

**Relationship between vocabulary knowledge and reading comprehension
among Grade 3 pupils in rural public elementary schools**

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ABSTRACT

Reading proficiency is fundamental to learners' academic success because it enables them to understand, interpret, and apply information across learning areas. Despite the recognized importance of vocabulary and reading comprehension, limited local evidence exists on how these two variables are related among Grade 3 learners in rural public elementary schools. This study determined the relationship between vocabulary skills and reading comprehension as measures of reading skills among Grade 3 pupils in the public elementary schools of Solana, Cagayan. Using a descriptive-correlational design, data were gathered from 34 Grade 3 teachers through a validated questionnaire and analyzed using frequency, percentage, weighted mean, and Pearson's r . The findings showed that pupils had high levels of vocabulary skills and reading comprehension, although teachers experienced very serious challenges in developing reading skills. A significant moderate positive relationship was found between vocabulary and reading comprehension ($r = .443$, $p = .009$). The study concludes that strengthening vocabulary instruction, together with sustained instructional support, is essential to improving pupils' reading proficiency.

Keywords: Vocabulary skills, reading comprehension, reading proficiency, Grade 3 pupils, descriptive-correlational research.

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INTRODUCTION

Reading is a fundamental skill that serves as the foundation of learning and academic success. It enables learners to acquire knowledge, develop critical thinking, and engage meaningfully with academic content. Reading begins with the decoding of written symbols into corresponding speech sounds (Castles et al., 2009). These sounds must then be assigned meaning for comprehension to occur (Van Zeeland & Schmitt, 2013). Consequently, reading requires the successful integration of two essential processes: decoding and comprehension. Decoding is primarily a technical process that relies on the brain's capacity to recognize written symbols (Dehaene & Cohen, 2007), whereas comprehension is a complex cognitive and linguistic process that depends on vocabulary knowledge, memory, and inferential thinking (Castles et al., 2018). Without effective decoding and comprehension, reading

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becomes either a mechanical exercise without understanding or an impossible task because of inadequate word recognition.

Vocabulary plays a crucial role in connecting decoding and comprehension. Understanding word meanings is essential for constructing meaning from text, making vocabulary a critical component of reading comprehension (Perfetti et al., 2005). Vocabulary knowledge includes both breadth, which refers to the number of words a learner knows, and depth, which refers to the richness and precision of that knowledge (Anderson & Freebody, 1981). Research has shown that vocabulary breadth strongly predicts early reading comprehension, whereas vocabulary depth becomes increasingly important as learners progress to higher levels of reading (Sénéchal et al., 2006). Although some scholars contend that breadth and depth are highly correlated (Vermeer, 2001), both dimensions contribute substantially to learners' ability to understand written texts.

Within the Philippine educational context, vocabulary and reading comprehension have become pressing concerns. Despite years of formal schooling, many Filipino learners continue to struggle with basic reading skills. Results of the Programme for International Student Assessment (PISA) revealed that Filipino learners ranked among the lowest in reading literacy worldwide, with many unable to understand simple texts (Bernardo & Mante-Estacio, 2023). Likewise, the implementation of the Every Child a Reader Program reflects the government's recognition of reading as a fundamental competency, yet difficulties in vocabulary development and reading comprehension remain prevalent across grade levels (Idulog et al., 2023).

Poor reading skills have serious academic and social consequences. Learners with limited vocabulary and weak comprehension often experience difficulty understanding textbooks, following classroom instructions, and performing higher-order thinking tasks. Moreover, struggling readers are exposed to fewer opportunities to acquire new vocabulary, thereby creating a cycle of limited reading growth. This phenomenon is consistent with Stanovich's (1986) Matthew Effect, which explains that proficient readers continually improve through increased reading experiences, whereas struggling readers progressively fall behind. Such disparities ultimately affect not only academic achievement but also national productivity and workforce competitiveness (Bejos, 2009).

For Grade 3 learners, vocabulary and reading comprehension are particularly important because this stage marks the transition from learning to read to reading to learn. As decoding skills become more automatic, comprehension increasingly depends on vocabulary knowledge, listening comprehension, and inferential thinking (Quinn et al., 2015). Learners who fail to develop these skills during the early grades are likely to encounter greater difficulty in meeting the literacy demands of the K–12 curriculum (Bejos, 2009).

Vocabulary and reading comprehension are likewise mutually reinforcing. According to the Lexical Quality Hypothesis, high-quality mental representations of words enable readers to recognize words efficiently and devote greater cognitive resources to comprehension (Perfetti, 2007). Conversely, limited vocabulary knowledge places additional demands on working memory, making comprehension more difficult (Cain et al., 2004). Learners with extensive vocabularies are generally better able to infer meaning, establish relationships among ideas, and integrate new information with prior knowledge (Nation & Snowling, 1999; Nation et al., 2007).

