

CHAPTER III

RESEARCH METHOD

This chapter discusses the place and time of the study, population and sample, research design, research variable, instrument, processing of collecting and analyzes the data.

3.1 Research Setting

The researcher conducted at MTsN 1 Jepara which is located on Jl.Tahunan-Batealit KM .3,5 Bawu, Batealit, Jepara 59461. The researcher took class VIII B and VIII C students of MTsN 1 Jepara as the sample of research. The students are taught two times a week. The research was carried out in August for four meeting. Which consist of gave a pre-test treatment and post-test to the students of experimental and control group.

3.2 Research Design

This study the writer used a quantitative research. The writer will used a quasi-experimental research in order to know the significant differences in writing skills using method, and rather to know the effectiveness of Project-Based Learning method.

Cohen, Manion and Morrison (2005) states that essential of experimental research is that investigators deliberately control and manipulate the conditions that determine the events in which they are interested. At its simplest, an experiment involves making a change in the value of one variable called the independent variable and observing the effect of that change on another variable called the dependent variable.

In this study, the researcher took two classes of the eighth grade students in MTsN 1 Jepara chosen as the experimental group and control group. The both classes tested by posttest and pre test. VIII B class and VIII C class were chosen as the sample of the study.

The process of Experimental research

Treatment

E 01 X 02
C 03 Y 04

(Mubarok, 2015)

Where:

- E : The experimental group
- C : The control group
- X : The treatment using Project-based learning method
- Y : The treatment using conventional method
- 01 : Pre-test for experimental group
- 02 : Post-test for experimental group
- 03 : Pre-test for control group
- 04 : Post-test for control group

The steps of the experiment used experimental group and control group. The treatment conducted to experimental group the experimental group that taught by using Project-based learning method and the control group the treatment without Project-based learning method or by using conventional method. The last the result of post-test and pre-test it will be counted in the end of meeting using statistics.

3.3 Population and Sample

1. Population

Mubarok, (2015) state that population is a unit of the object or subject that has certain qualities and characteristics, which are studied by the researchers then, be deduced. In this research, the populations are all the eighth grade students of MTsN 1 Jepara in academic year 2018/2019. The quantities are 385 students.

2. Sample

According to (Mubarok, 2015) sample is part of quality and characteristics of the population. Samples taken must be truly representative because the conclusions drawn from this sample is more favorable if it is compared with studies using population. In this

research the sample of the population were the eighth students of MTsN 1 Jepara, especially in class VIII B and VIII C as experiment class and control class. Class B consist of 31 students which as experimental group and class C consist of 31 students which as control group.

3.4 Research Variable and Hypothesis

1. Variable

According to Cohen, Manion and Marison (2007) there are two variables that are written in their book. First is Independent Variable, independent variable is an input variable, that which causes, in part or in total, a particular outcome it is a stimulus that influences a response, an antecedent or a factor which may be modified (e.g. under experimental or other conditions) to affect an outcome. Independent variable in this research is the use of Project-based learning method. And the second is Dependent Variable a dependent variable, on the other hand, is the outcome variable, that which is caused, in total or in part, by the input, antecedent variable. It is the effect, consequence of, or response to, an independent variable. This is a fundamental concept in many statistics. Dependent variable in this research is writing descriptive text.

2. Hypothesis

In this study, the hypothesis is presented as bellow:

a) Null Hypothesis (H₀)

There is no significance difference between the writing skills of the students who are taught by using Project-Based Learning method and those who are not use.

b) Working Hypothesis (H_a)

There is significance difference between the writing skills of the students who are taught by using Project-Based Learning method and those who are not use.

3.5 Instrument

According to (Gulo, 2000) instrument is a method used for data collection activities for these activities to be easy. Such as interview, test, observation, questionnaire and others. In this, research the instrument used in the form of test. Test is a test in simple terms, is a measuring a person's ability knowledge, or performance in a given domain (Mubarak, 2015). The researcher has compiled 1 items of essay question In the test, the students are asked to compose a descriptive text of famous person.

3.5.1 The Rubric for assessing writing

Table 3.1

Aspect	Score	Performance Description	Weighting
Content (C) 30% - Topic -Details	4	The topic is complete and clear and the details are relating to the topic.	3 x
	3	The topic is complete and clear but the details are almost relating to the topic.	
	2	The topic is complete and clear but 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 description are arranged with proper connectives.	2 x
	3	Identification is almost complete and description are arranged with almost proper connectives.	

