CHAPTER III RESEARCH METHODOLOGY

This chapter discusses methodology that is used by the researcher in the research. It deals with the type of research, research design, place and time of the research, population, variables, instruments, technique of collecting data, and technique of data analyses.

A. Type of Research

Research is defined as "the systematic and objective analysis and recording of controlled observations that may lead to the development of generalization, principles, or theories, resulting in prediction and possibly ultimate control of events". In this research, the researcher uses experimental quantitative research. It is quantitative because it emphasizes the systematic measurement and quantification of variables, statistical analysis of the quantitative data, and the use of mathematical models.²

B. Research Design

Before doing the research, the researcher arranged a research design. Research design refers to the outline, plan, or strategy specifying the procedure to be used in collecting data in a research.³ This research used experimental design which its purpose is to search or compare the certain treatment toward other within controlled condition.⁴ This kind of experiment is true experimental design in form of pretest-posttest control group design. Here, there are two groups which have been chosen randomly (R). Both two groups are given pretest to know the first condition whether or not there is a difference of competence level between them. The pretest result is said well if

¹John W. Best, *Research in Education*, (Prentice-Hall, Inc. London, 1981), p. 18.

²Donna M. Johnson, *Approach to Research Second Language Learning*, (London: Longman, 1992), p.34.

³Bambang Setiyadi, *Metode Penelitian Pengajaran Bahasa Asing*, (Yogyakarta : Graha Ilmu, 2006), 1st Ed, p. 125.

⁴Sugiyono, *Metodologi Penelitian Pendidikan, (Pendekatan Kuantitatif, Kualitatif, dan R&D*), (Bandung: Alfabeta, 2010), 9th Ed, p. 112

there is no significant difference. After giving pretest, the experimental group is given a certain treatment (X) while the control one is not. Here, the treatment refers to the teaching by using English songs. The design can be figured out as follow.

Figure 1.The design of experimental research

牵1	O_1	X	O_2
R_2	O_3	_	O_4

In which: R1 =The experimental group

R2 = The control group

O1 = Pre-test of experimental group

O2 = Post-test of experimental group

O3 = Pre-test of control group

O4 = Post-test of control group

X =The treatment of experimental group

C. Place and Time of Research

The researcher would like to choose the grade eleventh of MAN 02 Pekalongan which is located in Jendral Urip Sumoharjo street - Pekalongan 51111. The researcher conducted the research on 29th October 2010 to 12th November 2010.

D. Population

Population is defined as the whole of the study.⁵ It is a set (or collection) of all elements processing one or more attributes of interest. The population in this research was all students of grade eleventh of MAN 2 Pekalongan in academic year of 2010/2011. The number of the entire students

⁵Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*, (Jakarta: PT Rineka Cipta, 2006), 13th Ed., p.130.

was 380 students, in which each class consists of 36 students. But some classes consist of 33 students.

E. Variables

Variable refers to the object of the research that becomes the research focus. Variable is a variation object of the study. There are two types of variables: dependent variable (y) and independent variable (x). The dependent variable is the variable of focus or the central variable on which other variables will act if there is any relationship. The independent variable is selected by researcher to determine the relationship with the dependent variable. So, the variables in this study are:

1. Independent Variable (x).

Independent variable in this research is the use of English song in teaching simple past tense.

2. Dependent Variable (y).

Dependent variable in this study is the simple past tense achievement score of students at the eleventh grade of MAN 02 PEKALONGAN.

F. Technique of Collecting Data

In gaining the data, the researcher attempts to employ these following techniques:

1. Test

Test is a set of questions and exercises used to measure the achievement or capacity of the individual or group.⁷ The participants of this research are students of grade eleventh of MAN 2 Pekalongan. The research used English songs as the media in teaching past tense. The purposes of the test were to know students' achievement in grammar,

⁷Douglas Brown, *Teaching by Principles: An Interactive Approach to Language Pedagogy*, (New York: A Person Education Company, 2001), 2nd Ed., p. 384.

⁶*Ibid.*, p. 118-119.

aspect of simple past tense both the students who have been taught using English song and those who have been taught using traditional technique. There are 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 to make sure that two groups had similar and equal level proficiencies. The post test was given to the experimental group after being taught using the song and was given to the control group being taught using the traditional technique.

