DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Reading and Numeracy Difficulties in the Transition to Face-to-Face Classes

Rey S. Navarro and Emelyn D. Bolongaita
Pindahan Elementary School
Chief Education Supervisor in Schools Governance and Operations Division
Pindahan, Tayasan Negros Oriental
Canlaon City, Negros Occidental
reynavarro001@deped.gov.ph
emelynbolongaita@gmail.com
0009-0005-5257-991X
0009-0004-9439-4799

Abstract

Identifying the challenges learners face in acquiring and developing skills in school is valuable for developing concrete educational innovations. This study uncovers the difficulties learners experience in reading and numeracy during the transition to face-to-face classes in a public elementary school in a large division of Central Visayas. This descriptive research collected responses from 54 Grade 4 learners using a self-made questionnaire, which underwent validation and reliability testing. The findings revealed that (a) a moderate level of difficulties was experienced by learners in reading and numeracy, (b) there is a significant difference in the level of difficulties in reading and numeracy in terms of sex specifically in fluency and basic operations, and (c) there is a significant relationship between the level of learners' difficulties in reading and numeracy. The results proposed developing a culture of equality among learners and strengthening the LEND Program. It also encourages teachers to use various reading and numeracy activities, such as oral reading, interpretation, and story retelling, as well as board games, number puzzles, math challenges, and interactive quizzes presented through PowerPoint.

Keywords: *Basic operations, fluency, number sense, numeracy, reading comprehension, word recognition*

Bio-profiles

Rey S. Navarro has been a public school teacher at Pindahan Elementary School for six years. He earned his bachelor's degree in Education, majoring in General Education, at Negros College Incorporated, now known as Negros Academy and Negros College Incorporated (NANCI), in 2014. He pursued a master's degree in Education, major in Administration and Supervision at STI West Negros University in Bacolod. His research interests focus on reading comprehension, literacy development, numeracy skills, and practical classroom management strategies, which motivate him to conduct his study.

Dr. Emelyn D. Bolongaita is the Chief Education Supervisor in the Schools Governance and Operations Division (SGOD) of Canlaon City. Her research interests include reading and literacy, language education, leadership and management, and related fields.

Reading and Numeracy Difficulties in the Transition to Face-to-Face Classes
DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Introduction

Rationale

Reading and numeracy are among the most essential skills a learner must acquire during their educational journey. These skills are the means by which a learner becomes independent and achieves in various areas of learning. Ayade et al. (2019) stated that reading and numeracy are the foundations that support lifelong learning. Since these skills are integral to learners' daily communication, they are considered the most essential, not only for successful learning in the early grades but also at higher levels of education. Therefore, to ensure success at the school level and later in life, a solid foundation for these skills is necessary.

In general, reading is an engaging performance through which one gets a new understanding of the subject or theme. It connects different mental processes in the brain to establish a relationship with the given ideas. What it means is that to be able to dissect, analyze, and understand texts, one has to be very skilled in at least three essential areas, i.e., word recognition, comprehension, and fluency (McKee, 2013). On the other hand, numeracy refers to the ability to understand and apply numbers effectively. In fact, this can be demonstrated through a range of skills, such as recognizing numbers and performing basic operations. Aunio et al. (2016) even emphasized that early numeracy skills are the primary factor children should acquire to learn mathematics at school, as they depend on early numeracy competence.

However, the COVID-19 pandemic has significantly impacted learners' mastery of these skills. Upon the reopening of schools under the new standard setup, the learning gaps resulting from long absences became more visible. For instance, at one public elementary school in a large division of Central Visayas, teachers observed that many learners had not mastered the basic competencies of previous grade levels. In accordance with Division Memorandum No. 900 series of 2022, the district conducted literacy and numeracy assessments for all learners across different grade levels. The results revealed that only 10 percent were independent readers, 49 percent were instructional readers, 33 percent were struggling readers, and 8 percent were non-readers.

Furthermore, 25 percent of the learners can be considered non-numerate for their grade level because they are unable to perform basic operations independently. In light of these difficulties, the teachers were encouraged to provide remedial instruction focused on reading and numeracy. Although learners who require reading and numeracy interventions have been identified, the root causes of the problem have not yet been determined.

Based on the conditions stated above, the researcher is motivated to conduct a study to identify the difficulties learners face in reading and numeracy.

Literature Review

Reading is not a natural phenomenon; it is a skill that requires purposeful effort. Internationally, scholars such as Mohammed and Ab Rashid (2019) and Hidayati (2018) identify core obstacles, including inadequate vocabulary, poor concentration, and difficulties in making inferences or determining main ideas. Satriani (2018) and Al-Jarrah and Ismail (2018) further argue that limited vocabulary and low motivation hinder word recognition and the comprehension of technical texts. Research by Nurjanah (2018) suggests that these deficiencies are often linked to unengaging teaching methods and poor reading habits.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Locally, the Philippine context reveals a critical situation where roughly 70% of learners struggle to read at their expected grade level. Estremera and Estremera (2018) and Imam et al. (2016) note that while students may recognize words, they struggle with higher-order skills, such as summarizing or critiquing texts. Factors contributing to this include teacher incompetence, a shortage of materials, and a lack of parental involvement. Recent studies by Ditona and Rico (2021) and Rodado (2021) emphasize that the COVID-19 pandemic exacerbated these issues, particularly in oral and silent reading comprehension.

In the domain of numeracy, foreign literature suggests a strong link between language skills and early math development. Aunio et al. (2021) and Kiss et al. (2019) observed that learners at risk often struggle with number-word sequences, basic fact retrieval, and multi-step procedures. Furthermore, Novriani and Surya (2017) highlight that a lack of imagination and reading comprehension often prevents students from translating word problems into symbolic forms. Karimah et al. (2018) also suggest that personality types and "mathematical anxiety" play significant roles in these difficulties.

In the Philippines, Capate and Lapinid (2018) identify Geometry, Algebra, and Patterns as significant areas of difficulty. Local research indicates that even when students follow correct procedures, they often fail to reach the right solution due to a lack of fundamental skills. Layug et al. (2021) point to recent PISA results as evidence of the country's numeracy deficiencies. Unay (2016) and Ganal and Guiab (2014) attribute these failures to "traumatic experiences," financial stress, and instructional methods that do not align with student capabilities. However, Velez et al. (2023) note that perseverance and expert consultation are effective coping mechanisms for these challenges.

Collectively, these studies underscore that reading and numeracy deficiencies are long-standing, systemic issues. The literature suggests that these two domains are deeply interrelated, with reading comprehension serving as a prerequisite for successful mathematical problem-solving.

Theoretical Underpinnings

The study is fundamentally grounded in Jean Piaget's Theory of Cognitive Development (1962), which posits that learners actively construct knowledge through independent exploration and the formation of mental frameworks called schemas. According to Piaget, cognitive development occurs in distinct stages in which learners organize their understanding of the world by associating new concepts with past experiences. This implies that meaningful learning is only achievable when a child has concrete, tangible experiences to connect with new information.

In the context of this study, the theory explains the prevailing difficulties in literacy and numeracy. Mastery of complex competencies—such as reading comprehension and mathematical operations—is contingent upon the development of prerequisite schemas. However, the prolonged school closures during the pandemic resulted in significant learning gaps. Through modular learning, students were deprived of the rich, experiential environments necessary to build these essential schemas.

Consequently, many learners lack the foundational skills of word recognition, fluency, and number sense required for their current grade levels. This absence of prerequisite knowledge prevents the mastery of more advanced tasks, as students struggle to apply skills they never fully internalized. By applying Piaget's framework, the study underscores that the current reading and numeracy challenges are a direct result of disrupted developmental stages and insufficient experiential learning during a critical period of cognitive growth.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Objectives

This study aimed to determine the level of reading and numeracy difficulties among Grade 4 learners in face-to-face classes of a public elementary school in a large division of Central Philippines during the 2022-2023 school year. Specifically, it sought to answer the following questions: 1) level of learners' difficulties in reading in word recognition, comprehension, and fluency; 2) level of learners' difficulties in numeracy in numbers and number sense, and basic operations; 3) level of learners' difficulties in reading when grouped according to sex, number of siblings, section, and average family monthly income; 4) level of learners' difficulties in numeracy when grouped according to sex, number of siblings, section, and average family monthly income; 5) the level of learners' difficulties in reading when they are grouped and compared according to the aforementioned variables; 6) the level of learners' difficulties in numeracy when they are grouped and compared according to the aforementioned variables; and 7) significant relationship between the level of learners' difficulties in reading and numeracy.

