

**THE CORRELATION BETWEEN VOCABULARY MASTERY AND
READING COMPREHENSION AT THE SECOND YEAR STUDENTS OF
SMPN 3 GUNUNGSARI**

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ABSTRACT

The research entitled *The Correlation Between Vocabulary Mastery and Reading Comprehension* aims at finding out there is whether any correlation between vocabulary mastery and reading comprehension at the second year students of SMPN 3 Gunungsari. This research was designed by using descriptive quantitative method. The research took 30 students as sample of this study. To analyses the data this research used statistic computation by product moment correlation, to get the final score. The data found that the mean score of reading comprehension was 54.4 and vocabulary was 53,6. After computing by the statistical analysis of Product Moment, the value shows 1.631 while the t-table was 1.671 and 2.390. This result of this investigation indicated that there is no significant between vocabulary and reading comprehension. The value of t-test was 1.631 is lower than 1.671 and 2.390 in 0.05 and 0.01 significant level. While the degree of freedom (df) = 60. It can be concluded that there is no correlation between vocabulary mastery and reading comprehension.

Keywords: *The Correlation, Vocabulary Mastery and Reading Comprehension*

INTRODUCTION

English as an international language has an important role in the world. Since its role it's really important in the world, most countries use it either as a second language or foreign language. It is used in some events such as: international forums, world organization, and other important role in English for instant learning science and technologies because most of book about these matters are written in English.

In this era of free trade we should be able to speak and communicate in English. There are too many Medias in improving or learning English, and we can find it everywhere and every time we want.

The kind of media that may be assisted the learners to obtain the skills of English as the second language is particularly in progressing the reading skills, such as newspaper, magazine, internet, film or Movie and so on. In which the main function of those Medias as the alternative way of getting the information, entertainment, and learning by using several languages but one of the most language that used by the people especially for international communication. As consequences, the important devices in a language are word. According to Hornby (1989:959), the total number of words which (with rulers for combining them) make up language is called Vocabulary.

After having the vocabulary; we must understand and able to recognize the vocabulary of the language in

communication because without understanding and recognizing the vocabulary of the language, the verbal communication will not be running well for the learner who want to communicate in this effort they have to master the rule each other or understanding vocabulary of the target language.

Especially in Indonesian country, the government has been trying hard to overcome this problem by including the English language in the curriculum as one of the subject.

The support of this case was declared by Minister of Education and Culture Degree No. 0486/4/1984. That "the main program is in Senior High School Curriculum consists of 15 subjects" one of them is English (Depdikbud, 1984; 8)

Meanwhile, the Indonesian Curriculum of 1984, English is taught integratedly with place emphasis on Reading Comprehension with some targets which consists of 1500-2000 words.

Base on the statement above, it is very clear that vocabulary is one of the main factor to build up student's competence either orally or in written form of English as a foreign language.

According to the aim of teaching vocabulary itself, it is expected to the students of SMPN 3 Gunugsari understand the meaning of the word contextually and use them accurately and correctly. So, student mastery on vocabulary and reading comprehension are important factor that enable then to use English Literature.

The whole students of SMPN 3 Gunungsari have to study and learn English in their school but they never use English at their home. Their ability in English subject still under the curriculum target, in this case, it can be seen from the result of the report book on its pure evaluation result.

In contrary previously, the students in the language classroom emphasized in acquisition of linguistics and structure of vocabulary result; otherwise the student who may know the rule of language usage will be unable to use the language (Larsen, 1983:124).

Starting from statements above, the writer decides to investigate the correlation between vocabulary mastery and reading comprehension at second year students of SMPN 3 Gunungsari in academic year 2011/2012.

The study is aimed at finding out whether there is or not a correlation between vocabulary mastery and their reading comprehension. First of all, the researcher needs to know the students' vocabulary mastery and their reading comprehension. Next, the writer would like to find correlation between the students' mastery on vocabulary and their reading comprehension.

RESEARCH METHOD

This study aims to finding out the Correlation between Vocabulary Mastery and Reading Comprehension at the second year students of SMPN 3 To get the

data, the researcher distributed the test of vocabulary and reading comprehension at the second year students, and after that the researcher would analyze them in descriptive quantitative method and statistical analysis.

Population and Sampling Technique

1. Population of the study is the second year students of SMPN 3 Gunung Sari, which consists 165 students and they were divided into 4 classes comprising about 30-35 students for each.

