CHAPTER III

RESEARCH METHOD

This chapter presents research method including research design, populations and sample of the study, variable of the study, research instrument, validity and reliability testing, normality and homogeneity testing, data collecting method, and data analysis.

A. Research Design

This research was used experimental research design. According to Creswell (2003), experimental research is most appropriate for answering a research question about the effect of a treatment. The essential feature of experimental research is that investigators deliberately control and manipulate the conditions which determine the events, in which they are interested, introduce an intervention and measure the difference that it makes. 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 (Louis, 2007:291).

The type of experimental research design used in this research was pre experimental design. The design of this research used One Group Pretest-Posttest Design. This study used pre-experimental because it did not random assignment of subject to group or other strategy to control extraneous variable. In the one group pre-test and post-test design, a single group was measured or observed not only after being exposed to a treatment of some sort, but also before it by applying

pre-test. A pre-test provided a measure on some attribute or characteristic that the researcher asses for participants in an experiment before the group receive a treatment, while a post-test measured on some attribute or characteristic that is assessed for participants in an experiment after a treatment (Creswell, 2008:301). Then, the design of the one group pretest-posttest design typically represented in table 3.1 bellow::

Table 3.1   : The Procedure of the One Group Pretest-Posttest Design

Pre-test	Treatment	Post-test
Y1	X	Y2

X   : Edmodo Educational Website treatment

Y1 : students' achievement on writing narrative text before taught by using Edmodo Educational Website

Y2 : students' achievement on writing narrative text after taught by using Edmodo Educational Website

Referring to the table 3.1 above, the procedures of pre-experimental research that use one-group pre-test and posttest design in this study are described as follows:

1. Administering a pre-test (Y1) with a purpose of measuring writing narrative text of eighth grade students at MTsN Tulungagung before applying treatment.

2. Applying the experimental treatment (X) teaching writing narrative text by using Edmodo Educational Website to the eighth grade students at MTsN Tulungagung.

3. Administering a post-test (Y2) with a purpose of measuring writing narrative text of eighth grade students at MTsN Tulungagung after applying treatment.

B. Population and sampling of the Study

To make the study more feasible, it was important for the writer to know the research area where the research was conducted. It means that the research must be conducted in a certain area. This research was conducted at MTsN Tulungagung. This research was intended for the eighth grade students of MTsN Tulungagung in academic year 2016-2017.

Population is object that has some qualities and characteristic that is chosen to be cleared and to be concluded by the researcher (Louis: 2005). The population was not only human, but also the object and other something. Population not only the total in the object or subject where study, but also all of the character that belongs by subject or object. In this research the populations were all of eighth grade students at MTsN Tulungagung. The eighth grade of MTsN Tulungagung consists of nine (9) classes that were classified in to two; VIII A - VIII C as "excellent class" while VIII D - VIII I as "regular class". Total of population consist of 340 students.

In selecting the sample of the study, the researcher used purposive sampling technique. According to Cohen et al., (2007) in purposive sampling

technique, sample is satisfactory to specific needs. As its name suggests, the sample has been chosen for a specific purpose. The researcher took VIII C Excellent as the sample of the study because this class was low in writing. besides that, the students of this classroom use computer or laptop in daily learning activity. The fact supported this research since Edmodo only can be accessed through class use computer or laptop that connects to internet.

More clearly, in VIII C Excellent class, there were 35 students consisting of 11 males and 24 females as the samples of the study. Those 35 students were given a pretest, treatment, and posttest during the research.

C. Variable of the Study

According to Ary (2002), a variable is an attribute that is regarded as reflecting or expressing some concept or construct. Variable of the study was divided into two kinds. They were independent variable and dependent variable.

a. Independent Variable (X)

Independent variable is a variable is which is observer the side effect. Independent variable can appear and exist by itself without any other supported. It influences and gives special effects independent variable. Independent variable cannot stand by itself without dependent variable. In this study, independent variable is the using Edmodo Educational Website (X) in teaching writing narrative text.

b. Dependent Variable (Y)

Dependent variable is the response or the criterion variable that is presumed to be influenced by the independent treatment conditions and any other. In this research the dependent variable is students' writing achievement in narrative text.

D. Research Instrument

Research instrument refers to any equipment used to collect the data (Arikunto, 2010:262). As an experimental research, the instrument used in this research was tests, especially writing test. According to Ary et al (2006:201) test is a set of stimuli presented to individual in order to elicit responses on the basis of which a numerical score can be assigned.

There were two kinds of tests in this study, those were pre-test and post-test. Pre-test was intended to measure students' writing achievement in narrative text before the treatment given.While, post-test was to measure students' writing achievement in narrative text after the treatment given. The tests were in the form of subjective test writing narrative text to measure students' writing achievement in narrative text.

