

## CHAPTER III

### METHODOLOGY OF RESEARCH

#### A. Method of Research

Research is a systematic process of inquiry consisting of three elements or components:

1. A question, problem, or hypothesis
2. Data
3. Analysis and interpretation of data

In this research, the writer use quantitative method. Quantitative research is obtrusive and controlled, objective, generalisable, outcome oriented, and assumes the existence of facts which are somehow external to and independent of the observes or researcher.<sup>1</sup>

In this research the writer use experimental, experimental researchers are particularly concerned with the issue of external validity, and the formal experiment is specifically designed to enable the researcher to extrapolate the outcomes of the research from the sample to the broader population.<sup>2</sup>

Type of experiments:

1. Pre-experiment : May have pre- and post treatment test, but lacks a control group.
2. Quasi-experiment : Has both pre- and posttests and experimental and control group, but no random assignment of subjects.
3. True experiment : Have both and posttests, experimental and control groups, and random assignment of subjects.

In this research the writer use quasi-experiment for research in classroom, where David Nunan said “quasi-experiment is has both pre and posttests and experimental and control groups, but no random assignment of subjects”.<sup>3</sup>

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<sup>1</sup> David Nunan, *Research Methods in Language Learning*, (Cambridge: University Press, 1992). P. 3

<sup>2</sup>David Nunan, *Research Methods in Language Learning*. P.47

<sup>3</sup>David Nunan, *Research Methods in Language Learning*. P. 41

The writer took this method because in this method the researcher gave certain treatment to the experimental class to find: is there the improving students' reading comprehension through Listen-Read-Discuss (L-R-D) strategy?

## **B. Instrument of Research**

Instrument in this research is equipment applied to obtain data or information relates to independent variable which has been specified covering instrument of test and non test. The instruments that will be used by the writer in this research are tests. The tests consists pre-test and post test.

### **1) Pre-test**

Pre-test is a test that given to students before treatment. The multiple choice test given to knows the students' ability before treatment.

### **2) Post-test**

Pre-test is a test that given to students after treatment. The multiple choice test given to knows the students' ability after treatment. In this test, the writer would know the result of this research.

## **C. The Population and Sample**

### **1. Population**

Population is the object under study, whether it be people, objects, events, values and the things that happen.<sup>4</sup> The target population is junior Islamic high school SMPIT Bismilah Padarincang academic year. In this research, the writer researches second grade students which consist of 50 students of junior Islamic high school SMPIT Bismilah Padarincang, will be taken as population.

### **2. Sample**

According to Arikunto, sample is sub group of research population as individual.<sup>5</sup> Dealing with the research, in second grade of junior Islamic high school SMPIT Bismilah Padarincang 2017/2018 there are 2 classes each class consist of 25 students. The researcher determine research sample by taking students of VIII A and VIII B as the sample which groups, with 25 students each.

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<sup>4</sup>ZainalArifinM.Pd, 2011, *PenelitianPendidikan*, (Bandung: PT. RemajaRosdaKarya), P. 215

<sup>5</sup>SuharsimiArikunto, *ManajemenPenelitian*, (Jakarta, PT Rineka Cipta,1998), p.125

One group will give the treatment using Listen-Read-Discuss strategy to improve reading comprehension, and another group without giving the treatment.

#### **D. Place and Time of the Research**

The data needed of this research will be taken from the students' scores from the second grade of junior Islamic high school SMPIT Bismilah Padarincang. The writer will conduct this research on November 14, 2017 until this research is finished.

The writer chooses this place, because this school is representative need to research and there is data needed in the research and also it is strategic locations to find that location well from the accommodation or transformation. So, that's enable the writer to conduct the research.

#### **E. The Technique of Data Collecting**

As the study in intended to improve reading comprehension to the students, the writer took steps as follows:

##### **1. Test**

Test is a set of stimuli (stimulus) that is given to a person with the intent to get a response that can be used as the basic for scoring points.<sup>6</sup> The writer takes the objective test as one of the instruments used. It was the questions to measure the students ability before and after learning. The test item was tried out at the second grade of junior Islamic high school SMPIT Bismilah Padarincang, type of test that is given to the students are pre test and post test. The writer gave the students two test namely pre-test and post-test. Pre-test was given before the writer began teaching a unit of instruction in the class. After finishing teaching in the class, the writer gave the post-test. The post-test score was used as data analysis in the research.

