

# The Correlation Between Students' Vocabulary Mastery And Reading Comprehension

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**Abstract.** This study aimed at finding out the correlation between students' vocabulary mastery and reading comprehension of the tenth grade students in SMK N 1 Manggis. It made use of a correlation research design. The sample consists of 35 students. They were chosen by random sampling technique. The data which were needed for this research were collected through administering tests about vocabulary mastery and reading comprehension as the research instruments and delivered by using Google Form platform. The obtained data were analysed by investigating the correlation between students' vocabulary mastery score and reading comprehension score which was done by using IBM SPSS Statistic 24. The result of the correlation between students' vocabulary mastery and reading comprehension was 0.009. It described that there is a significant correlation between students' vocabulary mastery and reading comprehension of the tenth grade students of SMK N 1 Manggis in academic year 2021/2022. In conclusion, the alternative hypothesis ( $H_a$ ) is accepted.

Keywords: correlation, vocabulary mastery and reading comprehension.

## INTRODUCTION

For many years students from many places around the world have been learning English. Since it is considered an international language, learning English has become a necessity for everyone who wants to engage in international interaction. Mastering this language is not a simple thing to do. There are some skills that should be learnt and practiced. Such as listening, speaking, reading, and writing. Moreover, reading is considered the most important foreign language skill. This is in line with what Harry Madox (1963:76) said that "Reading is the most important single skill in study". In addition reading is a good thing in life because it is a factor of great importance in individual development and the most important activity in school. It is also needed in every level of field of study.

Reading requires understanding or comprehending the means of printed matters. Through reading we acquire new ideas, obtain needed information, seek support for our ideas and broaden our interest. We can also get the message that the writer had expressed. And one of the purposes of teaching English as a foreign language is that they can read, grasp the idea and understand the book written in English. To achieve those purposes, students need a lot of words of English to master.

Vocabulary is the stock of words used in a language. Vocabulary as one of the language aspects is a crucial component in acquiring and understanding language. It is impossible to learn a language without vocabulary. When reading something it would be better if students understand the words or vocabulary in their reading, because it will help and guide them in pronouncing, reading, and grasping the idea, so they will understand well. Thus, the more

students have a stock of words used in a language, the better it will improve their performance.

Mastering vocabulary is the ability to get or to receive lots of words. By having and mastering vocabulary we will know the meaning of vocabulary in the context. It can also help to avoid making mistakes in understanding a written or spoken text. Moreover, the English vocabulary often becomes a problem for most high school and university students although they have studied English since elementary school. Sometimes the students always have difficulties understanding some words in context.

Most students if they find difficult words, they still just continue their reading in the hope that the word they read is not really important or that meaning will become clear later on. Meanwhile, the word that they usually pass is the key to their reading and understanding. Thus, they cannot catch and grasp the idea from the reading as well as possible. So, reading comprehension and vocabulary mastery have a strong relationship. It is in line with Sedita (2005) who states that vocabulary knowledge is crucial in reading comprehension and determining how well students in comprehend the texts.

From the explanation mentioned above, the researcher have known how important the vocabulary mastery in reading activity. Therefore, the researcher formulated a research entitled "The Correlation between Students' Vocabulary Mastery and Their Reading Comprehension of the Tenth Grade Students of SMK N 1 Manggis in 2021/2022".

## METHOD

### Research Design

Research design is a plan or program made by a researcher, as the activity target that will be done (Suharsimi, 2003). Research method refers to the overall strategy in collecting and analysing data: this is referred to as the design of the research in what way the data will be analysed and collected. The design of this research was ex post facto design. Ex post facto design involves only one group as the sample of the research and does not use any control class. This study applied correlational study. Donald Ary (1985:327) says that: "Correlation studies are concerned with determining the extent of relationship between variables. They enable one to measure the extent to which variations in one variable are associated with variations in determined through the use of the coefficient of correlation". In this case, the researcher used two variables; independent variable (X) is students' vocabulary mastery and dependent variable (Y) is reading comprehension. It can be assumed that students' vocabulary mastery is considered as a factor that affects students' reading comprehension. Definitely, the two variables can be tried to correlate.

### Population and Sample

According to Brown (1988:144), population is a group that is interested in a study. The population of this research is the tenth grade students of SMK N 1 Manggis in academic year 2021/2022 that consist of 357 students. Sample is part or representative of the population that will be investigated (Suharsimi Arikunto, 2010: 109). Sampling for research according to Suharsimi Arikunto (2010: 112), if the subject less than 100 people should be taken all, if the subject large or more than 100 people can be taken 10-15% or 20-25% or more. In this case, The researcher used random sampling to determine the sample for this research. The sample is chosen at random which is intended to be an unbiased representation of the total population. The researcher took 10% of the population by using lottery. As the result, there are 35 students as the sample of this research.

