CORRELATIONAL STUDY ON JUNIOR HIGH SCHOOL STUDENTS' VOCABULARY MASTERY AND THEIR READING COMPREHENSION

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Abstract

Vocabulary mastery and reading comprehension are supposed to be closely related. Many researchers said vocabulary mastery would determine reading comprehension. The objective of this research is to know whether there is a correlation between students' vocabulary mastery and their reading comprehension at eight grade of SMPN 3 Sawoo. The subject of study is all students from VIII-A class. They are 20 students. The method used in this study is quantitative method and the design of the research is correlation design. The instrument to collect the data is test. The researcher uses the product moment correlation formula to analyze the data. The result of this study shows that there is a significant correlation between students' vocabulary mastery and their reading comprehension. It is proved by the r_{xy} (0.822) is higher than r_{table} in the degree of significant 5% (0.468). It is considered that null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.

Keywords: Correlation; Vocabulary Mastery; Reading Comprehension.

Abstrak

Penguasaan kosakata dan pemahaman membaca seharusnya memiliki keterkaitan erat. Banyak penelitian yang mengatakan bahwa penguasaan kosakata mempengaruhi pemahaman membaca. Tujuan dari penelitian ini adalah untuk mengetahui adakah hubungan antara penguasaan kosakata dan pemahaman membaca pada siswa kelas VIII di SMPN 3 Sawoo Ponorogo. Subjek penelitian ini adalah seluruh siswa kelas VIII-A. Keseluruhan siswa berjumlah 20. Metode yang digunakan di penelitian ini adalah metode kuantitatif dan bentuk penelitian adalah penelitian hubungan. Alat yang digunakan untuk mengumpulkan data adalah tes. Peneliti menggunakan rumus korelasi produk moment untuk menganalisis data. Hasil penelitian menunjukkan bahwa ada hubungan yang signifikan antara penguasaan kosakata dan pemahaman membaca. Itu dibuktikan dengan r_{xy} (0,822) yang lebih besar dari r_{table} di taraf signifikan 5%(0,822). Dengan kata lain hipotesis nol (H_0) ditolak dan hipotesis alternatif (H_a) diterima.

Kata kunci: Hubungan; Penguasaan Kosakata; Pemahaman Membaca

INTRODUCTION

The students' ability to read English text is very important as a bridge to understand the textbooks. 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 in Hayati, 2016). Reading ability is a crucial tool that helps the students in reading comprehension. In terms of reading ability, there are four abilities that the atudents should have. The components the component of reading ability are Phonemic Awareness (the understanding of spoken words or pronouncing a word), Phonic (is the understanding that there is a predictable relationship between phonemes (sounds of spoken language) and graphemes (the letters and spellings that represent those sounds in written language)), Fluency (the ability to read a text accurately and quickly), and Vocabulary mastery is the ability of knowing word meaning (Nisa', 2014:10).

According to Woolley (2011: 15) Reading comprehension is the process of making meaning from text. The goal is to gain an overall understanding of what is described in the text rather than to obtain meaning from isolated words or sentences in understanding read text. Without reading comprehension, the learners cannot understand the kinds of references and textbook that they have to read in their period of studies. The reading activity also contributes positively to improve student's vocabulary mastery. When they read the texts, they will found the new vocabularies and memorize it. But, there are many factors that contribute to one's ability to read effectively. Vocabulary mastery is one important factor that enhances reading comprehension (Ibrahim, Sarudin and Muhammad, 2016).

