

## **CHAPTER III**

### **RESEARCH METHOD**

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

In this research, the researcher uses quantitative method. Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. It means that the researcher tries to measure and analyze the English students ability. Based on the statement, quantitative research focuses on numerical data that is analyzed using statistic method. Quantitative approach basically is used for testing hypothesis and concludes the result to know the answer. By using this approach, the difference or the relation between the variables will be gotten. In doing so, the researcher intends to use quantitative to complete this study.

This research is aimed to identify the effectiveness of teaching and learning English by using of vocabulary notebook. The researcher will carry out an experimental research (quasi experimental with non-randomized control group) pre test - post test design was used as recommended by Ary et al. (2002:315). Therefore, the researcher uses experimental research which is one regarded as the most sophisticated research method for testing a hypothesis.

The researcher has carried out with two classes, they are experiment and control clas with pre test and post test as research tools. A group that has a treatment is called experiment group, whereas the other groups that have no treatment is called

a control group. The goal is to solve the actual problem that faced recently and collecting data to design, explain, and analyze the effectiveness of using vocabulary notebook in teaching and learning English of the Seventh Grade at MTsN 9 Hulu Sungai Selatan 2016/2017.

## **B. Research Setting**

This research was taken in MTsN 9 Hulu Sungai Selatan which is located at Jalan Pelayar No. 37, Habirau Tengah, Hulu Sungai Selatan, Kalimantan Selatan. The researcher conducted the data on January, 2<sup>nd</sup> 2017– Februari, 23<sup>st</sup> 2017. From the accepted the proposal until conducting post test. (The timeline of this research could be seen in appendix VII). The researcher has chosen this place because some students did not show any interest to learn English subject, such as they don't understand the meaning of vocabulary and have difficult to memorize new vocabulary.

## **C. Subject and Object of the Research**

### **1. The subject of Research**

The subject of research are students class VII B and VII D of MTsN 9 Hulu Sungai Selatan in the academic year 2016/2017. The total number is 82 students. It is presented in the following table.

Table 3.1 The Subject of Research

No	Class	Experiment	Control	Students number
1.	VII B	√		41
2.	VII D		√	41
	Total			82

There are 4 classes of VII at MTsN 9 Hulu Sungai Selatan. That is VII A, VII B, VII C, and VII D. In this research, the researcher has chosen the subject of the research based on the result of pre test that will be done to students class VII B, VII C, and VII D. After the researcher knowing the result of pre test and hopefully that the result of the student' ability of the test almost same. Therefore, the reseacher decided two classes as the subject of the research that is VII B as Experiment Class and VII D as Control Class.

## 2. The Object of Research

The object of this research is the effectiveness of using vocabulary notebook in experiment class and the effectiveness without using vocabulary notebook in control class. After that, the comparing of students' mastery in vocabulary between experiment class and control class to know the differently.

## D. Research Instrument

Research instrument, that use as follows:

1. Multiple Choice 15 items, for each questions has score 3 points, if the students can answer all correctly, they will get score 45 points.

2. Matching 10 items, for each question has score 3 points, if the students can answer all correctly, they will get score 30 points.
3. Essay 5 items, for each question has score 5 points, if the students can answer all correctly, they will get score 25 points.

After counting up all the three aspects, will be gotten the highest score is 100 points and the lowest score is 0. The total maximum expected score. In this research, students will pass two kinds of the test.

#### a) Pre Test

The pretest was conducted on February, 7<sup>th</sup> 2017. The pretest was conducted to the students' mastery in vocabulary before getting treatment. It means the researcher wants to know the students' mastery in vocabulary before the teacher teaching and learning English using of vocabulary notebook. The pre test, the test in experiment class same with the test in control class. The students class VII B as experiment class and the students class VII D as control class. For the test, there are multiple choice 15 items, matching 10 items and Essay 5 items.

#### b) Treatment

In the treatment, there are three meetings, the first meeting on February, 9<sup>th</sup> 2017, the second meeting on February, 16<sup>th</sup> 2017, and the third meeting on February 21<sup>st</sup> 2017. In each meeting the students are used vocabulary notebook in experiment class, and each meeting spends 80 minutes.

