



Early Grade Reading Assessment Results 2015-2017

School Meals Programme



WORLD EDUCATION



सफाइ
खुवाइ
पढाइ
सिकाइ



GOVERNMENT OF NEPAL
MINISTRY OF EDUCATION



EXECUTIVE SUMMARY

World Education has been providing Early Grade Reading interventions to 1,040 schools under the Ministry of Education's School Meals Programme funded by the United States Department of Agriculture's McGovern Dole Programme and is implemented by the World Food Programme and the MoE's Food for Education Project. The program's main objective is to improve Early Grade Learning, including reading and mathematics, in six districts: Baitadi, Bajhang, Dadeldhura, Dailekh, Darchula, and Jajarkot. An Early Grade Reading Assessment was conducted from March-May 2017 to assess reading achievement of students from Grades 1 to 3 in program schools and the project impact from baseline in 2015 through Year-1(2016) and Year-2(2017) of the project.

Out of 1,040 schools, 156 schools, one from each VDC, of all six districts were chosen at random for the sample for the 2016 EGRA assessment. The same schools those were chosen for EGRA testing in 2017. In 2017, 4,456 students were assessed from the sampled schools. During the assessment, all data was collected through tablets with software along with the EGRA questionnaire. The EGRA test comprises eight sections including reading fluency test as well as comprehension to measure learning achievement.

The results show that 16% of Grade 1, 39% of Grade 2 and 54% of Grade 3 students could read fluently and with full comprehension as per their respective grade's benchmark for learning achievement (the Grade 3 targets match the government target of 45 correct words per minute and at least 80% comprehension, while Grade 1 and 2 targets were developed by World Education to track progress). Students sampled for this year's EGRA demonstrated reading achievement that was twice as high as the levels found by the 2016 EGRA after the project's first year. Similarly, the portion of students falling in the lowest of the four achievement categories—"not yet begun to read"—declined dramatically from 2016 to 2017: from 64% to 41% for Grade 1; from 27% to 11% for Grade 2; and from 11% to and 5% for Grade 3. These results indicate that the learning achievements have improved dramatically. Similarly, the average scores in all the sections (listening, consonant, vowel, simple word, joint words, *matra*, word meaning, paragraph reading, paragraph comprehension, story reading, and story comprehension) were higher in EGRA 2017 than in EGRA 2016 and the 2015 baseline survey.

Considering performance by district, Dadeldhura, Dailekh, and Darchula showed the best results, with 67%, 64%, and 72% of children, respectively, "reading fluently with full comprehension" and meeting government targets by the end of Grade 3, and few, if any, students who "have not yet begun to read" in Grades 2 and 3. Jajarkot showed the poorest results, with significant room for improvement, while Baitadi and Bajhang were in middle of the spectrum for achievement across the six districts.

The data shows correlations between learning achievement and both ethnicity and Early Childhood Development experience. Dalit students along with children from other disadvantaged groups earned lower scores. Children with ECD experience demonstrated better fluency and comprehension than children with no ECD experience. Overall, boys show slightly higher achievement than girls (35% compared to 34% reading at grade level), but the small difference between boys and girls overall masks greater disparities and an inconsistent pattern at the district level, where the advantage varies between boys and girls depending on the district.

The major gains in learning outcomes over just two years show the value of incorporation of an early grade reading component into the School Meal Program. The baseline showed that despite increased attendance and more attentive students, children in the School Meal Program schools still had very poor learning outcomes: only 1% of Grade 3 students were reading at grade level. Harnessing the goodwill of communities and the strong foundations built by the School Meal program, modest additional investments in teacher training, provision of learning materials, community mobilization and regular support greatly increased the educational impact of this program. Constant fluctuations in the food security situation mean that communities' eligibility for this support can change quickly; as a result, there is a need for the National Early Grade Reading Program (NEGRP) to identify ways to provide continuity to efforts especially in districts such as Baitadi where the needs are great but for which there are insufficient resources.

TABLE OF CONTENTS

| | |
|--|-----|
| EXECUTIVE SUMMARY | i |
| LIST OF TABLES | iii |
| LIST OF FIGURES..... | iii |
| LIST OF ACRONYMS/ ABBREVIATIONS..... | iv |
| 1. Introduction..... | 1 |
| 1.1 Background..... | 1 |
| 1.2 Early Grade Reading Interventions..... | 1 |
| 1.3 Early Grade Reading Assessment (EGRA)..... | 2 |
| 1.3.1 Objective of EGRA..... | 2 |
| 1.3.2 Significance of EGRA | 3 |
| 1.3.3 Delimitation of the study..... | 3 |
| 2. Methodology for EGRA..... | 4 |
| 2.1 Sampling | 4 |
| 2.2 Study tools: | 4 |
| 2.3 Data Collection | 4 |
| 3. Profile of Students Tested..... | 4 |
| 3.1 Numbers of Students Tested | 4 |
| 3.2 Students by Ethnicity | 5 |
| 4. Summary of Overall Learning Achievement | 6 |
| 5. EGRA Subtask Results (Year-1 Compared to Year-2)..... | 8 |
| 5.1 Listening Comprehension | 8 |
| 5.2 Consonant Identification | 9 |
| 5.3 Vowel Identification | 9 |
| 5.4 <i>Matra</i> Identification..... | 9 |
| 5.5 Simple Word Identification..... | 10 |
| 5.6 Joint Word Identification | 10 |
| 5.7 Fluency: Correct Word per Minute (CWPM) | 11 |
| 5.7.1 Comparison of CWPM Scores between Year-1 and Year-2..... | 12 |
| 5.7.2 Comparison of 2017 CWPM Results to Other EGRA Survey Findings..... | 12 |
| 5.8 Correct Comprehension Answers | 13 |
| 5.8.1 Relationship between CWPM and Comprehension..... | 14 |
| 6. Comparative Analysis of Year-2 with Baseline and Year-1 Results | 15 |
| 7. Gender Analysis by District (EGRA 2017) | 19 |
| 8. Effects of different Factors on Learning Outcomes..... | 21 |
| 8.1 Ethnicity..... | 21 |
| 8.2 ECD Experience..... | 22 |
| 8.3 Effective Teaching Practices..... | 22 |
| 9. Conclusions..... | 23 |
| Annexes..... | 25 |
| Annex A: Early Grade Reading Assessment Questionnaire Sheet | 25 |
| Annex B: District/Gender Result Presentation..... | 31 |

LIST OF TABLES

| | |
|--|----|
| Table 1: Total Number of students in project schools and grades | 3 |
| Table 2: Total Number of students tested | 5 |
| Table 3: Reading Achievement Matrix | 6 |
| Table 4: Average Score on Listening Comprehension | 8 |
| Table 5: Average Score on Consonant Identification | 9 |
| Table 6: Average Score on Vowel Identification..... | 9 |
| Table 7: Average Score on <i>Matra</i> Identification | 10 |
| Table 8: Average Score on Simple Word Identification..... | 10 |
| Table 9: Average Scores on Joint Word Identification..... | 11 |
| Table 10: Total Numbers of Students Tested for Baseline, Year-1 & Year-2 | 16 |

LIST OF FIGURES

| | |
|--|----|
| Figure 1: Early grade reading interventions..... | 2 |
| Figure 2: Ethnicity of students assessed – By District..... | 5 |
| Figure 3: Reading achievement (2017) by grade and district | 7 |
| Figure 4: Grade 3 reading achievement over time | 8 |
| Figure 5: Grade Average Correct Word per Minute for all districts for EGRA 2017 | 11 |
| Figure 6: Average Correct Words per Minute, Year-1 vs. Year-2 (all grades)..... | 12 |
| Figure 7: Grade 3 CWPM Scores across EGRA Surveys..... | 13 |
| Figure 8: Average Score by District for Reading Comprehension for EGRA 2017..... | 14 |
| Figure 9: CWPM and comprehension for Grade 2 (left) and Grade 3 (right)..... | 15 |
| Figure 10: CWPM and comprehension, for Grade 2 (left) and Grade 3 (right), from USAID/RTI national EGRA baseline (2014) | 15 |
| Figure 11: Comparison of Reading Achievement over Three Assessments..... | 16 |
| Figure 12: District Comparative Learning Outcomes for Grade1 | 17 |
| Figure 13: District-wise Comparative Learning Outcome for Grade 2 | 18 |
| Figure 14: District Comparative Learning Outcomes for Grade 3 | 19 |
| Figure 15: Learning Achievement by Gender for All Grades and Districts | 19 |
| Figure 16: Reading Achievement by Gender and District (all grades combined) | 20 |
| Figure 17: Percentage of students results by ethnicity..... | 21 |
| Figure 18: Percentage of students who meet indicators with/without ECD background..... | 22 |

LIST OF ACRONYMS/ ABBREVIATIONS

| | | |
|-------|---|--|
| CDC | : | Curriculum Development Centre |
| CWPM | : | Correct Word per Minute |
| DEO | : | District Education Office |
| DOE | : | Department of Education |
| ECD | : | Early Childhood Development |
| EGL | : | Early Grade Learning |
| EGRA | : | Early Grade Reading Assessment |
| EGRP | : | Early Grade Reading Program |
| ERO | : | Education Review Office |
| FFEP | : | Food For Education Project |
| MOE | : | Ministry of Education |
| NCED | : | National Centre for Education Development |
| NGO | : | Non Government Organization |
| PC | : | Program Coordinator |
| PO | : | Program Officer |
| RM | : | Reading Motivator |
| RP | : | Resource Person |
| SS | : | School Supervisor |
| TOT | : | Training of Trainer |
| USAID | : | United States Agency for International Development |
| VDC | : | Village Development Committee |
| WASH | : | Water, Sanitation and Hygiene |
| WEI | : | World Education Inc. |
| WFP | : | World Food Programme |

1. Introduction

1.1 Background

Under the School Feeding Program which is supported by the World Food Programme (WFP), World Education is providing support to improve learning outcomes in remote communities of six districts: Baitadi, Bajhang, Dadeldhura, Dailekh, Darchula, and Jajarkot. The United States Department of Agriculture (USDA) McGovern-Dole Food for Education initiative, supports the School Feeding Program in Nepal combines a mid-day meal for students (110g portion of *haluwa*), support for Early Grade Learning (EGL), and activities to improve sanitation and hygiene (WASH). The EGL component of the program, which represents 7% on the overall program, focuses on improving children's reading and comprehension skills, enhancing teachers' teaching skills and increasing the engagement of parents and communities to promote a culture of reading. From September 2015 till date, 1,040 schools have been using the Read-Learn-Know Early Grade Reading (EGR) package to strengthen the impacts of providing school meals in these remote communities. The Read-Learn-Know reading program model, developed by World Education and Rato Bangala Foundation, includes mobilization of teachers, parents and communities to enhance the reading skills of students at both homes and schools. The program focuses on Grades 1, 2 and 3 students but also benefits students in higher grades through access to reading materials and support to promote reading through *melas* (reading fairs) and parental engagement.

In coordination with the Ministry of Education (MOE), Department of Education (DOE), Curriculum Development Centre (CDC), National Centre for Education Development (NCED), Education Review Office (ERO) and District Education Offices (DEO), the project conducts activities to promote reading skills. These include conducting Training of Trainers (TOT), basic and refresher trainings for teachers, distribution of reading and math materials, establishment of book corners, and orientations to Reading Motivators (RM) and schools administrators. Partner NGOs are providing regular support to the project schools. NGOs' Reading Motivators are supporting teachers inside the classroom as well as working in the community to make parents more aware of the reading and math activities within the schools in coordination with DEOs, Education Training Centers, Food For Education Unit, WASH partners, and other stakeholders. DEOs in every district are supporting and taking initiative to mobilize School Supervisors (SS), Resource Persons (RP), roster trainers and Reading Motivators.

1.2 Early Grade Reading Interventions

The project has provided the same early grade reading support in all schools of all districts. These activities addressed teacher development, provision of materials, parent and community engagement and capacity building of the education system.

| EARLY GRADE READING AND EARLY GRADE MATH INTERVENTIONS | |
|--|--|
| TEACHER PROFESSIONAL DEVELOPMENT | SYSTEM SUPPORT |
| <ul style="list-style-type: none"> ➤ Teacher manual ➤ Training EGR (5 + 2 days) & EGM (2 days) <ul style="list-style-type: none"> - Student-centered pedagogy - Components of reading - Activities for teaching reading - Lesson planning - Formative and summative assessment - Developing materials - Engaging parents and community ➤ Teacher mobile meetings ➤ Support from Reading Motivators | <ul style="list-style-type: none"> ➤ Head Teacher & School management Committee orientations ➤ Training of Trainers for government Roster Trainers ➤ Capacity building for Resource Persons, District Education Office staff ➤ Coordination with DoE, National Center for Education Development, Curriculum Development Center, National Early Grade Reading Program, EGRP (USAID/RTI) |
| COMMUNITY ENGAGEMENT | MATERIALS |
| <ul style="list-style-type: none"> ➤ Outreach to parents of struggling/ absent students ➤ Parent engagement & awareness meetings ➤ Reading “mela” (fairs) ➤ Engagement through continuous assessment benchmarking | <ul style="list-style-type: none"> ➤ Library corners ➤ Literacy materials: <ul style="list-style-type: none"> - Letter and word cards - Manipulatives - Levelled readers - Continuous assessment chart and rewards - Classroom charts - Activity books - Literacy games ➤ EGM materials ➤ Learning material development with locally available materials |

Figure 1: Early grade reading interventions

1.3 Early Grade Reading Assessment (EGRA)

The EGRA is a research-based individual oral assessment that aims to assess foundational literacy skills of children in the early grades, from Grade 1 to Grade 3. It is administered to students at the end of each grade. EGRA focuses on early grade reading and can be used to measure the progress made by the districts within a year, overall and by specific grade.

1.3.1 Objective of EGRA

The general objective of this EGRA was to identify the level of basic reading skills of early grade (Grades 1 to 3) students of schools in six districts where the project is implementing activities. This assessment also helps identify the specific areas of strength and weakness of early grade students' reading abilities, so that relevant interventions can be designed for enabling effective learning.

