

## **THE IMPACT OF VOCABULARY DEPTH AND BREADTH TO THE TOEFL READING SUBTEST IN IAIN KEDIRI**

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### **Abstract**

TOEFL has been provided as a standardized test to measure the English proficiency of non-native speakers. However, one thing should be considered that TOEFL is still a big challenge for non-native English learners, especially for EFL learners. This is one of the factors, related to how proficient the vocabulary knowledge which students have. Therefore, this study aimed to investigate to what extent the relation between vocabulary knowledge, breadth and depth, and TOEFL test, especially reading subtest session. Participants of this study were undergraduate English students who never took a TOEFL preparation course. To help analyze data, IBM SPSS 24 version with Spearman rank correlation analysis was used to make it more precise. The result of Spearman rank correlation analysis revealed that there was a significant correlation among the variables. This result supports some previous studies focusing on the same topic.

**Keywords:** Vocabulary breadth, Vocabulary depth, TOEFL, Reading.

### **INTRODUCTION**

TOEFL as a standardized test has a significant role in academic and occupational reasons. We can see the phenomenon where a score of TOEFL test becomes a prerequisite of job vacancy for the applicant when joining a better company; Applicants are demanded to be able to master English both spoken and written proficiency. TOEFL also becomes a prerequisite of a higher education institution to be part of admission and also a final exam. However, for some EFL learners, this condition is a big challenge. Consequently, many test-takers are failed and did not reach a standard grade. Mahmud (2014) found that there are several conflicting reasons of Indonesian learners when answering TOEFL test questions: fewer basic skill, less practice, less motivation, and students' individual difference such as age and social status.

Regarding fewer basic skill, vocabulary plays a big role in the success of language

proficiency: speaking, listening, reading, and writing. Nation (2001) says that there is a close correlation between vocabulary and language proficiency. Like when speaking, at least two major aspects needed, vocabulary and grammar. However, vocabulary here roles much more than grammar. Therefore, to get fluency in speaking, vocabulary knowledge roles as one of the curial factors (Mart, 2012). Another study shows a reciprocal correlation between vocabulary and writing that the size and knowledge of vocabulary have an impact on writing and writing helps learner elevate knowledge of vocabulary (Karakoç & Köse, 2017). Still in the same article, as cited from Karakoç and Köse (2017), Muncie argues that writing allows learners to have a greater experiment to use productive vocabulary than speaking does. Not only to writing, but reciprocal correlation also occurs between vocabulary and listening (van Zeeland, 2013). Another

correlation is with reading skill. Some studies are on the same page that reading has a tight correlation with vocabulary (Jun Zhang & Bin Anual, 2008; D. Qian, 1999; Zhang, 2012).

Concerning the relationship between vocabulary and reading, Anderson and Freebody as cited from Farvardin and Koosha (2011) stated that vocabulary knowledge can be the best predictor of understanding the text. The knowledge itself is divided into two different types of viz vocabulary size or some people know as vocabulary breadth and vocabulary depth. Since the correlation between vocabulary and language skills is very high, a study concerning the correlation is crucial. However, the correlation between vocabulary and reading needs to question because there are many question types provided in reading to consider. Thus, arguing that there is a correlation between them needs to postpone. Therefore, this study aimed to investigate the correlation between vocabulary breadth and depth to vocabulary questions on reading which is provided in TOEFL subtest and propose a research question viz whether depth and breadth have a correlation to TOEFL reading score, if so, which one has a more significant role.

### **PREVIOUS STUDIES**

There are a lot of studies investigating the correlation between vocabulary to reading proficiency. Like what we have already gotten from before in Qian (1999),

Zang and Annual (2008) and Zang (2012) where they stated that vocabulary and reading have a tight correlation to each other. Another study, conducted by Stæhr (2008), stated that it's really important to master vocabulary. Results of the study show that the students would perform adequately in the writing, reading and listening if they know the most frequent 2000 words. In another research, it says that it is very difficult for learners to comprehend text if their vocabulary size is far from the required threshold (Pringprom, 2012).

