

# THE CORRELATION ANALYSIS BETWEEN VOCABULARY MASTERY AND READING COMPREHENSION

Paper Subtitle as needed

Tubagus Darmawan.

Fakulty of Languages and Arts

Universitas Negeri Semarang

Semarang, Indonesia

belzcygnuz@gmail.com

## Abstract

Although English has been taught in schools starting from kindergarten/elementary to junior high school levels, the fact shows that many student still difficult to read English texts. They may read fast but get nothing or they need a very long time to understand the texts. It means that they are not effective readers. It can be assumed that their comprehension skill is not good. The aim of this research was to find out the correlation between the students' vocabulary mastery and the students' reading comprehension. There were 26 students participating in this study. The instruments in this research were two kinds of test, they were vocabulary test and reading comprehension test, each test consisted of 20 multiple choice. All the data gained in this research was analyzed by using the formulation of Pearson Product Moment Correlation Coefficient. According to the result of the analysis and statistical calculate, by comparing the values of  $r_{xy}$  and  $r_t$ , the result was  $r_{xy}$  was bigger than  $r_t$ , in other words  $r_{count}$  was higher than  $r$  table. It means that there was correlation between students' vocabulary mastery and reading comprehension and coefficient correlation was high, in this case the alternative hypothesis is accepted. Based on the finding from this research, it could be concluded that vocabulary mastery helps the students to comprehend the text. To solve the problem in comprehending the text in which students should have sufficient vocabulary that can help them in doing their in reading test.

**Keywords – Correlation, Vocabulary, Reading Comprehension**

## Introduction

Although English has been a mandatory course in the secondary school curriculum, many problems appear. One of the problems that almost occurs in Indonesian schools is speaking when students prefer to use their mother tongue to communicate instead of using English. Due to the fact that English is a foreign or second language in Indonesia, it is not easy to learn English for Indonesian students. There are several differences between English and Indonesian systems that confuse Indonesian students to comprehend English (Rijasti, 2017). This can be understandable; as Bygate (1987) argued, one of the essential problems in teaching English as a foreign language is preparing learners to use it. Using language means the students have to use

English to communicate with other people.

Apart from difficulties due to differences between the English and Indonesian system, students do not want to speak English because of their anxiety. It happens for several reasons, such as lack of vocabulary, improper pronunciation, losing confidence, etc. It is similar to Wicaksono (2017: 21), who states that the common problem of speaking includes accuracy, fluency, appropriateness, grammar, pronunciation, and vocabulary. there are a number of difficulties that many students in the EFL context have such as understanding texts. Husna (2006) investigates students' reading speed and finds that 80% of them find difficulties in vocabulary, 15% in reading comprehension, and 5% in other

areas. This, as a result, influences the reading speed which is significantly low (100 words per minutes) and even a few of them merely read less than 100 words per minutes.

Many English foreign language students have difficulty in making sense of texts they read. They seem to read considerably more slowly in English than in their first language, and feel less confident about reading in English (Handoko, 2014)

Student's reading motivation also play important role. According to Barber and Klauda (2020), reading motivation is the cause of someone's desire to read, which is derived from their motivation. Reading motivation affects reading volume, reading motivation predicts, and reading comprehension performance. It indicates that the more motivated students are, the more books they read and the better they will comprehend what they read. According to Pelletier et. al (2022), Students must have the competence and the desire to read if they are willing to become mature and practical readers. One factor that motivates students to become effective readers is their willingness to read. However, according to Semenova (2022), learners' motivation is always a significant factor influencing their reading comprehension. It has not yet been recognized that motivation is the main factor in reading comprehension.

Reading in English allows one to learn about what is happening worldwide and discover new things. According to Astrid (2014), one of the main objectives of language learners was not to become fluent in the language of study. Fluency did not ensure flawless communication between language learners and native speakers. Put the culture, and culture was yet another element that affected communication. Then, regarding reading in English, Lieska (2022) lists the benefits

of reading in English for students; they include the acquisition of reading, writing, speaking, and listening skills, vocabulary growth, and increased motivation, self-esteem, and empathy. She further noted that students who read extensively also became more autonomous learners.

