THE CORRELATION BETWEEN STUDENTS' VOCABULARY MASTERY AND GRAMMAR MASTERY TOWARDS STUDENTS' READING COMPREHENSION AT THE SECOND GRADE OF SMAN 1 AMBARAWA

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Abstrak. Penelitian ini bertujuan untuk mengetahui apakah ada korelasi antara penguasaan kosakata siswa, penguasaan tata bahasa siswa terhadap pemahaman membaca siswa. Penelitian ini menggunakan desain *ex-post facto co-relational.* Subjek dari penelitian ini adalah kelas XI MIA 2 SMAN 1 Ambarawa yang terdiri dari 32 siswa. Kemudian, data yang diperoleh dianalisis menggunkan *Pearson Product Moment Correlation and Multiple Linear Regression Test.* Hasil menunjukkan bahwa terdapat korelasi yang signifikan antara penguasaan kosakata dan tata bahasa siswa dengan pemahaman membaca mereka secara statistic dengan level signifikansi 0.05. Ini menunjukkan bahwa untuk mendapatkan kemampuan pemahaman membaca yang bagus, pembelajaran kosakata dan tata bahasa harus ditingkatkan.

Abstract. The objective of this research was to find out whether there was a correlation between students' vocabulary mastery, grammar mastery and their reading comprehension. This study used *ex post facto* co-relational design. The subject of this research was class XI MIA 2 of SMAN 1 Ambarawa consisting of 32 students. The data were analyzed by using Pearson Product Moment Correlation and Multiple Linear Regression Test. The result showed that there was a statistically significant correlation between students' vocabulary mastery, grammar mastery and their reading comprehension with the significant level 0.05. This suggests that to obtain a good reading comprehension, vocabulary mastery and grammar mastery must be improved.

Keywords: *vocabulary mastery, grammar mastery, reading comprehension*

INTRODUCTION

English is one of foreign languages that learn by students in Indonesia. The students are required to study about English since junior high school until university level. In mastering English as a foreign language (EFL), the students should be mastered in all aspects; listening, speaking, reading, and writing. One of aspects that students who learn foreign language should be mastered is reading. However, sometimes the students do not know the purpose of reading itself. As one of the basic skills of language, reading is no doubt a means of gaining knowledge and information. In the process of reading, people receive information through the eyes, discriminate letter shapes, and associate the letter with language and the text with meaning. By reading, we can develop our creativity, critical thinking, and even writing skill. Besides that, by reading people can imagine the characters what they read in novel or a text.

Unfortunately, in general, several students have some difficulties in achieving reading skill. This is reasonable because reading is one of skills, which has complex aspects that students should be mastered. This problem could be affected by some factors related to the components of reading performance, such as reading habit, prior knowledge, grammar mastery, and vocabulary mastery. If the students want to master in reading, they have to master all aspects of reading. Reading without understanding is not mean as reading. To master in reading, people must learn about grammar and vocabulary because they take roles in understanding the nature of language, the learner must be understood the nature of this internalized, unconscious set of rules that is part in every grammar of every language. Students who want to get a message of a text, they have to know about the text is form.

Vocabulary and reading are two things that cannot be separated from another. According to Hornby (1995), he states that vocabulary is a list of words with their meanings; it is the core of language. Therefore, when students are reading, they need vocabulary to help them understand an idea of a text. Then, to learn about vocabulary students need a lot of practice of reading because reading is the active way in learning vocabulary. On the other hand, grammar also takes an important role in reading. If the students' grammar mastery is good, they can read and get the idea of a text correctly and easily. Grammar and vocabulary have consistently produced a strong correlation to reading comprehension. For vocabulary, it is widely accepted that the 2.000 most frequent vocabulary items are crucial for basic reading as they cover approximately 80% of the words in a text in general (Cobb, 2007). Vocabulary learning through reading entails an array of boot strapping process of noticing on unfamiliar word, recognizing the need to discover the meaning of the word, inferring the meaning from context with the aid of linguistic and non-linguistic cues, and integrating the new lexical item into one's developing vocabulary knowledge, which all necessitate a certain level of surplus intentional resources. Meanwhile, how grammar has correlation in reading comprehension, it can be found in several research, for example Kuhn and Stahl's (2003) review the roles of words, dissect sentence into meaningful chunks and recognize the syntactic of a sentence seem to contribute to the construction of meaning from a text.

