The Correlation between Vocabulary Achievement and Reading Comprehension

Arni Fitri[1], Abdul Aziz Rifa'at[2]

fitriarni45@gmail.com[1], aziz_lie2@yahoo.co.id[2]

STIK Siti Khadijah Palembang[1,2]

Abstract

The study investigated the correlation between students' vocabulary mastery and their reading comprehension. Data were collected from 32 eighth grade students of SMPN 11 Palembang. The test item of vocabulary mastery and reading comprehension were given to the students to measure their level of vocabulary mastery and reading comprehension. The results were compared to find out the correlation between those variables. The result showed that there was a significant correlation between students' vocabulary mastery and their reading comprehension. The technique of collecting data was by using a test. A try out test was also done to find out the validity. After the data of the students' vocabulary mastery and their achievement in reading comprehension were collected, the data were statistically computed to find out the correlation between the two variables. The result of applying the pearson correlation shows that the coefficient correlation is 0. 807. It means that there is a significant correlation between the vocabulary mastery and reading comprehension. It is suggested that to have a good mastery of reading comprehension, students should have a good mastery of vocabulary.

Keywords: correlation, vocabulary mastery, reading comprehension ability.

Introduction

Language is very important in social life, because language has a tight position to every part of life. That is why nobody lives perfectly without language as an instrument. The main function of language is to communicate and interact among human beings, without language human beings cannot express their feelings and communicate to other people.

Learning a language means trying to get a good achievement of the language for the purpose as communication. The communication itself can be implemented orally, such as listening means understanding the spoken language and speaking means using the language orally or in writing, such as reading refers to understanding the meaning and the supporting ideas of the written language and writing refers to expressing oneself in writing in order to make people understanding him or her. the achievement of a language, especially English, will help a student to develop himself or herself to get a knowledge easily in every field of study since many books are written in that language.

English as a foreign language in Indonesia taught as an important subject starting from the first grade of junior high school to the senior high school, or even at university level. Learning English involves four skills, such as listening, speaking, reading and writing. Besides, she/he has to master the language components, such as: phonology, grammar, vocabulary, and pronunciation to support the four skills because the skills are very important. English as a global language means a communication in numerous dialects, and the movement towards an international standard for the language.

In technology era, reading is one of the most important skills to develop knowledge beside listening, speaking, and writing. It provides access to information because it can give valuable knowledge to the readers who want to find the

information. Most of the sources of information are shown in internet, book, journals, TV and newspapers. Reading is very important because by reading people can get many information from the text. Reading will help the readers improve their knowledge.

In Indonesia, reading is one of the most important skills to acquire knowledge and reading is one of the four skills of English that must be taught to the students. Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning. It is a meaning of language acquisition, of communication, and of sharing information and ideas. Like all language, it is a complex interaction between the text and the reader that is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated. The reading process requires continuous practice, development, and refinement. In other words, reading is a complex cognitive process between the reader and the text whereby a mind, with nothing to operate on but the symbols of the readable matter, and with no help from outside, elevates itself by the power of its own operations.

The standard of competency (Standar Kompetensi/SK) and the Basic Competency (Kompetensi Dasar/KD) in KTSP for English subject in Junior High School are the compulsory competencies for the students. They should show the result of learning this subject. The Standard of Competency of English Subject is the four language basic skills namely listening, speaking, reading and writing. Each Standard of Competency has its own Basic Competency.

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.

Vocabulary is a crucial component in acquiring and understanding language. When we read something it will sound good if we understand the words or vocabulary in our reading. Because it will help and guide us in pronouncing, reading, and grasping the idea from our reading, so we will understand. Vocabulary is the stock of words used in a language. The more students have stock of words used in a language, the better it will make their performance.

Good achievement of vocabulary is important for anyone who learns the language used in listening, speaking, writing and reading. A learner of a foreign language will speak fluently and accurately, write easily, or understand what he or she reads and hears if he or she has enough vocabulary and has the capability of using it accurately.

