The Correlation Between Vocabulary And Reading Comprehension Of SMA Negeri 3 Palu Students

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ABSTRACT

Vocabulary can be defined as the list of words in a language that are understood and memorized, playing an important role in communication and learning processes, while reading comprehension is the ability to understand, interpret, and evaluate the meaning of written texts. This study aims to investigate the correlation between vocabulary and reading comprehension at SMA Negeri 3 Palu. The method used was correlational research, employing vocabulary tests and reading comprehension tests as data collection instruments. The sample consisted of 36 students selected through purposive sampling. The collected data were analyzed using the Pearson Product Moment correlation technique. The results showed a significant positive correlation between vocabulary and reading comprehension ability at SMA Negeri 3 Palu. These findings indicate that an increase in vocabulary can improve reading comprehension.
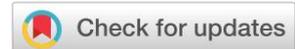
1. Introduction

Vocabulary is one of the most important components of the English language. Vocabulary can be defined as a list of words in a language that are understood and memorized. According to Ulfatussyarifah (2017), vocabulary is a collection of words in a language and it has function to create information, meaning, form and usage in context of communication. Vocabulary in English is based on a crucial role. Vocabulary as the main foundation in mastering language skills, namely listening, reading, speaking, and writing. If students do not have enough vocabulary, they will not be able to understand others or express their own ideas well.

One of the important language skills is reading. According to Virgiyanti & Mahdiyah (2023), Reading is one of the prominent skills that should be owned by students since it contributes a lot of benefits for them. By reading they can expand their knowledge and open their mind toward many knowledge and information around the world. However, many students often have difficulties in understanding the content of the text they read, especially when it comes to understanding English texts.

Reading is not just about recognizing letters and words, but also involves understanding the content of the reading as a whole. According to Agussalim et al. (2019), reading comprehension is the ability to process and understand the contents of texts, this is the ability of individuals where they can process and get information from what they read. Efendy et al. (2019) argued that the process of comprehending English texts is more complex regarding its importance in the education context. So, reading comprehension is an important part of learning English, to understand every text that students read.

One of the important factors influencing comprehension is vocabulary mastery. According to Bishry (2018), in terms of achieving students' reading comprehension, students must expand their vocabulary. Vocabulary can be defined as a list of words in a language that are understood and memorized. If students have low vocabulary mastery, it will be difficult for them to understand the meaning of the text. It is in line with Setiawan & Wiedarti (2020), who states that vocabulary is one of the most important components in the English language, which helps the learners to comprehend the text.

Based on the description of vocabulary and reading above, it can be seen that there is a relationship between vocabulary and reading. It is in line with Hayati (2016), who states that vocabulary is very important in learning especially

in reading. Furthermore, mastering vocabulary will facilitate someone in using language in communication. They cannot speak well and understand written materials if they do not master it. Achmad & Sujarwo (2022) also argued that vocabulary and reading cannot be separated, because both are interrelated. Students who master vocabulary well have good reading comprehension skills. The higher the mastery, the more reminded of the ability to read and understand. So, it is clear that someone who has vocabulary or has studied vocabulary and understands the meaning of vocabulary will be able to understand the contents of the reading correctly.

When conducting pre-observation, the researcher found that most of the students of SMA Negeri 3 Palu face persistent challenges in comprehending English texts. Initial observation showed that these difficulties stem from limited vocabulary knowledge, as students frequently skip unfamiliar words and continue reading without understanding their meanings. This behavior results in incomplete comprehension of texts. In the regard to this matter, this research attempts to find out the correlation between vocabulary and reading comprehension.

1.1 Definition of Vocabulary

Vocabulary is a group of words in a language and has a meaning. In other words, vocabulary is one aspect of language that studies the meaning of words and how they are used in the context of a sentence (Terasne, 2020). Therefore, vocabulary is one of the elements of language that must be learned and taught. According to Nuraeni and Lube (2020), the students have to improve their vocabulary mastery, because without knowing vocabulary, there is nothing we can express in four language skill, namely listening, speaking, reading, and writing. Vocabulary mastery determines the four language skills because it is impossible for students to master language skills completely if they have a limited vocabulary.