Along with that, EGRA aims to identify the level of the children's learning achievements and progress (at the district level) over the period of time. An initial baseline was done by independent consultants Kimetrica and looked at overall achievement rates at the end of three years of schooling using the standard EGRA test. The first annual results EGRA were conducted in 2016. The current study, EGRA 2017, helps show change over time and demonstrates the impact of the project's interventions. Therefore, EGRA 2017 helps to determine whether the Early Grade Learning Component under the School Meals Program is effective for all the student groups (gender, grades and districts).

1.3.2 Significance of EGRA

This study provides World Education with insight into how its interventions are affecting student's early grade reading outcomes. The results will help World Education identify areas in which it can improve its programming, trends in areas of reading skills with which students seem to struggle the most, and which districts need more support. This information can help World Education and its partner organizations, donor agencies along with MOE, determine how they may be able to adjust programming in order to increase effectiveness and impact on improving student literacy in the target districts during the rest of the project till the end of 2017 and in its future phases.

In addition to informing the remaining half year of the current project and potential subsequent phases, this study can be used to inform other EGR programming in Nepal. The MOE is currently coordinating with the United States Agency of International Development (USAID) to develop and implement a nation-wide National Early Grade Reading Program. World Education is also supporting this effort and aligning its programming to the Ministry's new and emerging policies. The insights gained through this study may prove informative to the Ministry's work, as well as to other early grade reading programs being conducted by World Education in partnership with UNICEF and other international development agencies. The results may be of particular interest to other school feeding programs that are implemented by the bi-lateral donor in other countries.

1.3.3 Delimitation of the study

World Education is implementing the program in 1,040 schools in 156 VDCs in six districts: Baitadi, Bajhang, Dadeldhura, Dailekh, Darchula, and Jajarkot. The project provided EGR support to 68,024 students in the 2072 academic year (April 2015-April 2016). In the 2073 academic year the project supports 60,585 students.

Table 1: Total Number of students in project schools and grades

| STUDENTS NUMBERS 2072 Academic Year (Year-1) | | | | | | | | | | | | | |
|--|------------------------------------|--------------|--------------|--------------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|
| District | Total Schools (updated) as of 2015 | Grade 1 | | | Grade 2 | | | Grade 3 | | | Grade 1-3 | | |
| | | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | Total |
| Dadeldhura | 93 | 559 | 687 | 1246 | 668 | 722 | 1390 | 560 | 673 | 1233 | 1787 | 2082 | 3869 |
| Bajhang | 236 | 3573 | 4081 | 7654 | 1760 | 1876 | 3636 | 1578 | 1867 | 3445 | 6911 | 7824 | 14735 |
| Darchula | 153 | 1515 | 1830 | 3345 | 748 | 865 | 1613 | 651 | 776 | 1427 | 2914 | 3471 | 6385 |
| Baitadi | 197 | 3843 | 4227 | 8070 | 1911 | 2271 | 4182 | 1611 | 2011 | 3622 | 7365 | 8509 | 15874 |
| Dailekh | 167 | 3065 | 2911 | 5976 | 1955 | 1761 | 3716 | 1867 | 1546 | 3413 | 6887 | 6218 | 13105 |
| Jajarkot | 163 | 3168 | 3341 | 6509 | 1967 | 1824 | 3791 | 1850 | 1906 | 3756 | 6985 | 7071 | 14056 |
| Total Students | 1009 | 15723 | 17077 | 32800 | 9009 | 9319 | 18328 | 8117 | 8779 | 16896 | 32849 | 35175 | 68024 |

| STUDENTS NUMBERS 2073 Academic Year (Year-2) | | | | | | | | | | | | | |
|--|------------------------------------|--------------|--------------|--------------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|
| District | Total Schools (updated) as of 2016 | Grade 1 | | | Grade 2 | | | Grade 3 | | | Grade 1-3 | | |
| | | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | Total | Boy | Girl | Total |
| Dadeldhura | 94 | 712 | 767 | 1479 | 525 | 569 | 1094 | 509 | 603 | 1112 | 1746 | 1939 | 3690 |
| Bajhang | 251 | 4006 | 4540 | 8546 | 1925 | 2125 | 4050 | 1671 | 1991 | 3662 | 7602 | 8656 | 16258 |
| Darchula | 168 | 1320 | 1449 | 2769 | 732 | 890 | 1622 | 707 | 808 | 1515 | 2759 | 3147 | 5906 |
| Baitadi | 197 | 2944 | 2521 | 6465 | 1367 | 1671 | 3038 | 1280 | 1411 | 2691 | 5591 | 6603 | 12194 |
| Dailekh | 167 | 2291 | 2392 | 4683 | 1421 | 1493 | 2914 | 1286 | 1442 | 2728 | 4998 | 5327 | 10325 |
| Jajarkot | 163 | 2887 | 2958 | 5845 | 1555 | 1730 | 3285 | 1488 | 1594 | 3082 | 5930 | 6282 | 12212 |
| Total Students | 1040 | 14160 | 14627 | 29787 | 7525 | 8478 | 16003 | 6941 | 7849 | 14790 | 28626 | 31954 | 60585 |

The study was based on a quantitative survey of a sample of the project schools comprising one school from each of the 156 VDCs in the aforementioned six districts. Hence, the results represent the program intervention schools only and cannot be generalized to entire districts or the nation. The assessment was conducted within the school premises with students from Grade 1 to Grade 3, so absent students couldn't participate during the process and did not take the EGRA.

2. Methodology for EGRA

2.1 Sampling

The study was based on the primary source of information collected from the school. World Education is implementing its project in 1,040 schools of 156 VDCs in six districts. In the Year-2016, during the Year-1 EGRA survey, one school each from every VDC was chosen for sampling in all the districts. The sample was chosen on a random basis in coordination with DEO, FFEP, NGO, and World Education. Kimitrica selected the initial schools and the same methodology was used to select additional schools in districts/VDCs not included in their baseline sample. The EGRA 2017 was conducted with all the students of the same 156 schools selected for the EGRA 2016.

2.2 Study tools:

The EGRA 2017 is a quantitative survey used for EGRA 2016 and Kimitrica's Baseline. The EGRA tool was developed and approved by the ERO. As in 2016, the 2017 EGRA was administered using software on Android tablets. The EGRA software allowed both online and offline data collection of responses to the questionnaire. The content in the questionnaire was based on the textbook used by students of grade 1 to 3 along with the reading materials that were used in the project schools.

The EGRA questionnaire¹ included a number of sections to provide comprehensive data on reading skills including listening, consonant, vowel, simple word, joint words, *matras*², word meaning, paragraph reading, paragraph comprehension, story reading, and story comprehension.

2.3 Data Collection

A Program Coordinator (PC) and Program Officer (PO) from each NGO in six districts were oriented to use the EGRA software and tablets. Several demonstrations were done for practice before the actual data collection. Data collection for EGRA 2017 began in March 2017 and continued through April 2017, which was the end of school year. NGO project staff administered the tests in schools that were not in their own working area.

Data collected through tablets were directly uploaded to the server when Wi-Fi network was available. After completing the data collection, data was extracted from all the tablets and a database was formed in Microsoft Excel for final analysis.

3. Profile of Students Tested

3.1 Numbers of Students Tested

Altogether, the EGRA 2017 test was administered to a total of 4,456 students from 156 schools. Out of them, 1,574 were Grade 1 students, 1,360 from Grade 2, and 1,522 Grade 3 students. Table 1 shows the number of the students assessed by grade, gender, and district.

Of the total students tested, 54.1% (2,411) were girls and 45.9% (2,045) were boys. Darchula district had the greatest proportion of girls among assessed students with 61.4% (451), while Bajhang had the greatest proportion of boys with 49.7% (507), and therefore the most gender balanced sample of assessed students.

¹ See Annex 1 for a set of questionnaire.

² *Matra* is a consonant-vowel connected sound or phoneme.

Table 2: Total Number of students tested

| District | No. of Schools | Grade 1 | | | Grade 2 | | | Grade 3 | | | Total |
|--------------|----------------|------------|------------|-------------|------------|------------|-------------|------------|------------|-------------|-------------|
| | | Boys | Girls | Total | Boys | Girls | Total | Boys | Girls | Total | |
| Baitadi | 36 | 184 | 203 | 387 | 153 | 183 | 336 | 171 | 184 | 355 | 1078 |
| Bajhang | 34 | 154 | 167 | 321 | 167 | 151 | 318 | 186 | 196 | 382 | 1021 |
| Dadeldhura | 14 | 51 | 64 | 115 | 44 | 59 | 103 | 54 | 58 | 112 | 330 |
| Dailekh | 25 | 101 | 113 | 214 | 89 | 111 | 200 | 133 | 111 | 244 | 658 |
| Darchula | 29 | 123 | 162 | 285 | 70 | 143 | 213 | 91 | 146 | 237 | 735 |
| Jajarkot | 18 | 119 | 133 | 252 | 91 | 99 | 190 | 64 | 128 | 192 | 634 |
| TOTAL | 156 | 732 | 842 | 1574 | 614 | 746 | 1360 | 699 | 823 | 1522 | 4456 |

3.2 Students by Ethnicity

The majority of students in the EGRA test by ethnicity were Brahmin/Chettri (70%) and Dalit(25%).The presence of Brahmin/Chettri students was higher (93%) in Darchula, whereas the presence of Dalit student was highest (48%) in Jajarkot. There are altogether 5% Janajatis and other ethnicities among the sample students. Figure 1 below shows the composition of the students taking the EGRA test.

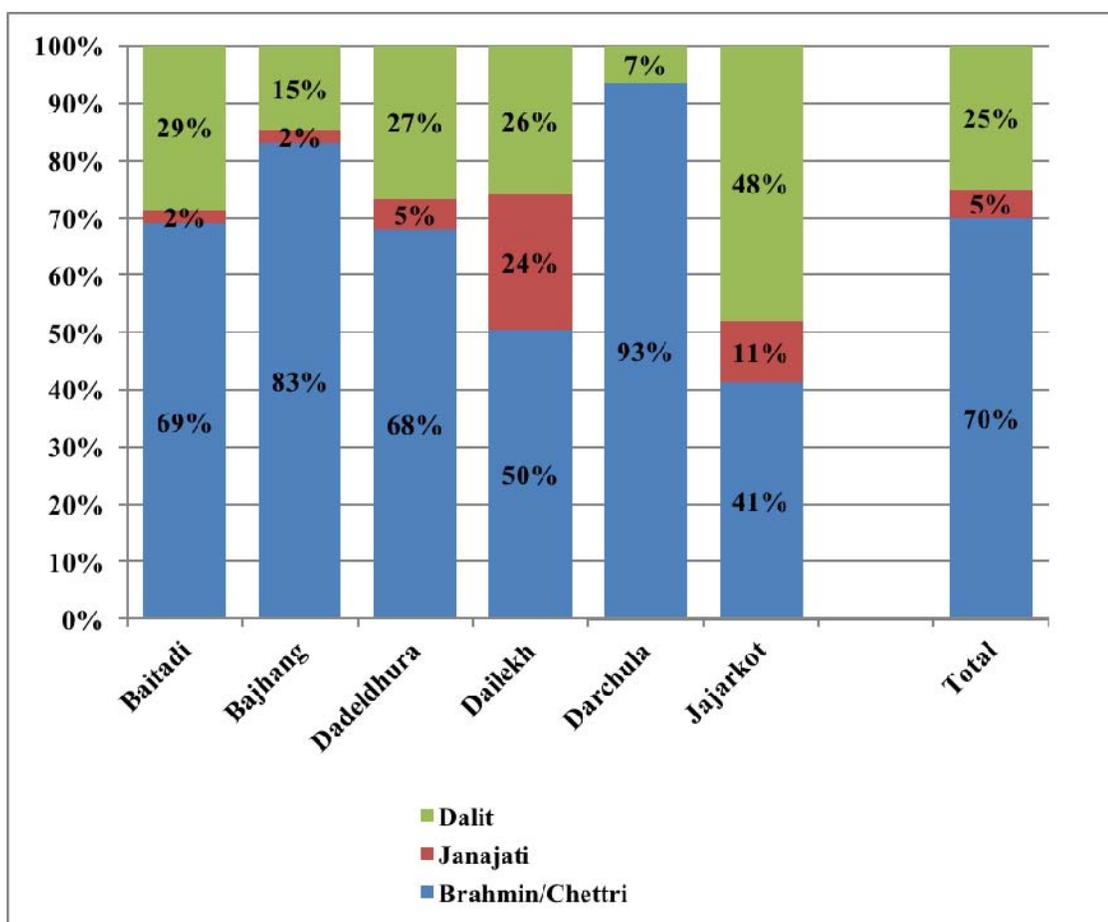


Figure 2: Ethnicity of students assessed – By District

4. Summary of Overall Learning Achievement

World Education developed a Learning Achievement Matrix based on the government’s targets of 45 Correct Words per Minute (CWPM) and 5 or more correct comprehension questions (80%) to help track whether students are on track to meet the target, depending on their respective grade level. As scores for CWPM and Reading Comprehension are the most frequently reported and also serve as summary indicators of overall reading ability, these metrics are used. Together, they indicate whether children can read quickly enough to facilitate understanding and whether they are, in fact, comprehending what they read. Levels are defined as per the table below:

Table 3: Reading Achievement Matrix

| Reading Achievement Level | Level Targets | | | |
|---|----------------------------------|------------|------------|------------|
| | Grade 1 | Grade 2 | Grade 3 | |
| Children who read fluently with full comprehension | CWPM | 25 or more | 35 or more | 45 or more |
| | Comprehension (correct out of 6) | 3 or more | 4 or more | 5 or more |
| Children who read with increasing fluency and comprehension | CWPM | 15-24 | 25-34 | 35-44 |
| | Comprehension (correct out of 6) | 2 or more | 3 or more | 4 or more |
| Children who read slowly with limited comprehension | CWPM | 1-14 | 1-25 | 1-34 |
| | Comprehension (correct out of 6) | 1 or more | 2 or more | 3 or more |
| Children who have not yet begun to read | CWPM | 0 | 0 | 0 |
| | Comprehension (correct out of 6) | 0 | 0 | 0 |

