CHAPTER III

METHODOLOGY OF THE RESEARCH

A. Research method

The research was used an experimental research; experimental research is a producer for testing a hypothesies by setting up a situation in which the strength of the relationship between variables can be tested.[1]

There are three kinds of experiments research, such as : pre experiment, quasi experiment and true experiment[2].

1. A pre-experiment may have pre and post treatment tests, but lacks of control group.
2. A quasi experiment has both pre and post-test and experiment and control groups, but not random assignment of subjects.
3. True experiment consists of a control and an experiment groups to which subject have been randomly assigned, and in which all subjects are tested before and after the intervention of treatment under investigation has been administered to the expetiment group.

In this research, the researcher takes quasi experiment and uses non equivalent control group design that takes two classes consist of the students of group who are given the jigsaw technique and without the jigsaw technique.

[1] David Nunan, *Research method in language learning*, (Cambridge University Press, 1992), 230.

[2] David Nunan, *Research Method*, 230.

B. Research site

Research was conducted in MTs Darul Irfan Kota Serang. The school is located in Lebak Gempol Serang Banten. The researcher took this school because this research based on the researcher's experience when conducting Educational Field Practice Program (PPLK) in MTs Darul Irfan for two months, therefore researcher determine this place according to the problem has found in PPLK.

C. Population and sample

1. Population

   Population is all cases, situations individuals who share one or more characteristic.[3] Meanwhile Arikunto stated " Population is the whole of the research subject,"[4] The population of this research are 108 students of class VII MTs Darul Irfan Kota Serang.

2. Sample

   Sample is is a subset of individuals or cases from within population.[5] Arikunto stated " sample is a representative of the population which studied or to generalize research result to the population.[6] And the reseacher takes purposive sampling because subjects are handpicked by the researcher on the basis of her estimates of

[3] Mertens, M. Donna, *Research And Evaluation In Education And Psychology* 3th Ed (SAGE Publications, Inc), 23.

[4] Suharsimi Arikunto, *Prosedur Penelitian*, (Jakarta: Rineka Cipta, 1998), 130.

[5] David Nunan, *Research Method In Language Learning* " (New York : Cambridge University Press, 1992), 232.

[6] Arikunto, *Prosedur Penelitian*,131.

their typicality, and the samples of this research are 50 students of class VII C and D.

The sample is taken by using non-probability sample which sample derives from the researcher targeting a particular group, in the full knowledge that it does not represent the wider population; it simply represents itself. This is frequently the case in small-scale research.[7]

In this research, the researcher will take class VII B and VII C of MTs Darul Irfan Kota Serang as the sample. Sample will take as many as 50 students with 25 students as a control class and 25 students as an experimental class, because each classes consists of 25 students.

D. Research instrument

1. Lesson plan

   Lesson plan is used for treatment process. The purpose is to make systematical learning process. This lesson plan is attached.

2. Scoring sheet

   Scoring sheet is used to make the researcher know about the students' speaking ability. After giving test to students the researcher has measured the result of them by the purpose to analyze the test that was given by the researcher.

[7] Louis Cohen, Lawrence Manion, and Keith Morrison, *Research Methods in Education*, (New York: Routledge, 2007), 112.

3. Tape recorder

Recoding was used to record the students' voice when they speak during the test. The researcher used a tape recorder like a handphone. The purpose this recording is to analysing the scoring rubric of speaking.

E. Data collecting technique

There are several techniques taken by the researcher in collecting data as follows :

1. Observation

Observation is technique to collect the data through observing the field. The researcher observed the class activity to know the situation and see interaction between English teacher with the students while the teaching-learning process.

2. Test

The test is a series of questions or exercises to measure the skills, knowledge, intelligence, ability or talent possessed by individuals or groups.[8]

a. Pre-test

Pre-test was used to collect the data about student's speaking ability before getting treatment for experimental class and before getting no

[8] Supardi dan Darwansyah, *Research Pengantar Statistik Pendidikan*, (Jakarta; Diadit Media, 2009), 14.

treatment for control class, the test was administred to the seventh grade students at MTs Darul Irfan Kota Serang.

b. Post-test

Post-test was used to collect the data about students speaking ability after getting treatmentfor experimental class and after getting no treatment for control class. the test was administred to the seventh grade students at MTs Darul Irfan Kota Serang. Then the researcher took the total score from the result of speaking test.

F. Data analysis technique

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

The steps for statistic analysis are :

1. Determining mean of variable XI with formula :

$$M_1 = \frac{\sum x_1}{N_1}$$

2. Determining mean of variable X2 with formula :

$$M_2 = \frac{\sum x_2}{N_2}$$

3. Determining derivation score variable X1 with formula :

$$x_1 = x_1 - M_1$$

4. Determining derivation score variable X2 with formula :

$$x_2 = x_2 - M_2$$

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 :

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

Notes :

M_1 = Mean score or the experiment class

M_2 = Mean score of the control class

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

$\sum x_2^2$ = Sum of square derivation score in control class

N_1 = Number of student of experiment class

N_2 = Number of student of control class

2 = Constant number

df = Degree of freedom (df = N_1+ N_2- 2)

3. Research Prosedure

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

a. Provide pre-test of the experimental class and control class.

b. Provide treatment to the experimental class using jigsaw technique and control class without jigsaw technique as follow:

1) Experimental class

a) Preparation

- Preparing the lesson plan
- Preparing the material
- Preparing the jigsaw technique

b) Implementation

- Teacher explain the material
- Teacher gives the example
- Teacher guide students to make a group and disscus the material.
- Teacher guide students to speak the result of disscussion by using jigsaw technique.

2) Controlled class

a) Preparation

- Preparing the lesson plan
- Preparing the material

b) Implementation

- Teacher explain the material
- Teacher gives example
- Teacher ask students to speak in front of the class

c. Provide post-test of the experimental class and control class.

d. Analyzing the data from pre-test and post-test.