From the explanation above, in reading English texts, students often do not understand the meaning of a sentence even though they understand all words

contain in a sentence. It often occurs especially in long and complex sentence. On the other hand, if the learners are unfamiliar with the meaning of the words by those who address them, they will be unable to participate in conversation, ask for the information, and get the information. These trigger the researcher to conduct the research by choosing grammar and vocabulary mastery as the predictors of students' reading comprehension.

METHOD

This research was quantitative research and used ex post facto co-relational design, which focused to find out the correlation between students' vocabulary mastery and grammar mastery and their reading comprehension. There were three variables in this research: grammar mastery and vocabulary mastery as the independent variables and reading comprehension as the dependent variable. The population of this research was second year students of SMAN 1 Ambarawa. By using random sampling technique, the sample of this research was XI IIS 3 that consists of 31 students in order to find validity, reliability, level of difficulty and discrimination power of the test item. After getting good test item, the researcher took XI MIA 2 that consists of 32 students as the sample to collect the data. There were instruments of this research: grammar test, vocabulary test, and reading comprehension test. The hypotheses were analyzed in SPSS by using formula Pearson Product Moment Correlation and Multiple Linear Regression.

RESULT AND DISCUSSION
This point contains about the results and discussion of the research. Results deal with the finding of the research and discussion talk about the interpretation of the findings.

Result
The data from the test of grammar, vocabulary, and reading comprehension, which taken from 32 students have analyzed by using SPSS in order to get the result. The result of vocabulary mastery (X1), grammar mastery (X2), and reading comprehension (Y) are shown in the following table.

1. **The Correlation between Students' Vocabulary Mastery and Their Reading Comprehension**

Table 1. Coefficient Correlation of X1 and Y

Correlations

		X1	Y
X1	Pearson Correlation	1	.472[**]
	Sig. (2-tailed)		.006
	N	32	32
Y	Pearson Correlation	.472[**]	1
	Sig. (2-tailed)	.006	
	N	32	32

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

Based on Table 1 above, the researcher found that the coefficient correlation between students' vocabulary mastery and their reading comprehension was .472 at the significant level 0.05. The significant level 0.05 means that the probability of error in hypothesis is only 5%, and r_{table} at the significant level for 32 students was .349. Therefore, the coefficient correlation was higher than the critical value of r_{table} (.472>.349). In addition, the statistical analysis showed that the correlation between students' vocabulary mastery and reading comprehension was significant (p<0.05; p=0.006).

Moreover, according to the result of calculation above, it showed that for the first hypothesis, the null hypothesis (H_o) was rejected, which means the alternative hypothesis (H_1) was accepted. In other words, this research verified that students' vocabulary mastery significantly correlates with their reading comprehension. It indicates that vocabulary mastery and reading comprehension cannot separate each other.

2. The Correlation between Students' Grammar Mastery and Their Reading Comprehension

Table 2. Coefficient Correlation of X2 and Y

Correlations

		X2	Y
X2	Pearson Correlation	1	.475**
	Sig. (2-tailed)		.006
	N	32	32
Y	Pearson Correlation	.475**	1
	Sig. (2-tailed)	.006	
	N	32	32

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

Based on Table 2, the researcher found that the coefficient correlation between students' grammar mastery and their reading comprehension was .475 at the significant level 0.05. The significant level 0.05 means that the probability of error in hypothesis is only 5%, and r_{table} at the significant level for 32 students was .349. Therefore, the coefficient correlation was higher than the critical value of r_{table} (.475>.349). In addition, the statistical analysis showed that the correlation between students' grammar mastery and reading comprehension was significant (p<0.05; p=0.006).

Moreover, according to the result of calculation above, it showed that for the second hypothesis, the null hypothesis (H_o) was rejected, which means the alternative hypothesis (H_1) was accepted. In other words, this research verified that students' grammar mastery significantly correlates with their reading comprehension. It indicates that grammar mastery and reading comprehension cannot separate each other.

