CHAPTER III

RESEARCH METHOD

A. Research Design

The design of this research was Experimental research. According to Gay (2000:367), the experimental research is the only type of research that can test hypotheses to establish cause-and-effect relationship. It aims to find out the effect of make a match technique towards students' writing skill, related to; content, organization, vocabulary, language use, and mechanics. Sugiyono (2013: 113) states that experimental research is a research on the action from the beginning.

There was two classes will involve in this research. The first was classified as the experimental (E) and the other one was the control class (C). Both classes have the same topic, the same length of time. Both experimental class and control class would be taught by researcher. The two groups were treated as many as six meetings; it would be assumed that six meetings would be sufficient in seeing any difference that occurred afterward. After deciding which class was experimental and control, the researcher will be continued with the treatment process for experimental class and no treatment process for the control class. Before doing treatment researcher gives pre-test to both sample. Pre-test was given to know the students ability in writing before treatment. After treatment six times, researcher gives post-test. Post test was done to know students'

ability in writing after treatment. The result would be known by comparing the posttest of experimental and control classes.

The design of the research could be described as follows:

Table 3.1
Research Design

Group	Pre-test	Treatment	Post-test
A	O1	X	O2
B	O1	--	O2

Where:

A : Experimental class

B : Control Class

X : Treatment for experiment group

O1 : Pre-Test

O2 : Post-Test

The researcher gives make a match technique for the experimental class, and conventional technique for the control class. At the end of the research the researcher gives the post test to both samples. The test was written test.

B. Population and Sample

1. Population

Gay (1987:102) stated that the population is the group of interest to the researcher, the group to which she or he would like the result of the study to be generalized. The population of this research was students at class X IPS at Islamic Senior High School 1 Padang. The total number of

the population was 91 students. They were distributed into three classes as shown in the table bellows:

Table 3.2
Population of Class X IPS at Islamic Senior High School 1 Padang AY.2017/2018

No	Class	Total Students
1	X IPS_1	29
2	X IPS_2	28
3	X IPS_3	29
Total		**91**

Source: English Teacher's book mark at Islamic Senior High School 1 Padang

The students are chosen as population based on assumption that they have learnt English, so that they have experience in writing English and they also learn with the same material and syllabus.

2. Sample

Sample is the process of selecting a number of individual for the study in such a way that individual represents the larger group from which they are selected. The purpose of sampling is to gain information about the population by using the sample. In order to get sample, the sample of this research has been taken by cluster random sampling. Gay (1987:110) says that cluster random sampling is sampling in which group, not individuals, are randomly selected they have similar characteristics and in which subject can be found. The sample of this research has been taken by cluster random sampling.

To get the sample of the research, the researcher used the lottery to get a class for the sample. Such as class X $IPS_{1,}$ X $IPS_{2,}$ and X IPS_3. All lotteries were in the box and then the researcher shakes it and removed a lottery. The one which removed was chosen as the sample of the research. In this case, X IPS_1 as experiment class and X IPS_3 as control class.

To get the representative sample of this research the following steps:

a. Collecting the score MID test scores the entire students class X from the teacher.

