

## **CHAPTER III**

### **METHODOLOGY OF THE RESEARCH**

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

The research will be conducted at SMP SMP Al-Mu'min Pandeglang. It is located on Jalan Raya Mandalawangi, Kupahandap, Pandeglang, Banten. The writer will conduct this research on July 2019 until this research is finished.

#### **B. The Method of Research**

Method is a way to conduct something in order to get the purpose or the goal as expected. The method of this research is experimental research. Experimental research is a research method that test the hypothesis which has the form of cause and effect relations between variables. Experiments are carried out in order to explore the strength of relationship between variables<sup>1</sup>. It means the experimental research conducted to know the cause and effect relationship between independent variable and dependent variable.

According to Mujis that “Experimental research is a test under controlled conditions that is made to demonstrate a known truth or examine the validity of a hypothesis.”<sup>2</sup> Nunan stated that “Experiment is a procedure for testing the hypothesis by setting up a situation in which the strength of the relationship

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<sup>1</sup> David Nunan, *Research Methods in Language Learning* (Cambridge: Cambridge University Press: 1992), 24-25.

<sup>2</sup> Daniel Mujis, *Doing Quantitative Research in Education* (London: SAGE Publications Ltd, 2004), 13.

between variable can be tested.”<sup>3</sup> It means that experimental is a research method that test the hypothesis.

The researcher will conduct the research by applying quasi experiment to see the effect of questioning the author chart in reading comprehension on narrative text. As stated by Mujis that, “quasi-experimental research is especially suited to looking at the effects of an educational invention, such as a school improvement program, a project to improve a specific element.”<sup>4</sup> Also, Wiersma and Jurs stated that, “a quasi-experiment is an approximation of a true experiment that uses groups that have not been formed randomly. Such research can make valuable contributions, but it is important that the researcher be especially cautious about interpreting and generalizing result.”<sup>5</sup> It means compare the results of two groups between experimental class and control class.

In this research the researcher gives pre-test and post-test experimental. The pre-test is conducted in order to diagnose students’ current ability in introducing someone else before the treatment applied. Meanwhile, post-test is used to measure the effect of study after applying the treatment.

In applying this research, the researcher teaches about Questioning the author chart on students’ reading comprehension on narrative text as experimental class, and writer do not teach Questioning the Author toward students’ reading comprehension on narrative text as control class.

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<sup>3</sup>David Nunan, *Research Method in Language Learning*, 230.

<sup>4</sup>Daniel Mujis, *Doing Quantitative Research in Education*, 27.

<sup>5</sup>William Wiersma and Stephen G. Jurs, *Research Methods in Education 9<sup>th</sup> ed*, (America: Pearson International Edition, 2009), 165.

## C. Population and Sample

### 1. Population

Population is a generalization region consisting of objects that have certain qualities and characteristics set by researchers to be studied and then drawn conclusions<sup>6</sup>. According to David Nunan, “population is all case situation, or individuals who share one or more characteristics”.<sup>7</sup> Its mean population is a research subject.

The population of this research is all of the third grade students of SMP Al-Mu'min Pandeglang (located on Jalan Mandalawangi, kupahandap pandeglang, Banten.). The total number of the population come class A, B, C, D, E The total number of students is 150.

### 2. Sample

Sample is important because in almost case, it is not partical to study all the members of population. Nunan stated that “Sample is subset of individuals or cases from within population.”<sup>8</sup> In this research the writer uses purposeful sampling in taking samples. Because there are many eight grade students at this school, it is not possible if the researcher takes all the students as the samples. McMillan stated that:

“Purposeful sampling refers the selecting particular elements from the population that will be representative or informative about the topic of interest. In

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<sup>6</sup>Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*, (Bandung:ALFABETA cv, 2016 ), 80.

<sup>7</sup>David Nunan, *Research Method in Language Learning*, 231.

<sup>8</sup>David Nunan, *Research Method in Language Learning*, 232.

quantitative studies, the emphasis is more on relying on the judgment of the researcher to select a sample that is representative of the population or that includes subjects with needed characteristics.”<sup>9</sup>

Based on that statement, the writer uses two classes. The first is as Experimental Class and second is as Control Class. The writer chooses class IX C which consists of 30 students as experimental class and class IX B which consists of 30 students as control class.

