CHAPTER III

RESEARCH METODOLOGY

A. Research Design

The design of this research was an experimental research. Gay (1987:222) says that the researcher was the action from the beginning. He selected the groups, decided what treatment went to which group control extraneous variables, and measures the effect of the treatment at the end of the study. The group that received the new treatment was often called the experimental group, and the group that received a different treatment or is treated as usual was called the control group.

In this research, the researcher used post test-only control design (Sugiyono,2013:114). The researcher chose two groups in this research first was classified as the experimental (E) and the other one was the control class (C). Both classes had the same topic, the same length of time. Both experimental class and control class were taught by researcher. The two groups were treated as many as six meetings. There was one test in this research post-test that occurred after the treatment of the strategy for the experiment class and after a conventional strategy for the control class.

After deciding which class was experimental and control, the researcher continued with the treatment process for experimental class and no treatment process for conventional strategy (discussion) for the control class. And finally, at the end of the research, they took the final or the post-test to see

how both strategy, how Think-Pair-Share (TPS) strategy and conventional strategy affected students' writing ability.

Table 3.1
Research Design

CLASS	TREATMENT	POST-TEST
E	X	Y
C	0	Y

E : Experimental group

C : Control group

0 : No Treatment

X : Treatment (teaching through TPS strategy)

Y : Post-test

B. Population and Sample

1. Population

Population is generalization region consisting of object or subject that have certain qualities and characteristics defined by the researcher to learn and then make the conclusion. (Sugiyono,2013:119). In the other word population is the total number of students on a research.

This research had been done at MAN 2 Pesisir Selatan in this research the researcher took all of the first semester students; they were about 91 people and they divided into three classes.

Table 3.2

Total of Science Grade X MAN 2 Pesisir Selatan

No	Class	Male	Female	Total
1	X IPA 1	18	11	29
2	X IPA 2	20	11	31
3	X IPA 3	22	9	31
	Total	61	32	91

Source: Teacher data collection of MAN 2 PESSEL

They would be chosen as the population based on the assumption that they had a basic knowledge in writing paragraph. They also were taught with the same material and syllabus.

2. Sample

The sample is taken by cluster sampling. Gay (1987:110) says that cluster sampling is sampling in which group, not individuals. Sample was part of population. A sample is made up the individuals, items or events selected from a larger group referred to as population. The researcher needed two groups (classes) to act the research sample.

The researcher took classes of science grade X IPA_1 and X IPA_2 as the sample, beside that the students in both of class had similar knowledge of English since they were taught by the same teacher and material. In determining this classes as sample, researcher took class X IPA_1 as experimental group, and class X IPA_2 as control group.

Table 3.3
Sample

No	Class	Total
1	X IPA 1	29
2	X IPA 2	31

The samples of this study are X IPA_1 This class also has role as experimental class.

To get the representative sample of this research the researcher used Cluster Random Sampling. The researcher had done these steps:

a. Collect the Mid test score of all science classes in first semester

b. Test of Normality

Normality test had an objective to know the population normal or not. In this research, to do the normality test, the researcher used Kolmogrov Smirnov and Shapiro Wilk. This test used SPSS program. If the data was significant or more than 0.05 the class was normal.

Table 3.4
Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
KELAS	Statistic	Df	Sig.	Statistic	df	Sig.
CLASS-IPA-1	,123	29	,200*	,961	29	,553
CLASS-IPA-2	,141	31	,119	,975	31	,660
CLASS-IPA-3	,103	30	,200*	,944	30	,118
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Based on the table, it can be seen that the significance of each classes score was higher than 0.05. To see whether the sample normal or not in distribution, researcher also used normal graphic of Q-Q plot, the data was normal if the distribution of data plot be in the surrounding of aslant and athwart line. From the normality test, researcher got the output as below:

