

CHAPTER III

METHODOLOGY OF RESEARCH

A. Research Method

First of all, it is better to know what research method is before discussing more about the topic. Kothari defines that “research is a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation”.¹ The writer conclude, research methodology is a way to systematically solve the research problem.

In this research, the researcher uses quantitative research. Quantitative research is a process of finding knowledge of the use of data a number as a means of finding information about what we want to know. The researcher use quantitative research because she would collect the data from certain sample and give the result in a form of statistic. Quantitative approach stressed the analysis to the numerical data that is processed by statistical method. It will explain the result of pre-test and post-test.

The research is conducted as experimental research, because the writer is not teacher in the research place; According to Suharsimi Arikunto, “experiment research is research which is intended determine whether there is a result of something imposed on the subject inquired”.² On the other hand, David Nunan said that “Experimental method is used here designed to collect data in such a way

¹ C. R. Kothari, *Research Methodology: method & technique*, (India: New Age International (P) limited publisher, 2004), p. 1.

² Suharsimi Arikunto, *Manajemen Penelitian*. (Jakarta: PT. Rineka, copyright), p.207

that threats to reliability and validity of research are minimized”.³ Based on the statement, Experimental research is a procedure for testing hypothesis by setting up variables which can be tested.

In this research, any two groups namely experimental class and control class. Experimental class is a class of treatment in the form a strategy index card match, and the control class is the class that used method conventional. Based on the type issues this research, the researches used the quasi experiment because this study a control group that used not really be used as a control.

The researches used the experimental and control class design with:

Control group, pre-test, post-test design

E	O ₁ x O ₂
K	O ₃ O ₄

Where:

E : Experiment Class

X : Treatment

K : Control Class

O₁ & O₃ : Pre-test

O₂ & O₄ : Post-test

³ David, Nunan, *Research Method in Language Learning*, (Cambridge: Cambridge University Press, 1992), p. 47.

B. Place and Time of Research

Research will be conducted at MTs Yabika Jambe – Tangerang. This school is located on Jl. Perum Asabri Ds. Kutruk Kec. Jambe Kab. Tangerang.

The writer chooses this place because this school so near with the writer house. The writers hope this technique will develop the student reading comprehension especially in learning descriptive text.

C. Population and Sample

1. Population

Population is the generalization region consisting of: object / Subject that have certain qualities and characteristics defined by the researchers to learn and then drawn conclusions.⁴

Population is all of elements processing that will be investigated. Kothari said that “All items in any field of inquiry constitute a ‘Universe’ or ‘Population’.”⁵

In MTs. Yabika Jambe – Tangerang, has 3 classes of the seventh grade from VII A until VII C consisting of 25 students in the class VII A, 35 students class VII B and 31 Students in the class VII C. So the populations are 91 students.

2. Sample

Kothari said that “The selected respondents constitute what is technically called a ‘sample’ and the selection process is called ‘sampling technique’.”⁶ The researches use the purposive sampling because its looked by the purposes the

⁴ Sugiyono, *Metodologi Penelitian Kuantitatif, Kualitatif dan R&D* (Bandung: Alfabeta, CV, 2008), 80

⁵ C.R Kothari, *Research Methodology: Methods & Technique*. 55

⁶ C.R Kothari, *Research Methodology: Method & Technique*. 55

researcher need two class for control and treatment class. Sample of this research are class VII A as a class experiment with number of 25 students and class VII C as the control class with number 31 students. Then, the sample of this research is 56 students.

D. The Research Instrument

Instrument is an important in the research from the certain kinds of test. In this research, the writer will be able to collect the data by using the research instrument such as Pretest and Posttest Design and observation to get the data by giving the students a pretest, treatment more than once, then post-test, and compare the result, and take the conclusion. And then the scores which can be used to identify, classify, and give an achievement to the student.

E. Technique of Data Collecting

In this process, to collecting data the writer uses several techniques of data collecting in this research, as follow:

1. Test

Test is a question which is used to measure competence, knowledge, intelligence, and ability of talent which is possessed by individual or group to collect data.⁷ In this research, there were two kinds of test, pre test and post test that were given to the students as participants, either the experimental or the control group. Before carrying out the teaching, the pre test was given to both groups in order to make sure that the two groups have similar and equal level of proficiencies. The post test was given to the experimental group after being taught

⁷ Suharsimi Arikunto, *Manajemen Penelitian*. (Jakarta: PT. Rineka, copyright),p.150

by Index Card Match Strategy and the writer use the test by multiple choices forms.

2. Observation

Observation is a way to gather data by observing or observing an object research or event in the form of a human, inanimate objects, and natural. Data obtained was to determine the attitude and behavior of humans, dead or natural phenomena.⁸ In this research, the researcher use observation to observe the teacher to apply the index card match strategy on student reading descriptive text in teaching learning process.

F. Technique of Analysis Data

The last aspect of the research methodology is data analysis. It is a way that used to find out the effectiveness of Index Card Match on student reading on descriptive text. The technique of the data analysis that the researcher uses in this research is T-test. The writer uses observation t-test, then the data is analyzed by using statistic collection of the data t-test.

- a. The result of the pre-test and post-test in experiment class named variable (X)
- b. The result of the pre-test and post-test in control class named variable (Y)
- c. Qualification of data: multiple choices.

The steps for statistic analyze are:

- 1. Investigating student worksheet give s and describe score in the table
- 2. Determining mean of variable X with formula :

⁸ Sugiyono, *Metode Penelitian Pendidikan*, (Bandung, Alfabeta:2010). P.87

$$Mx = \frac{\sum x}{x}$$

3. Determining mean of variable Y with formula :

$$My = \frac{\sum y}{y}$$

4. Determining derivation score variable X with formula :

$$X = x_2 - x_1$$

5. Determining derivation score variable Y with formula:

$$Y = y_2 - y_1$$

After all of data have been collected and than those data will be processed, analyzed, and analyzed, and least is concluded. The writer uses observation t-test, then the data is analyzed by using statistic collection of the data t-test.

$$t = \frac{Mx - My}{\sqrt{\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2} \left[\frac{1}{Nx} + \frac{1}{Ny} \right]}}$$

T = Test

M = Means of each group from the deviation

X^2 = Squared Deviation

Y^2 = Squared Deviation

X = The deviation of every X_1 and X_2

Y = The deviation of every Y_1 and Y_2

N = Number of students

df = degree of freedom

$$df = N_x + N_y - 2$$

6. The result of calculating t-test with t-table

G. Research Procedure

In general, the procedure of research can be described as follows:

1. Preparing the appropriate material for teaching and learning process during the treatment.
2. Organizing teaching procedure by using Index Card Match with following steps.
 - a. The teacher explained the rules of Index Card Match
 - b. The teacher gave the exercise
3. Organizing research instrument
4. Administrating the pre-test for student to find out the initial abilities within.
5. Giving the experimental group a Index Card Match
6. Administrating the post-test for student to find out the effectiveness index card match on student reading comprehension on descriptive text after giving index card match
7. Administering the quantification data using to find out more information about the effectiveness of index card match based on student's point of view
8. Analyzing the data collected from pre-test and post-test.