

CHAPTER III

RESEARCH METHOD

In this research method the researcher will present about research design, population and sample, research instrument, validity, and reliability testing, data collecting method and data analysis.

A. Research Design

Before conduct the research, the researcher decided the topic and the phenomena which would be identified. After that, the researcher decided the planning that would conduct the research. The title from this research is to know the effectiveness of edmodo on eighth grade students' descriptive writing, the researcher choosed the experimental study especially pre-experimental research design. The experimental is really agreeable in this research. Experimental study itself can be defined as an objective, systematic, and controlled study to predict or control the phenomena (Syamsudin & Damaianti, 2011).

This reserach used a quantitative. Quantitative is explain numeric data. In pre- experimental research design used pre-test and post-test. In the simplest pretest-posttest design, researchers gather data about some outcome through a single pretest, administer a treatment, and then gather posttest data on the same measure (Bell, 2010). The researcher conducted pre-test and post-test. The researcher gather the result of pre-test and post-test data and compare it, is this any significant different score or not.

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

Pre-test	Treatment	Post-test
O1	X	O2

The pretest simbol is O1before using edmodo, the treatment simbol is X, it is when the researcher give the explanation about edmodo and give explannation about descriptive writing, and the post-test simbol is O2 after using edmodo and after getting treatment. After that the researcher getting all score, the researcher find the significant different.

B. Population, Sample and Sampling

1. Population

As stated in Sugiyono (2010:117), population is generalization area consisting of objects or subjects that have certain quality and characteristics decided by the researcher to be researched and be taken the conclusion then. Also from Nawawi (2012) population is the whole research objects which include human, things, animals, plants, indications, test value or events as data sources which have particular characteristics in a research. Population here is very important because it can influence the research data.

The population used to conduct this research on the eighth grade of MTsN 1 Tulungagung in the academic year of 2019/2020. This school located at jl. Ki Hajar Dewantara No. 10b, Dusun Krajan, Beji, Kec. Boyolangu, Kabupaten Tulungagung, Jawa Timur 66233.

2. Sample

To study the population more deeply, the researcher selected the sample. About the sample, according to Sugiono (2010:118) is part of the total and the characteristics of population which is researched. As the sample, the researcher select VIII-1. This class there are 30 students about 10 male and 20 females.

The researcher selected one class because it is appropriate as the subject of this reseach. Furthermore, the teacher who teaches VIII-1 also suggest to take this class for conducting the research. Because this class is excellent class number one at MTsN 1 Tulungagung, this class has good ability, and this class is cooperative.

Tabel 3.2. Sample of Research

Sample of 8-1 Class		Total Participants
Male	Female	30
10	20	

3. Sampling

As stated in this research, the researcher used non probability sampling especially purposive sampling. A purposive sampling also referred to as judgment sampling sample elements judged to be typical, or representative, are chosen from the population (Ary et al,2010:156). The reason was the researcher choosed the class that had good ability. This

class is excellent class and very easy to apply edmodo application. According to Nawawi (2012) describes sampling technique as the way to take the sample whose numbers are appropriate to the sample size which will be used as real data source, by concentrating on the characteristics and the spread of population in order to get representative sample or truly represent the population.

Based on Gay (1992: 123) Sampling is the process of selecting number of individuals for a study in such a way that the individuals represent the large group for which they were selected. The purpose of the sampling is to get information about a population. The sampling is technique to take a sample.

C. Research Instrument

Research instrument is a tool to collect the data. In this research, the researcher used writing test or usually people said “essay test”. The researcher gave two type of test, the first was pre-test and the second was post-test. All test was descriptive test. In the pre-test, the students was given 3 pictures and the students choosed one picture randomly and wrote the descriptive text about the picture that choosen before.

The score generated is in accordance with the descriptive text assessment such as content, orgsnization, grammar, vocabulary, and mechanics. The researcher used scoring rubric to know the score from the test before.

D. Validity and Realibility Testing

1. Validity

In language testing, Brown (2004) defines validity as the extent to which inference made from assessment results are appropriate, meaningful, and useful in terms of the purpose of assessment. 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 a test where the test can measure a certain objectives that appropriate with the material or the content of learning that is given (Arikunto, 82). A test said to have content validity if its contents constitutes a representative sample of the language skills, structures, etc. Being tested. It is obvious that Edmodo help students to study and do descriptive writing. 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. Standard Competence and Basic Competence in K13 Curriculum

Standard Competence	Basic Competence
1.4 Responding the meaning and creating an oral and written text, by using text structure correctly, language element accurately, thanking	4.7.2 Making a simple descriptive text about people, animals and things in oral and written that attention with the social function, text structure, and language element as right and based

	on the context.
--	-----------------

b. Construct Validity

A test is said to have construct validity if every question in the test measures every thinking aspect (Arikunto, 2006: 83). A test, part of a test, or a testing technique is said to have construct validity if it can be demonstrated that it measures just the ability which it is supposed to measure because the word “construct”. In this study the researcher administered descriptive writing test in two kinds of test formats. In the pre-test gave before using edmodo and post-test gave after using edmodo. Both of them are appropriate for testing descriptive writing.

