

CHAPTER III

RESEARCH METHOD

In this chapter, the researcher presented research method. There were some topics dealing with the research method. Those were: research design, population, sampling, sample, variable of studies, research instrument, method in collecting data, method of data analysis, validity and reliability, and hypothesis testing.

A. Research Design

This research belongs to quantitative research because the aim of this research was to test a theory. This research was conducted to test whether the use of Gallery Walk was effective or not on students' writing ability in Hortatory Exposition text. Furthermore, to analyse the data, the researchers used statistical analysis of numeric data. This was in line with Aliaga and Gunderson (2002) who said that quantitative research is explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics). Creswell, J.W. (2003) added quantitative research establishes statistically significant conclusions about a population by studying a representative sample of the population.

The procedure of doing this research was by having pre-test and post-test in two groups. The first group was given treatment by using Gallery Walk technique, called experimental group and the second group was not given treatment, called control group. Thereby, this research

belongs to quasi experimental research design. As stated by Mujis (2004:200), “quasi experimental research is especially suited to looking at the effects of an educational invention, such as a school improvement program, a project to improve a specific element.” The table below shows the design of the research.

Table 3.1 Quasi Experimental Research Design

Group	Y1	X	Y2
Experimental Group XI-MIA 1	Pre-test	Gallery Walk Technique	Post-test
Control Group XI-IIS 1	Pre-test	Conventional Technique	Post-test

Based on the table 3.1 above, the procedures of using two groups pre-test and post- test design were:

1. Administering a pre-test to both classes (XI MIA 1 and XI IIS 1) to measure the score of writing in hortatory exposition text of the students at the first grade of senior high school 3 Blitar before given a treatment and to know whether bith classes are equal.
2. Applying treatment in experimental group (XI MIA 1) to teach hortatory exposition text by using Gallery Walk Technique and control class (XI IIS 1) to teach hortatory exposition text by using conventional method.

3. Administering a post-test in both classes to measure the score of writing in hortatory exposition text of the students at the first grade of senior high school 3 Blitar after given a treatment.

B. Population, Sampling, Sample

1. Population

The population used to conduct this research was the eleventh grade of MAN 3 Blitar in academic year 2018/2019. The total population was 520 students which spread into 10 classes. This is in line with Cresswell (2012:142) that a population is a group of individuals who have the same characteristic. Gay (2006) also stated that population is a certain group of things (people, objects, events, etc) chosen by the researcher whose study on the research that can be generalized to the group that has a population at least one characteristic that distinguishes it from the other group. Further, Scott and Johnston (2009: 29) revealed population is the universe of people to which the study could be generalized, and a sample is the subset of people from the population who will participate in the current study.

2. Sampling

The type of sampling used in this study was non-probability sampling. It meant each individual has no the same chance to be selected as sample. In other word, it does not use randomization. Meanwhile the sample technique used in this study was purposive sampling. Sugiyono (2015:12) stated that purposive sampling is technique to determine the sample considerately. Thus, purposive sampling means the selecting sample is based on the

criteria. Hence, the researcher chose the average ability of a class that has a tendency to develop their skill after given treatment by Gallery Walk technique. To know the average ability between those classes, the researcher got information for the English teacher who teaches those classes. Therefore, the researcher determined those classes as the sample of this study since those two classes have the average ability. In addition, the researcher used SPSS 16.0 version to prove it.

3. Sample

As a sample, the researcher selected XI MIA 1 as experimental group which consists of 37 students and XI IIS 1 as control group which consists of 34 students. The reason of the researcher in deciding those classes were both of classes belong to normal class in which both of classes neither high nor low level, but in average level. Hence, the researcher chose those classes as the sample of the study. It is in line with Cresswell (2012:142) sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. Fraenkel and Wallen (2006:92) also give explanation that sample is the group on which information is obtained.