Vocabulary mastery is important because it is one of element that linked the four skills such as reading, listening, writing and speaking. Without vocabulary there is nothing we can say.

Lehr (2004) states that vocabulary is knowledge of words and word meaning in both oral and written language and in productive and receptive form. Good mastery of vocabulary is important for anyone who learns the language either in listening, speaking, writing, or reading. A foreign language learner will speak fluently and accurately, or write easily, understand what he or she reads or hears if he or she has enough vocabulary. More importantly, he or she should have the capability of using it accurately. Snell-Homby (2000) also states that vocabulary is all of the words that a person knows or uses your active vocabulary (the words that you use) and your passive vocabulary (the words that you understand but do not use) all the words in a particular language, the words that people use when they are talking about particular subject, a list of words with their meanings, especially in a book for learning a foreign language.

In addition, Vocabulary is the component of the English language which holds an important role in communication (Hart and Risley, 2003). It means that we must master the vocabulary, if the students have more vocabularies, then they will develop the four language skills. Especially, Reading skill. According to Djiwandono (2008) vocabulary mastery can be divided into: active-productive and

passive-receptive mastery. The definition of active-productive vocabulary mastery, namely vocabulary that has been mastered and understood and can be used by language learners naturally without any difficulties in communicating or speaking. Passive-receptive vocabulary mastery is vocabulary that has been mastered and can only be understood by language learners from other people's language expressions, but they are unable to use the vocabulary properly in communicating or speaking.

Reading is one of the four important basic language skills learned by the foreign language students. There are some reasons why it is very necessary; it can help the learners to enhance their knowledge because they can learn many things through reading. Reading can also entertain the learners because it is not only for academic purpose, but also it can help the learners to refresh their mind. In other words, reading is very crucial skill for the learners.

Reading is defined as a process of installing new experiences in the mind. It needs intensive concentration in order to get new experiences. It is a surface structure of language which does not directly represent meaning. The meaning resides in the deep structure of language, in the intentions of the writers and in the interpretation made by the readers (Natsir & Anisati, 2016).

Silalahi et.al (2022), reading comprehension is challenging since students must be able to understand written words, decode vocabulary, and recognize the contents of texts. The study of English language acquisition revealed that reading comprehension is the most crucial component to consider while teaching English. As a result, reading comprehension is one of the essential aspects of English language acquisition for all students because it is the

foundation for a significant amount of educational learning. Reading motivation is a crucial factor that determines a student's ability to recognize and comprehend literature.

Alyousef (2006) defines reading as an interactive process between a reader and a text to direct the reader become fluently in understanding the meaning of a passage. In this process, the reader interacts with the text when he or she tries to understand the meaning and in which various kinds of the text knowledge they have used. It means that the reader requires the interactive process to understand the text that they read, so that the reader understands the purpose of the text.

Smith (2005) who stated that reading is a process that builds the understanding of the essence in writing text. It means that reading is an interactive activity to reap the meaning of contain in writing. Supriyono (2005) said that the important of reading is as a means of getting information and training in reading comprehension to improve our development. Reading is receptive skill of receiving information through written language. In process of accepting is the most important is the understanding of information conveyed through written language.

Furthermore, the students are expected to have sufficient vocabulary especially for students who learn English as foreign language. Vocabulary plays a significant role in comprehending reading text. To be success in reading students need to master of many kinds of vocabulary which enable them to understand the text. Armbruster (2002) confessed that knowledge of the meaning of word is strongly related to reading comprehension process. The students are going to be easier in accepting English text when they have many vocabularies.

By having large extent of vocabulary, a learner will be easier to understanding the meaning from the text being read.

Krashen (2004, p. 37) confirms that reading is the way to become good readers and spellers, develop writing skills, and improve vocabulary and grammar. However, reading does not automatically lead to good writers. Some research investigating the correlation between reading and writing in the ESL and EFL contexts find that more reading may result in better writing (Lee, 2005; Lee & Krashen, 2002). Another research was conducted to prove whether extensive reading can improve students writing skills in both EFL and ESL context (Tsang, 1996), extensive reading and fluency (Taguchi, Takayasu, & Gorsuch, 2011) reading attitude, vocabulary (Grabe & Stoller, 1997).