Methodology

This section details the methodology used to achieve the study's objectives. It discusses the research design, locale, respondents, and data-gathering instruments and procedures. Furthermore, it outlines the analytical schemes and statistical tools used to ensure a rigorous, systematic analysis of the collected data.

Research Design

This study employed a descriptive research design to investigate reading and numeracy difficulties in face-to-face classes of a public elementary school in a large division of Central Philippines during the 2022‑2023 school year. This approach aims to systematically describe and analyze the existing conditions, behaviors, and characteristics of a particular population without manipulating any variables.

Descriptive research provides a detailed account of phenomena as they naturally occur, allowing researchers to identify patterns, trends, and relationships within the data while presenting an accurate picture of the current situation (Best & Kahn, 2016). In this study, descriptive research enabled the researcher to assess learners' reading and numeracy performance, providing insights to inform instructional strategies and interventions to address learning difficulties.

Locale of the Study

This study was conducted in a public elementary school within a large division in Central Philippines. Situated in a third-class municipality, the school is led by a dedicated principal and staffed by fourteen teachers serving a population of 315 pupils.

The institution serves as a banner school for its district, particularly recognized for its commitment to innovation and school beautification. Historically, it has maintained a reputation as one of the most substantial contingents in district-level competitions, consistently excelling in academics, vocational skills, technology, and agriculture. Beyond its competitive academic performance, the school is a perennial winner in aesthetic development. Most recently, the division

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

recognized the institution as the best implementing school in the Brigada Eskwela program under the medium elementary school category.

By championing projects that balance academic rigor with school improvement initiatives, this locale provides a robust and dynamic setting for investigating the challenges and successes of modern educational practices.

Respondents of the Study

The respondents in this study are 54 Grade 4 learners from a total population of 62 enrollees. The sample size was determined using the Cochran formula to ensure precision (Briggs, 2020). Stratified random sampling was then employed to represent 88% of the population across all classes (Hayes, 2021).

Data Gathering Instrument

The study employed a researcher-designed instrument to assess the difficulties learners experience in reading and numeracy. Structured into three parts, Part I gathers the demographic profile of respondents, including sex, number of siblings, section, and average monthly family income. Part II serves as the survey proper, focusing on specific challenges in reading, including word recognition, comprehension, and fluency, as well as numeracy, encompassing number sense and basic operations. Responses in this section are quantified using a five-point Likert scale ranging from 5 (Very High) to 1 (Very Low). Finally, Part III uses experience-based questions to identify the qualitative problems learners encounter in these academic areas. This comprehensive tool ensured a systematic gathering of both baseline characteristics and specific learning obstacles.

Instrument Validity and Reliability

To ensure the instrument's appropriateness and correctness, it underwent rigorous face and content validation by six education experts, including a district supervisor, school principal, master teachers, and specialized coordinators. Following Haradhan's (2017) principles of content validity, these experts, many of whom hold doctorates, evaluated the tool using Good and Scates' standardized criteria, resulting in a validation score of 4.69, indicating "excellent" validity.

Reliability was established through a pilot test with 30 non-participant Grade 4 learners. Data were analyzed using Cronbach's Alpha (1951) to assess internal consistency, as suggested by Taber (2018) for non-dichotomous scales. The computed alpha reached 0.853, exceeding the standard threshold and confirming "good" reliability. This ensures the researcher-made questionnaire consistently measures the specific difficulties learners face in reading and numeracy.

Data Gathering Procedure

The researcher initiated data collection by obtaining necessary approvals from parents and school authorities, progressing from the school principal to the district and division offices. Upon receiving formal authorization, the researcher personally administered the instruments to the identified respondents. The gathered data were then tallied and analyzed through descriptive, comparative, and relational schemes. Finally, the results were presented in tables and processed using various statistical tools to draw conclusions and formulate meaningful recommendations.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Research Ethics Protocol

Adhering to the ethical principles of voluntary participation and honesty, this study strictly complies with R.A. 10173, or the Data Privacy Act of 2012, ensuring the protection of all confidential information. Proper legal procedures were followed, securing formal approval from the Schools Division Superintendent of Negros Oriental, as well as the respective school heads and parents, through informed consent. To maintain health, safety, and anonymity, respondents were not required to write their names, and all personal identifiers were excluded from the dataset. All collected data were handled with strict confidentiality and were accessible only during the study period. They will be permanently deleted upon completion to prevent unauthorized access. These safeguards ensure the integrity of the process while protecting the privacy of both individual learners and their institutions.

Analytical and Statistical Schemes

Objective No. 1 employed descriptive statistics, frequency count, and simple percentage to determine the profile of the respondents in terms of sex, number of siblings, section, and average family monthly income. Objective No. 2 also employed descriptive statistics and mean scores to evaluate learners' difficulties in reading, word recognition, and comprehension. Objective No. 3 also employed descriptive statistics and means to evaluate the level of learners' difficulties in numeracy, particularly in number sense and basic operations. Objective No. 4 used descriptive statistics and means to evaluate the level of learners' reading difficulties, grouping and comparing them according to specific variables. Objective No. 5 used descriptive statistics and means to evaluate the level of learners' numeracy difficulties, grouping and comparing them according to the aforementioned variables. Objective No. 6 used comparative statistics and the Mann-Whitney U test to determine whether there is a significant difference in the level of learners' reading difficulties when they are grouped and compared according to the aforementioned variables. Objective No. 7 also used comparative statistics and the Mann-Whitney U test to determine significant difference in the level of learners' numeracy difficulties when grouped and compared according to the aforementioned variables. Objective No. 8 also used relational statistics and Spearman's rho to determine a significant relationship between the levels of learners' reading and numeracy difficulties.

Results and Discussion

Profile of the Respondents in terms of Sex, Number of Siblings, Section, and Average Family Monthly Income

Table 1
Profile of Respondents

Variables	Categories	Frequency	Percentage
Sex	Male	26	48.10
	Female	28	51.90
	Total	54	100
Number of Siblings	Few (Less than 4)	26	48.10

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

	Many (4 or More)	28	51.90
	Total	54	100
Section	Section A	30	55.60
	Section B	24	44.40
	Total	54	100
Average Family Monthly Income	Lower (Below Php 4,000)	27	50.00
	Higher (Php 4,000 and above)	27	50.00
	Total	54	100

Table 1 presents the profiles of Grade 4 learners across sex, number of siblings, section, and average monthly family income.

In terms of sex, females slightly outnumbered males at 28 (51.90%), a trend that aligns with Desoacido (2021) and promotes gender equality—regarding family size, 28 learners (51.90%) had four or more siblings, suggesting larger family structures, which, according to Crismundo (2023), can enhance social skill development. Analysis of class sections reveals that Section A had 30 learners (55.60%) and Section B had 24 (44.40%); both remain well within the DepEd 1:35 pupil ratio, facilitating manageable individualized instruction. Finally, the average family monthly income was evenly split, with 27 learners (50%) in each category. Notably, half of the respondents earn less than 4,000 pesos per month, placing them below the poverty line. Similar to Crismundo's (2023) findings, this economic parity suggests a significant portion of the learner population faces material and financial struggles, necessitating targeted school support. Overall, the profile describes a diverse group of learners from large, low-income families situated in an ideal learning environment.