Although numerous international studies have examined the relationship between vocabulary knowledge and reading comprehension (Ouellette, 2006), relatively few studies have investigated this relationship among Grade 3 learners in rural Philippine settings. Solana, Cagayan, provides a meaningful context for examining this issue because many learners continue to experience challenges associated with limited educational resources. Understanding the relationship between vocabulary and reading comprehension among Grade

3 pupils in this locality may provide valuable evidence for designing instructional interventions and informing educational policies that strengthen early literacy development.

This study therefore sought to determine the relationship between vocabulary and reading comprehension as measures of reading skills among Grade 3 pupils in the public elementary schools of Solana, Cagayan. Specifically, it aimed to generate evidence that may assist teachers, school administrators, and policymakers in developing effective interventions that promote vocabulary development, improve reading comprehension, and strengthen pupils' overall reading proficiency.

Statement of the problem

The study aimed to determine the relationship between vocabulary and reading comprehension as measures of the reading skills of Grade 3 pupils in the public elementary schools of Solana, Cagayan during School Year 2025 to 2026.

Specifically, it sought to answer the following research questions:

1. What is the profile of the teacher respondents in terms of age, gender, civil status, highest educational attainment, present position, latest performance rating, length of service, and level of in-service training attended?
2. What is the level of vocabulary skills of Grade 3 pupils?
3. What is the level of reading comprehension of Grade 3 pupils, as perceived by their teachers, in terms of literal understanding, inferential understanding, and critical understanding?
4. What is the extent of the challenges encountered by teachers in developing the reading skills of Grade 3 pupils?
5. Is there a significant relationship between vocabulary skills and reading comprehension as measures of the reading skills of Grade 3 pupils?

METHODOLOGY

This study employed a descriptive correlational research design to determine the relationship between vocabulary skills and reading comprehension of Grade 3 pupils as measures of their reading skills in public elementary schools in Solana, Cagayan. The design was appropriate because it described naturally occurring variables and examined the association between pupils' vocabulary skills, reading comprehension, and the challenges encountered by teachers in developing these skills, without manipulating any variables. According to McBurney and White (2009), descriptive correlational research is suitable for describing trends and relationships among naturally occurring variables. Similarly, Hassan (2024) emphasized that correlational designs are commonly used in educational research to determine the strength and direction of relationships among variables such as skills, attitudes, and performance. Best and Kahn (2006) further noted that this design effectively identifies patterns and explains behaviors in authentic educational settings.

The study was conducted in the public elementary schools of Solana District, Cagayan, a first-class municipality in the province of Cagayan, Philippines. Solana comprises both urban and rural communities distributed across 38 barangays, providing an appropriate setting for investigating the reading skills of Grade 3 pupils in public elementary schools.

The study employed purposive sampling in selecting the respondents. The participants consisted of 34 Grade 3 teachers, with one teacher representing each of the 34 public elementary schools in Solana District, Cagayan. These teachers served as the respondents

because they were directly involved in assessing the vocabulary skills, reading comprehension, and reading development of Grade 3 pupils.

Three data gathering instruments were utilized in the study: a researcher made questionnaire, documentary analysis, and unstructured interviews. The questionnaire, developed from professional books, journal articles, theses, and dissertations, consisted of four parts: respondents' profile, vocabulary skills of Grade 3 pupils, reading comprehension skills of Grade 3 pupils, and challenges encountered by teachers in developing pupils' reading skills. Prior to its administration, the questionnaire underwent a tryout among selected teachers from a nearby municipality, and the instrument was revised based on the recommendations of the participants and the research adviser before its final administration. Documentary analysis was conducted to verify information obtained through the questionnaire, while unstructured interviews were used to clarify ambiguous responses provided by the respondents.

Before conducting the study, the researcher secured approval from the Office of the Schools Division Superintendent and obtained permission from the school administrators. The validated questionnaire was then reproduced and personally administered to the respondents. After retrieval, the completed questionnaires were checked, tallied, tabulated, and prepared for statistical analysis.

The collected data were analyzed using appropriate descriptive and inferential statistical tools. Frequency and percentage were employed to describe the demographic profile of the respondents. Weighted mean was used to determine the levels of vocabulary skills, reading comprehension, and the challenges encountered by teachers. Finally, the Pearson Product Moment Correlation Coefficient (Pearson's r) was utilized to determine the significant relationship between vocabulary skills and reading comprehension among Grade 3 pupils.

