AL-TA'LIM JOURNAL, 23 (2), 2016, (95-99)
(Print ISSN 1410-7546 Online ISSN 2355-7893)
Available online at http://journal.tarbiyahiainib.ac.id/index.php/attalim

# The Correlation between Indonesian Students' Vocabulary Mastery and Their Reading Comprehension 

Received: $05^{\text {th }}$ April 2016; Revised: $06^{\text {th }}$ April 2016; Accepted: $19^{\text {th }}$ July 2016

Permalink/DOI: http://dx.doi.org/10.15548/jt.v23i2.217

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#### Abstract

Exploring students' background knowledge in prereading activities suggests the importance of interaction in the process of meaning making which requires appropriate vocabulary. Although many factors constitute students' comprehension, vocabulary should be the main concern in EFL reading classes. Consistence with this premise, the current study was aimed at proving the correlation between students' vocabulary mastery and their reading achievement at the fourth semester of STKIP Dharma Bakti Lubuk Alung. This correlational study involved 70 students taken through cluster random sampling. Vocabulary and reading test were employed to determine the correlation between students' vocabulary mastery and their reading comprehension. Through Correlation of Product Moment, coefficient correlation between two variables was found to be 0.61 with index correlation in r -table was 0.1617 for $\alpha=0.05$, suggesting that the coefficient correlation between two variables (rxy) $t$-calculated was bigger than $t$-table. It means that H1 was accepted and H0 was rejected. In conclusion, there was a positive correlation between students' vocabulary mastery and their reading comprehension at the fourth semester students of STKIP Dharma Bakti Lubuk Alung.


Keywords: Correlation, vocabulary mastery, reading comprehension.
How to Cite: Hayati, A. (2016). The Correlation between Indonesian students' vocabulary mastery and their reading comprehension. Al-Ta Lim Journal, 23(2). doi: http://dx.doi.org/10.15548/jt.v23i2.217

## INTRODUCTION

Reading is one of the four important basic language skills learned by the foreign language students. There are some reasons why it is very necessary; it can help the learners to enhance their knowledge because they can learn many things through reading. Reading can also entertain the learners because it is not only for academic purpose, but also it can help the learners to refresh their mind. In other words, reading is very crucial skill for the learners.

Alyousef (2006) defines reading as an interactive process between a reader and a text to direct the reader become fluently in understanding the meaning of a passage. In this process, the reader interacts with the text when he or she tries to understand the meaning and in which various kinds of the text knowledge they have used. It means that the reader requires the interactive process to understand the text that they read, so that the reader understands the purpose of the text.

Reading is defined as a process of installing new experiences in the mind. It needs intensive concentration in order to get new experiences. It is a surface structure of language which does not directly represent meaning. The meaning resides in the deep structure of language, in the intentions of the writers and in the interpretation made by the readers (Natsir \& Anisati, 2016).

The importance of reading makes the teachers pay great attention in teaching it. In fact, the fourth semester students of STKIP Dharma Bakti Lubuk Alung did not comprehend the reading text well. Most of them did not get good scores when studying Reading I. It means that most of students did not comprehend the text while they were reading English text.

Many English foreign language students have difficulty in making sense of texts they read. They seem to read considerably more slowly in English than in their first language, and feel less confident about reading in English (Handoko, 2014).

To support the students' comprehending of the text, they need to identify some components of reading. Vocabulary is one of language components. Especially for beginners, vocabulary mastery is the basic knowledge to learn English. If they master vocabulary, they are going to be easy to understand the written material. Meanwhile, if they have limited vocabulary they will feel difficult to understand text. In other words, if students have low vocabulary mastery, it will be difficult for them to understand the purpose of the text.

Lehr (2004) states that vocabulary is knowledge of words and word meaning in both oral and written language and in productive and receptive form. Good mastery of vocabulary is important for anyone who learns the language either in listening, speaking, writing, or reading. A foreign language learner will speak fluently and accurately, or write easily, understand what he or she reads or hears if he or she has enough
vocabulary. More importantly, he or she should have the capability of using it accurately.

Snell-Homby (2000) also states that vocabulary is all of the words that a person knows or uses your active vocabulary (the words that you use) and your passive vocabulary (the words that you understand but do not use) all the words in a particular language, the words that people use when they are talking about particular subject, a list of words with their meanings, especially in a book for learning a foreign language.

