

## **CHAPTER III**

### **METHODOLOGY**

This chapter will discuss the method that the researcher uses in conducting the study. It involves the Reserch Design, Population and Sample, Data Collection, and Data Analysis.

#### **3.1 Research Design**

Experimental research is the design of this study. Miller (1984:4) explained that experimental design is a process to collect the research data to know the effect of variable and the other variable. It is purpose is to examine the theory, so the aim of this study is to examine the effect of Think Pair Share through Padlet in writing descriptive text. This study uses quasi experiment use to predict the cause and effect of the relationship between dependent and independent variable. The researcher uses quasi experiment because the school does not allow the researcher to do randomization and do true experiment at SMA Muhammadiyah 9 Brondong. It is because the classification of the class at SMA Muhammadiyah 9 Brondong had been determined by the school. It means that the researcher cannot change the classification of the group. So that, the researcher does not have accesses to full control the target.

In this study, there are two variables. They are writing descriptive text as dependent variable, Think Pair Share as independent variables. There will be two groups; those are experimental group wich will be given the treatment by the teacher's strategy that is "Think Pair Share through Padlet" and control group which will be given a treatment by using "Think Pair Share with pictures". The researcher gives pre-test and post-test to collect the data in order to find out the result between the students of experimental group and control group in pre-test and post-test and also to see the effect of using Think Pair Share through Padlet in student's writing descriptive text for 10<sup>th</sup> grade at SMA Muhammadiyah Brondong.

Group	Pre-test	Treatment	Post-test
Experimental	X	V	Y
Control	X	-	Y

Where :

V : Treatment

X : Pre-test

Y : Post-test

## 3.2 Population and Sample

### 3.2.1 Population

According to Jobson (1999:12), population is one group of individuals where each can be assigned a characteristic value. Population is all data that is targeted in the specified time and scope (Margono, 2005: 118). The population of this research is the students of SMA Muhammadiyah 9 Brondong who are in tenth grade. There are two classes with 56 students as the total of subjects. They are divided into two groups, one is experimental group and another is control group.

### 3.2.2 Sample

Sample is a part of population (Sugiono, 2009 in Hanglopo, 2013). In this research the technique is cluster sampling. Ary (1990), argued that cluster sampling is choosing a group already together not an individual. The researcher uses technique of cluster sampling because the school has been determining the classification of the class. Here, X IPA-1 will be as experimental group which consist of 28 students and X IPA-2 will be as the control group which consist of 28 students.

### **3.3 Data Collection**

#### **3.3.1 Instrument**

Research instrument is an important role in doing the research. In this study, the researcher uses tests as an instrument. The instrument is writing on descriptive text in order to measure the student's writing skill. It is very important to measure the validity of the test to make sure that the tests are valid. Research instrument is a tool, which is used by the researcher to collect the data. The instrument is created whether the research success or not.

##### **3.3.1.1 Test**

There are two test in this study, they are pre-test and post-test. Pre-test will be given to the students before the treatment. It is to gain the data of the student's entry in mastering writing ability. Besides, the post-test will be given to the students after giving the treatment. The test checks the content validity. The content of item is based on the standards of competence in the syllabus (school-based K13 curriculum) in 10<sup>th</sup> grade of Senior High School .

##### **3.3.1.1.1 Pre-test**

The pre-test will be given before gives treatment to the students. It is form is written test to measure student's writing skill on descriptive text. The researcher asks the students to compose a descriptive text from some criteria, and some topic from 2 theme, they are "Tourism Object" and "Historical Place" that has provided by the researcher then the students make a descriptive text by choose one of topic from one of theme that they have visited. From the result of the pre-test, the researcher will get the student's writing skill.

##### **3.3.1.1.2 Post-test**

Post test is to find out whether the students make progress in their writing skill or not. Post-test will be given after the students get the treatment which is Think Pair Share with Padlet method for experimental group and Think Pair Share with Pictures method for control group. The test in this research is written text, especially descriptive text. The researcher asks the students to compose a descriptive text from some criteria, and some topic from 2 theme, they are "Tourism Object" and "Historical Place" that has provided by the researcher then

the students make a descriptive text by choose one of topic from one of theme that they have visited. Post-test before comparator between experimental group and control group.