Overall reading achievement by grade and by district for EGRA 2017 is presented in Figure 3. Across the board, as children progress in school from Grade 1 to 2 to 3, more children move into the highest category, indicating they are reading at grade level. This is significant because the standards also increase with each grade, so students are making greater progress than might be expected. Dadeldhura, Dailekh, and Darchula have the greatest proportions of children who “read fluently with full comprehension” by the end of Grade 3, with 67%, 64%, and 72%, respectively, reaching the top achievement category and meeting the government standard. These three districts also have few, if any, students who “have not yet begun to read” in grades 2 and 3. Jajarkot showed the poorest results, with significant room for improvement, while Baitadi and Bajhang were in middle of the spectrum for achievement across the six districts. For comparison, the 2014 nationally representative Early Grade Reading Assessment supported by USAID found that 37% of grade 2 students and 19% of grade 3 students could not read a single word.³

³Sitabkhan, Y. and DeStefano, J. (2014). *Data for Education Programming in Asia and Middle East: Nepal Early Grade Reading Assessment Study*. Retrieved from: <https://iercpublicfiles.s3.amazonaws.com/public/resources/Nepal%20EGRA.pdf>

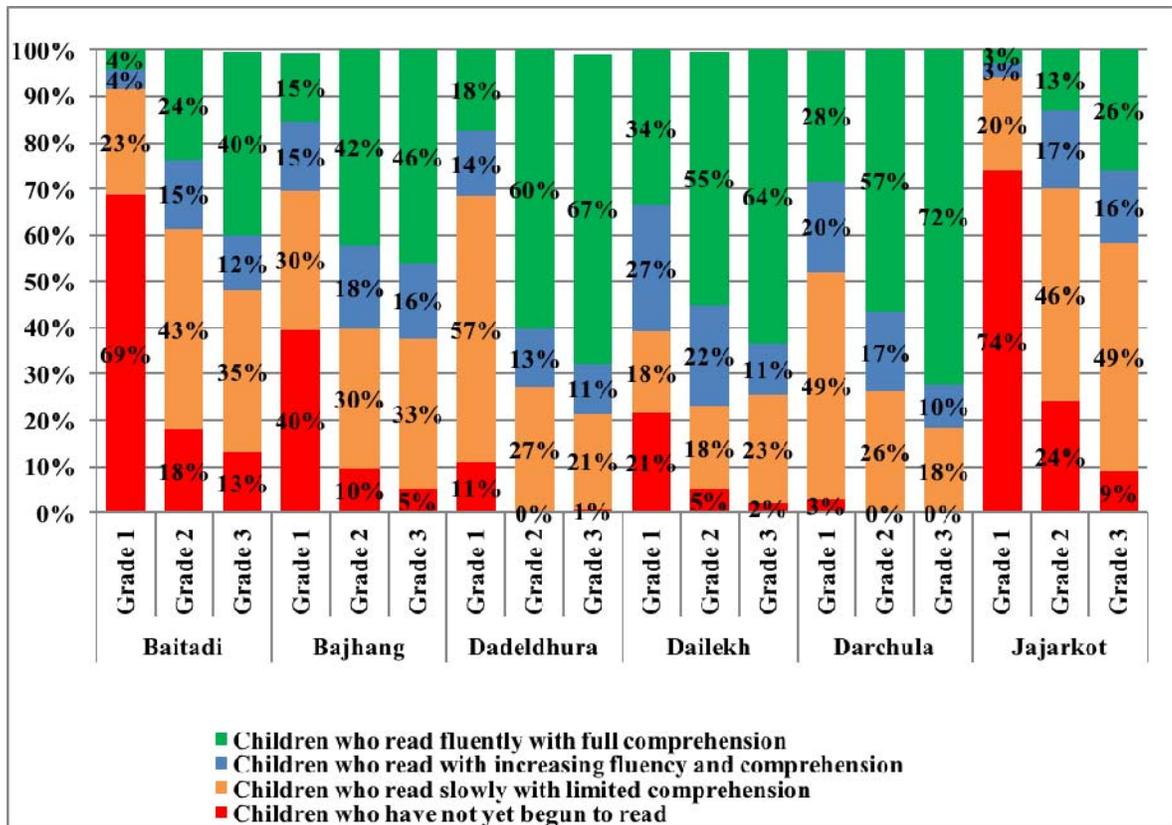


Figure 3: Reading achievement (2017) by grade and district

The children that “have not yet begun to read” or have “zero scores” are of great concern in any early grade reading program. A rapid decline in the number of children at the bottom end of the matrix is a good sign of progress. However, a score in this category and still being unable to read a single word after three years of school—when the majority of classmates are reading—is often a sign that a child has a learning impairment or disability. Research done by Handicap International and World Education⁴ in adjoining districts in 2016 found on average 26% of students had some form of learning impairment. While the program does have some materials and techniques that help some children with learning impairments, more effort is needed to identify and address disability. Malnutrition and poor health care in remote communities are likely to be contributing factors to high prevalence of disabilities making this a priority for school feeding programs if ‘zero scores’ are to be further reduced.

Comparison to the baseline study reveals that the project delivered impressive gains in reading achievement in some of Nepal’s poorest and most disadvantaged communities. In 2017, after two academic years of interventions, 16% of Grade 1, 39% of Grade 2 and 54% of Grade 3 students read fluently and with full comprehension (according to learning achievement benchmarks for their respective grades). In comparison, just 1% of Grade 3 students surveyed in a 2015 baseline met reading standards. Similarly, the portion of students who could not read declined dramatically from 2016 to 2017: from 64% to 41% for Grade 1; from 27% to 11% for Grade 2; and from 11% to and 5% for Grade 3. The chart below presents the changes in Grade 3 students reading at grade level and not at all, showing that over the course of two years, the project had a significant impact at both ends of the spectrum.

⁴Early Detection Report – Handicap International 2017

Students reading on grade level and students not reading at all, baseline to Year 2 (baseline n =651; Y2 n=1,522)

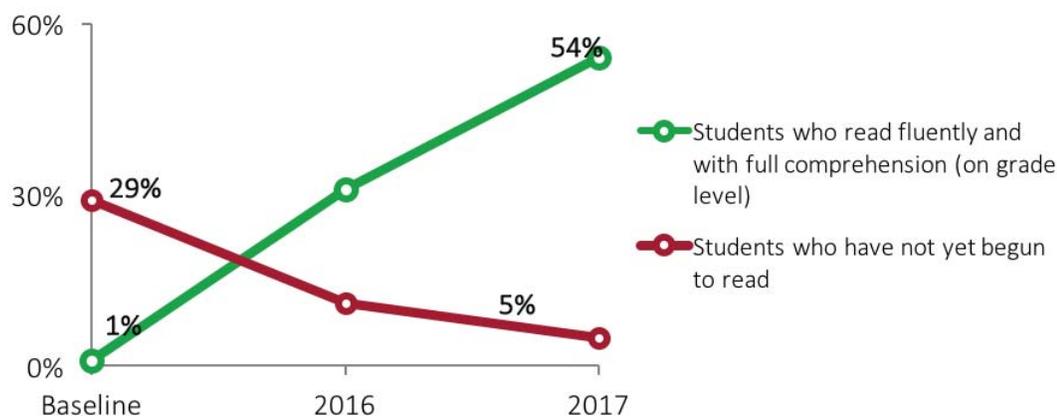


Figure 4: Grade 3 reading achievement over time

5. EGRA Subtask Results (Year-1 Compared to Year-2)⁵

5.1 Listening Comprehension

The listening comprehension section of the assessment tests children's ability to understand oral language and correctly respond to questions after hearing a short passage read aloud. There were 4 questions for listening comprehension, and there are 4 total possible points for the section. Table 4 shows the average scores on listening comprehension in Year-1 and Year-2 of the project by grade and districts. Average scores improved in every grade in every district from Year-1 to Year-2. The overall average for the scores across 6 districts was roughly 1 entire point higher (equivalent to an extra correct question) in each grade in Year-2 compared to Year-1.

Children in Jajarkot district did very poorly in listening comprehension in Year-1 whereas in Year-2, children for each grade of Baitadi district scored lowest compared to other districts. Therefore, the ratio of progress is higher for the students of Jajarkot district in Year-2 in compared with the students of Baitadi.

Table 4: Average Score on Listening Comprehension

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 0.35 | 1.28 | 2.04 | 0.78 | 2.13 | 2.92 |
| 2 | Bajhang | 0.7 | 1.55 | 2.66 | 1.64 | 2.75 | 3.45 |
| 3 | Dadeldhura | 2.48 | 3.12 | 3.33 | 2.65 | 3.30 | 3.77 |
| 4 | Dailekh | 1.22 | 2.59 | 2.77 | 2.70 | 3.26 | 3.62 |
| 5 | Darchula | 0.97 | 1.86 | 2.73 | 2.39 | 3.26 | 3.71 |
| 6 | Jajarkot | 0.07 | 0.6 | 1.55 | 1.38 | 2.67 | 3.12 |
| Average Total | | 0.97 | 1.83 | 2.51 | 1.92 | 2.9 | 3.43 |

⁵EGRA 2016 is considered as Year-1 (Y-1) and EGRA 2017 as Year-2 (Y-2).

5.2 Consonant Identification

There are 36 consonant letters in Nepali alphabet. During the assessment, students were asked to read the consonants, which were not displayed in alphabetical order, for a total of 36 possible points. Again, average scores improved at every grade level in every district from Year-1 to Year-2. In fact, in every district, Grade 2 students in 2017 performed better than Grade 3 did students in 2016. Students from Dadeldhura and Dailekh earned the highest scores for identifying consonants in all grades in Year-1 and Year-2, respectively. Comparatively, students from Baitadi and students from Jajarkot earned the lowest scores in grade 1 and grade 2, respectively, in both EGRA surveys. While scores in these districts are lower than in others, they made the most significant gains because they started with significantly lower scores for grade 1.

Table 5: Average Score on Consonant Identification

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 16.00 | 30.01 | 33.39 | 28.02 | 34.02 | 34.32 |
| 2 | Bajhang | 22.11 | 29.23 | 32.98 | 31.89 | 34.39 | 35.04 |
| 3 | Dadeldhura | 32.06 | 34.35 | 35.32 | 34.57 | 35.83 | 35.95 |
| 4 | Dailekh | 27.39 | 32.46 | 34.73 | 35.40 | 35.92 | 36.00 |
| 5 | Darchula | 25.63 | 33.59 | 34.1 | 34.27 | 35.81 | 35.97 |
| 6 | Jajarkot | 16.92 | 26.57 | 31.97 | 28.39 | 32.78 | 35.10 |
| Average Total | | 23.35 | 31.04 | 33.75 | 32.09 | 34.79 | 35.4 |

5.3 Vowel Identification

The Nepali alphabet has 13 vowels. Table 4 shows the average score obtained by the students in the vowel reading test. Darchula has the highest mean score in Grades 1 and 2 in Year-1, and in all grades in Year-2. Similar to the results of identifying consonants, Jajarkot's students earned the lowest scores among all other districts for all the grades. As with other components, scores improved from Year-1 to Year-2 in every grade in every district.

Table 6: Average Score on Vowel Identification

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 8.49 | 11.33 | 11.83 | 11.66 | 12.51 | 12.63 |
| 2 | Bajhang | 8.53 | 10.14 | 11.69 | 11.37 | 12.18 | 12.61 |
| 3 | Dadeldhura | 10.23 | 11.51 | 12.17 | 11.03 | 12.52 | 12.68 |
| 4 | Dailekh | 5.78 | 9.38 | 10.6 | 11.07 | 12.65 | 12.75 |
| 5 | Darchula | 10.25 | 11.92 | 12.03 | 12.4 | 12.92 | 12.97 |
| 6 | Jajarkot | 4.61 | 7.71 | 10.31 | 9.38 | 10.87 | 12.22 |
| Average Total | | 7.98 | 10.33 | 11.44 | 11.15 | 12.28 | 12.64 |

5.4 Matra Identification

Matra are the phonemes of connected sound formed by combining consonants and vowel diacritics. There are altogether 468 *matras*, from which 11 were included in the EGRA test for 11 possible points. Dadeldhura had the highest scores in Year-1, and students from Darchula showed the best results in Year-2. Across the board, scores improved from Year-1 to Year-2, with four districts and the overall average showing higher achievement among Grade 2 students in Year-2 than Grade 3 students earned the prior year, indicating significant improvement.

Table 7: Average Score on *Matra* Identification

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 1.55 | 5.87 | 7.74 | 2.37 | 7.41 | 8.43 |
| 2 | Bajhang | 2.93 | 5.8 | 8.38 | 5.03 | 8.66 | 9.77 |
| 3 | Dadeldhura | 5.43 | 7.95 | 9.57 | 5.83 | 9.24 | 10.05 |
| 4 | Dailekh | 2.4 | 6.42 | 8.25 | 6.16 | 9.58 | 10.33 |
| 5 | Darchula | 3.77 | 7.71 | 8.8 | 6.28 | 10.04 | 10.59 |
| 6 | Jajarkot | 1.39 | 3.13 | 5.9 | 2.08 | 5.94 | 8.86 |
| Average Total | | 2.91 | 6.15 | 8.11 | 4.63 | 8.48 | 9.67 |

5.5 Simple Word Identification

The test includes 5 simple words which should be identified and pronounced by students. In this component, too, scores improved in all grades in all districts from Year-1 to Year-2. Each district had average Grade 2 and Grade 3 scores of at least 4 out of 5 words correct, with the very high averages in Dadeldhura, Dailekh, and Darchula indicating that all or almost all students read all five words correctly. In these three districts, there was minimal difference between Grade 2 and Grade 3 averages. In Darchula, every single Grade 3 student read all five words correctly.

