don't know / No response	1	1.4

Annex D: **EGRA Descriptive Statistics and Additional Tables**

Table D.1: **Letter Sound Identification Rate (CLSP3M)—Filipino**

Intervention Group	Reader Type	*N*/*n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	29	18.1	14.5	1 (3.3%)	115.7	36.7	0 (0.0%)	98.4
	Braille	42	10.8	10.7	5 (11.9%)	112.4	43.0	1 (2.4%)	101.5
	All students	71	13.8	12.8	6 (8.3%)	113.8	40.3	1 (1.4%)	100.3
Comparison	Large print	30	15.3	13.3	3 (10.0%)	61.3	45.3	6 (20.0%)	46.1
	Braille	41	15.2	12.7	4 (9.8%)	66.3	42.9	3 (7.3%)	51.0
	All students	71	15.3	12.9	7 (9.9%)	64.2	43.7	9 (12.7%)	48.9
Total: All Students		**142**	**14.5**	**12.8**	**13 (9.1%)**	**89.1**	**48.7**	**10 (7.0%)**	**74.6**

Table D.2: **Nonword Reading Rate (CNWP3M)—Filipino**

Intervention Group	Reader Type	*N*/*n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	29	13.3	13.0	5 (17.2%)	72.4	44.1	0 (0.0%)	60.8
	Braille	42	6.6	6.6	10 (23.8%)	59.3	26.5	1 (2.4%)	52.7
	All students	71	9.3	10.2	15 (21.1%)	64.8	35.2	1 (1.4%)	56.0
Comparison	Large print	30	10.4	14.2	9 (30.0%)	42.1	41.4	6 (20.0%)	31.7
	Braille	40	8.2	7.7	5 (15.0%)	34.2	27.7	5 (12.2%)	26.3
	All students	70	9.2	10.9	15 (21.4%)	37.6	34.1	11 (15.5%)	28.6
Total: All Students		**141**	**9.2**	**10.5**	**30 (21.3%)**	**51.3**	**37.2**	**12 (8.4%)**	**42.4**

Table D.3: **ORF Rate (CWP3M)—Filipino**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	28	24.1	24.6	4 (13.8%)	133.6	76.9	0 (0.0%)	116.6
	Braille	42	7.1	8.5	12 (28.6%)	91.1	42.1	2 (4.8%)	84.0
	All students	70	13.9	18.7	16 (22.5%)	108.8	62.3	2 (2.8%)	97.1
Comparison	Large print	28	19.9	22.1	7 (24.1%)	82.5	88.1	7 (26.7%)	66.3
	Braille	39	11.1	12.7	6 (15.4%)	50.5	45.6	3 (7.3%)	39.5
	All students	67	14.8	17.7	13 (19.1%)	64.0	68.2	10 (15.5%)	50.7
Total: All Students		**137**	**14.3**	**18.2**	**30 (20.9%)**	**86.6**	**68.9**	**12 (9.1%)**	**74.4**

Table D.4: **Reading Comprehension Score—Filipino**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	29	2.6	2.2	11 (36.7%)	4.3	1.3	1 (3.3%)	1.9
	Braille	42	1.0	1.5	25 (59.5%)	4.2	1.4	2 (4.8%)	3.2
	All students	71	1.6	2.0	36 (50.0%)	4.2	1.4	3 (4.2%)	2.6
Comparison	Large print	29	1.9	2.0	14 (46.7%)	2.6	2.3	11 (36.7%)	0.8
	Braille	39	1.5	1.8	19 (48.8%)	2.6	2.0	10 (24.4%)	1.1
	All students	68	1.7	1.9	33 (47.9%)	2.6	2.1	20 (29.6%)	0.9
Total: All Students		**139**	**1.7**	**1.9**	**68 (49.0%)**	**3.4**	**1.9**	**23 (16.8%)**	**1.8**

Table D.5: **Listening Comprehension Score—Filipino**

Intervention Group	Reader Type	N/n	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score n (%)	Mean	SE	Zero Score n (%)	
Intervention	Large print	29	2.9	1.3	4 (13.3%)	3.2	1.2	1 (3.3%)	0.4
	Braille	42	2.5	1.4	5 (11.9%)	3.4	0.9	0 (0.0%)	0.9
	All students	71	2.6	1.3	9 (12.5%)	3.3	1.0	1 (1.4%)	0.7
Comparison	Large print	29	2.3	1.5	6 (20.0%)	2.4	1.4	5 (16.7%)	0.1
	Braille	39	3.0	1.2	5 (12.2%)	3.1	1.0	0 (0.0%)	0.2
	All students	68	2.7	1.4	11 (15.5%)	2.8	1.2	5 (7.0%)	0.1
Total: All Students		**139**	**2.7**	**1.4**	**19 (14.0%)**	**3.1**	**1.1**	**6 (4.2%)**	**0.4**