Haryono (2016) says that reading skill is integral part of the daily activity, which is important for people's academic, personal and social lives. Vocabulary mastery is an aspect that closely related to reading skill. Frijuniarsi \& Marlianingsih (2016), on the contrary, propose that reading is one of several ways to increase vocabulary and knowledge. By reading, the students will have more knowledge in understanding many kinds of themes and also achieve the good impacts of vocabulary mastery towards listening skill.

Based on the description of vocabulary and reading above, it shows that there is a close relation between vocabulary and reading. To get empirical data, the writer organized the test result to prove whether there is significant correlation between student's vocabulary mastery and their reading comprehension. By getting the grades, the writer tried to find out the correlation between students' vocabulary mastery and their reading comprehension.

## METHOD

A correlational research was used in this study. According to Gay and Airasian (2011), a correlational research describes an existing condition where it is distinctly different from the conditions typically describe in survey or observational studies. It involves data collection in order to determine whether, and to what degree, a relationship exists between two or more quantifiable
variables. The correlational study provides a numerical estimate of how two variables are related.

## Population

According to Gay \& Airasian (2011), the population is the interest to random the researcher which she or he would like the results of the study to be generalized. The population of this research was the fourth semester students' of STKIP Dharma Bakti Lubuk Alung. There 70 students spreading in two classes.

## Sample

Sample is a process of selecting a number of individuals for study in such a way that they represent the larger group from which they are selected. Gay \& Airasian (2011) states that sample is a group of individuals, items, or events that represents the characteristics of the larger group from which the sample is down. The researcher took the sample by flapping a coin; the researcher took randomly one class from two classes as sample. Thus, class 4B is choosen to be sample with 35 students.

## Data Analysis <br> Normality test

Test of normality was used to collect from the research come from normal distribution or not by using Liliefors test as following:
a. Data $X_{1}, X_{2}, X_{3} . \ldots . . . . . . X_{n}$ the data obtained from the lowest to the highest data.
b. Data $X_{1}, X_{2}, X_{3} \ldots \ldots . . . . . X_{n}$ be raw numbers $\mathrm{Z}_{1}, \mathrm{Z}_{2}, \mathrm{Z}_{3} \ldots \mathrm{Z}_{\mathrm{n}}$ with the formula as following:
$z i=\frac{X i-\bar{X}}{S}$
Where:
$\mathrm{Zi}=$ Total score
$\mathrm{Xi}=$ students' score i
$\overline{\mathrm{X}}=$ mean score
$\mathrm{S}=$ standard deviation
c. Using the standard normal distribution lists and then calculated odds

$$
\mathrm{F}(\mathrm{Z} i)=\mathrm{P}(\mathrm{Z} \quad \text { Z } i)
$$

d. Using the proportion of $\mathrm{Z}_{1}, \mathrm{Z}_{2}, \mathrm{Z}_{3}, \ldots, \mathrm{Z}_{\mathrm{n}}$ is less that equal to $Z_{i}$, if this proportion is expressed by $S\left(Z_{i}\right)$, then :

$$
S(\mathrm{ZI})=\frac{\text { Amount of } Z_{1}, Z_{2}, Z_{3} \ldots \ldots . . \mathrm{Zn}}{\frac{\text { which } \leq Z_{i}}{n}}
$$

e. Calculated the difference between $\mathrm{F}\left(\mathrm{Z}_{\mathrm{i}}\right)$ - $\mathrm{S}\left(\mathrm{Z}_{\mathrm{i}}\right)$ which then determine the absolute value.

It is taken from the highest value in the absolute difference between the values of so called $L_{0}$. Comparing the value of $L_{0}$ with $L_{\text {table }}$ contained in the real level $\alpha=0$, 05 .Accepted criteria are normally distributed if the sample of $L_{0}$ low then $\mathrm{L}_{\text {table }}$.

## RESULT AND DISCUSSION

There were two variables in this research. The first variable was Vocabulary Mastery represented by vocabulary test ( X variable). The second was Reading Achievement represented by Reading Achievement test (Y variable). This Research used vocabulary and reading tests as the instruments. The reading test consisted 60 multiple choices test.