Vocabulary mastery and reading comprehension are supposed to be closely related. (Frijuniarsi & Marlianingsih, 2016). Vocabulary mastery refers to the great skill in processing words of a language. It is an individual achievement and possession for that reason the biggest responsibility in increasing the knowledge is in the individual himself. The success in widening the vocabulary mastery requires their own motivation and interest on the words of a language (Alqahtani, 2015). Students can learn new vocabulary indirectly thought everyday experiences or they can have someone directly teach or explain the meaning of a word to us. But, mastery English vocabulary has been a great problem for most Indonesian students. There are many problems that influence of students difficult in mastering English. One of those main problems is the lack in vocabulary mastery because, the students has limited knowledge about vocabulary. In this phase, the importance of vocabularies input becomes so crucial to lead students comprehend their reading (Arifin, 2015). Johnson (2008: 93) classified types of vocabulary into four kinds, as follows: 1) listening vocabulary, are the words that people hear and understand, commonly referred to as words we know. This is the largest of our vocabularies and the one upon which the others are built. 2) Writing vocabulary, are the words we use to express ourselves in written form. This is usually the smallest of the four vocabularies. We write using only those words we can read and understand. Just like listening and speaking vocabularies, our reading vocabulary is larger than our writing vocabulary, 3) speaking vocabulary are the words we use in making

conversation. Our listening vocabulary is larger than our speaking vocabulary because our understanding of some words is incomplete or contextual we understand a word in the context of a sentence or situation, but not necessarily by itself. Thus, adding both depth and dimension to our word knowledge enables us to express our thoughts more efficiently and effectively. 4) Reading vocabulary are the words that we are able to read. Most students enter school with very few words in their reading vocabulary. Learning to read is much easier if students are reading words in their listening and speaking vocabularies. Thus, increasing the number of words in students' listening vocabularies make learning to read easier.

Many researchers said that vocabulary mastery would determine to reading comprehension. It seems likely that having a limited vocabulary in the language in which children are being taught will lead to severe problems in understanding texts. A reader may be able to tolerate some unknown words and still be able to infer the meaning of a text with the help of text-level constraints. However, if too many words are unknown it is likely that comprehension will break down altogether (Carver, 1994 in Lervåg & Aukrust, 2010). Therefore, if someone who is good in vocabulary mastery would comprehend a text well. On the other hand, someone with poor vocabulary mastery would not understand perfectly what he or she reads. In language study, teaching and improving students' reading ability is a big fat homework as most of Indonesian students have (Harida and Wulandari, 2019).

Bahri *(*2018: 84*)* conducted a research on *The correlation between students' vocabulary mastery and their reading comprehension at the seventh grade students' of MTs Daarul Ihsan.* The results showed that there was strong correlation between students' vocabulary mastery and their reading comprehension. The current study also concluded that students' experiences and reading strategies help the students to understand text but vocabulary was more contributive in helping the students to comprehend the texts.

Furqon (2013) also studied about vocabulary mastery and reading comprehension on *correlation between students' vocabulary mastery and their reading comprehension.* The test items of reading comprehension and vocabulary mastery were given to the students to measure their level of reading comprehension and vocabulary mastery. The results were compared to find out the correlation between those variables. The findings showed that vocabulary mastery was contributive in helping the students to comprehend the texts.

Armykirana's (2017) research on *The correlation between students' vocabulary mastery and their reading comprehension of the third grade of SMA Negeri 7 Kediri in academic year 2016/2017* was aimed to know the correlation between students' vocabulary mastery and their reading comprehension of the third of SMA Negeri 7 Kediri in academic year 2016/2017. This quantitative-correlation research gained the data using vocabulary test and reading comprehension test which contains 20 questions each. There is correlation between students' vocabulary mastery and their reading comprehension at the third grade students of SMA Negeri 7 Kediri in Academic Year 2016/2017

Aprilia's (2019) research entitled *The correlation between students' vocabulary mastery and their reading comprehension in descriptive text at State Senior High School 2 Pekanbaru.* This correlational research used two tests in collecting the data for this research: vocabulary test and reading

comprehension test. The writer found that 19.36% students' reading comprehension of the tenth grade students at State Senior High School 2 Pekanbaru influenced by their vocabulary mastery. Then, the other 80.64% was influenced by other factors.

Ali (2010) research entitled *The correlation between students' vocabulary mastery and reading comprehension*. This research was observed and analyzed from the university students of the second semester of English Department, the faculty of Tarbiyah and Teachers Training Syarif Hidayatullah State Islamic University Jakarta. this study is to get the information and the empirical data about the impact of students' vocabulary mastery and their reading comprehension. According to the result of the analysis and statistical calculation, it is found that having more vocabulary or vocabulary mastery significantly affects the comprehension of the students reading activity.

