THE CORRELATION BETWEEN STUDENTS' GRAMMAR AND VOCABULARY MASTERY AND THEIR READING ABILITY

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Penelitian bertujuan menghubungkan korelasi antara penguasaan tata bahasa siswa terhadap kemampuan membaca. Penelitian ini merupakan penelitian kuantitatif dengan menggunakan desain ex-post facto. Sampel dipilih dengan menggunakan probabiliti sampling acak sederhana. Kelas X 5 terpilih sebagai kelas sampel dan kelas X 6 dipilih sebagai kelas uji coba. Data dikumpulkan dengan pemberian tes tata bahasa, tes kosa kata, dan tes membaca pemahaman. Tidak ada pengajaran yang dilakukan di kelas sampel. Data dianalisis dengan menggunakan statistik (SPSS) versi 15.0. Hasil pengujian menunjukkan bahwa koefisien korelasi penguasaan tata bahasa siswa dan penguasaan kosa kata dan kemampuan membaca mereka adalah 0,803 pada tingkat signifikan 0,01. Ini berarti bahwa variabel tersebut berkorelasi positif. Koefisien korelasi (nilai p) lebih tinggi dari rtabel (0,803> 0,393). Penelitian ini berarti ada hubungan yang signifikan antara tata bahasa siswa dan penguasaan kosa kata dan kemampuan membaca mereka.

This research is quantitative by nature using ex-post facto design. The sample was chosen by using simple probability random sampling. Class X 5 was chosen as the sample class and class X 6 was chosen as the try out class. The data were collected by administering grammar test, vocabulary test, and reading comprehension test. There were no treatments conducted in the sample class. The data were analyzed by using Statistical Packaged for Social Science (SPSS) version 15.0. The test result showed that the coefficient correlation of students' grammar mastery and vocabulary mastery and their reading ability is 0.803 at the significant level of 0.01. It means that those variables positively correlated. The correlation coefficient (r_{value}) is higher than r_{table} (0.803 > 0.393). It means that there is significant correlation between students' grammar and vocabulary mastery and their reading ability.

Key words: grammar mastery, reading ability, vocabulary mastery

INTRODUCTION

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, associate the letter with language and associate the text with meaning.

As Bamfrod (1998: 12) defines reading as the constructing meaning from aprinted or writtern message. The constructing of meaning involves the reading connecting information from the written message with previous knowledge to arrive at meaning at understanding. Based on the definition, it can be stated that the aim of reading process is to understand the meaning which is informed by the writer to the reader. The reader tries to interpret word per word, sentence per sentence based on its context and clues given by the writer on the text. In the process of getting idea of the text, the reader uses his skills to recognize the language or genre of the text.

According Rea (1991) there are various definitions of grammar that have provided the basis of the constructs of grammar underlying different approaches to the testing of it. She begins with a quotation from Close (1982) defining grammar as knowledge of sentence level form. "English grammar is chiefly a system of syntax that decides the order and patterns in which words are arranged in sentences." Such a definition excludes context beyond what a single sentence provides, considers meaning a separate matter, and is not concerned with the ability to use

such a sentence. This sort of understanding of grammar, this construct, led to multiple-choice items of the type we are all familiar with. There might be some quibble over which of the following is the best of the type (that is, has the best construct validity) but all are reasonably good examples.

According to Nation (1990) vocabulary is clearly an important skill in reading. The students have to master vocabulary because it will help them to succeed in reading, it can be stated that vocabulary is the number of words that students master based on the context area. By having lot of vocabulary knowledge, it can help students to understand the text. So, if the students know a lot of vocabulary, they may able to comprehend the text easily. It is impossible for students to understand the passage without mastering vocabulary. It is clear that the students' vocabulary is needed to face the difficulties in learning English, especially to understand reading materials.

From the explanation above, to comprehend reading text students need adequate vocabulary and grammar mastery, because grammar and vocabulary mastery becomes the important things for students in order to be successful in reading.