To verify that two classes were equal or not, the researcher calculated pre-test score of both classes. The researcher used Independent Samples T-Test in SPSS 16.0 version. The result showed that the significant level was 0.999 because of the significant level was higher than 0.05, it indicated that

there is no difference in variance data or in the other words those classes were equal. The result of computation was presented in table 3.2 below :

Table 3.2 Independent Sample T-test of Pre-test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
students score	Equal variances assumed	.000	.999	.151	69	.880	.166	1.098	-2.025	2.357
	Equal variances not assumed			.151	68.027	.880	.166	1.100	-2.028	2.361

C. Variable of Study

According to Frankel and Wallen (2006:40) variable is a concept a noun that stands for variation within a class of subject such as gender, color, motivation, chair, eye, achievement, or running speed. Taken from this statement, there were two variables in this research, they were:

1. Independent Variable

In this research, Gallery Walk technique belongs to independent variable because it affected another variable; in this case another variable is students' writing ability.

2. Dependent Variable

In this research, students writing ability in hortatory exposition text was a dependent variable because it was affected by another variable that is Gallery Walk technique.

D. Research Instrument

In this research, the researcher used quantitative research to collect the data. In collecting the data, the writer need research instrument. According to Arikunto (2006:126) the device the researcher uses to collect data is called instrument.” Instrument takes significant rule in conducting this research. It is due to the data which is needed to answer research question and examine hypothesis is gained though instrument itself.

The instrument of this research was test. According to Ary (2010:201) test is 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 researcher used test in form of written test of hortatory exposition text to see the different result of those who taught by using Gallery Walk technique and those who are not taught by using Gallery Walk technique.

Prior to conduct the test to 2 groups, the researcher try-out the test to XI IIS 3 in order gets reliability of the test. Then, the score calculated by using

SPSS. After the test was reliable, the researcher conducted pre-test and post-test for 2 groups ; experimental and control group.

Pre-test was given to the students at the first meeting. Students were asked to create a hortatory exposition text based on the three topics which have already mentioned in a worksheet. They could choose one of the topics there. Pre-test was administered to measure the students' writing ability in hortatory exposition text before being taught by giving treatment and to know whether both classes were equal. In addition pre-test was conducted to see the level of both classes.

Meanwhile post-test was carried out after each student of two groups have been given treatment. Post-test run as how pre-test was. There were some instructions as guidance for the students to do the test. The time allocation given was 60 minutes and there were three chosen topics. The aim of this test was to measure the students' writing ability in hortatory exposition text after being taught by giving treatment.

In analyzing the writing test the researcher used the scoring rubric to avoid the subjectivities. It was adapted from Brown (2007:214), there were five scales in scoring the writing test, they are content, organization, vocabulary, grammar, and mechanics.

Table 3.3 Scoring Rubric for the Aspect of Writing

Aspect of Writing	Criteria	Score	Weight
Content (C) 30% -Topic -Detail	The topic is complete and clear and the details are relating to the topic	4	3x
	The topic is complete and clear but the details are almost relating to the topic	3	
	The topic is complete and clear but the details are not relating to the topic	2	
	The topic is not clear and the details are not relating to the topic	1	
Organization (O) 20% -Identification -Argument	Identification is complete and argument are arranged with proper connectives	4	2x
	Identification is almost complete and argument are arranged with almost proper connectives	3	
	Identification is not complete and argument are arranged with few misuse connectives	2	

	Identification is not complete and argument are arranged with misuse connectives	1	
Grammar (G) 20% -use simple present	Very few grammatical and agreement inaccuracies	4	2x
	Few grammatical	3	
	Numerous grammatical	2	
	Frequent grammatical	1	
Vocabulary(V) 15% -Word choice	Effective word choice, word forms and appropriate word number and sufficient word number	4	1,5x
	Few misuse of word choice, word forms but not change the meaning	3	
	Limited range confusing word choice, no word form, and less word number	2	
	Very poor knowledge of words and word forms, limited word number	1	
Mechanics(M)	It uses correct spelling, punctuation, and	4	

