

A Correlation Between Vocabulary Mastery, Grammatical Competence and Reading Ability

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Abstract: The objectives of the study are to find out whether or not there is a correlation between (1) vocabulary mastery and reading ability (2) grammatical competence and reading ability (3) vocabulary mastery and grammatical competence simultaneously and reading ability. The correlation method is used in this research. The sample of this research is 30 students from Class B which was taken randomly using simple random sampling. The data of vocabulary mastery, grammatical competence, and reading ability in this research were collected using test. The data are then being analyzed using simple correlation and multiple linear regressions. The research findings show that (1) there is significant positive correlation between the students' vocabulary mastery and reading ability with the coefficient of correlation (r_{x1y}) 0.5469 and the significance of coefficient of correlation (t_o) $3.4571 > t$ table 1.70 (2) there is significant positive correlation between the students' grammatical competence and reading ability with the coefficient of correlation (r_{x2y}) 0.5377 and the significance of coefficient of correlation (t_o) $3.3753 > t$ table 1.70 and (3) there is positive significant correlation between the students' vocabulary mastery and grammatical competence simultaneously and reading ability with $F_o (8.22) > F_t(3.35)$. It can be concluded that reading ability will simultaneously follow the increase and decrease of vocabulary mastery and grammatical competence.

Keywords: *correlation study, vocabulary mastery, grammatical competence, reading ability*

INTRODUCTION

Since there are many important messages from the texts that should be obeyed, people are expected to read the text written in English then do or do not do what the text mean. Beside the texts are found in the public area, there are also many relevant texts for students printed in English, such as textbooks, journal, scientific research reports, and literacy. Thus, students in university also need to master reading to get

new information from those texts to support their study. To accomplish the meaning of the text, people need to have reading ability. If the reader does not have ability in reading, he cannot understand what the text means, as a result, the communication between the reader and the writer will fail to happen or there will be misunderstanding so that what the writer means actually cannot be accomplished well.

There is not only special person who needs to have reading ability, but all of people need to. An officer needs to read business letter from foreign job seekers or colleagues; a tourist guide needs to read a booking letter from his foreign tourist; a mechanic needs to read procedure of operating or repairing machine; a scholarship seeker needs to read the qualifications to get free study abroad; a teacher needs to read reference books to improve his teaching; teenagers need to read the lyric of song to know the meaning of their favorite song or read their favorite novel, and of course, people who continue their study in higher level in university need literacy and scientific book to enrich their knowledge in field they took because more literacy and scientific books are printed in English. Thus, reading ability is essential to be mastered by students of university.

Generally the success of reading ability depends on some factors. Those factors can be classified into linguistic factors and non linguistic factor. Some linguistic factors are vocabulary, grammar, semantic, pragmatic, and sociolinguistic. The linguistics factors that influence reading ability comes from one's knowledge and understanding about linguistic. Meanwhile, the non linguistic factors are motivation, self esteem, attitude, habit, and risk-taking. Linguistic factors have the main effect in influencing the success of reading ability. However, the non linguistic factors are also needed to support one's success in reading ability.

Dealing with learning language, vocabulary can't be separated from language skills, included reading. In

reading a text, people are expected to have vocabulary mastery in order to get what the text means. While reading, they read words in a text then they have to translate the words in their mind into his mother language to understand what the text is about. If the readers cannot recognize words in the text at all, they will not be able to guess anything from the text. It will be different if the readers master the vocabulary, although not all the words in the text are recognized, they will be able to guess what the text tell them about. The more vocabulary one mastered, the more he understand the text. In mastering vocabulary, people cannot interpret word by word because there is a relation between word and other words in making a message to be delivered. It means one word may have various meaning depends on the context.

Another factor that influences reading ability is grammar. A text, beside contains vocabulary, it also contains grammar. Vocabulary presents the words while grammar presents the arrangement of those words. In reading, it is not enough for the readers to understand the text by using their vocabulary mastery. They still need another competence to support their success in reading; it is grammatical competence. Although grammar is assumed as a not important thing to be taught, in fact grammar is important to be taught because it helps the readers to understand the meaning of the text while they are trying to correlate word with other words.

