



READING COMPREHENSION AND VOCABULARY SKILLS OF GRADE 4 PUPILS IN A DISTRICT: BASIS FOR INTERVENTION PLAN

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Abstract: Reading comprehension and vocabulary skills are undeniably prerequisite to students' learning. Hence, this study focused on investigating the reading and vocabulary skills of students in District II A, Olongapo City. The study answered questions regarding the reading comprehension level of pupils using the Phil-IRI Passages, their vocabulary test score, and whether there is a significant correlation between their reading comprehension level and vocabulary skills. Additionally, the study gathered teachers' perspectives on strategies that can improve pupils' reading comprehension and vocabulary skills. The quantitative data were collected through tests. This provided insights into their literacy proficiency levels and any potential differences between schools within the district. Additionally qualitative data were gathered through interviews and observations of classroom activities to gain an understanding of factors that may impact students comprehension and vocabulary development. The research findings serves as a resource for policymakers, administrators and teachers, which was the basis for an intervention plan aimed to increase the reading comprehension level of the pupils; enrich the vocabulary knowledge of the pupils; eliminate the challenges encountered in reading comprehension and vocabulary knowledge; exemplify ways on appropriate assessment of pupils' reading comprehension and vocabulary knowledge; and train teachers on effective strategies in developing reading comprehension skills and vocabulary knowledge among pupils.

Keywords: Reading comprehension, vocabulary skills, teaching-learning, Mixed Methods, Phil-IRI, District II-A, Olongapo City

INTRODUCTION

Cognitive development linked to reading has been extensively studied, indicating that successful educational outcomes correlate strongly with proficient reading skills. According to Kim and Park, reading comprehension significantly influences academic performance, especially in language and social studies subjects Zhang et al. (2023). In the 21st century, literacy has emerged as a foundational element essential for learning and developing sophisticated competencies in students, as articulated by the World Economic Forum (Vienazindiené et al., 2021). According to Dicataldo et al., emergent literacy skills such as phonological awareness, vocabulary, and narrative skills developed during preschool lay the groundwork for later reading comprehension abilities, thereby influencing children's readiness for academic challenges (Dicataldo et al., 2020). Research also indicates that the home literacy environment (HLE) significantly impacts reading development before formal schooling. Aleksić and Duruş highlight that parental engagement in literacy activities can have lasting effects on children's reading comprehension and overall academic readiness (Aleksić & Duruş, 2025). Incorporating multimedia elements in vocabulary instruction further enhances learning by creating a multifaceted engagement experience. Alobaid (2021) emphasizes the role of ICT multimedia tools in improving writing accuracy through enhanced vocabulary retention. (Kendeou et al., 2012) indicate that there exists a strong correlation between reading fluency and comprehension. Readers who struggle with fluency often experience difficulties in understanding how various components of a text interrelate, hampering their ability to create coherent mental representations of what they read. A National Reading Panel study found that English reading skills include reading fluency, vocabulary, phonic awareness, and comprehension. According to a study, elementary school pupils' receptive and emissive vocabulary predicts their reading and writing ability. Moreover, the importance of reading extends beyond academics into personal development and social growth. According to (Bennett et al.,



2023), engaging children in read-aloud sessions that incorporate social-emotional learning contributes to their cognitive and emotional development.

The reader's mental image of the text depends on their reading comprehension. According to Kucer (2016) and van den Broek et al. (2016), readers develop mental models from explicit and implicit text, experience, and past knowledge. Scientific literature has examined reading comprehension from literal idea identification to inferential and critical levels involving conclusions and fact transformation (Ulum, 2016). Several research studies (Trakhman et al., 2019; Kazazoglu, 2020) show that students prefer print textbooks and perform better on reading comprehension exams while reading print texts. In terms of student diversity, reading comprehension has been linked to interest and intrinsic motivation (Cartwright et al., 2019; Dewi et al., 2020), and reading-related knowledge, with women having higher reading comprehension than men. This is important because these variables can affect reading comprehension cognitive processes (Xu et al., 2020). Meanwhile, the Philippines has the lowest reading comprehension score in Asia, according to the OECD Programme for International Student Assessment (PISA, 2018). The Philippines has always struggled with reading comprehension, according to PISA 2018. The Department of Education reported in 2007 that 70% of children's reading skills are below grade level. Rosalina (2018) argues that mental, psychological, and emotional behavior affect language learning. Text and learner characteristics also affect reading and comprehension. Readers interpret material using learner characteristics such as past knowledge, preparedness or motivation, self-esteem, sex, and personality. However, text variables—structure, features, and content—can alter comprehension. Language acquisition experts have focused on these factors since they have a considerable impact on learning a foreign or second language (Rosalina, 2019).

