

CHAPTER III

RESEARCH METHOD

A. Research Design

The research design used to answer the research question” Is pixton effective to improve students’ narrative writing ability at MTS Sabilul Muttaqin Pungging Mojokerto? is quasi-experimental design. Quasi-experimental is involves manipulation of an independent variable but differs in that subjects are not randomly assigned to treatment classes.⁵³


Quasi experimental research consists of two classes that is experimental class and control class. As the Creswell states that “the quasi-experimental design, the researcher assigns intact classes the experimental and control treatments.”⁵⁴ Before giving the treatment, both of classes was giving the pretest and post-test after giving the treatment. While the treatment, experimental class taught by using pixton and students in the control class were taught without using pixton.

⁵³ Donald Ary et al., *Introduction to research in education* (Belmont, CA: Wadsworth, 2009), 316

⁵⁴ John W. Creswell, *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (Boston: Pearson, 2012), 309-310

The Quasi-Experimental Pretest and Posttest Designs was used.⁵⁵

Table 3.1
The Quasi-Experimental Design

Pretest and Posttest Design Time 

Select Control Classes	Pretest	No Treatment	Posttest
Select Experimental Classes	Pretest	Experimental Treatment	Posttest

B. Research Variable

1. Independent variable

Donald Ary et al states that “independent variable is manipulated (changed) by the experimenter”.⁵⁶ Based on the definition, the independent variable is “the implementation of pixton medium” for teaching writing in narrative text.

2. Dependent variable

Donald Ary et al states that “The variable on which the effects of the changes are observed is called the dependent variable”,⁵⁷ which is observed but not manipulated by the experimenter. Based on the definition, the dependent variable in this research is “students’ writing ability” in narrative text.

C. Setting of the Research

Setting of the research from this study is the second grade of MTS Sabilul Muttaqin, Pungging, Mojokerto. There are 4 classes for this school. However, the researcher took 2 classes that have equal achievement for this study. This school is located in Jl. Trawas-Mojosari no 54 Pungging Mojokerto. Most of students in

⁵⁵ *Ibid.* 310

⁵⁶ Ary et al., *Introduction to research in education*. 26

⁵⁷ *Ibid.* 26

this school is students in boarding school. In the boarding school provide the internet connection for the students. Therefore, students in the experimental class can take the advantage to make a comic in Pixton.

D. Population and Sample

1. Population

The population is region consisting of objects or subjects that have qualities and characteristics.⁵⁸ Population in this study was the eighth-grade students of MTS Sabilul Muttaqin Pungging Mojokerto. In this school, consists of 4 classes each class consist of 25 students. However, the researcher chose two classes as a sample of research.

2. Sample

The sample is part of the quantity and characteristic which haven by the population.⁵⁹ The researcher took two classes which have equal English score as the sample. The English score of students taken from teacher English in these classes. Therefore, the researcher chooses A class as an experimental class and B class as a control class.

E. Research Procedure

Table 3.2
Schedule of the Research

Date	Activities	
	Experimental Class	Control Class
29/03/2017	Pre-test	Pre-test
30/03/2017	Teaching narrative text with pixton medium	Teaching narrative text without using pixton medium

⁵⁸ Mardalis, *Metode Penelitian Suatu Pendekatan Proposal* (Bumi Aksara, 1999). 61

⁵⁹ *Ibid.* 62

19/04/2017	Teaching narrative text with pixton medium	Teaching narrative text without using pixton medium
20/04/2017	Teaching narrative text with pixton medium	Teaching narrative text without using pixton medium
26/04/2017	Post-test	Post-test

There are three procedures conducted the research: pretest, treatment, and post-test.

1. Pretest

Pretest held before treatment. The pretest was conducted in two classes: experimental class and control class. The purpose of the pretest is to determine students' ability in writing narrative text. The results of the pretest were useful as a controlling the differences between both of classes, because both of classes must begin from the same condition.

2. Treatment

After both of classes were given a pretest, then the next steps were treatment. Both of classes were given a different treatment, the experimental class was given medium of pixton, while the control class without using pixton medium.

a. Experimental class

The experimental class was getting treatment with the pixton as a medium of learning to write narrative text. The steps of the pixton in the teaching of writing narrative text were:

1) First treatment

- a) Researcher discussed with students. What are narrative text, functional text, and generic structure of narrative text.
- b) Researcher showed an interesting comic that created by the researcher.