Haryono (2016) says that reading skill is integral part of the daily activity, which is important for people's academic, personal and social lives. Vocabulary mastery is an aspect that closely related to reading skill. Frijuniarsi & Marliansih (2016), on the contrary, propose that reading is one of several ways to increase vocabulary and knowledge. By reading, the students will have more knowledge in understanding many kinds of themes and also achieve the good impacts of vocabulary mastery towards listening skill.

Based on the explanation above, this research was intended to answer the following question: "is there any significant correlation between the students' vocabulary mastery and the students' reading comprehension?" the result of this research is expected to be taken as one of references for the educators to teach vocabulary and reading.

## Methodology

This study employed quantitative method which was used to test the hypothesis that had been set. Sugiyono (2008) that associative hypothesis is a temporary answer to the associative problem formulation that asks the relationship between two or more variables qualitative research.

In this study, data were collected through objective test. The test was used by the researcher consists of two main tests. They were vocabulary mastery test and reading comprehension test, each test consists of 20 items. There were some procedures in this research process, they were:

1. Preparing the students' vocabulary mastery and reading comprehension test
2. The researcher did try out in the home forum that contain 26 student from some junior high school at Pemalang and Pekalongan to know the students' level. After that, the researcher calculated the data to get the result of validity and reliability of test.
3. The researcher conducted the study, the first day on the Friday Afternoon the researcher explained about the research that will carried out with the help of the students and conducted discussion about reading comprehension test.
4. In the second day on Saturday, the researcher distributed the vocabulary test to the students.
5. In the last day on sunday, the researcher distributed the reading comprehension test. The test conduct on different day to avoid negative things happen like the occurrence of stress and fatigue on students.

6. In the last, the researcher analyzed the data.

The aim of analyzing data was to determine whether student's vocabulary mastery and reading comprehension have significant positive correlation or not by using descriptive statistic and inferential. Firstly, the researcher checked the completeness of the data then gave scoring the tests. Afterwards, the researcher processes the data by using Descriptive Statistic and Inferential.

### Finding and Discussion

#### *Analysis Descriptive Statistic Of Vocabulary Mastery*

Based on the data accounting of vocabulary, it could be seen in Appendix the researcher tried to calculated mean and SD of students' vocabulary mastery by using Microsoft excel.

**Table 1.1 Descriptive Statistic of Vocabulary Mastery**

Students' score	Frequency	Percentage (%)
40	1	3.8 %
45	1	3.8 %
55	1	3.8 %
60	3	11.4 %
65	6	22.8 %
70	2	7.6 %
80	2	7.6 %
85	6	22.8 %
90	4	15.2 %
<b>Total</b>	<b>20</b>	<b>100 %</b>
<b>Mean</b>	<b>72.30</b>	
<b>Maximum</b>	<b>90</b>	
<b>Minimum</b>	<b>40</b>	
<b>SD</b>	<b>14.45</b>	

Based on the data, it was found that the mean score of vocabulary test of the students was 72.30. It could be said that the vocabulary mastery is good as could

be seen in Table 1.2 below. From the students final score of vocabulary mastery, then the score was classification into very poor, poor, fair, good, and very good (Arikunto, 2003) in provided in to the table below:

**Table 1.2 Classification of Students Score of Vocabulary Mastery**

N o	Classifica tion	Inter val score	Freque ncy	Percent age
1	Very Poor	00-39	0	0
2	Poor	40-55	3	11.4 %
3	Fair	56-65	9	34.2 %
4	Good	66-79	2	7.6 %
5	Very Good	80-100	12	45.6 %

Table 1.2 showed that for very poor level it could be seen nobody (0%) who got categorized of 26 students, for poor level there were 3 students or 11.4 % of 26 students. For fair level, it was indicated 9 students or 34.2 % of 26 students, for good level there were 2 students or 7.6 % of 26 students and 12 students or 45.6% who categorized of very good.

Based on the table above, there were 12 students or 45.6% who got categorized of very good. It means that, students' score of vocabulary mastery was categorized very good level, it was because number of students mostly got score around 80-100.