Research related to vocabulary size was conducted since 1920 (Bardakci, 2016) so study on vocabulary breadth and depth is not new. However, there was a lot of weakness in the test. Nation (1990) developed a test which tested levels of vocabulary knowledge. The test is called a vocabulary level test (VLT). This test is to diagnose for lexical knowledge or vocabulary breadth in English. The test comprises five groups/level: 2000, 3000, 5000, 10000 and academic vocabulary - the following table is an example of the test. Each vocabulary group has the same test format. Every single group has ten parts, and each part has three must-matched vocabularies meaning there are thirty vocabularies must be matched. From the test, test takers must make a correct match between the left and right side. When a test taker can answer twenty-four correct answer, s/he is considered to master the group/level of vocabulary (Alavi & Akbarian, 2012).

Table 1 Example of VLT test (taken from Schmitt, Schmitt, and Clapham, 2001)  
The 2000-word level

<b>1</b>	Copy	.....	End of the highest point
<b>2</b>	Event	.....	This moves a car
<b>3</b>	Motor	.....	Things made to be like another

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<b>4</b>	Pity
<b>5</b>	Profit
<b>6</b>	Tip

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Another test of vocabulary knowledge is The Depth of Vocabulary Knowledge Test (DVK) developed by Qian and Schedl (2004) which is a modification test of word associated test (WAT) developed by Read (1993). This test is to measure how deep the test taker understand vocabulary. This test measures three dimensions of vocabulary knowledge: synonymy, polysemy, and collocation (Bardakci, 2016). Qian (2002) says that word associated test (WAT) measured different aspects of vocabulary knowledge from which measured by vocabulary size test, or level test. Different from VLT, in this test technically there is no groups of vocabulary. There are eight choices of each target vocabulary. Four of which are words correlated with the target words and the others are not. From the test, test takers must choose the four correlated words by signing, ticking or circling, inside the right column. See table 2 below for clearer.

Related to the number of vocabulary mastered, Hirsh and Nation, as cited from Bardakçı (2016), say that it needs roughly 5000 vocabulary size to read an un-simplified text in reading for pleasure, 6000 - 7000 vocabulary size for better listening capacity, and 8000 – 9000 vocabulary size for reading. However, in another research, it stated that it is enough for a learner to master 5000 words to be able to read (Schmitt et al., 2001). Still related to the number of vocabularies, Hazenberg and Hulstun (1996) say that it needs around 20000 words for native speakers of English and 10000 words for non-native speakers to

be a requirement for university students. However, this can be problematic for EFL learners because the vocabulary size sets of non-native speakers are not stable and also fluctuate. This is due that lexical item can be remembered in a specific point of time but forgotten in the other point (Meara and Rodriguez, 1993) in Bardakçı (2016).

Some other research investigated the role of vocabulary breadth to reading comprehension. Most of the researchers agree that breadth and depth of vocabulary knowledge have a positive correlation to reading comprehension (Bardakci, 2016; Farvardin & Koosha, 2011; Li & Kirby, 2014; D. Qian, 1999; Rashidi & Khosravi, 2010). Some of those ensured that breadth of vocabulary knowledge was a stronger predictor of reading comprehension than depth was (Farvardin & Koosha, 2011; Rashidi & Khosravi, 2010). However, Qian (1999) argued that vocabulary depth is a stronger predictor. Li and Kirby (2014) gave more specific roles of vocabulary knowledge where for predicting a multiple-choice answer on reading comprehension, vocabulary breadth played a role in it, while vocabulary depth was for contributing to summary writing. Alavi and Akbarian (2012) gave a more specific analysis. They tested the correlation between vocabulary knowledge to five question types of reading comprehension tested: Guessing Vocabulary, Stated Detail, and Main Idea. All of which have a correlation to vocabulary level test (VLT), and only on the highest proficiency level of

learners, guessing vocabulary has a correlation with VLT.

