CHAPTER 3

METHOD OF THE STUDY

3.1. Research Approach

In this study, the writer uses quantitative approach. The quantitative approach refers to efforts to describe the development of children's English vocabulary by doing an experiment. The purposes of this approach are to obtain relevant information about the issue of the research, to quantify data and generalize results from a sample to the population of interest, to measure the incidence of various views and opinions in a chosen sample, and sometimes followed by qualitative research which is used to explore some findings further, in this case, teaching vocabulary to children using audio-visual aids.

In conducting the study, the writer uses quasi experimental design, it involves three key components: (a) manipulation of the independent variable, (b) use of a control group, and (c) randomization into groups (Polit & Beck, 2004). Experimental studies use the most powerful designs. These designs allow the researcher to control for extra variables that may interfere with the researcher's ability to tell if the measured effect was due to the manipulation of the independent variable or due to interference from the undesired extra variables. If a quasi experimental study is planned, the reader can anticipate use of inferential statistics such as t-tests for data analysis. In other words, quasi experimental design is a procedure that enables the researcher to test his hypothesis by reaching

valid conclusions about relationships between independent and dependent variables. It refers to the conceptual framework within which the experiment is conducted. The quasi experimental design involves selecting groups: independent variables which are control group and experimental group, observation-pretest, treatment for the experimental group and without treatment for the control group, observation-posttest, and dependent variable which is score. The aims are to investigate a situation in which random selection and assignment are not possible.

Independent and dependent variables are similar to cause and effect and both of them can be applied in the experimental and non-experimental situations. The basic idea of an experiment, in social science research, is that two comparison groups are set up. (Punch, 1998). Moreover, he mentioned that the researchers will call the independent variable as the experimental or treatment group because they can do something to the group, giving a treatment or manipulate the group. And they can do something different or not doing anything to another group called control group. The outcome of the research is the dependent variable. And the aim is to attribute dependent or outcome variable differences between the groups to independent or treatment variable differences between the groups.

This design is using pretest-posttest, which means the writer selected the subjects and gave them different treatments. Comparing pretest results will indicate degree of equivalency between the experimental and control groups. The writer attempted to obtain a reliable result of the comparison in teaching English

vocabulary for children by using cards and by using films to test the hypotheses proposed by the writer.

3.2. Subjects

The subjects of this study were class A and B students of the second grade of SD Hang Tuah 11 Sidoarjo. The subjects were chosen randomly by the writer since there are three classes of the second grade students and the writer only needed two classes as the subjects. Both classes, A and B, consist of thirty-seven students that are of the same level of ages for young learners. Class A was assigned to the experimental group and class B to the control group.

3.3. Instruments

The instruments used in this study are tests (pre- and post-test) and statistics, which were used to test the hypotheses proposed by the writer. Pretest and Posttest were developed by the writer according to the RPP and also the previous material that were taught in the first grade. The tests consisted 50 multiple choices and it included the words that the writer mentioned in the appendices and also based on the RPP for the second grade. To help the students to understand the questions, the writer put the Indonesian words in the bracket so that the students were able to remember the English vocabularies and answered it correctly. The tests had 4 options of answers and there's only one correct answer based on the word in the brackets. Moreover, the questions were adapted from the students' workbook and textbook so that they understand the commands and the

questions. The instrument provides a device that can be used in putting the data to have an accurate and valid result. The writer used SPSS software and chose one of the type of the statistical method, paired T-test, to compare the increasing number of each group to support the hypotheses.

3.4. Techniques of Data Collection

There are two groups that participated in this study, the experimental group and the control group. The experimental group was taught English vocabulary using films as the audio-visual aids and the control group was taught using cards as the visual aids. Both groups were taught by the same teacher and given the same material, pretest, and posttest. The purpose of the pretest and posttest was to identify differences between the two groups, before and after the treatment. This study was done from March 25th to June 3rd, 2010. During the period, there were 8 meetings for conducting this study, including the pretest and the posttest.

