

THE CORRELATION BETWEEN STUDENTS' ACHIEVEMENT IN VOCABULARY AND READING COMPREHENSION OF THE ELEVENTH GRADE STUDENTS

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Abstract

The objective of research was to find out the correlation between students' achievement in vocabulary and reading comprehension of the eleventh grade students of SMAN 1 Tolitoli. The population was the eleventh grade students. The number of the sample was 31 students. In collecting data, the researcher used two instruments namely questionnaires and tests which were consisted of vocabulary test and reading comprehension test. Questionnaire was used by researcher to know the correlation between the variables. The vocabulary test was used by researcher to collect the data about the students' achievement in vocabulary, while reading comprehension test was used to gather data about reading comprehension. The result of both tests showed r_{xy} was 0.41. The result of data analysis showed t_{counted} (0.41) was greater than t_{value} (0.367) by applying 5% level of significance and df was 29. In conclusion, there was a correlation between vocabulary and reading comprehension.

Keywords: Correlation; Vocabulary; Reading Comprehension

INTRODUCTION

Learning English as a foreign language as well as learning Bahasa Indonesia for the majority of students in Indonesia has been widely considered important to the national development. Language is a basic need for human communication in expressing ideas, thoughts, and feelings. Its function means of communication. Most human knowledge and culture are transmitted through language. English language is a compulsory lesson in every level such as elementary up to high school that function as a means the students' self development in knowledge, technology, art, and culture.

In Language learning, especially English, we recognize four skills, they are speaking skill, reading skill, listening skill, and writing skill. However reading is considered as the important skill. In line with what Madox (1963:76) defines, "Reading is the most important single skill in study". In addition, in the curriculum 1994, it is stated that out of the four skills, listening, speaking, reading, and writing, the main emphasis is on reading skill because it is believed that acquisition of reading in a second or foreign language is priority.

One of the purposes of teaching English as a foreign language to Indonesian people is that they can read, grasp the idea and understand the book written in English. To achieve those purposes, students have to master a lot of vocabulary. As Schmitt (1997:40) describes, “Vocabulary is one of the most important skills in a language”. It means that vocabulary is one of the key that must be mastered by the students if they want to have good knowledge in the four skills, including reading skill. Vocabulary is one of important aspects in learning foreign language. Anyone will get difficulty in understanding speaking, reading, listening, and writing when they have limited or lack of vocabulary. It might be impossible to learn foreign language without mastering vocabulary.

In fact, students still had difficulties in enriching vocabulary and also memorizing the words. If they did not know how to expand their vocabulary, they would gradually lose interest in learning. One of the causes was that they learned vocabulary in boring and inefficient ways. For instance, they were just listing the words with their spelling, pronunciation, and meaning and then finding difficulties in remembering the words that have been learnt.

Vocabulary and reading cannot be separated because they have closed relation. When the students learn about reading, they must understand vocabulary in the text. Aminah (1993:35) states, “The low achievement of student in reading comprehension was influenced by the lack of vocabulary; therefore vocabulary is regarded as an essential component of reading proficiency”. Regarding to the explanation, the researcher formulated her research problem in following question *Is there any correlation between student’s achievement in vocabulary and reading comprehension of the Eleventh grade students of SMAN 1 Tolitoli?* It proved that there is any correlation between students’ achievement in vocabulary and reading comprehension of the eighth grade students of SMAN 1 Tolitoli.

METHODOLOGY

In analyzing the data of this research, the researcher used correlational research. It is aimed at finding out the correlation between students’ achievement in vocabulary and reading comprehension of the eleventh grade students of SMAN 1 Tolitoli.

The population of this research was the eleventh grade students of SMAN 1 Tolitoli which consisted of five parallel classes. They were XI IPA 1, XI IPA 2, XI IPA 3, XI IPA 4, XI IPA 5. Best (1981:8) states, “A population is any group of individuals that have one or more characteristics in common that are of interest to the research”. Sample is an item or a subject selected from the population to observe and analyze. Best (1981:8) states, “Sample

is a small proportion of population selected for observation and analysis". Therefore, by applying cluster random technique, the researcher only took students in class XI IPA 2 to be sample of her research.