2. Sample of the study

The sample of this study is the second year students of SMPN 3 Gunung Sari. Suharsimi Arikunto (1994: 45) said that if the populations less than hundred, it is better to take all of the population as the subject of the research, but if the number of the population is more than a hundred, its suggested to take 10%-25%. This number is representative enough for the research. In this research, writer took only 15% as sample. So, that based on Suharsimi Arikunto statement the researcher chooses 30 students as sample of the study.

DISCUSSION

The statistical analysis of the data reflected from the result of means score, standard deviation and the value of product moment. Base on result of the test, the writer found the mean score of vocabulary was 5.85 and the mean score of reading comprehension was 5.69 it means that students English reading

comprehension depend on their English vocabulary mastery. In other words, we can say that student will be more understanding vocabulary but less of them able to understand of English reading comprehension.

In identifying the significance of the students' deviation mean scores it is found that the deviation of two mean scores (1.14 and 1.27) is also shown the value of *t-test* and *t-table*. It is read the value of *t* is lower than the *t-table*. Where the *t-test* value was 0.473 and the *t-table* was 1.671

So, the result of (*t-test*) is lower than (*t-table*) ($t < t_t$), the null hypothesis (H_0) is accepted and alternative hypothesis (H_a) is rejected. It means that there is not significance between variable X and variable Y. It is proved that the students' mastery in vocabulary but there is no good impact on their reading comprehension, and it can be said that mastery on vocabulary is not always guarantee for students to be good in reading comprehension but sometime it make them confused, especially in reading passage. Because they were very difficult to recognize the meaning whole words of sentences.

FINDING

In finding the data needed, the researcher took four classes as sample on this research, firstly the writer introduced about the materials in every class, in this case the writer did the treatments before distributed the tests and then the treatments was be done four time meeting in every

classes, after that the writer distributed the test to gaining the data, after having the students tests the writer did the scoring system based on previous chapter, to get the final score the writer draws the following formula, which runs:

$$S = \frac{R}{N} \times wt$$

Whereas:

S = Score which indicates the sum of

R = The number of right answer

N = The number of items (in this case N is 30)

Wt = weight (Possible Highest Final Score (10-100 Scales)

To find out whether the vocabulary mastery and reading comprehension is good or not, the writer analyses the obtained data by using the following steps:

1. The computation of Mean Score.

Harris (1969-122) said that," the arithmetic mean often shortened to the mean, is the sum of the separate scores devised by their number. Then, Heaton (1974-169) also clarified that the mean score of any test is the most efficient measurement of central tendency, but it is not always appropriate.

Base on the statement above, the writer formulated mean score in this research is:

$$M = \frac{\sum X}{N}$$

Whereas:

M = The mean score

X = The subject score

N = The number of samples

$\sum X$ = The sum of the subjects score

\sum = Sum of

For the purpose of computing the score as follows:
 the mean score, the writer to tabulates