15%	capitalization		
-Spelling			
- Punctuation	It has occasional errors of spelling, punctuation, and capitalization	3	
-Capitalization	It has frequent errors of spelling, punctuation, and capitalization	2	
	It is dominated by errors of spelling, punctuation, and capitalization	1	

$$\text{Score} = \frac{3C+2O+2G+1,5V+1,5M}{40} \times 100$$

40

E. Data Collecting Method

According to Cresswell (2012: 9) collecting data means identifying and selecting individuals for a study, obtaining their permission on the study and gathering the information by asking people questions or observing their behavior. In this research the researcher used Administery test. Administery 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 (Ary et al, 2010:216). The administery test was conducted into two part, they were pre-test and post-test. The details of pre-test and post-test were presented as follows:

1. Pre-test

Pre-test was conducted to both experimental and control groups prior to treatment. The aim of pre-test was to know the students' writing skill before

they were taught by Gallery Walk technique and the equality of both groups. In pre-test, students were asked to create a Hortatory Exposition text by choosing three different topics which were prepared by the researcher. Meanwhile the time allocation was 60 minutes. The researcher also provided the students in a piece of paper contained some instructions, chosen topic, time allocation, and blank identity of student.

2. Post-test

Post-test was carried out to the students after treatment. The aim of administering post-test was to know the students' writing skill after they were taught by Gallery Walk technique. The procedure in administering post-test was the same as pre-test, but there were three different topics from pre-test. Afterwards, the researcher got scores from both groups and calculated it by using SPSS 16.0 version to know how effective Gallery Walk technique on students' writing skill in Hortatory Exposition text.

F. Validity and Reliability

Test is supposed to be good if the test fulfils 2 requirements. Those are test must be valid and test must be reliable theoretically. The validity and reliability are used to ensure that the test was suitable to use.

1. Validity

The test can be called valid if the test measures what is intended to be measured. As Ary et al (2010: 225) stated, validity is the most important

consideration in developing and evaluating measuring instruments. Validity was defined as the extent to which an instrument measured what it claims to measure. In this research, the researcher emphasizes on content validity and constructs validity.

a. Content Validity

According to Ary (2010:235), the basic approach to determining content validity is to have teacher or subject matter experts examine the test and judge, whether is it an adequate sample of the content and objective to be measured. It means that the content of test had already agreed with the purpose of the test. While the purpose of the test is adapted from Core Competence – Basic Competence in Curriculum 2013 or referred as K13. Furthermore, the test used in this research was written test of hortatory exposition text for 11 grade of Senior High School. Therefore, the instrument of this research fulfilled the criteria of having content validity since the topics given in this research appropriate to Basic Competence in K13. It can be seen from the table stated as follow.

Table. 3.4**Syllabus of Hortatory Exposition Text**

Basic Competence	Indicator
<p>1.9. Membedakan fungsi sosial, struktur teks, dan unsur kebahasaan beberapa teks hortatory exposition tulis dengan memberi dan meminta informasi terkait pendapat mengenai topik yang hangat dibicarakan umum, argumentasi pendukung, serta saran sesuai dengan konteks penggunaannya.</p>	<p>1.9.1.Menjelaskan fungsi sosial, struktur teks, dan unsur kebahasaan beberapa teks hortatory exposition tulis dengan memberi dan meminta informasi terkait pendapat mengenai topik yang hangat dibicarakan umum, argumentasi pendukung, serta saran sesuai dengan konteks penggunaannya.</p> <p>1.9.2.Menganalisis perbedaan fungsi sosial, struktur teks, dan unsur kebahasaan beberapa teks hortatory exposition tulis dengan memberi dan meminta</p>

	informasi terkait pendapat mengenai topik yang hangat dibicarakan umum, argumentasi pendukung, serta saran sesuai dengan konteks
4.9. Teks hortatory exposition	
4.9.1. Menangkap makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks hortatory exposition tulis terkait isu aktual.	<p>4.9.1.1. Mengidentifikasi makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks hortatory exposition tulis terkait isu aktual.</p> <p>4.9.1.2. Menyampaikan makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks hortatory exposition tulis terkait isu</p>
4.9.2. Menyusun teks hortatory exposition tulis terkait isu aktual dengan memperhatikan	4.9.2.1. Mengembangkan topik ke dalam judul yang menarik untuk menyusun teks

