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## CHAPTER III

### METHOD OF THE RESEARCH

#### A. Research Design

This research was quantitative research. It used the correlational research design. According to Creswell (2012, p. 338) correlation is statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. From the definition above, it is clear that the purpose of the correlational research is to find out whether there is a correlation between two or more sets of data. In short, correlational research is to study correlations among variables in which it usually involves the possibility of cause and effect.

This research involved two variables, the first was students' knowledge of vocabulary as a variable X, and their speaking ability as a variable Y.

#### B. Time and the location of the research

The research was conducted at the eighth grade students of Junior High School 2 Rimba Melintang. It is located in Jl. Haji Salam, Jumrah. The research was conducted on May 16<sup>th</sup> 2017.

#### C. The subject and the object of the research

The subject of this research was the eighth grade students at Junior High School 2 Rimba Melintang. While the object of this research was the

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correlation between students' knowledge of vocabulary and students' speaking ability.

## D. The population and the sample of the research

### 1. Population of the Research

The population of this research was the eighth grade students at Junior High School 2 Rimba Melintang. There were four classes consisting of 102 students as the total of population. It can be seen in the following table:

**Table III. 1**  
**Population**

No	Classes	Population
1	VIII 1	25
2	VIII 2	26
3	VIII 3	25
4	VIII 4	26
Total		102

### 2. Sample of the Research

In this research, the researcher considered that the population was large. Because the population was more than 100 persons. Therefore, the technique used in taking the sample was simple random sampling.

**Table III. 2**  
**Sample**

No	Classes	Population	30% of the population
1	VIII 1	25	7
2	VIII 2	26	8
3	VIII 3	25	7
4	VIII 4	26	8
Total		102	30

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Creswell (2012, p.143) stated that any individual has the same probability to be the participants. So, in this research, the researcher took the students from each class. Then, for the each class, the researcher took 7 until 8 students to become a sample. Furthermore, Arikunto (2006, p. 112) stated that if the population is less than 100, it is better to take all of them as the sample but if the total population is more than 100 students, the sample can be taken between 10-15% or 20-25% or more. So, in this research the researcher took 30% of the population as the sample. So, the total sample of this research was 30 students.

**E. Technique of collecting the data****1. Test**

In order to collect the data from the sample of this research, the researcher gave two kinds of test namely multiple choice test and oral test to get the data or information. Moreover, it will explain more detail as follows:

**a. Multiple choice test**

In this research, the researcher used multiple choice test to find out how the students knowledge of vocabulary. The reason of using multiple choice items was they are undoubtedly one of the most commonly used types of item in objective test. The questions consisted of 20 multiple choice items test. The items of the test were constructed based on the indicators of vocabulary knowledge. In measuring the

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score, the researcher used the scale from Arikunto (2006, p. 245) as follows:

**Table III. 3**  
The scale of the Students' Knowledge Of Vocabulary

No	Score	Category
1	80-100	Very good
2	66-79	Good
3	56-65	Enough
4	40-55	Less
5	30-39	Fail

**Table III.4**  
Blue print of vocabulary knowledge

No	Indicators of vocabulary knowledge	Number of Items
1	Students have knowledge of English parts of speech	1, 7, 13, 20
2	Students are able to get the meaning of word based on context/different usages.	2, 6, 10, 15
3	Students are able to get the synonym of word	3, 8, 11, 17
4	Students are able to differentiate the antonym of word	4, 9, 14, 19
5	Students are able to identify the hyponym of word	5, 12, 16, 18

#### b. Oral test

To collect the data on students' speaking ability, the researcher used oral presentation based on the topic that they have learned. The researcher chose this test because it was appropriate to the syllabus. In order to give scoring, the researcher was helped by two rater, they were Riski Amelia M.Pd., and Kurnia Budianti M.Pd.

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Furthermore, in order to assess the students' speaking ability, the researcher used the assessment aspect of speaking ability by Hughes (2003). The assessment can be described as follows:

**Table III. 5**  
**Assessment aspect of speaking ability**

No	Aspect of Assessed	1	2	3	4	5	6
1	Accent						
2	Grammar						
3	Vocabulary						
4	Fluency						
5	Comprehension						
Total							

*Source from the rubric of speaking by Hughes (2003)*

Next, the students' score of speaking ability were classified based on the classification of English teacher at Junior High School 2 Rimba Melintang.

**Table III. 6**  
**Classification of students' score**

No	The score level	Category
1	80-100	Very good
2	66-79	Good
3	56-65	Enough
4	40-55	Poor
5	30-39	Fail

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## 2. Validity and Reliability of the test

To obtain the data from the respondent the researcher made try out of the vocabulary test to determine the validity and reliability of the instruments.

