

## Vocabulary Knowledge and Inferential Reading Comprehension of Senior High School Students: A Descriptive-Correlational Inquiry

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### ABSTRACT

This quantitative study employing descriptive-correlation research design is aimed to determine the vocabulary knowledge, the inferential reading comprehension, and whether there is a significant relationship between the vocabulary knowledge and inferential reading comprehension of the respondents. More so, it aimed to determine if there is a significant relationship between the vocabulary knowledge and inferential reading comprehension of senior high school students. The respondents to this study were two hundred sixty senior high school students at a public school in Libungan, Cotabato, Philippines. Two survey questionnaires were adopted to gather the needed data. The data gathered were tallied, computed, and interpreted using frequency counts, percentages, means, and Pearson R correlation. Moreover, the study revealed that the respondents have an average level of vocabulary knowledge and poor inferential reading comprehension. There is a positively moderate relationship between the two variables. Those who have high vocabulary knowledge also have high inferential reading comprehension, and those who have low vocabulary also have low inferential reading comprehension. It was also found that the relationship between respondents' vocabulary knowledge and inferential reading comprehension is highly significant.

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## INTRODUCTION

Vocabulary plays a crucial role in reading in order to comprehend and understand the text. It is important for the learners to understand the meaning of the words in the text they read in order to attain comprehension. As a matter of fact, Ibrahim et al. (2016) stated that in order for students to understand academic texts well, teachers should make sure that the learners acquire average knowledge of vocabulary. Similarly, Boyer (2017) claimed that vocabulary and comprehension are interconnected because for the readers to understand the larger texts they have read, they should be knowledgeable about the words. However, in the local context, second language learners have difficulties in vocabulary, which leads to low levels of inferential reading comprehension. Thus, this study seeks to determine the role of vocabulary in reading comprehension for senior high school students.

On the one hand, inferential reading comprehension is considered one important aspect of understanding the hidden thoughts or ideas of a text. It is necessary to draw inferences in order to link concepts inside the text and provide information that is not expressly stated (Pike, 2009). The ability of a reader to scrutinize written information and comprehend the deeper meaning of a particular text with the help of their prior knowledge is called inferential comprehension. Inferential comprehension skill encourages readers to combine the exact meaning of the text with their prior knowledge as well as their imagination in order to speculate or develop hypotheses (Pennell, 2002 as cited by Valentine, Rosmalina, & Hayati, 2015).

Several international and local studies have shown that readers' vocabulary knowledge affects their reading comprehension. The studies of Sidek and Rahim (2015), Shen (2013), and Manihuruk (2020) show that there is a significant relation between the two variables. According to Bahri (2018), students' experiences and reading techniques help them understand what they read, but vocabulary plays a larger role or makes a greater contribution to helping them comprehend the texts.

Considering the previous studies, there is a dearth of related research on vocabulary knowledge and inferential reading comprehension of senior high school non-readers. The majority of the existing studies about vocabulary and reading comprehension are conducted internationally and focus on EFL learners (Harkio & Pietilä, 2016; Al-Khasawneh, 2019; Dagnaw, 2023). However, this current study focused on a specific level of reading comprehension, inferential comprehension. Since vocabulary knowledge and reading comprehension have been recognized as interconnected, it is crucial to understand its relationship, specifically in the context of senior high school students. Thus, this study needs to be explored.

The study would contribute to the depth of existing information available about how vocabulary affects the specific level of reading comprehension, which is inferential. In addition, the results of the study would provide information to the teachers which is relevant to them in assessing their learner's knowledge in the parlance of vocabulary and the level of their inferential reading comprehension. Furthermore, the result of the study would

be submitted through a peer-reviewed journal for publication to widen its engagement and audience and to contribute to the whole body of knowledge in this specific field.

Generally, the study aimed to determine if there is a significant relationship between the vocabulary knowledge and inferential reading comprehension of senior high school students. The following objectives were specifically answered: determine the vocabulary knowledge of the respondents, determine the inferential reading comprehension of the respondents, and determine if there is a significant relationship between vocabulary knowledge and inferential reading comprehension of the respondents. The study was conducted at a public school in Libungan, Cotabato, Philippines.

