CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

In this research, the researcher will use quantitative method, and pre-experimental approach with “pre-test and post-test one group design”. Experimental method is chosen when the researcher is primarily interested in determining cause and effect. Pre-experimental with pre-test and post-test group design is used to measure students’ vocabulary ability before applying the treatment. By using this method the result of the treatment can be known more accurate because it is easier to compare the condition before treatment. A group is measured on a variable of interests. The group receives the experimental treatment. Then the measure is taken again. Then the researcher compares the pretest with the posttest to see if the hoped-for change has occurred.

The weakness of this design is the result influenced by independent variable (in this research learning English vocabulary through watching cartoon movie clips as independent variable and students’ vocabulary ability as dependent variable). This is happen because the design does not have control variable and sample does not choose randomly. Meanwhile, the strength of this design is researcher easier to organize

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33 www.fammed.ouhsc.edu/tutor/pexpdes.htm [accesed at Thursday 23 June 2011 10.11 a.m]
34 Sugiyono “Metode Penelitian Kuantitatif Dan R&D” (Bandung: ALFABETA, 2008) P.74
subject of the research without choosing randomly and result of the treatment or experiment more accurate.

The design of pre-test and post-test group can be describe below:35

\[ O_1 \times O_2 \]

1. \( O_1 \) = pre-test score (before given treatment), it means pre-test is held by the researcher in order to measure students’ vocabulary ability before giving cartoon movie clips.
2. \( X \) = treatment, it means the researcher will give treatment to the research’s subject using cartoon movie clips.
3. \( O_2 \) = post-test (after given treatment), it means the researcher will give post-test to the students in order to know the influences of giving treatment and measure score after giving cartoon movie clips as a treatment.

B. Research Subject and Location

The researcher chooses MTs. MA’ARIF which is placed in Ketegan, Tanggulangin Sidoarjo as location to do the research. This school has nine classes. Each grade has three classes. Because of the sample does not choose randomly. The subject of the research is eighth grade students, Especially B class. It is chosen

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35 Sugiyono, ibid, p.75
because the teacher said that most of the students on that class are lack of vocabulary. It can be known from the score of every final examination which shows unsatisfactory result.

C. Research Procedures

1. Preparation Steps

Before doing the research, the researcher does some preparations. They are:

a. Making research proposal.

b. Defining subject and location of the research.

The researcher chooses the location to do the research and choose the class that will be applied the new ways in learning vocabularies.

c. Defining research instrument and research design.

The researcher defines test as instrument of the research to measure students’ score vocabulary ability.

d. Getting research permission letter.

The researcher takes research permission letter in the academic faculty and the letter has been signed by the dean of faculty. Then the letter will be given to the headmaster of the research location.

2. Research Implementation (treatment) Steps

a. Pre-test.

The researcher will hold pre-test in the first meeting, the researcher will get score from this test in order to know students’ vocabulary ability before giving treatment.
b. **Treatment.**

The researcher will hold the treatment twice. In this case the researcher will give cartoon movie clips. Hopefully the treatment can influence the students in learning vocabulary.

c. **Post-test.**

After giving treatment the researcher will give post-test to the students in order to know the differences between before and after applying cartoon movie clips as the treatment. The researcher wants to know and measure the improvement of the students after they have given cartoon movie clips to learn vocabulary.

3. **Closing Steps**

a. **Analyzing result of the research.**

After doing the treatment and getting some data from the research, the researcher will analyze and calculate the data with the formula.

b. **Writing report.**

After doing research and analyzing data, the researcher will report what she has done. Then, the researcher will conclude the result of the research.

D. **Research Instrument**

The researcher chooses test as instruments in collecting all the data. It means that the researcher will give the test to the students and will measure the test score before and after giving treatment. Researcher will give intelligence and achievement
test. On pre-test, the researcher will give intelligence and achievement test, on post test the researcher will give achievement test only to measure students’ achievement.

Suharsimi in her book said intelligence test is a kind of test to find out estimation or calculation of someone intellectual grade through test to measure the intelligence.\(^{36}\) Achievement test is: test in order to measure someone achievement after learning something.\(^{37}\)

To make good test it should have high validity and reliability. A test is said to be valid if it measures accurately what it is intended to measure.\(^{38}\) To make test more valid, the followings are recommended: First, write explicit specifications for the test. Second, use direct testing. Third, make sure that the scoring of responses relates directly to what is being tested. Fifth, do everything possible to make the test reliable.\(^{39}\)

Reliability means an instrument which is believable enough to use as data collection technique because the instrument is good.\(^{40}\) Arthur said in his book, “Teaching for language teachers”: To make test more reliable, there are some ways should be considered:

1. Take enough sample behavior. It means the test will be reliable if the items on the test are equal.

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\(^{37}\) Suharsimi Arikunto, ibid. p 140

\(^{38}\) Arthur Hughes ‘*Testing for Language Teacher second edition*’ (United Kingdom: Cambrigde University Press. 2003) p26

\(^{39}\) Arthur Hughes, ibid. p35

\(^{40}\) Suharsimi Arikunto, opcit. p 170
2. Exclude items which do not discriminate well between weaker and stronger students. It means that tester cannot include items which are too easy or too difficult for the candidates.