In conducting this research, the researcher used two instruments, namely test was as a main one and questionnaire was the supporting instrument. It is explained as follows:

a. Tests

The test consisted of vocabulary test and reading comprehension test. It consisted of 20 items of vocabulary test and 20 items for reading comprehension test. Vocabulary test was divided by the researcher into two parts, 10 items for synonym and 10 items for antonym. Each correct item of vocabulary was 1 point while each correct item of reading comprehension was 2 points. The total score of vocabulary test was 20 points while reading comprehension was 40 points. Therefore, the total score of both tests were 60 points. The scores of the students were obtained by using the following formula proposed by Sutomo (1985:123):

$$\text{Individual Score} = \frac{\text{Jumlah Skor Perolehan}}{\text{Jumlah Skor Maximum}} \times 10$$

Both of the results compared and analyzed in order to know their correlation. To know the students' mean score, the researcher used the following formula proposed by Best (1981:225) as follows:

$$M = \frac{\sum x}{n}$$

Where:

M : mean score

$\sum x$: total score

n : number of subject

To know the degree of correlation between students' achievement in vocabulary and reading comprehension, the researcher used the Pearson's Product Moment analysis by Best (1981:248-249). The formula is the following:

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

where:

r: product moment correlation

$\sum xy$: sum of the product moment of the paired x and y score

$\sum x$: sum of the x score

$\sum y$: sum of the y score

$\sum x^2$: sum of the square x score

$\sum y^2$: sum of the square y score

Finally, the interpretation of the correlation was necessary to find out the level of correlation between students' achievement in vocabulary and reading comprehension. Therefore, to interpret the result of the correlation analysis, the researcher used standard of correlation product moments (r) as in the following:

Table 1

Standard of Correlation Product Moment

Coefficient (r)	Relationship
0.0 to 0.20	Negligible
0.20 to 0.40	Low
0.40 to 0.60	Moderate
0.60 to 0.80	Substantial
0.80 to 1.00	High to very high

Best (1981:255)

b. Questionnaire

The questionnaires were designed in 5 items with 4 options. It was given by the researcher in order to collect data about the correlation between vocabulary and reading comprehension. The result of questionnaire analyzed by using the percentage formula proposed by Anas (1987:43) as follow:

$$P = \frac{F}{n} \times 100 \%$$

Where:

P = percentage

F = frequency

n = number of students

FINDINGS

A. Result of Reading Test

The result of reading comprehension test can be seen in the table 2.

Table 2
The Students' Score in Reading Test

No	Initials	Correct Answers	Individual Score
1	ATN	15	7.5
2	AVW	17	8.5
3	AYA	14	7.0
4	BED	17	8.5
5	DAT	16	8.0
6	GYP	18	9.0
7	HSW	15	7.5
8	HYZ	14	7.0
9	IAP	16	8.0
10	IPT	18	9.0
11	JOK	17	8.5
12	JVK	16	8.0
13	MJD	17	8.5
14	MVH	18	9.0
15	NAA	18	9.0
16	NBR	17	8.5
17	NNH	15	7.5
18	NWP	16	8.0
19	NWY	15	7.5
20	RDT	16	8.0
21	SDF	18	9.0
22	SHY	17	8.5
23	SIP	16	8.0
24	SKF	18	9.0
25	SRN	20	10
26	STF	17	8.5
27	TAH	15	7.5
28	VKS	19	9.5
29	WCT	12	6.0
30	YHF	20	10
31	YRT	17	8.5
Total			257

After scoring the students' answer in reading comprehension test, the researcher made classification of students' achievement in test based on their score in table 2 they were classified in the table 3.

Table 3

Percentage of Students' Achievement in Reading Test

No	Classifications	Range Scores	Frequencies
1	Excellent	9.6-10	2
2	Very Good	8.6-9.5	7
3	Good	7.6-8.5	14
4	Fairly Good	6.6-7.5	7
5	Fair	5.6-6.5	1
6	Poor	4.6-5.5	0
7	Very Poor	3.6-4.5	0
Total			31

Therefore, based on the table above, the researcher found that students' achievement in reading comprehension test was classified as good.