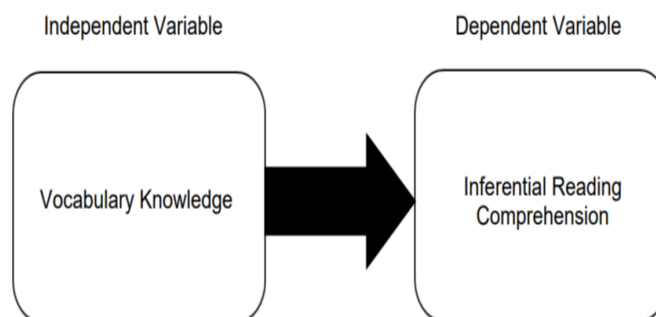
## **THEORETICAL REVIEW**

### *Theory of Vocabulary Knowledge*

This study was anchored to the theory of vocabulary knowledge by Qian (2002). This theory is intrinsically divided into several dimensions, such as the size of vocabulary, organization of lexis, vocabulary knowledge's depth, and receptive-productive knowledge automaticity (Zano, 2022). Moreover, this theory will help to evaluate and analyze the vocabulary knowledge of the respondents through the different dimensions mentioned.

### *Schema Theory*

This study was also anchored to the schema theory developed by Richard Anderson (1970). This theory suggests that there is stored knowledge or information, such as words, memories, and concepts, in our long-term memory, which is called a schema. According to Bos and Andres (1990), as cited by Aloqaili (2011), schema theory deals with the organized knowledge in human memory and how this knowledge affects new information. Moreover, this theory will help to assess how the respondents use their prior knowledge to comprehend a text and make inferences.



**Figure 1. Conceptual Framework**

## **METHODOLOGY**

The study utilized a descriptive-correlational design. Specifically, a descriptive research design was used to determine the vocabulary knowledge

and inferential reading comprehension of the respondents. Two hundred sixty senior high school students of a public school enrolled in the academic year 2023-2024 were the respondents of this study, wherein stratified random sampling with proportional allocation was employed to determine the sample. Moreover, this study used two expert-validated research instruments. To measure the level of the respondents' vocabulary knowledge, the researcher adopted the updated version of the Vocabulary Levels Test (VLT) formulated by Webb, Sasao, & Balance (2017). This study used level 5,000 of the Vocabulary Levels Test (VLT), which is comprised of 30 items. Conversely, to measure the inferential reading comprehension of the respondents, another set of questionnaires was formulated by LearningExpress (2010) entitled "Short Passages." The questionnaire comprises different short passages accompanied by questions requiring the respondents to make an inference. It is intended to measure the respondents' inferential reading comprehension.

Furthermore, in gathering the necessary data for the study, the researchers first secured ethical approval from the University of Southern Mindanao's Research Ethics Committee. Then, the researcher asked permission from the school principal of the select public school to conduct the study through a request letter. Upon approval, another request letter was sent to the senior high school teachers, asking for their permission to assist the researchers in gathering the needed data. Once approved, the researchers provided the informed consent form (ICF) to the respondents, asking for their permission to participate in the study. After the respondents' approval, the first set of questionnaires, which was the vocabulary level test, was distributed to them. They were given thirty minutes to answer. The second set of questionnaires, which measured their inferential reading comprehension, was distributed to them the next day. They were given one hour and thirty minutes to answer. After answering all the questionnaires, the data was collected. After the collection of data, it was tallied, tabulated, and computed.

In terms of the statistical analysis construed in this study, descriptive statistics such as mean, standard deviation, frequency, and percentage were used to describe the vocabulary knowledge and inferential reading comprehension of the respondents. Pearson R correlation was used to illustrate the significant relationship between the vocabulary knowledge and inferential reading comprehension of the respondents.

## **RESULTS**

Table 1 presents the vocabulary knowledge of the respondents. In general, the result shows that the respondents have a mean of 19.51 in the vocabulary level test which means they have an "average" vocabulary knowledge. They are able to recognize or answer the words that they have already encountered, but they do not really know the meaning of these words.

