

CHAPTER III

METHOD OF THE RESEARCH

A. Place and Time of the Study

The study has been conducted at SMA Negeri 5 Kota Serang. It is located at Jl. Ayip Usman No. 26 Kaligandu, Kecamatan Serang, Provinsi Banten. This study has been conducted about three months. It started on February until May 2017 in the second semester of the academic year 2016/2017. The reason of taking this educational level for this study, because the writer has done the observation in this school and based on the result of the observation, the writer found that there was problem with the students' reading comprehension ability, especially in report text. Whereas, report text is one kind of functional text which has to be mastered by the eleventh grade students of senior high school.

B. Research Method

The research method of this study is a kind of quantitative research method namely experimental research. Experimental research is the best method for examining causal relationships because the method allows us to look at the three main questions that need to be answered in the affirmative before we can say that one variable causes another.¹ The goal of experimental research is to determine whether there is a causal relationship.² In the experimental research, there are some forms of experimental research design, namely: pre – experiment, quasi

¹ Muijs, *Doing Quantitative Research in Education*, 32.

² Alison Mackey and Susan M. Gass, *Second Language Research: Methodology and Design* (London : Lawrence Erlbaum Associates, 2005), 137-138.

experiment, and true experiment and single subject design.³ The experimental design used in this study is quasi-experimental design. The writer uses quasi-experimental design of this study because it is a good design which has control class as a comparison for experimental class. In the design of this study, the writer gives certain treatment to the experimental class to find out the effectiveness of a treatment of a group and can be seen the differences of reading comprehension ability as the result of the differences in treatment used by holding pre-test and post-test to the both classes. In this study, the 3-2-1 Strategy is the independent variable which may influence reading comprehension ability as the dependent variable.

In this research, there are two groups, namely experimental group and controlled group. The experimental group is a group given treatment by using the 3-2-1 Strategy. While, control group is the group that are not given the treatment by using the 3-2-1 Strategy. The writer uses pre-test and post-test to the experimental and control group in order to see the effectiveness of using the 3-2-1 Strategy by looking the result of pre-test and post-test measurement and comparing the scores between both classes.

C. Population and Sample

1. Population

Population is the entire mass of observations, which is the parent group from which a sample is to be formed.⁴ It means that population is

³ John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (United States of America: SAGE Publication, 2014), 167.

⁴ Yoges Kumar Singh, *Fundamental of Research Methodology and Statistics* (New Delhi: New Age International Publishers, 2006), 82.

a group of object that become target of research in which sample is to be determined. The population in this study is the eleventh grade students of SMA Negeri 5 kota Serang in the academic year 2016/2017. It consists of eleven classes namely XI IPA 1-6 and XI IPS 1-5 with the total number of students are 401 students.

2. Sample

Sample is a subset of population selected to be participants in the study. According to Yoges, “Sample is selection of individuals from the population in such a way that every individual has the equal chance to be taken into the sample population.”⁵ In this study, the researcher uses purposive sampling technique. The researcher uses purposive sampling technique. It is purposive because the sampling is determined by certain characteristics that have been considered by the researcher.

In this study, the sample is taken as much 70 students taken from two classes at the eleventh grade students of SMAN 5 Kota Serang. One class as experimental class namely XI IPA 2 that consists of 35 students and one class as control class namely XI IPA 1 that consists of 35 students. They were chosen as the sample in this study because after doing observation, it was found that most of students in both classes had lower ability in English, especially reading. This problem was also in line with the result of the pre-test given to the both classes before treatment.

⁵ Yoges Kumar Singh, *Fundamental of Research Methodology and Statistics*, 82.

D. Instruments

1. Instrument for Treatment

The instrument used in this study is multiple choices. It can be objective to measure learning outcome. In this study, the multiple choices consist of 15 items with five alternative answers. The alternatives include one correct answer and four incorrect answers.

2. The 3-2-1 Strategy worksheet

This study conducted by using treatment namely the 3-2-1 Strategy. The instrument uses some reading topic and reading text, the students read the text and they must fill the 3-2-1 Strategy chart related to the text they have read. The example of 3-2-1 Strategy can be seen below:

Chart 1- The 3-2-1 chart

THE 3-2-1 CHART
Student name: Topic/text: 3 things you discovered 2 interesting things 1 question you still have

E. Data Collection and Data Analysis

1. Data Collection

In collecting the data, the writer uses some instruments as follows:

a. Observation

Before doing the research, the writer has done the observation directly to the school that becomes the place of this research and also to the population who becomes object of this research. The object of this

research consists of the teacher, school profile, and total number of students who become target of this research.