Table 8: Average Score on Simple Word Identification

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 1.59 | 3.9 | 4.48 | 2.96 | 4.5 | 4.64 |
| 2 | Bajhang | 2.48 | 3.79 | 4.5 | 3.93 | 4.53 | 4.77 |
| 3 | Dadeldhura | 3.98 | 4.54 | 4.84 | 4.39 | 4.92 | 4.91 |
| 4 | Dailekh | 2.97 | 4.19 | 4.62 | 4.68 | 4.94 | 4.95 |
| 5 | Darchula | 2.98 | 4.57 | 4.62 | 4.41 | 4.95 | 5.00 |
| 6 | Jajarkot | 1.38 | 2.88 | 3.72 | 2.58 | 4.12 | 4.76 |
| Average Total | | 2.56 | 3.98 | 4.46 | 3.83 | 4.66 | 4.84 |

5.6 Joint Word Identification

A joint word includes joint consonant clusters, graphemes consisting of half of a consonant connected with another consonant so that the syllable is pronounced with the sound of the half consonant heard momentarily or with half the stress. Students were given a test for identifying and reading five common joint words. In Year-1, Jajarkot had lowest scores whereas Dadeldhura had highest, but in Year-2, students of Grades 1 and 3 from Baitadi scored significantly lower, and Darchula's Grade 3 earned just slightly higher than Dadeldhura to take the top score for that grade. Baitadi and Jajarkot students averaged less than 1 joint word correct at the end of Grade 1, whereas the other four districts all had averages above 2. This suggests that students in these districts start out significantly behind, although by Grade 3, the gap between these two districts and the other four is not quite so stark. In each district, by the end of Year-2 of the project, average scores in Grade 2 were higher than the average scores for Grade 3 the previous year. In other words, the average Grade 2 student is now performing better than the average Grade 3 student performed last year, which demonstrates the impact that the project interventions are having.

Table 9: Average Scores on Joint Word Identification

| S.N. | District | YEAR-1 | | | YEAR-2 | | |
|---------------|------------|---------|---------|---------|---------|---------|---------|
| | | Grade 1 | Grade 2 | Grade 3 | Grade 1 | Grade 2 | Grade 3 |
| 1 | Baitadi | 0.46 | 1.88 | 2.91 | 0.62 | 2.91 | 3.59 |
| 2 | Bajhang | 1.18 | 2.39 | 3.72 | 2.42 | 3.74 | 4.23 |
| 3 | Dadeldhura | 2.33 | 3.49 | 4.23 | 2.66 | 4.24 | 4.56 |
| 4 | Dailekh | 0.6 | 2.44 | 3.36 | 2.34 | 3.84 | 4.28 |
| 5 | Darchula | 1.26 | 3.13 | 3.79 | 2.45 | 4.23 | 4.59 |
| 6 | Jajarkot | 0.37 | 0.96 | 2.42 | 0.84 | 2.77 | 4.02 |
| Average Total | | 1.03 | 2.38 | 3.41 | 1.89 | 3.62 | 4.21 |

5.7 Fluency: Correct Word per Minute (CWPM)

Fluency, typically measured in the number of correct words a student reads in a minute, is an important measure of overall reading ability because students must be able to read at a reasonable pace in order to understand what they are reading. (If students read too slowly, their working memory cannot store enough information for them to make sense of the passage.) In this component, a story passage containing 72 words was provided for students to read. The time was recorded while the student was reading the passage, and at the same time, assessors checked the correct words read by student. Reading fluency was calculated by taking the total number of words read in one minute, to arrive at Correct Word per Minute (CWPM). Based on the revised national target of 45 CWPM set by the Ministry of Education for all grades, World Education has also revised the project targets proportionately to 25 CWPM for Grade 1, 35 CWPM for Grade 2, and 45 CWPM for Grade 3 (see Detailed Learning Outcome Matrix is provided in Table 3).

Figure 3 shows average CWPM of Grade 1 to 3 by district in Year-2. At Grade 3, Darchula, Dailekh, and Dadeldhura averages all exceeded the national target of 45 CWPM, and Bajhang just barely missed it, falling short of the target by 1.8 CWPM. Jajarkot and Baitadi are further behind, with Baitadi farthest from the target. A similar pattern emerges at Grade 2 and at the Grade 1 level, all six districts earned averages well below World Education’s target.

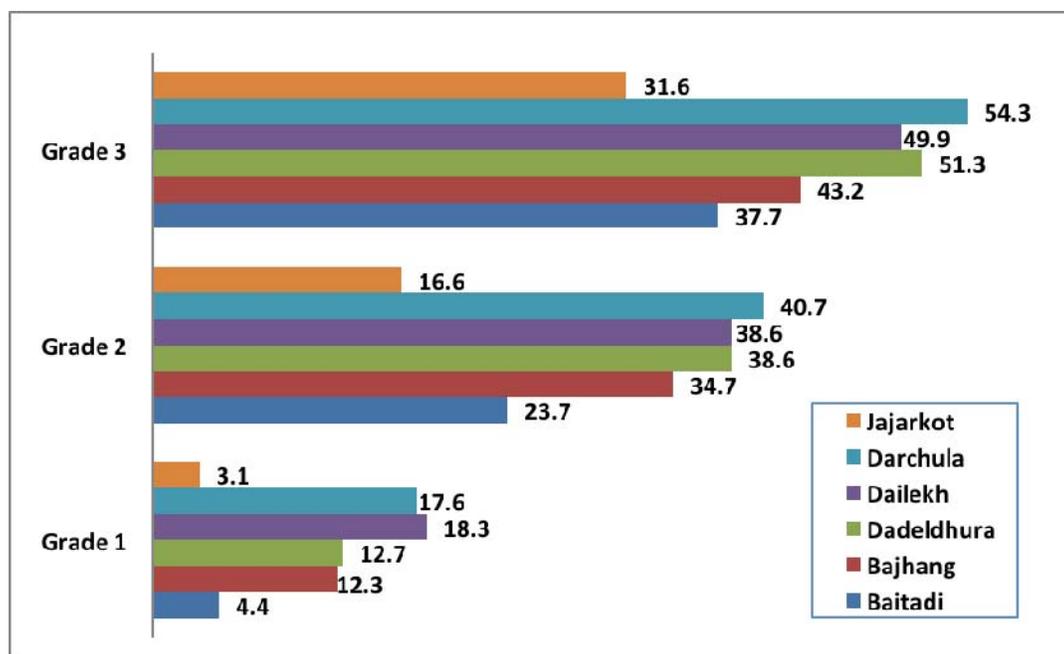


Figure5: Grade Average Correct Word per Minute for all districts for EGRA 2017

5.7.1 Comparison of CWPM Scores between Year-1 and Year-2

Comparing average CWPM scores (commonly used as a proxy for overall reading ability) from Year-1 and Year-2 (all grades) shows improvement in all the districts, as shown in the figure below:

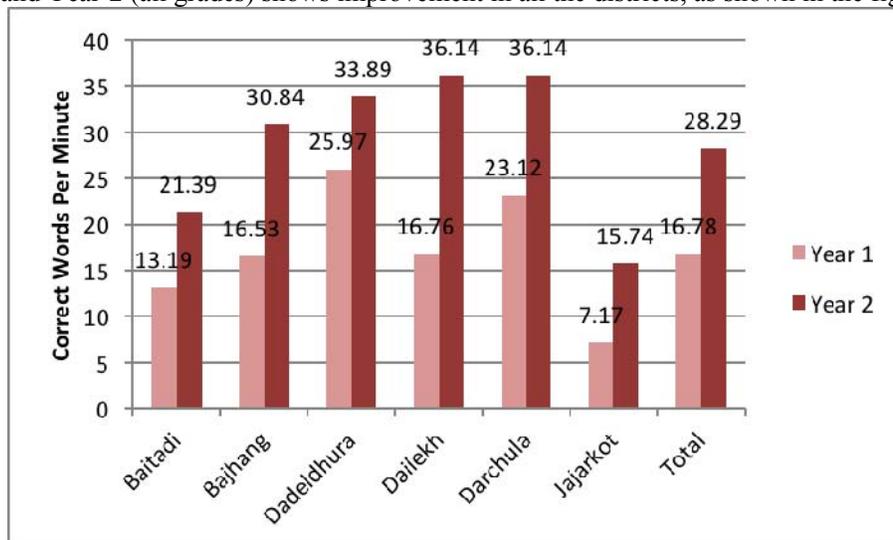


Figure 6: Average Correct Words per Minute, Year-1 vs. Year-2 (all grades)

5.7.2 Comparison of 2017 CWPM Results to Other EGRA Survey Findings

Because not all EGRA surveys and reports used the learning achievement matrix that combines CWPM and comprehension scores into a categorical representation of how well students can read, CWPM provides a useful proxy metric of reading ability that can be compared across assessments. The 2017 (Year-2) EGRA found average CWPM of 43.8 for Grade 3; 31.2 for Grade 2; and 10.7 for Grade 1. For comparison, the fluency rates found in the 2014 nationally representative Early Grade Reading Assessment supported by USAID were 27.2 CWPM in Grade 3 and 14.2 in Grade 2, with lower averages in the Mid-Western and Far-Western regions where the Early Grade Learning component of the School Feeding Program operates. The chart below shows a comparison of CWPM averages for Grade 3 students from a variety of EGRA surveys—the national baseline, EGL under the School Feeding Program, and two other World Education projects. As World Education typically works in marginalized and severely under-resourced areas, it is logical that baseline and control scores are somewhat lower than national averages, as shown below.

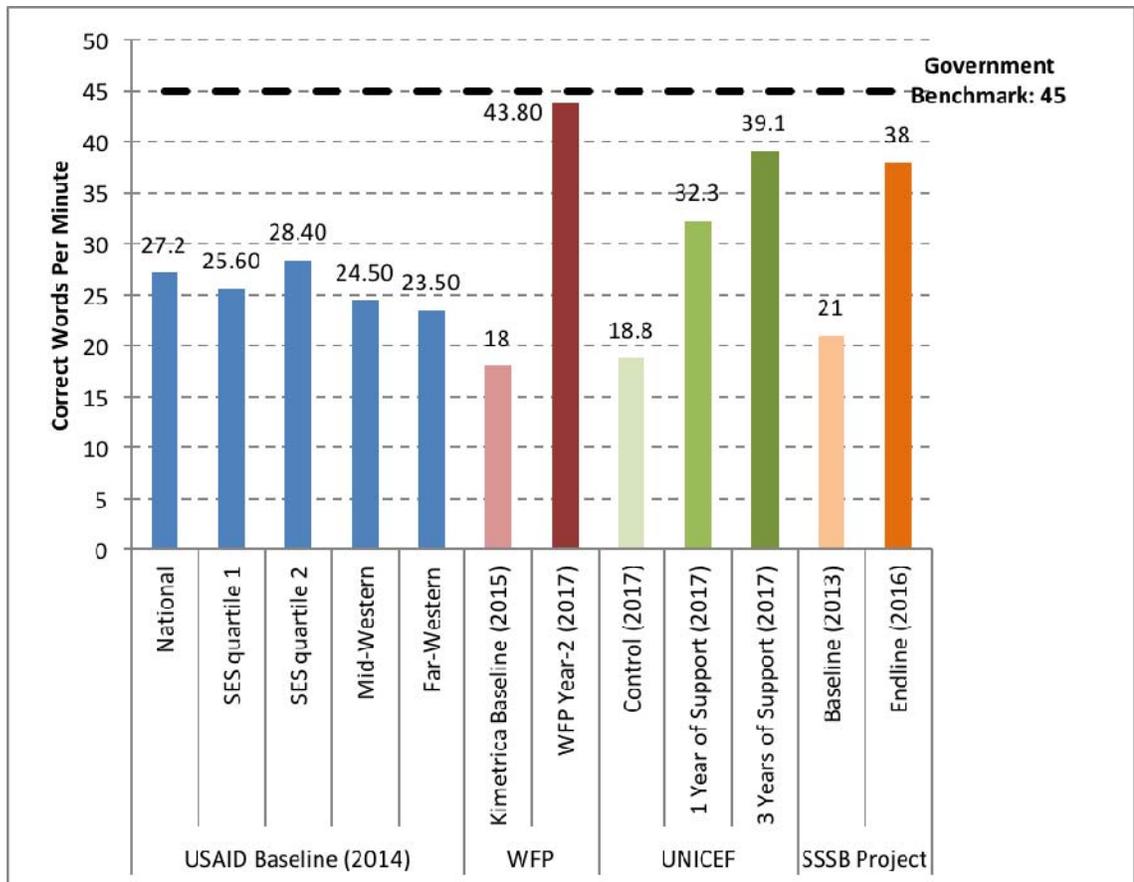


Figure 7: Grade 3 CWPM Scores across EGRA Surveys⁶

As the chart shows, no sample of Grade 3 students from any EGRA achieves, on average, the GoN benchmark of 45 CWPM. The students sampled for this EGRA report from the current EGL component under the School Feeding Program had the highest achievement of any group, coming very close to the GoN benchmark with an average of 43.8 CWPM. The UNICEF project operates a similar EGR program in four similar districts in the Mid-Western and Far-Western region in a mix of schools with and without school meal programming. Grade 3 students sampled from this project achieved an average 39.1 CWPM for students supported over three years and 32.1 CWPM for students with one year of EGR support, compared to students from control schools who averaged just 18.8 CWPM at the end of Grade 3. In Tharu language communities in Dang and Banke, World Education’s EGR interventions through the Sangai Sikaun Sangai Badhaun (SSSB) project achieved 38 CWPM for Grade 3 and 24 CWPM at the end of Grade 2 in 2017.

5.8 Correct Comprehension Answers

The ability to read text, process it, and understand its meaning is known as reading comprehension. Therefore, it is the level of understanding the message of the passage or sentence. After reading the story passage (the same passage used to measure CWPM), each student was asked to answer 6 different questions related to the passage, resulting in a score from 0 to 6. The government has set a target of 5 or more correct answers out of 6 for Grade 3 students. Based on the national target, World Education revised the project targets proportionately to 3 or above for Grade 1; 4 or above for Grade 2; and 5 or above for Grade 3. The average scores of the students by grade and district in is presented in Figure 4.

⁶USAID baseline data from Sitabkhan, Y. and DeStefano, J. (2014).

Unsurprisingly given the relationship between fluency and comprehension, Grade 3 students, on average, in Darchula, Dailekh, and Dadeldhura exceeded the benchmark, while Bajhang’s average was just below. Interestingly, Grade 2 averages in Darchula, Dailekh, and Dadeldhura are already meeting or exceeding the national benchmark, even though it is set for students a grade above them. As in other components, students in Jajarkot and Baitadi are well behind both their peers in other districts and the national target. In all grades, Dadeldhura district’s average comprehension scores are highest and Baitadi’s averages were lowest.