#### *Analysis Descriptive Statistic Of Reading Comprehension*

The result of reading comprehension test could be seen in the Appendix. Based on the data, the researcher tried to calculated mean and SD of students' reading comprehension by using Microsoft excel.

**Table 1.3 Descriptive Statistic of Reading Comprehension**

Students' score	Frequency	Percentage (%)
50	3	11.4 %
55	2	7.6 %
60	4	15.2 %
65	2	7.6 %
70	5	19 %
75	5	19 %
80	3	11.4 %
85	2	7.6 %
<b>Total</b>	<b>26</b>	<b>100 %</b>
<b>Mean</b>	<b>67.11</b>	
<b>Maximum</b>	<b>85</b>	
<b>Minimum</b>	<b>50</b>	
<b>SD</b>	<b>13.42</b>	

Based on the data was found that the mean score of reading test of the students is 67.11. It could be said that the reading comprehension is good. From the students final score of reading comprehension, then the score was classification into very poor, poor, fair, good, and very good (Arikunto, 2003) in provided in to the table bellows:

**Table 1.4 Classification of Students Score of Reading Comprehension**

No	Classification	Interval score	Frequency	Percentage
1	Very Poor	00-39	0	0
2	Poor	40-55	5	19 %
3	Fair	56-65	6	22.8 %
4	Good	66-79	10	38 %
5	Very Good	80-100	5	15.2 %
<b>Total</b>	<b>26</b>	<b>100 %</b>		

Table 1.4 showed that for very poor level it could be seen nobody (0%) who got categorized of 26 students, for poor level there were 5 students or 19 % of 26 students. For fair level, it was indicated 6 students or 22.8 % of 26 students, for good level there were 10 students or 38 % of 26 students and 4 students or 15.2% who categorized of very good.

Based on the table above, there were 10 students or 38 % who got categorized of good. It means that, students' score of reading comprehension was categorized very good level, it was because number of students mostly get score around 66-79.

### ***Inferential Statistic Analysis Correlation Between Vocabulary Mastery And Reading Comprehension***

The main goal of this research was to find out whether or not there was a significant correlation between vocabulary mastery and reading comprehension of the students.

To find out the coefficient correlation between vocabulary mastery and reading comprehension of the students, the researcher used Pearson product moment formula, it could be seen in Appendix II. Based on the data in appendix II, the researcher found that:

$$\Sigma X = 1880 \quad \Sigma Y = 1745 \quad \Sigma XY = 128972$$

$$\Sigma X^2 = 141150 \quad \Sigma Y^2 = 120125$$

Where:

X = Data of Students' Vocabulary Mastery

Y = Data of Students' Reading Comprehension

The result of analysis correlation between students' vocabulary mastery and reading comprehension by using product moment formula (see Appendix XI) showed that  $r_{count} = 0.705$ , it was bigger than  $r$  table with total participant 26 students and significant level 5%. It showed the point 0.388.

answering the test none of students got 100 score. The high score was 90 in vocabulary test and 85 in reading test. While the lowest was 40 in vocabulary test and 50 in reading test. The result of

the computation of the correlation between students' vocabulary mastery and reading comprehension at the student 0.705. By used criteria for evaluation and interpretation of correlation coefficient by Sugiyono, 2012.

**Table 4.5: Coefficient Interval and Relationship Level**

Coefficient interval	Level of relationship
0,00 – 0,199	Correlation is very low
0,20 – 0,399	Low correlation
0,40 – 0,599	Medium correlation
0,60 – 0,799	Strong correlation
0,80 – 1,00	The correlation is very strong

Based on the table 4.5 it means that the correlation between the two variables was strong correlation, it was positive correlation because the value was 0.705.

From the result of statistic calculation, it indicated that  $r_{xy}$  was 0.705 with the degree of freedom ( $df=N-nr$ ) is  $26-2 = 24$ ,. Where:

$df$  = degree of freedom

$nr$ = number of variable ( X and Y )

At the degree of significant of  $5\% = 0.404$

In the table of significant of  $5\%$  and  $1\%$  and the value were 0.388 and 0.496. By comparing the value of  $r_{xy} = 0.705$  and  $r_t = 0.388$ . The researcher made an assumption of the hypothesis, that  $r_{xy}$  is bigger that  $r_t$ .

