

CHAPTER III

RESEARCH METHOD

In this chapter, the researcher describes the research methodology applied in the present. It covers research design, population and sample, instrument and instrumentation of the research, validity and reliability, normality and homogeneity, data collection, and dataanalyzing.

A. Research Design

The method of this study was quantitative method. The design of this study was quasi experimental design. Quasi- experimental design is similar to randomized experimental design in that they involve manipulation of an independent variable but differ in that subjects are not randomly assigned to treatment groups. According to Ary (2006), quasi- experimental design does not provide full control; it is extremely important that researcher be aware of the threats to both internal and external validity and considers these factors in their interpretation.

The purpose of researcher is to know different effect of the treatment between the experimental class that was taught teaching by using video and control class which was taught without using video. Quasi- experimental design include two group which from each was given pretest and posttest. The procedure of quasi experimental design will be explained as follows:

First, the researcher chose two classes from the first grade student of SMA 1 Tulungagung that which both class have same average in writing ability. So, it can represent the population on the average ability on writing. Second, choose two classes that will be as the experimental class and control class. Third, gave pretest to all subjects to know the ability from each subject on occasion of dependent variable. Forth, gave treatment for experimental class by using video in teaching writing narrative text. In this case, the teacher gave explanation about how to write narrative paragraph, then asked the students to watch the video about narrative story. After the students understood the story in the video, they were asked to write the story based on the video they had watched. While for the control class, the learning activities in writing narrative paragraph was done without using media. The last procedure, experimental class and control class were given a posttest to compare the result.

Table 3.1 Nonrandomized Control Group Pretest- Posttest

Group	Pre-test	Independent	Post-test
E	Y1	X	Y2
C	Y1	–	Y2

(Taken from Ary, 2006)

Notes:

E : Experimental group

C : Control group

- Y1 : pre-test
Y2 : post-test
X : Treatment on the experimental group

B. Population and Sample

1. Population

Population is all that subject of this study that should be investigated. According to Arrikunto (2006:130) said that population is the whole subject of research. The population in this research is the whole of first grade at SMAN 1 Tulungagung in the 2016/2017, there are 243 students and consist of seven classes, every class the average 34 until 38, we can look as follow:

- X 1: 38 students
X 2: 34 students
X 3: 35 students
X 4: 36 students
X 5: 35 students
X 6: 35 students
X 7: 30 students

2. Sample

A sample is a part as the representative of population that is investigated, (Arikunto, 2006:134). Sample is part of selected number of

people or thing representing the whole population. The population of this research was the tenth grade students of SMAN 1 Tulungagung. The writer took sample based on the classes that have same high average value in English lesson. In this research the researcher used purposive sampling technique to obtain the sample. In 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). In this research, the researcher selected classes X5 consisting of 35 students as the experimental group was taught by using video. Meanwhile, class X4 consisting of 36 students was selected as the control group of this study which was taught without using video.

C. Research Instrument

Instrument plays an important role to collect data. There are many kinds of instruments, such as: test, interview, questionnaire, rating scale and etc. In collecting the data, the researcher used writing test as the instrument of the study. According to Ary (2010: 201) test as a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned. The success of a study is more or less influenced by the instrument used, because the use of the right instrument will guarantee the data required. Therefore, the test was used to measure students' ability in writing narrative. The data of the research were the score of the students writing ability obtained by using composition test. The test was done twice, before and after

treatment (pretest and posttest). The pretest was used to see student's achievement in writing narrative text before treatment was given and the posttest was used to see student's achievement in writing narrative text after the treatment was given. Then, to assess students' writing, the researcher set up analytic scoring rubric which included the criteria like as (1) Content, (2) Organization, (3) Vocabulary, (4) Grammar, and (5) Mechanic. The complete form of the writing scoring rubric can be seen in the Appendix.

