CHAPTER III
METHODOLOGY OF RESEARCH

A. Research Method

In this research, the researcher used Quantitative Research. It used to see the influence of clustering technique in descriptive writing. Quantitative research is collecting numerical data and generalizing it across groups of people.

Researcher used a Quasi-experimental in this research to analyze the used of Clustering Technique in descriptive writing. David Nunan stated that "The characteristic of quasi-experimental has both pre- and posttests and experimental and control groups, but no random assignment of subjects".[1] In the experiment class taught by using clustering technique as the treatment, meanwhile in the control class not taught clustering technique but conventionally.

B. Place and Time of Research

This research was conducted in SMAN 1 Petir. It is located on Jl. Raya Baros – Petir KM. 12 Kecamatan Petir Kabupaten Serang Provinsi Banten. This research was conducted on February, 27th 2019.

C. Population and Sample

According to Sugiono stated that "population is generalization area of the object or subject that has certain qualities and characteristics are determined by the researchers to learn and then drawn the conclusion."[2] In this research, the population took from the tenth-grade student of SMAN 1

[1] David Nunan, *Reseach Method in Language Learning* (New York: Cambridge University Press, 1992), 41.

[2] Sugiyono, *Metode Penelitian Pendidikan* (Bandung: Alfabeta, 2012), 119.

Petir. There were 288 students. While for sample, it involves 2 classes from 8 classes, one (1) experiment class and (1) control class.

Sugiyono stated that "sample is part of the number and characteristics possessed by the population."[3]

Based on statement above, the researcher took sample as follow. The sample are selected by using random sampling technique. Class X MIPA 1 as the experimental class there were 36 students, while X IPA 2 as the control class there were 36 students too.

D. Instrument of the Research

Research instrument was for facilitation that used by researcher to collect the data. The researcher used observation and test as instrument of this study, then the test used to collect the data from the object of the research.

1. Observation

   Based on Sugiyono stated that "Observation is a spesific data collection technique when compared to other techniques, namely interviews and questinares, if interviews and questionares always communicate with people, observation is not limited to people, but also other natural objects.[4] In this observation, researcher using kind of close ended observation. The researcher gives the assessment using Likert Scale 1-5. Scale 1 is Strongly Disagree, scale 2 is Disagree, scale 3 is Neutral, scale 4 is Agree, and scale 5 is Strongly Agree.

2. Test

   A test is a method of measuring a person's ability, knowledge, or performance in a given domain.[5] In this research, the researcher used

[3] Sugiyono, *Metode Penelitian Pendidikan,* 120.
[4] Sugiyono, *Metode Penelitian Pendidikan,* 203.
[5] H. Douglas Brown, *Language Assessment Principle and Classroom Practices* (California: Pearson Education, 2004), 3.

test by giving the instruction to make a paragraph descriptive text with the theme that decided by the teacher.

a. Pre-test

Pre-test was to collect the data when the teacher for the first time entered the class. It is aimed to know the students ability in material of writing skill which given by the researcher before getting treatment. This test using essay writing descriptive text.

b. Post-test

Post-test was used to collect the data in order to know the changeable on the students' writing ability material between learning process. The researcher took the total score from the result of the writing test. This test using essay writing descriptive text.

E. The Technique of Data Collecting

For collecting the data, the researcher will use observation and test (pre-test and post-test).

1. Observation

Observation is the first technique to know the situation and condition in the learning process of SMAN 1 Petir. This observation conducted to observe English learning process in the real classroom activities at the tenth grade of SMAN 1 Petir.

2. Pre-test

Before applying clustering technique in descriptive writing, the researcher will conduct the pre-test to the students in the first meeting. The test will be a written test; the student will be ask to make their own descriptive text. The test intend to know the students' ability in descriptive writing.

3. Post-test

The researcher will conduct the post test after the treatment is given to experiment class. The test suppose to know the students' ability in descriptive writing after the experiment class is given the treatment. In the experiment class, the researcher give the treatment that uses clastering as a technique in teaching writing descriptive text. In the control class, the researcher teaching writing descriptive text conventionally.

The test instruction will be same with the pretest but has different content. After scoring the test both two classes will be analyzed and calculated.

F. The Technique of Data Analysis

In the process of analysing the data, the researcher collected all the data of the study. In this analysing, the researcher using the t-test to know is there an influence or not from two samples of study.

Because this research uses the big sample (more than 30 students) which is related to each other, so the researcher will use formula:[6]

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

M_1 = the average score of experiment class

M_2 = the average score of control class

SE = Standard of error

X = Sum of the squared deviation score of Experiment class

Y = Sum of the squared deviation score of Control class

Calculation steps:

1. Determining Mean of Variable X (Variable I) :

$$M_1 = M' + i \frac{(\Sigma fx')}{(N)}$$

[6] Anas Sudijono, *Pengantar Statistik Pendidikan* (Jakarta: Raja Grafindo Persada, 2005), 346.

2. Determining Mean of Variable Y (Variable II) :

$$M_2 = M' + i \frac{(\Sigma fy')}{(N)}$$

3. Determining Standard Deviation (SD) of Variable X (Variable I) :

$$SD_1 = i \sqrt{\frac{\Sigma fx'^2}{N} - \frac{(\Sigma fx')^2}{(N)}}$$

4. Determining standard Deviation (SD) of Variable Y (Variable II) :

$$SD_2 = i \sqrt{\frac{\Sigma fy'^2}{N} - \frac{(\Sigma fy')^2}{(N)}}$$

5. Determining Standard Error Mean of Variable X (Variable 1) :

$$SE_{M_1} = \frac{SD_1}{\sqrt{N-1}}$$

6. Determining Standard Error Mean of Variable II

$$SE_{M_2} = \frac{SD_2}{\sqrt{N-1}}$$

7. Determining Standard Error different between Mean of Variable X (Variable I) and Mean of Variable Y (Variable II) :

$$SE_{M_1 - M_2} = \sqrt{SE_{M_1}^2 + SE_{M_2}^2}$$

8. Determining t_o :

$$t_o = \frac{M_1 - M_2}{SE_{M1 - M2}}$$