

CHAPTER III

RESEARCH METHOD

This chapter discusses about research design, population and sample, place and time of research, instrument, procedure of the research, technique of data collection, techniques of data analysis.

A. Research Design

This research is experimental research. Gay (2000, p. 367) states an experiment research is the only type of research that can test hypotheses to establish cause-and-effect relationships. It represents the strongest chain of reasoning about the links between variables. They are having two variables, first the independent variable, also called the treatment, casual, or experimental variable, is the treatment or characteristic believed to make a different. Second, the dependent variable, also called the criterion, effect, or outcome variables, shows the result of the study, the change or difference in groups that occurs as a result of the independent variable.

Table 3.1the Research Design of This Research

Class	X (Treatment)	0 (Post-test)
Experiment	X	0
Control	-	0

Description:

0: Post-test for experiment and control group

X: Treatment (teaching students by using Story Impressions Strategy).

B. Population and Sample

1. Population

Population is the number of the students on research. According to Gay and Arikunto (2000:122), population is the group of interest to the researcher, the group that researcher would like to know the result of the study to be generalized.

The population of this research was students of Junior High School (MTsN 5) Kota Padang which consist of fourth classes of class IX. The population of this research was 140 students. The distribution of the population can be seen in the table below.

Table 3.2 Population of the Research Class IX at Islamic Junior High School (MTsN 5) Kota Padang.

No	Classroom	Gender		Total
		Male	Female	
1	IX.1	8	28	36
2	IX.2	11	25	36
3	IX.3	13	21	34
4	IX.4	13	21	34
Total		45	95	140

Source: English Teacher of Islamic Junior High School Kuranji Padang

from the table above we can conclude that total of population is 140 students, consist of four classes, namely: IX-1, IX-2, IX-3, IX4.

After deciding population, the researcher used SPSS to show normality and homogeneity from the fourth classes above. Then to show the sample representative or not the researcher does the next step:

- a. Collected the students' examination score data from the English teacher.
- b. Test of Normality, Normality test had an objective to know the population normal or not. The researcher used kolmogrov Smirnov to do normality test, it is SPSS (*Statistical product and service solution*) test. The data would be normality tests, if every class was significant or more than 0.05.

Table 3.3 Tests of Normality

		One-Sample Kolmogorov-Smirnov Test			
		IX_1	IX_2	IX_3	IX_4
N		36	36	34	34
Normal Parameters ^a	Mean	66.78	57.61	67.88	64.24
	Std. Deviation	12.679	11.036	10.017	21.730
Most Extreme Differences	Absolute	.142	.137	.151	.202
	Positive	.142	.137	.151	.138
	Negative	-.079	-.119	-.098	-.202
Kolmogorov-Smirnov Z		.854	.819	.879	1.175
Asymp. Sig. (2-tailed)		.460	.513	.422	.126

a. Test distribution is Normal.

- c. Test of Homogeneous Variances

After doing 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 homogeneity or not.

The researcher did the test of homogeneity by using *Test of homogeneity of variance*. If the data were significant or the data were more than 0.05 it mean the data was homogeneous

Table 3.4. Test of Homogeneity of Variance

Pretest_value

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2260.861	3	753.620	3.561	.016
Within Groups	28782.425	136	211.635		
Total	31043.286	139			

2. Sample

Sample is a part of the population for the research. Gay (2012:130) asserts that a good sample is one that is representative of the population from which it was selected. 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.

To get the representative sample of this research, the researcher used cluster sampling technique. Gay (2012: 136) stated that clustering sampling technique is the way to selecting a sample when the researcher is unable to obtain a list of all members of the population cause of they are very large with similar characteristics is a cluster.

In this case, the researcher took class IX-1and IX-2 as the sample, beside that the students in both of class have similar knowledge of English since they aretaught by the same teacher and material. In determining this class as sample, it was chosen following the procedure of flipping coin to

device class experiment and control, the result of flipping coin researcher gave IX-1 as experimental group, and class IX-2 as control group.

C. Place and Time of Research

This research was done in class IX at Junior High School(MTsN 5) Kota Padang. This place was chosen because the researcher had ever done observation there. The treatment conducted on October to November 2017 on academic year 2017/2018 at first semester.

D. Instrument

The instrument of this research was written test that was used to collect the data about the improvement of student's writing ability after Story Impressions Strategy. A test must have content validity and reliability. Arikunto (2001:62) says that one of the characteristics of test validity is content validity. It means the test is valid if it fits with the material that has been given to the students and it is based on the Curriculum and Syllabus. The writer used the Curriculum or Syllabus and teaching material to construct the test.

According to Gay (1987), 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. However, Arikunto (1999) says "a test have had a validity if it could be measured the specific purpose related with the material that students have learned".

The written test was given in post test that the same writing test. In this case, the students were asked to choose one of the topics given and

create their paragraph. The topics are: snow white, Pinocchio, and Garlic and Onion. The students were asked to make outline firstly.

Instrument sample for giving the writing ability score:

Table 3.5 Post-test

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

While, the researcher uses the Jacob's criteria (1981:90) in scoring the student's writing.

E. Procedure of the Research

There were some steps to conduct the research such as preparation, application, and finishing.