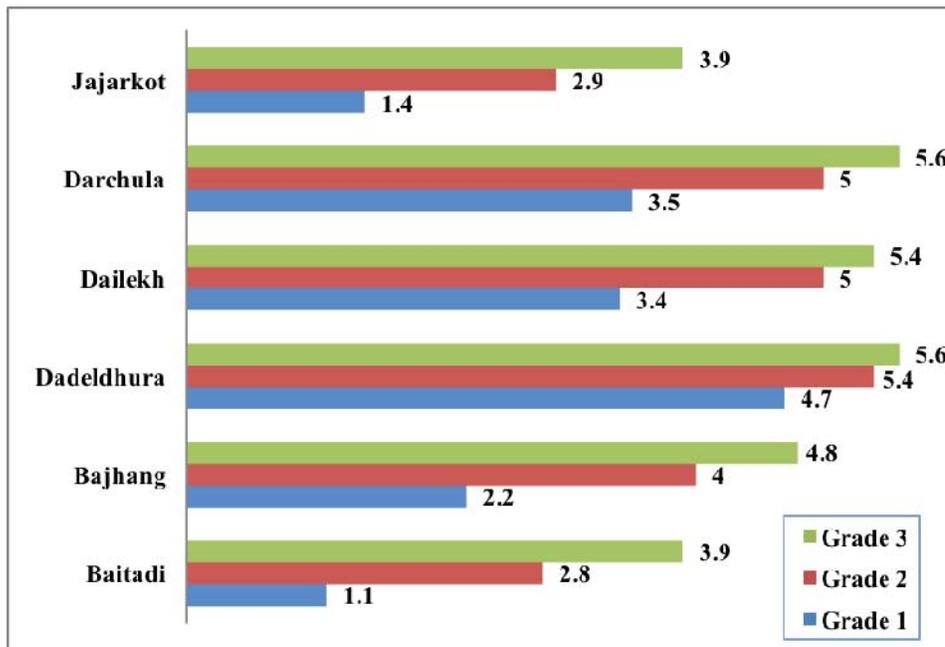


Figure 8: Average Score by District for Reading Comprehension for EGRA 2017

5.8.1 Relationship between CWPM and Comprehension

While CWPM is often taken as a proxy for overall reading ability, failure to meet a certain CWPM threshold (whether the 45 CWPM set by GoN or other thresholds suggested by researchers as adequate for comprehension) should not be confused with failure to read. Reading is making meaning from text, so it is important to recognize that while the majority of students will need fluency roughly in line with benchmarks in order to understand text, some students may achieve adequate comprehension at far slower speeds. This could occur, for example, when one has a disability or speaks another mother tongue. Their success in understanding text should not be discounted. The charts below show the variability in CWPM scores for each level of comprehension achievement. As shown in the charts, some students meet fluency benchmarks, but have almost no comprehension, while others achieve adequate comprehension (5 or above correct answers) at slower speeds. At the Grade 3 level, the majority of students who got all 6 comprehension questions correct read at or above the GoN’s 45 CWPM benchmark.

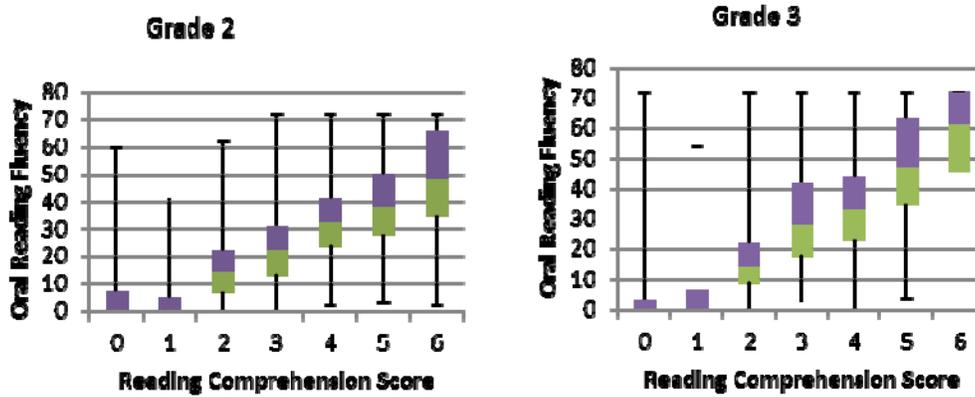


Figure9: CWPM and comprehension for Grade 2 (left) and Grade 3 (right)

For comparison, similar charts from the USAID national EGRA survey conducted in 2014 are shown in the figure below. Comparing the two sets suggests that students in the project sample achieving adequate comprehension at slightly slower speeds than indicated by the national sample.

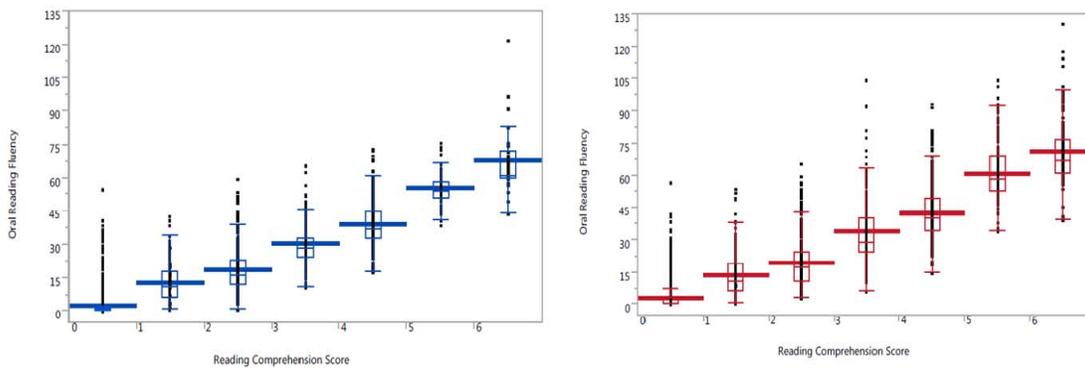


Figure 10: CWPM and comprehension, for Grade 2 (left) and Grade 3 (right), from USAID/RTI national EGRA baseline (2014)⁷

6. Comparative Analysis of Year-2 with Baseline and Year-1 Results

It is helpful to compare EGRA 2017 results with previous results to put this year's assessment results in context. EGRA 2016 assessed a total of 4,518 students from Grades 1 to 3, whereas EGRA 2017 assessed 4,456 students from grades 1 to 3 in the same 156 schools of six districts. The baseline survey, which was conducted in same schools externally by Kimetrica⁸ on behalf of WFP between April 2014 and March 2015, tested 866 students only from Grade 3 in six districts Baitadi, Bajhang, Bajura, Dadeldhura, Dailekh, and Doti. Among these districts, four (Baitadi, Bajhang, Dadeldhura, and Dailekh) with 651 assessed students are common to the current project phase's geographic coverage. Table 10 shows the total number of students tested for all the assessments.

⁷Sitabkhan, Y. and DeStefano, J. (2014).

⁸Note original analysis of Kimmetrica Baseline data used 50 CWPM and has been re-analyzed using revised 45CWPM NERGP benchmark

Table 10: Total Numbers of Students Tested for Baseline, Year-1 & Year-2

| District | Baitadi | Bajhang | Dadeldhura | Dailekh | Darchula | Jajarkot | Total |
|-----------------------------|---------|---------|------------|---------|----------|----------|-------------|
| Kimetrica (Baseline) | 170 | 267 | 90 | 124 | 0 | 0 | 651 |
| Year-1 | 1023 | 1170 | 426 | 687 | 733 | 479 | 4518 |
| Year-2 | 1078 | 1021 | 330 | 658 | 735 | 634 | 4456 |

The figure below shows the comparative presentation of learning outcomes of all the grades over three years of assessments. The chart shows clearly that over the course of the intervention, the number of students who can read fluently with full comprehension has increased by large measure, while the number of students who have not yet started to read has decreased. At baseline in 2014, just 1% of Grade 3 students could read at grade level, while 29% could not read a single word. By the end of two years of project interventions, 54% of Grade 3 students are meeting the government target for reading achievement, and only 5% cannot read at all. This is an impressive gain in learning achievement.

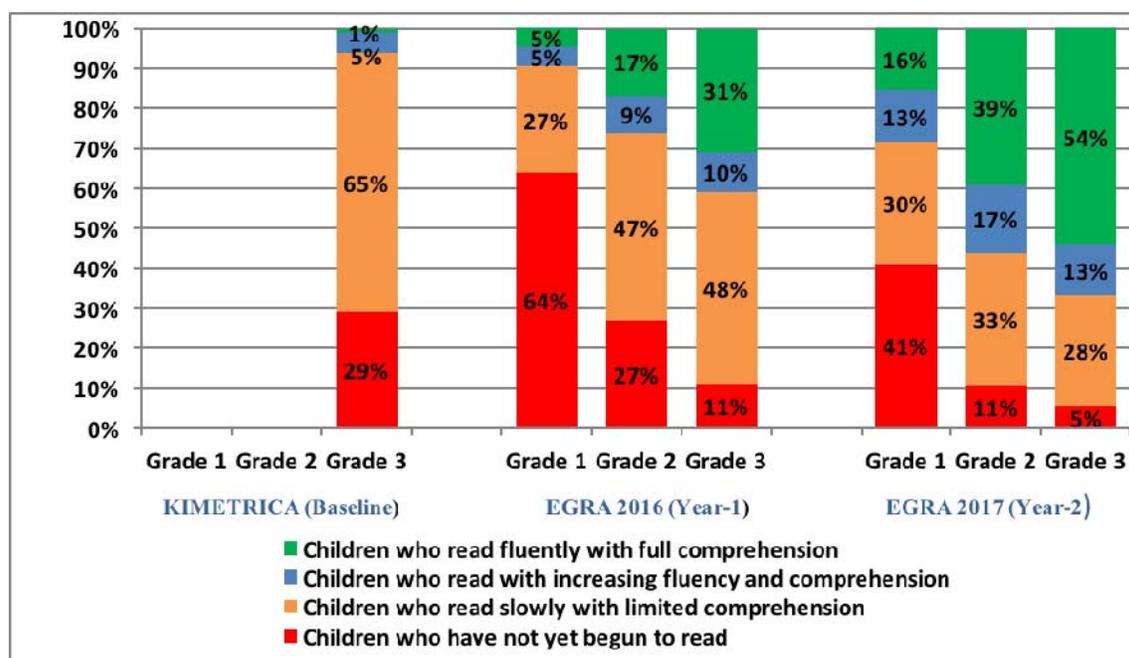


Figure 11: Comparison of Reading Achievement over Three Assessments

i. Grade 1:

At Grade 1, when children have just begun learning to read, it is helpful to look not only at whether students are reading on grade level, but also at how many cannot read. All six districts showed improvements at both ends of the reading achievement spectrum—i.e. more children reading at grade level and fewer children not reading at all—between EGRA 2016 and EGRA 2017. Gains manifest differently across districts: for example, Dailekh and Baitadi had similarly high rates of children who could not read at all in 2016 and 2017 (81% and 84%, respectively) and almost no children reading at grade level (1% and 2%, respectively). Dailekh made perhaps the most remarkable gains of the six districts in terms of students reading at grade level, increasing from 2% to 34%. However, 21% of Grade 1 students in Dailekh still cannot read. Baitadi and Jajarkot had the lowest rates of students moving into the top category (both increasing by 3%). However, Dailekh showed the largest reduction in students moving out of the “not yet begun to read” category, from 21% to

84%. At Grade 1, Jajarkot showed the least improvement with extremely poor reading achievement in Year-1 remaining quite poor in Year-2.

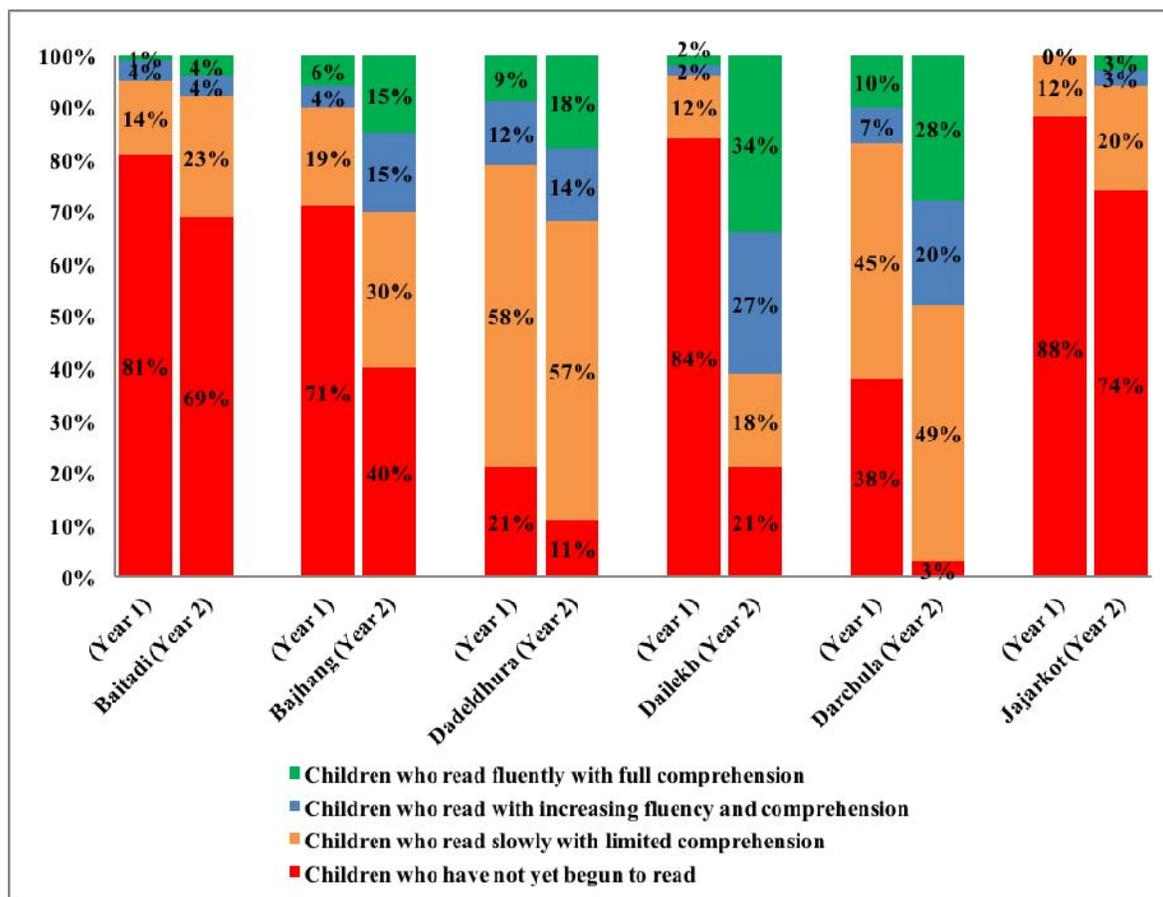


Figure 12: District Comparative Learning Outcomes for Grade 1

ii. Grade 2:

When comparing Grade 2 learning outcomes between Year-1 and Year-2, the proportion of children who can read fluently with full comprehension increased from 17% to 39% overall across all six districts. Figure 9 below presents the year-on-year comparison disaggregated by district. The greatest gains were in Darchula (34 percentage points), followed by Dailekh (33 percentage points) and Dadeldhura (29 percentage points). The fact that Baitadi and Jajarkot had the achievement in Year-1 and are showing smaller year-on-year gains suggests that there are unique challenges in these districts that may require targeted attention.

