THE CORRELATION BETWEEN STUDENTS' DEPTH AND BREADTH OF VOCABULARY AND READING COMPREHENSION

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ABSTRACT

This research aimed at finding out the correlation between depth and breadth of vocabulary and reading comprehension. This research was conducted by using quantitative method with correlational design. Thirty of fifth semester students of English Education Department at Alauddin State Islamic University of Makassar were chosen as the sample of this research. The data was gathered used Word Associates Test, Vocabulary Level Test and reading Test of English as a Foreign Language (TOEFL). To verify the hypotheses, the data were analyzed by using Pearson's Product Moment Correlation formula. The finding of this research indicated that there was a moderate correlation between depth of vocabulary and reading comprehension with correlation coefficient value was 0.440 > 0.361, and there was also a moderate correlation between breadth of vocabulary and reading comprehension with correlation coefficient value is 0.421> 0.361. Furthermore, the hypothesis testing showed that both of the index value of correlation coefficient (rxy) of 0.440 for depth of vocabulary and 0.421 for breadth of vocabulary were higher than the index value of correlation coefficient of the Product Moment table (rt) of 0.361 which meant that the null hypothesis (H0) was rejected and alternative hypothesis (H1) was accepted. In conclusion, there was a moderate correlation between the depth and breadth of vocabulary and reading comprehension.

Key words: breadth of vocabulary, depth of vocabulary, reading comprehension.

INTRODUCTION

In learning English, there are three important language components, which are pronunciation, grammar, and vocabulary. Moreover, there are also four skills in English that must be mastered by students, which are writing, speaking, listening and reading.

Charles in Kasihani (2007) stated that reading is a complex process of decoding symbol to construct a meaning. Reading is an activity where the author was viewed as the informant. In learning language, reading is one of the most important skills to be learned. Hazzard (2016) stated that reading makes a substantial contribution to the success of the learner in finishing their studies. Through the reading process, the learner can obtain the information required to

fulfill the needs of their study assignments. Reading also can be used as a source of information and a pleasure.

In reading, students often face several problems. According to Haynes and Baker (1993) the most significant problem for L2 readers is not the absence of reading strategies but insufficient vocabulary in English. Supporting the theory, Laufer (1997) stated that reading comprehension (both in L1 and L2) is affected by the vocabulary knowledge in a text, textually relevant background knowledge and the application of reading strategies, such as predicting the content of the text, guessing unknown in context, making inferences, recognizing the type of text and text structure, and identify the main idea of the paragraph. Vocabulary is a crucial component in reading. Vocabulary will help and guide the students to understand and grasp the idea of what written in the text. Students with great number of vocabularies will have a better reading comprehension. However, vocabulary knowledge is believed as the most important thing in reading.

Some researchers offer a framework for vocabulary knowledge. In recent times, Qian (2002) developed four dimensions of vocabulary knowledge which are vocabulary size, depth of vocabulary knowledge, lexical organization and automaticity of receptive-productive knowledge. Vocabulary knowledge is considered as an important factor in reading. The readers who are not familiar with difficult vocabulary in a passage, will find it difficult to get the meaning from the reading passage.

Furthermore, the research problems of this research were "How is the students' depth and breadth of vocabulary?", "How is the students' reading comprehension?". "Is there any correlation between students' depth and breadth of vocabulary and the students' reading comprehension?". In addition, this research was beneficial practically for the students (they can be informed about the advantages of having a great number of vocabulary), the lecturers (they can improve the students' number of vocabulary in order to get a better score of reading comprehension) and the further researchers (they can use this research as one of their reference).

Finally, the research was focused on the correlation between students' depth and breadth of vocabulary and reading comprehension at the fifth semester students of English Education Department at Alauddin State Islamic University of Makassar.

A number of researches had been conducted to find out the correlation between students' depth and breadth of vocabulary and reading comprehension. First, Soe (2013) conducted a study under a title *"Correlation between Vocabulary Knowledge and Reading Comprehension"*. The objectives of this research were to observe the breadth and depth of

vocabulary knowledge and to study their ability to handle reading comprehension. The data analysis of the study show a strong and positive correlation between vocabulary knowledge and reading comprehension.

A study by Rashidi and Khosravi (2010) titled *"Assessing the Role of Depth and Breadth of Vocabulary Knowledge in Reading Comprehension of Iranian EFL Learners"* exposed that; a) the interrelations among DVK, VS, and RC were high and positive; b) depth of vocabulary knowledge offered a significant contribution to the prediction of reading comprehension; and c) the students who had stronger depth and breadth of vocabulary knowledge had a better score on reading comprehension.

Depth of Vocabulary

Read (2000) stated that depth of vocabulary knowledge refers to the quality of vocabulary knowledge, that is, how well one knows a word. According to Read depth of vocabulary knowledge focus on the idea that for useful higher-frequency words learners need to have more than a superficial understanding of the meaning representation as well as knowledge of the word's formal features, syntactic functioning, collocational possibilities, register and characteristics.

In addition, Qian (1999) stated that depth dimension of vocabulary should cover such components as pronunciation, spelling, meaning, register, frequency, and morphological, syntactic, and collocational properties.