Chart 1. The Normality of Science Grade X 1

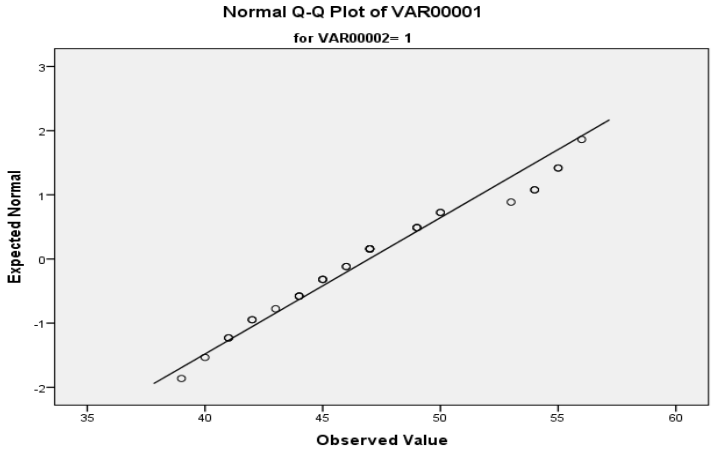


Chart 2. The Normality of Science Grade X 2

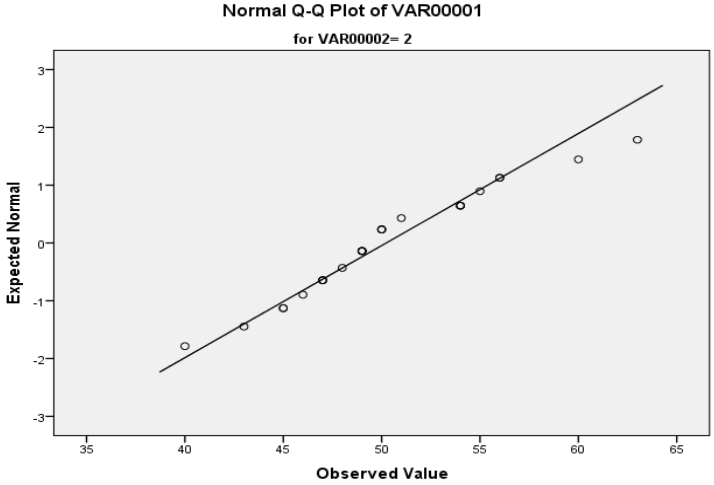
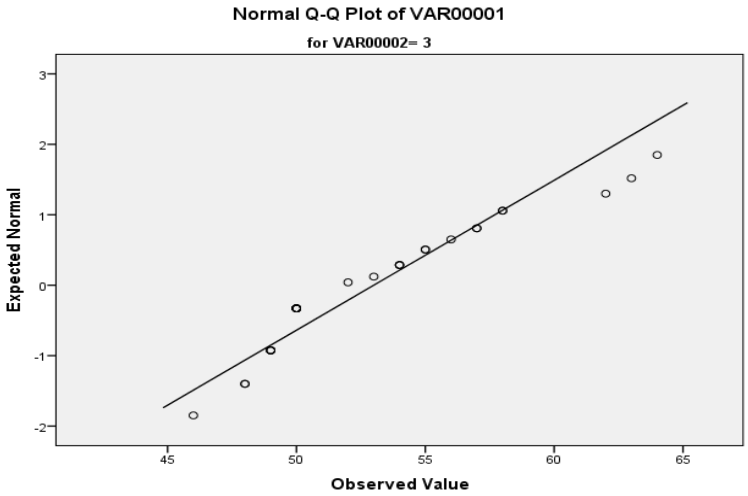


Chart3. The Normality of Science Grade X 3



c. Test of Homogeneous Variances

Table 3.5
Test of Homogeneous Variances

		Levene Statistic	df1	df2	Sig.
NILAI	Based on Mean	1,494	2	87	,230
	Based on Median	1,393	2	87	,254
	Based on Median and with adjusted df	1,393	2	84,562	,254
	Based on trimmed mean	1,489	2	87	,231

After the researcher did the normality test and got the normal data. Then the researcher did the homogeneous variation test. This test had an objective as to know the sample homogeny or not. This test used SPSS with levene test, if the data will be significant or the data was more than 0.05 it meant the data be homogeneous.