Table 2. Example of DVK test (taken from Qian and Schedl, 2004)

**Sound**

(A) logical (B) healthy (C) cold (D) solid	(E) snow (F) temperature (G) sleep (H) dance
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**Please note:**

Some of the words here in the left box are similar to the meaning of <b>sound</b>	Some of the words in the right are nouns that can be used after <b>sound</b> in a phrase or a sentence
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There are eight words in the two boxes, but only **four** of them are correct. You have to choose which are the four correct words.

In the left box, " <b>logical</b> ", "healthy" and "solid" all share the meaning of "sound"	We do not normally say "sound snow", "sound temperature" or "sound dance", so " <b>sleep</b> " is the correct answer on this side.
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On your **Answer Sheet**, you should mark the answers by blackening the corresponding letters with a pencil like this:

● ● (C) ● (E) (F) ● (H)

**Note:** In this example, there are three correct answers on the left and one on the right, but in some other items there will be **either** one on the left and three on the right, **or** two on the left and two on the right.

Now practice with two more items. The correct answers to these items will be provided by the Proctor at the end of your practice.

**digital**

(A) numerical (B) valuable (C) binary (D) body	(E) computer (F) liquid (G) keyboard (H) wind
Answer (A) (B) (C) (D)	(E) (F) (G) (H)

**outstanding**

A) limited (B) exceptional (C) strange (D) expectant	E) example (F) mistake (G) contribution (H) painter
Answer (A) (B) (C) (D)	(E) (F) (G) (H)

**Now you can turn to the next page to begin the test. Please mark your answers on the Answer Sheet**

1. *peak*

(A) initial (B) top (C) crooked (D) punctual	(E) time (F) performance (G) beginning (H) speed
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**METHOD**

Participants of this study were English students of IAIN Syech Wasil Kediri studying at an undergraduate level who never took the TOEFL preparation course beforehand majoring English department. The sampling technique used here to determine the participants was purposive sampling.

To get the data, the tests were administered to the participants at the same time. There were three kinds of tests. First, vocabulary size (VS). This test, which is also known as the vocabulary level test (VLT), was developed by Nation (D. D. Qian, 2002). There were five vocabulary groups on this test: 2000, 3000, 5000, academic, and 10000 groups of vocabulary. Each of the groups has ten sessions; every single session has six words which must be matched with three words showing their meaning. Therefore, there are 150 items in a total of matched words. Second, Depth of vocabulary-knowledge test (DVK). This test is also known as word associated test (WAT) which was developed by Read (1993). This test is to show how deep the words are semantically understood. There were forty questions of target words. Each question comprised eight words with four of

which are correlated to the question, while the rest are not. As a result, there were 160 items of words which should be answered in total. Third, TOEFL reading comprehension. To make sure the data used is standard, a standardized test of TOEFL reading was used. The reading test (RT) was taken from the Longman Complete Course for the TOEFL Test (Phillips, 2001). There are fifty questions in five passages, but only twenty questions were obliged to answer. It was due to only questions related to vocabulary questions.

In terms of analyzing data, the researcher used IBM SPSS 24 version. To answer the first question, the correlation analysis was used. Since the data were interval data and the participants were less than thirty, a non-parametric statistic was used. According to Anwar (2009), there is three correlation analysis of non-parametric: contingency coefficient, Spearman Rank, and Kendall's tau. To analyze the data in this study, Spearman rank was used.

**FINDING AND DISCUSSION**

The findings are presented in two main tables, first is descriptive statistic and the correlation among tested variables. The result of the data analysis as follows.

Table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VLT	15	54.00	121.00	79.2667	21.27194
DVK	15	65.00	130.00	91.6000	23.92488
RT	15	2.00	16.00	9.2000	4.24601
Valid N (listwise)	15				

From table 1 above, we can point toward that data spreading is quite wide; we can see from std. Deviation. This condition may happen when the data gotten from respondent are very various or there are some outliers in the data. Effect of this condition, if the respondents are very limited, then the analysis result of the data may not represent the whole data tested. Therefore, to make the standard deviation

more reasonable in real research, increasing the respondents in numbers or evaluating sampling technique are alternatives ways to get better data.