**Table 1. Vocabulary Knowledge of the Respondents**

Variables	Minimum	Maximum	Mean	SD	Interpretation
Vocabulary	0	30	19.51	9.24	Average

Legend:

- 1-5 - Very Poor
- 6-10- Poor
- 11-15- Below Average
- 16-20 - Average
- 21-25 - Above Average
- 26-30 - Excellent

Table 2 shows the inferential reading comprehension of the respondents. The table further shows that the respondents have poor inferential reading comprehension, with a mean of 8.88 on the inferential reading comprehension test. Senior high school students have undeveloped inferential reading comprehension.

**Table 2. Inferential Reading Comprehension of the respondents**

Variables	Minimum	Maximum	Mean	SD	Interpretation
Inferential Reading Comprehension	2	24	8.88	4.00	Poor

Legend:

- 1-5 - Very Poor
- 6-10- Poor
- 11-15- Below Average
- 16-20 - Average
- 21-25 - Above Average
- 26-30 - Excellent

Table 3 shows the relationship between vocabulary knowledge and inferential reading comprehension. The result shows that there is a positively moderate relationship between vocabulary knowledge and inferential reading comprehension (0.474). Thus, it reveals sufficient evidence to reject the null hypothesis ( $p\text{-value} < 0.001$ ), as it indicates a highly significant relationship between vocabulary knowledge and inferential reading comprehension.

**Table 3. Relationship between vocabulary knowledge and inferential reading comprehension**

Paired Variable	Correlation coefficient	Interpretation	p-value	Relationship
Vocabulary Knowledge and Inferential Reading Comprehension	0.474	moderate	0.000	Highly Significant

## DISCUSSION

In the vocabulary level test, it was found that the respondents have an "average" vocabulary knowledge. They are able to recognize or answer the words that they have already encountered, but they do not really know the meaning of these words. Senior high school students are still struggling with their vocabulary knowledge. This implies that some respondents know a lot of words, but they do not have deep knowledge about them, and vice versa. The breadth of their vocabulary knowledge is not parallel to the depth of their vocabulary knowledge. As a matter of fact, Sen and Kuleli (2015) stated that vocabulary breadth and vocabulary depth can predict each other. Those who possess a broad vocabulary also have a deep understanding of those words, and vice versa. These statements are supported by the theory on vocabulary knowledge of Qian (2002), which states that the subject of word knowledge and in-depth vocabulary involves a thorough knowledge of the four dimensions: vocabulary depth, receptive-productive knowledge, lexis structure, and vocabulary size.

In the inferential reading comprehension test, it was found that the respondents have poor inferential reading comprehension. Senior high school students have undeveloped inferential reading comprehension. This implies that students can be good at literal reading comprehension, but they are not good at inferential reading comprehension, as it requires mental calisthenics. In inferential reading comprehension, students need to dig deeper for meaning, read between the lines, analyze the context, and draw conclusions, unlike literal reading comprehension, where they only note details; that is why their inferential reading comprehension is poor. The majority of the respondents had difficulties comprehending and understanding the text due to having average or poor vocabulary knowledge. The result of this study was supported by the study of Soto et al. (2019), who stated that having a deep vocabulary can help a person comprehend a text easily and can significantly improve inferential skills. Poor inferential reading comprehension can affect students' performance in school. In like manner, Gilakjani and Sabouri (2016) stated that students who struggle with reading comprehension demonstrate lower levels of participation than those who excel in this area.

Moreover, the result supports the Programs for International Student Assessment (PISA) 2022 results released on December 5, 2023, wherein the Philippines ranked 6 in the top 10 countries with the lowest PISA scores in

reading with an average score of 347. Only 24% of Filipino students attained level 2 or higher in reading, and almost none of them scored at level 5 or higher. Some students are able to identify ideas from a short text and obtain ideas based on explicit, but almost none of them can comprehend larger texts, generate concepts based on implicit, or deal with abstract concepts (Avvisati & Ilizaliturri, 2023). Furthermore, the result of this study confirms the schema theory by Richard Anderson (1970), wherein in the schema framework, readers' prior or stored knowledge about words and concepts is very important in order for them to comprehend a text. Readers must activate that prior knowledge because reading comprehension involves an interactive process between the text and the reader's background knowledge.