#### c) Post test

The post test was conducted on February 23<sup>rd</sup> 2017. In post test, the students class VII B and the students class VII D of MTsN 9 Hulu Sungai Selatan

will given the questions like pre test. It means the researcher wants to know the students' mastery in vocabulary after the teacher teaching and learning English using of vocabulary notebook. The post test was taught by using vocabulary notebook and the control class without using vocabulary notebook. The questions are not the same. But for the level of questions are same with pre test. For the test, there are multiple choice 15 items, matching 10 items and essay 5 items.

Then, to recount the score, the researcher uses mean. To calculate the mean of the score, the writer uses the formula by Waya Nurkanca and Sumartana as the following :

$$M_1 = \frac{\sum x}{N_1}$$

M = Mean Score

$\sum X$  = Accumulative score

N = Number of Respondents

3.2 The Table of Category Students' Mastery in Vocabulary by David P. Harris (1969, p. 134)

No.	Score	Category
1.	80 – 100	Very Good
2.	70 – 79	Good
3.	60 – 69	Fair
4.	50 – 59	Poor
5.	0 – 49	Very Poor

## **E. Data Collection Procedure**

To collect data in this research, the researcher uses some technique which consist of:

### **1. Observation**

This technique is used to observe detail object directly and indirectly that can complete this study. This technique is used to get information about condition of school, how teaching and learning English process, problems teaching and learning English, etc.

### **2. Test (written test)**

This technique is used to get data about score of the pre test and post test was given for both of group. The both of groups are experiment class and control class.

#### **a) Pre test**

In pre test, the students class VII B and the students class VII D of MTsN 9 Hulu Sungai Selatan. The total number is 82 students. Before the start of teaching and learning English, the students do pre test. The researcher wants to know students' ability from the result of pre test. The researcher gives written test as pre test for the students in experiment class and control class, it way done for 70 minutes to answer 30 same questions between two classes. Content for the test about greeting, things around us, occupation, time, day, etc. (See Appendix IV).

#### **b) Post test**

In pre test, the students class VII B and the students class VII D of MTsN 9 Hulu Sungai Selatan. The total number is 82 students. After the teacher teaching

and learning English vocabulary, the students do post test. The researcher wants to know students' ability from the result of post test. The researcher gives written test as post test for the students in experiment class and control class, it way done for 70 minutes to answer 30 same questions between two classes. Content for the test about greeting, things around us, occupation, time, day, etc. (See Appendix IV).

### 3. Documentary

This technique is purpose to lokk for all written document that related with this reserach. It will help the researcher in doing the experiment. The document that needed in research, such as background of the school, the headmaster, teachers, administration staff, students, library staff, school facilities, pictures, etc.

## **F. Data Analysis Procedure**

### 1. Technique of Data Processing

In processing the data, the researcher uses some technique such as:

#### a. Editing

Editing is an activity that is performed after investigators finished collecting data or it can be called checking stage. This technique is used in the purpose of examining all the collected data to make sure whether the data are already completed or not.

#### b. Coding

After editing, the next step is coding. Coding is Process of identify the data. The researcher makes certain code on all collecting data to classify them into each certain category.

c. Scoring

This technique is used to compose and put the data into table and count the right answer's frequency. In scoring content, the scoring started ranging from very good criteria until very poor criteria.

d. Tabulating

The researcher composes and puts the data into a table and then counts its percentage by using the following formula:

$$P = \frac{F}{N} \times 100$$

P = Percentage

F = The frequency of answer from respondents for each item

N = Number of respondents

e. Data Interpretation

The data are described by the researcher's interpretation without changes means of the data. This technique can help the researcher to answer the research problem systematically.

## 2. Data Analysis

To conduct an analysis of the first formulation of the problem, that is the students' English between students taught by using vocabulary notebook and students taught without using vocabulary notebook, the research uses analytical techniques comparative test "t" (Students' test) by the formula of Anas Sudijono (2009):



$$T = \frac{M_1 - M_2}{SE\ M_1 - M_2}$$

Description:

T = Tests are being sought

M1 = Mean students taught by using vocabulary notebook

M2 = Mean students taught without using vocabulary notebook

SE M1-M2 = Standard error difference in mean students who are taught by using vocabulary notebook and taught without using vocabulary notebook.