Table .1 The subjects score of vocabulary and reading comprehension

| No | Students' Initial | X | Y | X ² | Y ² | XY |
|----|-------------------|--------------|--------------|----------------|----------------|----------------|
| 1 | AA | 4,6 | 7,3 | 21,16 | 53,29 | 33,58 |
| 2 | AN | 6 | 6 | 36 | 36 | 36 |
| 3 | DA | 7,3 | 6 | 53,29 | 36 | 43,8 |
| 4 | DIK | 7,3 | 3,3 | 53,29 | 10,89 | 24,09 |
| 5 | DR | 7,3 | 8 | 53,29 | 64 | 58,4 |
| 6 | EI | 6 | 6,6 | 36 | 43,56 | 39,6 |
| 7 | EM | 7,3 | 6 | 53,29 | 36 | 43,8 |
| 8 | HAE | 4 | 6 | 16 | 36 | 24 |
| 9 | HH | 6 | 4,6 | 36 | 21,16 | 27,6 |
| 10 | HS | 4 | 8 | 16 | 64 | 32 |
| 11 | HS | 4,6 | 6 | 21,16 | 36 | 27,6 |
| 12 | II | 5,3 | 2,6 | 28,09 | 6,76 | 13,78 |
| 13 | IW | 4,6 | 3,3 | 21,16 | 10,89 | 15,18 |
| 14 | JU | 6,6 | 6,3 | 43,56 | 39,69 | 41,58 |
| 15 | LS | 6 | 5,3 | 36 | 28,9 | 31,6 |
| 16 | MB | 4,6 | 6 | 21,16 | 36 | 27,6 |
| 17 | MD | 6,6 | 6 | 43,56 | 36 | 39,6 |
| 18 | MI | 6 | 4 | 36 | 16 | 24 |
| 19 | MN | 5,3 | 4,6 | 28,09 | 21,16 | 24,38 |
| 20 | MP | 6,6 | 5,3 | 43,56 | 28,9 | 34,98 |
| 21 | MS | 7,3 | 6 | 53,29 | 36 | 43,8 |
| 22 | MT | 6,6 | 5,3 | 43,56 | 28,9 | 34,98 |
| 23 | NF | 7,3 | 6 | 53,29 | 36 | 43,8 |
| 24 | OJ | 4 | 6,6 | 16 | 43,56 | 26,4 |
| 25 | PR | 6,6 | 5,3 | 43,56 | 28,9 | 34,98 |
| 26 | SB | 4 | 4,6 | 16 | 21,16 | 18,4 |
| 27 | SH | 5,3 | 6,6 | 28,09 | 43,56 | 34,98 |
| 28 | SI | 4,6 | 5,3 | 21,16 | 28,9 | 24,38 |
| 29 | YA | 7,3 | 8 | 53,29 | 64 | 58,4 |
| 30 | YM | 6,6 | 6 | 43,56 | 36 | 39,6 |
| | Jumlah | 175,6 | 170,9 | 1060,46 | 1028,18 | 1002,89 |

Explanation

X = Variable of individual score in vocabulary

Y = Variable of individual score in reading comprehension

X^2 = The square of the individual score of vocabulary

Y^2 = The square of the individual score of reading comprehension

The computation of the mean score can be processed by applying the formula. The process is shown below:

a. Vocabulary Mastery

in the table 1 above, it is identified that:

$$X = 170,9$$

$$N = 30$$

The Mean Score of the vocabulary is

$$\begin{aligned} M_x &= \frac{\sum X}{N} \\ &= \frac{175,6}{30} \\ &= 5,85 \end{aligned}$$

b. Reading Comprehension

The Mean Score of Reading Comprehension is:

$$Y = 175,6$$

$$N = 30$$

$$\begin{aligned} M_y &= \frac{\sum Y}{N} \\ &= \frac{170,9}{30} = 5,69 \end{aligned}$$

So, the mean score of both vocabulary mastery and reading comprehension have been obtained, the mean score of vocabulary (x) is 5.85 and the mean score of reading comprehension (y) is 5.69.

The above figures of the mean are just simple figures. The most important thing of the figures symbolized as the student's comprehension on the test and the accuracy of such technique applied. Theoretical or vice versa it also implies that the students vocabulary mastery is higher better than their comprehension on reading, to moreover it can be said" almost the students mastery on vocabulary rather than reading comprehension

2. The Computation of Standard Deviation.

Experts on language testing agree that standard deviation can be use to examine how well a number of score is very important since one purpose of testing is for sake of placement of the students (Heaton, 1975-170). This means that the more powerfully of spread the number of score, and discriminate the students from the good, average, and poor categorization.

Concerning these phenomena, Heaton (1975-170) further explains that the standard deviation is another way of showing the spread of the score. It measures describe the degree of the score and to gap between the highest and lower marks, without ignores the information provided by all the remaining scores. In another part of this writing, Heaton (1975-171) wrote that, it is also useful to provide information concerning characteristic of different groups.