While there is an existing body of literature on reading comprehension and vocabulary skills in various educational contexts, there is a noticeable gap in research specifically addressing the reading comprehension and vocabulary skills of Grade 4 pupils within a district setting. The available literature often focuses on broader age groups or specific interventions without pinpointing the unique needs and challenges faced by Grade 4 students. Additionally, limited research appears to explore the contextual factors and instructional methodologies that contribute to or hinder the development of reading comprehension and vocabulary skills in Grade 4 pupils within a district. Understanding these specific factors is crucial for tailoring effective intervention plans that can address the needs of this particular grade level in a district setting. The existing studies predominantly concentrate on general reading abilities or specific components of literacy, such as phonics or fluency, leaving a research gap regarding the holistic understanding of reading comprehension and vocabulary skills in Grade 4 students. This gap hinders the development of targeted and evidence-based intervention plans that can be implemented at the district level to enhance the literacy outcomes of Grade 4 pupils. Therefore, there is a need for empirical research that delves into the nuanced aspects of reading comprehension and vocabulary skills specifically in Grade 4 pupils within a district setting. Such research could shed light on the factors influencing these skills, effective instructional strategies, and the design of intervention plans that are contextually relevant to the district's educational landscape. Closing this research gap contribute valuable insights to educational practitioners, policymakers, and researchers aiming to enhance literacy outcomes at the Grade 4 level within a district. It premised that a study determined the reading comprehension and vocabulary skills of primary pupils in District II - A public elementary schools in Olongapo City for the School Year 2023 -2024 conducted to help the respondents, especially the primary pupils cope and survive the teaching and learning process, especially in reading comprehension and vocabulary skills. It would be a great advantage if their difficulties were identified so that proper and appropriate actions could be taken.

FRAMEWORK

The following theories served as the foundation for this study: Psycholinguistics theory, Schema Theory, and the conventional bottom-up approach. The traditional bottom-up approach to teaching reading describes language learning as a response system that humans acquire through automatic conditioning processes, where some patterns of language are reinforced, and others are not, and only those patterns reinforced by positive reinforcement are retained. The term linguistic schema describes a student's prior knowledge of vocabulary, grammar, and phonology. A topic's background knowledge, cultural sensitivity to or prejudice against the subject, cultural customs, and previous case experience are all taken into account by the content schema. The psycholinguistic model states that instead of relying on a set of teachable abilities, meaning is inferred from the reader's understanding of the grammar, semantics, and phonological clues of spoken language. The researcher utilized Input-Process-Output model. In the input phase, the researcher determined the reading comprehension level of the primary pupils along with the indicated reading comprehension skills, the level of the primary pupils' vocabulary skill. The qualitative part was based on the teacher's perspective on the strategies used to improve the reading comprehension and vocabulary skills of Grade 4 pupils. All data in the process were gathered through a questionnaire, which was tallied, tabulated, and interpreted using different statistical tools like weighted arithmetic mean, frequency, percentage distribution, Pearson Product Moment Correlation, and thematic analysis. The output was a proposed intervention plan for improving the reading comprehension and vocabulary skills of grade 4 pupils.

OBJECTIVES OF THE STUDY

This study was conducted to: (1) determine the extent of reading comprehension of Grade 4 pupils; (2) identify the extent of vocabulary knowledge of Grade 4 pupils; (3) analyze significant correlation between pupils' reading comprehension and vocabulary knowledge; (4) discuss the challenges students' encountered in reading comprehension and vocabulary knowledge; (5) explain the effective strategies utilized by teachers in improving students' reading comprehension and vocabulary; (6) deliberate the key factors perceived by teachers in assessing students' reading comprehension and vocabulary; and (7) develop an intervention plan to improve the reading comprehension and vocabulary skills of grade 4 students.