### **3.3.1.2 Validity**

Before doing pre-test and post-test as an instrument of the research, the test should be tried out in terms of validity. In this study, the test will be analyzed by using content of validity. The content of validity is measured related to the content of the instrument in Indonesia curriculum. To the test content validity, the researcher should compare the content of instrument to the materials based on English Curriculum and English syllabus. If it is content reflects the curriculum guides and syllabus, then the item of the test is valid.

### **3.3.1.3 Reliability of the Test**

Reliability is the consistency of the scores obtained how consisten they are for each individual from one administration of an instrument to another and from one set of items to another (Franken & Wallen, 1990:154).

In this study, the researcher uses Inter-rater Reliability to find out the result of the reliability test, because writing is concluded as subjective test. Based on Brown (2004:20), inter-rater reliability occured when the scores of the same test, possibly for lack of attention to scoring criteria, inexperience, inattention, or hypothesis. It was essentially a variation of the equivalent from type of reliability in that scores are usually produced by two raters. It can be conclude that inter-rater reliability is the degree of agreement between two raters.

### **3.3.2 The Procedure of Collecting the Data**

The researcher uses the procedures to collect the data : the firs step is the researcher makes english writing test for pre-test and post-test which consist of making a descriptive text. The second step is the researcher divides the subjects into two groups, they are experimental group and control group. The third step is the researcher gives the treatment toward the experimental group with using Think Pair Share through Padlet while in the control group the teacher gives treatment by using Think Pair Share with pictures. The treatment will be

implemented for four meetings. In the first meeting, the researcher will give the topic about Descriptive text about “Tourism Object” , the second meetings will give the topic Descriptive text about “Tourism Object”, the third meetings will give the topic Descriptive text about “Historical Place”, the four meetings will give the topic Descriptive text about “Historical Place”. And in every meeting, the researcher will give the evaluation. In the evaluation process, the reseacher will do talk to discuss with the english teacher about the meeting. After that, the reseracher gives the post-test for experimental group and control group. And the next step is analyzing the data from pre-test and post-test by using SPSS 16.00 version. The schedule as follow :

**Table of the Schedule**

No.	Meetings	Topic	Total of Students
1.	1 <sup>st</sup> meeting	Descriptive text about “Tourism Object”	56
2.	2 <sup>nd</sup> meeting	Descriptive text about “Tourism Object”	56
3.	3 <sup>rd</sup> meeting	Descriptive text about “Historical Place”	56
4.	4 <sup>th</sup> meeting	Descriptive text about “Historical Place”	56

The description as follow :

Table of description

Experimental Group	Control Group
<b>Pre-Teaching</b>	<b>Pre-Teaching</b>
<b>Observing</b>	<b>Observing</b>
➤ Students are given brainstorming by showing a picture about tourism place “Bungkul Park” on	➤ Students are given brainstorming by showing a picture about tourism place “Bungkul Park” on the LCD

<p>the LCD Projector</p> <ul style="list-style-type: none"> <li>➤ The researcher stimulates students to expressed their opinions related to the pictures by asking :           <ul style="list-style-type: none"> <li>- <i>What is the picture ?</i></li> <li>- <i>What is the chracteristic of this place ?</i></li> </ul> </li> </ul>	<p>Projector</p> <ul style="list-style-type: none"> <li>➤ The researcher stimulates students to expressed their opinions related to the pictures by asking :           <ul style="list-style-type: none"> <li>- <i>What is the picture ?</i></li> <li>- <i>What is the chracteristic of this place ?</i></li> </ul> </li> </ul>
<b>Questionning</b>	<b>Questionning</b>
<ul style="list-style-type: none"> <li>➤ The students given the opportunity to ask question that they have not understood.</li> <li>➤ The researcher ask to students try analyze the generic structure of the descriptive text           <ul style="list-style-type: none"> <li>- <i>Ok students, now from your description,have you mentioned, can you explain what are the part of descriptive text ?</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ The students given the opportunity to ask question that they have not understood.</li> <li>➤ The teacher ask to students try analyze the generic structure of the descriptive text           <ul style="list-style-type: none"> <li>- <i>Ok students, now from your description,have you mentioned, can you explain what are the part of descriptive text ?</i></li> </ul> </li> </ul>
<b>Whilst-Teaching</b>	<b>Whilst-Teaching</b>
<b>Exploring</b>	<b>Exploring</b>
<b>Think</b>	<b>Think</b>
<ul style="list-style-type: none"> <li>➤ The researcher divide the students into pairs</li> <li>➤ The students given direction for Think Pair Share through Padlet on the LCD Projector.</li> <li>➤ The researcher give the task on</li> </ul>	<ul style="list-style-type: none"> <li>➤ The researcher divide the students into pairs</li> <li>➤ The students given direction for Think Pair Share through Pictures on the LCD Projector.</li> <li>➤ The researcher give the task on</li> </ul>