b. Test of normality

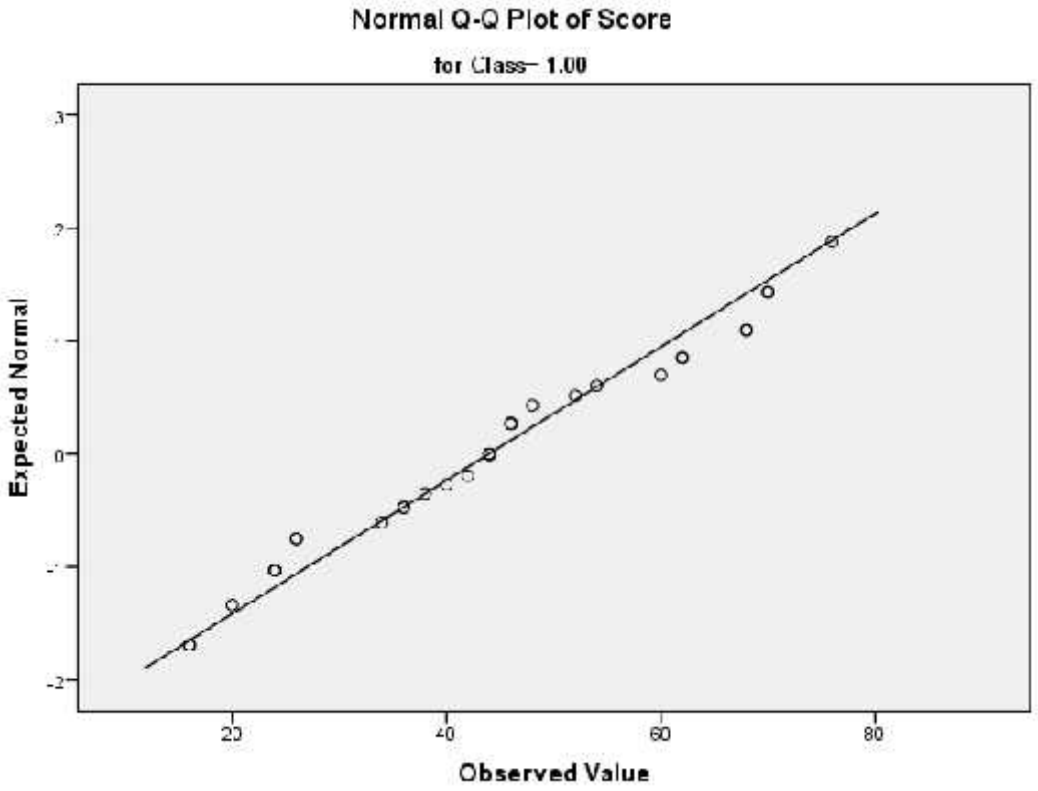
   Normality test had an objective to know the population normal or not. In this research, researcher was used Kolmogrov-Smirnov and Shapiro Wilk to know the sample normal or not. Based on the analyzed by SPSS (statistical product and service solution) 20.0 program all of the groups of population the result of P-value higher than 0.05, it mean the data was normal.