Level of Learners' Difficulties in Reading according to Word Recognition, Comprehension, and Fluency

Table 2
Level of Learners' Difficulties in Reading according to Word Recognition

Area		
A. Word Recognition	**Mean**	**Interpretation**
1. I cannot read long words.	3.57	High Level
2. I cannot read words with double consonants.	3.59	High Level
3. I am not familiar with the sounds of the alphabet.	3.06	Moderate Level
4. I am confused when words are put together in a sentence or paragraph.	3.44	Moderate Level
5. I cannot easily remember the words I have just read.	3.17	Moderate Level
Overall Mean	**3.37**	**Moderate Level**

Table 2 illustrates the level of difficulty learners experience with word recognition, yielding

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

an overall mean of 3.37, which indicates a moderate level of difficulty. This suggests that while word recognition is not insurmountable, it remains a significant challenge for intermediate learners. Blending consecutive consonant sounds often confuses learners, confirming Oslund et al.'s (2018) finding that weak word identification skills hinder reading proficiency. Most learners have developed a solid foundation in phonemic awareness, a crucial reading skill. Ultimately, these results highlight that while basic sounds are understood, complex phonetic structures require targeted instructional intervention to achieve full literacy.

Table 3
Level of Learners' Difficulties in Reading according to Comprehension
Area

B. Comprehension	**Mean**	**Interpretation**
1. I find it hard to understand what I have read.	3.39	Moderate Level
2. I need to reread the story so I can answer the comprehension questions.	3.13	Moderate Level
3. I need the teacher to explain the story to me.	3.35	Moderate Level
4. I usually forget the essential details of the story I have read.	3.69	High Level
5. I usually forget the sequence of events of a story.	3.56	High Level
Overall Mean	**3.42**	**Moderate Level**

Table 3 shows that intermediate-grade learners experience moderate difficulty in reading comprehension, with an overall mean of 3.42. Bangoy (2023) emphasizes that developing comprehension is vital for problem-solving and suggests using literature to bridge these gaps. Many learners struggle with the literal recall of characters and settings. While learners eventually achieve understanding, they require extra time and multiple readings. Learners possess basic decoding skills but lack the fluency required for immediate, deep understanding.

Table 4
Level of Learners' Difficulties in Reading according to Fluency
Area

C. Fluency	**Mean**	**Interpretation**
1. I mispronounced words that have similar sounds.	2.80	Moderate Level
2. I do not emphasize punctuation marks when reading.	3.44	Moderate Level
3. I am confused about when to use rising and falling intonations.	3.31	Moderate Level
4. It takes me a long time to read a short story.	3.22	Moderate Level
5. It is hard for me to read orally with expression.	3.41	Moderate Level
Overall Mean	**3.24**	**Moderate Level**

Table 4 illustrates the level of difficulty intermediate-grade learners experience regarding reading fluency, yielding an overall mean of 3.24. Fluency is not an insurmountable challenge and

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

can be mastered through regular practice. Lack of awareness concerning the mechanics of reading, supporting the study by Suliman et al. (2019), which found that learners frequently commit errors with punctuation. Learners encounter fewer difficulties with phonological similarities, suggesting they have already established foundational word recognition skills. Overall, while basic pronunciation is stable, structural reading mechanics remain a primary area for instructional growth.

Table 5
Level of Learners' Difficulties in Numeracy according to Numbers and Number Sense
Area

A. Number or Number Sense	**Mean**	**Interpretation**
1. I am confused about the correct sequence of the numbers.	2.85	Moderate Level
2. I cannot write word numbers into figures and vice versa.	2.35	Low Level
3. I have a problem reading number figures.	2.81	Moderate Level
4. It is hard for me to determine which number is greater or lesser.	2.93	Moderate Level
5. I cannot identify sequence patterns such as skip counting.	2.89	Moderate Level
Overall Mean	**2.77**	**Moderate Level**

Table 5 presents the level of difficulty intermediate-grade learners experience in numeracy, specifically in number sense, yielding an overall mean of 2.77. Nelwan et al. (2021) found that weak number sense forces learners to rely heavily on working memory, thereby hindering the development of higher mathematical skills. Basic numerical notation is well-developed, leaving number comparison and symbolic quantification as the primary areas for instructional intervention.

Table 6
Level of Learners' Difficulties in Numeracy according to Basic Operations
Area

B. Basic Operation	**Mean**	**Interpretation**
1. I find it hard to perform basic addition and subtraction.	2.98	Moderate Level
2. I find it hard to answer problems involving basic multiplication and division.	2.81	Moderate Level
3. I cannot answer multi-step problems.	2.83	Moderate Level
4. I am confused when performing basic operations with regrouping.	2.78	Moderate Level
5. I am confused about the operation signs.	2.72	Moderate Level
Overall Mean	**2.83**	**Moderate Level**

Table 6 shows the level of difficulty intermediate-grade learners experience with basic operations, yielding a moderate overall mean of 2.83. Mastery is not yet complete; the domain remains achievable through targeted practice. Specifically, item 1, regarding difficulties with addition and subtraction, had the highest mean of 2.98. Indino's (2021) findings suggest that slow development in algebraic thinking often stems from a lack of mastery of basic operations. Learners generally recognize mathematical symbols and understand their appropriate application in equations.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Ultimately, while conceptual awareness of signs is present, the mechanical execution of addition and subtraction remains the primary area for instructional intervention.

Table 7

Level of Learners' Difficulties in Reading according to Word Recognition by Sex

Categories	Male		Female	
A. Word Recognition	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I cannot read long words.	3.42	Moderate Level	3.71	High Level
2. I cannot read words with double consonants.	3.69	High Level	3.50	High Level
3. I am not familiar with the sounds of the alphabet.	3.27	Moderate Level	2.86	Moderate Level
4. I am confused when words are put together in a sentence or paragraph.	3.12	Moderate Level	3.75	High Level
5. I cannot easily remember the words I have just read.	3.00	Moderate Level	3.32	Moderate Level
Overall Mean	**3.30**	**Moderate Level**	**3.43**	**Moderate Level**

Table 7 presents the level of word recognition difficulties among learners grouped by sex, with both males (3.30) and females (3.43) experiencing moderate challenges. Witri et al. (2022) argued that females typically have higher reading levels than males. Notably, item 4 reveals a disparity: females scored 3.75, compared to 3.12 for males, on confusion when words are combined into sentences. While female learners may decode individual words, they experience greater difficulty with recognizing words in context within a paragraph.

Table 8

Level of Learners' Difficulties in Reading according to Comprehension by Sex

Categories	Male		Female	
B. Comprehension	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to understand what I have read.	3.46	Moderate Level	3.32	Moderate Level
2. I need to reread the story so I can answer the comprehension questions.	3.38	Moderate Level	2.89	Moderate Level
3. I need the teacher to explain the story to me.	3.50	High Level	3.21	Moderate Level
4. I usually forget the essential details of the story I have read.	3.50	High Level	3.86	High Level
5. I usually forget the sequence of events of a story.	3.46	Moderate Level	3.64	High Level
Overall Mean	**3.46**	**Moderate Level**	**3.39**	**Moderate Level**

Table 8 presents the level of reading comprehension difficulties among learners grouped by sex, with males (3.46) and females (3.39) both experiencing moderate challenges. Kashef et al. (2014) found no significant performance difference between the sexes. However, a disparity appears

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

in item 2, where males scored 3.38 compared to 2.89 for females regarding the need to reread stories. Male learners require more time and repetition to grasp meaning, potentially due to lower focus or higher distractibility during reading activities compared to their female counterparts.

Table 9

Level of Learners' Difficulties in Reading according to Fluency by Sex

Categories	Male		Female	
C. Fluency	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I mispronounced words that have similar sounds.	2.85	Moderate Level	2.75	Moderate Level
2. I do not emphasize punctuation marks when reading.	3.27	Moderate Level	3.61	High Level
3. I am confused about when to use rising and falling intonations.	3.04	Moderate Level	3.57	High Level
4. It takes me a long time to read a short story.	2.77	Moderate Level	3.64	High Level
5. It is hard for me to read orally with expression.	3.15	Moderate Level	3.64	High Level
Overall Mean	**3.02**	**Moderate Level**	**3.44**	**Moderate Level**

Table 9 presents the level of reading fluency difficulties among learners grouped by sex, with both males (3.02) and females (3.33) experiencing moderate challenges. Females encounter more obstacles in fluency than their male counterparts. Specifically, item 4 shows that females (3.64) take significantly longer to read short stories compared to males (2.77). Putri and Melanie (2022) suggest that female learners often overthink or struggle to finish passages, leading to longer reading times. While males spend less time on text, females' slower pace highlights a greater struggle with fluid reading transitions.

