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Early Grade Learning Competency of Young Children

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Abstract: ***The Early Grade Reading Assessment is an oral student assessment designed to measure the most basic foundation skills for early grade learning. This research was conducted to find out the early grade learning competency of young children (Grade 1, 2 and 3) of Myagdi and Baglung District. This study was conducted on November-December of 2019. Question sets were developed for grades (1-3) and all tests; reading comprehension, reading fluency and mathematical competency. 573 students of Grade 1, 2 and 3 from 16 schools were participated in EGRA. The average reading comprehension was lower than passed benchmarked (35 out of 100) in all levels of students. Reading fluency was around 15 correct words per minute and mathematical competency was also below the pass benchmarked. However, it was notable that, girls had higher score in all three testes- reading comprehension, reading fluency and mathematical competency in all three grades- Grade 1, 2 and 3. Moreover, this study found that mathematical competency of Grade 1 students was higher than that of Grade 2 students.***

Keywords: Early Grade Reading Assessment, Reading Comprehension, Reading Fluency, Mathematical Competency

1. Introduction

The Early Grade Reading Assessment (EGRA) is an oral student assessment designed to measure the most basic foundation skills for literacy acquisition in the early grades: recognizing letters of the alphabet, reading simple words, understanding sentences and paragraphs, and listening with comprehension. Generally, assessment is used to measure children's progress towards learning to read. EGRA is administered orally by an assessor, one-on-one with a child. The key components of early reading of EGRA are measures alphabetic principle, phonemic awareness, vocabulary, fluency and comprehension.

EGRA assesses critical skills that early primary-age pupils (grades 1-3) need in order to read with understanding and to be successful in other subjects and later grades. The components of EGRA are aligned with essential and teachable reading skills that research shows children can and should acquire in the early grades [1]. We have to focus on reading because the ability to read and understand a simple text is one of the most fundamental skills a child should have for learning. Again, the measurements of how quickly and accurately children can read a text out loud, and how well they can understand it align with both scientific and a popular understanding of what it means to be able to read [2].

We can apply EGRA to examine gaps in reading competencies to raise awareness, improve policy, curriculum, etc. for district, religion and country level. EGRA helps to identify key skills or areas of instruction that need to be improved in order to target interventions such as teacher training, materials, etc. Result of EGRA can inform education sector strategic planning, resource allocation and budgeting, to evaluate outcomes of program designed to improve specific early grade reading skills and to help to develop reading indicators and benchmarks [3]. But EGRA measures a specific set of critical early grade reading skill, not necessarily all important literacy skills. Also individual nature of assessment administration and size of a typical sample means it is usually used to report results at a regional, national or program level, not district, school, or student level. EGRA is not a high-stakes accountability tool for study. EGRA assessment is not suited for direct cross-language comparisons, but could be used to report on percentage of children meeting grade-level expectations [4].

1.1 Theoretical Foundation of EGRA

Children need basic foundation for literacy acquisition in early grades. Basic literacy will be foundation for the further learning process. However, measure of basic literacy is one of the major challenges, because it focuses on three early stages of reading acquisition: emergent literacy, decoding and confirmation and fluency [5]. The Early Grade Reading Assessment (EGRA) is one of the tools which is individually administered oral assessment of the most basic foundation skills for literacy acquisition in early grades. It was created to provide a reliable and valid measure of skills that contribute to reading acquisition [6]. EGRA refers to both a specific assessment tool, and at the same time, has come to be adopted as a generic concept for early grade reading assessment program.

With emergence of MGD and during 1990s, most of the countries committed to the United Nations (UN) campaigning or goal "Education for All". All of them were ready to ensure universal access and completion of primary education for young children. All countries and development partners (DPs) were ever focusing on the education for all and its being heavy progress on enrollment rates of the young children in pre-primary, however it failed to mean high quality education even in basic learning [7]. For example, the net enrollment rate of young children in primary education was almost 97% [8]. However, the average score of grade 5 students was only 51 (out of 100) and score on dictation, composing and correct writing was only 30 [9]. While the "Education for All" (EFA) goals were successful in increasing enrollments, little information was available on learning outcomes. Because EGRA finds that if the children are not performing well, it is because they didn't know content, or because they couldn't read the test.

