III. METHODS

This chapter discussed about research methods which consist of design, subject, instrument, data collecting technique, validity and reliability, procedure, data treatment, and hypothesis testing. These topics are explained as follows.

3.1. Research Design

In conducting this research, the researcher used experimental method. The researcher used the *One group pretest posttest design*, in which there was one group as the sample (Setiyadi, 2006). The class got the treatment from the researcher and also got pre-test and post-test. In order to see whether flashcard could be used improving the students' vocabulary achievement was determined by the difference scores of pre-test and post-test.

This research design is represented as follows:

T1 X T2

Which are :

T1 : Pre-test

X : Three Times Treatment

T2 : Posttest

3.2. Population and Samples

The samples of this research were the students in the kindergarten at Little Elephant Bandar Lampung. There were six classes of the kindergarten in Little Elephant 2014/2015 academic year and had almost the same age from 3 until 6 years old. The class that I used as a sample consisted of 15 students. Most of them were not able to write, to speak clearly, or to read.

In this research, the researcher only took one class as the sample of the research. The sample was taken randomly by using lottery.

3.3. Instruments

In this research, the researcher used several instruments for conducting her research. The instruments were tested by using oral test. The instruments that were used as follow:

1. The pre-test

This test was given to the class in order to know the students' vocabulary achievement before the researcher did the treatment by using flashcard. The researcher used 30 items of concrete noun. For scoring meaning and use, the teacher showed three pictures from the flashcard and called the student randomly. The student chose the suitable picture based on what the teacher said. For scoring pronunciation, the teacher used 2 raters. One rater was the researcher herself and

another was the English Teacher in that school. In pronunciation, the teacher showed the flashcard and the student mentioned the name of the object based on the flashcard.

2. Treatment

In this term, the researcher taught vocabulary by using flashcard. Researcher took 3 meetings to teach the concrete nouns of vocabulary to find the difficulties and the increasing of students' vocabulary achievement after they were taught through flashcards.

3. Posttest

The researcher administered posttest after the treatment. It was aimed to see the significant difference of the students' vocabulary achievement after they were taught by using flashcard. The aspects of vocabulary aspects which tested in this research are pronunciation, meaning, and use. There were 30 items of concrete noun that were tested in the posttest. The posttest was similar to the pretest.

3.4. Data Collecting Techniques

For collecting the data, the researcher gave pre-test and post test of vocabulary. The test was given before and after the treatment. The pretest and posttest were given orally. In this case, for scoring meaning and use, the teacher showed three pictures from the flashcard and called the student randomly. The student chose the suitable picture based on what teacher said. For scoring pronunciation, the teacher showed the flashcard and the student mentioned the name of the object based on the flashcard. It

was recorded by teacher from pre-test, after they were given the treatment, and post test. Then, the researcher scored the test so the data was in form of interval data. After conducting pre-test and post test, the researcher compared the result to find out the students' achievement in vocabulary and to analyze whether flashcard as a media has a better improvement. Further explanation about pre-test and post test of vocabulary were explained as follow:

1. Pre-test

The goal was in order to know the students' vocabulary knowledge before they were given the treatment. It was administered in order to know the quality of the class. It was used to see whether the classes have equal background knowledge or not. The aspect of the vocabulary that researcher used was content words and it was focused on concrete noun. In this case the researcher used an oral test by using flashcard. For scoring meaning and use, the teacher showed three pictures from the flashcard and called the student randomly. The student chose the suitable picture based on what teacher said. For scoring pronunciation, the teacher showed the flashcard and the student mentioned the name of the object based on the flashcard. In this test, the researcher used 30 words of concrete noun that it was related to things that students could be found in their daily life e.g. stationeries, clothes, and part of body.

2. Post-test

After conducting the treatment, the researcher gave the post-test. It was the same like in the pre-test, the researcher used an oral test by using picture and would be recorded to know whether they have development or not.

3.5. Validity of the Instrument

In order to get the data, the researcher tried to use an appropriate instrument to measure the result of the research. The good research is a research which the instrument is based on validity. The researcher conducted the test in order to know the validity of the instrument. This test consisted of 30 items of concrete nouns that it was divided into 5 meetings by using the picture that it was an oral test for young learners. Here, the researcher gave a brief explanation about validity.

a. Validity

Validity of the test is the degree to which it measures what is intended to measure (Gage, 1960:111). Actually, there are five types of validity but researcher only wants to describe only two of that types of validity, there are content validity and construct validity. Content validity is intended to see whether the test is good reflection of what have been taught. Construct validity focuses on the kind of the test that is used to measure the ability. The material and the test in this research are related to the 2013 curriculum for kindergarten school especially in cognitive aspect. In cognitive aspect, the students are able to understand the material based on categorizing the things based on the size, colors, and shape. In this research, researcher administers an oral test and the technique scoring students' vocabulary is based on 3 aspects: pronunciation, meaning, and use.