METHODOLOGY

Research Design

The study aimed to assess the reading comprehension and vocabulary skills of primary pupils in public elementary schools in District II-A Olongapo City for the School Year 2023 – 2024. The research design employed a mixed-method approach, specifically convergent parallel design, integrating both quantitative and qualitative methods to provide a comprehensive understanding of the research questions. According to Hong et al. (2017), utilizing a mixed-methods perspective can yield a more comprehensive understanding of research questions than could be achieved by employing either method in isolation. In this research, the qualitative data provided the study depth, while quantitative data gave it scope. Moreover, cross-validation was applied to qualitative through quantitative data. Triangulation, as a qualitative research approach, enabled the convergence of data on reading comprehension and vocabulary knowledge, which made it easier to test validity or get a thorough grasp of a study problem. The use of mixed-methods design in this research offered the most



amazing chance to solve research questions since it integrated the benefits of two distinct methodologies while minimizing their disadvantages.

Research Site

The setting included four public elementary schools in District II-A Olongapo City.

Participants

The student-participants were selected using universal sampling method, wherein 662 grade 4 pupils served as participants. All the data on reading comprehension and vocabulary of pupils were considered, while teachers were interviewed on a random selection to develop themes after data saturation was achieved.

Instrumentation

The researcher created a test question to assess the vocabulary and reading comprehension abilities of District II-A's elementary students. Eight (8) reading passages taken from the Philippine Informal Reading Inventory (Phil-IRI) Package were included in the test questions. The vocabulary test was developed using a variety of vocabulary-rich reading passages. To ensure the validity of the research instrument, pilot testing of the instrument to ten (10) respondents from other district was utilized. The internal consistency of the instruments used in this study ranges from moderate to excellent, according to the reliability test results. With a total of ten items, the reading comprehension test had a Cronbach's alpha coefficient of .732, which indicates good reliability. Similarly, the vocabulary exam, which also had ten items, had a Cronbach's alpha coefficient of .777, indicating a marginally better degree of internal consistency. While not perfect, the coefficients provide a fair degree of reliability for both tests, demonstrating that the items in each test reliably measure comparable constructs. The findings imply that the instruments were valid measures of the participants' vocabulary and reading comprehension, providing a solid foundation for interpreting the test outcomes. Finally, District II – A grade 4 teachers were given an interview guide. The adviser and professionals in the field of English education reviewed this interview guide questionnaire. Before the final draft of the instruments was created, ten (10) teachers from different schools who were not among the respondents were requested to use the tool for clarification and other modifications. The instruments were then duplicated for administration with the research adviser's agreement.

Ethical Consideration

At all times, the researcher was required to respect the dignity of the interviewees. We have taken measures to protect the respondents' privacy to protect not only the confidentiality of the research data but also the confidentiality of other personal information. Everyone who participated in the research was kept anonymous throughout the process, and all conversations regarding the study were honest and transparent. It ensured no erroneous information or a biased portrayal of the core data finance. Before beginning the study, the researcher carefully obtained participants' consent and verified their voluntary participation. Before initiating this investigation, the researcher contacted the relevant authorities to obtain their agreement on the ethical rules governing the research project's conduct. Additionally, credit was given where credit was due for any papers or journals mentioned in this study. In addition, this research considers Republic Act 10173, commonly known as the Philippine Data Privacy Act of 2012, passed in 2012.

Data Collection



Data gathering involved obtaining permission from the School's Division Superintendent of Olongapo, coordinating with teachers, and securing consent from parents for pupil-respondents.

Statistical Techniques

The collected data were organized, tallied, and tabulated, utilizing tools such as frequency and percentage for analysis. Pearson r was employed to measure the correlation between reading comprehension and vocabulary skills, while thematic analysis was used to interpret qualitative data. The study's treatment of data emphasized a correlational approach, investigating the connection between reading comprehension and vocabulary skills without manipulating variables. The comprehensive research design, ethical considerations, and systematic data gathering and analysis methods contribute to the study's reliability and validity, providing a robust foundation for addressing the research questions.

