CHAPTER III

METHODOLOGY OF RESEARCH

A. Research Method

This research will used quantitative research. Kothari has defined quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.[1]

In this research, the researcher will use experimental research.

According to Danim, experimental research is conducted by conducting an objective, systematic and controlled study to predict or control phenomena. Experimental research aims to investigate cause and effect relationships, by exposing one or more experimental groups and one or more experimental conditions. the results were compared with one or more control groups not subject to treatment.[2]

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[1]C.R. Kothari, *"Research Methodology Methods and Techniques"*, New Age International (P) Limited Publisher, 2004, p.3.

[2] Ir. SyofianSiregar, *"Metode Penelitian Kuantitatif"*, (Jakarta: PT Fajar Inter pratama Mandiri, 2013), p.5.

According to Danim quoted by Fuchan.A the experimental research has the following characteristics:[3]

1. Research variables and experimental conditions are arranged in an orderly and strict manner, either by establishing control, direct manipulation, or random.

2. The existence of the control group as a basis for comparison with the experimental group.

3. This research focuses instead of controlling variance, to maximize variant variances associated with the research hypothesis, minimizing the variance of confounding variables that may affect experimental results, but not the research objectives. in addition, this study minimizes the variance of error, including measurement error. for that, preferably the selection and determination of the subject, as well as the placement of subjects in groups is done randomly.

4. Internal validity is absolutely necessary in experimental research design, to find out whether experimental

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[3] Ir. Syofian Siregar, *"Metode Penelitian Kuantitatif"*, (Jakarta: PT Fajar Interpratama Mandiri, 2013), p.5.

manipulation conducted at the time of this study really did make a difference.

5. External validity relates to how the representation of research findings is related and also to the realignment of the same conditions.

6. All important variables are kept constant, unless treatment variables are deliberately manipulated or left to vary.

In this study researchers are very eager to conduct research on such experiments. In addition, researchers also want to know the effectiveness of using power point presentation in teaching writing descriptive text.

B. Place and Time

The place of this research is at MA MalnuPusat Menes Pandeglang, Jl. Alun-alunTimur Menes, Purwaraja, Menes, Pandeglang, Banten 42262.

This research will be conducted on the first grade students of MA MalnuPusat Menes Pandeglang in academic year 2018/2019.

C. Population and Sample

1. Population

   According to Bungin quoted by Siregar, population of research is the whole of the object of research that can be human, animal, plants, air, symptoms, values, events, attitudes and so on. so these objects can be the source of research data.[4] The population of this research was all first grade of MA Malnu Pusat Menes in academic year 2018/2019. The total number of eighth grade is 353 students.

2. Sample and Technique Sampling

   Sample is part of population, which is choosen to participate in the study. The researcher will observe not all classes but only a class, that is first grade. To determine the two class, the researcher used purposive sampling technique. This technique was done by taking the subject/sample which is not based on strata, random or area but it is based on consideration of a certain purpose.

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[4] Ir. SyofianSiregar, *"MetodePenelitianKuantitatif"*, (Jakarta: PT FajarInterpratamaMandiri, 2013), p.30.

The selected respondents constitute what is technically called a 'sample' and the selection process is called 'sampling technique'.[5]

The consideration that the researcher tried to complete in preliminary research was the sample that will be chosen has to be homogeny, so that the research will be a good and valid research. Because we know that something that can be compared is something that has the similar characteristic.

The research will take two classes to be experimental class and control class. The one of class as the experimental class which is taught by Power Point Presentation as learning media while another class as the control class which is taught without Power Point Presentation as learning media.

In this research, the researcher will used purposive sampling of first grade populations.

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[5]C.R. Kothari, *"Research Methodology Methods and Techniques"*, New Age International (P) Limited Publisher, 2004, p.55.
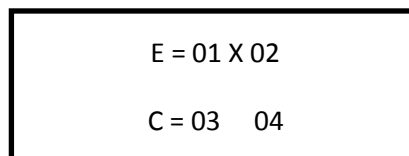
D. Design of the Research

The approach used in this research is quantitative. While the method employed in through experimental research in which its purpose is to search and compare the certain treatment toward other within controlled condition.

An experiment is the way to find the causal relationship between two factors which are raised by the researcher in purpose by reducing or eliminating any distracting factors. The writer used pre-test and post-test control group design with one treatment as the design for this study.

The researcher will used pre-test post test control group design.

This is the scheme:

$$E = O_1 \ X \ O_2$$
$$C = O_3 \quad O_4$$

Where :

E   : the symbol for experimental class

C   : the symbol for control class

01   : pre-test for experimental class

02   : post-test for experimental class

03   : pre-test for control class

04   : post-test for control class

X   : treatment

The procedure of experiment design included pre-test, treatment and post-test as follow:

1. The first the researcher require oermission to the students for being the object of the research.

2. The students in the experiment class give the pre-test by the researcher.

3. After that, the researcher give the treatment for the first meeting. And the researcher giving the material about descriptive text by using power point presentation. The researher showing the picture about the tourism object in Pandeglang by power point presentation.

4. The second meeting the researcher giving the material about descriptive text by using power point presentation. The researher showing the picture about the tourism

object in Pandeglang by power point presentation and also the material about decriptive text showing by power point presentation.

5. The third meeting the researcher giving the material about descriptive text by using power point presentation. The researher showing the picture about the tourism object in Pandeglang by power point presentation.