Table 10

Level of Learners' Difficulties in Reading according to Word Recognition by the Number of Siblings

Categories	Few		Many	
A. Word Recognition	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I cannot read long words.	3.42	Moderate Level	3.71	High Level
2. I cannot read words with double consonants.	3.50	High Level	3.68	High Level
3. I am not familiar with the sounds of the alphabet.	2.92	Moderate Level	3.18	Moderate Level
4. I am confused when words are put together in a sentence or paragraph.	3.65	High Level	3.25	Moderate Level
5. I cannot easily remember the words I have just read.	3.31	Moderate Level	3.04	Moderate Level
Overall Mean	**3.36**	**Moderate Level**	**3.37**	**Moderate Level**

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Table 10 presents the level of word recognition difficulties among learners grouped by the number of siblings, with both those from small (3.36) and large (3.37) families experiencing moderate challenges. However, item 4 reveals that learners with fewer siblings struggle more (3.65) with recognizing words in context than those with many siblings (3.25). A larger household provides more opportunities for reading assistance and joint book-reading. Supporting this, Capostoso et al. (2017) note that multiple family members, including siblings, can positively impact a child's reading skills through explicit home teaching.

Table 11

Level of Learners' Difficulties in Reading according to Comprehension by the Number of Siblings

Categories	**Few**		**Many**	
B. Comprehension	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to understand what I have read.	3.42	Moderate Level	3.36	Moderate Level
2. I need to reread the story so I can answer the comprehension questions.	3.08	Moderate Level	3.18	Moderate Level
3. I need the teacher to explain the story to me.	3.27	Moderate Level	3.43	Moderate Level
4. I usually forget the essential details of the story I have read.	3.69	High Level	3.68	High Level
5. I usually forget the sequence of events of a story.	3.46	Moderate Level	3.64	High Level
Overall Mean	**3.38**	**Moderate Level**	**3.46**	**Moderate Level**

Table 11 reports the level of reading comprehension difficulties among learners grouped by the number of siblings, with both small (3.38) and large (3.46) family categories experiencing moderate challenges. However, a gap exists in item 5: learners with many siblings had a higher difficulty level (3.64) in remembering the sequence of events than those with fewer siblings (3.46). A specific struggle with sequential memory and patterns is observed in larger households, aligning with Muñez et al. (2022), who noted that children with more siblings may exhibit poorer reading skills.

Table 12

Level of Learners' Difficulties in Reading according to Fluency by the Number of Siblings

Categories	**Few**		**Many**	
C. Fluency	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I mispronounced words that have similar sounds.	2.73	Moderate Level	2.86	Moderate Level
2. I do not emphasize punctuation marks when reading.	3.65	High Level	3.25	Moderate Level
3. I am confused about when to use rising and falling intonations.	3.23	Moderate Level	3.39	Moderate Level
4. It takes me a long time to read a short story.	3.12	Moderate Level	3.32	Moderate Level

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

5. It is hard for me to read orally with expression.	3.35	Moderate Level	3.46	Moderate Level
Overall Mean	**3.22**	**Moderate Level**	**3.26**	**Moderate Level**

Table 12 presents the level of reading fluency difficulties among learners grouped by the number of siblings, with both small (3.22) and large (3.26) family categories experiencing moderate challenges. Fluency obstacles affect learners to a similar extent regardless of household size. However, item 2 reveals a notable gap: learners with fewer siblings had a higher difficulty level (3.65) in punctuation emphasis than those with many siblings (3.25). Garcia-Salas and Wood (2024) argue that older siblings contribute significantly to language development by responding to and correcting a younger child's reading difficulties.

Table 13

Level of Learners' Difficulties in Reading according to Word Recognition by Section

Categories	**Section A**		**Section B**	
A. Word Recognition	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I cannot read long words.	3.63	High Level	3.50	High Level
2. I cannot read words with double consonants.	3.90	High Level	3.21	Moderate Level
3. I am not familiar with the sounds of the alphabet.	2.97	Moderate Level	3.17	Moderate Level
4. I am confused when words are put together in a sentence or paragraph.	3.47	Moderate Level	3.42	Moderate Level
5. I cannot easily remember the words I have just read.	3.10	Moderate Level	3.25	Moderate Level
Overall Mean	**3.41**	**Moderate Level**	**3.31**	**Moderate Level**

Table 13 reveals the level of word recognition difficulties among learners grouped by section, with Section A (3.41) and Section B (3.31) both experiencing moderate challenges. Recognition obstacles are comparable across groups, regardless of section assignment. However, item 2 shows a significant disparity: Section A faced a high level of difficulty (3.90) in reading words with double consonants, while Section B remained at a moderate level (3.21). Wichayut and Sitthikul (2019) found that fourth-grade learners struggle with phonetic patterns often due to rote learning. Such teaching approaches, where learners repeat words without practicing sound-letter correspondence, prevent students from mastering word forms and usage.

Table 14

Level of Learners' Difficulties in Reading according to Comprehension by Section

Categories	**Section A**		**Section B**	
B. Comprehension	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to understand what I have read.	3.43	Moderate Level	3.33	Moderate Level
2. I need to reread the story so I can answer the comprehension questions.	2.83	Moderate Level	3.50	High Level

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

3. I need the teacher to explain the story to me.	3.00	Moderate Level	3.79	High Level
4. I usually forget the essential details of the story I have read.	3.87	High Level	3.46	Moderate Level
5. I usually forget the sequence of events of a story.	3.97	High Level	3.04	Moderate Level
Overall Mean	**3.42**	**Moderate Level**	**3.43**	**Moderate Level**

Table 14 illustrates the level of reading comprehension difficulty by section, with Sections A (3.42) and B (3.43) both experiencing moderate challenges. Comprehension obstacles are nearly identical across both groups. However, a significant discrepancy exists in item 5, where Section A recorded a high level of difficulty (3.97) compared to Section B's moderate level (3.04) regarding forgetting the sequence of story events. Quijano and Legaspi (2020) found that although learners vary in their ability to sequence narratives, they often struggle with the structural and grammatical recall required to accurately retell significant events.

Table 15

Level of Learners' Difficulties in Reading according to Fluency by Section

Categories	**Section A**		**Section B**	
C. Fluency	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I mispronounced words that have similar sounds.	2.37	Low Level	3.33	Moderate Level
2. I do not emphasize punctuation marks when reading.	3.23	Moderate Level	3.71	High Level
3. I am confused about when to use rising and falling intonations.	3.13	Moderate Level	3.54	High Level
4. It takes me a long time to read a short story.	3.43	Moderate Level	2.96	Moderate Level
5. It is hard for me to read orally with expression.	3.60	High Level	3.17	Moderate Level
Overall Mean	**3.15**	**Moderate Level**	**3.34**	**Moderate Level**

Table 15 illustrates the level of reading fluency difficulty grouped by section, with Section A (3.15) and Section B (3.34) both experiencing moderate challenges. This suggests that fluency obstacles are consistent across sections. However, item 1 reveals a noticeable difference: Section B recorded a moderate level (3.33) compared to Section A's low level (2.37) regarding mispronouncing words with similar sounds. Learners in Section B struggle more with rhymes and phonological distinctions, a difficulty that Fadillah (2020) attributes to mother-tongue interference and biological factors.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Table 16

Level of Learners' Difficulties in Reading according to Word Recognition by Average Family Monthly Income

Categories	Lower		Higher	
A. Word Recognition	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I cannot read long words.	3.44	Moderate Level	3.70	High Level
2. I read words with double consonants.	3.67	High Level	3.52	High Level
3. I am not familiar with the sounds of the alphabet.	3.37	Moderate Level	2.74	Moderate Level
4. I am confused when words are put together in a sentence or paragraph.	3.63	High Level	3.26	Moderate Level
5. I easily remember the words I have just read.	3.59	High Level	2.74	Moderate Level
Overall Mean	**3.54**	**High Level**	**3.19**	**Moderate Level**

Table 16 presents the level of word recognition difficulties among learners, grouped by average family monthly income, revealing disparities across economic groups. The lower-income category recorded a high level of difficulty (3.54), while the higher-income category remained moderate (3.19). Learners from low-income families face greater obstacles in identifying basic sight words, likely due to limited access to educational media and materials. Dolean et al. (2019) identified socio-economic status as a predictor of initial reading skills. Poverty-related challenges, often exacerbated by school absences, necessitate developmental plans that integrate quality instruction with student well-being to bridge the literacy gap.