RESULTS AND DISCUSSION

Reading Comprehension of the Participants

The provided data reveals that all participants are in Frustration Level with a Mean Score of 27.82. This outcome also supports a 2017 study by Younus and Khan, which discovered that students' poor English reading comprehension skills make it more complicated for them to comprehend their textbooks. Up reading, the nation came up at 79th place in the 2023 Program for International Student Assessment (PISA) study. The Philippines ranks at 347, which is equivalent to Level 1a, while the OECD average is 476, or Level 2.

Reading Comprehension of Participants

Reading Comprehension Level	Frequency	Percentage
Frustration Level	662	100.00
Mean Score	27.82	

Vocabulary Knowledge of the Participants

Looking at the data, it is evident that the majority of students consistently achieved scores in the Good category (5-6) for all five tests. The frequencies in this category were consistently the highest among all the score ranges, ranging from 230 to 268, with corresponding percentages ranging from 38.40% to 44.74%. This indicates a relatively strong performance level in the Good range for all the tests. The next highest score range was Very Good (7-8), with frequencies ranging from 125 to 163 and percentages ranging from 20.87% to 27.21%. Although there was some variability across the tests, the Very Good range consistently represented the second-highest performance level. Interestingly, no students achieved scores in the Outstanding (9-10) category for any of the tests.

Vocabulary Test Scores

Score Range	Vocabulary Test									
	Test 1		Test 2		Test 3		Test 4		Test 5	
	F	%	f	%	F	%	f	%	F	%
9 – 10 (Outstanding)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
7 – 8 (Very Good)	12	20.87	15	25.38	16	27.21	13	22.20	72	12.02
5 – 6 (Good)	23	38.40	18	31.59	26	43.41	17	28.71	26	44.74
3 – 4 (Poor)	24	40.07	24	41.27	17	28.71	25	42.07	23	39.07
0 – 2 (Very Poor)	4	6.67	11	18.44	4	6.67	42	70.01	25	41.67
Mean Score	5.01 (Good)		5.05 (Good)		5.39 (Good)		4.82 (Good)		4.76 (Good)	

Research by (Crimon et al., 2022) highlights that the volume of language exposure directly correlates with vocabulary size, which in turn affects language processing speed and learning capabilities. Innovative instructional strategies have emerged to enhance vocabulary learning. Research suggests that incorporating multimedia and technology can significantly enhance vocabulary acquisition. For example, authentic video materials can provide contextualized experiences that enrich learners' exposure to new vocabulary in meaningful ways, promoting both listening skills and vocabulary development (Polat & Erişti, 2022). Having a large vocabulary allows people to communicate ideas clearly and prevent misunderstandings.

Correlation of Reading Comprehension Level and Vocabulary Skills of Pupils

The result indicates a negligible correlation between pupils' reading comprehension level and vocabulary skills.

Correlation of Reading Comprehension Level and Vocabulary Skills

Correlation	Pearson r	p-Value	Decision at 5% alpha
Reading Comprehension Level and Vocabulary Skills	-0.07 Negligible Correlation	0.086	Accept Ho (Not Significant)

As with Limpangog's (2017) study, which found that pre-reading exercises like vocabulary definitions, text summaries, and pre-passage questions had no discernible effect on reading comprehension, this study's result suggests that there is no discernible relationship between students' reading comprehension abilities and their vocabulary knowledge, as indicated by the computed negligible correlation coefficient (r-value) of -0.07.

Moreover, research by Tangsakul (2024) elucidates that vocabulary size is linked to reading achievement but is not the sole determinant. This finding aligns with the notion that while vocabulary is vital, external factors such as decoding skills and inferencing abilities also significantly impact reading comprehension, which maintain that vocabulary skills have a significant impact on students' comprehension. Moreover, even if the results indicate an inverse correlation between the two variables—which explains why vocabulary skills increase and comprehension abilities decrease—the computed correlation coefficient, with an r-value of -0.07, is insignificant. Therefore, it is unlikely that



their kids' vocabulary will grow, but their reading comprehension will decline, and vice versa. We cannot reject the null hypothesis since the p-value is higher than the significance level of 0.05 (5%). This shows insufficient data to conclude that students' vocabulary and reading comprehension levels are statistically correlated. Interestingly, even if the correlation coefficient points to a weak link, it is not statistically significant at the 5% level. Therefore, showing a broader sample of students the connection between vocabulary and reading comprehension would not be helpful.