In correlating a word to others, grammatical competence is needed to help the readers to notice the definition for a

word which can change into another meaning. Without grammatical competence, the readers may faults in translating the meaning of words in a text because some words have different meaning if they are used in different sentence and or context. Although the readers can guess the meaning of words to get the information from the text, without grammar, there will be miss-understanding to understand the text they read.

According to Hatch and Brown (1995: 1), vocabulary is a list of words for a specific language that might be used by individual speakers of a language. In line with Hatch and Brown's definition, Ur (1996: 60) defined vocabulary as the words that are taught in the foreign language. He added that each language has its own vocabulary. The vocabulary only exists in the language and may do not exist in other language. A number of words here mean that there are not all words called vocabulary because words that can be called as vocabulary must have meaning. It can be concluded that vocabulary are a list of words that exist in a language which have meaning depend on the context where they are used together with. The meaning of mastery is very close with acquisition. Carter and McCarthy (1988: 115) stated the term acquisition raises the question of when we may regard a word as being truly acquired and how we measure understanding of a word. It can be concluded vocabulary mastery is a comprehensive knowledge to understand the meaning of words and their function and form of words in content appropriately

O' Grady, Dobrovolsky and Katamba (1996: 14) stated that grammar governs the articulation, perception, and patterning of speech sounds, the formation of words and sentences, and the interpretation of utterances. Meanwhile, Ur (1996:75) defined grammar as the way words are put together to make correct sentences. Similar with Ur, Swan (1980: xix) said grammar is the rules that say how words change to show different meaning, and how they are combined into sentences. On the other hand, Chomsky (2006: 150) "a grammar is a system of rules that generates an infinite class of potential percepts, each with its phonetic, semantic, and syntactic aspects, the class of structures that constitute the language in question." Additionally, Savignon (1997: 41) stated "grammatical competence is mastery of linguistic code, the ability to recognize the lexical, morphological, syntactic, and phonological features of language and to manipulate these features to form words and sentence." From those theories, grammatical competence means one's knowledge of language rule how words are combined to make correct clause, phrase, or sentence though its pattern that allow us to distinguish the grammatical and ungrammatical sentences and to form and interpret the words and sentence of their language.

There are many definitions of reading proposed by some linguists based on their own view. According to Silberstein (1994: 12) reading is "a complex information processing skill in which the reader interacts with the text in order to (re)create meaningful discourse". It seems

that reading is not passive process because there is interaction between the writer and the reader through the text. While reading, skills to process the information is needed to create a communication. Another definition is proposed by Davies (in Benettayeb, 2010), he argued that “reading is a mental or cognitive process which involves a reader in trying to follow and respond to a message from a writer who is distant in space and time”. Reading is a process when a reader reads text made by a writer. A reader needs to involve his mental or cognitive competence to see the message that is tried to be delivered to the reader. A reader is not only expected to read the text but he is also expected to follow and respond to the message that is intended by the writer. Here, the communication between the reader and the writer is an indirect communication because they cannot meet each other at this time while the reader is reading the text and the text made the writer may be made several times before the reader read it. Having discussed the definition from those experts, it can be inferred is that reading is a process to look and understand the written symbols in the text to respond the message from the writer. In conclusion, reading ability is one’s capability to use some skill they have in a process to look and understand the written symbols in the text to respond the message from the writer.

RATIONALE

The readers who lack of vocabulary will face some difficulties while reading. In the contrary, the readers who have rich vocabulary will be helped in guessing the

meaning of other words that will guide them to correlate words with other to accomplish the text well

The readers who have poor grammatical competence will find it difficult to avoid miss-understanding while reading a text. Meanwhile, those who have good grammatical competence will be successful in reading because they can negotiate the meaning of the text well.