<p>fungsi sosial, struktur teks, dan unsur kebahasaan secara benar dan sesuai konteks.</p>	<p>hortatory exposition tulis terkait isu aktual dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan secara benar dan sesuai konteks.</p> <p>4.9.2.2. Membuat gagasan utama sesuai dengan topik untuk menyusun teks hortatory exposition tulis terkait isu aktual dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan secara benar dan sesuai konteks.</p> <p>4.9.2.3. Mengembangkan gagasan utama ke dalam paragraf untuk menyusun teks hortatory exposition tulis terkait isu aktual dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan secara</p>
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	<p>benar dan sesuai konteks.</p> <p>4.9.2.4. Memproduksi teks hortatory sederhana terkait isu aktual dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan secara benar dan sesuai konteks.</p>
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b. Construct Validity

Based on Ary et al (2010:638) construct validity referred to the degree to which evidence and theory support the interpretations of test scores entailed by the proposed use of the test. It meant that the construct validity can be measured by looking at the theoretical concept. The following is the format of the test :

Table 3.5 Instrument of Writing Test

<p style="text-align: center;">HORTATORY EXPOSITION TEXT</p> <p>Name : _____</p> <p>Class : _____</p> <p>Date : _____</p> <p>Instructions!</p> <ol style="list-style-type: none"> Please write a hortatory text by choosing one of the topics that have been provided below! The topics are: <ol style="list-style-type: none"> The Limitation of Playing Games for Students The Importance of Extracurricular Should We Reduce The Use of Plastic to Keep Environment? Your product of writing must contain at least 3 paragraphs which have to be appropriate with the generic structures of hortatory text (thesis, argument, and recommendation). You have to use the following language features of hortatory text: <ol style="list-style-type: none"> Simple present tense Modal such as <i>should, must, can, etc.</i> Action verbs such as <i>build, buy, agree, etc.</i> Mental process for example <i>think, realise, feel, etc.</i> Connective words for instance <i>then, furthermore, moreover, in addition, afterwards, etc.</i> Material process to state what happens for example <i>polluting should be treated.</i> Relational process to state what it should or should not be such as <i>does not seem to have been.</i> You are given 60 minutes to write hortatory text as well as you can in this worksheet. Your writing will be measured based on five aspects in writing, namely content, organization, grammar, vocabulary, and mechanic. You may open your dictionary. <p>Now, You can start to write your ideas about the topic that have been decided to make hortatory text directly in the next page of this worksheet.</p>

Regarding to table 3.5 the test was in line with the assessment theory in testing writing. Hughes (1989:75) yielded that the best way to test people's writing ability is to get them to write. From this statement, it can be inferred that a test of writing involves at least two basic components: one or more writing tasks, or instructions that tell test takers what to write, and a means of evaluating the writing samples that test takers produce (J.Charles, 2002:2). Therefore, the test used in this research has fulfilled the construct validity.

2. Reliability

As revealed by Cresswell (2012:159) that reliability means that scores from an instrument are stable and consistent. In this research, the reliability of the test has been done by having inter-rater reliability. The researcher try-out the test before distributing to the experimental and control group. Try-out conducted to XI IIS 2 in the same grade to get reliability of pre-test and post-test. Furthermore, the researcher attempted to ask students of XI IIS 2 related to the instrument provided by the researcher. In addition, the researcher tried to analyse the respond of the students when they were doing the test. From the observation, the researcher decided to construct alteration from the instrument. The alteration was the time allocation provided in the test. At the first, the researcher provided 45 minutes, but it seemed the time provided was not enough. It could be seen from the respond of the students when the time was up. Moreover, they requested additional

time. Therefore, the time allocation in the instrument which was prepared for pre-test and post-test was 60 minutes.