- Identification	2	Identification is not complete and descriptions are arranged with few misuse of connectives.	
-Description	1	Identification is not complete and descriptions are arranged with misuse of connectives.	
Grammar (G)	4	Very few grammatical or agreement inaccuracies.	2 x
	3	Few grammatical or agreement inaccuracies but not affect on meaning.	
-Use Present tense	2	Numerous grammatical or agreement inaccuracies.	
-Agreement	1	Frequent grammatical or agreement inaccuracies.	
Vocabulary (V) 15%	4	Effective choice of words and words forms.	1.5 x
	3	Few misuse of vocabularies, word form, but not change the meaning.	
	2	Limited range confusing words and words form.	
	1	Very poor knowledge of words, word form, and not understandable.	
Mechanics (M) 15%	4	It uses correct spelling, punctuation, and capitalization.	1.5 x
-Spelling	3	It has occasional errors of spelling, punctuation and capitalization.	
-Punctuation	2	It has frequent errors of spelling, punctuation and capitalization.	

- Capitalization	1	It is dominated by errors of spelling, punctuation and capitalization.	
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Adapted from Brown (2007)

$$\frac{\text{Score} = 3C+2O+2G+1.5V+1.5M}{40} \times 10$$

An analytics research rubric, like a checklist each criterion is assessed on a different, differentiated, and numerically assigned scale. Analytic schemes are designed in an effort to make testers more objective in assessing. The aspects measured are the relevance and adequacy of the content, cohesion, vocabulary, grammar accuracy and precision for spelling and punctuation (Utami, 2014). In assessing writing descriptive text form the analytic scoring rubric for writing is each unit get scored from 1 until 4 and weighted 30% since it can be more worth that the other aspect. The organization and grammar are weight 20% respectively as they are more worth that vocabulary and mechanic. There is little anxiety in the two last aspects of vocabulary and mechanics because they have a small weight; they have a weight of 15%.

3.4.2 Validity

Validity is a measure that the level of validity or rightness of an instrument (Arikunto, 2013:211). An instrument that is valid have high validity. Every test has to be valid. In this research the researcher use a content validity. Content validity shows how far the question, task or items in a test or instrument are able to represent the overall and proportional behavior of the sample subject to the test. The meaning of the test is valid if the test items reflect the entire content or material that is tested or what should be controlled proportionally. To find out whether the test is valid or not, it must be done through a review of the test grid to ensure that the test questions represent or

reflect the whole content or material that should be controlled proportionally. Therefore, validity the actual content is based on logic analysis, it is not a validity coefficient that is calculated statistically(Matondang, 2009).

3.6 Techniques of Collecting Data

Related to the research which used by the writer in this study the instruments divides into pre-test, treatment and post-test.

1. Pre-test

The writer given pre-test for both of experimental and control group. The both of groups got same pre-test to make a descriptive text based on topic and pictures that given by the writer. Both of two groups were given pre-test to write descriptive text based on topic and picture that given by the writer. The students can express their skills and idea in writing descriptive text.