Overall across six districts, the rate of students who had not begun to read declined from 27% (Year-1) to 11% (Year-2). In this respect, Jajarkot was successful in decreasing the numbers of students who had not begun to read by 37 percentage points. Dadeldhura and Darchula had nearly 0% in this category, which means that all grade 2 students tested in that district could read at least slowly and with some comprehension.

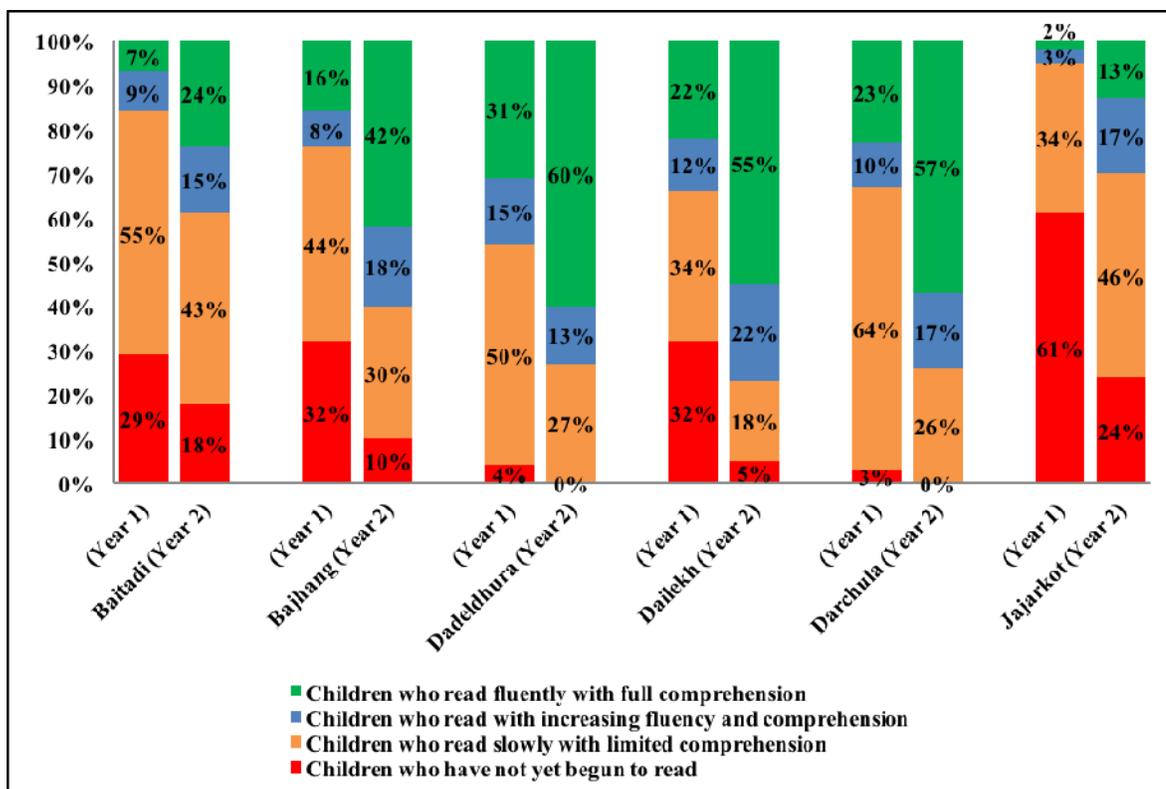


Figure 13: District-wise Comparative Learning Outcome for Grade 2

iii. Grade 3:

Among sample Grade 3 students, the baseline study found only 1% of students could read fluently with full comprehension. By the end of Year-1, the proportion of students at that level had increased to 31%. From Year-1 to Year-2, the figure improved from 31% to 54%. Therefore, 54% of Grade 3 students achieved the learning outcome according to government set targets of 45 or more CWPM and 5 or more correct comprehension answers. As already given in the Figure 5, 29% of children had not yet begun to read in the baseline study, 11% in Year-2 and only 5% in Year-1. This shows the significant improvement in the learning outcomes of the Grade 3 students in all the districts.

While analyzing district results of Grade 3 in Year-2, Darchula has the highest proportion of students (72%) who were able to read fluently with full comprehension, followed by with Dadeldhura (68%) and Dailekh (64%). And Baitadi had the highest number of Grade 3 students who cannot read (13%) followed by Jajarkot (9%).

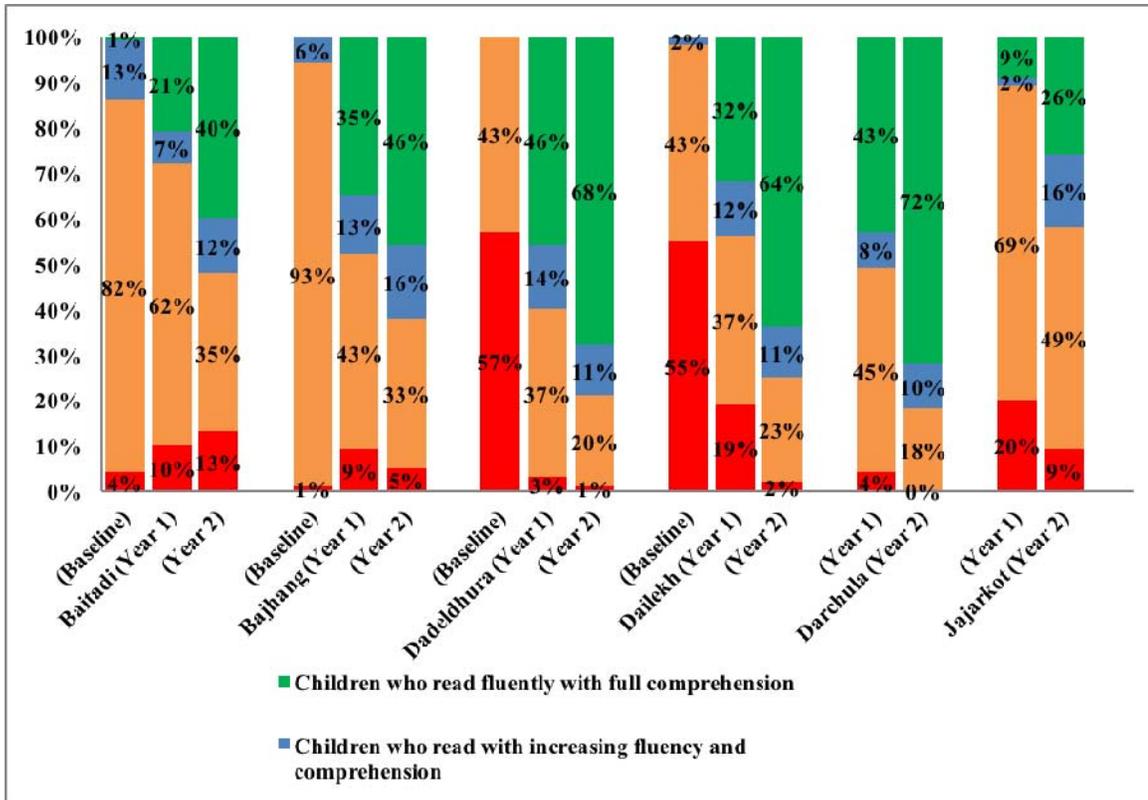


Figure 14: District Comparative Learning Outcomes for Grade 3

7. Gender Analysis by District (EGRA 2017)

Overall, reading achievement levels were similar for boys and girls, with 35% of boys and 34% of girls in the total sample achieving the highest level (“reads fluently with full comprehension” based on CWPM and comprehension relative to grade-level targets), and boys also achieving the second level at a rate 1 percentage point higher than that of girls. A T-test performed to compare the average CWPM scores of males and females found no statistically significant difference between the genders in the overall sample, with all grades and districts combined.

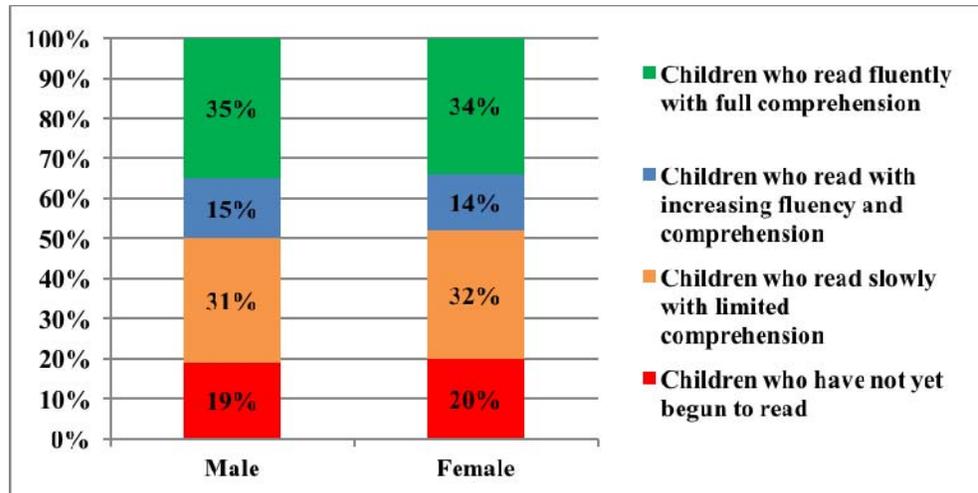


Figure 15: Learning Achievement by Gender for All Grades and Districts

However, looking at reading achievement in district disaggregated by gender reveals that there is no consistent advantage or disadvantage by gender across the districts. In some districts (e.g. Baitadi), boys outperform girls, but in others (e.g. Dadeldhura), more girls reach the highest achievement categories. Figure 6 shows the percentage of students reaching different achievement levels by district and gender for all grades combined. Annex B provides a graph for gender difference in the aggregate sample as well as a detailed graph for gender differences in each grade in each district.

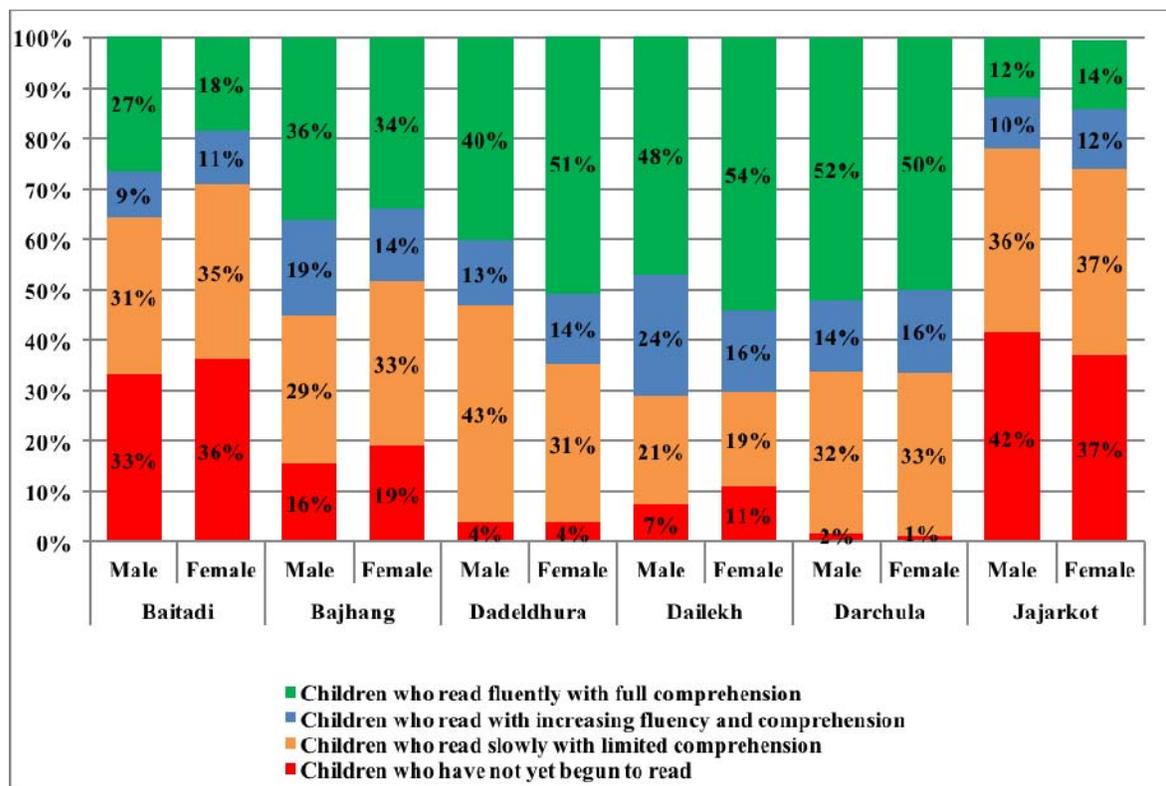


Figure 16: Reading Achievement by Gender and District (all grades combined)

In Baitadi and Bajhang, achievement is better for boys than for girls. In Baitadi, boys are 11% more likely to achieve the highest reading level than are girls. Comparing average CWPM scores of girls and boys (all grades combined) within each district; the difference in means is significant in Baitadi at the $P < .01$ level, and in Bajhang, but only at the $P < .05$ level.