Based on those previous study description, it shows that there is a close relation between vocabularies and reading comprehension. Then, the objective of the study is to know whether there is a correlation between students' vocabulary mastery and reading comprehension.

METHOD

This study uses the quantitative method in conducting this research. The type of the research design is correlation design. Correlation designs are procedures in quantitative research in which investigators measure the degree of association (or relation) between two or more variables using the statistical procedure of correlation analysis. This degree of association, expressed as a number, indicates whether the two variables are related or whether one can

predict another" (Creswell, 2012: 21). In this study correlated two variables. The variables are students' vocabulary mastery (x) as the independent variable and reading comprehension (y) as the dependent variable. The subject of study is all students from VIII-A class at SMPN 3 Sawoo. They are consisted of eleven men and nine women. The total numbers is 20 students. The instrument to collect the data is test. To analyze the data, the researcher applies some techniques which are appropriate to the kind of each of the data from tests, both vocabulary mastery test and reading comprehension test. The writer used the product moment correlation technique. The main objective of this technique is to find out the correlation between two variables. And the r-$_{table}$ on 5%level of significance. The formu la of the product moment correlation coefficient by Spermant-Brown to analyze the data is as follows:

$$r_{xy} = \frac{N \sum xy - \left(\sum x\right)\left(\sum y\right)}{\sqrt{\left\{N \sum x^2 - \left(\sum x\right)^2\right\}\left\{N \sum y^2 - \left(\sum y\right)^2\right\}}}$$

r_{xy} = the coefficient of correlation variable x and y

x   = the result of Vocabulary mastery test

y   = the result of reading comprehension test

N   = the number of the students

$\sum$ = Total number

(Arikunto, 2002: 157)

RESULT AND DISCUSSION

To find out the valid and reliable test, the researcher tries out the test on the other class is at class VIII-B. The students consist of 21 students. The tryout of the test was held on May, 24th, 2019. The tests are 25 items of multiple choice for vocabulary mastery

and 25 items of multiple choice for reading comprehension.

After finish, to get the validity of test, it was tested using Microsoft Excel. After the calculation by using Microsoft Excel, it was found that 11 test items for vocabulary mastery and 9 test items for reading comprehension that valid and reliable. The complete calculation of the valid data can be seen in Appendix. After that the researcher gave the valid test to the students at VIII-A as the subject of research.

The results of the students' subject score were gotten are:

Table 1: The result of vocabulary mastery test (X)

No	Students	The Right Answer
1	Aj	10
2	Ay	11
3	Ay	10
4	At	10
5	Ap	9
6	Bs	9
7	Dh	10
8	D	10
9	Fm	10
10	Fe	2
11	Dk	3
12	Hd	10
13	Ja	8
14	Kk	1
15	Mn	7
16	Mr	11
17	Hd	10
18	Wa	8
19	Yl	11
20	Rs	10

Table 2: The result of reading comprehension test (Y)

No	Students	The Right Answer
1	Aj	8
2	Ay	8
3	Ay	9
4	At	8
5	Ap	8
6	Bs	2
7	Dh	8
8	D	9
9	Fm	8
10	Fe	1
11	Dk	3
12	Hd	7
13	Ja	8
14	Kk	1
15	Mn	8
16	Mr	9
17	Hd	8
18	Wa	8
19	Yl	8
20	Rs	7

To find correlation between the variable X and the variable Y, the researcher applies the product's Moment Correlation Formula. Tabulate the data written in the analysis product moment list/table. The table contains six columns.

