

## **CHAPTER III**

### **METHOD OF RESEARCH**

#### **A. Research Design**

This is a correlational research. Correlational research indicates an association between two or more variables (Creswell, 2008, p.358). Furthermore, in conducting the research, the researcher uses quantitative method. Quantitative research is essentially collecting numerical data to explain a particular phenomenon (Muijis, 2004, p.2). In the research, the researcher uses questionnaire to score students' reading habit. Then, the researcher conducts reading comprehension test to measure their vocabulary mastery. After that, Pearson Product Moment formula is used to correlate two variables and to find out the significance correlation between students' reading habit and their vocabulary mastery. The independent variable of this research is the students' reading habit (variable X) and the students' vocabulary mastery is the dependent variable (variable Y).

#### **B. Research Setting**

This research is conducted in IAIN Antasari located in Jl. A.Yani Km. 4,5 Banjarmasin, South Kalimantan. Then, the research is conducted during May until June in 2016.

### C. Population and Sample

#### 1. Population

The population of this research is the second semester students of English Department in IAIN Antasari Banjarmasin which consists of 169 students from five classes (class A, B, C, D, and E). It can be seen in the following table:

Table 3.1 Population of Research

No	Class	Population
1	A	34
2	B	37
3	C	36
4	D	35
5	E	30
<b>Total</b>		<b>169</b>

#### 2. Sample

Sample is a part of population that is observed. According to Arikunto (2006, p.51), if the population is more than 100, the researcher can take 25% from it. Furthermore, proportional random sampling method is used in determining the sample of this research. So, the researcher takes 42 students as the sample of this research which takes 25% of every class.

Table 3.2 Sample of Research

No	Class	Population	Sample
1	A	34	8
2	B	37	9
3	C	36	9
4	D	35	9
5	E	30	7
<b>Total</b>		<b>169</b>	<b>42</b>

#### D. Data Collection Procedure

In collecting the data, the instruments of this research are questionnaire to measure the students' reading habit (variable X) and vocabulary test to measure the students' vocabulary mastery (variable Y).

##### 1. Questionnaire

In this research, the researcher will distribute questionnaire to the students aimed to know about their reading habit. Total items of the questionnaire are 20 items and using five alternatives based on the Likert's scale types. Likert's scale is used to measure attitude, opinion, perception based on the certain object or phenomena (Siregar, 2013, p.50).

Moreover, the questions are based on the reading habit indicators. It can be seen on the table below:

Table 3.3 Indicators of Reading Habit in English

No	Indicators	Item Number
1	Reading frequency	1, 2
2	Attitude toward reading	3, 4, 5
3	Academic reading	6, 7, 8, 9
4	Non-academic reading	10, 11, 12, 13
5	Motivation in the academic environment	14, 15, 16
6	Motivation in the family environment	17, 18, 19, 20

## 2. Test

A test is a method of measuring a person's ability, knowledge, or performance in a given domain (Brown, 2010:3). A test is used to collect the data of students' vocabulary mastery (variable Y). There are 25 questions in the test. The questions are based on the syllabus in vocabulary course of English Department in IAIN Antasari Banjarmasin which the indicators of the test can be seen on the table:

Table 3.4 Indicators of Vocabulary Mastery

No	Indicators	Item Number
1	Word meaning	1, 2, 3, 4, 5
2	Part of Speech	6, 7, 8, 9, 10
3	Word and grammar	11, 12, 13, 14, 15
4	Word formation	16, 17, 18, 19
5	Collocation	20, 21, 22
6	Idiom	23, 24, 25

### E. Technique of Data Analysis

In this research, there are three steps in analyzing the data. The steps are as follows:

1. To find out about how the students' reading habit, the researcher calculates the result of the questionnaire one by one. If a student chooses *Always (selalu)*, the student will get score 5 and so on. This is a table to understand about Likert's scale types:

Table 3.5 Scoring The Questionnaire

Likert's scale types	Score
<i>Always (selalu)</i>	5
<i>Often (sering)</i>	4
<i>Sometimes (kadang-kadang)</i>	3

<i>The Continued Table</i>	
<b>Likert's scale types</b>	<b>Score</b>
Seldom ( <i>jarang</i> )	2
Never ( <i>tidak pernah</i> )	1