- c) The researcher gave a comic that was made by the researcher.
 - d) The researcher asked the students to understand the content of the comic.
 - e) The researcher asked the students to make a group and gave some comics that were made by the researcher. In these comics, the verb was blank.
 - f) The researcher asked students to complete the blank verb in the comics with suitable word in the box
 - g) The researcher asked classes to present or retell their comics in front of the class.
 - h) After the present. The teacher asked them to rewrite their comics into the paragraphs.
 - i) The researcher gave the tutorial to make a comic in the Pixton website.
 - j) The researcher gave the opportunity to students who wanted to ask about using Pixton website
 - k) The researcher gave students homework in pair to make comic in the Pixton website.
- 2) Second treatment
- a) When beginning the class, researcher reviewed the material of narrative text.
 - b) The researcher asked the difficulties when they made and wrote a comic using Pixton.
 - c) The researcher gave back the comic to students but with randomized.
 - d) The researcher asked students to access their comic and write narrative text from the comic into a paragraph.
 - e) The students shared their narrative text into the other.
- 3) Third treatment
- a) The researcher reviewed narrative text material.
 - b) The researcher asked students to rearrange the comic which have been panel randomized in Pixton.

- c) The researcher asked students to make a narrative text from these comics.
- d) The researcher asked students to present or retell their narrative text or comic in front of the class.

b. Control class

In the control class, there was no treatment will be held. The researcher in learning process without using the pixton medium. Lesson plans for the control class were:

- 1) The researcher explained the lesson about narrative text.
- 2) Researcher asked students to write a narrative text
- 3) Students collected their work

3. Post-test

After doing the treatment, a researcher holds a post-test in the experimental class and control class. The purpose of this test was to know the improving students' achievement in writing narrative text, whether students' ability was improving or not.

F. Data Collection Technique

In this study, the data collection techniques used is test: The technique of test is data collection techniques that held with giving some questions or tasks, and other tools to subject that necessary the data.⁶⁰ Tests in this research existed in the pretest and post-test. A pretest is tested before treatment. It is also the first step in the equation of condition between the control class and the experimental class. While the post-test used in the end test of an experiment research for the purpose to get value in the control class and the experimental class after gave the treatment.

⁶⁰ Wiwid Ambarwati, *Buku Metodologi Penelitian oleh Kuntjojo*, http://www.academia.edu/9832970/Buku_Metodologi_Penelitian_oleh_Kuntjojo, accessed 23 Jan 2017. 35

G. Research Instrument

An instrument is a measuring tool. It's mean, research instrument as a tool to express the amount or percentage of quantitative or qualitative.⁶¹ In this study, instrument is writing a test. Writing test conducted in experimental class and control class. Writing assessment that used both of class is using Jacob at el in chapter 2 above.

There are two tests in the experimental and control group are pre-test and posttest. Pretest held before both of group gave the treatment, the purpose of this test is to know both of group had same ability or not. Posttest held after both of group gave the treatment, the purpose of this test is to know students' improvement in writing narrative text after gave the treatment. Before, the test is used to collect the data, therefore test should be tested before to get the valid and reliable research data.

Validity is defined as the extent to the scores on a test enables one to make meaningful and Appropriate Interpretations.⁶² In this study, researcher matched the content validity test to scoring rubric adapted from Jacob at el.

Reliability indicates how consistently a measure whatever it does measure.⁶³ Sugiyono also states that a "reliable instrument is an instrument when used several times to measure the same object, will result in the same data."⁶⁴ He also added that reliability is tested using the test-retest done by trying out the instrument to the respondents. Therefore, the instrument can be reliability instruments even the same instrument, the same respondents, and the different time but the result is same. This reliability was matches the reliability to scoring rubric adapted from Jacob at el.

⁶¹ *Metode Penelitian Suatu Pendekatan Proposal*. 60

⁶² Sugiyono, *Statistik untuk Penelitian* (Alfabeta Bandung, 2013). 352

⁶³ Ary et al., *Introduction to research in education*. 224

⁶⁴ *Statistik untuk Penelitian*. 348

H. Data Analysis Technique

After the data collected, the next step was analyze data. The researchers analyzing data whether any improvement in students 'writing narrative text before and after applying pixton medium. To determine the pixton medium was successful or not, the researcher measured it using a statistical calculation to the score differences from the pretest and post-test of experimental class and control class. The researcher used the t-test formula to find out whether the mean difference between the two classes was significant or not. Before the calculation of the formula independent t-tests, the sample must be two qualify, there was normality test and homogeneity test.