Two main approaches are used to measure the depth of vocabulary. The approaches are developmental approach and dimensional approach. The developmental approach uses scales to describe the stages of acquisition of a word. The most used scale is Vocabulary Knowledge Scale which has 5 levels. Meanwhile, the dimensional approach describes the mastery level of the various component types of word knowledge. One of the test to measure the depth of vocabulary is Word Associate Test (WAT).

Breadth of Vocabulary

The breadth of vocabulary is also known as vocabulary size. Nation (2001) stated that vocabulary size is the number of word that a learner at a certain level knows. Staehr (2009) stated that breadth of vocabulary is the number of words for which the learners has at least some significant knowledge of the meaning.

There are two mainly used vocabulary size test, the Eurocentres Vocabulary Size Test 10KA, and the Vocabulary Level Test (VLT). Meara (1996) calls VLT the nearest thing we have to a standard test in vocabulary.

Reading

Hill (1979) stated that reading is an activity that the reader does to get the meaning he needs from a written sources. Another definition is stated by Lado (1964). According to Lado, reading consists of grasping meaning in that language through its written representation.

Nuttal (1982) stated that reading can be classified into two kinds, which are intensive and extensive reading.

a) Intensive Reading

Intensive reading is the activity which the students read a short text to extract specific information. This activity emphasizes the correctness of activity involving reading for detail. Intensive reading is used to increase a deep comprehension of the text. Scanning skill plays a significant role in this reading activity.

b) Extensive Reading

Extensive reading refers to reading which the students deal with a longer text as a whole, which involve the ability to understand the components of the text and its overall meaning. Extensive reading usually is used as person's pleasure.

Kendeou (2014), stated that reading comprehension is a process to comprehend, use, reflect on, and engage written texts, in order to achieve one's targets, to improve one's knowledge and potential, and to participate in society. Furthermore, Otto (1979) explained that in comprehension of a reading, the reader not only pronounces written symbols, but also seeks to understand and interpret the information contained in the text.

RESEARCH METHOD

This research used quantitative method as the research design. Creswell (2013) stated that quantitative research is an approach for testing objective theories by examining the relationship between variables.

The variables of this research were depth of vocabulary as the independent variable (X_1), breadth of vocabulary as the independent variable (X_2), and reading comprehension as dependent variable (Y).

The researcher took English Education Department of Tarbiyah and Teaching Science Faculty of UIN Alauddin Makassar as a place for this research which was located on H. Yasin Limpo street No. 36 Samata-Gowa.

The populations of this research were the fifth semester students of English Education Department of Tarbiyah and Teaching Science Faculty of UIN Alauddin Makassar which consisted of 111 students. The researcher chose 30 students as the sample of this research. This

sample was chosen by using random sampling. The researcher used simple random sampling because it allows each individual to be chosen entirely by chance and each member of the population will have an equal chance of being included in the sample.

The instrument in this research was test. The researcher used vocabulary test, which was divided into Vocabulary Level Test (VLT) and Word Associates Test (WAT), and reading test. Vocabulary Level Test has five levels. The five levels represent five different word frequency level, the 2.000 word level, the 3.000 word level, the 5.000 word level, Academic word level, and the 10.000 word level. The Vocabulary Level Test consists of two blocks, one on the left side and one on the right side. The left block consists of six words numbered 1 to 6 as the answer choices and the right block consists of three definitions with blanks. The test takers should choose the available choices on the left based on the definitions on the right block by putting the chosen number on the blanks. The maximum score of Vocabulary Level Test is 150. Word Associate Test (WAT) is a test to measure students' depth of vocabulary. In this test, the test takers are given one stimulus word, which is an adjective. The stimulus word is followed by eight options of word, four associates and four distractors, which are divided into two boxes. The words in left box are adjectives. The four of them are either a synonym of the stimulus word or they represent one aspect of the stimulus word's meaning. In the right box there are four nouns. Among them are associates that can collocate with the stimulus word. Each item has four correct choices. Over half of the items have two associates on the left box and two on the right box. *T*o collect data on reading achievement, the researcher used a reading passage along with the questions related to the text to test the students' comprehension.

This research was conducted in four steps. The first step was choosing research participants by using simple random sampling. The researcher chose thirty students in fifth semester of English Education Department. Secondly, the Vocabulary Level Test which has 5 levels was given in order to measure students' depth of vocabulary. The Vocabulary Level Test was conducted on 27th November 2018. The third step was giving Word Associates Test to measure students' breadth of vocabulary. The Word Associates Test was conducted on 7th January 2019. After that, reading passage along with the question related to it was given to the students to measure students' reading comprehension. The reading test was conducted on 7th January 2019.