## Research Instrument

There are two basic kinds of test used to measure the four language skills of students, i.e.: the objective test and the essay test (Harris, 1969:71). In this research, the study only used objective test. The researcher chose matching task in gathering the score for vocabulary and short-answer task for reading comprehension. Vocabulary test items focused on content words (verb, noun, adjective, and adverb). Meanwhile reading comprehension test will focused on general information, identifying specific information, textual reference and textual meaning. The genre of the text of reading comprehension that was only descriptive text about place.

Each item for Vocabulary test is given a score of 1 for the correct answer and 0 for the wrong answer (Brown, 2004). Meanwhile for Reading Comprehension, each item is scored by using Brown's (2004) scoring rubric as follow:

**Table 1. Scoring Rubric of Reading Comprehension**

Score	Description
2	Correct answer, correct grammar
1	Correct answer but grammatically incorrect
0	Incorrect answer

In scoring students' result of the test, the researcher used Percentage Correct. The ideal highest score was 100. The scores of vocabulary and reading comprehension test calculated by using as follow:

$$S = \frac{r}{n} \times 100$$

Where:

S : the score of the test

r : the total of the right answer

n : the total of test items

(Henning,1987)

## Data Collection

The data of this study was gathered by administering the research instruments to the tenth grade students of SMK N 1 Manggis in academic year 2021/2022. The data was collected by administering the test through Google Form to the sample that had been chosen by using random sampling. The test is divided into two parts, first is vocabulary test and second is reading comprehension test. This test consists of 20 items of vocabulary test and 25 items of reading comprehension test. The researcher gives 60 minutes to do the test. Then after getting all of the samples' answer, the researcher checked the result of the test.

## Data Analysis

Data analysis is needed to answer the questions researched by the researcher. In this study, data will be collected through management. When analysing the data of this study, some data need to be prepared in order to perform a good analysis. In order to complete the data analysis, the researcher prepared some statistical analysis, such as; the normality test; the homogeneity test; the Pearson product moment; and the t-test.

## FINDINGS

In this part is presenting the findings of the research. The aim is answering the research questions. There are four statistical analyses; 1) the normality test, 2) the homogeneity test, 3) the Pearson product moment, 4) the t-test.

### The Normality Test

Normality testing was done by IBM SPSS Statistic 24 using One-sample Kolmogorov-Smirnov Test.

**Table 2. The Normality Test**  
**One-Sample Kolmogorov-Smirnov Test**

		Vocabulary Mastery	Reading Comprehension
N		35	35
Normal Parameters <sup>a,b</sup>	Mean	79.5714	78.5714
	Std. Deviation	9.72954	12.69387
Most Extreme Differences	Absolute	.146	.122
	Positive	.123	.096
	Negative	-.146	-.122
Test Statistic		.146	.122
Asymp. Sig. (2-tailed)		.056 <sup>c</sup>	.200 <sup>c,d</sup>
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. This is a lower bound of the true significance.			

The basic of the One-sample Kolmogorov-Smirnov test is if the significance value is greater than 0.05, the research data are normally distributed. Conversely, if the significance value is smaller than 0.05, the research data are not normally distributed. Based on table 4.2 it can be seen that:

- 1) The value of the Vocabulary Mastery variable sig test is  $0.056 > 0.05$ , so the variable has passed the normality test.
- 2) The reading comprehension variable sig test value is  $0.200 > 0.05$ , so the variable has passed the normality test.

In short, it can be concluded that the data of the two research variables were normally distributed.

### The Homogeneity Test

After getting the normality of the variables, it continued by finding the homogeneity of the data. Homogeneity Testing was used to know whether the data obtained from the sample

homogenous or not. Based on the statistical computation assisted by IBM SPSS Statistic 24 using Test of Homogeneity of Variances, the researcher obtained the result as follows:

**Table 3. The Homogeneity Test of Variances**

ANOVA					
Reading Comprehension					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1677.778	7	239.683	1.703	.151
Within Groups	3800.794	27	140.770		
Total	5478.571	34			

Based on Pallant (2007) if the calculation result is higher than 0.05, the data can be categorized as homogenous, or it means that either groups or variables have the same variant. Based on table 3 above, it is known that the sig value is  $0.151 > 0.05$ , which meant the significance value of the research variables was higher than 0.05. It can be concluded that vocabulary mastery and reading comprehension, were homogeneously distributed.