In Dadeldhura, the opposite is true and the proportion of girls achieving the top level is 11% higher than that of boys. Performing a T-test on the mean CWPM scores for girls and boys in Dadeldhura reveals that the advantage girls show is statistically significant, but only at the $P < .05$ level.

In Jajarkot and Dailekh, the proportion of girls achieving the highest level is greater than the proportion of boys doing so. However, if the top two achievement categories are taken together, the advantage flips to boys in Dailekh. In Darchula, boys outperform girls in achieving the top level, but the gender difference evens out when the top two categories are considered together. In these three districts, there was no statistically significant difference found in T-Tests performed on the mean CWPM scores for girls and boys (all grades combined) within each district.

District partners in Baitadi were unable to account for the poorer outcomes for girls. This was also the widest gender gap with 9% fewer girls achieving the desired standard than boys. There needs to be further exploration and effort in this district to narrow the leaning outcome gap. Possible reasons for this gap might be poorer participation in ECD by girls or less school attendance days by girls as even at this young age they are more likely to miss school to assist with farm work or to care for younger siblings.

8. Effects of different Factors on Learning Outcomes

Reading is considered as the important factor for successful future of all the students. Regardless of geographical region, socioeconomic status, family background, age and sex, all students must learn to read to be able to succeed in school and future. Thus, reading is an essential skill that every student needs to learn. But there are also some factors which are affecting the reading and learning outcomes of students that were observed during EGRA 2017.

8.1 Ethnicity

Disaggregating results by caste/ethnicity shows that Dalit students are clearly struggling more than others to learn to read; among caste/ethnic groups, they have the highest proportion of students who cannot read at all (26%) in Year 2. However this is improving with just a 2% gap between Brahmin/Chettri (28%) and Dalit (26%) students reading at grade level. Janajati students had the lowest proportion of students reading fluently at grade level (18%).

It is worth noting that of the six districts, Jajarkot had the greatest proportion of Dalit students assessed, i.e., 48% Dalit students. This suggests that there may be some correlation between caste/ethnic makeup in Jajarkot and the poor results at the district level; however it does not hold true overall, as Baitadi, Dadeldhura and Dailekh have similar proportions of Dalit students, but varied results.

Among the 4,456 students surveyed, majorities in the EGRA test by ethnicity were Brahmin/Chettri, i.e., 70% (3,094). Of these, 28% (862) read fluently with full comprehension by the end of Year 2 and 16% (483) couldn't read during EGRA assessment 2017.

Experience on the ground, however, suggests that it is not only the Dalit students, who struggle, but also most other minority ethnic students, as well as those from higher castes from poor and disadvantaged communities such as those where majority of students' parents are illiterate or semi-literate farmers and laborers. Figure 10 shows the percentage of students within each ethnicity who read in the highest and lowest achievement categories.

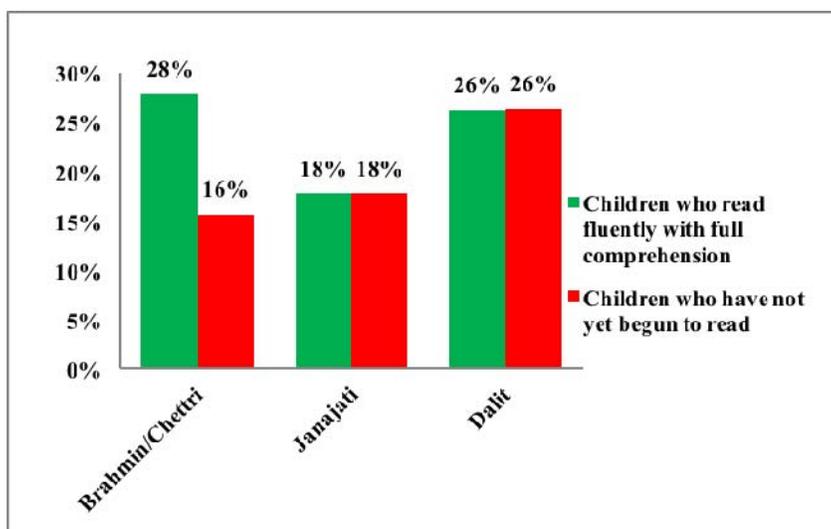


Figure 17: Percentage of students results by ethnicity

Language is also a factor which clearly affects outcomes. In the Far West (now Province 7) the majority of the students speak local languages from the Doteli (Dotyali) family of languages; Dadeldhuri; Baitadeli; Darchuli; Bhajhangli; Bajurali; and Acchamii depending on their community. These languages have a high degree of localized variation but also a high degree of mutual intelligibility with Nepali estimated at about a 70-72% overlap⁹. In contrast Janajati groups where

⁹Nepal Ethnologue - <https://www.ethnologue.com/country/np/languages>

students are more likely to be speaking a different mother tongue at home- most often Magar in this region- had the lowest learning outcomes at 18% reading at grade level. This is a challenge in that they are a small minority in the classes in these districts. In Banke and Dang where Tharu children are the majority, World Education’s Sangai Sikhau Sangai Badhau project used mother tongue materials and the Tharu language as a language of transition. This resulted in 29.7% of children being able to read at grade level at the end of Grade 3. More needs to be done to identify strategies teachers can use with Janajati students in classrooms where they are a minority to help them achieve similar learning outcomes to their classmates.

8.2 ECD Experience

Among the respondent students for the EGRA 2017, 56% of Grade 1, 58% of Grade 2 and 58 % of Grade 3 students had ECD (pre-primary) experience before starting school. Prior ECD experienced students have significantly higher scores in reading than students with no experience in ECD, which can be observed in Figure 16.

Therefore, the proportion of students without ECD experience could be one of the reasons behind the persistence of a significant number of students who are tested under grade level. If more children were better prepared as a result of ECD, they would have better understanding and reading skills like those who have been through ECD. The variable and generally poor quality of ECD classes in these districts could also be affecting the degree of impact ECD is having on subsequent EGR outcomes.

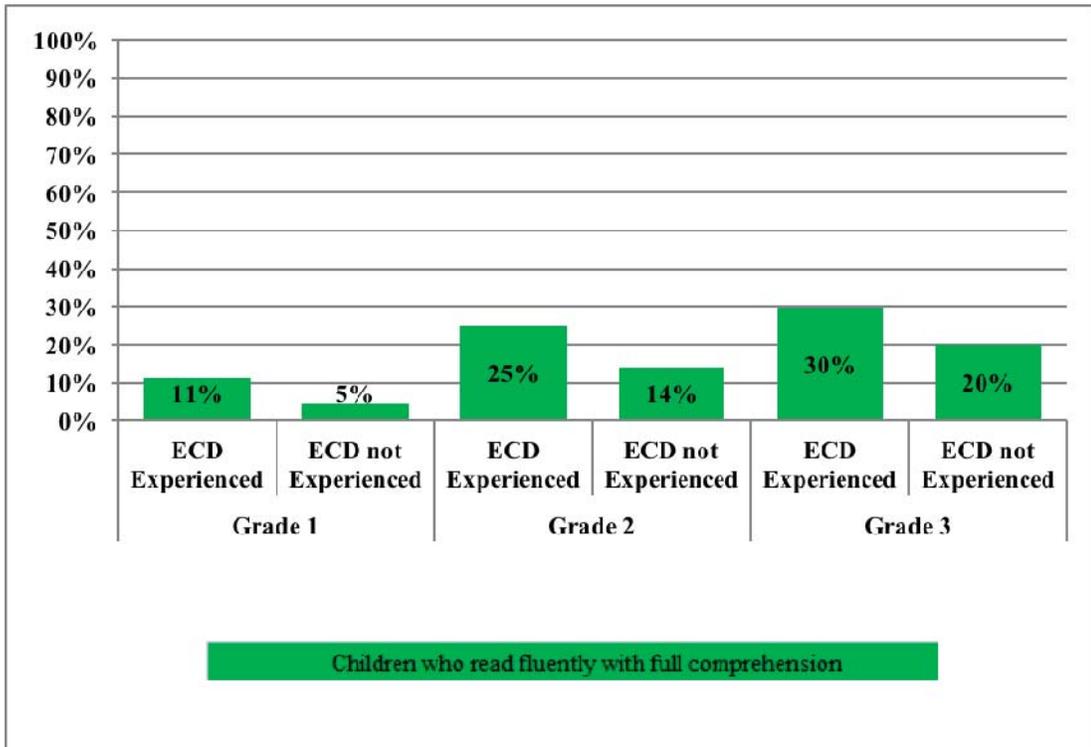


Figure 18: Percentage of students who meet indicators with/without ECD background

8.3 Effective Teaching Practices

Students’ achievement in any subject is determined by the effectiveness of the teaching inside the classroom. Teacher effectiveness is one of the most important factors affecting learning outcomes of the students as well as overall level of success. The best planned curriculum can also fail without an effective teacher (Educational Research Service, 2004).¹⁰

¹⁰Educational Research Service. (2004). What can schools do to reduce the achievement gap? Arlington, VA: Author. Retrieved from <http://www.ers.org/otsp/otsp3.html>

As seen from the data, about 30% of students assessed in the EGRA come from marginalized communities and more than 50% are from poor households. Schools with high numbers of disadvantaged and minority students also tend to have more under-qualified teachers. It can be assumed that most of the schools have similar situation regarding the qualification and level of teachers. This may be the reason why the learning targets are still not being achieved by some students.

A major challenge faced during the project implementation was the high rate of teacher turnover within the project period. Most of the teachers who left project schools had received training on EGR. Most of the EGR trained teachers left the job after getting new opportunities elsewhere, and there were also transfers of teachers from EGR project schools to other non-project schools. So, it remains a challenge to keep EGR trained teachers in some of the project schools.

9. Conclusions

World Education has been implementing EGRP under the School Feeding Program since January 2015 and Phase I will continue through December 2017. Altogether 1,040 schools in 156 VDCs of six districts are currently participating in the project. Before implementing the project, an external survey was performed by Kimetrica on the students of Baitadi, Bajhang, Bajura, Dadeldhura, Dailekh, and Doti, which is considered as baseline data. Similarly, World Education conducted EGRA in 2016, during the initiation of project as Year-1 and later on 2017 as Year-2. Both the EGRA were conducted in six project districts.

Results of EGRA 2017 show that the scores in all component sections mentioned increased compared to EGRA 2016 and baseline study across all grades and districts. The proportion of Grade 1 students reading at grade level tripled, and the proportion of Grade 2 students more than doubled, and in Grade 3 the proportion nearly doubled. These trends show that the project has been effective in positively impacting students' early grade reading outcomes.

Average progress in Darchula district is significantly higher than rest of the districts followed by Dailekh and Dadeldhura districts. Also, Jajarkot and Baitadi districts are progressing far more than in the previous year but their rate of improvement are slower than other districts. The reason behind this may be the presence of more minority communities, disadvantaged groups, parent's lack of literacy skills and poverty in the remote areas along with lower teacher retention rates.

Overall results suggest that further consideration may need to be given to the role of gender, caste/ethnicity, and ECD experience in early grade reading outcomes. These results will help World Education and its stakeholders to identify areas of improvement to increase effectiveness and impact on improving student literacy in the target districts during the next phase of the project.

As Dadeldhura is to be a NERGP government supported district this is to be phased out this year with the DEO taking over the program with RTI/USAID support. Dadeldhura has been achieving good learning outcomes and it is expected that the NERGP will be able to sustain these. Due to reduced support worldwide for the USDA McGovern-Dole School Meal Program Dailekh and Baitadi were identified for EGL phase-out in 2017 to be replaced by Rukum and Doti. Dailekh has progressed well achieving good outcomes in Year 2 and ways need to be found to expand EGR support in this district as initial results were modest but rapidly improving and there is an ongoing need in both project and non-project schools. Baitadi has a number of special challenges. While food security has been improving in this district there are still many disadvantaged communities with food security issues and poor learning outcomes. Many of the communities were former Haliya (bonded ploughman communities) that have historically been marginalized and have had limited support to improve livelihoods after this form of modern day slavery was abolished in 2000. Baitadi has worked hard to improve its EGR results but it was plagued by high teacher turnover with 61 community hired teachers leaving project schools in just one year. The wide gender gap for students learning outcomes remains a cause for concern.

Darchula has been a high performer despite teachers finding equally poor results initially. The DEO in this district has been very proactive in pushing schools to work hard to achieve EGR learning outcomes. The NGO Reading Motivators have also been extremely active making home visits to the families of children with poor attendance or poor learning outcomes and working with parents to meet these children's needs. The Reading Motivators also hosted "tole"¹¹ reading activities during the holiday breaks to help children to continue to build skills rather than see these regress over the school holidays. This consistency of effort from all stakeholders helps explain the huge progress with 72% of Grade 3 students meeting national standard after two years of interventions.

Jajarkot was identified in Year One as being the district with the weakest learning outcomes. The district has high levels of food insecurity, extreme poverty, poor ECD provision and high levels of parental illiteracy. Schools were heavily impacted during the civil war and this undermined school governance. The district is also short of 700 qualified teachers and many schools are in extremely poor physical condition. A lack of water due to climate change undermines WASH efforts and the schools frequently are impacted by disease outbreaks causing high levels of absenteeism. The DEO staff has been extremely active and supportive and the combined efforts of students, teachers, parents, NGO and DEO staff, PTAs and SMCs have resulted in 26% meeting national standards at Grade 3 after two years of effort. While this is a remarkable achievement over just two years much more effort is needed to build on this progress and ensure the gains made can be sustained under these conditions.