Furthermore, the writer gave score to the students' writing by using scoring guide of writing according to Cohen (1994:328-329) in the following formula below:

Table 3.2 : Scoring Guide of Writing

Aspects	Scores	Indicators
Content	5 (Excellent)	Main ideas started clearly and accurately, change of opinion very clear

	4 (Good)	Main ideas stated fairly clearly and accurately, change of opinion relatively clear
	3 (Average)	Main ideas somewhat unclear and inaccurate, change of opinion somewhat weak
	2 (Poor)	Main ideas not clear or accurate, change of opinion weak
	1 (Very Poor)	Main ideas not all clear or accurate, change of opinion very weak
Organization	5 (Excellent)	Well organized and perfectly coherent
	4 (Good)	Fairly well organized and generally coherent
	3 (Average)	Loosely organized but main ideas clear, logical but incomplete sequencing
	2 (Poor)	Ideas disconnected, lacks logical sequencing
	1 (Very Poor)	No organization, incoherent
Vocabulary	5 (Excellent)	Very effective choice of words and use of idioms and word forms
	4 (Good)	Effective choice of words and use of idioms and word forms
	3 (Average)	Adequate choice of words but some misuse of vocabulary, idioms and word forms
	2 (Poor)	Limited range, confused use of words, idioms, and word forms
	1 (Very Poor)	Very limited range, very poor knowledge of words, idioms, and word forms
Grammar	5 (Excellent)	No errors, full control of complex structure
	4 (Good)	Almost no errors, good control of structure
	3 (Average)	Some errors, fair control of structure
	2 (Poor)	Many errors, poor control of structure
	1 (Very Poor)	Dominated by errors, no control of structure
Mechanics	5 (Excellent)	Mastery of spelling and punctuation
	4 (Good)	Few errors in spelling and punctuation
	3 (Average)	Fair number of spelling and punctuation errors
	2 (Poor)	Frequent errors in spelling and punctuation
	1 (Very Poor)	No control over spelling and punctuation

Score:

$$\frac{\text{The total number gotten}}{\text{The maximal score}} \times 100 = n$$

E. Validity and Reliability Testing

Researcher is always dependent upon measurement. There are two important characteristics that every measuring instrument should go through a process of validity and reliability check.

1. Validity

Fraenkel and Wallen (2005:113) states that a valid instrument is measures what it is supposed to measure. Validity is the most important idea to consider when preparing or selecting an instrument for use.

These are four types of validity; 1) Content validity, 2) Criterion related validity, 3). Construct validity, 4). Face validity. In this research, to measure whether the test has a good validity, the researcher analyzed the test from content validity and construct validity.

a. **Content validity**

Content validity is correspondence between curriculum objectives and objectives being assessed. The instrument in this research achieved content validity since the test was designed based on main competence and basic competence in Curriculum of 2013 since the school implements the Curriculum of 2013 in the time the researcher conducted this research.

Table 3.3 : Main Competence and Basic Competence in Curriculum of 2013

Core Competence	Basic Competence
3. Understanding, implementing, analyzing	3.14 Analyzing social

factual, conceptual, and procedural knowledge based on the curiosity towards science, technology, art, culture, and humanity with the knowledge of. humanism, nationalism, and civilization related to the cause of phenomena and events, and implementing the procedural knowledge in a specific field according to the skill and interest to overcome the problem	function, text structure, and language features in narrative text related to the simple fable and legend story according to its context
4. Analyzing, thinking, and performing in both concrete and abstract field related to the development of what has been learnt in school individually, and being able to use the method based on the theory in science.	4.18 Comprehend the purpose of simple written and spoken narrative text about fable and legend story according to its context

b. Construct validity

A test is said to have construct validity if it can be demonstrated that is measures just the ability which is supposed to measure (Isnawati, 2012:29). It is the process of determining the extent to which test performance can be interpreted in terms of one or more constructs. In this study, the writer administered a writing test and the technique of scoring the students' writing is based on the five aspects of writing; they are content, organization, vocabulary, grammar and mechanic.

c. Face validity

Face validity refers to the degree to which a test looks right, and appears to measure the knowledge or abilities it claims to measure, based on subjective judgment or the examinees who take it, the administrative

personnel who decide on its use, and other psychometrically unsophisticated observers (Brown, 2004). The test in this research was designed to measure students' writing skill, thus, to achieve face validity, the researcher provided the instructions to ask students to write. In this study, the face validity was done through validated by the expert.

2. Reliability

Based on the Harrison in Johnson (2001) says that the reliability of a test is its consistency. Thus, reliability is a measure of accuracy, consistency, dependability or fairness of scores resulting from administration of particular examination. Ary et al (2006:236) also defines reliability as the degree of consistency with which an instrument measures whatever it is measuring. Thus, it can be said that a reliable test is consistent and dependable.