RESULTS AND DISCUSSION

The profile of the respondents indicates that the study was supported by a group of professionally competent and experienced teachers. Most were female, married, holders of a master's degree, and occupied the Teacher III position. Many had been in the teaching profession for more than a decade, and all had received an Outstanding performance rating. These characteristics suggest that the respondents possessed sufficient classroom experience and professional preparation to provide informed assessments of their pupils' reading skills. Their participation in professional development activities at the district, regional, national, and international levels further indicate their continued commitment to improving instructional practice.

The findings revealed that Grade 3 pupils possessed a generally high level of vocabulary skills ($WM = 3.65$). This suggests that the pupils had already acquired a substantial working vocabulary that enabled them to understand many of the words commonly encountered in classroom instruction and reading materials. Their strongest performance was in recognizing synonyms and antonyms, indicating that they could identify semantic relationships among familiar words. Such ability reflects the development of basic lexical knowledge, which is essential for reading comprehension.

However, the findings also revealed areas requiring improvement. The pupils obtained only moderate ratings in defining familiar English words and using newly learned words appropriately in sentences. This distinction is important because recognizing the meaning of a word is fundamentally different from being able to explain and use it accurately. Productive vocabulary requires a deeper understanding of meaning, context, grammar, and usage. Pupils who know a word only at the recognition level may still experience difficulty expressing ideas in speaking and writing or understanding more complex academic texts. These findings suggest that vocabulary instruction should not end with word recognition but should

emphasize repeated exposure, contextual learning, oral interaction, and authentic language use to deepen word knowledge.

The pupils likewise demonstrated a high level of reading comprehension (WM = 3.97). Among the three dimensions, critical thinking obtained the highest rating, followed by literal understanding, while inferential understanding received the lowest mean, although it remained within the high category. At first glance, the higher rating for critical thinking appears surprising because evaluation is generally considered a higher-order cognitive skill than inference. One possible explanation is that many critical-thinking items required pupils to express personal opinions, identify values, or relate stories to their own experiences. Such tasks are often easier for young learners because they rely on personal judgment rather than complex textual analysis. In contrast, inferential comprehension requires readers to integrate textual clues with prior knowledge to construct meanings that are not explicitly stated. This process demands greater cognitive effort and places heavier demands on vocabulary knowledge, working memory, and reasoning abilities.

The comparatively lower performance in inferential comprehension deserves particular attention because it represents the transition from simply understanding what is written to interpreting what the author intends to communicate. Learners who have difficulty making inferences may struggle to identify implied meanings, predict outcomes, determine causes and effects, and understand the deeper message of a text. If this weakness is not addressed during the primary grades, it may hinder pupils' ability to comprehend more complex informational and literary texts in the higher grade levels. Consequently, classroom instruction should intentionally incorporate activities that develop inferential thinking, such as prediction exercises, guided questioning, think-aloud strategies, and evidence-based discussions.

Although the pupils generally demonstrated satisfactory vocabulary and reading comprehension, the teachers reported experiencing very serious challenges in developing pupils' reading skills (WM = 4.31). The greatest challenge was implementing differentiated instruction for struggling readers, followed by limited instructional materials, inadequate classroom resources, low pupil motivation, difficulty monitoring individual reading progress, and the diversity of learners' needs. These findings suggest that effective reading instruction depends not only on teacher competence but also on the availability of adequate resources, manageable class conditions, and sufficient instructional support.

The coexistence of high pupil performance and very serious instructional challenges offers an important insight. It suggests that the teachers have been able to sustain acceptable learning outcomes despite considerable limitations in their teaching environment. At the same time, the high average ratings should not obscure the possibility that some pupils continue to experience substantial reading difficulties. Average scores often conceal individual differences, particularly among struggling readers who require specialized interventions. Thus, schools should complement classroom instruction with targeted reading programs, continuous progress monitoring, differentiated teaching strategies, and stronger partnerships with parents to ensure that no learner is left behind.

The correlation analysis demonstrated a statistically significant moderate positive relationship between vocabulary skills and reading comprehension ($r = .443$, $p = .009$). This finding indicates that pupils with stronger vocabulary knowledge generally demonstrated better reading comprehension. Vocabulary serves as the foundation upon which comprehension is built because readers cannot fully understand a text when they do not know the meanings of the words it contains. Knowledge of vocabulary enables learners to interpret ideas accurately, establish connections among concepts, and derive meaning from context.