1. Normality test

Normality test is a test to measure whether the data normal distribution or not. Researcher using SPSS 24 in the testing normality of data. So the data has been analyzed in SPSS 24 with the flow as follows:

H_0 : If Significance > 0.05 : the data are normal distribution (it's mean if H_0 is accepted and H_1 is rejected)

H_1 : If Significance < 0.05 : the data are not normally distributed. (It's mean if H_1 is accepted and H_0 is rejected)

2. Homogeneity test

After the data are normally distributed, next steps were held the homogeneity test. This test hold to determine whether the assumption of homogeneity each category of data are fulfilled or not. The test used is the greatest variance than the smallest variance using the F table. While testing steps are as follows:⁶⁵

⁶⁵ *Ibid.* 140

$$F = \frac{\text{Larger Varians}}{\text{Smaller Varians}}$$

In this test apply:

If $F < \text{or: } F \text{ table} = H_0$ is received. (If F count less than or equal to $F \text{ table}$ so H_0 is accepted)

If $F > F \text{ table} = H_0$ is rejected. (When the count is greater F with $F \text{ table}$ so H_0 is rejected)

Moreover using the F formula to determine the data homogeneous or not, another way to analyzed the data is using SPSS 24. The steps of data processing in SPSS 24 analysis is as follows: Analysis of the data is if the significance value more than 0.05 so H_0 is accepted (Homogeneous), if the significance value less than 0.05 so H_0 is rejected (Not Homogeneous).

3. T-test

If the data was normal and homogeneous, the next steps were analysis Independent t-test.⁶⁶ This test hold to compare weather both class having same variable data or not. The researcher was using SPSS 24 program to analyze the data. The steps of the test as follows:

a) Determining the null hypothesis and alternative hypothesis

H_0 : There was no significance improvement in achievement between students who were taught by using pixton medium than who were not taught by using pixton medium.

H_1 : There was a significant improvement in achievement between students who were taught by using pixton medium than who were not taught by using pixton medium.

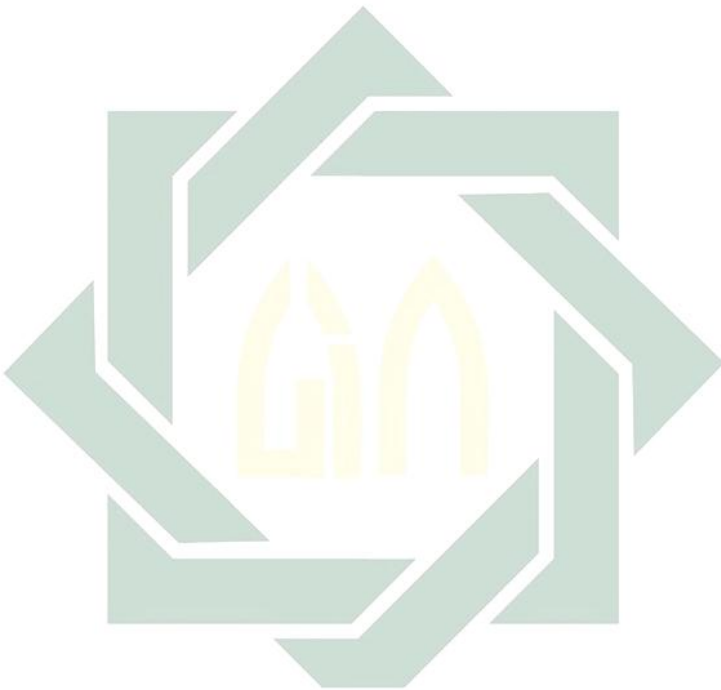
H_0 : if $t\text{-value} < t \text{ table}$ (H_0 is accepted)

H_1 : if the $t\text{-value} > t \text{ table}$ (H_1 is accepted)

⁶⁶ *Ibid.* 137-141

b) Determining the level of significance

Using a significance level of 0.05 (5%).⁶⁷



⁶⁷ *Ibid.*142