CHAPTER III
RESEARCH METHOD

This chapter discusses about research design, subject of the research, research procedures, data collecting technique, instrument, data collecting instrument, scoring system, data analysis, hypothesis testing.

3.1 Research Design

This research was intended to investigate the student' motivation in learning vocabulary and whether flashcards can be used to motivate them. The writer distributed motivaton questionnaire to the students before and after the treatment in order to know whether was a change of students' motivation after treatment. In this research, the writer used one class as experimental class.

The scores of questionnaire were measured based on the Likert Scale and range of 1 to 4. The scores were given for each item function as the symbol in showing that one of activity was higher or lower than the others. By using Scale in the questionnaire, the writer collected the ordinal data in form of numbers, so that the data collected were easier to be analized by using the statistical formula, therefore this research was included into quantitative research.

In this research, the writer used one of the pre experiment design that was one group pretest-post test design. This design was used because it was most suitable to measure a change of personality aspects, including motivation or attitude, so that through this design, the writer was enable to see whether there was a negative or positive change of all personality aspects or motivation after treatment.

The design was as follows

$$T_1 \, X \, T_2$$

In which T_1 =   Pre Test

                X   =   Treatment

                T_2 =   Post Test

(Setiadi, 2006:131-133)

3.2 Subject of the Research

The subjects of this research were the first grade students of SMPN 4 Bukitkemuning − Lampung Utara that consisted of six classes in 2012-2013 academic years. Each of the classes consisted of 30-40 students. The writer took one class as the experimental class. The writer chose the class using randomly.

3.3 Research Prosedure

1. Determining the subject

   There were six classes of the first grade of SMPN 4 Bukitkemuning – Lampung Utara and the writer chose one class as the subject randomly.

2. Determing the questionnaire

   Questionnaire was used in this research. A set of the questionnaire consisted of the 25 items of close-ended question that was used to measure students' motivation in learning vocabulary. It was adopted and modified by Setiyadi (1999).

3. Distributing the first questionnaire and pretest for vocabulary to the subject

   The questionnaire and vocabulary test were distributed to the subject before treatment. The subject was asked to answer the questionnaire and vocabulary test based on their experience in learning vocabulary.

4. Conducting the treatment

   Conducting the treatment in which the writer applied flashcards in learning vocabulary.

5. Distributing the second questionnaire and posttest of vocabulary to the subject

   The questionnaire and vocabulary test were distributed to the subject after the treatment. The subject was asked to answer the questionnaire and vocabulary test based on their experience in learnng vocabulary through flashcards.

6. Analyzing data

   In analyzing data of mean score and significance of the score before and after treatment, the writer used *Repeated measure T-test* which were computed by using *SPSS*.

3.4 Data Collecting Technique

In coleecting data, the writer used motivation questionnaire as the instrument. The questionnaire was used in this research because this instrument is an effective instrument in measuring personality aspects or psycology aspects like motivation. It was applied in many kinds of data gained from different variable and it did not need much fund and energy to collect the data from more subjects. Besides that, it was effective to measure aspects or variables relate to personality or psychology and sociology aspects (Setiyadi, 2004: 54). By using questionnaire, the students

were able to report their motivation toward the language they learnt. The writer distributed the questionnaire to get the data from the subjects. Besides that, the writer used close-ended questionnaire to get more sources of the data from the subjects.

3.5 Data Collecting Instrument

The intrument for collecting data on motivation was questionnaire and for vocabulary achievement was vocabulary test in form of multiple choice.

1.   Reliability of the Instrument

To know the reability of questionnaire, the writer used the Cronbach's alpha reliability, which was counted based on the correlation between each items of motivation scale and range of 0 to 1. According to Setiadi (1997: 77), the higher alpha is, the more reliable the questionnaire will be. The writer consideres the reability of the questionnaire with the alpha $\geq 0,70$.

2. Validity of the Instrument

An instrument can be said valid if the instrument measures the object that should be measured that is suitable with the criteria. To measure whether the instrument has good validity or not, the writer used construct validity. Construct validity was the extent to which an instrument becomes representative sample of subject matter contents. It was used to measure the instrument that has some indicators to measure one aspect or construct. The indicators of the questionnaire were frequency of students' activities, students' strategy and students' involvement (Sepliana, 2006). Construct validity is often correlated with instrument of measurement that is related with psycholinguistic such as percepion, linguistic attitude, and motivation in learning foreign language (Setiyadi, 2006:25-26). The writer used Pearson product moment Correlation to measure all items used in the questionnaire. It was used to measure correlation between two variables of continous (Setiyadi, 2006:166). It involved 32 students as object od research.

3.6 Data Treatment

The data obtained from questionnaire was analyzed by using Likert scale formula. First, in analyzing data, the writer should look at the option chosen by the respondent in which every option has their own score. They are as follow:

SS   =   Sangat Setuju   score 4

S   =   Setuju   score 3

TS   =   Tidak Setuju   score 2

STS   =   Sangat Tidak Setuju   score 1

In order to know the students' motivation in learning vocabulary through flashcards, the writer calculated the students' score that was devised from Harris (1997:84) cited in Sepliana (2006)as follow:

1.   Calculating the students' answers

Inter-rater is another person who gives scores besides the writer herself. The questionnaire was tested by the inter-rater before research was done. There are 3-raters that checked the questionnaire based on Questionaire specification: Students' response, the benefit of Flashcard and students' interest. It supposed to check whether the questionnaire was valid or not and reliable or not. The score are based on the Likert Scale and range to 1 to 4.

2.   Tabulating the result of the scores of quantitative and finding the mean score of the students' motivation before and after treatment. The mean were calculated by applying:

$$M = \frac{\sum\times}{N}$$

Where M   : Mean

$\sum\times$: Total scores of the students

N   : Numbers of the students

(Setiyadi, 2006:111)

3. Drawing conclusion from the table result of the questionnaire were given, that was by comparing the means score of the students' motivation before and after treatment.

3.7 Hypothesis Testing

To check whether the students' score of motivation after treatment was statistically significant to support the writer's hypothesis or not, the writer used Repeated Measures t-test in SPSS program.

The hypothesis were:

$H_{0:}$ Flashcards can not be used to increase the students' motivation in learning English vocabulary.

$H_{1:}$ Flashcards can be used to increase the students' motivation in learning English vocabulary.

(Sudjiono, 2001: 382)

The criteria were:

1. If the t-value is higher than 0.01: H_1 is accepted (flashcards can be used to increase students' motivation in learning vocabulary).

2. If the t-value is lower 0.01: H_1:is accepted (flashcards cannot be used to increase students' motivation in learning vocabulary).