Before giving posttest, the researcher made test to be tried out to the students to know how far the reliability of the instrument. It was done on Monday, 6th February 2017 in the VIII D class. Then, the researcher analyzed each item of instrument and computed it by using in SPSS Statistics 16.0 version. Then the result of computing can be seen below:

Table 3.4 : Result of Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.657	2

Based on the table above, it showed that the reliability of cronbach's alpha is 0,657. According to Triton in Sujianto (2009:97) the value of cronbach's alpha can be interpreted as follow:

Table 3.5 : Cronbach's Alpha Interpretation Based on Triton

Cronbach's Alpha	Interpretation
0,00 – 0.20	Less Reliable
0,21 – 0,40	Rather Reliable
0,41 – 0,60	Quite Reliable
0,61 – 0,80	Reliable
0,81 – 1,00	Very Reliable

Based on the table above, it can be concluded that the instrument of this research was in the category reliable because 0,61<0,657>1,00.

F. Normality and Homogeneity Testing

1. Normality Testing

Normality test is used to test whether a variable is normal or not. Normal here means if the data have a normal distribution. The main reason of conducting normality testing in a research is that it is necessary for the researcher to know that the population or data involved in the research is in normal distribution. To test the normality of the data can use the *One Sample*

Kolmogorov-Smirnov test with the provision that if Asymp. Sig > 0,05 the data were normally distributed (Asmarani, 2008:234). In this case the normality using *SPSS* (Statistical Product and Service Solutions) *16.0 for Windows*.

2. Homogeneity Testing

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. The computation of homogeneity testing using SPSS Statistics 16 is One-Sample Kolmogrov-Smirnov test by the value of significance (α) = 0.050. Before doing homogeneity testing, the researcher decides hypothesis in this homogeneity as follow:

H_0 : 1 variance (Experimental group) are same.

H_a : 1 variance (Experimental group) are different.

There is also certainty in taking decision of homogeneity testing, as follow:

The value of significance > 0.050, so H_0 is accepted means that the data of sample has same variance.

G. Data Collecting Method

Data collection method is an important aspect of any type of research study. It can define as the various methods that have been adopted by an organization to analyze the accuracy of the data collected. In this research, the data was collected in three steps:

1. Pre-test

   Pre-test refers to a measure or test given to the subject prior to the experimental treatment. This aims to know the basic competence and their earlier knowledge before they get the treatment in writing narrative text. At the first meeting, the researcher gave pre-test to the students. It was done on Monday, February 13th 2017. The pretest is writing in form of narrative text with the theme "LEGEND STORY" that decided by the researcher. It was conducted to know the student's score in writing. It determined the readiness for instructional program, and to diagnosed individual's specific strengths and weaknesses in writing descriptive text.

2. Treatment

   The researcher gave the treatment in 4 times exactly on February 15th until 8th March 2017. The researcher introduced Edmodo to the students. Although they have not known Edmodo before, when the researcher explained Edmodo and its feature, they understood quickly. Then, the researcher asked them to create the Edmodo account to log in on Edmodo Website, so it was very easily for the students because the accessed of Edmodo was very familiar with others social networks. On Edmodo, the researcher also gave some explanations and evaluations about narrative text before giving the posttest. Here the steps of the treatment.

Table 3.6 : Steps the treatment of Edmodo Educational Website

No	Steps	Researcher' activities	Students' activities
1	Opening	Greeting	• Answer greting

		Introducing about Edmodo Educational Website • Explain the way to access the Edmodo	• Create an account and join group of Edmodo
2.	Main strategy	Give the materials (narrative text) on the Edmodo • Give an example of narrative text and Explain the generic structure of narrative text • Explain *Simple Past Tense* for writing legend story	• Read the explanation of the materials on the Edmodo • Identify the generic structure of narrative text
		Give an explanation about writing process • How to start writing, drafting, and revising	• Write a paragraph based on the writing process
		Give some topics and ask the students to write the story about the topics • identify the generic structure	• make a drafting first • Write a story based on the topic • Write story on the Edmodo Educational Website
3	Closing	Ask the students to submit their writing • Give score • Correction • And give feedback	• Submit the writing

3. Posttest

The last method used to collect the data was administering post-test. A post-test is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment (Creswell, 2008: 301). It was done on Monday, March 13th 2017. Before starting making the first draft, prewriting was also conducted in classroom to help the students in generating ideas and understanding the prompt. In posttest, the students were allowed to make the first draft, revise and edit completely out of the classroom. After the students already posted their writing on Edmodo, the researcher gave evaluative comment and feedback. Then, the researcher analyzed the students writing as final of result of their writing.

H. Data Analysis

In managing and analyzing the data collected, the researcher use quantitative data analysis by using statistical technique. The analysis is used to find the significant difference of the students' writing achievement before and after using Edmodo.

Analyzing data is a process of analyzing the acquired from the result of the research. The data which is needed in this research is students' achievement about narrative text of the eighth grade students of MTsN Tulungagung in the academic year 2016-2017 before and after using Edmodo Educaional Website. To analyze the data, the researcher used Paired Samples Test in IBM Statistics 16.0. If the

result of t_{table} was bigger than t_{count} at the level of significance 0.05, the null hypothesis could not be rejected indicating that Edmodo was not effective on the students' writing achievement in narrative text. By contrast, if t_{count} was bigger than t_{table} at the level of significance 0.05, the null hypothesis could be rejected indicating that Edmodo was effective on the students' writing achievement in narrative text.