Table D.6: **Number of Reading Comprehension Questions Attempted at Baseline and Endline—Filipino**

Assessment	Number of Questions Attempted	Large Print				Braille				All Students			
		Intervention		Comparison		Intervention		Comparison		Intervention		Comparison	
		n	Percentage	n	Percentage	n	Percentage	n	Percentage	n	Percentage	n	Percentage
Baseline	0	8	26.7%	13	43.3%	19	45.2%	14	34.1%	27	37.5%	27	38.0%
	1	3	10.0%	2	6.7%	10	23.8%	7	17.1%	13	18.1%	9	12.7%
	2	1	3.3%	1	3.3%	5	11.9%	7	17.1%	6	8.3%	8	11.3%
	3	2	6.7%	2	6.7%	1	2.4%	4	9.8%	3	4.2%	6	8.5%
	4	2	6.7%	1	3.3%	4	9.5%	3	7.3%	6	8.3%	4	5.6%
	5	14	46.7%	11	36.7%	3	7.1%	6	14.6%	17	23.6%	17	23.9%
Endline	0	1	3.3%	9	30.0%	2	4.8%	5	12.2%	3	4.2%	14	19.7%
	1	0	0.0%	2	6.7%	0	0.0%	5	12.2%	0	0.0%	7	9.9%
	2	1	3.3%	2	6.7%	4	9.5%	10	24.4%	5	6.9%	12	16.9%
	3	0	0.0%	1	3.3%	3	7.1%	2	4.9%	3	4.2%	3	4.2%
	4	4	13.3%	2	6.7%	1	2.4%	2	4.9%	5	6.9%	4	5.6%
	5	24	80.0%	14	46.7%	32	76.2%	17	41.5%	56	77.8%	31	43.7%

Table D.7: **Number of Listening Comprehension Questions Attempted at Baseline and Endline—Filipino**

Assessment	Number of Questions Attempted	Large Print				Braille				All Students			
		Intervention		Comparison		Intervention		Comparison		Intervention		Comparison	
		n	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage
Baseline	0	2	6.7%	6	20.0%	3	7.1%	3	7.3%	5	6.9%	9	12.7%
	1	0	0.0%	0	0.0%	4	9.5%	2	4.9%	4	5.6%	2	2.8%
	2	5	16.7%	2	6.7%	3	7.1%	2	4.9%	8	11.1%	4	5.6%
	3	5	16.7%	6	20.0%	12	28.6%	8	19.5%	17	23.6%	14	19.7%
	4	18	60.0%	16	53.3%	20	47.6%	26	63.4%	38	52.8%	42	59.2%
Endline	0	0	0.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	3	4.2%
	1	1	3.3%	0	0.0%	0	0.0%	0	0.0%	1	1.4%	0	0.0%
	2	1	3.3%	3	10.0%	2	4.8%	2	4.9%	3	4.2%	5	7.0%
	3	6	20.0%	5	16.7%	9	21.4%	9	22.0%	15	20.8%	14	19.7%
	4	22	73.3%	19	63.3%	31	73.8%	30	73.2%	53	73.6%	49	69.0%

Table D.8: **Average Gain Scores by Gender—Filipino**

Subtask	Gender	Intervention			Comparison		
		n	Mean	SD	*n*	Mean	SD
Letter sound identification	Boys	31	92.5	33.1	44	51.2	35.9
	Girls	40	106.2	35.3	27	45.2	31.6
Nonword reading	Boys	32	50.9	22.9	44	29.5	27.0
	Girls	39	60.2	31.5	26	27.0	22.5
Oral reading fluency	Boys	31	88.3	43.1	42	51.2	60.1
	Girls	39	104	51.2	25	49.9	46.1
Reading comprehension*	Boys	32	2.2	1.8	43	1.0	1.3
	Girls	39	3.1	1.9	25	0.9	1.8
Listening comprehension	Boys	32	0.5	0.8	43	0.1	1.2
	Girls	39	0.8	1.3	25	0.2	0.9

* Significant at $p<.05$. Comparison group students not tested for significance between gender.