D. Validity and Reliability

Validity and reliability of instrument are integral parts in conducting a study since the instrument which will be used must be valid and reliable before using it to collect the data. In this study, the researcher ensured that the instrument (test) was valid and reliable by doing validity and reliability testing as follows:

1. Validity

Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations. Validity is an instrument measured what it claimed to measure. According to Ary (225) Validity is the most important consideration in developing and evaluating measuring. The focus of recent views of validity is not on the instrument itself but on the interpretation and meaning of the scores derived from the instrument.

There are four types of validity; content validity, criterion-related validity, constructs validity, and face validity. In this study, the instrument tested by using content validity, face validity, and construct validity because those are relevant with this research.

a. Content Validity

Content validity is contents constitute as representative sample of the language skill, structure, etc. To achieve the content validity, the researcher referred to the School- Based Curriculum. Based on the standard competence in syllabus of School- Based Curriculum, it is mentioned that the first grade of Senior High School are expected able to express meaning in functional written text and simple short essay in the form of narrative to interact with the society around them.

The instrument in this research achieved content validity since the test was designed based on main competence and basic competence in School- Based Curriculum since the school implements the School- Based the researcher conducted this research. In the Minister of Education regulation number 22/2006 about the standard of content, the content validity is maintained by developing the blue print as seen in the following table.

Table 3.2 Content Validity

Main Competent	Basic Competent	Indicator	Instruction	Item
<p>6. Expressing meaning in the text of the essay short writing and simple functional form of a narrative in the context of everyday life.</p>	<p>6.2 Expressing meaning rethoric and steps accuratly, flently, and acceptable by using a variety of written language in the context of everyday life in the form of a narrative.</p>	<p>Can write golden cucumber story with a coherent, taking generic structure like as: orientatio n, complicat ion, resolution . And language feature like as: past tense, action verb, nouns, adjectives , time connectiv es, adverbs dan adverbial phrase.</p>	<ol style="list-style-type: none"> 1. Write your full name, class, day/ date. 2. Make a narrative text with tittle of golden cucumber story in 35 minutes. 3. Write at least three paragraphs. 4. Write a paragraph consist of orientation, complicatio n, and resolution. 5. Must have pay attention content, organizatio n, vocabulary, grammar, mechanic. 	<p>1</p>

b. Face Validity

Face validity is a term sometimes used in connection with a test's content. According to Borwn (2003) face validity means that the students perceive the test to be valid. 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 who take it, the administrative personal who decide on it's use and phsycometrically unsophiticated observers (Brown: 2004). This research was to measure writing ability of student's. Menwhile, to achieve face validity the resercher was providing some of instruction ask students to story writing.

c. Construct Validity

Construct validity of a test as the extent to which a test is measuring the psychological construct it is intended to measure. Specifically, construct validity of experiments is defined as the validity of the inferences made about a construct based on the measures, treatment, subjects, and settings used in an experimental study. In this research, the test had high construct validity since it contained prompt in form of guided instructions to measure students' skill in writing a narrative text.

In this research, the researcher used SPSS 16.0 for windows to know the validity of test instruments. It can use corrected item-total

correlation formulation. The criteria of validity of the instrumen can be divided into 5 classess as follows (Ridwan: 2004) :

1. If the *item-total correlation* score 0.00 – 0.20: less valid
2. If the *item-total correlation* score 0.21 – 0.40: rather valid
3. If the *item-total correlation* score 0.41 – 0.60: enough valid
4. If the *item-total correlation* score 0.61 - 0.80: valid
5. If the *item-total correlation* score 0.81 – 1.00: very valid

Table 3.3 Result of Validity Test

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR000 01	76.8000	8.178	.623	. ^a
VAR000 02	76.8000	9.956	.623	. ^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.

Based table on above shows the result item- total correlation was 0.623, it's means the score is valid.

2. Reliability

Reliability is a measure of accuracy, consistency, dependability or fairness of scores resulting from administration or particular examination.

According Ary(2001) Reliability is the extent to which a test measures

accurately and consistency. According to Arikunto(2006:178), reliability is enough instrument can believe to use as a tool to collect data, because this instrument is good. Instrument that was can believe, that reliable will the result of data that can also believe.