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.

On the other hand, foreign students who learn English face a classical problem dealing with English reading text; lack of vocabulary is the major one, whereas in fact vocabulary is the most important thing in reading skill.

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 get difficulties to understand some words in context.

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.

Most of them if they find the difficult words, they still just continue their reading in the hope that the word we read is not really important or that it's meaning will become clear later on but sometimes the word that they passed usually as the key of our reading and understanding. They cannot catch and grasp the idea from our reading as good as possible. So looking up the difficult words in dictionary is better for them, but the skillful reader understands as they read.

Vocabulary and reading cannot be separated because they have closed relation. When the students learn about reading, they must understand vocabulary in the text. Fitri (2014:41) states, "The lack of vocabulary influnced the achievement of student in reading comprehension; therefore vocabulary is regarded as an important factor of reading comprehension".

In this research, the researcher will focus on correlation between student's achievement in vocabulary and reading comprehension.

The reasons why the researcher chooses this topic because in there are still many students that they find the difficult word, they still just continue their reading in the hope that the word they read is not really important or that its meaning will become clear later on, but sometimes the word that they passed usually as the key of their reading and understanding. They cannot catch and grasp the idea from their reading as well as possible.

Based on the description of vocabulary and reading above, it shows that vocabulary becomes the important component in language teaching and learning for the students in order to get successful in reading. To find out and to get empirical data about it the reseacher had organized the test result to prove the correlation of students' vocabulary and their reading comprehension. By getting the grades, the writer tries to find the answer of the students' vocabulary influencing their reading ability, and then the writer conducts a study to know whether or not there is a correlation between students' vocabulary achievement and their reading comprehension of the Eighth Graders of SMPN 11 Palembang.

Method

In analyzing the data of this research, the researcher used correlation research. It is aimed at finding out the correlation between students' vocabulary achievement and their reading comprehension of the Eighth Graders of SMPN 11 Palembang.

The population of this research was the eighth grade students of SMPN 11 Palembang. Best (1981:8) stated that 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 sampling, the researcher only took students in class VIII.2 to be sample of her research.

The subjects of this research consisted of eighth grade student SMPN 11 Palembang. Since this research belongs to correlation study, the researcher applied the measurement technique. The data were collected by using vocabulary test and reading test. It is intended to know the students achievement in vocabulary and reading comprehension.

The test of vocabulary achievement is intended to collect the data about students' vocabulary achievement. The test is an objective test in the form of multiple choices. There are 40 items of questions. For the vocabulary test, the students will be given 60 minutes in one meeting to answer the test.

The test of reading comprehension is intended to collect the data about the students' reading comprehension. The test consisted of 40 items. The researcher

used a type of objective test, which were multiple choice tests. There are five passages and from each passage the writer makes a question on reading comprehension including the identifying the main idea, finding explicit information, finding implicit information, identifying word meaning, and identifying reference.

An instrument can be said to be a good one if it is valid and reliable. Before the instruments are used, they have to be tried out. It is intended to find out the validity and reliability of the instruments.

Validity is an important key to effective research. If a piece of research is invalid then it is worthless.

Validity is the most important criteria in measuring an instrument. Validity is the touchstone of all types of educational research. Validity is thus a requirement for both of quantitative and qualitative / naturalistic research (Cohen, 2007: 157). A test said to be valid when it can measure what is intended to be measured.

In this research to verify the item validity of instrument, each item of the test is correlated with the total score by using Point.

The item of the test is considered valid if the result of the correlation coefficient (rxy) is as many as the r table of product moment. To know the conformity, the instrument arrangement should be based on specification.

In the item analysis, it will be known the level of the test, whether it is easy, moderate or difficult. It is also known about the qualification of a test. So, it is important to know the level of difficulty and discriminating power of every item (question). It is know the difficulty of test whether it is easy, moderate or difficult.