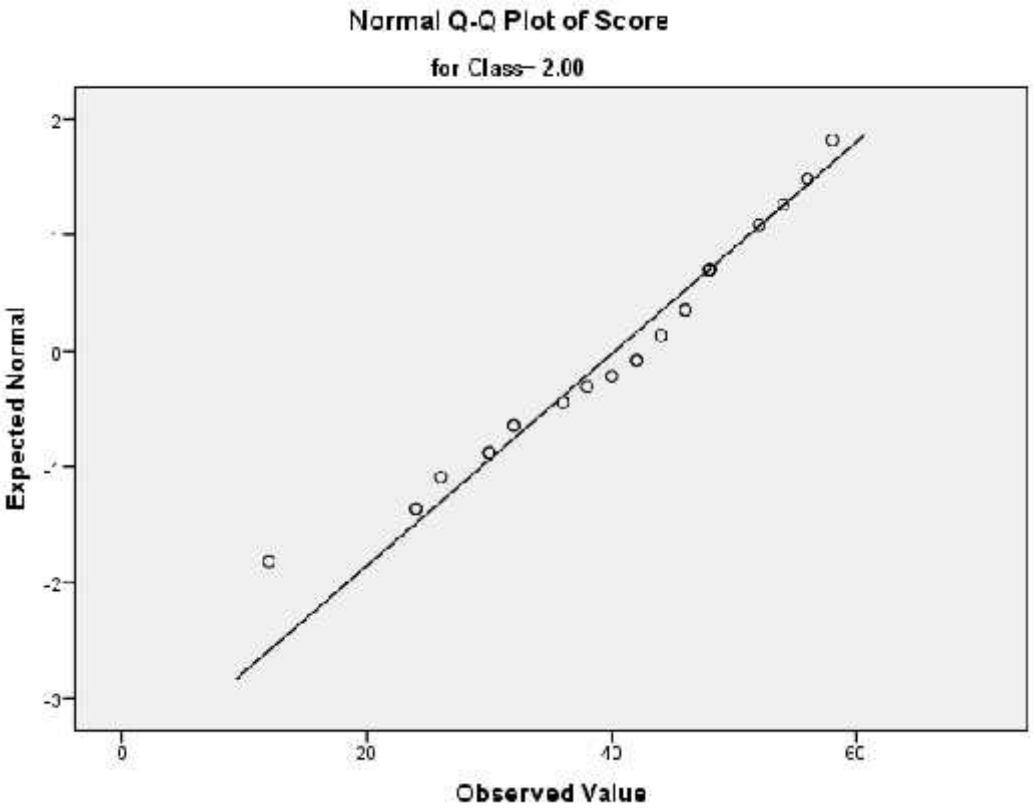
Table 3.3
Tests of Normality

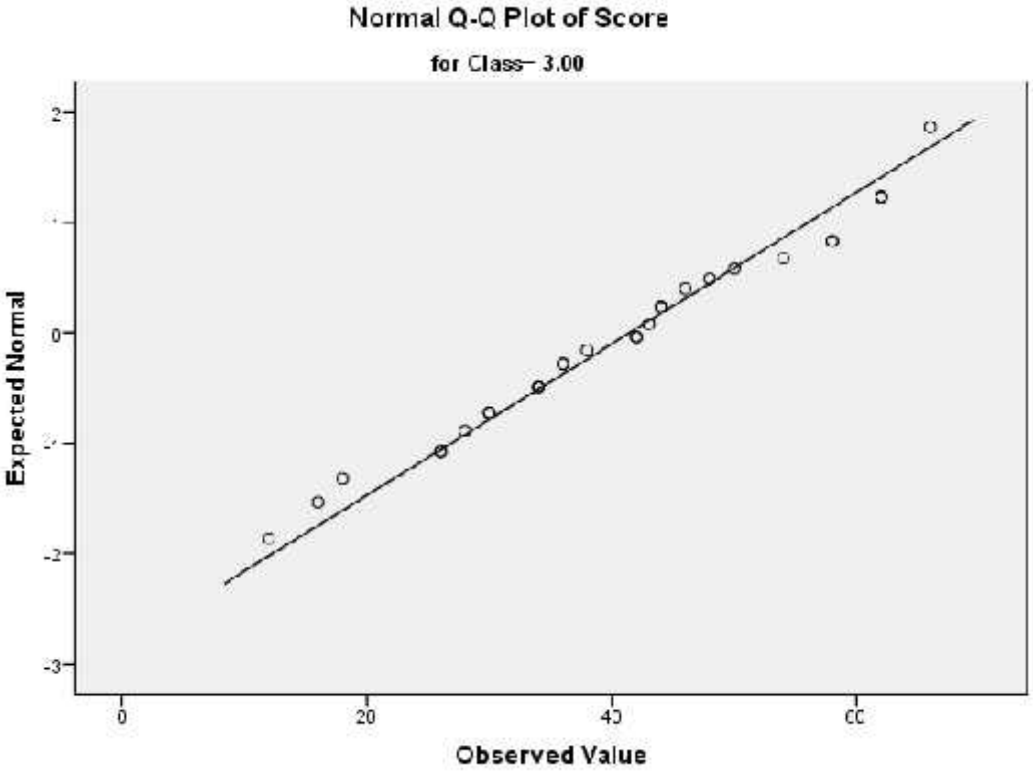
	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Score	X IPS_1	.108	32	.200*	.958	29	.247
	X IPS_2	.134	28	.200*	.958	28	.307
	X IPS_3	.098	31	.200*	.966	29	.423

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Based on the table, can be seen that the significance or probability score of all the classes bigger than 0.05 in the both Kolmogorov-Smirnov and Shapiro-Wilk. To see whether the sample normal or not in distribution, researcher also use normal graphic of Q-Q plot, the data is normal if the distribution of data plot be in surrounding of aslant and athwart line. From the normality test, researcher got the output as below:




Normal Q-Q Plot of Score
for Class= 2.00
Expected Normal
Observed Value
2
0
-2
-3
0
20
40
60


Normal Q-Q Plot of Score
for Class= 3.00
Expected Normal
Observed Value
2
0
-2
-3
0
20
40
60

c. Test of Homogeneous Variances

After doing the normality test and get the normal data. Then the researcher does the homogeneous variation test. This test has an objective as to know the sample homogeny or not. This test uses SPSS with levene test, if the data were significant or the data more than 0.05 it meant the data is homogeneous.