Here, the researcher used the scoring rubric to know the students' score. This scoring rubric depened from categories descriptive writing that adopted from internet, such as : content, organization, grammar, vocabulary, and mechanics.

Table 3.4. Scoring Rubric for Descriptive Text

Aspect	Score	Performance Description
Content -Topic - details	5 (Excellent)	The topic is complete and clear and the details are relating to the topic
	4 (Good)	The topic is complete and clear but the details are almost relating to the topic

	3 (Average)	The topic is complete and clear but the details are not relating to the topic
	2 (Poor)	The topic is almost clear and the details are not relating to the topic
	1 (Very Poor)	The topic is not clear and the details are not relating to the topic
Organization	5	Identification is complete and the descriptions are arranged with proper connectives
- Identification	(Excellent)	
- Description	4	Identification is almost complete and the descriptions are arranged with almost proper connectives
n	(Good)	
	3	Identification is not complete and the descriptions are arranged with few misuse of connectives
	(Average)	
	2	Identification is not complete and the descriptions are arranged with misuse connectives
	(Poor)	
	1	Identification is not complete and the descriptions are arranged with very misuse connectives
	(Very Poor)	

Grammar	5 (Excellent)	Nothing error with grammar and agreement
	4 (Good)	Very few gramatical or agreement inaccuracies
	3 (Average)	Few gramatical or agreement inaccuracies but affect on meaning
	2 (Poor)	Numerous grammatical or agreement inaccuracies
	1 (Very Poor)	Frequent grammatical or agreement inaccuracies
Vocabulary	5 (Excellent)	Effective choice of words and word forms
	4 (Good)	Almost effective choice of words and word forms
	3 (Average)	Few misuse of vocabularies, word forms, but not change the meaning
	2 (Poor)	Limited range confusing words and word forms
		Very poor knowledge of words, word form,

	1 (Very Poor)	and not understandable
Mechanics	5 (Excellent)	It uses correct spelling, punctuation, and capitalization
- Spelling		
- Punctuation		
- Capitalization		
	4 (Good)	It has occasional errors of spelling, punctuation, and capitalization
	3 (Average)	It has frequent errors of spelling, punctuation, and capitalization
	2 (Poor)	It is dominated by errors of spelling, punctuation, and capitalization
	1 (Very Poor)	All of spelling, punctuation, and capitalization is error

So, from that scoring rubric the researcher knows the students' score and the difference between pre-test before using edmodo and post-test after using edmodo. In this scoring rubric. The biggest score here is 25.

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 Testing

Inter-rater reliability refers to the degree of consistency of scores given by two or more scorers to the same set of oral or written texts (Sarosdy et al. 2006: 135). To make sure that the test was reliable enough. The researcher also discussed about the scoring rubric.

The researcher will use descriptive writing pre-test in this reasearch. The researcher will give the students some picture and give descriptive writing test before treatment and before knowing edmodo. The next day, the researcher will give the students treatment about edmodo. After that, the researcher give the students descriptive writing post-test using edmodo. Here, the teacher give the picture and the students make the descriptive writing.

To know how far the reliability of the instrument, the researcher used the validity testing before knowing reliability testing. The researcher made test to be tried out to students before giving pretest and posttest. In this research, the writer uses inter rater reliability where the result of the test was scored by two scorers or two raters to get reliability coefficient. Then, the two sets of scores gotten from the two raters are calculated to get the correlation coefficient. Finally, SPSS 16.0 for windows program is used to compute the reliability of instruments. Here the result of try out test

Table 3.5. The Statistical Correlation of *Person Product Moment* from IBM SPSS Statistical 16.0

Correlations		Rate_1	Rate_2
Rate_1	Pearson Correlation	1	.522**
	Sig. (2-tailed)		.002
	N	32	32
Rate_2	Pearson Correlation	.522**	1
	Sig. (2-tailed)	.002	
	N	32	32

**, Correlation is significant at the 0.01 level (2-tailed).

This table shows that Pearson Correlation of both rate 1 and 2 were 0.522. There are 2 types how to know this instrument valid or not. The first is the researcher compared between score of person correlation bigger than score of table. The second is significance value is smaller than 0,05.