The pretest was conducted in both groups to measure their level of ability in learning English vocabulary before being given the treatment. The test consisted of 50 numbers of multiple choices including nouns and verbs. Noun and verb are learned first and used often by young learners at the first two levels of vocabulary (Hurlock, p.172). The pretest was administered in 60 minutes in the beginning of the first meeting on March 25th and 31st for each class.

The next stage of collecting the data was giving different treatments to both groups the experimental (class A) and the control group (class B). The experimental group was taught English vocabulary using films, while the control

group was given treatment using cards and lasted for 90 minutes each class. The films that used are children's film such as, Barney – Let's go to the zoo, Hi5-TEAMS, ABC English for Children-Colours, Shape, Opposites and Prepositions, ABC English for Children – Let's Learn About, Little Einsteins – Flight of the Instrument Fairies, Little Einsteins – Go to Africa. And the cards that used in this study are flashcard that contains pictures and words in English and Indonesian.

The writer used films as the media of the lesson in the experimental group. Before the film was played, the writer as the teacher of the class gave some clues and wrote down some words needed to be found by the learners during the film. In the end of the film, the writer repeated, pronounced the vocabulary that appeared in the film they had seen. Then the learners were asked to repeat the words and given some exercises before the class ended. Moreover, the films were chosen to suit the topic and the material for each meeting.

The treatment for the control group was different from that for the experimental group. The learners were given the same material and topic by using cards as the media of learning. The writer also wrote down some words, pronounced the words, asked the learners to repeat the words and gave them exercises to do in the end of the meeting to improve their ability in learning English vocabulary.

In the last meeting on June 2nd (the control group) and June 3rd (the experimental group), the posttest was given to the learners to measure their ability after the treatment. The test was the same as the pretest, which also consisted 50 numbers of multiple choices including nouns and verbs. The posttest was

administered in 60 minutes for each group, the experimental group and the control group.

During the lesson, the students were very cooperative and enthusiastic to learn new words. They were very excited to write down the new vocabularies to their notebook as the teacher asked before while they related to the films or pictures that they saw. Although it was a big classroom, but the class situation was comfortable and the teacher was able to cooperate with the students during the lesson. They never absence when it comes to learn English, because most of the second grade students, like to learn English. And it proved by the result of their English test at school.

3.5. Techniques of Data Analysis

Data analysis was conducted in several stages. First, the writer divided the data into two, pretest and posttest. Then, the writer gave scores to the pretest and posttest of both groups. The scores were counted from the correct answers of the pretest and posttest, and then were counted by using paired t-test (student's t-test) to follow the normal distribution (also called student's t-distribution/paired t-test) if the null hypothesis is true. This null hypothesis will usually stipulate that there is no significant difference between the means of the two data sets. It is best used to try and determine whether there is a difference between two independent sample groups. For the test to be applicable, the sample groups must be completely independent, and it is best used when the sample size is too small to

use more advanced methods. Before using this type of test it is essential to plot the sample data from he two samples and make sure that it has a reasonably normal distribution, or the student's t test will not be suitable. It is also desirable to randomly assign samples to the groups, wherever possible. After giving scores to both groups, the data were put in tables. The tables helped the writer to analyze the data before counting the scores using t-test, with the following formula:

$$S_p{}^2 = \frac{(n1-1)S1^2+(n2-1)S2^2}{n1+n2-2}$$

In which:

Sp^2 = refers to standard deviation of variables

n_1= refers to numbers of score in sample 1

n_2= refers to numbers of score in sample 2

S_1= refers to standard deviation of sample 1

S_2= refers to standard deviation of sample2

Here is the paired t-test formula in order to find the distribution value:

$$t = \frac{\overline{x1}\text{-}\overline{x2}}{Sp\sqrt{(\frac{1}{n1}+\frac{1}{n2}}}$$

In which:

t   = refers to distribution value

$\bar{x}_1$ = refers to sample mean 1

$\bar{x}_2$ = refers to sample mean 2

Sp= refers to standard deviation of variable

n_1= refers to numbers of score in sample 1

n_2= refers to numbers of score in sample 2

The t-test was used to see whether the data differed and indicated whether the null

hypothesis was accepted or not.