Table 3: Product Moment Analysis Table of Vocabulary Mastery and Reading Comprehension test score

No	X	Y	X²	Y²	X.Y
1	10	8	100	64	80
2	11	8	121	64	88

3	10	9	100	81	90
4	10	8	100	64	80
5	9	8	81	64	72
6	9	2	81	4	18
7	10	8	100	64	80
8	10	9	100	81	90
9	10	8	100	64	80
10	2	1	4	1	2
11	3	3	9	9	9
12	10	7	100	49	70
13	8	8	64	64	64
14	1	1	1	1	1
15	7	8	49	64.	56
16	11	9	121	81	99
17	10	8	100	64	80
18	8	8	64	64	64
19	11	8	121	64	88
20	10	7	100	49	70
∑	170	136	1616	1060	1281

X = Vocabulary mastery

Y = Reading comprehension

Based on the table, the researcher found the calculation as follow:

$\sum X = 170$

$\sum X^2 = 1616$

$\sum Y = 136$

$\sum Y^2 = 1060.$

$\sum X.Y = 1281$

The computation results using product moment formula can be seen in the following:

$$r_{xy} = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{\left\{N\sum x^2 - (\sum x)^2\right\}\left\{N\sum y^2 - (\sum y)^2\right\}}}$$

$$= \frac{20 \times 1281 - (170)(136)}{\sqrt{\left\{20 \times 1616 - (170)^2\right\}\left\{20 \times 1060 - (136)^2\right\}}}$$

$$= \frac{25620 - 23120}{\sqrt{\{32320 - 28900\}\{21200 - 18496\}}}$$

$$= \frac{2500}{\sqrt{\{3420\}\{2704\}}}$$

$$= \frac{2500}{\sqrt{9247680}}$$

$$= \frac{2500}{3040.999836}$$

$$= 0.822$$

In this study there is a hypothesis to be tested. Whether there is a significance correlation between students' vocabulary mastery and their reading comprehension among the eighth grade students of SMPN 3 Sawoo. The accepted or the rejected of hypothesis is based on the comparison between r-observed (r_o) and r- table (r_t). If the value of r_o is higher than r_t, the hypothesis is accepted.

From the result of data analysis, it has got r_{xy} = 0.822 while value of r-table in 5% with df = N – 2 = 20 – 2 = 18 found number 0.468 so r- observed > r- table. The accepted or the rejected of hypothesis is based on the comparison between r-observed (r_0) and r- table (r_t). If the value of r_0 is higher than r_t, the hypothesis is accepted. Based on the table above, r-observed is higher than r-table (0.822 > 0.468). So, the summaries are:

Null Hypothesis (Ho)

"There is no correlation between students' vocabulary mastery and their reading comprehension at eighth grade of SMPN 3 Sawoo in the academic year 2019/2020" is rejected.

Alternative Hypothesis (Ha)

"There is a correlation between students' vocabulary mastery and their reading comprehension at eight grade of SMPN 3 Sawoo in the academic year 2019/2020" is accepted.

From the previous computation, the value of the correlation coefficient symbolized as "r" is found, that is 0.822. This value shows extend of correlation or connection between two variables, the first variable is the students' vocabulary mastery test scores and the second variable is reading comprehension test scores. In relation to the extent of the correlation coefficient, Sugiyono (2013: 242) says that there are five degrees of correlation coefficient. The table of "r" interpretation is such as follow:

Table 4: Pearson correlation

(Sugiono, 2013: 242)

The value or score of "r" Product Moment (r_{xy})	Interpretation
0.000 – 0.199	Very low
0.200 – 0.399	Low
0.400 – 0.599	Medium
0.600 – 0.799	High
0. 800 – 1. 000	Very high

Based on the table of correlation coefficient above, the writer concludes that the level of the value of "r" obtained is categorized as very high. Because the value of "r" = 0.822 belong to the interval of 0.800 – 1.000.

CONCLUSION

Based on the statistical calculation which analyzed above, the researcher finds out that there is a correlation between students' vocabulary mastery and their reading comprehension at eight grade students of SMPN 3 Sawoo in the academic year of 2019/2020. The correlation value of r_{xy} is 0.822 > r_t 0.468. Based on the result of the study, the writer can conclude that to succeed in reading comprehension, the students should master vocabulary.

For other researcher, this study presents more information to the inventory of research findings about the correlation between vocabulary mastery and reading comprehension. This research can be a contribution to the research in education which is intended to find out the correlation of two variables, in this case vocabulary mastery and reading comprehension. To keep in mind, that vocabulary mastery is a part of communicative competence, in which language teaching today is highly exposed to (Suprayitno *et al,* 2019).

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