So that, R table is 32. The score 5% of R table here is 0,349. So, this instrument data is valid because the score of person correlation is bigger than R table ($0,522 > 0,349$) and the significance value is 0,002. The significance value is smaller than 0,05 it is shows that the data is valid. In this case, if the Pearson Correlation was closer to +1, it can be said has strong correlation. Based on the table above, the result is closer to +1, so the data has strong reliability. It can be concluded that it is reliable.

Table 3.6. Reliability testing of try out

Case Processing Summary			
		N	%
Cases	Valid	32	100.0
	Excluded ^a	0	.0
	Total	32	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.659	2

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Rate_1	18.12	6.242	.522	. ^a
Rate_2	20.72	12.531	.522	. ^a

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Cronbach Alpha reliability test has a basic concept, namely:

1. Research instruments are said to be quality if they have proven validity and reliability.
2. The reliability test is carried out after the instrument item is declared valid.

3. The reliability test aims to see whether the instrument has consistency if measurements are carried out repeatedly.
4. The reliability test can be carried out jointly on all instrument items in a research variable.

The step how to do reliability testing are input the data, analyze the data and output the data from spss. The researcher has known the validity before and all item before was valid. For knowing the data is reliable or not, the cronbach alpha > 0.6 . If the cronbach alpha < 0.6 it is not reliable. From the table above, the cronbach alpha is 0,659. That means the data is reliable.

E. Data Collecting Method

In this research, the researcher will tell about how to get the data. The researcher used instruments such as pre-test, treatment, and post-test. Those all to measure the effectiveness of edmodo in students' descriptive writing.

1. Pre-test

The researcher gave the pre-test to know the students' ability in descriptive writing before explaining the material from edmodo. In this research, the researcher gave the pre-test to VIII-1 on 2nd March 2020 at 08:30AM – 09:50AM. The researcher gave the students 3 pictures and answer sheet. After that, the researcher asked the students to choose one picture and write descriptive text on the answer sheet. The students was given 60 minutes to make the descriptive text.

2. Treatment

After finishing pre-test, the researcher gave explanation about edmodo application. The researcher asked the students to download edmodo application and explain the way how to use it step by step. The researcher used edmodo to gave them material about descriptive. After that, the teacher gave online material one by one . the steps of treatment online are :

- a) Start from giving material about generic structure of descriptive writing on 05th March 2020 at 09:35AM.
- b) After that, the researcher gave material about grammar that used in descriptive writing on 07th March 2020 at 11:00AM.
- c) The next is the last material. The researcher gave materi about vocabulary for descriptive writing on 10th March 2020 at 11:15.
- d) Beside the last materi, the researcher gave some exercise to the students on 10th March 2020 at 11:56AM.

3. Post-test

After doing the treatment, the researcher gave the students post-test to know the students' descriptive writing after giving treatment by edmodo. The researcher gave the post-test on 11th March 2020 at 12:10AM – 13:30AM.

F. Data Analysis

In this research, researcher used a quantitative data analysis technique. The quantitative data of this research was analyzed by using statistical method. This technique was used to find the significant difference on the students'

scores after taught by using edmodo. The two variables investigated in this research were edmodo application and students' descriptive writing. To know whether there is any significant difference scores in the students score before and after being taught by edmodo, the researcher analyzed the collecting data quantitatively.

1. Descriptive Analysis

Descriptive analysis is an important first step for conducting statistical analysis. Descriptive analysis used to describe the data that researcher got. To find out the average student score, the lowest student score, the highest student score, the most student exit score. Descriptive analysis in this study covers the mean, median, mode, standard deviation and sum.

2. Normality Testing

In this research, the researcher used SPSS 16.0 to quantify the normal testing. Normal testing used to know the data is normal or not. Kolmogorov Smirnov normality test is part of the classical assumption test. Normality test aims to determine whether the residual value is normally distributed or not. A good regression model is to have a residual value that is normally distributed.

The basic decision making :

- If the significance value > 0.05 , then the residual value is normally distributed.
- If the significance value < 0.05 , then the residual value is not normally distributed .

3. Paired Sample T-test

As the researcher said before, this research used SPSS. In SPSS, the researcher used t-test to know the effectiveness. The researcher made the step to analyze the data. The first, the researcher input the frequency data of pre-test and post-test. After that, the researcher find the mean, median, mode, and standar deviation. All step used SPSS. After knowing all data, the researcher use t-test to know the differences between pre-test and post-test. The researcher could know the edmodo is effective or not for this study.