#### **D. The Research Instrument**

Research instrument is a facility that used by researcher in collecting data. Researcher used it to know students’ reading comprehension. In this research, the writer will take two items of test, those are multiple-choice and essay. It aims are to measure person’s comprehension or knowledge are given.

To get data of students’ reading comprehension, the researcher gives pre-test before treatment and post-test after treatment. Pre-test is question to evaluate the subject that using the conventional method in teaching to both of classes. Post-test is question to evaluate the subject that applying questioning the author chart towards students’ reading comprehension on narrative text in experimental class and conventional method in control class.

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<sup>9</sup>James H. McMillan, Sally Schumacher, *Research in Education Evidence-Based Inquiry 6<sup>th</sup>ed*, (Boston: Allyn and Bacon, 2006), 24.

## E. The Technique Data Collection

In this research, the researcher used two kind of instruments in gathering data. Those are test and observation:

### 1. Observation

Observation is very effective way of finding out what people do in particular contacts, the routines and interactional patterns of their everyday live.<sup>10</sup> Observation can be defined as the process of watching or noting something or particular group carefully and comprehensively fro period of a time in order to obtain specific information about the object of research.

The researcher observed teaching learning activities, the researcher made some list of observation aspect indicators which involve the constituent of the teacher, the students' and learning activities in the clsroom.

### 2. Test

Test refers to the fact that when a person knows he or she is being tested this fact can change his or her performance on an exam.<sup>11</sup> To get data of students' reading comprehension, the researcher gives pre-test before treatment and post-test after treatment. The aims of these tests are to measure and compare students' achievement from both groups before and after giving treatment.

There are two kinds of test based on response. They are subjective and objective test.

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<sup>10</sup>Yvonne Drington & Dorothy Scott, *Qualitative Research in Practice Stories From Field*, (Australia: Allen & Unwin, 2002), p.74

<sup>11</sup>Steven R. Terrell, *Writing a Proposal for Your Dissertation*, (New York: The Guilford Press, 2016), 108.

a. Subjective Test

Subjective test is a test which are the learners' ability performances are judged by examiners' opinion and judgment. The example of subjective test is using essay or short answer.

b. Objective Test

Objective test is a test in which learners' ability or performances are measured using specific set of answer, means there are two possible answer, right and wrong. In other word, the score is according to right answer. Types of objective test includes multiple choice test, true or false test, matching and problem based question.

In this research, the researcher takes the objective and subjective test as an instrument. The reading test was given to identify learners' reading comprehension which consisted of pretest and post-test. The pretest was given before the treatment was conducted; firstly, the pretest was administered to find out the students' reading comprehension ability before treatment. The post-test was administered at the end of treatments in order to find out the results of students' reading comprehension after the treatments.

## F. Technique of Analyzing Data

The steps for statistic analyze are:

1. Determining the Mean of variable X1 with formula:

$$M_1 = \frac{\sum x_1}{N_1}$$

2. Determining the Mean of variable Y1 with formula:

$$M_2 = \frac{\sum y_1}{N_2}$$

3. Determining derivation score variable  $X_1$  with formula:

$$X_1 = X1 - M_1$$

4. Determining derivation score variable  $Y_1$  with formula:

$$Y_1 = Y1 - M_1$$

After getting the data from pre-test and post-test, the writer analyzes it by using statistic calculation of t-test formula with the degree of significance 5% and 1% the formula as follow:

$$t_o = \frac{M_1 - M_2}{\sqrt{\left\{ \frac{\sum X_1^2 + \sum y_1^2}{N_1 + N_2 - 2} \right\} \left\{ \frac{N_1 + N_2}{N_1 \cdot N_2} \right\}}}$$

$M_1$  = the average score of experimental class (Mean X1)

$M_2$  = the average score of control class (Mean X2)

$\sum X_1^2$  = Sum of square deviation of experiment class

$\sum Y_1^2$  = Sum of square deviation of control class

$N_1$  = Number of students of experiment class

$N_2$  = Number of students of control class

2 = constant number

df = degree of freedom

df =  $N_1 + N_2 - 2$ <sup>12</sup>

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

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<sup>12</sup> J.P. Guilford, et.al. *Fundamental Statistic in Psychology and Education: International Student Edition* (California:McGraw-Hill, 1981), 157.