1.2 Part of Speech

In supporting vocabulary mastery, it is better to know the parts of speech. According to Mardhatillah, R (2020), parts of speech guide the meaning of words. To make a sentence, one needs parts of speech, although not all parts of speech are used, but one of the types of parts of speech is needed in producing sentence words. Therefore, Hafsah and Willyansah (2021) states that understanding parts of speech is a must, because by recognizing the forms of words used, students will find it easier to make sentences and understand their meaning. Based on Risan et al. (2022) part of speech is divided into several parts, including: Noun, Pronoun, Verb, Adjective, Adverb, Preposition, Conjunction and Interjection.

1.3 Types of Vocabulary

Talking about vocabulary of course we will discuss about knowledge of words. Hiebert and Kamil (2005: 3), propose word has two forms, first oral vocabulary is the set of words for which we know the meanings when we speak or read orally. Second, print vocabulary consists of those words for which the meaning is known when we write or read silently. They also define knowledge of words also comes in at least two forms as follows:

a.Productive Vocabulary

Productive vocabulary is the set of words that the students understand, pronounce, and use appropriately in speaking and writing. The words are familiar and used frequently.

b.Receptive or Recognition Vocabulary

Receptive or recognition vocabulary is that set of words for which an individual can assign meanings when listening or reading. These are words that are often less well known to students and less frequent in use.

1.4 Definition of Reading

Reading is very crucial skill for the students. There are several reasons why reading plays a crucial role in students; It enables them to broaden their knowledge, as they can acquire various types of information through reading activities. Moreover, reading does not only serve academic purposes but also provides entertainment and relaxation, helping students to refresh their minds. According to Riyani et al. (2023) reading is one of the most critical skills that should be mastered by the students. Reading is a number an interactive process between the reader and the text, in which readers use their knowledge to build, create, and construct meaning (Rahman, 2018; Tammasse et al., 2025; Dalyan et al., 2025). Therefore, reading is not just about importing the words and the detailed information from the text but also about the students' comprehension.

1.5 Types of Reading Comprehension

Reading comprehension is the ability to find the information from the text. Siregar (2018) states that reading comprehension is a good way to develop and understand English. In the process of reading comprehension, students are required not only to understand the ideas presented in a text but also to identify the relationships and organizational structures among those ideas. Through this process, they are able to obtain information and grasp the intended message conveyed by the written material. Day and Park (2005) also propose several types of comprehension, as follow:

a Literal comprehension is to have a straightforward understanding meaning of a text, such as vocabulary and facts, which is not explicated in that text.

b.Inferential comprehension is to conclude information from a text and build new information which is not explicitly stated in text.

c.Reorganization is rearranging information from various parts of a text in order to get new information.

d.Predictive comprehension is integrating reader and their own knowledge about that text in order to determine what might happen next or after it is finished.

e.Evaluative comprehension is like inferential comprehension. The difference is that evaluative comprehension requires readers' comprehensive judgment about some aspects in a text and ability to redevelop an understanding by using related issues.

f. Appreciative or personal comprehension is reading in order to gain an emotional or other value response from a text, and it demands reader to respond a text also with their feelings.

1.6 The Correlation between Vocabulary and Reading Comprehension

Vocabulary and reading are two closely connected components that cannot be separated, as each supports and influences the other in the process of language comprehension and learning. This has been discusssed by many experts. According to Naniwarsih & Ningtyas, (2023) vocabulary is very important for reading comprehension. Bishry (2018) states that in case of achieving students reading comprehension, students should enlarge their vocabularies. Comprehension of a reading will not be achieved optimally without adequate vocabulary.

