CHAPTER III

METHOD OF THE RESEARCH

A.   Research Method

Research is equally important for social scientists in studying social relationships and in seeking answers to various social problems.[1]

Nunan said that "Experiment is a procedure for testing a hypothesis by setting up a situation in which the strength of the relationship between variables can be stated".[2] This study employs experiment method. The writer will teach writing in two different classes using two different methods. To find out which method is more effective, in the beginning of the lesson the writer will give the pre-test to the student of both class to find out both group have relatively the same level of competence. In the experiment class the writer teaches writing skill using plot diagram method while in the control class the writer teaches it using explanatory method. At the end of the experiment, the writer will administer post-test to the classes and compare the test result using T-test formula.

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[1] C.R. Kothari, *Research Methodology: Method and Techniques* (New Delhi: New Age International, 1990, p 1.

[2] David Nunan, *Research Method in Language Learning* (New York: Cambridge University Press, 1992, p. 230.

B. The Place and time of the Research

To examine the effect of plot diagram in student's writing skill this research was held at second grade of SMP Negeri 2 Cikande, 2nd semester, and the academic year of 2017-2018.

C. The Population and Sample

According to Suharsimi Arikunto, a population is a set (or collection of all elements processing one or more attributes of interest.[3] The population in this research is students of second grade of SMP Negeri 2 Cikande. There are 243 students of second grade. The eighth grade consists of seven classes. Number of VIII A is 35 students, VIII B is 35 students, VIII C is 35 students, VIII D is 35 students, VIII E is 35 students, VIII F is 34 students, and VIII G is 34 students.

Sample is collecting data with small amount of population that tested at the research. Nunan stated that "sample is a subject of individual or cases from within the population".[4] In taking sample the researcher use no random technique, because it is one of the characteristic from experiment.

The writer took only 50 of students at eighth grade. The writer took two classes as sample for the research. First is VIII C class as experiment class which consists of 25 students and they

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[3] Suharsimi Arikunto, *Prosedur Penelitian*, (Jakarta: Rineka Cipta. 2010, p. 173

[4] Nunan, *research method in language* learning,231

were taught writing skill using plot diagram technique. Second is VIII D class as control class which consists of 25 students and they were taught writing skill without using plot diagram technique.

D. The Techniques of Data Collecting

In techniques of data collecting, writer uses teaching and learning process by giving the test to the students. The writer obtained the data by conducting teaching activity and collecting students' test scores from both experiment class and controlled class before and after they have been taught writing skill. The test was conducted at the first meeting that can be called pre-test and the fifth meeting that can be called post-test which the scores were the result of learning writing skill through plot diagram and without plot diagram.

Before giving the test to the students, the writer consulted to the English teacher about the questions she made, whether these questions can be given to the students. The writer gave the same kind of test for both the experimental class and the controlled class.

E. The Instrument of the Research

The research instruments used by the writer in collecting data are

1. Pre-Test

The writer did the pre-test when she for the first time entered the class. It is aimed to know the students ability in material of writing skill which given by the writer.

2. Post- test

Post-test was done in order to know the changeable on student's writing skill material between learning process with explanatory method and learning process through plot diagram..

F. The Techniques of Data Analysis

The technique of analysis data in this research uses t-test. According to Anas Sudijono Test-t is used for testing the null hypothesis of the mean differences of two samples.[5] Because the experiment use pre-test and post-test then the writer uses this test to measure the final test between experiment class and control class.

The steps for statistic analyze that are[6] :

a. Determining mean of variable x with formula :

$$M_{1=\frac{\sum x}{N_1}}$$

[5] Anas Sudijono, *Pengantar Statistik Pendidikan*. Jakarta: PT Raja Grafindo, 2014. P. 307

[6] AnasSudijono, *Pengantar Statistik Pendidikan*. P. 314

b. Determining mean of variable y with formula :

$$M_{2=\frac{\sum y}{N_2}}$$

c. Determining derivation score variable X with formula :

$$x = x_{-\ M_1}$$

d. Determining derivation score variable x2 with formula :

$$y = {}_{y- M_2}$$

After collecting the data from pre-test and post-test, the researcher analyze it by using statistic calculation of t-test by using fisher formula with significance degree 5% and 1%. The formula is as follow:

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{N_1 + N_2 - 2}\right)\left(\frac{N_1 + N_2}{N_1.N_2}\right)}}$$

Notes:

M_1 = Mean score of the experiment class

M_2 = Mean score of the control class

$\sum x^2$ = Sum of square deviation score in experiment class

$\sum y^2$ = Sum of square deviation score in control class

N_1 = Number of students of experiment class

N_2 = Number of students of control class

2 = Constant number

df = Degree of Freedom (df = $N_1 + N_2 - 2$)