So EGRA is the theoretical foundation that supports quick adaption to meet demand for early assessments. So, we have to use EGRA for betterment of student achievement [10].

Teaching young children to read is the foundation of improving educational outcomes, and has far-reaching implications. If children learn to read at an early age, children cannot fascinate more innovative skills and content that trust on reading [11]. Moreover, if they do not learn to read in early grades, it results in poor reading skills and unsatisfactory result in upper grade. They may not absorb printed information, follow written instructions or communicate well in writing. One of the researches exposed that better learning is more impactful than years of schooling to a country economic growth [12]. Assessment data of early grade literacy in low-income countries, although still limited, reveal that many students are not mastering the basic skills of reading. In some countries, a majority of students at the end of Grade 2 are unable to read a single word of a simple paragraph in the language in which they are being taught [13]. In this context, EGRA was developed to measure the students' progress towards learning to read because education for all may not be fruitful without low learning levels among the country's students.

Measuring how well students read can make policy makers, educators, and donors more conscious of how low reading levels are and what the inferences are for forthcoming learning. Such consciousness can lay the substance for debates of how to best address the problem. The EGRA is one of the tools to measure the student learning achievement of pre-primary (1-3). EGRA is administrated orally and one student at a time [14]. EGRA was the basic tool administrated by RTI, International in 2006. Although these assessments have shown very little levels of basic literacy skills in many countries, the results have encouraged policy makers and educators to pursuit for resolutions to address the deficiencies, including developing teaching and learning strategies and materials. Many of these energies have resulted in inspiring developments in reading levels. This study aims to explore the learning level of pre-primary level of students (Grade 2 and 3) of study area.

1.2 N/EGRA in Nepal

Now EGRA is used by more than 60 countries, more than 30 organizations and more than in 100 languages [15]. Nepal defined EGRA in terms of National Early Grade Reading Programmed Document (NEGRA). Nepal included the NEGRA in the SSRP plan just in 2015/16. Ministry of Education has included the key priority areas for implementation in the next two years. In Nepal, the NEGRA is a five-year program of the Government of Nepal which was implemented from the fiscal year 2014. The programme focuses primarily in improving the reading skills of students in early grades, especially in the GGrade 1-3 of primary level. The programme's document is prepared to supplement the concept and the nature of NEGRA as envisioned in the SSRP [16]. In context of our country, the lingua franca being Nepali is generally most widely used language. When a research done by Ministry of Education with the aid of USAID in Karnali inquiring the teachers on the usage of mother tongue as a medium of teaching in the class than 46% of teachers were of the opinion that instruction in one's mother tongue is essential while teaching the students at an early grade reading; likewise 26% did not lay an emphasis of mother tongue but rather Nepali for early grade reading and a 28% of the teachers had to say that mother tongue for early reading was beneficial for some aspects.

1.3 Problematic Issues and Objectives of the Study

Children who learn to read within the first few grades of primary education have a greater chance of success in completing primary education. Moreover, the researcher shows that learning to read both early and at a sufficient rate are essential for learning to read well. Learning to read becomes more difficult as children grow older and children who do not learn to read in the first few grades are more likely to repeat and eventually drop out [17].

Children must initiate discovering the world and its dynamics from initial schooling. Explorations of the world and knowledge acquisition become evidences through reading [18]. Moreover, if young children are successful in early grade reading and understanding, it will be the milestone for the better achievement throughout schooling and beyond. Better learning in early grade is critical window of opportunity, and prepared to read for learning and for pleasure in later lives. Likely, students' poor reading competence negatively influences the process and outcome of instruction. Therefore, early reading problems must be investigated early in order to avoid the escalation of reading difficulties later [19]. This will help for formative classroom management and lead to appropriate decisions for teachers and management. So, the overall objective of this study is to find out the early learning competencies (early grade reading assessment) of young children.

2. Research Methodology

This study was conducted on November-Decemeber, 2019 in Baglung and Myagdi District. Quantitative research method was adopted collecting numeric data using structured questionnaire. 8 schools from Baglung and 8 schools from Myagdi were selected. The schools were selected on the basis of geographical location such as: urban, semi-urban and rural area. EGRA test was conducted to all students of Grade 1, 2 and 3 from the selected schools. In total, 573 students were participated in the EGRA. Among them, 279 were boys and 291 were girls. 312 students were from Dalit communities and 261 were from ethnic groups.

