CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

In this research, the writer will conduct the experimental research. According to Mubarok, (2015: 88), the experimental research is a research method used to find a specific treatment effect against the other in uncontrolled conditions. Experiment is carried out in order to explore the relationship between variables (Nunan in Mubarok, 1992). A variable as the term itself suggest, is anything which does not remain constant. In our case, it includes language proficiency, aptitude, motivation, and so on. The purpose of experimental research is to examine cause and effect relationship.

In this research, there are two variables, there are independent variable and dependent variable. Martono (2011) state that independent variable is variable that influence other variable. The symbol of this variable is "X". Dependent variable is variable that effect by independent variable. The symbol of this variable is "Y". So, in this research the independent variable (X) is Guessing Game and the dependent variable (Y) is vocabulary mastery.

The writer use quasi-experimental design. The writer want to know how effective of guessing game in teaching vocabulary. The writer will give pre-test and post-test for experimental group class and

control group class. The writer will give a pre-test before applying the treatment. Then, the writer will be applying the treatment to experimental group class. Next, the writer will give post-test after applying treatment to experimental group class to get the data. It can be formulated as follows:

$$
\begin{array}{c}
O1 \; X \; 02 \\
O3 \quad O4
\end{array}
$$

O1.2   : Pre-Test

X   : Treatment

O3.4   : Post-Test

(Sugiyono, 2011: 79)

3.2 Population and Sample

Population is a unit of the object or subject that has certain qualities and characteristics which are studied by the researcher than be deduced (Mubarok,2015: 31). Sugiyono (2011: 49) said that population is the generalization region consisting of the object or subject that have certain quantity and characteristics detined by the researcher to the studied and then drawn conclution. Then, sample is a part of population. The population of this research is of all the fifth grade students of MI Miftahul Huda Dongos, Jepara. The number of population is 77 students devide into two (2) classes, there are class

VA and class V B . The class V A consist of 38 students, and class V B consist of 38 students.

The sample of this research used cluster random sampling. It is sampling in which group, not the individuals are randomly selected. In this research, the sample of the population is the fifth grade of MI Miftahul Huda Dongos especially in class V A as experimental group class and class V B as control group class.

3.3 Instrument

Instrument is a tool that use to measure nature or social phenomenon which observed (Sugiyono, 2012 :102). The instrument that the writer use for collecting data is test. The test is divided into two test, Pre-test and Post-test. The instrument of test consist of 30 multiple choice questions.

3.4 Try Out of The Instrument

The instrument used in this research was a test. Before a test was given to the students, try out test applied first to know the test is good instrument. The result of the test was too find out the validity and reliability.

According to Bajpai & Bajpai 2014:173, Validity is a test of how well an instrument that is developed measures the particular concept it is intended to measure as shown in figure. Arikunto (2013:211) state that validity is a measure that shows the level of validity of an

instrument. A valid instrument has high validity. To calculate the validity, the researcher used Product Moment formula :

$$r_{xy} = \frac{(N.\sum XY) - (\sum X.\sum Y)}{\sqrt{\{N.\sum x^2 - (x)^2\}\{N.\sum Y^2 - (Y)^2\}}}$$

In which :

r_{xy} : the item of test reliability

N : the number of respondent

X : total score of each item

Y : individual total score

X² : total of the square for each item

Y² : total of the square of individual total score

(X)² : the square of the total score of each item

(Y)² : the square of the individual total score

(Arikunto,2013:213)

The validity computation is consulted to the r-table of product moment by determining the significances level 5% and n which is according to the data. The instrument is valid if the r_{xy} > r-table.

Bajpai & Bajpai (2014:175) said that if a measurement device or procedure consistently assigns the same score to individual or objects with equal values, the instrument is considered reliable. To measure the reliability of the test, the researcher uses the following Kuder-Richardson formula 20 (K-R 20).

$$r_{xy} = \frac{K}{K-1}\left(\frac{S_X^2 - \sum pq}{S_x^2}\right)$$

In which :

r_{xy} : reliability of the whole test

K   : the number of item or questions

S_X^2 : variance of score on the total test (squared standard deviation)

P : proportion of correct responses on a single item

q : proportion of incorrect responses on a same item

3.5 The Technique of Collecting Data

The technique of collecting data used in this research are:

1. Pre-test

    The writer will give a pre-test to the control group class and experimental group class before the writer implement the treatment. Pre-test aims to find outcome of the students' mastery before applying the treatment.

2. Treatment

    After doing pre-test, the students participate at least 3 meetings of treatment. The writer will deliver treatment to the experimental class in teaching vocabulary. Experimental Group Class

Meeting	Treatment
Meeting 1	➢ The students see the picture and read

	the word about part of body that the researcher had been given them.
	➢ The Students listen to the explanation from the researcher about the material "Part of Body".
	➢ The students repeat the pronoun of words that the researcher had said.
	➢ The students guess the words of pictures that the researcher has pasted on the whiteboard.
	➢ The researcher checks the students' understanding of the material.
Meeting 2	➢ The researcher reviewed material in previous meeting.
	➢ The students make some groups and takes the material about part of body.
	➢ The students guess the words according to the clues given by the researcher.
	➢ The students come forward to share their answers to their friends.
	➢ The researcher checks the students' understanding of the material.
Meeting 3	➢ The researcher review the material in previous meeting.
	➢ The Students answered the questions about the material "Part of Body".
	➢ The students make some groups and one of student of each group to be a

	leader.
	➢ The leader give some clues related the material of part of body and the members of group will guess the word.
	➢ The group with many score is the winner.
	➢ The researcher checks the students' understanding of the material.

Control Group Class

Meeting	Treatment
Meeting 1	➢ The Students listen to the explanation from the researcher about the material "Part of Body".
	➢ The teacher checks the students' understanding of the material.
Meeting 2	➢ The teacher reviewed material in previous meeting.
	➢ The students answered the question that had given by teacher.
	➢ The teacher checks the students' understanding of the material.
Meeting 3	➢ The teacher review the material in previous meeting.
	➢ Students pay attention the explanation of teacher about the material "Part of Body

| | ➤ Students did daily assessment. |
| | ➤ The teacher checks the students' understanding of the material. |

3. Post-test

The last step is giving post-test. It will give after the treatment will finish. The post-test is purposed to know the result of students' achievement after the students' have been given teaching/ treatment. Post-test aims to find outcome of the students' mastery after applying the treatment.

3.6 Method of Data Analysis

Data analysis is an activity in reflecting the data of the research. Analyzing the data is a long process of experimental research. The researcher uses score analysis of pre-test and post-test in analyzing data of the research.

In this research, the writer will use statistic technique analyze the data using SPSS (Statistic Product and Statistic Solution) statistical application and T-Test.

3.7 Hypothesis of the study

H0 : There is no significant difference between the vocabulary mastery of the fifth grade students of MI Miftahul Huda taught with and without using guessing game.

Ha : There is a significant difference between the vocabulary mastery of the fifth grade students of MI Miftahul Huda taught and without using guessing game.