Table 17

Level of Learners' Difficulties in Reading according to Comprehension by Average Family Monthly Income

Categories	Lower		Higher	
B. Comprehension	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to understand what I have read.	3.41	Moderate Level	3.37	Moderate Level
2. I need to reread the story so I can answer the comprehension questions.	3.30	Moderate Level	2.96	Moderate Level
3. I need the teacher to explain the story to me.	3.41	Moderate Level	3.30	Moderate Level
4. I usually forget the essential details of the story I have read.	3.78	High Level	3.59	High Level
5. I usually forget the sequence of events of a story.	3.67	High Level	3.44	Moderate Level
Overall Mean	**3.51**	**High Level**	**3.33**	**Moderate Level**

Table 17 reveals a disparity in reading comprehension difficulties among learners grouped by their average monthly family income. The lower-income category recorded a high level of difficulty

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

(3.52), while the higher-income category remained at a moderate level (3.33). Learners from economically disadvantaged backgrounds face greater challenges in comprehending texts, possibly due to limited access to nutritional resources and reduced availability of literacy materials. Mary et al. (2019) emphasize that parental economic conditions determine the level of support and the availability of reading resources for children. Consequently, restricted income limits parental participation in literacy acquisition, preventing lower-income learners from achieving the same reading improvements as their more affluent counterparts.

Table 18

Level of Learners' Difficulties in Reading according to Fluency by Average Family Monthly Income

Categories	**Lower**		**Higher**	
C. Fluency	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I mispronounced words that have similar sounds.	2.70	Moderate Level	2.89	Moderate Level
2. I do not emphasize punctuation marks when reading.	3.44	Moderate Level	3.44	Moderate Level
3. I am confused about when to use rising and falling intonations.	3.37	Moderate Level	3.26	Moderate Level
4. It takes me a long time to read a short story.	3.44	Moderate Level	3.00	Moderate Level
5. It is hard for me to read orally with expression.	3.41	Moderate Level	3.41	Moderate Level
Overall Mean	**3.27**	**Moderate Level**	**3.20**	**Moderate Level**

Table 18 presents the level of reading fluency difficulties among learners grouped by average family monthly income, with both lower (3.27) and higher (3.20) income categories experiencing moderate challenges. A slower reading speed and a greater need for processing time. These findings align with those of Sheikh et al. (2020), who emphasize that home environments and parents' ability to provide tutoring or literacy support significantly influence reading acquisition. Consequently, economic constraints limit the specialized assistance necessary to improve reading performance and speed.

Table 19

Level of Learners' Difficulties in Numeracy according to Numbers by Sex

Categories	**Male**		**Female**	
A. Number or Number Sense	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I am confused about the correct sequence of the numbers.	2.62	Moderate Level	3.07	Moderate Level
2. I write word numbers into figures and vice versa.	2.12	Low Level	2.57	Moderate Level
3. I have a problem reading number figures.	2.62	Moderate Level	3.00	Moderate Level

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

4. It is hard for me to determine which number is greater or lesser.	2.69	Moderate Level	3.14	Moderate Level
5. I identify sequence patterns such as skip counting.	3.00	Moderate Level	2.79	Moderate Level
Overall Mean	**2.61**	**Moderate Level**	**2.91**	**Moderate Level**

Table 20 illustrates the level of difficulty in numeracy, specifically regarding number sense, grouped by sex, with both males (2.61) and females (2.91) experiencing moderate challenges. Female learners face greater struggles with sequencing, notation, and determining quantities. Barham et al. (2019) noted that, while overall numeracy levels may not differ significantly by sex, male learners often demonstrate more substantial skills in place value and number awareness than their female counterparts.

Table 20

Level of Learners' Difficulties in Numeracy according to Basic Operations by Sex

Categories	**Male**		**Female**	
B. Basic Operations	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to perform basic addition and subtraction.	2.85	Moderate Level	3.11	Moderate Level
2. I find it hard to answer problems involving basic multiplication and division.	2.62	Moderate Level	3.00	Moderate Level
3. I answer multi-step problems.	2.42	Low Level	3.21	Moderate Level
4. I am confused when performing basic operations with regrouping.	2.50	Moderate Level	3.04	Moderate Level
5. I am confused about the operation signs.	2.38	Low Level	3.04	Moderate Level
Overall Mean	**2.55**	**Moderate Level**	**3.08**	**Moderate Level**

Table 20 presents the level of numeracy difficulties in basic operations among learners grouped by sex, with both males (2.55) and females (3.08) experiencing moderate challenges. Female learners struggle more with solving word problems requiring multiple operations, reflecting lower analytical skills in complex tasks. Reinhold et al. (2020) found that males often outperform females in multi-step word problems due to stronger reasoning abilities and the use of spatial strategies to facilitate correct solutions.

Table 21

Level of Learners' Difficulties in Numeracy according to Number and Number Sense by Number of Siblings

Categories	**Few**		**Many**	
A. Number or Number Sense	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I am confused about the correct sequence of the numbers.	2.96	Moderate Level	2.75	Moderate Level

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

2. I write word numbers into figures and vice versa.	2.38	Low Level	2.32	Low Level
3. I have a problem reading number figures.	2.81	Moderate Level	2.82	Moderate Level
4. It is hard for me to determine which number is greater or lesser.	2.62	Moderate Level	3.21	Moderate Level
5. I identify sequence patterns such as skip counting.	2.81	Moderate Level	2.96	Moderate Level
Overall Mean	**2.72**	**Moderate Level**	**2.81**	**Moderate Level**

Table 21 displays the level of numeracy difficulty regarding number sense among learners grouped by the number of siblings, with both small (2.72) and large (2.81) family categories experiencing moderate challenges. Those in larger households face a unique challenge in quantifying and visualizing numbers. Muñez et al. (2022) observed that learners with more siblings may exhibit poorer mathematical skills. Such findings highlight that a crowded external environment can hinder skill development, necessitating a more responsive and conducive learning setting to bolster numerical mastery.

Table 22

Level of Learners' Difficulties in Numeracy according to Basic Operations by Number of Siblings

Categories	**Few**		**Many**	
B. Basic Operations	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to perform basic addition and subtraction.	3.04	Moderate Level	2.93	Moderate Level
2. I find it hard to answer problems involving basic multiplication and division.	2.88	Moderate Level	2.75	Moderate Level
3. I answer multi-step problems.	2.69	Moderate Level	2.96	Moderate Level
4. I am confused when performing basic operations with regrouping.	2.85	Moderate Level	2.71	Moderate Level
5. I am confused about the operation signs.	2.31	Low Level	3.11	Moderate Level
Overall Mean	**2.75**	**Moderate Level**	**2.89**	**Moderate Level**

Table 22 displays the level of numeracy difficulties in number sense among learners grouped by the number of siblings, with both small (2.75) and large (2.89) family categories experiencing moderate challenges. Learners in larger households struggle more with determining the correct operation to apply, particularly in complex word problems. McCarthy and Pearlman (2022) argue that having siblings provides an educational advantage, positively impacting mathematical skills, particularly for female learners with multiple siblings.