RESEARCH METHOD

This inferential quantitative research relied on second language learning to examine the relationship between grammar mastery and vocabulary mastery and their reading ability. In English as foreign lanuage the writer used ex post facto research design because she did not give any treatment but collected the data and

saw the correlation of cause and effect that happened. *Ex post facto* design involved only one group and does not use any control class. Hacth and Farhady (1982:26) state that an *ex post facto* design is used when the researcher does not have control over the selection and manipulation of the independent variable. This design is often called co-relational study. Co-relational study focuses on the relationship among variables that exist naturally. It does not involve the manipulation of the independent variables. Yet it involves collecting data in order to determine whether and what degree a relationship exists between two or more variables rather than the cause-effect relationship (Hatch and Farhady, 1982:27) The research design of *Ex post facto* co-relational study is formulated as follows:

T1   T2

Where:

T1   : The test of understanding grammar and vocabulary mastery.

T2   : The test of reading comprehension.

The population of this research was the first year students of SMAN 1 Bandar Lampung. In 2013 there were nine classes of the first grade students and whole of classes consisted of about 290 students. In this research, the writer determined the sample by using simple random sampling technique, because every student in the population got the same opportunity to be chosen or to be sample of the research. The writer took class X-5 consisting of 38 students as the sample and class X-6 consisting of 40 students as the try out class.

In this research, there were two variables: independent (X) and dependent variables (Y). The independent variables of this research were students' grammar mastery (X_1) and vocabulary mastery (variable X_2). While the dependent variable was reading ability (variable Y).

RESULT AND DISCUSSION

Table 1. Correlation Between Students' Grammar Mastery and Reading Ability

		X1	Y
X1	Pearson Correlation	1	.654(**)
	Sig. (2-tailed)		.000
	N	40	40
Y	Pearson Correlation	.654(**)	1
	Sig. (2-tailed)	.000	
	N	40	40

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

From the calculation of the SPSS, the writer found the correlation between students' grammar mastery and reading ability is .654.The coefficient correlation is higher than the critical value of r_{table} (.654 > .393) at significance level 0.01. The result of this research shows that students' grammar mastery correlates positively with reading ability.

Table 2. Correlation Between Students' Vocabulary Mastery and Reading Ability

		X2	Y
X2	Pearson Correlation	1	.730(**)
	Sig. (2-tailed)		.000
	N	40	40
Y	Pearson Correlation	.737(**)	1
	Sig. (2-tailed)	.000	
	N	40	40

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

From the table above, N shows the number of the students who took part in the test where the coefficient of correlation between students' vocabulary mastery and reading ability shows .73. It means that the correlation is significant because the coefficient correlation is higher than the value of *r* table (0.728 > 0.393) at the significance level 0.01.

The Correlation between Students Grammar Mastery and Vocabulary Mastery and Their Reading Ability

In order to determine whether there is significant correlation between the students' grammar and reading ability, and whether there is correlation between vocabulary mastery and reading ability, the variables were calculated by using Pearson Product Moment Coefficient Correlation. Then, to determine whether there is any significant correlation between students' grammar and vocabulary mastery and their reading ability or not the writer used multiple correlations in order to investigate the third hypotheses.

Here is the formula for *Pearson Product Moment Correlation Coefficient.*

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

The correlation of the variables, that is, students' grammar (X_1), vocabulary mastery (X_2) and reading ability (Y) can be seen as follows:

Table 3. Correlation Between Students' Grammar Mastery and Vocabulary Mastery and Their Reading Ability

No	rx_1y	rx_2y	ry_{12}
1	0.62	0.728	0.803

From the result of data calculation above, it can be seen that the correlation coefficient $_{(rx_1y)}$ of the two variables was 0.62 at the significant level of 0.01. It means that there was high correlation between students' grammar and reading ability. Meanwhile the result of correlation coefficient $_{(rx_2y)}$ of the two variables was 0.728 at the significance level of 0.01. It means that there was high correlation between students' vocabulary mastery and reading ability. The result of the multiple correlation between students' grammar and vocabulary mastery and their reading ability showed $r_{y12} = 0.803$ which was categorized as very high correlation. They were higher than critical value taken from the table ($r_{table} = 0.393$) where degree of freedom (df) is 40 at the significance level 0.01. It means that there is positive significant correlation between students' grammar and vocabulary mastery and their reading ability.