In line with that, Erniwati (2019) explain that by having and mastering vocabulary, it will know the meaning of vocabulary in the context. Ulfatussyarifah (2017) also argued that the mastery of large vocabulary has an important role in understanding sentences/texts, because vocabulary can help the learners to grasp the meanings of the utterances given. Mastering vocabulary is the way for the teachers to improve their student's reading comprehension. Many students will understand more if they have already known vocabulary because they really help the students to comprehend the reading text. Based on the explanation above, it cannot be denied that by mastering vocabulary English language skills can run well, especially in understanding reading.

2. Methodology

This research employs a correlational research method to examine the correlation between vocabulary and reading comprehension. The population of this research consists of all eleventh-grade students at SMA Negeri 3 Palu, totaling 540 students from fifteen classes. Using a purposive sampling technique, class XI B2 was selected as the sample, consisting of 36 students.

In conducting this research, the researcher used tests as the main instruments. In this case, the instruments consisted of a vocabulary test and a reading comprehension test. The test included a total of 30 items, with 15 items designed to assess students' vocabulary and 15 items aimed at measuring their reading comprehension. The researcher used one day to collect data, where 75 minutes were allocated for the vocabulary test and reading comprehension test. To collect the data, the researcher administered the tests directly to the students in XI B2 classrooms to ensure that all students were under the same conditions when taking the tests, thus promoting more accurate and consistent results. The data obtained after the students completed the test were processed and analyzed using validity and reliability tests, normality and linearity tests, and correlation analysis between the variables.

3. Result and Discussion

3.1 Result

a. Validity and Reliability Tests

The validity test was conducted on each vocabulary and reading comprehension test item using point biserial correlation. A question is declared valid if the value of r count ≥ r table (0.329) with 36 respondents (df = 34, α = 0.05). Based on the results of the validity test conducted on 30 instrument items, it was found that all items under the vocabulary and reading comprehension variables had r values greater than the r table value of 0.329 (with df = 34 and α = 0.05), indicating that these items met the validity criteria and were declared valid. However, one item in the vocabulary variable could not be further analyzed due to a typographical error. This error caused students to be unable to fully understand the content of the question, making their responses to this item uninterpretable in a valid manner. Therefore, the item was excluded from the validity analysis. Overall, these results indicate that the instrument used in this study met the validity requirements and is considered suitable for use in data collection.

Based on the results of reliability calculations using the KR-20 formula, the reliability value of the vocabulary instrument is 0.806, which is classified in the high category. While the reliability value of the reading comprehension instrument is 0.728, which is in the moderate category. Based on the interpretation criteria according to Sanaky et al. (2021), an instrument is said to have good reliability if the coefficient value is ≥ 0.70. Therefore, both instruments in this study were declared reliable and suitable to be used to measure students' vocabulary acquisition and reading comprehension.

b. Normality Tests

In this research, the normality test was conducted on the data of students vocabulary and reading comprehension test scores. The test was conducted using the Shapiro-Wilk test because the number of samples was less than 50 people.

Decision Criteria:

1. If the p value > 0.05, then the data is normally distributed.

2. If the p value is ≤ 0.05, then the data is not normally distributed.

Table.1 Normality Test Results with Shaphiro-Wilk

Variable	N	W (Shapiro-Wilk)	Sig. (p-value)	Distribution
Vocabulary	36	0.079462834	0,05	Normal
Reading Comprehension	36	0.933018589	0,05	Normal

The table presents the Shapiro-Wilk normality test results for the two main variables: vocabulary (W = 0.7946) and reading comprehension (W = 0.9330), each with a p-value of 0.05. Since p > 0.05, both datasets are considered normally distributed. Therefore, the data meet the assumptions required for parametric statistical analysis, such as the Pearson Product Moment correlation test.

c. Linearity Tests

This test is a prerequisite that must be fulfilled before conducting the Pearson correlation analysis. The linearity test was carried out through regression analysis (ANOVA). The results of the linearity test are presented as follows;