Reliability is the consistency of the instrument in producing the same score on different testing occasions or with different raters. To get reliable the researcher used inter-rater reliability. Inter-rater reliability is achieved when two scorers or two raters do the scoring (Isnawati: 23). Two rater in this research were the English teacher and the researcher herself. This research, the researcher also used SPSS 16.0 for window to know the reliability of test instruments. The criteria of reliability instrument can be divided into 5 classes as follows as follows (Ridwan : 2004), those are:

1. If the *cronbachalpha* score 0.00 – 0.20: less reliable
2. If the *cronbachalpha* score 0.21 – 0.40: rather reliable
3. If the *cronbachalpha* score 0.41 – 0.60: enough reliable
4. If the *cronbachalpha* score 0.61 - 0.80: reliable
5. If the *cronbachalpha* score 0.81 – 1.00: very reliable

The result of reliability testing by using SPSS 16.0 can be seen from the table:

Table 3.4 Result of Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.766	2

Based table on above, that the test can said reliable or not can be seen through cronbach's alpha. The score of cronbach's alpha 0,766 it's means reliable.

E. Normality and Homogeneity Testing

In this part the researcher discuss about the result of normality and homogeneity testing.

1. The Result Normality Testing

a. Normality Testing of Experimental Class

Normality testing is conducted to determine whether the gotten data is normal distribution or not. The researcher used SPSS.16. *One-Sample Kolmogorov-Smirnove test* by the value of significance (α) = 0.050. The result can be seen below:

Table 3.5 Normality Testing of Experimental Class

		One-Sample Kolmogorov-Smirnov Test		
		preteast	Posttest	Unstandardized Residual
N		35	35	35
Normal	Mean	62.00	87.03	.0000000
Parameters ^a	Std. Deviation	5.018	4.495	4.43032951
Most Extreme	Absolute	.182	.154	.113
Differences	Positive	.169	.131	.094
	Negative	-.182	-.154	-.113
Kolmogorov-Smirnov Z		1.078	.914	.671
Asymp. Sig. (2-tailed)		.196	.374	.759
a. Test distribution is Normal.				

the table above is known that the significance value from pre-test is 0.1078 and from the post test is 0.914. Both value from pre-test and post-test are bigger than 0.05. The sig/p value on pre-test is 0.1078 and it is lower 0.05 ($0.1078 > 0.05$) means that the data is in normal distribution. Then, for post-test score the value of sig/p is 0.914 and that is bigger than 0.05 ($0.914 > 0.05$) means that the data is in normal distribution. It also means that H_0 is accepted and H_a is rejected. So, it can be interpreted that both of data (pre-test and post-test score) are in normal distribution.

b. Normality Testing of Control Class

Normality testing is conducted to determine whether the gotten data is normal distribution or not. The researcher used SPSS.16. *One-*

Sample Kolmogorov-Smirnov test by the value of significance (α) = 0.050. The result can be seen below:

Table 3.6 Normality Testing of Control Class

One-Sample Kolmogorov-Smirnov Test				
		Pretest	Posttest	Unstandardized Residual
N		36	36	36
Normal Parameters ^a	Mean	59.44	72.58	.0000000
	Std. Deviation	4.462	3.597	4.08624387
Most Extreme Differences	Absolute	.188	.236	.158
	Positive	.090	.236	.075
	Negative	-.188	-.181	-.158
Kolmogorov-Smirnov Z		1.131	1.416	.946
Asymp. Sig. (2-tailed)		.155	.036	.333
a. Test distribution is Normal.				

Based on the table above is known that the significance value from pre-test is 0.1131 and from the post test is 0.1416. Both value from pre-test and post-test are bigger than 0.05. The sig/p value on pre-test is 0.1131 and it is lower 0.05 ($0.1131 > 0.05$) means that the data is in normal distribution. Then, for post-test score the value of sig/p is 0.1416 and that is bigger than 0.05 ($0.1416 > 0.05$) means that the data is in normal distribution. It also means that H_0 is accepted and H_a is rejected. So, it can be interpreted that both of data (pre-test and post-test score) are in normal distribution.