According to Hidayati (2017), a solid and positive relationship exists between students' achievement in reading comprehension—which improves their reading skills—and their vocabulary knowledge. On the other hand, the relationship between vocabulary and reading comprehension is not always linear. Certain studies, such as those by (Cho et al., 2019), highlight complexities in the interactions of different linguistic skills among English learners, indicating that vocabulary alone may not fully explain discrepancies in reading comprehension outcomes. Furthermore, in the Journal of English Language Teaching and Learning, Fitri et al. (2021) discovered a strong correlation between students' vocabulary mastery and reading comprehension, indicating that students should develop their vocabulary knowledge to enhance their reading comprehension.

More investigation or study would be required to fully comprehend the potential influences on pupils' vocabulary and reading comprehension. Furthermore, accounting for other variables or carrying out a longitudinal study can yield further information about the connections between these variables.

The Challenges in Reading Comprehension and Vocabulary

There were four themes unearthed in accordance to challenges encountered by the students based on teachers perspectives. These include lack of vocabulary knowledge, lack of comprehension, lack of interest, and low level reading skills.

Lack of Vocabulary Knowledge

Teachers believe that a student's limited vocabulary or prior knowledge of words presents a significant challenge that needs to be addressed, which is comparable to Susanto's (2021) study, which highlighted that one of the challenges students face is learning vocabulary in addition to pronouncing, writing, spelling, and grammar forms, selecting acceptable meanings, and employing words in context.

Lack of Comprehension

Further studies corroborate the assertion that vocabulary knowledge propels reading comprehension. (Ouellette, 2006) elaborates on the vital interplay between vocabulary and reading processes, positing that an enriched vocabulary contributes not only to word reading but also enhances overall comprehension (Ouellette, 2006).

Lack of Students' Interest

Furthermore, students' lack of interest was also revealed as one of the challenges encountered by students, as some of the teachers' perspectives stated that "Students' found reading boring" and "Students' laziness". About this, Yunita and Komsu (2023) asserted that various factors influence students' reading interests. Students who prefer reading are generally more motivated than their counterparts who are less inclined towards reading, a trend influenced by internal and external factors. The study revealed that students' reading interests tend to hover around the middle to lower average level, with approximately 40% falling within this range. Consequently, there is a pressing need for concerted efforts to elevate and enhance students' reading interests.



Low level of Reading Skills Top of Form

The study's findings show that reading skills prevail as one of the difficulties students encounter, as some of the respondents stated that "They had a hard time decoding some difficult words encountered while reading" and "Some students are having trouble recognizing the letters". This indicates that students struggle to connect the text to their experiences, hindering their comprehension. Research by Daugaard et al. (2017) highlights the importance of inference-making in reading comprehension and its strong relationship with vocabulary knowledge.

Effective Strategies for Improving Reading Comprehension and Vocabulary Skills

Three major themes in terms of effective strategies were drawn which are identifying context clues, providing reading intervention, and collaboration with students' parents. These are the three major strategies that helped in improving students reading comprehension and vocabulary skills. Related to the findings of the study conducted by Innaci and Sam (2017), where it was concluded that introducing the use of context clues as a strategy assist learners in comprehending unfamiliar words, the result from this study shows that teaching students with the process of identifying context clues to find the meaning of an unfamiliar words is helpful in improving students' reading competence. Results show that providing intervention among students helped them in improving their reading comprehension and vocabulary knowledge based on teachers' perspectives. This clearly indicates that aside from a normal teaching, strategies in improving students' skills are important. This result ties well with previous study conducted by Gilakjani & Sabouri (2016) where the researchers concluded that strategies must be integrated in order to help struggling learners towards learning acquisition in reading comprehension and strengthen their vocabulary knowledge

Teachers' Perspectives in Assessing Students' Reading Comprehension and Vocabulary

There are three major factors that teachers consider in assessing their students which was drawn in three themes. These are identifying students' learning condition, students' ability to answer guide question and students ability to pronounce words. Based on the perspectives of the teachers, majority of them believe that it is important to assess or identify students' learning condition. This supports the conclusion from the study conducted by Fletcher, et al. (2018) where they have mentioned that it is important to have a prior assessment among learners for possible health condition such as eye defects, dyslexia and different speech impediments. This pattern of results is consistent with the previous study conducted by Hadhrami, Amrat, Khasawneh, and Darawsheh (2022) which concludes that identifying students mental or physical condition must be assessed first to have a basis in implementing different learning intervention among students.