After that, the researcher interprets the scores of reading habit by classifying it into three categories. They are up rank (good), middle rank (fair), and bottom rank (bad). According Sudijono (2006, pp.175-176), the formula in interpreting the score into three categories is:

- a. Finding the mean

$$M_x = \frac{\sum fX}{N}$$

- b. Finding the standard deviation

$$SD_x = \sqrt{\frac{\sum fX^2}{N}}$$

- c. Classifying the scores into three categories

—————→ Good

$M_x + 1 SD_x$   
 —————→ Fair  
 $M_x - 1 SD_x$

—————→ Bad

- Top up of reading habit score =  $M_x + 1 SD_x$
- Bottom of reading habit score =  $M_x - 1 SD_x$

Explanation:

$M_x$  = mean of students' reading habit

$SD_x$  = Standard deviation of students' reading habit

$\sum fX$  = Total score of students' reading habit

$N$  = Total Number of the respondents

2. To find out degree of students' vocabulary mastery, the researcher calculates scores of the test one by one. If the answer is correct, they will get score 4. So, the total score of 25 items test is  $25 \times 4 = 100$ . In classifying the score, the researcher uses the categories which is submitted by David p. Harris (1969: 134), as follows:

Table 3.6 Categories of Vocabulary Mastery

<b>Score</b>	<b>Category</b>
80 – 100	Excellent
70 – 79	Good
60 – 69	Fair
50 – 59	Low
0 – 49	Poor

The researcher also finds out the mean of vocabulary mastery by using this formula:

$$M_Y = \frac{\sum fY}{\sum f}$$

Explanation:

$M_Y$  = mean of vocabulary mastery

$\sum fY$  = Total score of vocabulary mastery

$N$  = Total number of the respondents

3. To find out the correlation between reading habit and vocabulary mastery, the researcher uses *Pearson Product Moment* formula. The formula is as follows:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

Explanation:

$r_{xy}$  = Coefficient of correlation between variable x and variable y

$N$  = Total respondent

$\sum x$  = Accumulative score of reading habit questionnaire

$\sum x^2$  = Accumulative square score of reading habit questionnaire

$\sum y$  = Accumulative score of vocabulary test

$\sum y^2$  = Accumulative square score of vocabulary test

$\sum xy$  = Accumulative score of multiplication of variable x and variable y

However, before using the formula, the researcher does normality test and linearity test because these tests are prerequisite in using Pearson product moment formula. Normality test is done to determine normal distribution and linearity test is used to know the relation between dependent and independent variable. In doing normality test and linearity, the researcher uses SPSS version 23.



The criteria in determining normal distribution of the data are as follows:

- a. A normal distribution of data, if the value of significance  $> 0,05$
- b. An abnormal distribution of data, if the value of significance  $< 0,05$

The criteria in determining the linearity of the variables are as follows:

- a. If the value of significance  $> 0,05$ . It means that the variables are linear
- b. If the value of significance  $< 0,05$ . It means that the variables are linear

Then, the researcher will interpret the value of  $r_{xy}$  by comparing it with  $r_t$  with significant value 0,05. Before that, the researcher determines the degree of freedom by using this formula :

$$df = N - nr$$

Explanation:

df = degree of freedom

N = Total respondent

nr = Total variable

Criteria in testing the hypotheses:

- If  $r_{xy} > r_t$  means there is a significant correlation and  $H_a$  is accepted,  $H_o$  is rejected.
- If  $r_{xy} < r_t$  means there is no significant correlation and  $H_a$  is rejected,  $H_o$  is accepted.

Furthermore, the researcher interprets the value of  $r_{xy}$  by looking the mark of value of  $r_{xy}$  whether is positive (+) or negative (-). Then, interpreting the value of  $r_{xy}$  by referring to rough standard so that the degree of correlation can be classified.

Table 3.7 Rough Standard Value in Interpreting the Degree of Correlation

$r_{xy}$	Interpretation
0,00 – 0,20	There is a very low correlation between variable X and Y
0,20 – 0,40	There is a low correlation between variable X and Y
0,40 – 0,70	There is a medium correlation between variable X and Y
0,70 – 0,90	There is a high correlation between variable X and Y
0,90 – 1,00	There is a very high correlation between variable X and Y

*(Sudijono, 2006, p.193)*