After the researcher got the mean class that had no significant differences, then the researcher chose two classes as experimental and control group. To decide the sample the researcher used a piece of paper.

1. Variable

According Sugiyono (2013:64), research variable is an attribute from people, object or activity having certain variation of specified by researcher to be learned and then its conclusion. The variables in this researcher are dependent and independent variable. The writing was dependent variable while the interactive writing was independent variable.

There were two variables in this research:

a. Independent Variable, variable which will influenced with another variable or treatment that would be given to the students in experiment class will Think-Pair-Share strategy in learning writing
b. Dependent Variable, the indication which appeared from treatment would result of students' writing ability that would get from test at the end of research.

C. Place and Time of Research

This research was carried out in the second years of students MAN 2 Pesisir Selatan. This research started on April, 18th 2018 and ended on May, 25th 2018. The researcher gave treatment for six meetings, after giving treatment the researcher gave both classes post-test in order to know the students' writing ability. And to see whether the use of Think-Pair-Share

(TPS) strategy give significant effect to the students' writing ability, the researcher compared the result of post-test of both classes.

D. Instrument

The researcher used writing test as instrument. The test was students writing test. The students were given instruction to write the recount text based the topics that had been given by teacher. The teacher depicted students' writing ability in recount text based on Jacob's theory ; they were in content, organization, vocabulary, language use and mechanics.

According to Gay (1987:191), validity was the most important quality of a test. It was the degree to which a test measures it was supposed to measure and consequently, permitted appropriate interpretations of test scores. To be able to test the hypothesis and got better result, a test should have internal and external validity.

Table. 3.5
Blueprint of Writing Test

NO	Component of Writing Test	Indicator	Topic	Number of Item
1. 2. 3. 4. 5.	Content Organization Vocabulary Language use Mechanic	The students are able to write down a paragraph in good content, organization, vocabulary, language use, and mechanic.	1. My Last Holiday 2. My Unforgettable Experience 3. My Interesting Vocation. 4. My Bad Day 5. My Lucky Day 6. My Experience When I Was a Child	1 1 1 1 1 1
			Total	**6**

From the table above, the students would write a recount text based on the topics given. They would allow to choose one of six topics that they like most. The six topics were My Last Holiday, My Bad Experience, My Interesting Vocation, My Bad Day, My Lucky Day, My Experience When I Was a Child. The students asked to write recount text based on the orientation, series of events, reorientation and language features.

E. Procedures of Experiment

There were two classes that had been given the same materials and teacher, length of time, but different treatment. For experimental used Think–Pair-Share (TPS) strategy, while for control group without treatment. To achieve the goal of the research, it was needed several procedures as preparation, application, and finishing.

1. Preparing

The researcher used two classes to collect the data, the researcher taught TPS strategy for experimental class, and taught conventional strategy (discussion) for control class. However, the material of the teaching would be the same writing material. In short, the researcher would propose this procedure.

a. Determined the research time.
b. Prepared the lessons plan arranged by curriculum.
c. Explained to the students about the planning in learning process.
d. Prepared the final test.

2. Learning Process

The researcher used two classes to get data. These two classes taught by using the same material. However, they were taught by using different strategy. The researcher implemented this procedure:

Table. 3.6
Teaching Procedure for Experimental and Control Group

No	Experimental group	Control group
1	**Pre-activity (10 minutes)** 1. Greeting 2. Praying 3. Teacher checks students' attendance 4. Teacher explains the aim of teaching and learning 5. Motivate the students **Main activity (65 minutes)** *Observing* 6. Teacher asks students to observe the example of recount text in the form of booklet or journal 7. Teacher assigns students to identify the characteristics of a modeled recount text *Questioning* 8. Teacher leads student to give comment or ask question based on the text. *Exploring* 9. Teacher leads student how to write the recount text (tells the students about the role of TPS strategy) **Thinking** 10. The teacher gives the students time to think	**Pre-activity (10 minutes)** 1. Greeting 2. Praying 3. Teacher checks students' attendance 4. Teacher explains the aim of teaching and learning 5. Motivate the students **Main activity (65 minutes)** *Observing* 6. Teacher asks students to read a simple recount text 7. Teacher assigns the students to identify the characteristics of a modeled recount text 8. Teacher asks students to discuss the function, generic structure, and language features *Questioning* 9. Teacher leads student to give comment or ask question based on the text *Exploring* 10. Teacher leads student how to write the recount text. 11. The teacher ask the students to make a group and discuss