The result of this research shows that students' grammar mastery and vocabularry mastery correlate positively to reading ability. It indicates that students' grammar mastery and vocabulary mastery are interrelated and seemed unseparately. In other words, it can be verified that there is significant correlation between

students' grammar mastery and vocabulary mastery and their reading ability at the

first year students of SMA I Bandar Lampung.

Normality Test

Table 4. Normality test X1
One-Sample Kolmogorov-Smirnov Test

		X1
N		40
Normal Parameters(a,b)	Mean	8.2632
	Std. Deviation	.94649
Most Extreme	Absolute	.187
Differences	Positive	.076
	Negative	-.187
Kolmogorov-Smirnov Z		1.155
Asymp. Sig. (2-tailed)		.138

a Test distribution is Normal.

b Calculated from data.

From table 4, it can be seen that the data are normally distributed through

Kolmogorov-Smirnov, with the level of significance 0.01. The test significance

value of the data for students' grammar mastery was 0.138. It means p > 0.01 and

data X1 have normal distribution.

Table 5. Normality Test X2
One-Sample Kolmogorov-Smirnov Test

		X2
N		40
Normal Parameters(a,b)	Mean	7.1930
	Std. Deviation	1.20965
Most Extreme	Absolute	.142
Differences	Positive	.103
	Negative	-.142
Kolmogorov-Smirnov Z		.878
Asymp. Sig. (2-tailed)		.424

a Test distribution is Normal.

b Calculated from data.

In the normality test for X2, vocabulary mastery, it could be seen from data on table 5 above that the result of vocabulary mastery was 0.424. It means that the variable X2 was bigger than 0.01 and could be stated as normally distributed.

Table 6. Normality Y
One-Sample Kolmogorov-Smirnov Test

		Y
N		40
Normal Parameters(a,b)	Mean	7.5526
	Std. Deviation	1.06339
Most Extreme	Absolute	.181
Differences	Positive	.121
	Negative	-.181
Kolmogorov-Smirnov Z		1.119
Asymp. Sig. (2-tailed)		.164

a Test distribution is Normal.

b Calculated from data.

According to *Kolmogorov-Smirnov*, the test significance value of the data for students' reading comprehension was 0.164. It means that $p > 0.01$ and data Y has normal distribution. Since the data from students' grammar, vocabulary mastery, and their reading ability are normally distributed, this research used *Pearson Product Moment Correlation Coefficient* which found out the correlation between three variables. The first variable was students' grammar, second variable was vocabulary mastery, and the third variable was reading comprehension.

Discussion of the Correlation between Students' Grammar and Reading

It is obvious that grammar mastery plays an inportant role for the students to comprehend the text (reading). Based on the result of data analysis of this

research, it was found that there was positive correlation between students' grammar and reading. The coefficient of the correlation between students' grammar mastery and reading is 0.62 at the significance level 0.01. It means that the students' grammar mastery positively correlated with students' reading ability. From the result, it was revealed that the students who had good mastery in grammar could understand reading well, because the rules of grammar help to determine the mechanics of reading, which what makes the connection between grammar and reading is important.

Brown (2001: 362) states that grammar is the system of rules governing the conventional arrangement and relationship of words in a sentence. Considering that a correct grammar is important because grammatical mistakes can lead to misunderstanding what one is saying or writing. In addition, Jeffery (1990 : 120) states that grammar is needed in order to gain control of written language for thought has to be organized in order to make meaning clear to readers. Therefore grammar is the rules that show how words are combined, arranged or changed to show certain kinds of meaning. Grammar is important to students to understand the meaning of the text that they read and to make meaning clear to readers, without grammar, words when combined with other words, may not have meaing.

Discussion of the Correlation between Students' Vocabulary and Reading

The coefficient correlation between students' vocabulary and reading ability is 0.728 at the significance level 0.01, it means that students' vocabulary mastery positively correlated with their reading ability. Nation (1990 : 22) contends that

the main goal of vocabulary is to increase the students' vocabulary mastery in order to master the four language skills : listening, speaking, reading, and writing. As mentioned previously it can be obviously seen that students' vocabulary mastery takes a big part in acquiring reading ability.

Gleason and Ratner (1998 : 1425) argue that development of vocabulary knowledge represents a continuum in which individual words move from unfamiliar to acquainted, and to established categories. This vocabulary development both pushes and is pushed forward by reading acquisition.