¹¹Tole or neighborhood reading groups

Annexes

Annex A: Early Grade Reading Assessment Questionnaire Sheet



Early Grade Reading Assessment (EGRA)
प्रारम्भिक तह पढाइ मापन

मिति: सर्वेक्षकको नाम:

(१) विद्यार्थी सम्बन्धी

कोड नं.:

नाम थर :

ठेगाना:

कक्षा : उमेर :

विद्यालय पुन लाग्ने समय: मिनेट

पूर्व प्राथमिक: छ छैन

घरमा पढ्ने बानी: छ छैन

घरमा पढ्न सघाउने व्यक्ति:

घरमा बोल्ने भाषा:

लिङ्ग : जातजाति :

आमाको पेशा: बुबाको पेशा:

(२) विषयगत उपलब्धि:

| | |
|------------------------------------|----------------------|
| १. सुनाइ बोध | <input type="text"/> |
| २. व्यञ्जन वर्ण | <input type="text"/> |
| ३. स्वर वर्ण | <input type="text"/> |
| ४. सरल शब्द | <input type="text"/> |
| ५. मात्रा लागेका शब्द | <input type="text"/> |
| ६. संयुक्त शब्द | <input type="text"/> |
| ७. शब्द चित्र अर्थ | <input type="text"/> |
| ८. कथा पढाई | <input type="text"/> |
| ८.१ एक मिनेटमा शुद्ध पढेको शब्दहरू | <input type="text"/> |
| ८.२. बोध | <input type="text"/> |

१. सुनाइ र बोध :

ढुकुर र कमिलो

एउटा कमिलो थियो । त्यस कमिलालाई खोलाले बगायो । ढुकुरले कमिलालाई खोलाले बगाएको देख्यो । ढुकुरले छिट्टै एउटा पात ल्यायो । ढुकुरले खोलामा पात खसाल्यो । कमिलो पातमा चढ्यो । ढुकुरले त्यो पात खोला बाहिर ल्यायो । कमिलोको ज्यान बच्यो । कमिलाले ढुकुरलाई भन्यो, “ढुकुर दाइ, धन्यवाद ।”

एकदिन ढुकुर रुखमा थियो । ढुकुरलाई एउटा सिकारीले देख्यो । सिकारीले ढुकुरलाई बन्दुक ताक्यो । कमिलाले सिकारीले ढुकुर मार्न लागेको देख्यो । कमिलाले त्यतिखेरै सिकारीको खुट्टामा किटिक्क टोक्यो । सिकारी ऐया भनेर करायो । उसको बन्दुक पनि भुइँमा खस्यो । सिकारी कराएको सुनेर ढुकुर भुर्र उड्यो । सिकारी जिल्ल पन्यो ।

१.१. उत्तर भन :

- (क) ढुकुरले के देख्यो ?
- (ख) कमिलाको ज्यान कसरी बच्यो ?
- (ग) ढुकुरलाई कसले देख्यो ?
- (घ) कमिलाले सिकारीले के गर्न लागेको देख्यो ?

२. तलका अक्षर पढ :

(व्यञ्जन)

| | | | | |
|-----|---|---|---|-----|
| छ | ज | झ | घ | ध |
| क्ष | ड | म | ञ | ड |
| थ | श | प | ह | ण |
| च | ट | ठ | फ | ष |
| द | य | ल | ढ | र |
| भ्र | ख | त | स | व |
| ब | न | क | ग | भ |
| | | | | त्र |

३. तलका अक्षर पढ :

(स्वर)

| | | | | | |
|---|----|---|---|---|---|
| औ | अं | ऐ | आ | ओ | उ |
| अ | अः | इ | ई | ए | ऊ |
| | | | ऋ | | |

४. तलका शब्द पढ :

(सरल शब्द)

कमल

घर

पक्ष

चहक

भन

५. तलका शब्द पढ :

(मात्रा)

मात्रा

हिसाब

ढिकी

ढुकुर

भूल

मेवा

मैना

भोको

मौका

अंश

बाँस

६. तलका शब्द पढ :

(संयुक्त शब्द)

भान्छा

चप्पल

सर्प

बाख्रा

घ्याम्पो

७. शब्द पढेर चित्र देखाऊ :

डालो

कोदाली

मकै

कौवा

माला



C. कथा पढ :

एउटा काग थियो । कागलाई तिर्खा लाग्यो । काग पानी खोज्न उड्यो । कागले कतै पनि पानी देखेन । उड्दा उड्दा कागले एउटा घँटो देख्यो । घँटामा अलिकति पानी थियो । कागले घँटाको पानी खान खोज्यो । कागले पानी भेटेन । कागले पानी कसरी खाने भनेर विचार गर्‍यो । कागले घँटाको पानी माथि ल्याउने उपाय सोच्यो । कागले साना साना ढुङ्गा ल्यायो र घँटामा हाल्यो । घँटामा धेरै ढुङ्गा भएपछि पानी माथि आयो । कागको चुच्चाले पानी भेट्यो । कागले पेटभरि पानी खायो र उड्यो ।

२.२. उत्तर भन :

- (क) काग के खोज्न उड्यो ?
- (ख) कागले के देख्यो ?
- (ग) घँटोमा कति पानी थियो ?
- (घ) कागले घँटोमा के हाल्यो ?
- (ङ) कागले कसरी पानी खायो ?
- (च) तिमीलाई तिर्खा लाग्यो भने के खान्छौ ?

Annex B: District/Gender Result Presentation

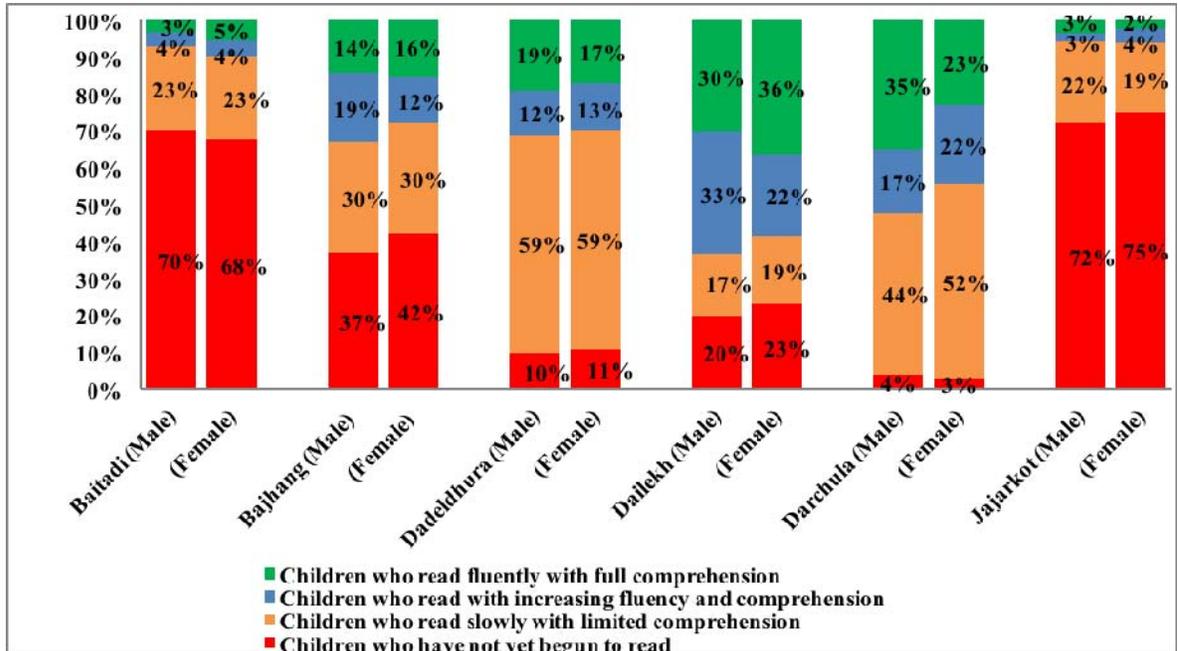


Figure B1: Learning Outcomes by District & Gender- Grade 1

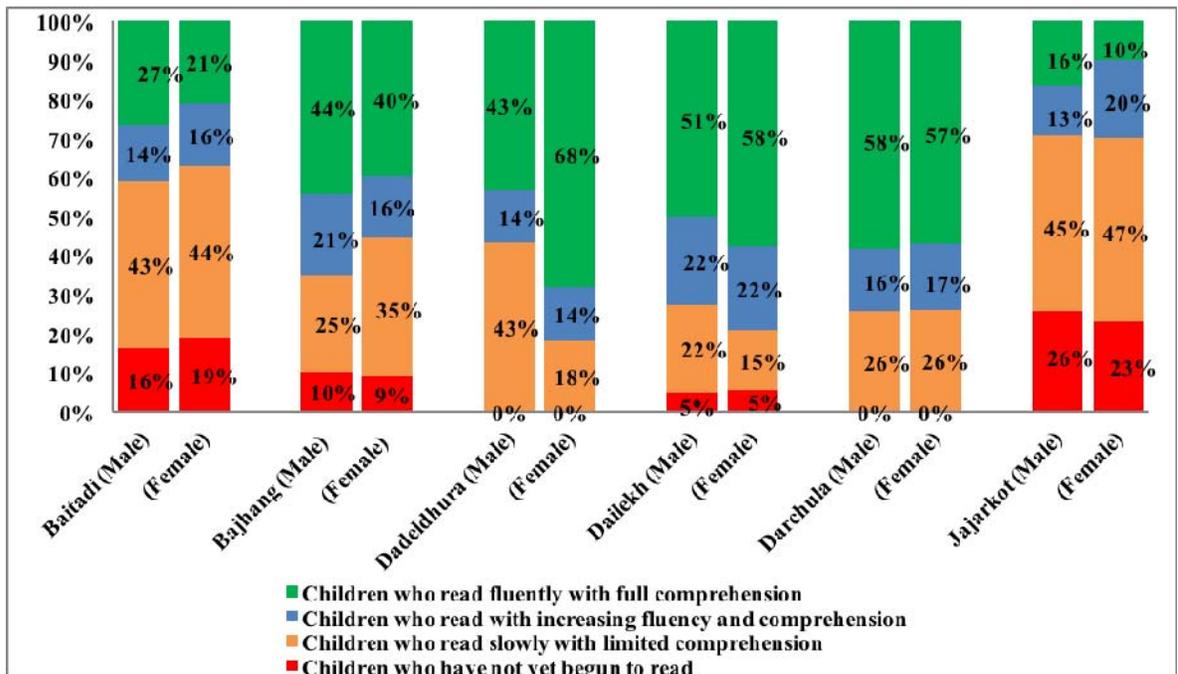


Figure B2: Learning Outcomes by District & Gender- Grade 2

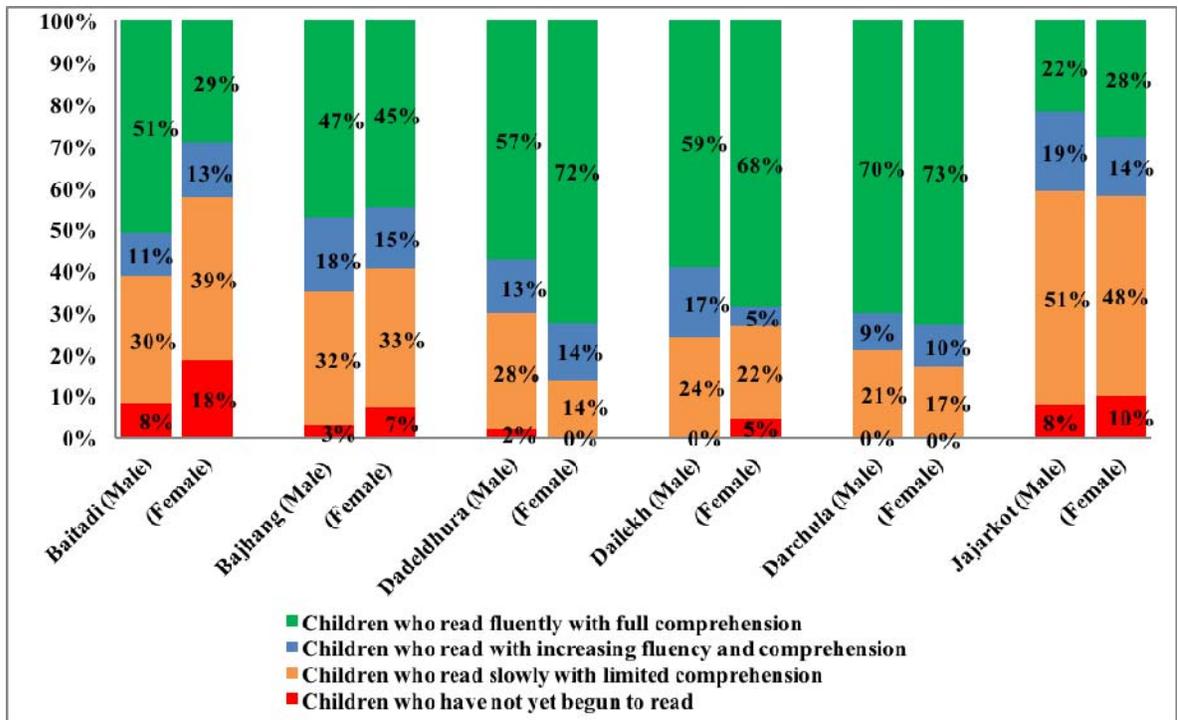
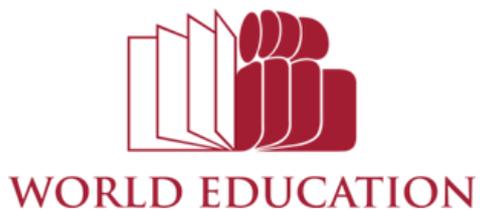


Figure B3: Learning Outcomes by District & Gender- Grade 3



World Education, Inc.

Ratopul, Kathmandu, Nepal

Phone: +977 4422385

Fax: +977 4415303