2. The Result Homogeneity Testing

1. Homogeneity Testing of Experimental Class

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. To know the homogeneity, the researcher used *Test of Homogeneity of Variances* with SPSS.16 by the value of significance (α) = 0.050. The result can be seen below:

Table 3.7 Homogeneity Testing of Experimental Class

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
1.392	5	26	.260

Based on the table above is known that the sig/p value is 0.260 higher than 0.05 means H_0 is accepted and H_a is rejected. So, it can be interpreted that the data is homogeneous.

2. Homogeneity Testing of Control Class

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. To know the homogeneity, the researcher used *Test of Homogeneity of Variances* with SPSS.16 by the value of significance (α) = 0.050. The result can be seen below:

Table 3.8 Homogeneity Testing of Control Class

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
1.911	4	28	.136

Based on the table above is known that the sig/p value is 0.136 higher than 0.05 means H_0 is accepted and H_a is rejected. So, it can be interpreted that the data is homogeneous.

F. Data Collecting Method

Data collection plays a very important role in the research. While, data collection is done by observing a situation, setting or interaction using constructed instrument Muijs (2004:56). To know more the details of the test accomplished, the researcher put in plain words below to collecting data:

a. Pre-Test

This test was administered before the treatment. The pretest is aimed is to know the students' writing ability before the treatments carried out. It was done on Monday, March 6th2017. The researcher came to the class, and explained the material also told to the students what they had to do. The researcher asked the students to write story about golden cucumber by follows instructions. The researcher gave time 60 minutes to finish working on it.

b. Post-Test

The post test was given to the experimental class and control class. It was given in order to know students achievement after they were taught by using video (experimental class) and without video (control class). In this case, students were asked to make narrative text based on the correct order of generic structure. The result of the scoring then is compared with pretest. Post test was conducted on Friday, March 31st 2017.

G. The Description of Treatment

Treatment was given after administering the pretest and before the posttest. The treatment conducted by researcher on March 20th, 23th, 27th, and 30th 2017. The procedure of treatment as follow:

1. First, treatment was conducted on March 20th 2017

Before beginning applied video in teaching writing, the researcher conveyed about simple past tense and discussed the main point of narrative text and given examples both them. Then, the researcher introduced a media that used in teaching writing, especially in narrative text. The media that used is video. In this occasion, the researcher explained how to apply video in writing narrative text. The researcher gives example video about snow white, the researcher press the pause on picture. Then the researcher, ask the students to guess weather character will say or do. After that the researcher,

ask the students to make a paragraph based on video. So, students will easy to make a simple paragraph about what they should by giving video in the task, because video give stimulus to students to get an idea before writing.

2. Second, treatment was conducted on March 23th 2017

The review about narrative text and researcher reminded how to do the exercise based on explanation before. The researcher given exercise to the students. The students should narrative text the topic given by there searcher. The topics are about "sangkuriang".

3. Third, treatment was conducted on March 27th 2017

The researcher given exercise to the students. The students should write narrative text the topic given by the researcher. The topics are about "Bawang Merah dan Bawang Putih".

4. Fourth, treatment was conducted on March 30th 2017

The researcher given exercise to the students. The students should write narrative text the topic given by the researcher. The topics are about "Toba Lake".

H. Data Analysis

Data analyzing is a process of analyzing the acquired from the result of the research. After all the data needed in this research have been collected in writing narrative form. The resercher analyzed wheter there is a significant

difference between students ability in writing narrative textwho are taught by using and without video. In conducting the test, the writer gave score the writing ability of the students. To describe the students ability in writing narrative text, the researcher in this research using SPSS 16for windows. The researcher using t test to know it is higher or smaller than 0.05. The technique of data analysis which is used by the resrachar belonged to quantitative data analysis.