Stanovich (1986, 2000) has also reported on studies that support this relationship, and in his own research, he has reported strong correlations between vocabulary and reading. In fact, Stanovich (1986, 2000) makes a strong argument for a reciprocal causal relation between reading and vocabulary. That is, vocabulary growth leads to improve reading comprehension, and amount of reading leads to vocabulary growth.

The Correlation between Students' Grammar and Vocabulary Mastery and their Reading Ability

As the writer has mentioned before, each student had different rate of grammar mastery and vocabulary mastery to reading ability, whether it was high, moderate or even low and those results of students' grammar mastery and vocabulary were correlated with their reading ability. Based on the data of the research, it was found that there was positive correlation between students' grammar mastery and

vocabulary and their reading ability. The coefficient correlation between students' grammar mastery and vocabulary mastery and their reading ability is .803.

To emphasize grammar, vocabulary, and reading have correlation one to the other. For understanding reading comprehension students must know the vocabulary first because it is a basis of language. It is impossible for the students to read a foreign language without having enough knowledge of vocabulary. Besides that, grammar has important role in learning English, so it also has a big influence to reading comprehension. Students who want to get a text message, have to know about how the text is formed or they will not be able to have complete understanding about what the text means. So, when their score of grammar and vocabulary is high, their score in reading comprehension is also high.

As mentioned in the frame of theories, in his research, Widiono (2007) found that students had difficulty in comprehending reading text. Some aspects that caused the students to have difficulty in comprehending the text which he found in his research were: students' lack of vocabulary and grammar, students' interest in the reading text, teachers' ability in guiding and managing their class and inappropriate reading strategy. This statement is also supported by Finnochiaro (1983) who defines that reading comprehension is the ability which depends on the accuracy and speed of graphic perception, that are perception of writer symbol, control of language relationship and structure, knowledge of vocabulary items and lexical combination, awareness of redundancy, the ability to use contextual clues.

Based on the statement above it is revealed that vocabulary and grammar which are the important elements in learning language especially in reading. Vocabulary is the first stage to learn and to kow the text itself. Because, if the student have a little vocabulary they found difficult to understanding about grammar in text reading. Especially for regular and irregular verb in vocabulary to express their text in reading. So, the students must master grammar formations if they want to improve their skill in reading.

CONCLUSION AND SUGGESTIONS

Based on the result of the data analysis and discussion, are drawn the following conclusions :

1. There is a significant positive correlation between students' grammar mastery and their reading ability at the first year of SMAN 1 Bandar Lampung. It can be seen from the result of the hypothesis testing which showed that the coefficient correlation was higher than critical value of r_{table} (0.6117259> 0.393) at significance level 0.01. The null hypothesis is rejected and the alternative hypothesis is accepted, which shows that there is significant correlation between students' grammar mastery and their reading ability.

2. There is significant correlation between students' vocabulary mastery and their reading ability. The coefficient correlation between students' vocabulary mastery and their achievement on reading ability is found to be very high with index correlation (0.728 > 0.393) at significance level 0.01.

3. There is a shared correlation between students' grammar and vocabulary mastery and their reading ability at the first grade of SMAN 1 Bandar

Lampung. It can be seen from the result of the hypothesis testing which shows that the coefficient correlation was higher than the critical value of $_{rtable}$ (0.803 > 0.393) at the significance level 0.01. the null hypothesis is rejected and the research hypothesis is accepted, which shows that there is a significant correlation between students' grammar and vocabulary mastery and their reading ability.

Based on the conclusions of the research, the writer puts forward some suggestions, they are:

1. The English teacher should give more explanation and attention to the students about the aspects of reading comprehension especially in the aspect of determining main idea. He teacher may give more practice of reading by giving exercises on finding the main idea.

2. The teacher should encourage the students to have and use dictionary as a tool to help them with difficult words.

3. In order to increase the students' reading comprehension, the teacher should give more practice by giving difference types and topics of the text.

4. In order to increase the students' vocabulary mastery, the teacher should give more attention and explanation about groups of words. The teacher may give some interesting game of vocabulary to the students.

5. The students should improve their reading ability by doing a lot of practice of reading English text not only at school but also at home. They are recommended to read some interesting topics to them so they will not feel bored.

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