Reading ability is greatly influenced by vocabulary mastery and grammatical competence. The readers who lack of vocabulary and have poor grammatical competence will face some difficulties in understanding the text and may get failure to avoid their miss-understanding the text. On the other hand, those who have rich vocabulary and good grammatical competence will achieve better in reading and may avoid miss-understanding the text. Therefore, it is can be concluded that vocabulary mastery and grammatical competence have positive correlation to the reading ability, either particularly or simultaneously.

In this study, the hypotheses that can be formulated are: 1) There is a positive and significant correlation between vocabulary mastery and reading ability 2) There is a positive and significant correlation between grammatical competence and reading ability 3) There is a positive and significant correlation between vocabulary mastery and grammatical competence in reading ability

RESEARCH METHODS

This research uses a correlational research between three variables, namely vocabulary mastery (X1), grammatical competence (X2), and reading ability (Y). The sample of the study is 30 students taken randomly from the population which consists of 70 students. The following is described the Statistical Hypothesis of the study.

In the first hypothesis, the zero hypothesis (H_0) is occurred if $H_0 = r_{x1y} \leq 0$ which means that there is no correlation between the students' vocabulary mastery (X1) and reading ability (Y). Meanwhile, the alternative hypothesis (H_a) is occurred if $H_a = r_{x1y} > 0$ which means that there is positive correlation between the students' vocabulary mastery (X1) and reading ability (Y). In the second hypothesis, similar with the first hypothesis, zero hypothesis (H_0) is occurred if $H_0 = r_{x2y} \leq 0$ which means that there is no correlation between the students' grammatical competence (X2) and reading ability (Y). Meanwhile, the alternative hypothesis (H_a) is occurred if $H_a = r_{x2y} > 0$ which means that there is positive correlation between the students' grammatical competence (X2) and reading ability (Y). The third hypothesis, the zero hypothesis (H_0) is occurred if $H_0 = r_{x1x2y} \leq 0$ which means that there is no correlation between the students' vocabulary mastery (X1) and grammatical competence (X2) simultaneously and reading ability (Y). Meanwhile, the alternative hypothesis (H_a) is occurred if $H_a = r_{x1x2y} > 0$ which means that there is positive correlation between the students' vocabulary mastery (X1) and grammatical competence (X2) simultaneously and reading ability (Y).

The Technique of Collecting the Data

In this study, test is the most appropriate evaluation to collect the data of students' vocabulary mastery, grammatical competence, and reading ability. Allison et al (1996: 25) defined test as instrument designed to measure a variable. There are many kinds of test but the multiple choice test that provides more optional answer is chosen because multiple choice can be used to measure a variety of learning outcomes from simple to complex degree knowledge, understanding and application area and it is easier to collect data of students' score and simpler to analyze the data. The test for try out group consists of 60 items where each items provides four alternative choices. From the try out, 40 valid items will be tested to the students in control group.

The Technique of Analyzing the Data

To test the first and the second hypothesis whether there is a positive correlation between (1) vocabulary mastery and reading ability (2) grammatical competence and reading ability, the researcher uses the simple correlation technique using Pearson Product Moment Formula as follows:

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

The calculation shows that the correlation coefficient (r_{x1y}) between students' vocabulary mastery (X1) and reading ability (Y) is 0.5469 meanwhile, the significance of correlation coefficient to $(3.4571) > t_t (1.70)$ at the level of significance $\alpha = 0.95$ for $n = 30$ is 1.70. It can be concluded that there is positive

significant correlation between the students' vocabulary mastery and reading ability.

The calculation shows that the correlation coefficient (r_{x_2y}) between students' grammatical competence (X_2) and reading ability (Y) is 0.5377 meanwhile, the significance of correlation coefficient t_o (3.3753) > t_t (1.70) at the level of significance $\alpha = 0.05$ for $n = 30$ is 1.70. It can be concluded that there is positive significant correlation between the students' grammatical competence and reading ability.

Furthermore, to test the third hypothesis whether there is correlation between vocabulary mastery and grammatical competence simultaneously and reading ability, the formula of multiple linear regressions as follow is used.