### a. Validity of Vocabulary Test

Brown (2003) stated that if all test items cover all of learning objectives (indicators) the test is content valid. Content validity was used because the test given were based on materials that the students learned. The validity of the test is determined by finding the difficulty level of each item. Arikunto (2013) explained that the index of difficulty is generally expressed as the percentage of the students who answer the question correctly.

The formula for item difficulty is as follows:

$$P = \frac{B}{J}$$

Where:

- P = Index of Difficulty  
 B = The Number of Correct Answer  
 JS = The Number of the Students

The formula above was used to find out whether each item of the test is easy. The items that do not reach the standard level of difficulty are revised and they are edited or changed with the new items that are appropriate. The accepted items are the ones which has facility values

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between 0.30 and 0.70. The index difficulty level of instruments is represented on the following table:

**Table III. 7**  
**Index Difficulty Level of Instruments**

Proportion Correct (p)	Items Category
0.00 – 0.30	Difficult
0.30-0.70	Average
0.70-1.00	Easy

The standard level of difficulty used is  $>0.30$  and  $<0.70$ . It means that an item is accepted if the level of difficulty is between 0.30-0.70 and it is rejected if the level of difficulty is less than 0.30 (the item is too difficult), thus, if it is over than 0.70 (the item is too easy). On the other hand, the proposition of correct is represented by “p”, whereas the proposition of incorrect is represented by “q”. To know whether the data are valid or not the data obtained were calculated by Mc. Excel windows program.

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**Table. III. 8**  
**The analysis of Try out validity of Vocabulary**

Item	P	Status
1	0.48	Valid
2	0.56	Valid
3	0.64	Valid
4	0.52	Valid
5	0.68	Valid
6	0.64	Valid
7	0.56	Valid
8	0.52	Valid
9	0.64	Valid
10	0.52	Valid
11	0.64	Valid
12	0.44	Valid
13	0.44	Valid
14	0.68	Valid
15	0.44	Valid
16	0.68	Valid
17	0.48	Valid
18	0.64	Valid
19	0.64	Valid
20	0.44	Valid

**b. Validity of speaking test**

The test used for the students' speaking ability should be valid and reliable. The test can be valid if it measures accurately whether the test is appropriate, meaningful, and useful (Hughes, 2003). In this research, the researcher used content validity to know the validity of speaking ability test. Test has content validity if the test is appropriate with the lesson that is taught in the class. Thus, the test was given based on material studied by the students. The material of the test was taken from the syllabus of the eighth grade of Junior High School 2 Rimba Melintang.

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### c. Reliability of Vocabulary

Brown (2003, p. 21) explained that a reliable test is consistent and dependable. It means that a reliable test will stay to give unchangeable results in a few test conducted to the same group of people. The following table is the categories of reliability test used in determining the level of the reliability of the test. The table below is the categories of reliability test used in determining the level of reliability of the test.

**Table III. 9**  
**The level of Reliability**

No	Reliability	Level of Reliability
1	0.0 – 0.20	Low
2	0.21 – 0.40	Sufficient
3	0.41 – 0.70	High
4	0.71 – 1.0	Very high

For X variable (students' knowledge of vocabulary), the researcher gave the try out to 25 students. After getting the result, the researcher used *Cronbach's Alpha* formula to find out the reliability of the test through

**Table III. 10**  
**Cronbach alpha reliability of vocabulary**

Reliability Statistics	
Cronbach's Alpha	N of Items
.783	20

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Based on analysis above, it was obtained that the value of Cronbach's Alpha was 0.783. It could be said that the test is reliable. Due to  $0.783 > 0.71$ , the level of the reliability was very high.

### **F. Technique of Data Analysis**

For the technique of analyzing the data, the researcher applied the quantitative data. In quantitative data analysis, Creswell (2012) indicated that we analyzed the data by using mathematical procedures that we called statistic to explain the result of the research. In order to analyze the data, the researcher used pearson product moment on SPSS 16.0 windows program.

Then, to find out whether there is a significant correlation between students' knowledge of vocabulary and their speaking ability by using the pearson product moment correlation using SPSS 16.0 program. According to Siregar (2013)  $H_0$  is accepted if the significance 2- tailed value is bigger than ( $\text{sig-t} > \alpha$ ), in this case  $\alpha$  value is 0.05.

Statistically the hypotheses are:

$H_0$  is accepted if  $\text{sig} > \alpha$  : There is no significant correlation between students' knowledge of vocabulary and their speaking ability.

$H_a$  is accepted if  $\text{sig} < \alpha$  : There is a significant correlation between students' knowledge of vocabulary and their speaking ability.

Then, to determine the level of correlation between the two variables, the following categories from Arikunto (2006) were used :

**Table III. 11**  
**Interpretation Table**

$r_{xy}$	Interpretation
0.00-0.20	Very Low
0.20-0.40	Low
0.40-0.60	Medium
0.60-0.80	Strong
0.80-1.00	Very Strong

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