The purpose of this observation is to get factual information about school profile and the condition of the school, teaching learning activities and how is the students' response in learning English, especially in reading.

b. Test

A test is a method to measure the person's ability, knowledge, intelligence or attitudes. In this study, the writer uses pre-test and post-test, as follows:

1) Pre-test

Pre-test consist of 15 multiple choices. For multiple choice, the correct answer is given score 1 (one) and incorrect answer is given score 0 (zero).

Before giving treatment, the writer gives the pre-test to the both classes as sample to know the students' ability in reading comprehension. In this test, there are five types of text and each of them consists of three questions related to the reading comprehension aspects which have indicator such as: determining main idea, stated and unstated details of the text.

- a) Question number 1, 4, 7, 10, and 13 related to determining main idea of the text.
- b) Question number 2, 5, 8, 11, and 15 related to determining stated details of the text.
- c) Question number 3, 6, 9, 12, and 14 related to determining unstated details of the text.

2) Post-test

Post-test consist of 15 multiple choices. For multiple choice, the correct answer is given score 1 (one) and incorrect answer is given score 0 (zero).

This test administered after the students are given treatment either by using the 3-2-1 strategy or without using the 3-2-1 strategy to find out the result of the different treatment used. Similar with the pre-test, in the post-test there are five types of text and each of them consists of three questions related to the reading comprehension aspects.

- a) Question number 1, 4, 7, 10, and 13 related to determining main idea of the text.
 - b) Question number 2, 6, 8, 11, and 14 related to determining stated details of the text.
 - c) Question number 3, 5, 9, 12, and 15 related to determining unstated details of the text.
- 3) Scoring system

$$Score = \frac{\text{Students' correct answer}}{\text{total maximum score}} \times 100$$

2. Data Analysis

The data analyzed in this study are data from pre-test and post-test. The result of pre-test and post-test will be analyzed and calculated by using statistical calculation of t-test formula with the level significance 5% and 1% to find out the differences of students' score between both

classes. The formula of t-test stated by Suharsimi Arikunto is as follows:⁶

$$t_o = \frac{Mx - My}{\sqrt{\left(\frac{\Sigma Y^2 + \Sigma Y^2}{Nx + Ny - 2}\right)\left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

The calculation procedures through several processes as follow:

- a. Determine mean of score experiment class (MX), with formula:

$$MX = \frac{\Sigma X}{N}$$

- b. Determine mean of control class (MY), with formula:

$$MY = \frac{\Sigma Y}{N}$$

- c. Determine the total square of error in experiment class (X), with formula:

$$\Sigma X^2 = \Sigma X^2 - \frac{\Sigma X^2}{N}$$

- d. Determine the total square of error in control class (Y), with formula:

$$\Sigma Y^2 = \Sigma Y^2 - \frac{\Sigma Y^2}{N}$$

- e. Calculation T-Test

$$t = \frac{Mx - My}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma Y^2}{Nx + Ny - 2}\right)\left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

- f. Determine the degree of freedom, with formula:

$$Df = Nx + Ny - 2$$

⁶ Suharsimi Arikunto, *Prosedur Penelitian Suatu pendekatan Praktik* (Jakarta: Rineka Cipta, 2013), 354.

Notes:

M_x = Mean of experiment class

M_y = Mean of control class

ΣX^2 = the total square of error in experiment class

ΣY^2 = the total square of error in control class

N = the number of subject

Df = Degree of freedom

- g. Doing interpretation and conclusion by comparing the result of calculation t-test with t-table.

Criteria of the test as follow:

If $t_{count} \geq t_{table} = H_a$ is received

If $t_{count} \leq t_{table} = H_a$ is rejected

F. Research Procedure

In general, the procedure of this research can be described as follows:

1. Observation about the students' ability and achievement in reading comprehension.
2. Provide pre-test for the experimental class and control class.
3. Provide treatment for the experimental class using the 3-2-1 Strategy, while the control class without using the 3-2-1 Strategy.

a. Experimental class

1) Preparation

- Preparing the lesson plan
- Preparing the materials and

- Design of group formation (if desired)

2) Implementation

- The teacher provides the 3-2-1 Strategy chart for the students.
- Teacher sets reading text, then asks the students to read the text.
- The teacher explains the process of implementation of using the 3-2-1 Strategy.
- After the students have read the text, the teacher asks the students to fill the 3-2-1 Strategy chart.
- The teacher guides the students to fill the chart.
- After the students complete their charts, the teacher assesses the students' work. Then, students do same task that assess students' comprehension of the text.

b. Control class

a) Preparation

- Preparing the lesson plan
- Preparing the materials that will be discussed.

b) Implementation

- The teacher asks the students to read aloud.
- The students are asked to answer the question based on the text.

4. Provide post-test to the experimental class and control class.
5. Analyzing the data from pre-test and post-test.
6. Drawing the interpretation based on the result of the analysis of data and making conclusion.