

CHAPTER III

METHODOLOGY OF RESEARCH

A. The Research Method

Research methodology is a way to systematically solve the research problem.¹In this research the researcher using a quantitative research and using of quasi experimental method, because the aim of the method is to find effectiveness of a method, beside that to get data the researcher use pretest and posttest toward the subject of research.

The variety of quasi experimental design can be divided into two main categories they are pre-test and post-test group design. In this research, the researcher applied quasi experimental that is pre-test and post-test group design.

Quantitative research is means for testing objective theories examining the relationship among variables.²

The types available in experiments are:³

¹ C.R Kothari, *Research Methodology Method and Techniques*, New Age International (India, 2004), p. 8.

² John W. Creswell, *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*(London: 2009),p.4.

³ John W. Creswell, *Research Design Qualitative, Quantitative, an Mixed Methods Approahess*(London:2009),p.15.

1. Pre experimental design

The researchers studies a single group and provides and intervention during the experiment. This design does not have a control group to compare with the experimental group.

2. True experiments

The investigator randomly assigns the participants to treatments group

3. Quasi experiments

The investigator uses control and experimental groups but does not randomly assign participants to groups. Creswell states that we can apply the pre-test and post-test approach to quasi experimental design.

Based on those explanation above the researcher using Quasi experiments research, the researcher using two classes, one class in experiment class, the researcher use Animation Movie treatment to know the effectiveness of using Animation Movie in students' writing skill, and in control class the researcher did not use using Animation Movie in Student writing skill

B. Place and Time

In research activity, the researcher needed the location of research to get attractive. The researcher take place for research at 10th senior of high school in SMA Negeri 8 Pandeglang. Later the researcher must be clarify when the research will take the time it depends on research problem. The researcher will be starting the experimental at July 14 2019 until finish.

C. Population and Sample

1. Population

Population is a group of individuals who have the same characteristic.⁴ The population of this research is the students 10th senior high school in SMA Negeri 8 Pandeglang, provinsi banten, they are 180 students.

2. Sample

A sample is a subgroup of the target population of the target population that the researchers plan to study for generalizing about the target population.⁵

⁴ John W. Creswell, *Educational Research*, (University of Nebraska-Lincoln 4th – ed,2008)p. 142.

⁵ John W Creswell, *Educational Research*, (University of Nebraska-Lincoln 4th – ed, 2008) p. 142.

The samples of this research are two classes. One classes as the experimental class who the student were taught Using Animation Movie in IPS 5 class 10th And class as control class without Using Animation Movie in IPA 4 class 10th there are 36 students for experiment class and 36 students for control class and the total number of students is 72

D. The Research Instrument

In this research, the researcher use pre-test and post-test as instruments to know the effectiveness of Using Animation Movie to Improve students Writing Narrative text. Because with this test the writer would like to gives the score of comprehension on writing.

The researcher give two kind of test, there are as follows:

1. Pre –test

The test that is given to both of control class before giving treatment non Animation movie as a technique and experiment class before given treatment with Animation movie as a technique

2. Post –test

The test that is given to both of control class after given the treatment non Animation movie as technique and experiment class after given treatment with Animation movie as a technique.

E. The Technique Data Collecting

In collecting the data, the researcher used test to know the student writing ability. Collecting data means identifying and selecting individuals for a study. The technique collecting data used this research :

1. Pre-test

The pre-test provide a measure to experiment and control class. Pre-test used to first meeting to know the students writing ability before the treatment is given to the students.

2. Post-test

The post-test also administered after giving the pre-test and the treatment to know the students writing ability in making transactional in a students.

F. The Technique of Data Analyzing

For the next step of the research, the researcher process and analysis the data. The researcher compares the data between the experiment and control classes.

To find out the differences students' score by Animation Movie, the researcher will use the statistical calculation of the 't' test.

In analyzing the result of the final test statistics of t-test is used with a significant degree 5% and 1% as follows:⁶

$$t_o = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 \cdot N_2}\right)}}$$

M_1 = Mean score of the experiment class

M_2 = Mean score of the control class

$\sum x_1^2$ = Sum of square deviation score in experiment class

$\sum x_2^2$ = 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 = $N_1 + N_2 - 2$)

Next the writer will take the square root of the result:

1. Determine Mean of Variable X_1 :

$$M_1 = \frac{\sum X_1}{N_1}$$

2. Determine Mean of Variable X_2 :

$$M_2 = \frac{\sum X_2}{N_2}$$

⁶ Anas Sudijono, *Pengantar Statistic Pendidikan* (Jakarta: Raja Grafindo Persada, 2012), 317.

3. Determine score deviation of Variable X_1 :

$$x_1 = x_1 - M_1$$

4. Determine score deviation of Variable X_2 :

$$x_2 = x_2 - M_2$$

5. The squaring of X_1 , then add up; obtained Σx_1^2
6. The squaring of X_2 , then add up; obtained Σx_2^2
7. Determine t_0 :

$$\frac{M_1 - M_2}{\sqrt{\left(\frac{\Sigma x_1^2 + \Sigma x_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 \cdot N_2}\right)}}$$

8. Determining t-table in significance level 5% and 1% with df:

$$df = (N_1 + N_2) - 2$$