3. The Correlation between Students' Vocabulary and Grammar Mastery towards Their Reading Comprehension

Table 3. The Coefficient of Multiple Correlation Variables X1 and X2 to Y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655[a]	.429	.390	6.854

a. Predictors: (Constant), X2, X1

Based on the Table 3, it can be seen that the coefficient of determination of vocabulary and grammar mastery towards reading comprehension is 0.429. It means that the contribution of vocabulary and grammar mastery towards reading comprehension 42.9% that means the rest 57.1% is determined by other factors.

Table 4. Regression Coefficient Significance Test of Variables X1 and X2 to Y

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1025.485	2	512.742	10.914	.000[a]
	Residual	1362.390	29	46.979		
	Total	2387.875	31			

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

In addition, according to the Table 4, it showed that the acquisition value of F_o= 10.914 and Sig. 0.000<0.05 which means there is significant influence of students' vocabulary and grammar mastery together on the students' reading comprehension.

Table 5. The Coefficient of Multiple Linier Regression Equality Test of Variables X1 and X2 to Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.841	12.216		.724	.475
	X1	.394	.123	.452	3.219	.003
	X2	.407	.125	.455	3.243	.003

a. Dependent Variable: Y

Meanwhile, based on Table 5 above, the multiple regression equation can be expressed by Y= 8.841 + 0.394 + 0.407 which has understanding that students' vocabulary and grammar mastery contributes positively towards students' reading comprehension.

Besides that, from Table 5 above, it can be seen that there is significant influence of students' vocabulary mastery towards students' reading comprehension. This evidence by acquisition value of $t_{count} = 3.219$ and Sig. 0.003<0.05.

Table 6. The Coefficient of Multiple Correlation Variables X1 to Y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472a	.222	.197	7.867

a. Predictors: (Constant), X1

Moreover, based on Table 6, for the contribution of students' vocabulary mastery to the students' reading comprehension can be expressed by the following formula:

Kd= Value βx1y x Partial Correlation Value (rx1y) x 100%

Kd= 0.452 x 0.472 x100% = 21.3%

Notes:

Kd	= Coefficient Determination
Value βx1y	= Coefficient Beta of X1
Partial Correlation Value (rx1y)	= R Value of X1 to Y

(Sudjana, 2002)

From the calculation above, the result stated that the contribution vocabulary mastery on reading comprehension is 21.3%.

On the other hand, on Table 5, it showed that there is significant influence of students' grammar mastery towards students' reading comprehension. This evidence by acquisition value of $t_{count} = 3.243$ and Sig. 0.003<0.05.

Table 7. The Coefficient of Multiple Correlation Variables X2 to Y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475a	.226	.200	7.851

a. Predictors: (Constant), X2

As for the contribution of students' grammar mastery to the students' reading comprehension can be expressed by the following formula:

Kd= Value βx2y x Partial Correlation Value (rx2y) x 100%

Kd= 0.455 x 0.475 x100% = 21.6%

Notes:

Kd	= Coefficient Determination
Value βx1y	= Coefficient Beta of X2
Partial Correlation Value (rx1y)	= R Value of X2 to Y

(Sudjana, 2002)

From the calculation above, the result stated that the contribution vocabulary mastery on reading comprehension is 21.6%.

Discussion

The interpretation of the results of the data could be seen in the following points.

1. **The Correlation between Students' Vocabulary Mastery (X1) towards Their Reading Comprehension (Y)**

From the result of the research, students' vocabulary mastery has significant correlation towards their reading comprehension. Related to the classification of correlation elaborated by Arikunto (2006), the correlation between vocabulary mastery and reading comprehension in this research was .472 and classified as average. It could be interpreted that vocabulary influenced in students' reading comprehension ability. This is in accordance with the opinion of Wainwright (2006), he states that vocabulary is the important factor in reading; he also says that the larger vocabulary the easier it is to make the sense of text. In addition, Harmer (2002) who said that without grammar very little can be conveyed, without vocabulary nothing could be conveyed also supports this statement. You can say very little with grammar but you can say almost anything with words.