Table D.9: **Letter Sound Identification Rate (CLSP3M)—English**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	28	25.3	16.6	1 (3.4%)	138.5	42.4	0 (0.0%)	114.7
	Braille	42	15.6	13.4	3 (7.1%)	131.6	50.2	0 (0.0%)	116.0
	All students	70	19.5	15.4	4 (5.6%)	134.5	46.9	0 (0.0%)	115.5
Comparison	Large print	29	20.1	17.2	6 (20.7%)	70.8	54.8	5 (16.7%)	53.1
	Braille	38	18.1	15.3	4 (10.5%)	78.7	52.8	4 (9.8%)	59.5
	All students	67	19.0	16.0	10 (14.9%)	75.3	53.4	8 (12.7%)	56.7
Total: All Students		**137**	**19.2**	**15.7**	**14 (10.1%)**	**105.1**	**58.2**	**9 (6.3%)**	**86.7**

Table D.10: **Nonword Reading Rate (CNWP3M)—English**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	28	10.1	10.6	6 (20.7%)	65.5	39.8	0 (0.0%)	58.8
	Braille	40	5.9	6.2	10 (26.2%)	51.6	25.2	2 (4.8%)	47.1
	All students	68	7.6	8.5	16 (23.9%)	57.4	32.6	2 (2.8%)	51.9
Comparison	Large print	28	9.2	10.6	11 (37.9%)	37.3	35.5	7 (26.7%)	26.6
	Braille	37	5.8	5.6	8 (21.1%)	27.4	22.7	4 (9.8%)	20.9
	All students	65	7.3	8.2	18 (28.4%)	31.6	29.0	11 (16.9%)	23.3
Total: All Students		**133**	**7.5**	**8.3**	**35 (26.1%)**	**44.6**	**33.4**	**13 (9.8%)**	**37.9**

Table D.11: **ORF Rate (CWP3M)—English**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	27	18.0	21.1	6 (20.7%)	114.1	75.4	0 (0.0%)	103.9
	Braille	41	4.7	6.0	13 (31.0%)	71.9	37.5	2 (4.8%)	68.9
	All students	68	10.0	15.4	18 (26.8%)	89.5	59.8	2 (2.8%)	82.8
Comparison	Large print	29	14.3	18.8	12 (41.4%)	81.6	82.5	7 (23.3%)	70.1
	Braille	37	6.7	10.0	11 (28.9%)	32.9	36.7	7 (19.5%)	26.9
	All students	66	10.0	14.9	23 (34.3%)	53.5	64.6	14 (21.1%)	45.9
Total: All Students		**134**	**10.0**	**15.1**	**41 (30.4%)**	**71.6**	**64.6**	**16 (11.9%)**	**64.6**

Table D.12: **Reading Comprehension Score—English**

Intervention Group	Reader Type	*N/n*	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score *n* (%)	Mean	SE	Zero Score *n* (%)	
Intervention	Large print	29	0.8	1.4	17 (60.0%)	2.3	1.8	5 (16.7%)	1.6
	Braille	42	0.3	0.6	34 (81.0%)	2.2	1.5	7 (16.7%)	1.9
	All students	71	0.5	1.0	51 (72.2%)	2.2	1.6	12 (16.7%)	1.8
Comparison	Large print	29	0.6	1.2	21 (73.3%)	1.2	1.6	15 (53.3%)	0.6
	Braille	38	0.5	1.1	28 (73.2%)	1.1	1.4	18 (46.3%)	0.5
	All students	67	0.6	1.1	49 (73.2%)	1.1	1.5	33 (49.3%)	0.6
Total: All Students		**138**	**0.5**	**1.1**	**100 (72.7%)**	**1.7**	**1.6**	**45 (32.9%)**	**1.2**

Table D.13: **Listening Comprehension Score—English**

Intervention Group	Reader Type	N/n	Baseline			Endline			Mean Gain
			Mean	SE	Zero Score n (%)	Mean	SE	Zero Score n (%)	
Intervention	Large print	28	0.5	0.7	19 (66.7%)	1.6	1.3	6 (20.0%)	1.1
	Braille	42	0.8	1.0	22 (52.9%)	2.0	1.4	9 (21.4%)	1.2
	All students	70	0.7	0.9	41 (58.3%)	1.8	1.3	15 (20.8%)	1.2
Comparison	Large print	29	0.6	0.8	18 (63.3%)	1.0	1.0	11 (36.7%)	0.4
	Braille	37	1.1	1.1	16 (43.9%)	1.7	1.3	9 (24.4%)	0.5
	All students	66	0.9	1.0	34 (52.1%)	1.4	1.2	20 (29.6%)	0.5
Total: All Students		**136**	**0.8**	**1.0**	**75 (55.2%)**	**1.6**	**1.3**	**34 (25.2%)**	**0.8**

Table D.14: **Number of Reading Comprehension Questions Attempted at Baseline and Endline—English**