This technique is used to analyzed right or wrong about hypothesis of the research. If the result of the test (to) is same or higher than *ttable* (tt), then Zero hypothesis (Ho) is rejected, but if the result of test (to) less than *ttable* (tt) then, Zero hypothesis (Ho) is accepted.

The application way to use student “t” or test “t” or (t) code formula:

1. Looking for Mean Variable I by using the following formula:

$$M_x \text{ or } M_1 = \frac{\sum x}{N_1}$$

M1 : Mean of the control class of MTsN 9 HSS

$\sum x$  : Accumulative of the total score of the control class of MTsN 9 HSS

N1 : Number of subject of the experiment class of MTsN 9 HSS

2. Looking for Mean Variable II by using the following formula:

$$M_y \text{ or } M_2 = \frac{\sum y}{N_2}$$

M2 : Mean of the experiment class of MTsN 9 HSS

$\sum y$  : Accumulative of the total score of the experiment class of MTsN 9 HSS

$N_2$  : Number of subject of the experiment class of MTsN 9 HSS

3. Looking for standard Deviation for variable I by using the following formula:

$$SD_x \text{ or } SD_1 = \frac{\sqrt{\sum x^2}}{N_1}$$

$SD_1$  : Standard Derivation of the control class of MTsN 9 HSS

$\sum x^2$  : Accumulative of the quadrat of deviation of the control class of MTsN 9 HSS

4. Looking for standard Deviation for variable II by using the following formula:

$$SD_y \text{ or } SD_2 = \frac{\sqrt{\sum y^2}}{N_2}$$

$SD_2$  : Standard Derivation of the experiment class of MTsN 9 HSS

$\sum y^2$  : Accumulative of the quadrat of deviation of the experiment class of MTsN 9 HSS

5. Looking for standard error for Mean Variable I by using the following formula:

$$SD_{Mx} \text{ or } SE_{M1} = \frac{SD_1}{\sqrt{N_1 - 1}}$$

$SE_{M1}$  : Standard Error of the control class of MTsN 9 HSS

1 : Value of constant

6. Looking for standard error for Mean Variable II by using following formula:

$$SD_{my} \text{ or } SE_{M2} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

$SE_{M2}$  : Standard Error of the experiment class of MTsN 9 HSS

I : Value of constant

7. Looking for standard Error for comparative Mean Variable I and Mean

variable II by using the following formula:

$$SE_{M1-M2} = \sqrt{SE_{M1} + SE_{M2}}$$

$SE_{M1-M2}$  : Standard error for comparative mean of control class and experiment class of MTsN 9 Hulu Sungai Selatan

$SE_{M1}^2$  : Quadrat result of standard error of mean of the control class of MTsN 9 HSS

$SE_{M2}^2$  : Quadrat result of standard error of mean of the experiment class of MTsN 9 HSS

8. Looking for t, by using the following formula:

$$T_{\text{test}} = \frac{M_1 - M_2}{SE_{M1-M2}}$$

T : value of t observation

9. Giving interpretation for “t” with consulting (“t”table):

- Looking for Degree of Freedom :

$$Df / db = (N_1 + N_2) - 2$$

$N_1$  = number of subject of the control class of MTsN 9 HSS

$N_2$  = number of subject of the experiment class of MTsN 9 HSS

2 = value of degree of freedom for two variables

- Consulting score of “df/db” with “t table”

Ttable = value of critic “t”

- In significant degrees t *tabel* 5%
- In significant degrees t *tabel* 1%
- Making hypothesis interpretation :
  - $H_0$  (Zero Hypothesis ) : there is no significant difference
  - $H_a$  (Alternative Hypothesis) : there is a significant difference

- Consulting "*t<sub>o</sub>*" with "*t table*"

If the value of "*t<sub>o</sub>*" is higher than the value of *t<sub>table</sub>*"

*H<sub>0</sub>* is rejected, *H<sub>a</sub>* is accepted.

If the value of "*t<sub>o</sub>*" is lower than the value of *t<sub>table</sub>*"

*H<sub>0</sub>* is accepted, *H<sub>a</sub>* is rejected.