To find out the achievement of the students of Grade 1, 2 and 3, the researcher had developed the question sets based on the curriculum of ECED prescribed by the Government of Nepal. Different question sets were developed for all three testes: reading comprehension, reading fluency and mathematical competency for all Grade 1, 2, and 3. After that, the researcher had discussed with the primary level teachers and educationists about the questions sets. Question sets were revised on the basis of the recommendations provided by the teachers and educationists. Revised questions were tested in one school from Kathmandu

district. 13, 9 and 12 students were participated in the pilot test and questions were revised after the pilot test.

The quantitative data were analyzed by employing software package named statistical analysis (SPSS) version 21. The achievement score has been calculated through percentage of total average. To address the reliability and validity of the data, questionnaire was developed after the review of several literatures. Moreover, Cronbach's alpha test was done for the reliability of the survey questionnaire. Furthermore, for the validity of the data, data and information were triangulated by cross checking it with the secondary data, and simply observing the existing scenario. Furthermore, the information obtained from qualitative and quantitative techniques were triangulated with each other. This is how, the validity will be assured. In the matter of considering sensitivity, the researcher was alert on the personal quality of patience, persistence, tolerance, confidence, commitment, honesty, diplomacy, and an acceptance that some questions may never get answered, knowing when to ask probing questions (Harrison, 2006).

3. Findings and Discussion

3.1 Reading Comprehension, Reading Fluency and Mathematical competency of Students

Early learning competency was measured by measuring of reading comprehension, reading fluency and mathematical competency. 15 questions (fill in the blanks) were administrated. 20 questions were administrated for mathematical competency, and 30 familiar words were used to find out reading fluency for Grade 1.Likewise, six questions were administrated on the basis of given paragraph for reading comprehension, six questions were administrated for mathematical competency and 40 familiar words were used to find out the reading fluency for Grade 2. Same procedure was adopted for reading comprehension and mathematical competency for Grade 3. However, 60 familiar words were used to find out the reading fluency for Grade 3.

3.1.1 Reading Comprehension: Significantly Different from National Average

Average scoring of ELC of grade one was 33%. The ELC score of girls was higher than boys and score of Dalit students was significantly lower than other caste. Likely Early grade reading competency of Grade 2 students was found 31.70 %, 33.36 % and 30.55 % for boys, girls and Dalit students respectively, while it was 32.60 % for students from other ethnic groups. Moreover, early grade reading competencies of Grade 2 students was 32%. Categorically, reading competencies of boys was 32.42%, that of girls was 34.36%, that of Dalit students was 31.10% and that of other caste was 35.26%. According to NEGRP document, average reading competencies/ comprehension questions answer of Grade 2 and 3 is 35% and 45% [20]. This means that students can answer of only 35 questions out of 100 questions in Grade 2 and can answer of only 45 questions out of 100 questions in right way. This shows that, reading comprehension of the students of study area was found significantly lower than the national average. Moreover, 19% students of US have less than 35% reading comprehension and only 10% of US students have around 90% reading comprehension [21]. In the same way one research of RTI international revels that, around half of grade two and more than a quarter of grade three students are unable to answer even one comprehension questions [22]. This shows that, reading comprehension is a major issue throughout the world. However, the status of reading comprehension of the study area is found significantly lower than the national and international average. It is found interesting that, education review officer (ERO) of the MoE published a class based EGRA assessment in 2017. This reports shows that, the average value of EGRA in Grade 2 and 3 was 65% [23]. However, the average EGRA score of Grade 1, 2, and 3 students of study area was found less than 35%. This shows the significant difference in early grade learning achievement of the students according to geographical regions. This shows that, the study area has higher disparity in learning systems and learning achievement of the students.

Regarding the gender difference on reading comprehension, this study found that girls have higher score than boys, but this was not significantly higher. One of the researches reveals that there was not significant difference in reading comprehension test in their native language [24]. The global status of the girls and boys is in line with a result found by this study. Globally, the average reading comprehension scores of girls is 54% but boys have only 46.8% [25]. All studies show that girls' reading comprehension is better than that of boys because girls are better in reading skills ability. Among eleven reading skills, girls have better skill than that of boys in nine reading skills [26]. So, gender difference affects reading attainment through some aspects. Dissimilar trait from family and society forms students' gender and personality, which plays effective role for reading comprehension achievement. Regarding the Dalit students, they are apart from the resources and opportunities. So, they are unable to develop their human capital [27].