Table 23

Level of Learners' Difficulties in Numeracy according to Numbers and Number Sense by Section

Categories	**Section A**	**Section B**
A. Number or Number Sense		

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

	Mean	Interpretation	Mean	Interpretation
1. I am confused about the correct sequence of the numbers.	2.73	Moderate Level	3.00	Moderate Level
2. I write word numbers into figures and vice versa.	2.20	Low Level	2.54	Moderate Level
3. I have a problem reading number figures.	2.83	Moderate Level	2.79	Moderate Level
4. It is hard for me to determine which number is greater or lesser.	3.13	Moderate Level	2.67	Moderate Level
5. I identify sequence patterns such as skip counting.	2.87	Moderate Level	2.92	Moderate Level
Overall Mean	**2.75**	**Moderate Level**	**2.78**	**Moderate Level**

Table 23 presents the level of numeracy difficulties regarding number sense among learners grouped by section, with Section A (2.75) and Section B (2.78) both experiencing moderate challenges. Learners in Section A struggle more with visualizing and sequencing numerical values. Indino's (2021) study found that failure to master basic number-sense skills, such as counting and comparison, is alarming, as these are essential prerequisites for developing more advanced mathematical competencies.

Table 24

Level of Learners' Difficulties in Numeracy according to Basic Operations by Section

Categories	**Section A**		**Section B**	
B. Basic Operations	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to perform basic addition and subtraction.	2.83	Moderate Level	3.17	Moderate Level
2. I find it hard to answer problems involving basic multiplication and division.	2.77	Moderate Level	2.88	Moderate Level
3. I answer multi-step problems.	2.63	Moderate Level	3.08	Moderate Level
4. I am confused when performing basic operations with regrouping.	2.70	Moderate Level	2.88	Moderate Level
5. I am confused about the operation signs.	2.67	Moderate Level	2.79	Moderate Level
Overall Mean	**2.72**	**Moderate Level**	**2.96**	**Moderate Level**

Table 24 presents the level of numeracy difficulties regarding basic operations among learners grouped by section, with Section A (2.72) and Section B (2.96) both experiencing moderate challenges. Novriani and Surya (2017) found that mathematical problem-solving is deeply linked to reading comprehension. Without a clear understanding of the text, learners often resort to guessing or fail to translate word problems into the correct symbolic equations.

Table 25

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Level of Learners' Difficulties in Numeracy according to Number and Number Sense by Average Family Monthly Income

Categories	Lower		Higher	
A. Number or Number Sense	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I am confused about the correct sequence of the numbers.	2.85	Moderate Level	2.85	Moderate Level
2. I can write word numbers into figures and vice versa.	2.37	Low Level	2.33	Low Level
3. I have a problem reading number figures.	2.74	Moderate Level	2.89	Moderate Level
4. It is hard for me to determine which number is greater or lesser.	2.89	Moderate Level	2.96	Moderate Level
5. I identify sequence patterns such as skip counting.	2.74	Moderate Level	3.04	Moderate Level
Overall Mean	**2.72**	**Moderate Level**	**2.81**	**Moderate Level**

Table 25 describes the level of numeracy difficulties in number sense among learners grouped by average monthly family income, with both lower (2.72) and higher (2.81) income categories experiencing moderate challenges. Skill levels in number awareness are consistent across different economic backgrounds. Kim (2017) argues that learners typically possess efficient counting methods. To address these gaps, Kim recommends providing explicit instruction and targeted interventions, such as using number lines and manipulatives, to help learners master counting strategies and establish a stronger numerical foundation.

Table 26

Level of Learners' Difficulties in Numeracy according to Basic Operations by Average Family Monthly Income

Categories	Lower		Higher	
B. Basic Operations	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. I find it hard to perform basic addition and subtraction.	2.93	Moderate Level	3.04	Moderate Level
2. I find it hard to answer problems involving basic multiplication and division.	2.85	Moderate Level	2.78	Moderate Level
3. I answer multi-step problems.	3.07	Moderate Level	2.59	Moderate Level
4. I am confused when performing basic operations with regrouping.	2.67	Moderate Level	2.89	Moderate Level
5. I am confused about the operation signs.	2.85	Moderate Level	2.59	Moderate Level
Overall Mean	**2.87**	**Moderate Level**	**2.78**	**Moderate Level**

Table 26 presents the level of numeracy difficulties in basic operations among learners grouped by average family monthly income, with both lower (2.87) and higher (2.78) income categories experiencing moderate challenges. Operational skills are comparable across economic

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

backgrounds. Amalina and Vidakovich (2023) highlight family income as a primary influence on problem-solving skills, noting that socio-economic inequalities often exacerbate gaps in basic mathematical proficiency.

Table 27
Difference in the Level of Learners' Difficulties in Reading according to Word Recognition by Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Sex	Male	26	25.62	315.00	0.394	0.05	Not Significant
	Female	28	29.25				
Number of Siblings	Few	26	27.44	362.50	0.979		Not Significant
	Many	28	27.55				
Section	Section A	30	28.50	330.00	0.600		Not Significant
	Section B	24	26.25				
Average Family Monthly Income	Lower	27	30.89	273.00	0.112		Not Significant
	Higher	27	24.11				

Table 27 presents a comparative analysis of word recognition difficulties, revealing that sex, number of siblings, section, and average family income are not significant factors (p-values of 0.394, 0.979, 0.600, and 0.112, respectively). Since these exceed the 0.05 significance level, the null hypothesis is accepted, indicating that profiles do not determine recognition challenges. Consequently, teachers should conduct individual assessments to find the root of these obstacles. This results-driven conclusion contrasts with Nava (2024), who found that family income and sibling count have a significant influence on word recognition, providing essential financial and emotional support for skill development.

Table 28
Difference in the Level of Learners' Difficulties in Reading according to Comprehension by Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Sex	Male	26	27.42	362.00	0.972		Not Significant
	Female	28	27.57				
Number of Siblings	Few	26	27.17	355.50	0.882	0.05	Not Significant
	Many	28	27.80				
Section	Section A	30	27.95	346.50	0.813		Not Significant

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

	Section B	24	26.94				
Average Family Monthly Income	Lower	27	29.76	303.50	0.288		Not Significant
	Higher	27	25.24				

Table 28 presents a comparative analysis of reading comprehension difficulties, revealing that sex, number of siblings, section, and average monthly income are not significant factors (p-values of 0.972, 0.882, 0.813, and 0.288, respectively). As these exceed the 0.05 significance level, the null hypothesis is accepted, indicating that comprehension struggles are consistent across all groups. This suggests that Grade 4 learners share a similar developmental level in this area. Conversely, Dariagan and Laureto (2022) found that family income specifically influences comprehension, as higher-income families provide more material and technological support, facilitating better skill acquisition than other demographic profiles.

Table 29

Difference in the Level of Learners' Difficulties in Reading according to Fluency by Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Sex	Male	26	21.46	207.00	0.006	0.05	Significant
	Female	28	33.11				
Number of Siblings	Few	26	27.37	360.50	0.951		Not Significant
	Many	28	27.63				
Section	Section A	30	25.17	290.00	0.219		Not Significant
	Section B	24	30.42				
Average Family Monthly Income	Lower	27	27.70	359.00	0.924		Not Significant
	Higher	27	27.30				

Table 29 presents a comparative analysis of reading fluency difficulties, revealing that the number of siblings (p = 0.951), section (p = 0.219), and average family monthly income (p = 0.924) are not significant factors. However, sex is statistically significant (p = 0.006), indicating that male and female learners experience distinct challenges and levels of mastery in reading fluency. This results-driven conclusion contrasts with Nava's (2024) findings, which revealed no significant difference based on sex but suggested that family income and sibling count are the primary influences on fluency, providing both financial and emotional support.

Table 30

Difference in the Level of Learners' Difficulties in Numeracy according to Numbers and Number Sense by Variables

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Sex	Male	26	24.33	281.50	0.151	0.05	Not Significant
	Female	28	30.45				
Number of Siblings	Few	26	26.60	340.50	0.682		Not Significant
	Many	28	28.34				
Section	Section A	30	26.55	331.50	0.618		Not Significant
	Section B	24	28.69				
Average Family Monthly Income	Lower	27	26.30	332.00	0.572		Not Significant
	Higher	27	28.70				

Table 30 presents a comparative analysis of numeracy difficulties in number sense, revealing that sex (p = 0.151), number of siblings (p = 0.682), section (p = 0.618), and average family monthly income (p = 0.572) are not significant factors. Since these p-values exceed the 0.05 significance level, the null hypothesis is accepted, indicating that demographic profiles do not determine challenges in number awareness. These findings align with Andamon and Tan (2018), who noted that background variables often have no bearing on mathematics performance. Instead, they emphasize that a learner's attitude and conceptual understanding are the primary predictors of success, suggesting that a positive mindset is more influential than socio-economic or demographic factors.

