**CHAPTER III**

**METHODOLOGY OF RESEARCH**

1. **Research Method and Design**

The method of this research is an experimental research. The researcher will applying experimental research with Quasi experimental design on two group. According to Sugiyono, experimental design is divided into four, namely ; pre-experimental design, true experimental design, factorial experimental design and quasi experimental design.[[1]](#footnote-1)The experimental method is basically a collection of research design, guidelines for using them, principles and procedures for determining statistical significance, and criteria for determining the quality of a study.[[2]](#footnote-2) The experimental method is part of the psychometric tradition and it is also referred to as the scientific method. Fraenkel, Wallen, and Hyun explain that quasi experimental design do not include the use of random assignment.[[3]](#footnote-3) Finally, the writer gives certain treatment to the students to find assessment of how is the effect of using PQRST Technique in reading comprehension 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.

1. **Place and time of the Research**

 The location of the research is in the second grade of SMA AL-HUSEN Tunjung Teja. It is located on Jl. KH. Abdul Kabier, Kec. Tunjung Teja, Kab. Serang, Banten. The writer chooses this location because some reasons, namely: (1) This school is not too far from the writer’s house. (2) The English teacher still use the old method in teaching learning process in the classroom. (3) The English teacher never use PQRST strategy in teaching reading. The writer will be starting the experiment on September 2018 until finish.

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

Population is all totality to research object. According to Suharsimi Arikunto, quote from encyclopedia education evolution. A population is a set or collection of all elements possessing one or more attributes of interest.[[4]](#footnote-4) The population in this research is students at second grade of SMA AL-HUSEN Tunjung Teja in 2018/2019 academic year that consists of two classes XI.A and XI.B and each class generally consisting of 33 students. So the total numbers population is about 66 students.

1. Sample

According to Nunan : A sample is subset individuals or cases from within population.[[5]](#footnote-5) Zoltan Dornyei said that, “sample is the group of people whom researchers actually examine.[[6]](#footnote-6) The way the experimenter collects representatives, often called sampling, is a reflection of the situation that the truth derived as the end from these representatives serving as the mean, is expected to be a close fit.[[7]](#footnote-7)The writer takes two classes as a sample research by clustering from the second grade (XI A class and XI B). XI.A class consists of 33 students as control class and XI.B class consists of 33 students as experiment class.

1. **The Instrument of Research**

The instrument that would be used by the writer in this research are test. The test consists pre-test and post-test.

1. Pre-test

Pre-test is a test that given to students before treatment. Firstly researcher ask student to read a text, then they should answer the question. This test given to know the students comprehension before treatment.

1. Post-test

Post-test is a test that given to students after treatment. The procedure of post-test is same with pre-test. The difference is from the theme of the text. This test given to know the students comprehension after treatment. In this test, the writer would know the result of this research.

1. **The technique of Data Collecting**
2. **Observation**

 According to Arikunto, “Observation is an activity of whole senses toward object that cover attention, smell, sight, hearing, and taste. It means that observation can be done by using test, questionnaire, visual record, and audio record. The writer conducts the observation directly to SMA AL-HUSEN Tunjung Teja toward situation of the school, facilities, principal and others that enable the writer to complete the data.

1. **Test**

 The writer takes the objective test as one of the instruments used. It was the questions to measure the students ability before and after learning.

1. **The Technique of Data Analyzing**

In this research, the writer use formula to find out how the students can improve their reading comprehension of text. Collected and scoring the students reading comprehension test with multiple choices includes 20 questions with 100 scores. If correct the answer is given 5 scores and incorrect answer is given 0 (zero). To analyze data, the writer uses statistical approach quantitative data. The steps are:

* + 1. Determining mean of variable X (variable I) with formula:

 $M\_{1}= \frac{\sum\_{}^{}X}{N\_{1}}$

* + 1. Determining mean of variable Y (variable II) with formula:

 $M\_{2}= \frac{\sum\_{}^{}Y}{N\_{2}}$

* + 1. Determining deviation standar of variable I with formula:

 $SD\_{x}=\sqrt{\frac{∑X^{2}}{N\_{1}}} $

* + 1. Determining deviation standar of variable II with formula

 $SD\_{y}=\sqrt{\frac{∑Y^{2}}{N\_{2}}} $

* + 1. Determining standar error of mean variable I with formula:

 $SE\_{M\_{x}= \frac{SD\_{1}}{\sqrt{N\_{1} - 1} }}$

* + 1. Determining standard error of mean variable II with formula:

 $SE\_{M\_{y}= \frac{SD\_{2}}{\sqrt{N\_{2} - 1} }}$

* + 1. Determining standard error of mean difference variable I and variable II with formula:

 $SE\_{M\_{1-}M\_{2 }=\_{ }}\sqrt{SE\_{M\_{1}}^{2}+SE\_{M\_{2}}^{2}}$

* + 1. Analyzing the result by using calculation of the t-test as follow:

 $t\_{0}= \frac{M\_{1 }-M\_{2}}{SE\_{M\_{1 }- M\_{2}}}$

* + 1. Determining degrees of random (df) with formula:

*df =(N1 + N2) −2*

 Note:

 t0 = t-test

 Mx = Mean of the Experimental Class (X)

 My = Mean of the Control Class (Y)

 $SE\_{M\_{1-}M\_{2 }\_{ }}$ = Standard Error of Variable X and Y

 *df* = Degree of Random

1. **Research procedure**

The procedure of this research can be describe as follows :

1. Provide pre-test of the experimental class and control class
2. Provide treatment of the experimental class using PQRST Technique, while control class without using PQRST Technique, the treatments as follows:
3. **Experimental class**
4. Preparation
5. Preparing the lesson plan
6. Preparing the material
7. Preparing the text reading comprehension
8. Implementation
9. Teacher guide students to make a group
10. Teacher explain the material
11. Teacher give example
12. Each group gives text for analyze and answer the questions in the text. Then, discuss and answer the questions on the text.
13. Each group explain results from them read in front of the other group
14. **Control class**
15. Preparation
16. Preparing the lesson plan
17. Preparing the material
18. Implementation
19. The teacher explain the material
20. The teacher give the example
21. The teacher ask the student about the material being studied
22. Provide post-test of experimental and control class
23. Analyzing the data from pre-test and post-test
24. Drawing the interpretation based on the result of test and making conclusion.
1. Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif,Kualitatif,dan R&G 13 edition).* (Alfabeta:2011),P.108-109 [↑](#footnote-ref-1)
2. David Nunan,*Exploring Second Language Classroom Research* (Canada: Nelson Education 2009),p.83 [↑](#footnote-ref-2)
3. 2 Jack. R. Fraenkel, Norman E, Helen H. Hyun, *How to Design and Evaluate Research in Education,*(New York: Mc Graw Hill, 1932), p. 254 [↑](#footnote-ref-3)
4. Suharsimi Arikunto,*Prosedur Penelitian Suatu Pendekatan Praktik.* Cet 15,(Jakarta: PT Rineka Cipta, 2013), p. 173 [↑](#footnote-ref-4)
5. David Nunan, *Research Method In Language Learning,* (New York:Cambridge University Press 1992), p. 232 [↑](#footnote-ref-5)
6. Zoltan Dornyel, *Quistionares In Second Research : Construction Administration,and Processing* (New Jersey: Lawrence Associates, Inc.2003 ),p.70 [↑](#footnote-ref-6)
7. K Srinagesh, *The Principles of Experimental Research,* (Butterworth:Heinemann,2005),p.282 [↑](#footnote-ref-7)