$P = B/JS$

Keyword:

P = Index of difficulty

B = Students who answer correctly

JS = Number of Students

Discriminating power is an ability of a test to differentiate students who have high ability and student who have low ability. Because the test is multiple choices, so the researcher used this formula.

$DP = (JB\_A-JB\_B)/JS\_A$

Keyword:

DP = Discriminating power

JBA = total of top group students who

answer correct

JBB = total of bottom group students who answer correct

JSA = total of group students

Table 1
Level of Difficulty

Range	Difficulty Level
20 & below	Very Difficult
21 - 40	Difficult
41 - 60	Average
62 - 80	Easy
81 – above	Very Easy

Table 2
Discriminating Power

Discriminating Power	Qualification
DP $\leqslant$ 0.00	Very bad
0.00 < DP $\leqslant$ 0.20	Bad
0.20 < DP $\leqslant$ 0.40	Almost good
0.40 < DP $\leqslant$ 0.70	Good
0.70 < DP $\leqslant$ 1.00	Very good

(Sundayana, 2015, P.77)

To know a test is reliable or not, it can be seen in value of r11. The value is must be at least 0.60 or has normal distribution. Because the type of test is multiple choice, the formula to measure the reliability is used KR21 (Kuder Richardson 21).

$$r_{11}=\left(\frac{k}{k-1}\right)\left(1-\frac{M(k-M)}{kVt}\right)$$

(Arikunto, 2013, P.232)

Keyword :
r11 = reliability coefficient
k = total of questions
Vt = total score variance
M = mean of score

k is total question that is obtained from sum of all the question. To get M (mean of score), total score is divided to number of students. To know Vt, it is used the formula:

$$Vt = \sum \text{\tiny■} \llbracket x^2 - (\sum \text{\tiny■} x)^2 / (N/N) \rrbracket$$

Keyword :
Vt = total score variance
X = total of the correct answers
N = number of students.

In collecting the data, the writer used two kinds of test to investigate the correlation between vocabulary mastery and reading comprehension, so the writer used test method. The test consisted of 10 items and divided into two parts: the first was vocabulary mastery test which consisted 40 items test and the second was reading comprehension test which also consisted 40 items tests.

The purpose of this research was to measure the correlation between student's vocabulary mastery and their reading comprehension. The data of the study were analyzed by using statistical analysis.

Statistics is a tool for creating an understanding from a set of numbers. Statistic is the science of collecting, organizing, summarizing, and analyzing information to draw conclusions or answer questions. According to (Agresti & Finlay, 1997), statistic consists of a body of methods for collecting and analyzing data The writer used Spearman formula to measure the correlation both the two variables,. Pallant, 2007 stated that SPSS is an enormously powerful data analysis package that can handle very complex statistical procedures. It means, SPSS is a powerful data analysis package that capable of handling large amount of the data and it can perform all data of the analysis covered in the text.

1. Normality test

Normality test was conducted to determine whether the research data obtained was normality disturbed or not, measures to the test normality by using one sample kolmogorov-smirnov test in SPSS.

2. Pearson's Product-Moment
   Correlation

The writer used the The Pearson product-moment correlation coefficient, because the data is normally disturbed. A Pearson's correlation attempts to draw a line of best fit through the data of two variables, and the Pearson correlation coefficient r, indicates how far away all these data points are from this line of best fit (i.e., how well the data points fit this model/line of best fit).

FINDINGS

Description of Data

As it has been mentioned in the previous chapter, the writer conducted field research. Having finished doing research on correlation study between Vocabulary and Reading done by the The Eighth Grade Students of SMPN 11 Palembang 2019/2020, the writer collected the data of this research from the scores available in SMPN 11 Palembang. This is the test result obtained by the group of students who had completed the subject of vocabulary and reading, especially Vocabulary and Reading scores.

