

CHAPTER III

METHODOLOGY OF RESEARCH

A. The 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 are three kinds of experimental methods, namely pre-experiment, true experiment, and quasi-experiment. Pre-experiment may have pre and post-treatment tests, but lacks a control group, true experiment has both pre and post tests and experimental and control groups, and random assignment of subjects. 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 experimental. Daniel Muijs explains that experimental designs are sometimes known

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

as ‘the scientific method’ due to their popularity in scientific research where they originated.²

Finally, the writer gives certain treatment to the students to find assessment of how is the effect of using Vocabulary Self-Collection Strategy in teaching reading comprehension of narrative text with quasi experiment research. In quasi experimental will be two classes, there are experimental 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. Place and Time of the Study

In research activity, the writer will take place for research at second grade of SMPN 3 Pandeglang. This school selected as the research setting because of two major reasons. Firstly, its location is near for reseacher to conduct the research. Secondly, the researcher has practiced teaching there, so she feels unfamiliar with SMPN 3 Pandeglang. And the researcher knows in second grade of SMPN 3 Pandeglang some problems

² Daniel Muijs, *Doing quantitative research in education with SPSS*. Sage, 2010, p. 13

that happen with students in English skills especially in reading comprehension. The writer will be starting the experiment on January 2018 until finish.

C. Population and Sample

a) Population

A population is defined as all members of any well-defined class of people, events, or objects.³ The writer takes respondents from students of eighth grade of SMPN 3 Pandeglang of 2017/2018 as a population which consists of 320 students.

b) Sample

A sample is a portion of a population.⁴ The writer will take the samples of 79 students. The sample from VIII B as the experiment class that consists of 40 students and VIII B as the control class that consists of 39 students.

³ Donald Ary, et. al, *Introduction to Research in Education*, Wadsworth, 2010, p. 148

⁴ Donald Ary, et. al, *Introduction to Research in Education*, p. 148

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

a. Test

In collecting the data, the researcher used reading comprehension test in the form of multiple choice and essay. The researcher used narrative text for reading comprehension test. The purpose of this test is to know the result in teaching by using Vocabulary Self-Collection Strategy.

Qualification of data: multiple choice and essay.

Pre-test consists of multiple choices and essay. Multiple choices consists of 15 questions. The correct answer is given score 1 (one) and incorrect answer is given zero. And essay consists of 5 (five) questions. The correct answer is given 2 (two), and incorrect answer is given 0 (zero). So, the total items are 25 questions.

Post-test consists of multiple choices and essay. Multiple choices consists of 15 questions. The correct answer is given score 1 (one) and incorrect answer is given zero. And essay consists of 5 (five) questions. The correct answer is given 2 (two), and incorrect answer is given 0 (zero). So, the total items are 25 questions.

Table 3.1

Form of Pre-test and Post-test

Series Number of items	Form of Test	Total of Item	Score of Correct Answer
1-15	Multiple choice	15	15

16-20	Essay	5	10
Jumlah			25

$$\text{Students final score} = \frac{\text{Students scores}}{\text{Ideal Maximum (25)}} \times 100$$

In this research, the researcher was given twice of test. They are pre-test and post-test. The researcher gave the same test for student because the researcher is known the progress of student reading comprehension score before and after treatment the strategy.

1. Pre-test

The pre-test conducted one only to experiment and control class, it conduct in the first meeting in order to know basic of students reading comprehension before the treatment. The test consists of 15 items in multiple choices and 5 items in essay.

2. Post-test

After the treatment completed, both experiment and control class was given a post-test. Post-test was conducted to see effectiveness of the treatment based on the score. The

post-test used the same 15 items multiple choices and 5 items essay.

F. Technique of Data Analyzing

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

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

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

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

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

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

$$SD_x = \sqrt{\frac{\sum X^2}{N_1}}$$

- d. Determining deviation standar of variable II with formula

$$SD_y = \sqrt{\frac{\sum Y^2}{N_2}}$$

- e. Determining standar 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:

$$t_0 = \frac{M_1 - M_2}{SE_{M_1 - M_2}}$$

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

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

Note:

t_0 = 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 Random