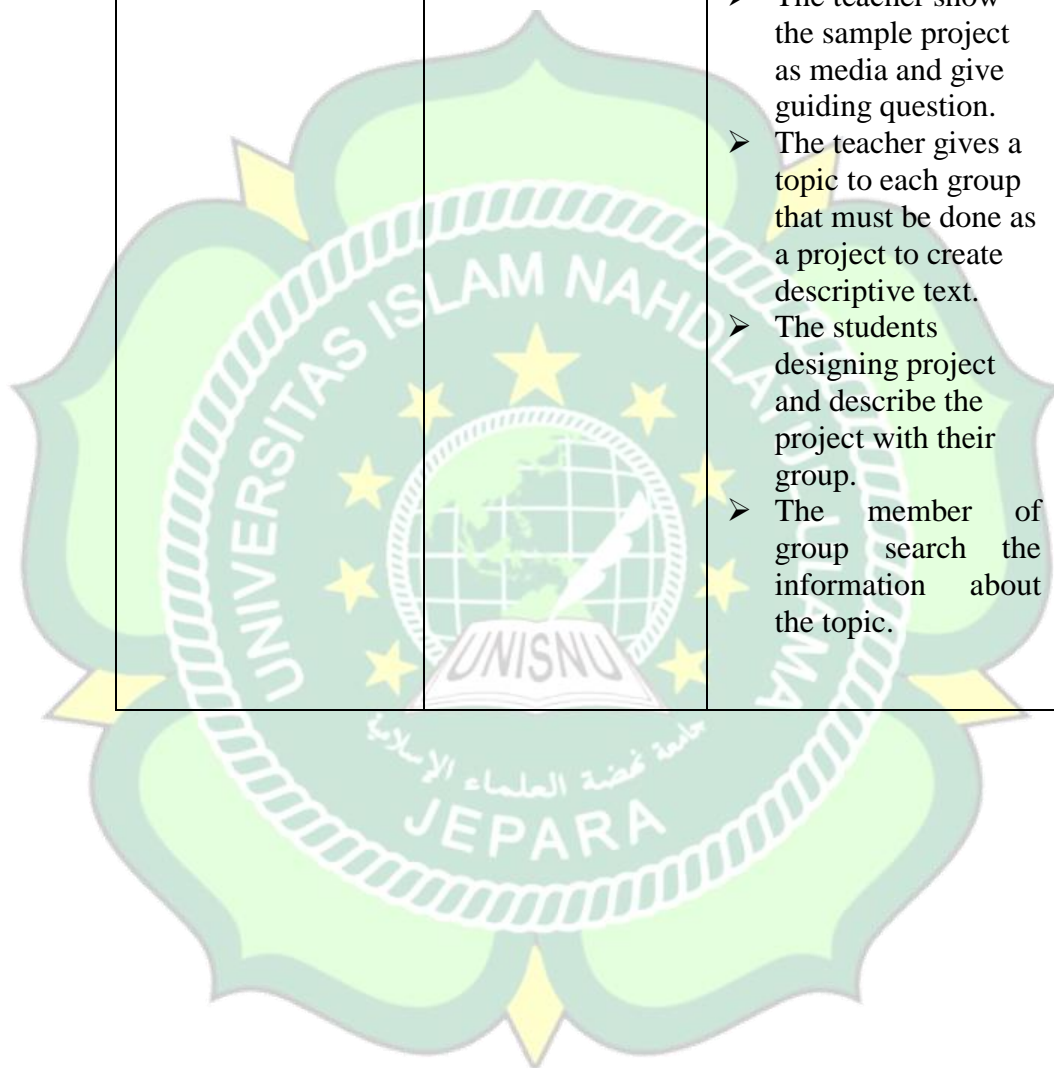
2. Treatment

After conducting pre-test, both of two groups got treatments. The researcher will teach taught writing of descriptive text both to experimental group and control group. Experimental group will be taught using Project-based learning method , while for control group will be taught using conventional method that was usually used by the teacher.

Table 3.2

Group	Meeting	Treatment
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Experimental Group	Meeting 1	<ul style="list-style-type: none">➤ The students were divided into small group, one group consist of 6 students.➤ The teacher explain about the material in power point.➤ The teacher show the sample project as media and give guiding question.➤ The teacher gives a topic to each group that must be done as a project to create descriptive text.➤ The students designing project and describe the project with their group.➤ The member of group search the information about the topic.
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	Meeting 2	<ul style="list-style-type: none"> ➤ After the information collect, the students can arrange it into descriptive text in poster form. ➤ The teacher monitoring the progress of project by students. ➤ After completion the leader of each group presentation in front of the class about the result of the project. ➤ The students make a descriptive text in individually by the same topic of group. ➤ Teacher and students make a conclusion and the teacher gives a feedback of learning process and outcomes.
Control Group	Meeting 1	<ul style="list-style-type: none"> ➤ The researcher gave little explanation about the material about descriptive text. ➤ The researcher asked students to read and understanding the descriptive text.
	Meeting 2	<ul style="list-style-type: none"> ➤ The researcher reviwed material in previous meeting. ➤ The researcher asked the students to make a descriptive text as a post test.

3. Post-test

Post-test was conducted after the students got treatments. To know there is significant or not after used Project-based learning method to improve students writing skills.

3.7 Technique of Analyzing Data

To analyze the data the writer analyze and cooperated the statistically. Whether there are scores of the experimental class and the students' scores of the control class. This technique is useful to prove a significant difference between pre-test and post-test data of two classes, the writer using statistical analysis or SPSS and T-test. The purpose of data analysis was to know the effectiveness of using project-based learning method in eighth grade students of MTsN 1 Jepara in academic year 2018/2019.