The writer took the scores of 32 students randomly and analyzed those scores in order to find out whether there is any correlation between the scores of vocabulary and those score of reading by using the Pearson r Formula. So the totals there are 64 scores because the sample had 2 sets of scores: vocabulary scores and reading scores. In this chapter the writer gives the report concerning the data description and compares the achievement of those two scores.

A. Result of Reading Test

The result of reading comprehension test can be seen in the table 3

Table 3

The Students' Score in Reading Test (X)

No	Initials	Correct Answers	Individual Score (X)
	AFJ	38	95
	AYP	35	87,5
	AR	33	82,5
	ASS	25	62,5
	BAH	40	100

No	Initials	Correct Answers	Individual Score (X)
	CNT	32	80
	DPR	34	85
	EV	28	70
	FFS	30	75
	IPA	32	80
	LWRP	33	82,5
	LR	24	60
	LHR	36	90
	MRP	33	82,5
	M	35	87,5
	MM	27	67,5
	MAP	27	67,5
	MAW	40	100
	MFK	39	97,5
	MH	28	70
	MTR	31	77,5
	NIS	31	77,5
	NKT	38	95
	RP	25	62,5
	RI	32	80
	RNR	29	72,5
	SMA	40	100
	SA	36	90
	SST	37	92,5
	THR	28	70
	ZAA	31	77,5
	ZK	34	85

Actually, there are 35 students in one class but the writer only took 32 students

because 3 out of 35 students did not go to school. From the data above we can obtain the information that the lowest score in vocabulary test is 60 and the highest score is 100 and the mean is 81.4.

B. Result of Vocabulary Test

The result of vocabulary test can be seen in the table 4

Table 4

The Students' Score in Vocabulary Test (Y)

No	Initials	Correct Answers	Individual Score (Y)
	AFJ	34	85
	AYP	38	95
	AR	31	77,5
	ASS	27	67,5
	BAH	38	95
	CNT	36	90
	DPR	32	80
	EV	30	75
	FFS	29	72,5
	IPA	27	67,5
	LWRP	36	90
	LR	26	65
	LHR	34	85
	MRP	34	85
	M	37	92,5
	MM	30	75
	MAP	30	75
	MAW	38	95
	MFK	35	87,5

No	Initials	Correct Answers	Individual Score (Y)
	MH	25	62,5
	MTR	34	85
	NIS	29	72,5
	NKT	35	87,5
	RP	28	70
	RI	30	75
	RNR	33	82,5
	SMA	39	97,5
	SA	34	85
	SST	35	87,5
	THR	31	77,5
	ZAA	33	82,5
	ZK	36	90

Actually there are 35 students in one class but the writer only took 32 students because 3 out of 35 students did not go to school. From the data above we can obtain the information that the lowest score in vocabulary test is 62.5 and the highest score is 100 and the mean is 97.5

FINDINGS

Data Analysis

a. Normality Test

Before calculating the data, the writer checked the normality of the data. The wiriter used SPSS program to find out whether the data normal or not.

Table 5

Normality testing by One-Sample Kormogolov-Smirnov Test One-Sample

Kolmogorov-Smirnov Test

		X	Y
N		32	32
Normal Parameters[a,b]	Mean	81,3281	81,5625
	Std. Deviation	11,58740	9,56198
Most Extreme Differences	Absolute	,086	,140
	Positive	,086	,097
	Negative	-,068	-,140
Test Statistic		,086	,140
Asymp. Sig. (2-tailed)		,200[c,d]	,110[c]
Test distribution is Normal.			

The table 5 showed that the result of the distribution of the data was normal, because based on the significance Y (0.110) was higher than 0.05. It means that the data was normal.

b. The correlation between student's vocabulary mastery and their reading comprehension

From the data above, the writer got the result of each variable. That is the result of the correlation between students' vocabulary mastery and reading comprehension.

