

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **A. Research Method**

The writer used experimental research for doing this research, especially quasi experimental design. Quasi experimental design is practical compromises between true experimental and the nature of human language behavior which wish to investigate. Experimental research is a research method that tests the hypothesis which has the form of cause and effect relation by manipulating which is not caused by other variable.

A quasi-experiment is an empirical study used to estimate the causal impact of an intervention on its target population. Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but they specifically lack the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition, but using some criterion other than random assignment. Quasi experimental will carry out in order to know the correlations between variables.

The writer will use two classes, the first class is as experimental, and the last one is as control class. A quasi experiment consists of control and experiment groups to which subject has been randomly assigned, and in which all subject are tested before and after the intervention or treatment under investigation has been administered

to the experiment group<sup>1</sup> in order the writer can see the point of there is or no the influence of using collaborative learning. To get the data, the writer will used pre-test and post-test towards the subject of research.

## **B. Place and Time of Research**

The writer conducts this research at Second Grade of SD Islam An-nur Kota Serang. The writer will use visual aids technique in teaching english vocabulary. The spesific technique is “Introducing english vocabulary with pictures selection. The writer conducts research in the school from maret-april when the learning teaching procces is going on.

## **C. Population and Sample**

### **1. Population**

Population is number of subject that will be research, while sample is part be researched. According to David Nunan, “Population is all casessituation, or individuals who share one or more characteristic.”<sup>2</sup> According to Prof. Sukardi, Ph.D., “Populasi adalah semua anggota kelompok manusia, binatang, peristiwa, atau benda yang tinggal bersama dalam satu tempat secara terencana menjadi target kesimpulan dari hasil akhir suatu penelitian”.<sup>3</sup>

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<sup>1</sup> David Nunan, *Research Methods in Language Learning* (Cambridge University Press, 1992), 230.

<sup>2</sup>David Nunan,*Research Method in language learning* (Campvridge University Press, 1992) p. 231

<sup>3</sup> Sukardi, *Metodology Penelitian Pendidikan* (Jakarta: PT Bumi Aksara, 2003) p. 53

Based on the definition above, the population of this research is students at second grade at SD Islam An-nur Kota Serang consist 61 students. The total population are three classes, class 2A (Siti Zaenab) consist of 22 students, class 2B (Siti Hawa) consist of 24 student, and class 2C (Siti Shofiah) consist of 15 student. So the total number of population are about 61 students.

## 2. Sample

Sample is a part or representative of population being researched. It is called sample research. Sample is subject of individual or cases from within a population.<sup>4</sup> Normally, someone wishing to carry out such an investigation would select a sample from the population and test.<sup>5</sup> In this research the writer take two classes as sample research by clustering from the second grade. The class 2C (siti shofiah) consist of 15 students and class 2A (siti zainab) consist of 22 students. So the total number of sample are about 37 students.

## D. Research Instrument

In this research, the writer uses test as instrument, the writer will give the students two test. There are pre-test and post-test. Teacher uses pre-test to students before treatment and teacher uses post-test after treatment. The result from the test that for teacher knows how the treatment using visual aids in teaching English vocabulary.

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<sup>4</sup>David Nunan, *Research Method in language learning* (Cambridge University Press, 1992) p.231

<sup>5</sup>David Nunan, *Research Method in language learning* (Cambridge University Press, 1992) p.232

The target of the test is looking for students who needed by research. The purpose of using this technique is to get is written answer about the object of the research. In the order word, the reason of the author using technique is (1) to make easy or enjoy the student answering the question (2) to make the student concentrate in answering the test (3) to make easy in collecting and analyzing the data. Test consist of twenty questions used to get information from students about their knowledge of the test submitted to sample who had represented population.<sup>6</sup>

### **E. Techniques of The Collecting Data**

Further steps to complete this data, the writer uses some techniques to get authentic data as follow :

#### **1. Observation**

Observation is the methods and techniques of collecting data where the researcher was not experimenting systematically, with research subjects. Also observations needed to obtain information from the primary school. The study looked at students from two classes in SD Islam An-nur Kota Serang.. Researchers also give the observation sheets to the English teacher to the school, to assess the writers who are researchers in the classroom.

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<sup>6</sup>Uyun, Khurotul, *The Correlation Between Students' Self-Concept And English Speaking Ability* (2010)P.28

## 2. Interview

The writer conducted interviews to teachers of English to get the complete data about the students in learning the English language, the researchers conducted interviews about the extent of students' understanding in learning English.

## 3. Test

To know the data about the role visual aids in teaching English vocabulary, the writer will do an experiment to 37 (thirty seven) students in two classes in the second grade of elementary school at SD Islam An-nur. The writer will observe the process of teaching-learning English to overview the real problem, especially to the teaching of vocabulary.

In this experiment the writer will provide vocabulary lesson by using visual aids, the first the writer will give a pre-test to students in two classes, experiment class and control class. The second, the writer will teach English vocabulary through pictures in the experiment class. The writer uses the pictures of animals and pictures of things in the class, as follows :

Step I : the teacher mentions some pictures and the students follow it

Step II : the teacher shows the pictures and the students mention it

Step III : the teacher asks a student to come forward and he mentions one by one the picture

Step IV : the teacher explains again about the picture until the students understand and then the teacher gives a post-test.

Writer will test to students after the writer has done an experiment to know the student's achievement in learning vocabulary through visual aids, the writer will give 20 test item in multiple choices. Each question is given score by formulate :

$$\text{Score} = \frac{\text{student score}}{20} \times 100$$

#### **F. Technique of Analyzing Data**

After the writer collecting the data, the writer processess the data, then analyzing the data. The data analysis that used is done quantitative research. It means that the writer collects the data, the writer must go to place of the research.

Before the writer analysis the data the students' vocabulary mastery, the writer describe the rating scales used in this research. It purposes to know the students' vocabulary mastery with each other, what the typical learner at each level can do. So it is easier for the researher to decide the score. Here is the relating scale used by for comparative research test.

1. Determining mean distribution score of both variables, with using

$$MX = MX_1 - MX_2 \text{ and } MY = MY_1 - MY_2$$

2. Determining the percentage distribution score of both variables, with using

- a. Determine the percentage of the average score of variable X

$$\% = \frac{MX}{MX+MY} \times 100\%$$

b. Determine the percentage of the average score of variables Y

$$\% = \frac{MY}{MX+MY} \times 100\%$$

3. The last analyzing is determine t-test by formula  $t_0 = \frac{M_D}{SE_{MD}}$

t-test is formula to analysis between two variable with using t-test to know the use of visual aids strategy .

a. Determine mean of difference ( MD ), by formula:

$$M_D = \frac{\sum D}{N}$$

b. Determine standard deviation

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

c. Determine standard error from mean of difference

$$SE_{MD} = \frac{SD_D}{\sqrt{N-1}}$$