# **CHAPTER III**

# **RESEARCH METHOD**

## **3.1 Design of Research**

This research will be designed by using quantitative method. It meant that the researcher accumulated the data which got from the research also focus to the quantity of variables, they were vocabulary and realia media. The researcher manipulates certain stimuli, treatments, or environmental conditions and observes how the condition or behavior of the subject is affected or change. Sugiyono (2006:80) stated that, “experimental research is a research which has the purpose to find the cause-effect relationship among variables in a controlled condition”. In line, with Sugiyono (2006: 81) stated that “some types of experimental research design are pre experimental design, true experimental design, factorial design and quasi experimental design”.

 Based on the statement above, this research used experimental design of collecting data, the class that will be tested is divided into two classes, class A and class B, class A as control class and class B as Experimental class.The experimental group is the group that will be a measured of whether the test is successful or not using realia media, while the control group is considered without using realia media. This design will be applied to investigate the effect of using realia media on students' achievement in vocabulary.The design can be showed as in the following table :

**Table 3.1**

**RESEARCH DESIGN**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Group | Pre-test  | Treatment | Post-test  |
| 1 | Experimental group | X1 | With Realia Media | X2 |
| 2 | Control group  | Y1 | Without Realia Media | X2 |

Note :

X1 =Pre-test experimental group

X2  = Post-test experimental group

Y1 = Pre-test control group

Y2 = Post-test control group

**3.2 Population and Sample**

### **3.2.1 Population**

Arikunto (2006:108) stated that “population is the subject of research”. In line, with Sugiyono state that “population is the object/subject that has some qualities and characteristics that are chosen to be learned and to be concluded by the researcher”. Based on the statement beside, the researcher choose the population of class IV students at HikmatulSalridho School.

### **3.2.2 Sample**

Arikunto (2002: 109) stated that sample was part of population that represented all the population observed. Where, the first class was students of class IV – A (as experimental groups) and IV – B (as control group) of the MIS HikmatulSalridho School.

## **3.3 Instrument of The Research**

The researcher collected the data by conducting the test. The instrument of collecting the data are designed into four steps : Pre-test, treatment, post-test, and scoring the-test.

### **3.3.1 Pre-test**

Pre-test is a test of a question, which is carried out before the lesson or material begins. Test question are given relating to te material that will be taught in research treatment. It is given with the intent to find out if any of the students already know about the material that will be taught. Pre-test can also be interpreted as a test activity levels of the students’ knowledge on the material that will be delivered.

### **Treatment**

Treatment is something that researcher administer to experimental units. Treatment also is the major limitation of one group design is that since control group is used , the researcher cannot assume that the change between the pre-test and post-test. In other to find the effect of realiamedia in teaching, the sample is treated in different ways ;realia media and without realia media.

### **Post-Test**

Post test will be carried out to measure students' ability after treatment. Then the data is taken from the test results which will be compared and analyzed. The test for post test will be the same example.

## **3.4 Technique of Collecting Data**

## Giving pre-test and post-test

## Scoring

## Assessment criteria

The technique of data will be conducted to analyze the validity and then pre-test and post-test of the questions. This research will be focused for fourth grade students at MIS HikmatulSalridho. After the researcher collected the data, the researcher analyzed the result of data from pre-test and post-test. In other way to collect data, the researcher use three of them by using documentation, observation, and test as an instrument.to measure, the researcher used T-Test.

## **3.5 Technique of Analyzing Data**

In this research, researcher will be applied quantitative research. Quantitative research will be used to quantify problems by producing numerical data or data that will be convert into usable statistics. To analyze quantitative data, pre-test results scores before study will be conducted and compared with post-test data after the research. Then the data will be analyzed whether the reading results reach the minimum standard or not, and have increased or not. And researcher made a conclusion in the form of a description of the students' vocabulary ability.After getting the data from the observation, the pre-test and the post-test, the researcher was used a formula to find the mean or the average score, as followed :

 $T= \frac{Mx-My}{\sqrt{\left(\frac{\sum\_{}^{}x^{2}+\sum\_{}^{}y^{2}}{Nx+Ny-2}\right)\left(\frac{1}{Nx}+\frac{1}{Ny}\right)}}$

Where :

T = Total score

Mx = Mean of experimental group

My = Mean of control group

$\sum\_{}^{}y$ = Standart derivasion of control group

nx = Total sample of experimental group

ny = Total sample of control group

(Arikunto, 2010:354)