B. The Result of Vocabulary Test

Vocabulary test was given to the students in order to measure their achievement in vocabulary. The result of the test can be seen in the table 4.

Table 4
The Students' Score in Vocabulary Test

No	Initials	Correct Answers	Individual Score
1	ATN	17	8.5
2	AVW	16	8
3	AYA	18	9
4	BED	17	8.5
5	DAT	17	8.5
6	GYP	18	9
7	HSW	15	7.5
8	HYZ	16	8
9	IAP	15	7.5
10	IPT	18	9
11	JOK	17	8.5
12	JVK	17	8.5
13	MJD	18	9
14	MVH	16	8
15	NAA	17	8.5
16	NBR	17	8.5
17	NNH	14	7
18	NWP	14	7
19	NWY	18	9
20	RDT	16	8
21	SDF	16	8
22	SHY	19	9.5
23	SIP	18	9
24	SKF	18	9
25	SRN	17	8.5
26	STF	18	9
27	TAH	16	8
28	VKS	18	9
29	WCT	16	8
30	YHF	19	9.5
31	YRT	18	9
Total			262

Based on the students' score in the table 4, the following table was the classification of the students' achievement in vocabulary test.

Table 5
Percentage of Students' Achievement in Vocabulary Test

No	Classifications	Range Scores	Frequencies
1	Excellent	9.6-10	0
2	Very Good	8.6-9.5	12
3	Good	7.6-8.5	15
4	Fairly Good	6.6-7.5	4
5	Fair	5.6-6.5	0
6	Poor	4.6-5.5	0
7	Very Poor	3.6-4.5	0
Total			31

Based on the result of the students' score in vocabulary test, the researcher made classification of the students' achievement in vocabulary was good.

After gathering all data of reading comprehension and vocabulary mastery test, the researcher applied Pearson Product Moment Correlation formula to find out the correlation between students' achievement in vocabulary and reading comprehension. The formula was as follow:

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

The researcher proposed the score of reading comprehension test as X and Vocabulary test as Y. The result of the students' score of reading comprehension test and vocabulary test was put into the table. To know their correlation, the researcher presented results in the table 6.

Table 6**The Score of Reading Comprehension and Vocabulary Mastery**

NO	Initials	X	Y	x ²	y ²	Xy
1	ATN	7.5	8.5	56.25	72.25	63.75
2	AVW	8.5	8	72.25	64	68
3	AYA	7	9	49	81	63
4	BED	8.5	8.5	72.25	72.25	72.25
5	DAT	8	8.5	64	72.25	68
6	GYP	9	9	81	81	81
7	HSW	7.5	7.5	56.25	56.25	56.25
8	HYZ	7	8	49	64	56
9	IAP	8	7.5	64	56.25	60
10	IPT	9	9	81	81	81
11	JOK	8.5	8.5	72.25	72.25	72.25
12	JVK	8	8.5	64	72.25	68
13	MJD	8.5	9	72.25	81	76.5
14	MVH	9	8	81	64	72
15	NAA	9	8.5	81	72.25	76.5
16	NBR	8.5	8.5	72.25	72.25	72.25
17	NNH	7.5	7	56.25	49	52.5
18	NWP	8	7	64	49	56
19	NWY	7.5	9	56.25	81	67.5
20	RDT	8	8	64	64	64
21	SDF	9	8	81	64	72
22	SHY	8.5	9.5	72.25	90.25	80.75
23	SIP	8	9	64	81	72
24	SKF	9	9	81	81	81
25	SRN	10	8.5	100	72.25	85
26	STF	8.5	9	72.25	81	76.5
27	TAH	7.5	8	56.25	64	60
28	VKS	9.5	9	90.25	81	85.5
29	WCT	6	8	36	64	48
30	YHF	10	9.5	100	90.25	95
31	YRT	8.5	9	72.25	81	76.5
Total		257	262	2153.5	2227	2179