Table 6

Analysis Result of Pearson Correlation

Correlations		READING	VOCAB
READING	Pearson Correlation	1	,807**
	Sig. (2-tailed)		,000
	N	32	32
VOCAB	Pearson Correlation	,807**	1
	Sig. (2-tailed)	,000	
	N	32	32
**. Correlation is significant at the 0.01 level (2-tailed).			

The table above showed that the correlation coefficient equalled r = .807, which indicated there was positive correlation between two variables.

DISCUSSION

As described in previous chapter, the aims of this research is to analyse the students', achievement of vocabulary mastery and reading comprehension, and correlation between students' vocabulary mastery and their reading comprehension.

Regarding to the result above, the correlation coefficient equalled r = . 807, which indicated there was positive correlation between two variables. From the r number (.807), the writer concluded that there was strong correlation between two variables (see the interpretation correlation on tablea 6). The number of .807 resided between r=.50 to .1.o. It means that the strength was large correlation. Based on the data, vocabulary and reading was significant because Sig. 1-tailed (0.000) was smaller than 0.05. It means that, if the students mastered in vocabulary, so they would be mastered in reading comprehension.

The result of this research has been answered that there is a correlation

between students' vocabulary mastery and their reading comprehension. It could be considered as a strong correlation since the result was included into strong category (Arikunto,2003).

In addition to the ability of students' vocabulary mastery, the stratefy and background knowledge of the text help students comprehend the text.

In improving students reading comprehension, teacher should teach vocabulary to their students since vocabulary has strong relationship with reading comprehension. Having a lot of vocabulary makes the students understand the text easily. Although strategy of reading and experience of students help them in comprehend a text, but vocabulary mastery is more important in helping the students to comprehend the text. According to nation and Newton (1997) vocabulary is knowledge of words and word meanings. Actually vocabulary is more complex, vocabulary mastery is not only knowing the words and its meaning, but also knowing about how the words sound and how the words are used in context.

Conclusion

This study focuses on the correlation between students' vocabulary mastery and their reading comprehension.

Referring to the result and discussion, it was found out that there is a strong correlation between students' vocabulary mastery and their reading comprehension. Although the scores of vocabulary and reading test are different but the correlation is strong.

There are many factors that help students to comprehend the reading materials. The result show that are students' background knowledge and experience. Those factors may help students comprehend reading materials. When they found unknown word they could guess the meaning of unknown word by referring them

to the text.

References

Agresti, A. & Finlay, B., Statistical Methods for the Social Sciences, 3th Edition. Prentice Hall, 1997.

Arikunto, S. (2013). Prosedur Penelitian: Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.

Best, J.W. (1981). Research and Education, New Jersey: Prentice Hall. Inc. Englewood Cliffs.

Cohen, L., Manion, L., & Morrison, K. (2007). Research methods in education (6th ed.). London: Routledge.

Fitri. (2014). The Correlation Between Vocabulary Achievement and Reading Comprehension: The Case of The Eighth Grade Students Of SMPN 54 Palembang of Post Graduate of Sriwijaya University 2013/2014. Unpublished Thesiss

Masruddin, M, (2018). The Efficacy of Using Short Video Through Group Work in Teaching Speaking to Indonesian English As Foreign Language (EFL) Students. *Arab World English Journal (AWEJ) Volume 9. Number 3. September*. http://dx.doi.org/10.2139/ssrn.3258815

Masruddin, M. (2016) The Efficacy of Using Language Experience Approach in Teaching Reading Fluency to Indonesian EFL Students. *Arab World English Journal (AWEJ), Volume 7, Number 4, December*. http://dx.doi.org/10.2139/ssrn.2898635

Pallant, J. (2007). SPSS: Survival Manual. England: Open University Press.

Sundayana. (2015). Statistika Penelitian Pendidikan. Bandung : Alfabeta.

Schmitt, N and Carthey, Mc. M.(1997). Vocabulary in Language Teaching. New York: Cambridge University Press.