Table 3.4
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	2.138	2	88	.124
	Based on Median	2.242	2	88	.112
	Based on Median and with adjusted df	2.242	2	81.317	.113
	Based on trimmed mean	2.191	2	88	.118

d. After got the normality and homogenity, then the researcher chose two classes as experimental and control group. To decide the sample the writer used the coin. Class experimental was X IPS_1 and class control was X IPS_3.

Table 3.5
Sample of the Research

No	Class	Description
1.	X IPS_1	Experimental Class
2.	X IPS_3	Control Class

C. Place and Time

This research would be held in State Islamic Senior High School 1 Padang. The treatment would be conducted at class X students. This research would be done six times meeting where the treatment was one a week for experimental class. The treatment would be carried out based on the teaching schedule of Islamic Senior High School 1 Padang.

D. Research Instrument

Instrument is a tool to collect data from the sample. This instruments which used in this research focused on the data that needed to be collected. The collected data will be used to explain the application of this research. There is one instrument that use in this research.

The instrument that used for this research was writing test. The researcher made the test. It is aim at obtaining the data of students' writing skill in descriptive text. There was pre-test and post-test. The post-test given to the students was aim to see whether the two classes had significant difference scores. This is also to see whether the treatment was useful or not. In post-test, the students assigned to create a descriptive text based on the topic given.

Table 3.6
Blue Print of Writing Test

Skill	Types of Test	Text	Indicator	Topic
Writing	Written Test	Descriptive text	1. Students are able to construct a text by using content in writing	 1. Raisa
			2. Students are able to construct a text by using organisation in writing	 2. Habibie
			3. Students are able to construct a text by using language use in writing	 3. Oke Setiana Dewi
			4. Students are able to construct a text by using vocabulary in writing	 4. Laudya Sintia Bela
			5. Students are able to construct a text by using mechanics in writing	 5. Verrell

Table 3.7
Sample of Instrument in Giving Writing Scores

1. Pre-test and Post-test for the experiment class

No. of Students	Aspects					
	Content (30)	Organization (20)	Voc (20)	L. Use (25)	Mechanics (5)	Total (100)
1						
2						
↓						
29						

2. Pre-test and Post-test for control class

No. of Students	Aspects					
	Content (30)	Organization (20)	Voc (20)	L. Use (25)	Mechanics (5)	Total (100)
1						
2						
↓						
29						

While, the researcher used the Jacob's criteria (1981:90) in scoring the student's writing. Those criteria can be seen from table below:

Table 3.8
Indicator of writing based on Jacob

No	Items	Criteria of Each Item	Score
1	Content	o Excellent to very good: Knowledgeable; substantive; thorough development of thesis; relevant to assigned topic.	30-27
		o Good to average: Some knowledge of subject; adequaterange; limited development of thesis; mostly relevant to topic, but lacks detail.	26-22
		o Fair to poor: limited knowledge of subject; little substance; inadequate development of topic.	21-17
		o Very poor: does not show knowledge of subject; non-substantive; not pertinent; or not enough to evaluate.	16-13
2	Organization	o Excellent to very good: Fluent expression; ideas clearly stated/ supported; succinct; well organized; logical sequencing; cohesive.	20-18

		o Good to average: somewhat choppy; loosely organized but main ideas stand out; limited support; logical but incomplete sequencing. o Fair to poor: non-fluent; ideas confused or disconnected; lacks logical sequencing and development. o Very poor: does not communicate; no organization; or not enough to evaluate.	17-14 13-10 9-7
3	Vocabulary	o Excellent to very good: sophisticated range; effective word/ idiom choice and usage; word form mastery; appropriate register. o Good to average: adequate range; occasional errors of word/ idiom form, choice, usage but meaning not obscured. o Fair to poor: limited range; frequent errors of word/ form choice, usage; meaning confused or obscured. o Very poor: essentially translation; title knowledge of English vocabulary, idioms, word form, or not enough to evaluate.	20-18 17-14 13-10 9-7
4	Language Use	o Excellent to very good: effective complex constructions; few errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions. o Good to average: effective but simple construction; minor problems in complex constructions; several errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions but meaning seldom obscured. o Fair to poor: major problems in simple/ complex constructions; frequent errors of negation, agreement, tense, number, word order/ function, articles, pronouns, prepositions and/ or fragments, run-ons, deletions; meaning confused or obscured. o Very poor: virtually no mastery of sentence constructions rules; dominated by errors; does not communicate; or not enough to evaluate.	25-22 21-18 17-11 10-5
5	Mechanics	o Excellent to very good: demonstrates mastery of conventions few errors of spelling, punctuations, capitalizations, paragraphing. o Good to average: occasional errors of	5 4