Later, the researcher put the result of the tests in the formula to measure the correlation between the two variables using the formula of Pearson Product Moment Coefficient Correlation. Based on the result of significance of the correlation between English vocabulary and reading comprehension, the researcher found that the correlation between the two variables was 0.41. The researcher used the 5 % (0.05) level in the critical value of Pearson Correlation Coefficient to know the value of the r_{table} to determine the degree of freedom (df), the researcher calculated it as follows:

$$df = N-2$$

$$df = 31-2$$

$$= 29$$

The value of r_{table} at significance level of 0.05 and degree of freedom (df)= 29 was 0.367. The $r_{counted}$ was higher than r_{table} . It means that there was a significant correlation between students' achievement in vocabulary and reading comprehension.

C. Result of Questionnaire

The results of the questionnaire are given below

Table 7

The students' opinion about vocabulary mastery in learning English

No	Statement	Options	Frequency	%
1	Bagaimanakah pendapat anda tentang penguasaan kosa kata dalam mempelajari bahasa Inggris?	a. Sangat Penting	31	100
		b. Penting	0	0
		c. Tidak Penting	0	0
		a. Sangat Tidak Penting	0	0
Total			31	100

Based on the table above, the researcher found that 31 (100 %) students thought that vocabulary was very important in learning English.

Table 8
The students' opinion about reading

No	Statement	Options	Frequency	%
2	Bagaimanakah pendapat anda tentang pelajaran reading?	a. Sangat Penting	22	70.97
		b. Penting	9	29.03
		c. Tidak Penting	0	0
		d. Sangat Tidak Penting	0	0
Total			31	100

Based on table above, the researcher found that 22 (70.97%) students considered that reading was very important, 9 (29.03%) students considered that reading was important, and none of them stated that reading was very unimportant. In short, the researcher concluded that most of them said that reading was very important.

Table 9
The Students' opinion about Their Teacher's Way in Teaching Reading

NO	Statement	Options	Frequency	%
3	Bagaimanakah cara guru anda mengajar reading kepada anda?	a. Menjelaskan kosa kata baru	0	0
		b. Menerjemahkan bacaan	2	6.45
		c. Menyuruh siswa mengerjakan soal-soal reading	4	12.90
		d. Kombinasi a, b, dan c	25	80.65
Total			31	100

Based on the table 9, the researcher found that 2 (6.45 %) students stated that the teacher taught reading by asking them to translate reading passage; 4 (12.90 %) students stated that the teacher taught reading by asking them to answer the reading questions; 25 (80.65%) students stated that the teacher taught them by using combination of a, b, and c.

Table 10**The Students' Opinion about Their Vocabulary Mastery Supporting Their Knowledge in Reading**

No	Statement	Options	Frequency	%
4	Apakah penguasaan kosakata menunjang pengetahuan anda dalam reading?	a. Sangat menunjang	28	90.32
		b. Menunjang	2	6.45
		c. Kurang menunjang	1	3.23
		d. Tidak menunjang	0	0
Total			31	100

Based on the table above, the researcher found 28 (90.32%) students stated that their vocabulary mastery supported their knowledge very much in reading, 2 (6.45%) students stated that their vocabulary mastery supported their knowledge in reading, 1 (3.23%) students stated that their vocabulary mastery less supported their knowledge in reading.

Table 11**The Students' Opinion about whether They Easy or not in Answering Reading Comprehension Questions when They have many Vocabularies**

NO	Statement	Options	Frequency	%
5	Apakah dengan banyak menguasai kosakata anda mudah mengerjakan test yang berhubungan dengan reading?	a. Mudah sekali	11	35.48
		b. Mudah	17	54.84
		c. Agak mudah	3	9.68
		d. Tidak Mudah	0	0
Total			31	100

Based on the table above, the researcher found 11 (35.48%) students stated that they felt very easy in answering the reading comprehension questions when they have many vocabularies, 17 (54.84%) students stated that they felt easy in answering the reading comprehension questions when they have many vocabularies, 3 (9.68%) students stated that they felt rather easy in answering the reading comprehension questions when they have many vocabularies, and none of them stated that they feel difficult in answering the reading comprehension questions when they have many vocabularies. The researcher concluded that the students considered that they felt easy in answering the reading comprehension questions when they have many vocabularies.