Padlet and ask the students to do it.	worksheet and ask the students to do it.
➤ The students given time some minutes to do task individually	➤ The students given time some minutes to do task individually
<b>Associating</b>	<b>Associating</b>
<b>Pair</b>	<b>Pair</b>
➤ The researcher ask the students to discuss with her/his partner	➤ The teacher ask the students to discuss with her/his partner
➤ The students determine the best answer or the conclusion for the answer of the task	➤ The students determine the best answer or the conclusion for the answer of the task
➤ Each group post their answer on Padlet	➤ Each group write their answer on their worksheet .
<b>Communicating</b>	<b>Communicating</b>
<b>Pair</b>	<b>Pair</b>
➤ The students asked to share their answer (each group) on Padlet	➤ The researcher ask the students to present their answer in front of the class to whole classroom or another groups
➤ The students give correction to each other by comment on post their friends on Padlet	➤ The students give correct by comment to their friends that present in front of the class.

### 3.3.3 Scoring Guide

The scoring guide is used to guide the teacher to correct the students test. to correct the test of this research, the researcher will use 2 correctors. They are researcher and the english teacher in SMAM 9 Brondong. Below the rubric scoring for pre-test and post-test to assess the students writing descriptive text based on Brown (2007)

Content (C) 30 % - topic - detail	4	The topic is complete and clear and the details are relating to the topic
	3	the topic is complete and clear but the details are almost relating to the topic
	2	the topic is complete and clear but the details are not relating to the topic
	1	the topic is not clear and the details are not relating to the topic
Organization (O) 20 % - identification - description	4	Identification is complete and descriptions are arranged with proper connectives
	3	Identification is almost complete and descriptions are arranged with almost proper connectives
	2	Identification is not complete and descriptions are arranged with few misuse of connective
	1	Identification is not complete and descriptions are arranged with misuse of connectives
Grammar (G) 20 %	4	Very few grammatical or agreement inaccuracies
	3	Few grammatical or agreement inaccuracies but not effect on meaning
	2	Numerous grammatical or agreement inaccuracies
	1	Frequent grammatical or agreement inaccuracies
Vocabulary (V) 15 %	4	Effective choice of words and word forms
	3	Few grammatical or agreement inaccuracies but not effect on meaning
	2	Limited range confusing words and word forms
	1	Very poor knowledge of words, word forms, and not understandable
Mechanics (M) 15 % - Spelling - Punctuation - Capitalization	4	It uses correct spelling, punctuation and capitalization
	3	It has occasional errors of spelling, punctuation and capitalization
	2	It has frequent errors of spelling, punctuation and capitalization
	1	It is dominated by errors spelling, punctuation and capitalization

Scoring technique :

$$\text{Score} : \frac{3C+2O+2G+1,5V+1,5M}{40} \times 10$$

40

The symbol defined as follow :

C : Content

O : Organization

G : Grammar

V : Vocabulary

M : Mechanics

**Note :**

2-3 : Poor

4-5 : Fair

6-7 : Good

8-10 : Excellent



### 3.4 Data Analysis

After collecting the data, the researcher will analyze the data. Analyzing the data is very important in a research because it answers the research problem which is taken from pre-test and post-test. The researcher analyzes the data using SPSS program which is Independent sample t-test. Moreover, the samples are small and the groups are independent, t-test for independent samples is carried out to determine whether there is any significant between experimental and control group.

The assumption for independent t-test where : (1) Independence : observations within each sample must be independent, (2) Normal Distribution : the two population must be normally distributed. This study is included in parametric research which divides into two kinds of the data; ration and interval. The data of this study is ratio because zero has value or absolute zero. Ratio data is defining homogeneity and normal distribution. The last, (3) Homogeneity of Variance : the two populations must have equal variance.