3.6. Reliability of Instrument

Reliability of the test is consistency which a test yields the same result in measuring whatever it does measures. So, a test cannot measure anything well unless it measures consistently (Haris, 1974:14). Reliability of the pre test and post test speaking are examined by using statistical measurement proposed by Shohamy (1988:213).

The statistical formula is:

$$R=1-\frac{6.(\sum d^2)}{N.(n^2-1)}$$

Notes:

R	: Reliability
N	: Number of the students
d	: The difference of the rank correlation
1-6	: Constant number

The Standard of Reliability :

a. A very low reliability ranges from 0.00 to 0.19
b. A low reliability ranges from 0.20 to 0.39
c. An average reliability ranges from 0.40 to 0.59
d. A high reliability ranges from 0.60 to 0.79
e. A very high reliability ranges from 0.80 to 1.00

Slameto (1998: 147)

In this research, it was found that the result of inter ratter reliability of pretest and posttest was as follows:

Inter rater Reliability in Pretest :

$$R=1-\frac{6.(\sum d^2)}{N.(n^2-1)}$$

$$R = \frac{1-6(10)}{15(15^2-1)}$$

$$R = \frac{1-6(100)}{15(225-1)}$$

$$R = \frac{1-6(100)}{15x224}$$

$$R = 1-\frac{600}{3360}$$

$$R = 1-0.17$$

$$R = 0.83$$ (A very high reliability)

Inter raters Reliability in Posttest :

$$R=1-\frac{6.(\sum d^2)}{N.(n^2-1)}$$

$$R = \frac{1-6(100)}{15(15^2-1)}$$

$$R = \frac{1-6(100)}{15(225-1)}$$

$$R = \frac{1-6(100)}{15x224}$$

$$R = 1-\frac{600}{3360}$$

R = 1-0.17

R = 0.83 (A very high reliability)

3.7. Scoring Criteria

This researcher used oral test in scoring pretest and posttest to see the improvement of vocabulary for young learners. This is the explanation in how the researcher did the scoring:

3.7.1. Pronunciation

In this research the researcher used oral test to score pronunciation. This oral test was in term of monologue for pretest and posttest. In this research, the researcher used subjective scoring, so there were two raters in this research. The two rates were the researcher and other English teacher. The raters would be as a judge and they worked together to find out the reliability of the test. And here is the rating sheet for scoring pronunciation:

Aspects	Score	Qualifications
Pronunciation	50	If speech is fluent and effortless as that of native speaker.
	40	Refers to pronunciation and self correction in misunderstanding.
	30	Denote that if it is always intelligible though one is conscious of a definite accent.
	20	Indicate that it is very hard to understand because of pronunciation problem most frequently asked to report.
	10	Shows that pronunciation problem so serve as to make conversation unintelligible.

3.7.2. Meaning and Use

In this research the researcher used oral test by using multiple choice to score meaning and use. In this research, the researcher used objective scoring, so the score is absolute. The score of meaning and use calculated by using as follow:

$$S = \frac{r}{n} \times 100$$

(Henning, 1987)

Where:

S = The score of the test

r = The total of the right answer

n = The total of test items

The score of vocabulary achievement based on the three aspects can be compared in percentage as follows:

a. Pronunciation…….33.3%
b. Meaning……..33.3%
c. Use…….33.3%

_____ +

Total percentage……99.9% (100%)

3.8. Hypothesis Testing

The hypothesis analyzed by using *Repeated Measure T-Test* with SPSS version 16.0. The level of significance is 0.05, and the probability of error in the hypotheses is 5%. The researcher states the hypothesis as follow:

H_0 : There is no significant increase of students' achievement in learning vocabulary after being taught using flashcard.

H_1 : There is a significant difference of students' achievement in learning vocabulary after being taught using flashcard.

The criteria are:

1. If $p < 0.05$: H_1 is accepted
2. If $p > 0.05$: H_0 is accepted