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The result of the computation shows the correlation coefficient ($r_{x_1x_2y}$) between the students' vocabulary mastery (X_1) and grammatical competence (X_2) simultaneously and reading ability (Y) is 0.62. After being calculated to the F-value, the value of F_o (8.22) > F_t (3.35) at the level of significance $\alpha = 0.05$ and the df (degree of freedom) for $n = 30$. It can be concluded that the coefficient of correlation is significant.

Discussion of the Research Findings

This study is aimed to reveal whether or not there is correlation between vocabulary mastery, grammatical competence and reading ability. The result of the study shows that there is positive

correlation between vocabulary mastery, grammatical competence, and reading ability. The result is described as follow:

1. The correlation between the students' vocabulary mastery and reading ability

The finding of the study from testing of the first hypothesis shows that there is a positive correlation between the students' vocabulary mastery and reading ability. The relative contribution of the students' vocabulary mastery to reading ability is 52% while the effective contribution is 19.68% implying that the increase of the students' vocabulary mastery will be followed by the increase of students' reading ability.

The result obtained from this study are relevant to the research that was done by Mehrpour, Razmjoo, and Kian (2011) which stated that depth and breadth of vocabulary knowledge are positively correlated with reading comprehension. It implies that the more words the students know, the more easily they comprehend the text. The same result is also obtained from Furqon (2013) and Fitriana (2012), which concluded that there is significant positive correlation between students' vocabulary mastery and reading comprehension.

In addition, Wilkins (in Thornbury, 2002: 13) stated "the fact is that while without grammar very little can be conveyed, without vocabulary nothing can be conveyed". Aebersold and Field (1997: 13) added that if there are many unfamiliar words that are key words, comprehension of the text begins to break down. It means that vocabulary is a most important factor that determines the success in language,

especially reading. Students who have rich vocabulary will be able to understand what they read easily because they know more words in the text. So, if they find difficult words, they will try to connect those difficult words to the close words so that they can guess the meaning of those difficult words.

From the brief explanation above, it can be said that the the students who have rich vocabulary will be better in reading ability than those who have low

vocabulary. Finally, it can be concluded that vocabulary mastery has positive correlation and give positive contribution toward reading ability.

2. The correlation between the students' grammatical competence and reading ability

The finding of the study from testing of the second hypothesis shows that there is a positive correlation between the students' grammatical competence and reading ability. The relative contribution of the students' grammatical competence to reading ability is 48% while the effective contribution is 18.16%. Then, it also means that the increase of the students' grammatical competence will be followed by the increase of students' reading ability.

The result of this study is relevant to the research that was done by Apriani (2007) which concluded that there is a positive correlation between the mastery of complex sentences and reading skill. The mastery complex sentence or grammatical competence helps the students in guessing the meaning of a text through the sentence structure. It is also inline with the rsearch

conducted by Ranjbar (2012) which concluded "knowledge of grammar has proved a vital effect in guessing meaning". It means that "grammar is a very important factor in deciphering the meanings of unknown words in understanding a text".

Nassaji (in Ranjbar 2012) explained that "one fundamental factor of any understanding of reading texts and knowing the utterances is the knowledge of grammar". Knowledge of grammar helps the reader in dealing with the unknown words in text. The research shows that "the intermediate and advance EFL learners guess their unknown words through adjacent words and grammatical structure of the sentence". This statement is supported by Simmons (2006) that grammars helps the writer and the reader in creating connection. If the reader cannot draw the text on their grammar conventions, there is a failure in the connection to make meaning of their reading. In addition, Smith (in Simmons, 2006) stated "understanding how words go together in meaningful language makes prediction possible and, therefore, comprehension.

From the brief explanation above, it can be said that the the students who have good grammatical competence will be better in reading ability than those who have poor grammatical competence. Finally, it can be concluded that grammatical competence has positive correlation and give positive contribution toward reading ability.