The instrument of the test in this research is objective test. There are many kinds of objective tests; they are true-false test, multiple choice tests, matching test and completion test. The writer used multiple choice forms which are choosing the correct answer by giving underline since it was easy to score and administer. The choice of the test type is based on the consideration that multiple choice test are:

- a. Easier to be scored and it does not take much time to score
- b. More objective to score because it just has one correct answer.
- c. Not subjectivities to score

In this research, the writer used pre test and post test, they are:

a. Pre-test.

Before the teacher teaches new material by using song, the teacher gave a test to the students. Pre-test was given to the experimental group and control group with same test. This test was given before the experiment was run.

b. Post-test.

To get the data, the writer gave a post-test to experiment group and control group in order to know the ability of the students after they were taught by using song and the students who were taught without song as media to facilitating students understanding on grammar simple past tense.

2. Observation

It refers to the activity of giving total concern to research object by the

sense. In this research, the concern of research was paid on the teaching learning process and the researcher made filed noted as well. In conducting the observation, the researcher used the observation guideline to make it more systematic containing list of activity or happening which might happen. In this case, it will be about the condition of class and students, the teacher entered the class, held the class activities during the lesson until the teacher ended the lesson and the obstacles appear during the teaching learning process or during the experiment.

G. Instrumentation

The instruments used here are test and observation checklist.

1. Test

This research took the test for the instrument from English grammar book, it took from Understanding and using English Grammar by Betty Schrampfer Azar, then the validity and reliability of the questions are obligated from the book writer.

2. Observation Check List

In arranging this instrument, the researcher listed some students' observable behavior that indicates their understanding on English simple past. The observation check list is attached.

H. Techniques of Data Analysis

The following steps had been taken by the researcher to analyze the data taken from the observation and test.

1. Hypothesis Test

To respond to the objectives of the study, the researcher examined the data in the following steps that was to prove the researcher hypothesis about the difference of students' grammar simple past tense achievement between students who had been taught using the English songs technique and those who had been taught using the traditional technique.

a. Score the post test, after giving the post test to the students; the

researcher will score its' result.

b. Compare the result of the test of the two groups. This step will be done to prove the research hypothesis. Here, the two ways ANOVAs formula was used in which its formula is as follow:⁸

$$\sum x^{2}_{tot} = \sum X^{2} - \frac{\left(\sum X\right)^{2}}{N}$$

$$\sum x^{2}_{jak} = \frac{\left(\sum X_{1}\right)^{2}}{n} + \frac{\left(\sum X_{2}\right)^{2}}{n_{2}} + \frac{\left(\sum X_{3}\right)^{2}}{n_{3}} + \frac{\left(\sum X_{4}\right)^{2}}{n_{4}} - \frac{\left(\sum X\right)^{2}}{N}$$

$$\sum x^{2}_{jdk} = \sum x^{2}_{tot} - \sum x^{2}_{jak}$$

$$\sum x^{2}_{jkk} = \left\{\frac{\left(\sum X_{x_{1+x_{2}}}\right)^{2}}{n_{1} + n_{2}} + \frac{\left(\sum X_{x_{3+x_{4}}}\right)^{2}}{n_{3} + n_{4}}\right\} - \frac{\left(\sum X\right)^{2}}{N}$$

$$\sum x^{2}_{jkb} = \left\{\frac{\left(\sum X_{x_{1+x_{3}}}\right)^{2}}{n_{1} + n_{3}} + \frac{\left(\sum X_{x_{2+x_{4}}}\right)^{2}}{n_{2} + n_{4}}\right\} - \frac{\left(\sum X\right)^{2}}{N}$$

$$\sum x^{2}_{jki} = \sum x^{2}_{jak} - \left(\sum x^{2}_{jkk} + \sum x^{2}_{jkb}\right)$$

Notice:

 $\sum x^2_{tot}$ = total number of square

 $\sum x^2_{jak}$ = square number between group

 $\sum x^2_{idk}$ = square number inside group

 $\sum x^2_{ikk}$ = square number between column

 $\sum x^2_{jkb}$ = square number between rows

 $\sum x^2_{iki}$ = square number of interaction

2. The result of observation

The researcher analyzed the data of observation used descriptive narrative qualitative technique.

⁸Suharsimi Arikunto, op. cit., p. 322