**CHAPTER III**

**RESEARCH METHODOLOGY**

1. **The Research Method**

In this paper the writer uses quantitative approach. Many researchers take a pragmatic approach and use quantitative methods when they want to test a hypothesis or want to study something quantitative. The writer uses an experimental method in this research. An experimental research is the traditional approach to conduct a quantitative research. In experimental designs, we typically compare two or more groups, one of (the experimental group) receives the experimental treatment, while the other (the control group) does not. Experimental studies usually employ a pre test, experiment, and post test design.

According to Muijs, 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, is there a relationship between the variables, does our cause precede our effect in time, and are there any confounding variables that could explain the relationship?[[1]](#footnote-1). In additon according to Creswell defines that in an experiment, you test an idea (or practice or procedure) whether it influences an outcome or dependent variable.[[2]](#footnote-2)

There are four kinds of experimental design, such as Pre Experimental design, True experimental design, factorial design and Quasi experimental design. In this research the writer uses Quasi experimental design. Quasi experimental design stated by Creswell is include assignment, but not random assignment of participants to groups.[[3]](#footnote-3)

Table 3.1 Quasi Experimental Research

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Group** | **Pre test** | **Treatment** | **Post test** |
| Select Control Group | Contol group | Pre test | - | Post test |
| Select Experimental Group | Experimental group | Pre test | Experimental Treatment | Post test |

1. **Place and time of research**

The writer conducts this research at SMP Khairul Huda Kota Serang on the third grade in the academic year 2018/2019. This school is located at Jl. Kh Jamhari No. 17, Kaloran Madrasah, Kecamatan Lontar baru, Kota Serang, Banten. The reasons why the writer choose this school because SMP Khairul Huda where the researcher did the teaching practice program (PPLK) for this research, the writer conducts this research on February 2019 until this research is finished. So the teacher and the students are quite familiar with the writer. And then, back to my background of this research there were many students got difficulties especially in writing descriptive. The writer hopes , if this research is succesful, it will be applied in language teching in various school, especially in SMP Khairul Huda.

1. **Population and Sample**
2. Population

The population is taken of whole subject or person in study to get required data. Accoridng to Creswell defined that A population is a group of individuals who have the same characteristic. [[4]](#footnote-4) For example, all teachers would make up the population of teachers, and all high school administrators in a school district would comprise the population of administrators. As these examples illustrate, populations can be small or large. You need to decide what group you would like to study.

All of the students in SMP Khairul Huda Kota Serang consist of 78 Students, which devides into four classes. The population of this research is the student’s of the third grade in SMP Khairul Huda Kota Serang which consists of 44 Students, from two clasess.

1. Sample

Still in Creswell’s book, he defined that A sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. [[5]](#footnote-5) The sample of this research is students at the third grade of SMP Khairul Huda Kota Serang. The writer uses two calsses to support this research one class is IX A consists of 22 students as experimental class, then the other one is IX B consists of 22 students as the control class.

1. **The Technique of Collecting Data**

The instrument of this research to collecting data for Teaching writing descriptive text through four square uses Test and Observation . According to Brown stated that A test, in a simple term is a method of measuring a person’s ability or knowledge or performance in a given domain.[[6]](#footnote-6) The writer uses two kinds of test, there are Pre Test and Post Test. The purpose of test is to measure The effectiveness of four square method in teaching decriptive writing.

1. Pre Test

The writer will give the pre test before implementing Four Square Method in tecahing descriptive writing, it will be given in the first meeting in order to get the data of their mastery writing of both two group. The test will be given in essay. The students should make a descriptive text that consist at least two paragraphs and the total number of words is 50-100.

1. Post Test

Post test will be given at the end after implementing the Four Square Method in tecahing descriptive writing to check the significancy in student’s writing descriptive of both two groups. The test is same as pre test, there will be a question in essay. The students should make a descriptive text that consist at least two paragraphs and the total number of words is 50-100.

1. Observation

According to Sugiyono stated that Observation is a spesific data collection technique when compared to other tehniques, namely interviews and questionnares, if interviews and questionnares always communicate with people, observation is not limited to people, but also other natural objects.[[7]](#footnote-7) The writer will conduct this research uses observation while treatments of Four Square Method is given in this part after Pre test. The English teacher and Students in the class observe and monitor how the writer facilitates and how students activities as long as learning activities using four square method in teaching writing descriptive text.

1. **The Technique of Data Analyzing**

In this research the writer uses T test formula, this formula is the most frequently used to measure in second language research when comparing mean score for two groups. It supposed to know wheteher experimental versus control class when taking the same test has the same score or not. The writer will use the following formula according to Anas Sudijono[[8]](#footnote-8) :

1. Determining mean Variabel $X\_{1}$ , with formula :

$$M\_{1}=\frac{ƩX\_{1}}{N\_{1}}$$

1. Determining mean Variabel $X\_{2}$ , with formula :

$$M\_{2}=\frac{ƩX\_{2}}{N\_{2}}$$

1. Determining Deviation Score variable $X\_{1}$ , with formula :

$$X\_{1}=X\_{1 }-M\_{1}$$

1. Determining Deviation Score variable $X\_{2}$, with formula :

$$X\_{2}=X\_{2 }-M\_{2}$$

1. To calculate T test with Formula :

$$T\_{O}=\frac{M1-M2 }{\sqrt{ \left(\frac{ΣX\_{1}^{2}+ΣX\_{2}^{2}}{N\_{1}+N\_{2}-2}\right) \left(\frac{N\_{1}+N\_{2}}{N\_{1}. N\_{2}}\right)}} $$

Notes :

M1 = Mean score of post test of experimental class

M2 = Mean score of post test of Control class

Ʃx² = Sum of Square Deviation score in Experiment class

Ʃy² = Sum of Square Deviation score in Control class

N1 = Number of students of Experiment class

N2 = Number of students of Control class

1. **Research Procedure**

In conducting this research, the following steps are :

1. Provides the Pre test at Experimental and Control Class
2. Experimental Class
3. Gives the appropriate material
4. Gives the treatment use Four Square
5. Control Class
6. Gives the appropriate material
7. Gives the treatment use another method
8. Provides the Post test at Experimental and Control Class
9. Analyzing the data from pre test and post test.
10. Make an interpretation based on the result of test and conclusion.
1. Daniel Mujis*, Doing Quantitative Research in Education* (London: Sage Publication, 2004), 32. [↑](#footnote-ref-1)
2. John Creswell*, Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (Boston: Pearson, 2012), 295. [↑](#footnote-ref-2)
3. Creswell*, Educational Research*, 310. [↑](#footnote-ref-3)
4. Creswell*, Educational Research*, 141. [↑](#footnote-ref-4)
5. Creswell*, Educational Research*, 141. [↑](#footnote-ref-5)
6. H.Doughlas Brown, *Teaching by Principle: An Interactive Approach to Language Pedadogy* (San Francisco: Longman, 2000), 3. [↑](#footnote-ref-6)
7. Sugiyono, *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R&D* (Bandung: Alfabeta Bandung, 2016), 203. [↑](#footnote-ref-7)
8. Anas Sudijono, *Pengantar Statistik Pendidikan* (Jakarta: PT Raja Grafindo Persada, 2005), 317. [↑](#footnote-ref-8)