3. Do not allow to have testees much freedom, in some kinds of language test there is a tendency to offer candidates a choice of question and to allow them a great deal of freedom in the way that they answer the ones that they have chosen.

4. Write unambiguous items. It means the test items should not be presented unclear or there are other acceptable answers which are not anticipated by the tester. Writing unambiguous items can be started from drafting the content of test items including the topics covered, the range of vocabulary, the length, the range of grammar and the options or distracters to avoid misinterpretations.

5. Provide clear and explicit instructions whether oral and written forms. If the instructions are unclear, there is possibility the testees will misunderstand what they are asked to do.

6. Ensure that the layout of the test is constructed well and readable. On some occasion, the intuitional tests are badly typed (moreover in handwritten), small font and space, and are poorly reproduced.

7. Make candidates familiar with the format and testing techniques. It means that the testees are familiar with test constructions. So, every
effort should be made to ensure all testees have the opportunity to do
the test well.

8. Provide uniform and non-distracting conditions of administration. To
get same results of the testees, we should make the same process of
teaching and the content of test.

9. Create an item that will make the tester easier in scoring objectively.

10. Make comparison of the test result among students as soon as possible.

11. Provide a detailed scoring key. It means that tester should specify
acceptable answers or responses for each questions.

12. Train scorers. This is especially important to achieve objectivity in
scoring.

13. Agree acceptable responses and appropriate scores at outset of scoring.
A sample of script should be taken immediately after the
administration of the test. Where there are compositions, archetypical
representatives of different levels of ability should be selected.

14. Identify testees by number, not name. Scorers inevitably have
expectations of candidate that they know. Except in purely objective
testing, this will affect the way that they score. Studies have shown
that even where the testees are unknown to the scorers, the name on a
script (or a photograph) will make a significant difference to the scores
given. The identification of testees only by number will reduce such
effects.
15. Employ multiple and independent scoring. As a general rule, when the test is in the form of subjective test, the test should be scored by at least two independent scorers. Scored should be recorded on separate score sheets and the result from every scorer should be compared.

E. Data Collection Technique

For collecting data, the researcher uses test, observation and documentation. In this case, observation means that the researcher observes the class situation and condition, student act, learning-teaching processes around the school, etc. According to Sutrisno Hadi observation is a complicated process that arranged from every biological and psychological process.\textsuperscript{41} For data collection technique process, there are two kinds of technique; there are participant observation and non participant observation. The researcher will use non-participant observation. It means that the researcher directly involve and observe in the research. The documentation is used to collect some data with picture.

F. Data Analysis Technique

After collecting the data, the researcher will analyze the result of the research. The researcher uses statistical analysis. The data analysis technique used by the researcher is sign test. The reliability of the test will be calculated by using test-retest method. It means that the researcher only has one series test, but the test will be applied twice and then the result of both tests will be counted the correlation. Commonly, the result of the second test (post-test) is better than the first test (pre-

\textsuperscript{41} Sugiyono, \textit{opcit} p.145
test). It happens because there are practice effects and carry over effects which are influenced by the treatment.\(^{42}\)

The researcher will use parametrical statistic, it use test associative hypothesis (correlation between variable). The researcher will use correlation product moment, this technique is used to find out the correlation and prove the hypothesis if the data is interval or ratio, and the source of data is from both or more variables is the same.\(^{43}\)

The good test does not only measure the reliability, but also validity. Good test requires content and construct validity. For testing construct validity, after the instrument has been constructed, it will be consulted with the expert. Testing content validity is done by comparing between content instrument and treatment which is given by the researcher (cartoon movie clips).

*Suharsimi* in her book, analysis data includes three steps;

- Preparation
- Tabulation
- Implementation data which is suitable with research methodology.\(^{44}\)

The researcher will analyze the result of the experiment in pre-test and post-test using $t$-test, and the formula is:


\(^{43}\) Sugiyono, *Statistika Untuk Penelitian*, (Bandung : alfabeta, 2010) p228

\(^{44}\) Suharsimi Arikunto, *opcit* p.240
\[ Md = \sqrt{\frac{\sum x^2d}{N (N-1)}} \]

Md = differences between pre-test and post-test (post-test – pre-test)

\[ xd = \text{deviation for each subject}(d-Md) \]

\[ \sum x^2d = \text{total of quadrate deviation} \]

N = sample of the subject

d.b = definite with N-1

\[ \text{Suharsimi Arikunto, ibid p.300} \]