To examine the relationship between the respondents' vocabulary knowledge and inferential reading comprehension, Pearson's correlation analysis was utilized to examine the related values. The result shows that there is a positively moderate relationship between vocabulary knowledge and inferential reading comprehension. This indicates that those who have high scores in vocabulary knowledge also have high reading comprehension, while those who have low vocabulary knowledge have low reading comprehension. This implies that the higher the vocabulary knowledge of the senior high school students, the higher their inferential comprehension skills, and the lower their vocabulary, the lower their inferential reading comprehension.

The result of this study is parallel to the study result conducted by Manihuruk (2020), wherein the findings revealed that there is a positive and moderate correlation between vocabulary mastery and reading comprehension. He stated that enrichment of vocabulary is necessary and very important to improve the performance of the students in comprehending a text. In the same way, Rouhi and Negari (2013), in EFL learners' context, the size and depth of vocabulary knowledge of EFL learners and reading comprehension are positively and significantly correlated. Based on the results of their study, the correlation between vocabulary size and reading comprehension is much higher than vocabulary depth. They stated that the success of the reader's ability to comprehend a text depends on how well and better they perform in vocabulary. Moreover, correspondingly, Qomar and Sari (2019) also stated that mastery of vocabulary is one of the variables that influence one's ability for reading comprehension. These findings relate to the present study's result, wherein the respondents' inferential reading comprehension is poor because they only have average vocabulary knowledge. Their knowledge of vocabulary affects their ability to infer a text.

## **CONCLUSIONS AND RECOMMENDATIONS**

The study concluded that, based on the data gathered from the respondents, the respondents are still struggling with their knowledge of vocabulary. The breadth of their vocabulary knowledge is not parallel to the depth of their vocabulary knowledge. Moreover, the study concluded that the respondents have undeveloped inferential reading comprehension. Students are good at the literal level of reading comprehension but lack skills at the inferential

level, as it requires mental calisthenics. Students lack the skills to dig deeper meaning, read between the lines, analyze context, and draw conclusions.

Furthermore, the respondents' inferential comprehension is lower than their vocabulary knowledge. They still lack knowledge and possess a low level of knowledge and skills. Those individuals with a high level of vocabulary knowledge also have a high level of inferential comprehension skills. While those with low vocabulary knowledge also have low inferential comprehension.

The present study suggests that students should engage themselves more in reading activities, use their gadgets for educational purposes, and watch educational videos online about vocabulary at home aside from learning in school for additional knowledge. Moreover, learning at home is more effective and successful if the guidance and support of their parents are present. The study also recommends that schools provide different learning facilities with complete educational materials, such as a library with various types of books and dictionaries. Schools should strengthen, continue, and enhance their summer reading camp, as well as remedial classes for students with poor vocabulary and low levels of comprehension skills.

The study also suggests that teachers should motivate the students to read more books and practice and study vocabulary. In classes, they can conduct a vocabulary test in all meetings before the classes start, such as spelling, giving synonyms and antonyms of the words, and identifying what words are being defined. Teachers can also conduct a reading session every vacant period and should create a learner-centered learning environment inside the classroom. Furthermore, the Department of Education (DepEd) should set a standard and avoid the "no-fail policy." Students must possess the required skills before they get accelerated to the next year's level because the result of this study is very alarming since the respondents are already in senior high school.

## **FURTHER STUDY**

For future researchers, it must be noted that the study was carried out in one public high school in Libungan, Cotabato, Philippines, which prevented the researchers to gain probable comprehensive insights from students who came from other educational institutions and even those who come from other municipalities in the province. And since the study only adapted questionnaires from other studies, it would be better to craft a contextualized survey-questionnaire and reading comprehension test to assess actual performance of the respondents while considering their backgrounds as ESL learners. It would also be better to identify the different factors that cause the students' poor vocabulary knowledge and low inferential reading comprehension, which were not explored in this research because it only measures the level of their vocabulary knowledge and inferential reading comprehension. Mediating factors such as reading self-efficacy or reading attitudes can be further explored to explain the instability of the performance of the students.

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