There were some reliability procedures are designed to determine whether all the items in a test are measuring the same thing Ary et al (2010:244). Inter-rater reliable was chosen in this research to get reliability of the test. Inter-rater ability refers to consistency of scores given by two or more scorer to the same set of oral or written texts (Sarosdy et.al. 2006, p. 135). The two scorers in this research were the researcher and the English teacher. Then, SPSS 16.0 version was utilized to obtain the reliability of the instrument. Additionally, the criteria of reliability instrument divided into 5 classess as follows (Ridwan: 2004) :

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

The result of pre-test and post-test reliability testing can be checked in table below :

Table 3.6 Pre-test Reliability Statistic**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha		
.941	.952	2

Table 3.7 Post-test Reliability Statistic**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha		
.937	.942	2

The table above was the result of Pearson Product Moment Formula. It showed that the Alpha Cronbach score of pre-test is 0,941 and the Alpha Cronbach score of post-test is 0,937. According to (Ridwan: 2004), if the *alpha cronbach* score 0.81 – 1.00, the test is very reliable. While,), if the *alpha cronbach* score 0.81 – 1.00, the test is very reliable. In short, based on the result of calculation gained in this research, the instrument used to collect the data is very reliable because it has reliability coefficient 0.941 in pre-test and 0,937 in post-test.

G. Normality Testing

Normality test is one of the requirement in analyzing the data. Thus, before conducting further analysis, the data should normally distributed. In addition, normality test intended to know whether the data is normally distributed or not. Furthermore, it could become the consideration which statistical formula used. Then, if the significance value is more than 0.05, the data is normally distributed. Meanwhile if the significance value is less than 0.05, the data is not normally distributed. In this research, the researcher used One-Sample Kolmogorov – Smirnov Test on SPSS 16.0 version.

H. Homogeneity Testing

Homogeneity testing conducted to know whether the gotten data has a homogeneous variance or not. In addition, either homogeneity or normality testing were conducted to decide whether the formula for hypothesis testing belong to parametric or non-parametric one. In this research, the researcher used SPSS Statistics 16.0 that was Levene Statistic test by the value of significance (α) = 0.05. The samples can be categorized as homogeneity if value of significance > 0.05 .

I. Hypothesis Testing

Bluman (1998:356) yielded that hypothesis testing is the process of evaluating claims about population. Thus, hypothesis testing is functioning to know whether the null hypothesis (H_0) of the research is rejected or not.

1. Stating the Hypothesis

The hypotheses of this study are :

- a. H_a (alternative hypothesis) : Gallery Walk technique is effective on students' writing ability in hortatory exposition text.
- b. H_o (null hypothesis) : Gallery Walk technique is not effective on students' writing ability in hortatory exposition text.

2. Finding the Critical Value

In this step, the writer will determine the significance level or the tolerance of error at $\alpha = 5\%$. It is due to this study belong to language and education.

3. Computing the Test Value

In calculating the data in order to test the hypotheses, the writer use SPSS 16.0 version

4. Drawing the Conclusion

After calculating the data in SPSS, the writer starts to draw the conclusion. The null hypothesis (H_o) is rejected if the P-value is lower than $\alpha = 5\%$. Meanwhile if the P-value higher than or equal to $\alpha = 5\%$, null hypothesis is not rejected. Furthermore, the P-value is denoted in Significance (Sig.)

J. Data Analysis

Data analysis is a review of a series of activities, grouping, systematization, interpretation and verification of data so that a phenomenon has social value, academic, and scientific (Tanzeh, 2009: 69). In this research, the researcher used quantitative data analysis. It is used to find out the

significant difference scores of students taught by Gallery Walk technique and those who are not taught by Gallery Walk technique. Because of this study belonged to Parametric test, so the researcher used *t* Test to analyze the data of both classes. It was in line with Kim (2015) that stated *t* Test is a type of parametric method; they can be used when the distribution of data is normally distributed, equal variance, and independence. Hence, to know the effectiveness of Gallery Walk technique toward students' writing skill in hortatory exposition text, the researcher analyzed the score of post-test in experimental and control group by using Independent Sample T-Test in SPSS 16.0 version.