Table 2. The Deviation score of vocabulary and reading comprehension

| No | Students 'Initial | X | Y | X ¹ | Y ¹ | X ² | Y ² |
|----|----------------------|--------------|--------------|----------------|----------------|----------------|----------------|
| 1 | AA | 4,6 | 7,3 | -1,25 | 1,41 | 1,56 | 1,98 |
| 2 | AN | 6 | 6 | 0,15 | 0,31 | 0,02 | 0,01 |
| 3 | DA | 7,3 | 6 | 1,45 | 0,31 | 2,10 | 0,01 |
| 4 | DIK | 7,3 | 3,3 | 1,45 | -2,39 | 2,10 | 5,71 |
| 5 | DR | 7,3 | 8 | 1,45 | 2,31 | 2,10 | 5,33 |
| 6 | EI | 6 | 6,6 | 0,15 | 0,91 | 0,02 | 0,82 |
| 7 | EM | 7,3 | 6 | 1,45 | 0,31 | 2,10 | 0,01 |
| 8 | HAE | 4 | 6 | -1,85 | 0,31 | 3,42 | 0,01 |
| 9 | HH | 6 | 4,6 | 0,15 | -1,09 | 0,02 | 1,18 |
| 10 | HS | 4 | 8 | -1,85 | 2,31 | 3,42 | 5,33 |
| 11 | HS | 4,6 | 6 | -1,25 | 0,31 | 1,56 | 0,01 |
| 12 | II | 5,3 | 2,6 | -0,55 | -3,09 | 0,30 | 9,54 |
| 13 | IW | 4,6 | 3,3 | -1,25 | -2,39 | 1,56 | 5,71 |
| 14 | JU | 6,6 | 6,3 | 0,75 | 0,61 | 0,56 | 0,37 |
| 15 | LS | 6 | 5,3 | 0,15 | -0,39 | 0,02 | 0,15 |
| 16 | MB | 4,6 | 6 | -1,25 | 0,31 | 1,56 | 0,01 |
| 17 | MD | 6,6 | 6 | 0,75 | 0,31 | 0,56 | 0,01 |
| 18 | MI | 6 | 4 | 0,15 | -1,69 | 0,02 | 2,85 |
| 19 | MN | 5,3 | 4,6 | -0,55 | -1,09 | 0,30 | 1,18 |
| 20 | MP | 6,6 | 5,3 | 0,75 | -0,39 | 0,56 | 0,15 |
| 21 | MS | 7,3 | 6 | 1,45 | 0,31 | 2,10 | 0,01 |
| 22 | MT | 6,6 | 5,3 | 0,75 | -0,39 | 0,56 | 0,15 |
| 23 | NF | 7,3 | 6 | 1,45 | 0,31 | 2,10 | 0,01 |
| 24 | OJ | 4 | 6,6 | -1,85 | 0,91 | 3,42 | 0,82 |
| 25 | PR | 6,6 | 5,3 | 0,75 | -0,39 | 0,56 | 0,15 |
| 26 | SB | 4 | 4,6 | -1,85 | -1,09 | 3,42 | 1,18 |
| 27 | SH | 5,3 | 6,6 | -0,55 | 0,91 | 0,30 | 0,82 |
| 28 | SI | 4,6 | 5,3 | -1,25 | -0,39 | 1,56 | 0,15 |
| 29 | YA | 7,3 | 8 | 1,45 | 2,31 | 2,10 | 5,33 |
| 30 | YM | 6,6 | 6 | 0,15 | 0,31 | 0,02 | 0,01 |
| | Jumlah | 175,6 | 170,9 | 20 | 24,5 | 40 | 49 |

Explanation: X = Variable of individual score in Vocabulary
 Y = Variable of individual score in Reading Comprehension

X1 = Deviation score from the mean score of vocabulary

Y1 = Deviation score from the mean score of Reading Comprehension

X2 = The square of the deviation score of vocabulary

Y2 = The square of the deviation score of Reading Comprehension

Dealing with the proficiency of testing techniques and based on what has been stated by Heaton, the standard deviation of the two groups can be calculated by using the following formula, which runs:

$$SD = \sqrt{\frac{\sum d}{N}}$$

Where:

SD = The standard deviation

D = The deviation score from the mean

N = The number of sample

\sum = The sum of

$\sqrt{\quad}$ = The root of.....

The table of computing the standard deviation of the two group can be seen at table 2.2 below.

A. Independence of variable vocabulary

$$\sum X^2 = 40$$

$$N = 30$$

$$SD X = \sqrt{\frac{\sum d}{N}}$$

$$= \sqrt{\frac{40}{30}}$$

$$= \sqrt{1,3}$$

$$XY = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\}\{N \sum Y^2 - (\sum Y)^2\}}}$$

$$= 1,14$$

B. Dependence variable reading comprehension

In the table 2 above, it is identified that is:

$$\sum Y^2 = 49$$

$$N = 30$$

The standard deviation of reading comprehension is:

$$SD Y = \sqrt{\frac{\sum d}{N}}$$

$$= \sqrt{\frac{49}{30}}$$

$$= \sqrt{1,63}$$

$$= 1,27$$

C. Identification of the significance of the correlate of the two means score

The last step of computing of the statistic data is to find out the value of product moment. Looking over the figures of mean score obtained through statistic computation, we might say that vocabulary seem to be at good level of mastery which affect the reading comprehension.