		spelling, punctuation, and capitalization, paragraphing, but meaning not obscured. o Fair to Poor: Frequent errors of spelling, punctuations, capitalizations, paragraphing; poor handwriting, meaning confused or obscured. o Very poor: no mastery of conventions dominated by errors of spelling, punctuation, capitalization, paragraphing; handwriting illegible; or not enough to evaluate.	3 2

E. Procedure of Research

There are some steps in this research such as preparation, learning process, and evaluation.

a. Preparation

In this step, this research prepared the steps such as determined the research time, prepared the lessons plan arranged by curriculum, explained to the students about the planning in learning process, prepared the final test.

b. Learning Process.

Table 3.9
The Procedures of doing Research at Experiment Class

No	Procedures activities	Teacher Activities	Students' Activities
1.	**Pre Teaching Activities**	• Teacher greets the students. • Praying. • Teacher Asks the students to read the holy Qur'an • Teacher check student's attendent list. • Teacher asks the students last material.	• Students give the response • Students praying • Students read the holy Qur'an • Students give the response

		• Teacher introduces learning objective to students. • The teacher asks the students based on the topic to built students background knowledge	
2.	**Main Teaching Activities**		
	Observing	• Teacher asks students to observe the example of descriptive text • Teacher assigns the students to identify the characteristics of descriptive text • Teacher explain about make a match technique in descriptive text	• Students observe the example of descriptive text • Students identify the characteristics of descriptive text
	Questioning	• Under the guidance and direction of teachers, students asking and questioning about make a match technique in descriptive text. • Teacher explains how to write descriptive text with Make a Match technique by using a card	• Students asking and questioning the social function, the structure of the text, and linguistic elements of each of the text. • Students listen to the teacher explanation
	Exploration	• Teacher asks the student to find generic structure and social function from the example of descriptive text	• Students' find generic structure and social function from the example of descriptive text
	Association	• The students are put into 2 groups A and B. • Each of the students of the group gets one card.	• Students make two group, group A and group B • Each student in each group get one car, • The students in group

		• A group brings the questions (topic) cards, while B group brings the answers (simple description) cards. • When they are ready to start, the teacher asks them to face each other. • After that, the teacher rings the whistle as the sign that they have to find their matches.	A get the topic cards while the students in group B get the simple description cards. • Finds their partner that has a matching card with his card
	Communicating	• When they already found their matches they can report to the teacher and if they are right, the teacher ask them to compose longer paragraph.	• Students' compose sentences based on the words they got on their cards.
3.	**Post Teaching Activities**	• Students are asked about their feeling after following the instructional activities or learning process. • Teacher asks the students about understanding materials that students have gotten. • Teacher and students review and conclude the lesson. • Teacher closes the lesson.	• Students answer the teachers' question

Table 3.10
The Procedures of doing Research at Control Class

No	Procedures activities	Teacher Activities	Students' Activities
1.	**Pre Teaching Activities**	• Teacher greets the students. • Praying. • Teacher Asks the students to read the holy Qur'an • Teacher check student's attendent list. • Teacher ask the students last material. • Teacher introduces learning objective to students.	• Students give the response • Students praying • Students read the holy Qur'an • Students give the response
2.	**Main Teaching Activities**		
	Observing	• Teacher give the examples of descriptive text • Teacher asks students to read a simple descriptive text • Teacher assigns the students to identify the characteristics of descriptive text • Teacher asks students to discuss the function, generic structure, and language features	• Students observe the example of descriptive text • Students read the text • Students identify the characteristics of descriptive text • Students to discuss the function, generic structure, and language features
	Questioning	• Under the guidance and direction of teachers, students asking and questioning the social function, the structure of the text, and linguistic elements of each of the text. • Teacher explains how to write descriptive text	• Students asking and questioning the social function, the structure of the text, and linguistic elements of each of the text. • Students listen to the teacher explanation