Having known the descriptive statistic portrayed above, to see the degree of correlation among the variables regardless of the groups of participants, spearman's ranked analysis shows the result as in table 2 below.

Table 2. Correlations

		VLT	DVK	RT	
Spearman's rho	VL T	Correlation Coefficient	1.000	.771**	.874**
		Sig. (2-tailed)	.	.001	.000
		N	15	15	15
	DV K	Correlation Coefficient	.771**	1.000	.767**
		Sig. (2-tailed)	.001	.	.001
		N	15	15	15
	RT	Correlation Coefficient	.874**	.767**	1.000
		Sig. (2-tailed)	.000	.001	.
		N	15	15	15

\*\* . Correlation is significant at the 0.01 level (2-tailed).

There are three correlations we can interpret from above table viz VLT to DVK, VLT to RT and RT to DVK. First, VLT to DVK. As shown in the table above, the value of R is 0.771, since it is higher than Spearman's ranked correlation coefficient ( $r_s$ ) table with  $\alpha$ .001 showing 0.715, and the P value is 0.001, there is a correlation between VLT and DVK. And looking at the score which is very high, the correlation between them is very strong. Therefore, by normal standards, the correlation between the two variables would be considered statistically significant. Second, VLT and RT. The value of R is 0.874 and the two-tailed value of P is 0.000. This value is lower than the significant score ( $\alpha$ ) 0.01. So, by normal standards, the association between

the two variables would be considered statistically significant meaning that there is no correlation between VLT and RT. Third, DVK and RT. In this correlation analysis, there is a significant correlation because the value of R is 0.767 and it is higher than  $r_s$  or R table meaning that there is a significant correlation between both. We also can see from the two-tailed value of P which is lower than the significant score ( $\alpha$ ) 0.01.

From the result of the data above, the correlation amongst variables shows positive correlation. What we can infer from this is if the student's vocabulary knowledge of depth is high then the vocabulary knowledge of the breadth adheres to be high and vice versa. The same happens to their capacity of reading especially for

vocabulary questions type. If the result shows that the reading achievement is high, meaning the knowledge of vocabulary, either breadth or depth, rises as well. It means that between the variables there is intercorrelation.

From the data as well, we can see that the highest correlation is between vocabulary breadth to reading achievement, and the lowest correlation is between vocabulary depth to reading achievement. This result also answers the research question that roles of vocabulary breadth is more significant to the reading than the role of vocabulary depth. This result also deals with most of the other study concerning on the correlation between vocabulary knowledge to reading achievement which says that breadth of vocabulary knowledge was a stronger predictor of reading comprehension than depth was (Farvardin & Koosha, 2011; Rashidi & Khosravi, 2010).

Result of the present study also supports Sedita's work (2005). She said that students who have well-developed vocabulary have more capacity in reading. They can understand more about what meaning is transferred in the reading. Therefore, the knowledge of the vocabulary widens since they can learn a new vocabulary from the context. On the other hand, students who have lack of vocabulary either breadth or depth will have difficulties in grabbing the meaning of the text they read. It results the students read less reading text. In a context of TOEFL reading comprehension, Samad, Jannah, and Fitriani (2017) revealed that students encounter difficulties when determining meaning of difficult words.

## CONCLUSION AND SUGGESTION

Breadth and depth of vocabulary knowledge, either breadth or depth, have their own role in the TOEFL reading

success. The roles play how important vocabulary knowledge to the achievement of reading comprehension. Therefore, enhancing vocabulary knowledge is crucial for those who want to take TOEFL test especially at reading comprehension subtest. Otherwise, difficulties will be encountered by test takers. Therefore, mastering breadth and depth of vocabulary is noteworthy. To make sure that vocabulary knowledge plays important roles in the TOEFL test, in my opinion, the study on the correlation between vocabulary knowledge to writing, listening and speaking need to be conducted. Then, we can see how important vocabulary knowledge to the TOEFL test.

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