Table 31

Difference in the Level of Learners' Difficulties in Numeracy according to Basic Operations by Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Sex	Male	26	21.71	213.50	0.009	0.05	Significant
	Female	28	32.88				
Number of Siblings	Few	26	26.40	335.50	0.619		Not Significant
	Many	28	28.52				
Section	Section A	30	25.28	293.50	0.243		Not Significant
	Section B	24	30.27				
Average Family Monthly Income	Lower	27	28.65	333.50	0.589		Not Significant
	Higher	27	26.35				

Table 31 presents a comparative analysis of numeracy difficulties in basic operations. While the number of siblings (p = 0.619), section (p = 0.243), and family income (p = 0.589) showed no significant impact, sex emerged as a significant factor (p = 0.009). This indicates that male and female learners face distinct challenges and exhibit varying levels of mastery in mathematical

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

operations. These results suggest that gender influences specific strengths in applying math, perhaps due to differing analytical preferences. This aligns with Amalina and Vidakovich (2023), who found that sex impacts performance, often noting that female learners excel in problem-solving due to greater diligence and persistence in their academic tasks.

Table 32
Relationship between the Level of Learners' Difficulties in Reading and Numeracy

Variable	rho	p-value	*Sig. level*	Interpretation
Reading **Numeracy**	0.320	0.018	0.05	Significant

Table 32 shows that reading difficulties are significantly related to numeracy problems (p = 0.018). Since this value is below the 0.05$ threshold, the null hypothesis is rejected. This implies that a learner's reading proficiency directly impacts their ability to master numeracy; struggling readers are statistically more likely to face mathematical challenges. This confirms Chang's (2023) finding that reading skills are a primary predictor of math achievement. Proficient readers possess the confidence and linguistic strategies to decode and solve complex mathematical problems, whereas poor reading skills create a barrier to understanding numbers.

Conclusion

The Grade 4 learners exhibit a balanced demographic profile in sex and income, fostering an environment of equal opportunity; however, significant challenges persist in reading comprehension and basic numeracy operations. Findings reveal that learners struggle to retain story details and perform multi-step mathematical problems, with difficulties in word recognition and comprehension being more pronounced among lower-category groups. Notably, sex emerged as a significant predictor of both reading fluency and numeracy mastery. Given that reading deficiencies directly exacerbate numeracy struggles, the school must prioritize the Literacy Enhancement and Numeracy Development (LEND) program within its School Improvement Plan. To bridge these gaps, teachers should implement targeted interventions, such as the DEAR program and Catch-Up Fridays, and use interactive tools like flashcards, board games, and digital quizzes to foster engagement. Furthermore, school heads must transition from routine supervision to facilitating data-driven remedial programs and quarterly assessments that ensure equitable skill development for both male and female learners. Ultimately, by integrating personalized mentorship and collaborative Learning Action Cell (LAC) sessions, the institution can address foundational gaps in phonics and number sense, ensuring all learners achieve essential academic milestones.

Acknowledgment

Deepest gratitude to the Almighty for the spiritual guidance and wisdom to complete this work. Sincere thanks to the University administration, Graduate School leadership, and my adviser

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

for their unwavering support. Heartfelt appreciation to the panel of examiners and everyone who contributed morally and financially to this research milestone.

Authorship Contribution Statement

Navarro: Lead researcher, primary data investigator, and statistical analysis. **Bolongaita:** Research supervisor, quality assurance, and academic advisory.

Conflict of Interest

The authors affirm that this research was executed without any competing interests. There are no financial involvements or personal affiliations that influenced the results presented herein, and the authors maintain full responsibility for the study's conclusions and the decision to publish.

References

Al-Jarrah, H., & Ismail, N. S. B. (2018). Reading comprehension difficulties among EFL learners in higher learning institutions. International Journal of English Linguistics, 8(7), 32-41.

Amalina, I. K., & Vidákovich, T. (2023). Cognitive and socioeconomic factors that influence the mathematical problem-solving skills of students. Heliyon, 9(9).

Amalina, I. K., & Vidákovich, T. (2023). Development and differences in mathematical problem-solving skills: A cross-sectional study of differences in demographic backgrounds. Heliyon, 9(5).

Andamon, J. C., & Tan, D. A. (2018). Conceptual understanding, attitude and performance in mathematics of grade 7 students. International Journal of Scientific & Technology Research, 7(8), 96-105.

Aunio, P., Mononen, R., Ragpot, L., & Törmänen, M. (2016). Early Numeracy Performance of South African School Beginners. South African Journal of Childhood Education, 6(1), 496.

Ayade, M., Dela Calzada, R., Sabanal, J. and Saballa, M. (2019). Early language literacy and numeracy implementation. SMCC Teacher Education Journal. ISSN:2008-0601. DOI: htpps://dx.doi.org/10.18868/sherte.01.060119.02.

Bangoy, R. (2023). Reading Comprehension in Relation to Problem-Solving Skills. 27. 64–71. Retrieved from https://www.researchgate.net

Barham, A. I., Ihmeideh, F., Al-Falasi, M., & Alabdallah, A. (2019). Assessment of first-grade students' literacy and numeracy levels and the influence of key factors. International Journal of Learning, Teaching and Educational Research, 18(12), 174-195.

Best, J. W., & Kahn, J. V. (2016). Research in education (10th ed.). Pearson Education.

Briggs, D. C. (2020). COVID-19: The effect of lockdown on children's remote learning experience–Parents' perspective. Journal of Education, Society and Behavioural Science, 33(9), 42-52.

Capate, R. N. A. & Lapinid, M. R. C. (2018). Assessing the Mathematics Performance of Grade 8 Students as a Basis for Enhancing Instruction and Aligning with K to 12 Curriculum. De La Salle University, Manila.

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Capotosto, L., Kim, J. S., Burkhauser, M. A., Oh Park, S., Mulimbi, B., Donaldson, M., & Kingston, H. C. (2017). Family support of third-grade reading skills, motivation, and habits. Aera Open, 3(3), 2332858417714457.

Chang, I. (2023). Early Numeracy and Literacy Skills and Their Influence on Fourth-Grade Mathematics Achievement: A Moderated Mediation Model. Large-scale Assessments in Education, 11(1), 18.

Crismundo, K. (2023). Learners' Struggles and Coping in Printed Modular Learning Modality. STI West Negros University, Bacolod City.

Dariagan, Andy & Laureto, Marien. (2022). Module Readability, Reading Skills, and Reading Comprehension of Grade 8 Students. Journal of Contemporary Issues and Thought. 12. 24-41. 10.37134/jcit.vol12.1.3.2022.

Desoacido, M. (2021). Classroom climate of intermediate learners in relation to their academic performance. Unpublished Thesis. STI West Negros University, Bacolod City.

Ditona, G., & Rico, F. (2021). Reading level of Grade II pupils in the scaffolding for reading program of Eastern schools in Botolan District, Philippines. American Journal of Humanities and Social Sciences Research (AJHSS), 5(8), 86-94.

Dolean, D., Melby-Lervåg, M., Tincas, I., Damsa, C., & Lervåg, A. (2019). Achievement gap: Socioeconomic status affects reading development beyond language and cognition in children facing poverty: learning and Instruction, 63, 101218.

Estremera, M. L., & Estremera, G. L. (2018). Factors Affecting the Reading Comprehension of Grade Six Pupils in the City Division of Sorsogon. The Philippines as a Basis for the Development of Instructional Material. Asia Pacific Journal of Education, Arts and Sciences, 5(3), 72–78.

Fadillah, A. C. (2020). Pronunciation difficulties of EFL learners in Indonesia: a literature study. Jurnal Budaya, 2(1), 7-13.