3.1.2 Reading Fluency: Girls As Better than Boys

Reading fluency of Grade 1 students was measured through correct word reading. This test was conducted with the 30 words per minute. However, average reading fluency of the students was only 8.3 words per minute, which is almost 31% of expected result. Moreover, the average reading fluency of girls was higher (9.5) than boys and ethnic groups (9) was higher than Dalit (7.6). In case of Early Grade reading comprehension (fluency) of Grade 2, the average reading fluency of boys was 14 words per minute, that of girls was 14.5 words per minute, that of Dalit students was 13 words per minutes and that of other ethnic groups' students was 14 words per minute. Similarly, EGRC for reading fluency was assessed conducting a test for Grade 3 students. EGRC for reading fluency of grade three students was found 15, 17 and 13 per minute for boys, girls and Dalit students respectively while it was 15.5 per minute for students from other ethnic groups. This shows that all of the students can correctly read less than 15 words per minute in early grade. Moreover, reading fluency of girls seems higher than boys and other caste students' reading fluency seems higher than Dalit students. In spite of 94.5% teacher was with the required qualification and training, this result shows the issues in learning achievement of young children. Other pre-requisites and basic training in teaching reading skills

are needed to the teacher. Because, GoN has introduced the Priority Minimum Enabling Condition (PMECs) for basic enabling conditions for improving the quality education but only 4% of the schools have met all five PMECs, about 11% of schools have fulfilled only one PMEC, while around 23% have fulfilled two PMCEs and only 3% schools have fulfilled three PMECs [28].

Reading fluency of the young children in study area is looking lower than the national average and other district. The benchmark for the reading fluency is 25 or more words per minute for Grade 1 students, 35 or more word per minute for Grade 2 students and 45 or more words per minute for Grade 3 students [28]. Study conducted by world education was found that, the reading fluency correct word per minute in Baitadi was 4.4, Jajarkot was 3.1, Dadeldhura was 12.7 and Dailekh was 18.3 for Grade 1[29]. However, this study explore that the reading fluency of Grade 1 is higher than Baitadi and Jajarkot but it is lower than Dailekh and Darchula. However, the reading fluency of the study area for Grade 2 and 3 is found lower than the other districts: Jajarkot (16.6 for Grade 2 and 31.6 for Grade 3), Baitadi (23.7 for Grade 2 and 37.7 for Grade 3) and so on. However, the EGRA score of students in Makawanpur is same as this study, for example the familiar words reading of students was around 11 words per minute for Grade 1 students [30]. However, reading fluency depends upon the experience on ECD, native language and language used in home. One of the studies conducted in Ethiopia, Gambia, Guyana, Honduras, Liberia, Mali, Nicaragua, and Uganda. This study found that no statistically significant gender differences in the percentage of students who cannot read a single word of a short narrative text. However, five EGRA applications found significant differences between the skills of boys and girls. A greater percentage of girls than boys were unable to read in Ethiopia (SNNPR region, 79% of girls vs. 60% of boys), Mali (Songhoi language, 89% of girls vs. 78% of boys), and Uganda (Lango region and language, 85% of girls vs. 78% of boys). In contrast, a higher percentage of boys than girls were nonreaders in Guyana and Liberia (30% and 35% of boys vs. 17% and 25% of girls, respectively) [31]. However, this study explored that, there is significant difference between girls and boys in terms of their ability to read Nepali language. For example, 34 % of Grade 1 and 25 % of Grade 2 boys cannot read even a single word. However, this percentage was 20 and 9.5 for girls in Grade 1 and 2 respectively.

Some researches were conducted about to EGRA in Nepal. Most of the findings are found in line with this study. For example; only 43% students in Grade 2 could read all letter correctly [32]; 36% of native Nepali speaking students in Grade 3 could not read a single word in a text [33]; 80% students in Grade 2 could not read a single word and the reading fluency of Grade 2 students was only 5 words per minute [34] Only 12.53% students in Grade 2 and 23.08% in Grade 3 could read all simple correctly [35]. This shows that the reading fluency of the students in study area is lower than other findings.