6. The fourth meeting the researcher giving the material about descriptive text by using power point presentation. The researher showing the picture about the tourism object in Pandeglang by power point presentation.

7. The fifth until the eighth meeting the researcher showing the video about the tourism object in Pandeglang by using power point presentation and the researcher give the exercise to the students.

8. The last steps is the researcher give the post-test to the students for know the increase of the treatment.

E. Instrument of Research

In this research, the researcher will applies documentation and test, and interview as the techniques in collecting the data. The processes are able to be explained as follow:

1. Interview

Interview is an instrument to collect data which done orally. Kothari has stated "The interview method of collecting data involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses. This method can be used through personal interviews and, if possible, through telephone interviews".[6]

The researcher will use a personal interview if the researcher less data resources. The researcher hopes that the respondents will give the information in detail.

2. Test

Test is a set of questions and exercises used to measure the achievement or capacity of the individual or group. Test is

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[6]C.R. Kothari, *"Research Methodology Methods and Techniques"*, New Age International (P) Limited Publisher, 2004, p.97.

used to assess and measure students' achievement; mainly the cognitive side related the students' mastery on learning as aim of education and teaching. The researcher gathers the data by analyzing the test based on material of descriptive text. The researcher gave the test twice (pre-test and post-test) in both experimental and control class.

a. Pre test

Before the teacher explained material by using power point presentation media, the teacher gave pre-test to experimental and control class in the same way. It will be given before the experimental was run.

b. Post test

Post test was given to the experimental and control class. It was given in order to know students' understanding and score in descriptive text after they were thought by power point presentation media (experimental class) and using non power point presentation media (control class).

Table 3.1

Assessing writing descriptive text[7]

Aspect	Score	Description
Content (C) 30% Topic Details	4	The topic is complete and clear and the details are relating to the topic.
	3	The topic is complete and clear but the details are almost relating to the topic.
	2	The topic is complete and clear and the details are not relating to the topic.
	1	The topic is not clear and the details are not relating to the topic.
Organization (O)	4	Identification is complete and descriptions are arranged with

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[7] H Douglas Brown, *"Teaching by Principl: An Interactive Approach to Language Pedagogy (second edition)"*, (New York: Longman, 2007)

20% Identification Description		proper connectives.
	3	Identification is almost complete and descriptions are arranged with almost proper connectives.
	2	Identification is not complete and descriptions are arranged with few misuses of connectives.
	1	Identification is not complete and descriptions are arranged with misuses of connectives.
Grammar (G) 20% Use present tense Agreement	4	Very few grammatical or agreement inaccuracies.
	3	Few grammatical or agreement inaccuracies but not affect on meaning.
	2	Numerous grammatical or agreement inaccuracies.

	1	Frequent grammatical or agreement inaccuracies.
Vocabulary (V) 15%	4	Effective choice of words and word forms.
	3	Few misuses of vocabularies, word forms, but not change the meaning.
	2	Limited range confusing words and word form.
	1	Very poor knowledge of words, word form, and not understandable.
Mechanics (M) 15% Spelling Punctuation Capitalization	4	It uses correct spelling, punctuation, and capitalization.
	3	It has occasional errors of spelling, punctuation, and capitalization.
	2	It has frequent errors of

		spelling, punctuation, and capitalization.
	1	It is dominated by errors of spelling, punctuation, and capitalization.

The score of students' achievement can be calculated by using this following formula:

$$\text{Score} = \frac{the\ number\ of\ right\ answer}{total\ item}\ x\ 100$$

1) Documentation

Documentation is a technique of data collection by gathering and analyzing documents, whether written documents, pictures, and electronic.

F. Techniques of Data Collecting

In educational research achievement tests are most commonly used. The researcher will know the achievement of

the students writing using the test and with the test is to measure of students' ability.

The researcher should select one of collecting the data. And based on the following explanation, the researcher will take the test that divided into two ways, they are pre-test and post-test. Pre-test is the test before doing the treatment, while post-test is the test after doing the treatment.

G. Techniques of Data Analysis

After the required research data is obtained, then conducted analysis of research data. Data analysis in this study include: description of data, equality of research data. Data analysis test average, prerequisite analysis test, and final analysis (hypothesis testing).

To calculating the results of pre-test and post-test the researcher will using the statistical approach quantitative data of the formula is as:

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

$$M_1 = \frac{\sum X}{N1}$$

2. Determining mean of variable Y (variable II) with formula:

$$M_2 = \frac{\sum Y}{N2}$$

3. Determining of deviation standard of variable I with formula:

$$SD_x = \sqrt{\frac{\sum X^2}{N1}}$$

4. Determining of deviation standard of variable II with formula:

$$SD_y = \sqrt{\frac{\sum Y^2}{N2}}$$

5. Determining standard error of mean variable I with formula:

$$SE_{M_x} = \frac{SD_1}{\sqrt{N_1 - 1}}$$

6. Determining standard error of mean variable II with formula:

$$SE_{M_y} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

7. Determining standard error of mean difference variable I and variable II with formula:

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

8. Analyzing the result by using calculation of the t-test as follow:

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

9. Determining degrees of freedom (df) with formula:

$$df = (N_1 - N_2) - 2$$

Note :

t_o : t-test

M_x : Mean of the experimental class (X)

M_y : Mean of the control class (Y)

$SE_{M_x M_y}$: Standard error of variable X and Y

df : Degree of freedom