Assessment	Number of Questions Attempted	Large Print				Braille				All Students			
		Intervention		Comparison		Intervention		Comparison		Intervention		Comparison	
		n	Percentage	n	Percentage	n	Percentage	n	Percentage	n	Percentage	n	Percentage
Baseline	0	15	50.0%	21	70.0%	29	69.0%	27	65.9%	44	61.1%	48	67.6%
	1	2	6.7%	0	0.0%	8	19.0%	7	17.1%	10	13.9%	7	9.9%
	2	3	10.0%	1	3.3%	3	7.1%	3	7.3%	6	8.3%	4	5.6%
	3	4	13.3%	1	3.3%	0	0.0%	1	2.4%	4	5.6%	2	2.8%
	4	2	6.7%	3	10.0%	1	2.4%	2	4.9%	3	4.2%	5	7.0%
	5	4	13.3%	4	13.3%	1	2.4%	1	2.4%	5	6.9%	5	7.0%
Endline	0	3	10.0%	12	40.0%	5	11.9%	14	34.1%	8	11.1%	26	36.6%
	1	0	0.0%	4	13.3%	5	11.9%	12	29.3%	5	6.9%	16	22.5%
	2	1	3.3%	3	10.0%	5	11.9%	5	12.2%	6	8.3%	8	11.3%
	3	4	13.3%	1	3.3%	7	16.7%	3	7.3%	11	15.3%	4	5.6%
	4	11	36.7%	2	6.7%	6	14.3%	4	9.8%	17	23.6%	6	8.5%
	5	11	36.7%	8	26.7%	14	33.3%	3	7.3%	25	34.7%	11	15.5%

Table D.15: **Number of Listening Comprehension Questions Attempted at Baseline and Endline—English**

Assessment	Number of Questions Attempted	Large Print				Braille				All Students			
		Intervention		Comparison		Intervention		Comparison		Intervention		Comparison	
		n	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage	*n*	Percentage
Baseline	0	11	36.7%	12	40.0%	15	35.7%	14	34.1%	26	36.1%	26	36.6%
	1	5	16.7%	5	16.7%	2	4.8%	4	9.8%	7	9.7%	9	12.7%
	2	7	23.3%	4	13.3%	12	28.6%	7	17.1%	19	26.4%	11	15.5%
	3	3	10.0%	4	13.3%	4	9.5%	6	14.6%	7	9.7%	10	14.1%
	4	4	13.3%	5	16.7%	9	21.4%	10	24.4%	13	18.1%	15	21.1%
Endline	0	1	3.3%	7	23.3%	2	4.8%	6	14.6%	3	4.2%	13	18.3%
	1	3	10.0%	2	6.7%	3	7.1%	2	4.9%	6	8.3%	4	5.6%
	2	8	26.7%	8	26.7%	7	16.7%	11	26.8%	15	20.8%	19	26.8%
	3	6	20.0%	5	16.7%	12	28.6%	7	17.1%	18	25.0%	12	16.9%
	4	12	40.0%	8	26.7%	18	42.9%	15	36.6%	30	41.7%	23	32.4%

Table D.16: **Average Gain Scores by Gender—English**

Subtask	Gender	Intervention			Comparison		
		n	Mean	SD	*n*	Mean	SD
Letter sound identification	Boys	32	104.6	38.9	42	59.4	48.1
	Girls	38	124.6	43.5	25	52.2	35.9
Nonword reading	Boys	31	46.8	24.7	40	24.0	23.6
	Girls	37	56.2	28.6	25	22.2	19.9
Oral reading fluency	Boys	30	72.1	39.7	42	48.6	61.4
	Girls	38	91.3	52.8	24	41.1	40.7
Reading comprehension*	Boys	32	1.5	1.5	42	0.4	0.9
	Girls	39	2	1.3	25	0.8	1.0
Listening comprehension	Boys	31	1	0.9	42	0.3	0.9
	Girls	39	1.3	1.1	24	0.8	0.7

* Significant at p<.05. Comparison group students not tested for significance between gender.

Annex E: **EGRA Reliability Results**

Table E.1: **Reliability Results for Endline EGRA—Filipino**

Subtask	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Letter sound identification (percentage correct)	0.772	0.872
Nonword reading (percentage correct)	0.880	0.849
Oral reading fluency (percentage correct)	0.907	0.838
Reading comprehension (percentage correct)	0.896	0.841
Listening comprehension (percentage correct)	0.329	0.950
	EGRA Coefficient Alpha	**0.899**

Table E.2: **Reliability Results for Endline EGRA—English**

Subtask	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Letter sound identification (percentage correct)	0.704	0.860
Nonword reading (percentage correct)	0.859	0.825
Oral reading fluency (percentage correct)	0.814	0.833
Reading comprehension (percentage correct)	0.722	0.856
Listening comprehension (percentage correct)	0.513	0.903
	EGRA Coefficient Alpha	**0.822**