DISCUSSION

Based on the research problem, the researcher investigated about the correlation between students' vocabulary achievement and reading comprehension. In gathering the data the researcher used two instruments. They are tests and questionnaire.

Based on the result of the reading test, the researcher found 45.16% of the students got score 7.6-8.5. Therefore, the extent of the students' score in reading comprehension test was classified good (see table 3) while based on the vocabulary test, the researcher found 48.39 % of the students got score 7.6-8.5. It implies the extent of the students' score in vocabulary test was classified good (see table 5). The researcher also found that 57.8 % students made error in Noun, 32.2 % students made error in adjective, and 10 % students made error in verb. From the calculation using the formula of Pearson Product Moment, it could be said that vocabulary mastery has moderate influence to the students' reading comprehension. It also supported by the result of questionnaire. The questionnaire showed that all of the students said learning vocabulary and reading are very important. By having a lot of vocabulary it will be easy for them to comprehend the reading text.

Based on the result of significance of the correlation between English vocabulary and reading comprehension, the researcher found that the correlation between the two variables was 0.41. The value of r_{table} at significance level of 0.05 and degree of freedom (df)= 29 was 0.367. The $r_{counted}$ was higher than r_{table} . It means that there was a significant correlation between students' achievement in vocabulary and reading comprehension.

Based on the observation, the researcher found a research which is related to this research. The previous research entitled "The correlation between students' vocabulary mastery and reading comprehension". It was conducted by Ali (2010). There were many differences and similarities between this research and the previous research.

The result of Ali's research shown that the r_{xy} is 0.641 and r_t is 0.361, it means that the r_{xy} is higher than r_t and there is a correlation between students' achievement in vocabulary and reading comprehension while the result of this research shown that the r_{xy} is 0.41 and r_t is 0.367, it means that the r_{xy} is higher than r_t and there is a correlation between students' achievement in vocabulary and reading comprehension.

CONCLUSIONS AND SUGGESTIONS

After analyzing the data that the researcher got from the test, the researcher comes to the conclusion that there is a correlation between the two variables. It was proven from the

result of significance of the correlation between English vocabulary and reading comprehension that the correlation between the two variables is 0.41. The value of r_{table} at significance level of 5 % and degree of freedom (df)= 29 is 0.367. The $r_{counted}$ is higher than r_{table} . It means that there is a correlation between students' achievement in vocabulary and reading comprehension.

Some suggestions are addressed to the students and the teachers of English in order to make a better improvement in reading and vocabulary. For students, they should study harder. Even though their vocabulary test result was good, they still need to learn more about vocabulary and they have to do more practice to increase their reading comprehension. Next for the teacher, English teachers are motivators and stimulators. The teachers should support the students' expectation about reading and arouse their interest to increase their reading comprehension, the teachers should know and be able to implement a good method in teaching reading, the teachers should encourage the students to have and to use dictionary as a tool to help them with difficult words, and the teachers should also give a high motivation to the students to read more and more English literature to increase their vocabulary level.

REFERENCES

- Ali, I.R. (2010). *The Correlation Between Students' Vocabulary Mastery and Reading Comprehension*. Jakarta: UIN Unpublished Thesis
- Aminah. (1993). *Factor Affecting the Reading Comprehension Achievements of the Sixth Semester Students of D3 of English education Department of FPBS IKIP*. Unpublished Thesis
- Anas, S. (1987). *Pengantar Statistik Pendidikan*. Jakarta: PT. Raja Grafindo.
- Best, J.W.(1981). *Research in Education*. Englewood Cliff, New Jersey: Practice hall Inc.
- Madox, H. (1963). *How to Study*, Greenwich: Fawcet Premier
- Schmitt, N and Carthey, Mc. M.(1997). *Vocabulary in Language Teaching*. New York: Cambridge University Press.
- Sutomo. (1985). *Teknik Penelitian Pendidikan*. Surabaya: Bina Mulia.