#### The Pearson Product Moment Test

Pearson Product Moment was used to measure the strength of association between the variable, provided the association is linear. The researcher used SPSS version 24 to make sure the data. The result of SPSS was described as follow:

**Table 4. The Output of Pearson Product Moment Correlation**

Correlations			
		Vocabulary Mastery	Reading Comprehension
Vocabulary Mastery	Pearson Correlation	1	.435**
	Sig. (2-tailed)		.009
	N	35	35
Reading Comprehension	Pearson Correlation	.435**	1
	Sig. (2-tailed)	.009	
	N	35	35

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Seeing the significance of the relationship in this study, it can be described if the significance value of the research results is  $< 0.05$ , then the relationship between the two variables is significant. Whereas if the significance value of the research results is  $> 0.05$ , then the relationship between the two variables is not significant.

Based on the data analysis that was performed using SPSS 24, from the 35 samples, the index value of correlation that was found was 0.009 (see table 4). This shows that there is a

correlation between the vocabulary mastery and reading comprehension, because the significance value is  $0.009 < 0.05$ . This correlation indicated that the students who had high vocabulary mastery could comprehend well in reading.

### The T-test

In this study, the researcher used statistical computation assisted by IBM SPSS 24.0 using Paired Sample Test. This technique was used to test whether certain values differ significantly from the average sample. According Santoso (2014:256), interpretation in paired-sample t-test based on the significant value of the output result SPSS are:

- 1) If the significance (2-tailed)  $< 0.05$ , null hypothesis is rejected and alternative hypothesis is accepted
- 2) If there significance (2-tailed)  $> 0.05$ , null hypothesis is accepted and alternative hypothesis is rejected

For the explanation, the researcher put the table as the summary of t-test that is presented in Table 5

**Table 5. The Summary of T-test**

		Paired Differences							
Pair		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
1	Vocabulary Mastery - Reading Comprehension	1.0000	12.17519	2.05798	-3.18232	5.18232	.486	34	.030

Based on table 5 above, it is known that the sig value is  $0.030 < 0.05$ , which meant that null hypothesis ( $H_0$ ) is rejected and alternative hypothesis ( $H_a$ ) is accepted. So the present study's data have already proven that there is a significant correlation between the vocabulary mastery and reading comprehension of the tenth students of SMK Negeri 1 Manggis in academic year 2021/2022.

### DISCUSSION

The following discussion was intended to explain the findings of the present study about the correlation between vocabulary mastery and reading comprehension of the tenth grade students of SMK Negeri 1 Manggis in academic year 2021/2022. The data analysis results showed that there was a significant correlation between vocabulary mastery and reading



comprehension of the tenth grade students of SMK Negeri 1 Manggis in academic year 2021/2022.

This study was supported by Armykirana (2017) and Bahri (2018). They convincingly found that there was a correlation between the students' vocabulary mastery and their reading comprehension. It was in line with the present study results that vocabulary mastery and reading comprehension were correlated. Both of the previous studies clearly supported the research findings of the present study. In other words, these two researchers have proven that vocabulary mastery correlated to reading comprehension.

The research results showed that in terms of criteria of vocabulary mastery, most samples could understand about their reading comprehension that fulfilled the criteria: general idea, specific information, textual meaning and textual reference. However, during the data collection process, the researcher found interesting findings related to the ability of samples. Most of the samples which have high score in vocabulary mastery test could answer the reading comprehension test easier and faster. In contrast, samples with low vocabulary mastery scores would find it difficult to answer the test and take longer. Therefore, those findings can be adapted by future researchers to conduct vocabulary mastery and reading comprehension of the same and in-depth research.

As what has been explained above, it can be concluded that vocabulary mastery and reading comprehension had a significant correlation. It showed that vocabulary mastery correlated with students' reading comprehension. It could be seen from the results of the hypothesis testing, which use Pearson product-moment correlation and t-test. The present study was in line with the previous study, which showed the correlation between vocabulary mastery and reading comprehension. Based on the research findings, it can be concluded that the alternative hypothesis ( $H_a$ ) which has been previously determined was finally confirmed. In other words, there is a significant correlation between vocabulary mastery and reading comprehension of the tenth grade students of SMK Negeri 1 Manggis in academic year 2021/2022.

## CONCLUSION

Based on the findings and discussions above, the researcher concludes that there is significant correlation vocabulary mastery and reading comprehension of the tenth grade students of SMK Negeri 1 Manggis in academic year 2021/2022. This means reading comprehension and vocabulary mastery have a strong relationship. It is in line with Sedita (2005) who states that vocabulary mastery is crucial in reading comprehension and determining how well students in comprehend the texts.

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