The statistic hypothesis in this research they were:

H0:  $\alpha = 0$ , H0 is accepted, there was no correlation.

H1:  $\alpha \neq 0$ , H1 is accepted, there was a positive correlation.

H2:  $\alpha \neq 0$ , H2 is accepted, there was a negative correlation

The result of hypothesis is  $\alpha \neq 0$  or  $r_{xy}$  is bigger that  $r_t$  and the score of vocabulary and reading was straight comparable. So H0 and H2 is rejected and H1 is accepted. It means that there was a positive correlation between students' vocabulary mastery and reading comprehension.

Based on the interpretation above, the researcher finally gain the valid answer from the question which was stated in the first chapter ( 1.2 ) as problem of the research.

### Discussion

Based on the result of testing hypothesis, the Null Hypothesis (H0) which explained that there was no correlation between vocabulary mastery and reading comprehension was rejected, H2 which explained that there was negative correlation between vocabulary mastery and reading comprehension was rejected While, the Alternative Hypothesis (H1) which explained that there was a positive and significant correlation between vocabulary mastery and reading comprehension of students was accepted. The coefficient correlation between variables was 0.705. It means that vocabulary mastery had an strong correlation with students reading comprehension. It's on 0.705 on the range of 0,60 – 0,799. In similar, it could be said that vocabulary mastery and reading comprehension have a relationship one to another.

The result of this research showed that there was positive and significant correlation between students' vocabulary mastery and reading comprehension. It means that if their vocabulary mastery is high, their reading comprehension will be also high and if their vocabulary mastery is low, their reading comprehension will being also low. This research concluded that vocabulary mastery is contributive in helping the students to comprehend the

texts. Therefore, the students' vocabulary mastery is contributive in their reading comprehension. In the other word vocabulary mastery supports students' reading comprehension since it makes them easier in comprehending many texts.

Furthermore, this positive correlation was support by the result of data calculated, that is  $r_{count} = 0.705$ , it was bigger than  $r$  table with total participant 26 students and significant level 5%. It showed the point 0.388. The students vocabulary had an closed relationship with their reading comprehension, they were able to understand the text more if they have mastered of vocabulary and vocabulary also provide useful contributed in their reading comprehension, if their master of vocabulary they will comprehend the texts better.

Based on the explanation, alternative hypothesis was accepted and null hypothesis was rejected. The researcher proved that there was significant and positive correlation between vocabulary mastery and reading comprehension of students.

## Conclusions

Based on the finding and discussion, it could be concluded that there was any correlation between students' vocabulary mastery and reading comprehension of students. From the result of analysis descriptive statistic of vocabulary and reading comprehension was good. It could be seen from the computation in which the mean score of the students' vocabulary mastery was 72.30 and mean score of students' reading comprehension was 67.11, when it is consulted the table of category level presented the score is good categorized. The coefficient correlation between students' vocabulary mastery and reading comprehension was 0.705, it means that

coefficient correlation was strong correlation. Based on the result, it could be synthesized that hypothesis is  $\rho \neq 0$  or  $r_{xy}$  was bigger that  $r_t$ . So  $H_0$  is rejected and  $H_1$  is accepted.

In addition, vocabulary mastery helped the students to comprehend the text. To solve the problem in comprehending the text the students should master vocabulary. Have a good vocabulary can help students in school work easier especially in reading test. This finding support by Tarigan (2015) explains that the quality of a person's language skills depending on the quantity and quality of the vocabulary possessed. The richer the vocabulary we have, the greater our chances of being skilled in language. Without adequate vocabulary mastery, it is very difficult for the person to interact well. During reading and listening activities, comprehension skills are required. Meanwhile, writing and speaking activities are required ability to use vocabulary.

Based on the result of the research, some suggestions which hopefully give valuable and useful contribution for the teachers and the next researchers, the English teacher should be a good motivator and support their interest in learning to help students' to improve their vocabulary mastery because it has big influence language skill especially reading. For next researchers, the researcher suggested to conduct a research in a great population or more sample to gain better result.

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