Table.2 Linearity Test Results between Vocabulary and Reading Comprehension

ANOVA

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2175,294118	2175,294118	26,08066747	1,24824E-05
Residual	34	2835,816993	83,40638216		
Total	35	5011,111111			

Based on the table above, the Significance F value is 0.00001248 (or 1.24824×10^{-5}), which is smaller than the significance level α = 0.05. This shows that there is a significant linear correlation between the variables of vocabulary and reading comprehension. Therefore, it can be concluded that the correlation between vocabulary and reading comprehension is linear, so the Pearson Product Moment correlation test can be continued.

d. Assessing Two Variables

The Pearson Product Moment correlation test was conducted to determine the extent of the correlation between the variables of vocabulary mastery (X) and reading comprehension (Y). Based on the calculation results, the value is obtained:

Table.3 The Result of Calculating the Correlation of Two Variables

Statistics	Value
Correlation Value (r)	0,658858232
Coefficient of Determination (r²)	0,43409417
Calculated t Value	5,106923483
Table t Value (df = 34, α = 0.05)	2,032244509
Significance (p-Value)	0,000012 < 0,05

From the calculation results, it is known that the correlation coefficient (r) value is 0,658858232, which indicates a correlation between vocabulary mastery and reading comprehension. Based on the correlation criteria according to Best & Kahn (2014), the value is included in the substantial category because it is in the range of 0.61 - 0.80.

e. Hypotheses Tests

Based on the data analysis using the Pearson Product Moment formula, the correlation coefficient (r) was found to be 0.6588, indicating a moderately strong positive correlation between vocabulary acquisition and students' reading comprehension. Furthermore, the significance of the correlation was tested using the t-test. The calculation results show that the t-value is 5.107, while the t-table value at a 5% significance level with 34 degrees of freedom (df = n – 2 = 36 – 2) is 2.032. Since the calculated t-value (5.107) is greater than the t-table value (2.032) and the p-value (0.000012) is less than α = 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. Therefore, it can be concluded that there is a statistically significant positive correlation between students vocabulary and their reading comprehension.

3.2 Discussion

The results of this research indicate a significant positive correlation between students vocabulary and their reading comprehension at SMA Negeri 3 Palu, with a correlation coefficient of 0.6589, which is categorized as substantial (Best & Kahn, 2014). This suggests that students with a higher vocabulary level demonstrate better understanding of reading texts. Adequate vocabulary facilitates interpretation, conclusion drawing, and overall comprehension, highlighting its critical role in reading skills development.

These findings align with previous research. Bahri (2018) reported a strong correlation between vocabulary mastery and reading comprehension among seventh-grade students at MTs Daarul Ihsan, emphasizing that vocabulary has a greater impact than reading experience or strategies. Similarly, Achmad & Sujarwo (2022) and Ria & Perdawati (2021) found that increased vocabulary knowledge enhances students' reading comprehension.

Theoretically, experts agree that vocabulary and reading are inseparable. Naniwarsih & Ningtyas (2023) stated that insufficient vocabulary hinders comprehension, while Bishry (2018), Erniwati (2019), and Ulfatussyarifah (2017) emphasized that vocabulary mastery is essential for understanding sentences and texts accurately. Therefore, this research confirms that vocabulary acquisition plays a crucial role in supporting students reading success. English educators should focus on strategies that expand students vocabulary, as this not only strengthens their linguistic foundation but also directly improves overall reading comprehension.

4. Conclusion

Based on the results of this research, it can be concluded that there is a significant positive correlation between vocabulary and students reading comprehension. This is indicated by a correlation coefficient (r) of 0.6589 with a significance level of $p < 0.05$, which, according to Best & Kahn (2014), falls under the category of "substantial correlation." The hypothesis test results show that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, indicating a statistically significant correlation between the two variables. These findings suggest that the higher the students vocabulary mastery, the better their ability to comprehend reading texts. Therefore, vocabulary mastery contributes significantly to enhancing students' reading comprehension skills.

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