

CHAPTER III

METHODOLOGY OF RESEARCH

A. Method of Research

The method of research in this study is experimental research. Experimental research is a procedure for testing a hypothesis by setting up the situation in which the strength of the relationship between variables can be tested. There were three kind of experimental method namely pre experiment, true experiment, and quasi experiment. Pre experiment is may have pre and post treatment test, but lack a control group, true experiment has both pre and post tests and experimental and control groups, and random the assignment of subjects. And quasi experimental has both pre and post tests and experimental and control groups, but no random assignment of subjects.¹

In this research, the writer uses quasi experimental. Fraenkel, Wallen, and Hyun explain that quasi experimental design do not include the use of random assignment.²

¹David Nunan, *Research Method in Language Learning*, 41.

²Jack. R. Fraenkel, Norman E. Wallen, Helen H.Hyun, *How to Design and Evaluate Research in Education*, (New York: McGraw Hill, 1932), 264

Finally, The writer gives certain treatment to the students to find assessment of how is the effect of using vocabulary self- collection (VSS) in teaching reading comprehension with quasi experiment research. In quasi-experimental will be two classes, there are experiment class and control class. The samples is conducted do not have randomly and the result is decided from the pre- test and post- test of experimental and control class.

B. Time and Place of the Study

In this research, the writer take a place for research at SMPN 1 Sukamulya is located in Jl. Kalimalang, Kp. Gunung Ds. Buniayu, Kec. Sukamulya, Kab. Tangerang – Banten The writer does the research at the second grade of SMPN 1 Sukamulya as the subject or place of the research. The writer will be starting the experiment at 20th august 2017 until finish the research.

C. The Population and Sample

Population is all cases, situation, or individuals who share one or more characteristics. ³the writer take respondents from students of

³ David Nunan, *Research Method in Language Learning*, 231.

second grade of SMPN 1 Sukamulya of 2016/2017 as a population which consists of 227 students.

Sample is a subset of individuals or cases from within a population.⁴ The writer will be taken the samples is 73 students. the samples from VIII A as experiment class that consists of 35 students and VIII B as control class that consists of 38 students.

D. The Research Instrument

Research instrument is facilitating that use by the researcher for collecting data. The researcher uses test questions items. This test is designed for students' pre-test and post-test activities. Pre-test was given before the treatment applied and the post-test was given after the treatment applied. So the researcher know whether there are differences before and after treatment or not.

E. The Technique of data Collection

The writer uses several techniques of collecting data in this research, the writer does :

⁴ David Nunan, *Research Method in Language Learning*, 232.

a. Test

The test is a tool to measure students' skill in education. In collecting the data, the research instruments used by the researcher by:

1. Pre test

A pre-test is conducted in the beginning of the lesson before the treatments are given. The purpose of the pre-test is to know how the student's ability reading comprehension.

2. Post test

A post-test is the test that the teacher gives after the treatments. The purpose of the post test is to know how the student's reading comprehension after treatment using vocabulary self collection (VSS).

F. Technique of Data Analyzing

In this research, the writer uses formula to find out how the students can improve their reading comprehension. To analyze data, the writer uses statistical approach quantitative data. The steps are :

- a. Determining mean of variable X (variable I) with formula:

$$M_1 = \frac{\Sigma X}{N_1}$$

- b. Determining mean of variable Y (variable II) with formula:

$$M_2 = \frac{\Sigma Y}{N_2}$$

- c. Determining deviation standard of variable I with formula:

$$SD_x = \sqrt{\frac{\Sigma x^2}{N_1}}$$

- d. Determining deviation standard of variable II with formula:

$$SD_y = \sqrt{\frac{\Sigma y^2}{N_2}}$$

- e. Determining standard error of mean variable I with formula:

$$SE_{M_x} = \frac{SD_1}{\sqrt{N_1 - 1}}$$

- f. Determining standard error of mean variable II with formula:

$$SE_{M_y} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

- g. Determining standard error of mean difference variable I and variable II with formula:

$$SE_{M_1 - M_2} = \sqrt{SE_{M_1}^2 + SE_{M_2}^2}$$

- h. Analyzing the result by using calculation of the t-test as follow:

$$t_o = \frac{M_1 - M_2}{SE_{M_1 - M_2}}$$

- i. Determining degrees of freedom (df) with formula:

$$df = (N_1 + N_2) - 2$$

Note :

t_o = t-test

M_x = Mean Of The Experimental Class (X)

M_y = Mean Of The Control Class (Y)

$SE_{M_1 - M_2}$ = Standard Error Of Variable X And Y

df = Degree Of Freedom