CHAPTER III
METHODOLOGY OF RESEARCH

A. The Method of the Research

"Research methods may be understood as all those methods/techniques that are used for conduction of research."[1] Research method a very close to do with some of procedure, techniques, also tools and research design used. Study design must match the research approach selected. In the set a research, in addition to using procedure set, also important to match research method with approach used for the purpose of the study can achieve.

According to Brown in Nunan,
Experimental research should exhibit several key characteristics. It should be systematic, logical, tangible, replicable, and reductive, and one should be cautious of any study not exhibiting these characteristics. study is systematic if it follows clear procedural rules for the design of the study, for guarding against the various threats to the internal and external validity of the study, and for the selection 2nd application of statistical procedures. A study should also exhibit logic in the step-by-step progression of the study. Tangible research is based on the collection of data from the real world. 'The types of data are numerous, but they are all similar in that-they must be quantifiable, that is, each datum must be a

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[1] C.R. Kothari, *Research Methodology: Method and Techniques,* (New Delhi: New Age International (P) Limited Publishers, 2004), p.3

number that represents some well-defined quantity, rank, or category.[2]

In this research, the researcher using experimental research to know the real data that got from the respondent. Method of experimental research is part of the quantitative methods and its own features with the two groups of class to be researched those are control and experiment group.

There are four kinds of experimental design such as Pre-Experimental design, True experimental design, factorial design and quasi experimental design. The kind of experimental design that is used by the researcher in this research is quasi experimental design. Quasi experimental design is the development of true experimental design that is difficult to implement. This design has a control group. But it cannot fully control the outside variables that affect the experimental execution. However, this design is better than pre-experimental design.

B. Place and Time of Research

The writer chooses research sites at tenth grade of SMAN 1 Baros, it is located in JL. Raya Pandeglang KM 14 This research will be conducted about a months on May 2018 in the second semester of academic year 2017/2018. The reasons

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[2] David Nunan, *Research Method in Language Learning,* (Cambridge: Cambridge University Press, 1992), p.9

why the researcher choose this school because this school has complete facilities to implement the media that will be applied that the writer will make the place as the one of teaching media and the researcher has a lot to know the problem that happened to student at school especially in writing English which make researcher try to experiment Moodle approach in text descriptive writing study.

C. Population and Sample

1. Population

The population of the research is students, especially the tenth grade of SMAN 1 Baros. There are five classes in the tenth grade with 152 students.

2. Sample

The sample of this research is students at tenth grade of SMAN 1 Baros. The researcher uses two classes to support this research. One class is X-MIPA 1 that consist of 30 students as experimental class and the other one is X- MIPA 2 that consist of 29 students as the control class.

D. Instrument and Technique of Data collecting

In this collecting data, the writer will use several instruments as follows:

1. Observation

According to Kothari, "The observation method is the most commonly used method specially, in studies relating

to behavioral sciences. In a way we all observe things around us".[3] Techniques of collecting data with observations are used when research relates to human behavior, work processes, natural phenomena and if the observed respondents are not too large. In this research the researcher did observation on The English teacher of SMAN 1 Baros and has seen the situation of the teaching and learning process of English subject.

2. Test

According to Brown, "Test is a method of measuring a person's ability, knowledge, or a performance in a given domain"[4]. Test is one instrument to get real results from the object that has been studied, in this case the researchers used two kinds of test that is pre-test and post-test.

a. Pre-test

The pre-test was performed to determine the initial state between the experimental group and the control group. The researcher will give the test before implementing Moodle to know students' writing descriptive text and to get the data of their mastery writing of both two groups.

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[3] C.R. Kothari, *Research Methodology: Method and Techniques,* (New Delhi: New Age International (P) Limited Publishers, 2004), p.92

[4] Doughlas Brown, *Language Assessment Principal and Classroom Practice,* (United Stated of Amerika: Longman), p.3

b. Post-test

Post-test will be given at the end, after implementing Moodle in experimental group and traditional method in control group to check the different significant in student's writing descriptive text of two groups.

E. The Technique of Data Analyzing

The technique used in this data analysis is the quantitative method and will be described in statistical form. To analysis data the writer uses *t*-Test. The *t*-Test is the most frequently used measure in second language research when comparing mean scores for two groups. It supposed to know whether experimental versus control class when taking the same test has the same score or not. The writer uses the following formula[5] :

1. To search Mean Variable X with formula :

$$M_X = \frac{\sum X}{N}$$

2. To search Mean Variable *Y* with formula :

$$M_Y = \frac{\sum Y}{N}$$

3. Determine the total square of error in experimental class, with formula:

$$\Sigma x^2 = \Sigma x^2 - \frac{(\Sigma x)^2}{N}$$

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[5] Anas Sudjiono, *Pengantar Statistik Pendidikan,* (Jakarta: PT Raja Grafindo Persada, 2003). p. 317

4. Determine the total square of error in control class, with formula:

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

5. To calculate t_{-test} with formula :

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma y^2}{N_x + N_y - 2}\right)\left(\frac{N_x + N_y}{N_x \cdot N_y}\right)}}$$

M_X = Mean score of the experiment class

M_Y = Mean score of the control class

ΣX^2 = Sum of square deviation score in experiment class

ΣY^2 = Sum of square deviation score in control class

N_X = Number of students of experiment class

N_Y = Number of students of control class

2 = Constant number

6. Determine the t_{table} with formula:

$$df = N_X + N_Y - 2$$