Therefore, based on the two variables above, we can take an adequate conclusion about the result of this research by using product moment formula as follow:

$$\begin{aligned}
 &= \frac{30.1002,89-(175,6)(170,9)}{\sqrt{(30.1028,18-(175,6)^2)(30.1060,48-(170,9)^2)}} \\
 &= \frac{30086,7-30010,04}{\sqrt{(30845,4-30835,36)(31814,4-29206,81)}} \\
 &= \frac{76,66}{\sqrt{(10,04)(2607,59)}} \\
 &= \frac{76,66}{\sqrt{26180,2036}} \\
 &= \frac{76,66}{161,802978} \\
 t &= 0,473
 \end{aligned}$$

After calculating the data by using a product moment coefficient of correlation above, the writer find out the result referred by the value of “t-test that is 0. 473. Now, this can be interpreted to find out if it is significant or not.

Before it is consulted to table of distribution, firstly, the writer determines the degree of freedom (*df*) that is $X + Y - 2 = 58$. If we checked up the t-table, it is not found out t-table for *df*(58). But, according to (Arikunto, 1992) said that when we do not find an exact degree of freedom. It is permitted to take another nearest one. It also means that the degree of freedom for 58 can be replaced by 60. In the t-table value that t-table for 60 was 1. 671 and 2.390 for both confidence levels 95% and 99% (0.05 and 0.01).

After the degree of freedom and level of significance have been pointed out, the coefficient (t-test) is directly checked on the t-table of *t* distribution. Based on the table, the critical value of t-test on the level

significance (0.05 and 0.01) is 1.671 and 2.390. So it is found that 0.473 is lower than 1.671 and 2.390.

B. The factors that vocabulary mastery correlate towards reading comprehension

Base on the conclusion of the result, so the writer concluded the factors that the correlate between vocabulary mastery and reading comprehension, these are two factors:

The first is before students able to understand reading comprehension they must know more about vocabulary so that, the more words they know the better quality to increase their skill on reading comprehension.

The second factor, the teacher is expected to have a good technique in teaching reading and he also must able to translate the difficult words to the students, as the consequence, it will enrich the students vocabulary on reading text.

CONCLUSION

The objective of this research was aimed to knowing how far the correlation between students vocabulary achievements and that reading comprehension. This research used the descriptive quantitative method at SMPN 3 Gunungsari in academic year 2010/2011.

This formula r - product moment applied to improve alternative hypothesis (H_a) there is/ correlation between students' vocabulary mastery and reading comprehension, and Null hypothesis (H_o) that is students' vocabulary mastery does not have correlation toward reading comprehension.

The result of data analysis using formula r - product moment showed the value r -product moment was 0.473 and t - table was 1.671 confident level 95% or 0.05%. It is consulted with the t -table of the critic value of r -product moment so the index correlation is more than 1.671 or 2.390 mean while t -test was 0.473 < 1.671 and 2.390. So base on the data above alternative hypothesis (H_a) is rejected and Null hypothesis (H_o) is accepted.

Base on the research was done by the writer, the researcher takes some conclusions of Null hypothesis (H_o) of this writer are as follows.

1. The students' vocabulary mastery at the second year students of SMPN 3 Gunungsari in academic year 2011/2012 is good
2. The students' ability in reading comprehension at the second year students of SMPN 3

Gunungsari in academic year 2011/ 2012 is poor

3. There is not any correlation between vocabulary mastery and reading comprehension at the second year students of SMPN 3 Gunungsari in academic year 2011/2012

It means that the students English vocabulary mastery do not influence toward the reading comprehension.

SUGGESTION

After having the facts and finding through this investigation the writer wanted to convey several considerable suggestions as follows:

1. Teacher should focus certain vocabulary mastery and reading comprehension together in session one. He also has to include the teaching vocabulary into other subject's matters, such as structure, speaking, writing and etc.
2. Teacher should explain the general reading techniques to the students before giving the real reading materials.
3. Homework for both reading comprehension and vocabulary should be given regularly.
4. In reading comprehension English teacher should avoid the word per word translation
5. In selection reading materials, teacher should need to select the material to the student's level of vocabulary, completely of grammar, and etc.

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