	Exploration	• Teacher asks each student make outline of descriptive text in peer • Teacher asks each student write a descriptive text individually	• Students make outline of descriptive text in peer •
	Association	• The teacher gives students feedback on the students' work	• Students listen to the teacher
	Communicating	• Teacher ask students to communicate their writing in front of the class • Teacher collects the students' work	• Students' communicate their writing in front of the class
3.	**Post Teaching Activities**	• Students are asked about their feeling after following the instructional activities or learning process. • Teacher asks the students about understanding materials that students have gotten. • Teacher and students review and conclude the lesson. • Teacher closes the lesson.	• Students answer the teachers' question

c. Evaluation

After doing the learning process the next step is the final test. The test is given to group as a sample. The test is written test. The students will be given explaination about the components of writing that were measured. They were content, organization, vocabulary, language use and mechanic.

F. Types of Data

The researcher collected the data in the form of quantitative. The term of qualitative data is used to describe a type of information that came from the data that expressed numerically. This type of data is often collected in experiments, and statistically analyzed. Quantitative data can be represented visually in graphs, histograms, tables and charts. The quantitative data got from the result of students' writing test in form of written test.

G. Technique of Data Collection

The researcher will collect the data by using test. To have a valid data, the researcher will collect the data by using writing test. The data that will be analyzed is post-test scores in form writing descriptive text. After teaching for five times, the researcher will give post test for both experimental and control class.

The data is test. Data of this test consist of students' scores in post-test; the data will be collected by giving writing test. Post-test will be

given at the end of the research or after finishing the treatment for five meetings. The test will be given both experiment and control group for 60 minutes.

H. Technique of Data Analysis

The researcher will use the statistical procedures to analyze the scores. It gives a way to analyze the differences of writing achievement between control group and experimental group. To find the standard deviation in experimental and control class, the writer will use the formula of t-test.

In this case, T-test means a statistical procedure which is used to determine, whether there is any significant difference between the means of the two sets score from control and experiment class. In analyzing the students' test score, there are some steps that will be done before analyzing the different mean by using t-test formula as follows:

1. This formula applied to decide mean of students' test score in experiment and control group:

$$\overline{X_1} = \frac{\sum F_1 X_1}{\sum F_1} \quad \text{(Experimental group)}$$

$$\overline{X_2} = \frac{\sum F_2 X_2}{\sum F_2} \quad \text{(Control group)}$$

2. This formula will be used to decide standard deviation of experimental group;

$$S_1^2 = \frac{n_1 \sum F_1 x_1^2 - (\sum F_1 X_1)^2}{n_1 (n_1 - 1)}$$

3. This formula will be used to decide standard deviation of control group;

$$S_2^2 = \frac{n_2 x \sum F_2 x_2^2 - (\sum F_2 X_2)^2}{n_2 (n_2 - 1)}$$

The formula of t-test as follows (Subana, 1996; 239)

$$t = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{N_1} + \frac{1}{N_2}}}$$

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

Note:

t = The value of t calculated

$\overline{X_1}$ = Mean of gain score of experimental class

$\overline{X_2}$ = Mean of gain score of control class

$S_1^{\,2}$ = Standard deviation of gain score of experimental class

$S_2^{\,2}$ = Standard deviation of gain score of control class

n_1 = Number of experimental group

n_2 = Number of control group

The t_{table} would be employed to see weather there was a significant difference between the mean score of both experimental group and control group. The value of $t_{calculated}$ will be consulted with the value of t_{table} at

the degree of freedom $(n_1-1) + (n_2-1)$ and the level of confidence of 95% = 0.05. If the value of $t\text{-}_{calculated}$ is less than the value $t\text{-}_{table}$, the null hypothesis was not accepted; on the contrary, if the value of $t\text{-}_{calculated}$ is bigger than value of $t\text{-}_{table}$, the alternative one is accepted.