	and answer the problematic question 11. Teacher gives explanation to the students about the material and the theme. 12. Teacher asks the students to think about their best and worst moment in their life (the first step by TPS strategy. 13. Teacher gives an example of recount text related to the theme of the day to the students to discuss. 14. Teacher gives time to the students to think and develop their story. **Pairing** **15.** Teacher asks the students to write their first draft about recount text related to the topic or theme of the day. **16.** Teacher help the students how make first draft of text. *Associating* 17. Teacher asks the students to exchange their work to their pair that have been divided before. 18. Teacher tells the	about recount text. 12. The teacher ask each group write a recount text. 13. The teacher change the paper to another group. And ask them to correct it. 14. Teacher ask the students to read the mistake and after that return it again to the group. 15. Teacher ask the group to rewrite again. 16. Teacher guides student to identify the purpose and generic structure of the recount text *Associating* 17. Teacher leads the students to mention definition and generic structure of recount text. 18. Teacher guides the student to discuss about their topic in writing text. 19. Teacher observes the student's activity **Pos-Activity (15 minutes)** 20. Teacher gives feedback to the teaching process 21. Teacher and students conclude what they learned 22. Teacher gives the students homework 23. Teacher informs the next material.

	students to write their comments and suggestions towards their friend's work. 19. Teacher add some ideas into their pairs' work. 20. Teacher ask to students to revise their first draft based on their friend's comments and suggestions and make the second draft. *Communicating* **Sharing** 21. Teacher asks the students to submit their work. 22. Teacher asks some volunteers to share their writing of recount text related to the topic or theme of the day. **Pos-Activity (15 minutes)** 23. Teacher gives feedback to the teaching process 24. Teacher and students conclude what they learned 25. Teacher gives the students homework to revise their entries 26. Teacher informs the next material.	

3. Evaluation

After doing the learning process, the next step was the final test. The test was given to group as a sample. The test was writing test. The students were given explanation about the components of writing that was measured. They were content, organization, vocabulary, language use, and mechanics.

E. Technique of Data Collection

The researcher collected the data by using test. The data of this research were mean of students' writing post test score. Data of this research was the students' score of writing ability post test in form paragraph or text.

The scores of the students' post test were the data in this research. The data collected through following procedures. Both groups (experimental and control group) were given a topic then they asked to write the recount text.

F. Technique of Data Analysis

The data of study was analyzed by using statistical procedure t-test. The formula that was used a t-test. The purpose was to differentiate of students' writing competence experimental group in pre and post-test.

The formula of t-test was as follow Sudjana (2005: 239)

$$T= \frac{\overline{X_1} - \overline{X_2}}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

Where:

$\overline{X_1}$ = Mean score of pre-test

$\overline{X_2}$ = Mean score of post-test

S_1^2 = Standard deviation of pre-test

S_2^2 = Standard deviation of post-test

n_1 = Number of samples in pre-test

n_2 = Number of samples in post-test

The t-table was employed to see whether there was a significant difference between the mean score of pre-test and post-test of experimental class. The value of t obtained was consulted with the value of t-table. The data was analyzed by using simple regression for hypothesis with 5 % (=0, 05) of significance level and the value of t-table of the level of freedom (N1-1) + (N2-1).

If the value t-obtained was bigger than the value of t-table, the null hypothesis was accepted. On the contrary, if the value of the t obtained was equal, bigger or smaller than the value t-table, the alternative one is not accepted (t-table) t-obtained.