Ganal, N. N., & Guiab, M. R. (2014). Problems and difficulties encountered by students towards mastering competencies in mathematics. Researchers World, 5(4), 25.

Garcia-Salas, M., & Wood, C. (2024). Fostering Dialogic Reading Through Older Siblings in Immigrant Latino Families: A Pilot Study. Topics in Early Childhood Special Education, 02711214241281384.

Haradhan, M. (2017). Two key criteria for good measurement in research Are Validity and reliability. Munich Personal RePEc Archive. Retrieve from https://mpra.ub.uni-muenchen.de/83458/.

Hayes, N. (2021). Doing psychological research, 2e. McGraw-Hill Education (UK).

Hidayati, K. H. (2018). Teaching writing to EFL learners: An investigation of challenges confronted by Indonesian teachers. LANGKAWI: Journal of the Association for Arabic and English, 4(1), 21–31.

Imam, A. I. (2016). Effect of Critical Thinking Strategies on Reading Comprehension Performance of Senior Secondary School Year II Students in Minna Metropolis, Nigeria (doctoral dissertation).

Indino, A. (2021). Parents' Involvement in the Kindergartens' Numeracy Development in the New Normal. Cebu Technological University – Moalboal Campus.

Karimah, R. K. N., Kusmayadi, T. A., & Pramudya, I. (2018, April). Analysis of difficulties in mathematics learning on students with guardian personality type in problem-solving HOTS

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

geometry test. In Journal of Physics: Conference Series (Vol. 1008, No. 1, p. 012076). IOP Publishing.

Kashef, S. H., Damavand, A., & Viyani, A. (2014). Strategies-based ESP instruction (SBI) of reading comprehension: Male vs. female students. International Journal of Education, 4(2), 171–180.

Kim, S., Signe E. Kastberg, Yan Ping Xin, Qingli Lei, Bingyu Liu, Shuang Wei, Yingjie Chen. (2017). Counting strategies of students struggling in mathematics in a computer-based learning environment. The Journal of Mathematical Behavior. Volume 68, ISSN 0732-3123, https://doi.org/10.1016/j.jmathb.2022.101007.

Kiss, A. J., Nelson, G., & Christ, T. J. (2019). Predicting third-grade mathematics achievement: A longitudinal investigation of the role of early numeracy skills. Learning Disability Quarterly, 42(3), 161–174.

Layug, Julie Pearl V., et al. (2021). Teachers' Interventions in Improving Numeracy Skills of Grade 7 Students in Baguio City National High School. Philippines. University of the Cordilleras, 4th International Conference on Advanced Research in Teaching and Education.

Mary, M., George, A. N., & Omwenga, E. (2020). Influence of Parental Economic Status and Utilization of Teaching and Learning Resources on Achievement of Basic Reading Skills among Grade Two Learners in Public Primary Schools in Nyamira South Sub-County, Nyamira County, Kenya. Journal of Research Innovation and Implications in Education, 4(1), 83-93.

Mccarthy, A. S., & Pearlman, R. (2022). Multiplying siblings: Exploring the trade-off between family size and child education in rural Bangladesh. The Journal of Development Studies, 58(9), 1831-1856.

McKee, L. (2013). Print literacy opportunities for young children in a multimodal literacy ensemble. The University of Western Ontario (Canada).

Mohammed, Q., & Ab Rashid, R. (2019). The Sources of Reading Comprehension Difficulties among Saudi EFL Learners. Trends in Social Sciences, 1(1), 7–16.

Muñez, D., Bull, R., & Lee, K. (2022). Maternal education and siblings: Agents of cognitive development in kindergarten. Developmental Science, 25(4), e13218.

Nava, Alijah. (2024). Reading Difficulties of Grade 4 Learners in the Post-Pandemic. GEO Academic Journal. 5. 10.56738/issn29603986.geo2024.5.69.

Nelwan, M., Friso-van den Bos, I., Vissers, C., & Kroesbergen, E. (2021). The relation between working memory, number sense, and mathematics throughout primary education in children with and without mathematical difficulties. Child Neuropsychology, 28(2),143–170. Https://doi.org/10.1080/09297049.2021.1959905 https://doi.org/10.1080/09297049.2021.1959905thevirtual field. International journal of qualitative methods, 20, 16094069211047823.

Novriani, M. & Surya, E. (2017). Analysis of student difficulties in mathematics problem-solving ability at MTs SWARTA IRA Medan. International Journal of Sciences: Basic and Applied Research (IJSBAR) 33 (3), 63-75.

Nurjanah, R. L. (2018). The analysis on students' difficulties in doing reading comprehension final test. Metathesis: journal of English language, literature, and teaching, 2(2), 253–264.

Oslund, E. L., Deacon, S. H., Conrad, N. J., & Kwong, T. (2018). Identifying the nature of readers' decoding difficulties: A comparison of item-level and latent variable models. Scientific

DOI: https://doi.org/10.56738/issn29603986.geo2026.7.156
ISSN 2960-3986
GEO Academic Journal Vol. 7 No. 2 – 2026 series

Studies of Reading, 22(2),117–132. https://doi.org/10.1017/jse.2012.11 (PDF) Investigating the EFL Learners' Visual Word Recognition: Words' Frequency, Length, Regularity, and Superiority Effects in Comparison. Available from: https://www.researchgate.net/publication/377364424_Investigating_the_EFL_Learners'_Visual_Word_Recognition_Words'_Frequency_Length_Regularity_and_Superiority_Effects_in_Comparison [accessed Apr 16 2024].

Putri, D. S., & Melani, M. (2022). The Comparison Between Male and Female Students' Reading Comprehension at IAIN Bukittinggi. Indonesian Journal of Learning Studies (IJLS), 2(1), 1-9.

Quijano, L. J. T., & Legaspi, M. J. B. (2020). English proficiency and sequencing skills in narrative writing of public high school students. Philippine Social Science Journal, 3(3), 129-141.

Reinhold, F., Hofer, S., Berkowitz, M., Strohmaier, A., Scheuerer, S., Loch, F., ... & Reiss, K. (2020). The role of spatial, verbal, numerical, and general reasoning abilities in complex word problem solving for young female and male adults. Mathematics Education Research Journal, 32, 189-211.

Rodado, C. C. (2021). The Implementation of Limited Face-to-Face Reading Classes Through Home Visitation to Enhance the Reading Skills of Grade VI Pupils. INTERNATIONAL JOURNAL OF ADVANCED MULTIDISCIPLINARY STUDIES, 1(4), 88-95.

Satriani, E. (2018). Reading comprehension difficulties encountered by English students of the Islamic University of Riau. J-SHMIC: Journal of English for Academic, 5(2), 15-26.

Sheikh, S., Khan, A. N., & Gul, M. (2020). Study of Socio-Economic Background and its Effect on the Ability of English Reading Skills at Secondary School Level. Global Social Sciences Review, 1, 95-101.

Suliman, F., Ben-Ahmeida, M., & Mahalla, S. (2019). Importance of Punctuation Marks for writing and reading comprehension skills. Faculty of Arts Journal, 1(1), 29–53.

Taber, K. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. Res Sci Educ 48, 1273–1296 (2018). https://doi.org/10.1007/s11165-016-9602-2

Unay, O. D. (2016). Difficulties in College Algebra of Freshmen Students at the University of Eastern Philippines: Basis for Modular Construction. Open Access Library Journal, 3(04), 1.

Vélez, A. J., Dayaganon, D. G., Robigid, J., Demorito, J., Villegas, J., & Gómez, D. (2023). Difficulties and coping strategies in understanding mathematical concepts in a private higher education in Tagum City, Davao del Norte, Philippines. Davao Research Journal, 14(1), 45-54.

Wichayut, J. I. T. T. R. A., & Sitthitikul, P. (2019). The effects of phonics instruction: Letters and Sounds on decoding and blending skills of Thai grade 3 students. Thammasat University.

Witri, H. & Ansyari, M. (2022). A Comparison Study On Reading Comprehension Between Male And Female Students. Journal of Pedagogy and Online Learning. 1. 16–23. 10.24036/jpol.v1i1.4.