Intervention Plan to Improve the Reading Comprehension and Vocabulary Skills of Grade 4 Pupils

This intervention plan targets to achieve the following goals: increase the reading comprehension level of the pupils; enrich the vocabulary knowledge of the pupils; eliminate the challenges encountered in reading comprehension and vocabulary knowledge; exemplify ways on appropriate assessment of pupils' reading comprehension and vocabulary knowledge; and train teachers on effective strategies in developing reading comprehension skills and vocabulary knowledge among pupils.

CONCLUSION



Based on these findings, it can be concluded that Grade 4 pupils in District II-A as a whole is facing challenges in reading comprehension, as indicated by the frequency, percentage, and mean score. Further investigation may be necessary to identify the specific factors contributing to this frustration level and to develop appropriate interventions or strategies to support the group in improving their reading comprehension skills. Majority of students consistently achieved scores in the Good category (5-6) for all the vocabulary tests. Although no students achieved scores in the Outstanding category (9-10), the absence of data brings into question the test's difficulty and whether it effectively measures outstanding performance. Overall, the data indicates a generally satisfactory performance level in vocabulary for the tested population. There is a weak and negligible correlation between pupils' reading comprehension level and vocabulary skills. The correlation coefficient indicates a slight tendency for an inverse relationship between these variables, but the magnitude of this relationship is very small. Moreover, the p-value obtained suggests that there is not enough evidence to conclude that there is a statistically significant correlation between reading comprehension level and vocabulary skills among pupils. Therefore, the weak relationship observed may not have practical significance in explaining the broader relationship between these variables in the pupil population.

RECOMMENDATIONS

Based on the findings, the following recommendations can be made for improving the reading comprehension and vocabulary skills of Grade 4 pupils. Further investigation should be carried out to identify the specific factors contributing to the challenges in reading comprehension. This may involve analyzing teaching methods, curriculum content, and individual student needs to pinpoint areas for improvement. Develop appropriate interventions or strategies to support Grade 4 pupils in improving their reading comprehension skills. These interventions should be tailored to address the identified factors contributing to the frustration level and cater to the diverse learning needs of the students. Given that no students achieved scores in the Outstanding category for the vocabulary tests, reviewing the test's difficulty level and ability to measure outstanding performance accurately may be necessary. Consider adjusting the test to provide a more comprehensive assessment of vocabulary skills and effectively differentiate performance levels. While the data suggests a generally satisfactory performance level in vocabulary skills, it is crucial to maintain a balanced focus on both vocabulary and reading comprehension. Strengthen efforts to support the development of reading comprehension skills alongside vocabulary building to ensure comprehensive language proficiency. Continuously monitor and measure the progress of Grade 4 pupils in both reading comprehension and vocabulary skills. Regular assessment and evaluation will help identify areas of improvement as well as measure the impact of interventions implemented. Provide professional development opportunities for teachers to enhance their instructional strategies and techniques for teaching reading comprehension and vocabulary skills. Equipping teachers with effective teaching methods can positively impact student learning outcomes. By implementing these recommendations, it is expected that Grade 4 pupils' reading comprehension and vocabulary skills will be improved, leading to better overall academic performance and language proficiency.

TRANSLATIONAL RESEARCH

The findings of this research are best translated through an intervention plan, which targets to increase the reading comprehension level of the pupils; enrich the vocabulary knowledge of the pupils; eliminate the challenges encountered in reading comprehension and vocabulary knowledge; exemplify



ways to appropriate assessment of pupils' reading comprehension and vocabulary knowledge, and train teachers on effective strategies for developing pupils' reading comprehension skills and vocabulary knowledge. Specific strategies include indentifying pupil's learning condition; analyzing pupil's ability to answer guide questions and pronounce words correctly; developing reading comprehension skills of the pupils focused on asking questions, visualization, predicting, summarizing, activating background knowledge, identifying the main idea, using graphic organizer, questioning, context clues, and collaborating with parents.

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