To find out the correlation between the depth and breadth of vocabulary and reading comprehension the researcher used the correlation formula by Pearson Product Moment Correlation Formula

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N Y^2 - (\sum Y)^2]}}s$$

In interpreting the coefficient of correlation, the researcher used the interpretation of correlation, as follow:

Table 1

Interpretation of Correlation

The Correlation Coefficient	Interpretation
0.00-0.19	Very low correlation
0.20-0.39	Low correlation
0.40-0.59	Moderate correlation
0.60-0.79	High correlation
0.80-1.00	Very high correlation

Sugiyono (2008)

To calculate the percentage, the researcher used the formula as follow:

$P = \frac{f}{N}$ x 100%

P = percentage

f = frequency

N = total of respondent

Sudjana (1996)

FINDINGS AND DISCUSSIONS

The findings of this research were taken from the result of the Vocabulary Level Test, Word Associates Test, and Reading Comprehension Test.

The students' score for the Word Associates Test shows that the minimum score that obtained by the students was 76, meanwhile the maximum score was 128. The researcher presented the percentage of the students' Word Associates Test score as follows:

Table 2

The Percentage of Students' Score of Word Associates Test

Score	Frequency	Percentage (%)
76 – 81	4	10
81 – 85	1	3.3
86 – 90	3	10
91 – 95	6	20
96 - 100	5	16.7
101 - 105	2	6.7
106 - 110	4	13.3
111 - 115	0	0
116 - 120	2	6.7
121 - 125	1	3.3
126 - 130	3	10

Students' score for the Vocabulary Level Test shows that the minimum score that obtained by the students was 31, meanwhile the maximum score was 135.

Table 3

The Percentage of Students' Score of Vocabulary Level Test

Score	Frequency	Percentage (%)
31 – 45	3	10
46 – 60	3	10
61 – 75	3	10
76 – 90	7	23.3
91 – 105	6	20
106 – 120	6	20
121 – 135	2	6.7

Students' score for the Vocabulary Level Test shows that the minimum score that obtained by the students was 2, meanwhile the maximum score was 8.

Table 4

The Score of Students' Reading Comprehension

Score	Frequency	Percentage (%)
2	2	6.7
3	4	13.3
4	4	13.3
5	4	13.3
6	8	26.7
7	2	6.7
8	6	20

To interpret the data of this research, the researcher used statistical method, in which the data was analyzed using Pearson Product Moment formula.

In order to find the coefficient correlation between students' depth of vocabulary and reading comprehension, the variables X and Y were calculated by using Pearson Product Moment Formula.

From the calculation, the index value of correlation coefficient was found to be **0.440**. According to the table of correlation interpretation, this number was classified as a moderate correlation. It means there was a moderate correlation between students' depth of vocabulary and students' reading comprehension.

In order to find the coefficient correlation between students' breadth of vocabulary and reading comprehension, the variables X and Y were calculated by using Pearson Product Moment Formula.

From the calculation, the index value of correlation coefficient was found to be **0.421**. According to the table of correlation interpretation, this number was classified as a moderate correlation. It means there was a moderate correlation between students' breadth of vocabulary and students' reading comprehension.

To test the hypotheses, the coefficient correlation (r_{xy}) was compared to Product Moment table (r_t). The r_t showed that on the accept point df = 28 and on 5% significant level, the point was 0.361. The obtained result of the rxy above was 0.440 for breadth of vocabulary and 0.421 for breadth of vocabulary. The coefficient of calculation (rxy) was higher than the coefficient of table (rt), which means that null hypothesis (H0) was rejected and alternative hypothesis (H1) was accepted.

Based on the research findings, vocabulary knowledge consists of depth and breadth of vocabulary is one of the factors for students' reading comprehension. It was supported by Shen (2008), vocabulary knowledge plays a very significant role in reading tests. Several researches had consistently found a word knowledge factor on which vocabulary tests load highly. Tests of vocabulary are highly predictive of performance on tests of reading comprehension.

CONCLUSION

Related to the research findings and discussion in the previous chapter, the conclusions of this research are presented in these following statements: From the result of the Word Associates Test that was conducted to measure the students' depth of vocabulary. The maximum score of the test was 160, meanwhile the highest score of the students was 128. Moreover, for the Vocabulary Level Test, the maximum score of the test was 150, meanwhile the highest score of the students was 132.

The result of the reading test showed that the highest score of the students was 8, meanwhile the maximum score of the test was 10.

The correlation between the students' depth and breadth of vocabulary and the students reading comprehension was 0.440 for the depth of vocabulary and 0.421 for the breadth of vocabulary. These numbers are classified as moderate correlation.

Based on the findings of the research, some suggestions are addressed for the teachers or lecturers, the students, and the next researchers.

1. For teachers

Based on the conclusion above, it is important for teachers to know that vocabulary of knowledge is correlated with reading comprehension. The lack vocabulary knowledge of the students affects their overall language proficiency as well as their language skills. Not having sufficient knowledge of vocabulary would hinder the growth of their academic reading success and overall language proficiency in general. If they find their students have lack of vocabulary, it is a challenge for them to solve, to teach the students so they can have a sufficient numbers of vocabulary.

2. For further researchers

Further researcher should focus their research related to depth of vocabulary, breadth of vocabulary and reading comprehension on larger scale with larger sample. In addition, further research investigations can be carried out to find out whether vocabulary knowledge has a correlation with other language skills as well.

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