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<sup>6</sup>SuharsimiArikunto, *ManajemenPenelitian*. P.139

## 2. Interview

Interview is a technique of data collection is done through conversation and question and answer, either directly or indirectly by respondent to achieve certain goals. There are two types of interviews, namely:

- a. Direct interview, the interview is conducted directly between the interviewer and the interviewee without going through intermediaries.
- b. Indirect interviews, is the interviewer asks something to the respondent through an intermediary, such as a questionnaire. That is, the researchers did not see a direct respondent.

There are three forms of interview questions which can be used in the study, namely:

- a. Forms of structured questions, the questions that require answers to match what is contained in the question.
- b. Form of unstructured questions (open-ended), the open-ended questions where respondents are free to answer this question.
- c. Form of a mixture of questions, the questions that require answer mixture, there is a structured and some are free.<sup>7</sup>

From the explanation about the kind of interviews, the writer use direct interview where the interview is conducted directly between the interviewer and the interviewee without going through intermediaries, and the explanation about the forms of interview questions, the writer chose to use the form of structured questions where questions that require answer to conform to what is contained in the question. The writer is required before the interview process of English language teachers in junior Islamic high school SMPIT Bismilah Padarincang. To know the ideas about teaching learning process in general and especially ways in reading comprehension and the students way in learning English especially using Listen-Read-Discuss strategy on students reading comprehension. The writer does the interview directly to the principal English teachers and other educational teachers to get the complete data the students achievement in learning English.

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<sup>7</sup>ZainalArifin,*PenelitianPendidikan*, p.233

This interview to aim for:

- a. Students
- b. Teacher

The interview done after research to know is there the improving students' reading comprehension through Listen-Read-Discuss (L-R-D) strategy ?

#### **F. Scoring System**

Student's Final Score =  $\frac{\text{the sum of the right answer}}{\text{the sum of the item (25)}} \times 100$

$$S = \frac{R}{N} \times 100$$

S = Student's Score

R = The sum of the right answer

N = The sum of the items.<sup>8</sup>

#### **G. The Technique of Data Analyzing**

The last step of the research methodology is analyzing the data. Data analysis is a last aspect of the research. It is a way to find out is there the effectiveness of using Listen-Read-Discuss (LRD) strategy on students' reading comprehension. To test the hypothesis, the writer use *t*-test. The research will compare the score result of two groups, so the inferencial statistic used is *t*-test. It is suitable to the statement of David Nunan who said that "when comparing two means, ....the appropriate test is *t*-test, which carries out the sorts of analytical procedures we have just examined. The great disadvantage of *t*-test is that it can compare only two groups".<sup>9</sup>

After collecting the data, the writer qualifies it based on it is kind. To analyze data, the writer uses two approaches. Those are logical approach for qualitative data and statistical approach for quantitative data. To compare the result of research between experimental class and control class, the writer uses step as follow:

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<sup>8</sup> H. Douglas Brown, *Language Assessment: principles and Classroom Practices* (USA: Longman,2004),p.59

<sup>9</sup> David Nunan, *Research Methods in Language Learning*. P.35

1. Determining mean of score experiment class (MX), through formula:

$$MX = \frac{\sum X}{N}$$

2. Determining mean score control class (MY), through  $MY = \frac{\sum Y}{N}$

3. Determining total square of error of experiment class (X), through formula:

$$\sum X^2 = \sum X^2 - \frac{(\sum X)^2}{N}$$

4. Determining the total square of error of control class (y), through formula:

$$\sum Y^2 = \sum Y^2 - \frac{(\sum Y)^2}{N}$$

5. Calculating T-test, the researcher used the formula stated by SuharsimiArikunto as follows:

$$t = \frac{MX - MY}{\sqrt{\frac{(\sum X^2 + \sum Y^2)}{Nx + Ny - 2}}} \left( \frac{1}{Nx} + \frac{1}{Ny} \right)$$

6. Determining the degree of freedom, by formula:

$$Df = Nx + Ny - 2$$

Notes:

MX : Mean of experiment

MY : Mean of control class

$\sum X^2$  : The total square of error of experiment class (X)

$\sum Y^2$  : The total square of error of control class (Y)

N : the number of subject