Based on the research finding above, students' vocabulary mastery is significant to improve their reading comprehension. Students who had good vocabulary mastery also had good reading comprehension ability.

2. **The Correlation between Students' Grammar Mastery (X2) towards Their Reading Comprehension (Y)**

From the result of the research, students' grammar mastery has significant correlation towards their reading comprehension. Based on the data of this research, the coefficient correlation was .475 and classified as average related to the classification of correlation elaborated by Arikunto (2006). It indicated that grammar is influencing in reading comprehension. This is in accordance with the opinion of Ur (1991), he states that grammar does not only affect to "look right"; it also affects their meaning. Richards and Renandya (2002) who said that people agree that grammar is too important to be ignored, and without good knowledge of grammar, learners' language development will be severely constrained support it. Based on the theoretical review above, it can be assumed that grammar is important in improving reading comprehension ability. Therefore, students who good in grammar, they can easily convey the meaning of reading materials.

3. **The Correlation between Students' Vocabulary Mastery (X1) and Grammar Mastery (X2) toward Their Reading Comprehension (Y)**

The research result above concluded that vocabulary mastery and grammar mastery have positive effect on reading comprehension ability at the second grade students of SMAN 1 Ambarawa. It means they are significantly influence on reading comprehension. It is proved by seeing the contribution of vocabulary and grammar mastery towards reading comprehension is 42.9%. According to Krashen (2004),

he explains that motivation to read and increased reading fluency along with knowledge of grammar and get in vocabulary. Thus, if the students have good grammar and vocabulary mastery, they can comprehend a text correctly. This statement is supported by Yuliawati (2018) who conducted to investigate the effect of grammar and vocabulary on reading comprehension at private university in Bekasi. The finding showed that there is significant effect of vocabulary mastery on students reading comprehension.

In addition, based on the result, it can be seen that the contribution of vocabulary mastery is 21.3% and grammar mastery is 21.6%. It means that vocabulary and grammar have a great influence in reading skill. It supported by Murcia (2001) who states that grammar and vocabulary have been viewed as competing elements in language teaching. Vocabulary mastery is the first stage to learn and to know the text itself but grammar is a description of the rules that govern how a language's sentence is formed (Thornburry, 2002). Studying about grammar means that how different grammatical elements can be strung together to make chains of words.

Based on the result and the finding above, it reveals that vocabulary and grammar are important and influence things in learning language especially in reading. Because a text consists of vocabularies and grammar, so that vocabulary is the first stage to learn to understand a text. Then, vocabulary will make the students easily to understand grammar in a text.

CONCLUSION AND SUGGESTION

This point discussed about the conclusions and suggestions based on the data that presented and analyzed in the previous point.

Conclusion

Based on the result of the analysis, the computation of the data and the discussion of the finding, the researcher concluded that:

1. There is positive correlation between vocabulary mastery and reading comprehension. The statistical analysis showed that the correlation between students' vocabulary mastery and reading comprehension is significant (sign<α, 0.006 < 0.05). It is concluded that the higher the students' vocabulary scores the higher the students' reading comprehension scores.
2. There is positive correlation between grammar mastery and reading comprehension. The statistical analysis showed that the correlation between students' vocabulary mastery and reading comprehension is significant (sign < α, 0.006 < 0.05). It is concluded that the higher the students' grammar scores the higher the students' reading comprehension scores.
3. There is significant influence of vocabulary mastery and grammar mastery towards reading comprehension, as seen from the result that (sign<α, 0.000 < 0.05). It is concluded that the higher level of vocabulary and grammar mastery will possess the students reading comprehension.

Suggestions

Referring the conclusion above, the researcher would like to propose some suggestions as follow:

1. The further researcher should consider other factors that can affect in students' reading comprehension besides vocabulary and grammar. Besides that, the further researcher who might study deeper related to this research should consider to use different population and sample.
2. In order to increase the students' reading comprehension, the teacher should give more practice by giving various types and topics of texts. Then, might give more practice of reading related to the five important aspects of reading.
3. In order to improve students' vocabulary and grammar mastery, the teacher may give some interesting game or technique in teaching vocabulary and grammar such as crossword puzzle and group discussion.

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