Nevertheless, the correlation coefficient also indicates that vocabulary explains only part of the variation in reading comprehension. A moderate relationship suggests that comprehension is influenced by multiple interacting factors beyond vocabulary alone. These include decoding ability, reading fluency, prior knowledge, reasoning skills, motivation, language exposure, instructional quality, and opportunities for meaningful reading experiences. Improving vocabulary is therefore necessary but not sufficient by itself to produce highly proficient readers. Reading instruction should adopt a balanced approach that simultaneously develops word knowledge, fluency, comprehension strategies, and higher-order thinking.

The findings support Quinn et al. (2015), who reported that vocabulary growth contributes significantly to improvements in reading comprehension over time. They also reinforce Stanovich's (1986) Matthew Effect, which explains that successful readers continually expand their vocabulary through frequent reading, while struggling readers gradually fall behind because limited reading opportunities restrict vocabulary growth. This reciprocal relationship highlights the importance of establishing strong reading habits during the primary grades. The more pupils read, the richer their vocabulary becomes; and as vocabulary expands, comprehension likewise improves, encouraging even greater engagement with reading.

Taken together, the findings demonstrate that vocabulary and reading comprehension are closely interconnected components of reading proficiency. Although Grade 3 pupils generally exhibited satisfactory reading skills, weaknesses in productive vocabulary and inferential comprehension indicate the need for sustained instructional support. Schools should strengthen vocabulary instruction through explicit teaching, contextualized language activities, and extensive reading while providing opportunities for learners to develop inferential and analytical thinking. At the same time, educational leaders should address the instructional challenges faced by teachers by ensuring the availability of quality reading materials, adequate professional development, and systematic intervention programs. Such efforts are essential for strengthening literacy instruction and establishing a solid foundation for lifelong learning.

CONCLUSION

The teacher-respondents are predominantly female, mostly belong to the mid-career age groups, are largely married, and possess strong academic qualifications, with most holding a Master of Arts in Education degree. Many occupy Teacher III and Master Teacher positions, have 11–15 years of teaching experience, have attended professional development activities at various levels, and all received outstanding performance ratings. These characteristics indicate that the respondents are professionally competent and well-prepared to support literacy instruction. Nonetheless, schools should sustain teachers' professional growth by providing continuous learning opportunities that enhance reading instruction and address emerging educational needs.

Grade 3 pupils demonstrate a high level of vocabulary skills, particularly in recognizing relationships among words such as synonyms and antonyms. However, they show relatively lower performance in defining words and using them appropriately in meaningful contexts. This suggests that while pupils possess adequate receptive vocabulary, greater emphasis should be placed on developing productive vocabulary through contextualized language activities, meaningful reading experiences, and regular opportunities for oral and written language use.

The pupils likewise exhibit a high level of reading comprehension in terms of literal understanding, inferential understanding, and critical thinking, with critical thinking emerging

as their strongest area. Although this reflects generally satisfactory reading performance, inferential comprehension obtained the lowest mean among the three dimensions, indicating the need for more classroom activities that develop reasoning, prediction, interpretation, and evidence-based thinking. Strengthening these skills will enable pupils to engage more deeply with increasingly complex texts.

Despite the pupils' generally positive reading performance, teachers continue to experience very serious challenges in developing reading skills. The most pressing concerns include implementing differentiated instruction for struggling readers, limited instructional materials and classroom resources, large class sizes, low pupil motivation, and insufficient parental and community support. These findings underscore that effective reading instruction depends not only on teacher competence but also on adequate institutional support. Schools should therefore invest in quality reading resources, strengthen school-based reading intervention programs, encourage active parental involvement, and provide teachers with sufficient instructional support to address learners' diverse reading needs.

The study further establishes that vocabulary skills are significantly related to reading comprehension, confirming that vocabulary development is an essential component of reading proficiency. However, the moderate correlation indicates that reading comprehension is influenced by other factors as well, including learners' background knowledge, motivation, reading experiences, and instructional practices. Consequently, reading programs should adopt a comprehensive approach that develops vocabulary, comprehension strategies, reading fluency, and higher-order thinking skills simultaneously.

Finally, the findings of this study provide a useful basis for improving reading instruction in the elementary grades. Future studies may validate these findings using larger populations, different grade levels, and varied educational settings. Researchers are likewise encouraged to investigate other factors that may influence reading development, such as the home literacy environment, learner motivation, parental involvement, technology integration, and classroom practices. Employing mixed-methods, qualitative, or longitudinal research designs may also provide deeper insights into how vocabulary and reading comprehension develop over time and how instructional interventions influence pupils' reading achievement.

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