The early grade reading competence has salient roles for the success of young children's learning and cognitive development [36]. However, reading comprehension of the study area was found very low. So, if concerned authorities do not start to mitigate the issues related with early grade learning, youth children will be divested from resources and opportunities.

3.1.3 Mathematical Competency: Gradually Decreasing in Upper Classes

Mathematical competency competency was also measured through administrated questionnaire. The study revealed that mathematical competency of the Grade 1 students was only one third. The average score of the mathematical competency was found only 33.40. Average score in mathematical competency of girls was found significantly higher than boys and ethnic group students' was higher than Dalit students. Likely, mathematical comprehension of Grade 2 was also in the same line. The average score of boys was 31.10, girls was 31.70, Dalit students was 30 and students from ethnic groups was 32.6.A particular test was conducted to know the *early mathematics comprehension* (EMC) for the students of Grade 3 which were found 35.31 %, 35.53% and 33.38% for boys, girls and Dalit students while for students from other ethnic groups it was found to be 35.70.10% in the project schools. In control school, it was found 35.30 %, 35.98%, 33.90% and 36.30 % for boys, girls, Dalit and students from other ethnic groups. This study reveals that mathematical competency is looking higher than comprehension competency and reading fluency. However it is also not as expected. Mathematical competency of Grade 3 students was higher than Grade 2 and Grade 1 students and girls has slightly higher mathematical competency than boys. Dalit students have lower mathematical competency than other caste students similar as reading comprehension, reading fluency. Finding of this research is contradict with other research because EGMA found that less than 5% of children in grades 1-3 demonstrated grade-level mastery of both number sense and basic operations tasks. Likely 30% of students age 5-7 in community schools could not recognize single-digit numbers, and another 21% could recognize single-, but not double-digit numbers [37]. In the ASER conducted in Parsa district, 50% of children in grades 3-5 could not do Grade 2-level subtraction (two double-digit numbers) and 70% of Grade 3-5 children could not do simple division (e.g. 12 / 3) [38]. This shows mathematical competency of students found very low as per needed. Even though improving math learning is necessary for each individual and society as well, because mathematics helps to managing money, time and navigating the world. Moreover, early mathematics learning is linked to higher future earning [39], general decision-making [40] and later academic success [41] including reading abilities.

4. Conclusion

The basic reading skill of youth children is very low. Reading comprehension of all grade; Grade 1, 2 and 3 are in same level. That is below than the national level and below than other districts as well. Average score of reading comprehension is below than pass marks (35). However, girls have higher reading comprehension than boys, but Dalit students have lower reading comprehension than other caste students. Moreover early grade reading comprehension of the Grade 1 students is slightly higher than Grade 2 and Grade 3. However, score of all level students is below the

national benchmark of passed score (35). However, it is notable that, instead of higher constrains than boys girls have higher reading comprehension score.

Reading fluency of the youth children is another major issue in EGRA. Correct word reading per minute is another indicator for early grade learning. Regarding the Grade 1, only around one third words can read correctly in one minute. Similarly, Grade 2 students can read only around 15.5 words correctly in a minute and Grade 3 students. However ethnic group students can read more than Dalit students and Girls can read more word correctly than boys and other ethnic group students.

The average score of mathematical competency is below than pass benchmarked of the government. However, mathematical competency of girls is higher than boys and ethnic group of students is higher than Dalit students. Moreover, mathematical competency of Grade 1 student is higher than Grade 2 students and mathematical competency of Grade 3 students is higher than Grade 1 and 2 students.

Low learning rate of early grade students is one of the challenges in current educational context. However, it can be solve through initiatives of government, teachers, students, parents, development partners and school environments. Government of Nepal has introduced the National Early Grade Reading Program (2014/15-2019/20). This project has planned in improving reading skills of all students in Grade 1-3 students through, strengthening early childhood education and development, instructional design, materials development, teacher professional, continuous assessment, community development and research (MoE, 2015). However, only this may not sufficient for the overall learning of young children, because mathematical competency and knowledge on English language are also important for the individual and social development.

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