#### 3.4.1 Normality Distribution Test

To analyze to normal distribution, this study uses Kolmogrov Smirnov Sample Test in SPSS version 16.0. It is aim to find whether or not the distributions of pre-test score in two groups are normally distributed. In this case, the result of the normality distribution is also used to find out whether or not the hypothesis that has determined is accepted. The first step in calculating the normality distribution test state that the hypothesis :  $H_0$ : the score of experimental and control group are normally distributed.

The second step is calculating the normality distribution test tried to compare the Sig. with the level of significance for testing the hypothesis. If the Sig. is more than level significance (0,05) the null hypothesis is accepted; the score normally distributed. On the other hand if the sig. is less than the level of significance (0,05) the null hypothesis is rejected. The procedure analyze is press menu, click analyze, click descriptive statistic, click explore and move all variable to dependent list box, click Plots and tick normality plots with test then continue.

### 3.4.2 Homogeneity Test of Variance

Homogeneity test of variance uses to know whether two groups are in the same position. For homogeneity test, the researcher uses one Levene's test of homogeneity test in SPSS 16.0 version. The purpose of this test is to analyze the variances of the observation in Experimental and Control Group are equal. Because the researcher cannot random the students, so homogeneity test is necessary to make sure the students in both of the class have the same ability in writing or not and the researcher can conduct the treatment. The test of Levene's test or  $P_{\text{value}}$  defined as follow (Brown:1974):

$$W = \frac{(N - k)}{(k - 1)} \cdot \frac{\sum_{i=1}^k N_i (Z_{i.} - Z_{..})^2}{\sum_{i=1}^k \sum_{j=1}^{N_i} (Z_{ij} - Z_{i.})^2}$$

The symbol defined as follow :

W : the result of th test

K : the number of different of different groups which the sample belong

N : the total number of sample in all groups

$N_i$  : the number of sample i group

$Y_{ij}$  : the value of the sample the  $j^{\text{th}}$  case from  $i^{\text{th}}$  group

$$Z_{ij} = \begin{cases} |Y_{ij} - \bar{Y}_{i.}|, & \bar{Y}_{i.} \text{ is a mean of the } i\text{-th group,} \\ |Y_{ij} - \tilde{Y}_{i.}|, & \tilde{Y}_{i.} \text{ is a median of the } i\text{-th group.} \end{cases}$$

The significance of W is tested against  $F(\alpha, k - 1, N - k)$  where F is a quintile of the test distribution, with  $k - 1$  and  $N - k$  it is degrees of freedom, and  $\alpha$  is the chosen level of significance (0,05). To analyze the homogeneity, the researcher uses SPSS 16.0 version. The homogeneity will be checked in SPSS by Lavene's test with the following procedure. The first step is inserting the pre-test score of both groups using data view. The second is going to the analyze menu, selecting compare means and the choosing independent simple t-test. The last procedure is interpreting the homogeneity test output, the researcher looks (sig.) at

the Levene's test columns to know whether the quality of variance in group of scores was homogeneity or not. If the sig.  $> \alpha$  (0,05), two populations of variance were homogenous or equal but if sig.  $< \alpha$  (0,05) two populations of variance were not homogenous or not equal.

### 3.4.3 Hypothesis Testing

Independent t-test is used to find out the significant difference of using Think Pair Share in Writing between experimental and control group. The steps of t-test calculation are : First, test the hypothesis of the research and the setting  $\alpha$  (alpha) level at 0,05 (two tailed test), the hypothesis in this research could be formulated as follow:

H0 : There is no significant difference of using Think Pair Share strategy through Padlet in writing between experimental and control group.

H1 : There is significance difference of using Think Pair Share strategy through Padlet in writing between experimental and control group.

The second step is finding t-value using Independent sample t-test and comparing the probability with the level of significance for testing the hypothesis. After the scores computed in SPSS 16.0 version, then to see the output of Independent sample t-test and interpret the output that if sig. (2-tailed)  $> \alpha$  (0,05), the researcher should accept the H0, but if sig. (2-tailed)  $< \alpha$  (0,05), the researcher can be rejected the H0, it means H1 is accepted.

In calculating t-test, the researcher uses SPSS 16.0 version. The first steps, input the data of post-test in SPSS program between experimental and control group, then click Analyze then Compare Mean then Independent Sample T-Test. In Independent Sample T-Test, input the score variable into Test Variable column, and group Variable Grouping Variable column, then clicks Define Group, Choose group 1 (for experimental) and grup 2 (for control), then click OK