## Vocabulary Mastery

Description of research data revealed the highest and lowest score, mean and standard deviation. Theresult of the data can be seen in the following table:

Table 1. Results of Data Analysis Final Test

| Item | Vocabulary |
| :--- | :---: |
| Highest Score | 90 |
| Lowest Score | 50 |
| Standar Deviation | 11 |
| Mean | 70,00 |
| Variation | 128 |

The table above shows that there were 90 for the highest score and 50 for the lowest score. Standard deviation was 11 , mean was 70.00 and varians was 128. To test the normality of the data distribution, Liliefors formula was used. It compares L-observed (Lo) and L-table in Liliefors value, in the level of significance 0.05 . The distribution was considered to be tended normal where Lo was lower than L -table.

Table 2. Normality Testing Using Liliefors Formula

| Variable | L-observed | L-table | Explanation |
| :---: | :---: | :---: | :---: |
| Vocabulary | 0.0418 | 0.1617 | Normal |

The table above explains that $0,0418<$ 0 . 1617, which means L-observed (Lo) lower than L -table. Therefore, the data has a normal distribution.

## Reading Comprehension

The distribution of data reveals the description of research data revealed the highest and lowest score, varians, mean and standard deviation. The result of the data can be seen in the following table:

Table 3. Results of Data Analysis Final Test

| Item | Reading |
| :--- | :---: |
| Highest Score | 92 |
| Lowest Score | 48 |
| Standar Deviation | 11 |
| Mean | 71.00 |
| Varians | 112 |

Table 3 shows that 92 is the highest score and 48 for the lowest score, mean was 71.00 , varians was 112 and standard deviation was 11 .

Table 4. Normality Testing Using Liliefors Formula

| Variable | L-obtained | L-table | Explanation |
| :--- | :---: | :---: | :---: |
| Reading | 0.0233 | 0.1617 | Normal |

The table above explains that $0.0233<$ 0.1617 , which means $L$ observed (Lo), lower than $\mathrm{L}_{\text {table. }}$. Therefore, the data has a normal distribution.

The Pearson Product Moment based on Z-score was used. Each item of both variables was converted to Z-score. The table below will draw the result of Hypothesis.

Table 5. Hypothesis Testing used Z-score Person Product Moment

| Variables | N |  |  | Explanation |
| :---: | :---: | :---: | :---: | :---: |
| Vocabulary <br> Mastery and <br> Reading | 30 | 2.59 | 1.701 | Get Positive <br> correlation |
| Achievement |  |  |  |  |

Based on the findings of the research it can be concluded that there was a positive correlation between vocabulary and reading. As mentioned in the previous chapter, vocabulary is all of words in a language that a person uses. Based on students' speaking performance test in descriptive text it was found that many students did not use appropriate vocabulary in making sentences. Their vocabularies were not suitable with context and situation of the sentences.

According to Lewis
(2000) particularly as students develop greater fluency and expression in English, it is significant for them to acquire more productive vocabulary knowledge. Rodgers (2001) also says that vocabulary is seen as an essential component of reading proficiency. Good readers have good vocabulary knowledge. In order to understand a text, reader needs to know the meaning of individual words.

Sedits (2005) mentions that vocabulary knowledge is important because it encompasses all the words, we must know to access our background knowledge, express our idea and communicate effectively and learn about new concept. It could be concluded that vocabulary is very important in learning especially in reading. Furthermore mastering vocabulary will facilitate someone in using language in communication. They cannot speak well and understand written
materials if they do not master it. So, it can call a power of knowledge.

## CONCLUSION AND RECOMMENDATION

Based on the result above, the research found that it was t -calculated $(2.59)>\mathrm{t}$-table (1.701) so, Ho was rejected, and H1 was accepted. In conclusion, the result shows that there is significance correlation between students' vocabulary and their reading achievement at the fourth semester of STKIP Dharma Bakti Lubuk Alung.

It is recommended that the English teachers should use mostly English in their English classes because it facilitates the students to learn English text effectively and efficiently. By using English as a tool of instruction, it helps students increase their vocabulary mastery. Meanwhile, using Indonesian language is still needed in English class to solve misunderstanding that may occur in foreign language settings.

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