3. The correlation between the students' vocabulary mastery and grammatical

competence simultaneously and reading ability

From the data, it is found that some of the respondents who achieve low score in the vocabulary test and grammatical competence test achieve the higher score in reading ability test. It happens because the succes of reading ability not only depends on the students' vocabulary mastery and

only depend on the vocabulary mastery and grammatical competence. Beside the linguistic factors the success of reading is also supported by non-linguistic factors such motivation, interest, habit, and attitude toward English. One of the research is done by Santi (2004) which concluded that the attitude toward English has a positive correlation in reading. So, eventhough the students have rich vocabulary and good grammatitacl

be influenced by many factors that are usually not considered in first language reading. It is assumed that the second language students will face difficulties in vocabulary and grammar knowledge. The second language students who have low vocabulary mastery and poor grammatical competence will fail in their reading while the first language students and the second language students who have rich vocabulary and good grammatical competence will be success in their reading.

In addition, Brumfit as quoted in Carter (1988: 128) stated that we need our understanding of vocabulary and structure of the language before we can negotiable meaning well. It is very clearly stated that in understanding a text the reader needs reading ability; therefore, the ability to understand the text depends on the

grammatical competence. There are many factors that are considered give cotribution toward reading ability. However, the higher score in reading ability test are obtained by the most of respondents who achieve high score in vocabulary mastery and grammatical competence test.

There are some researches that show that the succes of reading ability not competence, there is a possibility that they will achieve low score in reading if their attitude toward English is not good.

However, from the testing of the third hypothesis, it is found that there is a positive correlation between the students' vocabulary mastery and grammatical competence simultaneously and reading ability.

According to Grabe (in Calixto, 2006), reading in a foreign language can vocabulary mastery and grammatical competence.

To sum up, it is quite clear that the students' vocabulary mastery and grammatical competence simultaneously have a positive correlation and give contribution toward reading ability.

CONCLUSION AND SUGGESTION

The results of the study show that there is significant positive correlation between vocabulary mastery and reading ability. The result shows that the correlation coefficient (r_{xy}) between students' vocabulary mastery and reading ability is 0.5469, meanwhile the signifiance of correlation coefficient (t_0) is 3.4571 > t table, 1.70. The relative contribution of students' vocabulary mastery in reading ability is 52% while the effective

contribution is 19.68%. With respect to the relationship between vocabulary and reading ability, a positive correlation obtained which shows that the more words the students know; the more easily they comprehend the text. It means that reading competence will follow the increase or the decrease of vocabulary mastery.

It is also found that there is significant positive correlation between grammatical competence and reading ability. The result shows that the correlation coefficient (r_{xy}) between students' grammatical and reading ability is 0.5377, meanwhile the significance of correlation coefficient (t_o) is $3.3753 > t$ table, 1.70. The relative contribution of students' grammatical competence in reading ability is 48% while the effective contribution is 18.16%. It means that reading competence will follow the increase or the decrease of grammatical competence.

There is significant positive correlation between vocabulary mastery and grammatical competence simultaneously and reading ability. The result shows that the correlation coefficient (r_{1x2y}) between increased.

There are other factors which determine the success of reading ability beside vocabulary mastery and grammatical competence that the writer could not investigate yet because of some limitations. The other researchers may do another

students' vocabulary mastery and grammatical competence simultaneously and reading ability is 0.62, meanwhile the significance of correlation coefficient ($F_o = 8.22 > F$ table = 3.35). The coefficient determination is 0.3784 which means 37.84% variance of reading ability is determined by vocabulary and grammatical competence while 62.16% variance of reading is determined by other factors. It means that reading ability will simultaneously follow the increase and decrease of vocabulary mastery and grammatical competence.

There are several suggestions that hopefully useful for the readers. In this study, the writer proposes that students' vocabulary mastery should be maintained and elevated. The more vocabulary mastered by the students will make the students' reading ability increased.

In the previous section, it is also understood that grammar has a key factor in reading ability. It helps the reader to guess the meaning of unknown words. So, the writer also proposes that the students' grammatical competence should be research in the same field as the writer done to find the other factors which are also have contribution in the succes of reading ability. Hopefully, this research can be used as a reference for other researcher who carry out and develop a similar study.

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