1. Preparation.

The researcher collected the data that relate with preparation steps:

- a. Selecting the material
- b. Preparing media.
- c. Preparing the lesson plan based on the curriculum

2. Application steps.

This step was conducted in three teaching activities. The first activities were introduction which included greeting, checking

attendance, apperception, and motivation. The second was main activities included pre-writing, main activity and post-writing. The last activities were post activities included concluding the material and evaluation.

Table 3.6. The Procedures of the Research

Experimental Class	[Control class
<p>I. Pre activity(10minutes)</p> <p>Apperception</p> <ol style="list-style-type: none"> a. Teacher greets the students. b. Teacher checks student's attendant. c. Students pray. d. Teacher asks students about the last material. <p>Motivation</p> <ol style="list-style-type: none"> a. Teacher gives students motivation b. Teacher encourages students to speak English by asking question 	<p>I. Pre activity (10minutes)</p> <p>Apperception</p> <ol style="list-style-type: none"> a. Teacher greets the students. b. Teacher checks student's attendant. c. Students pray. d. Teacher asks students about the last material. <p>Motivation</p> <ol style="list-style-type: none"> a. Teacher gives students motivation b. Teacher encourages students to speak English by asking question
<p>II. While -activity</p> <ol style="list-style-type: none"> 1. Observation (10 minutes) <ol style="list-style-type: none"> a. Teacher shows a picture and gives example of question based on the topic to builds' students background knowledge about narrative. b. Teacher writes a topic of the lesson on the whiteboard. c. The teacher and students discuss about the new vocabulary that relevant with the text. 2. Questioning (10 minutes) <ol style="list-style-type: none"> a. Teacher explainabout definition of narrative text. 	<p>III. While -activity</p> <ol style="list-style-type: none"> 1. Observation (10 minutes) <ol style="list-style-type: none"> a. The teacher ask the students about narrative text. b. Teacher writes a topic of the lesson on the whiteboard. c. The students listen to the teacher's explanation about narrative text. 2. Questioning (10 minutes) <ol style="list-style-type: none"> a. The teacherask the students to tell narrative text. b. The teacher explains the generic structure of narrative text. c. Teacher explains to students about language features of narrative text.

<p>b. Teacher explain to students about generic structure of narrative text.</p> <p>c. Teacher explain to students about language features of narrative text.</p> <p>3. Exploring (10 minutes)</p> <p>a. Teacher asks the students to find out difficult words or phrases in the text.</p> <p>b. Teacher asks the students to mention something which is described around fairytales or legend story,</p> <p>c. Teacher asks the students to write down a story fairytales or legend story on their paper.</p> <p>d. Teacher asks the students to write a fairytales story or legend story on the paper.</p> <p>4. Associating (15 minutes)</p> <p>a. The teacher shows the text of narrative text.</p> <p>b. The teacher asked the students to write their topic based on steps of writing.</p> <p>c. After the students finish, asks them to collect their paper.</p> <p>5. Communicating (15 minutes)</p> <p>a. Teacher asks the students difficulties in writing.</p> <p>b. The teachers talk around type of a fairytales.</p>	<p>3. Exploring (10 minutes)</p> <p>a. Teacher asks the students to mention something which is described around fairytales or legend story.</p> <p>b. Teacher asks the students to identify text.</p> <p>c. Teacher asks the students to write down a story fairytales or legend story on their paper.</p> <p>4. Associating (15 minutes)</p> <p>a. The teacher shows the text of narrative text.</p> <p>b. The teacher asked the students to write their topic based on steps of writing.</p> <p>c. After the students finish, asks them to collect their paper.</p> <p>5. Communicating (15 minutes)</p> <p>a. Teacher asks the students their felling.</p> <p>b. The teachers talk around type of a fairytales.</p>
<p>IV. Post teaching activity (10 minutes)</p> <p>a. The teacher gives comment of their writing to make them can improve written text independently. The teacher gives feedback that has finished their writing well.</p> <p>b. The teacher and the students conclude and summarize the lesson</p>	<p>IV. Post teaching activity (10 minutes)</p> <p>a. The teacher gives comment of their writing to make them can improve written text independently.</p> <p>b. The teacher gives feedback that has finished their writing well.</p> <p>c. The teacher and the students conclude and summarize the lesson together.</p> <p>d. The teacher reviews the activities that have been done consistently.</p> <p>e. Close the class.</p>

<p>together.</p> <p>c. The teacher reviews the activities that have been done consistently.</p> <p>d. Close the class.</p>	
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3. Finishing Steps

- a. Collecting the data (students' writing)
- b. Processing data towards experiment and control class by using T-test formula if the data normality and homogeneous or the Mann Whitney test if not.
- c. Getting finding
- d. Taking conclusion and proposing suggestion.

F. Technique of Data Collection

For this research, the researcher will use writing test to collect the data.

The test is given in post-test. Post-test is the process of identifying the students' writing skill after giving the treatment. Treatment is the process of Story Impressions Strategy as a strategy in teaching and learning process to improve the student's writing skill.

G. Technique of Data Analysis

1. T-test

The data analysis technique used in this study can be a t-test if the data was normal and homogeneous. to analyze the students' score on posttest, the researcher will use t-test that take from Gay (1987) and Statistical Software Program SPSS version 16.0. In this case, T-test means a statistical

procedure use to determine whether there are many significant differences between the mean of the two sets score from control and experiment class.

In analyzing the students' test score, some steps were did before analyzing the different mean by using t-test formula as follows;

1. This formula apply to decide mean of students' test score in experimental and control groups;

$$\bar{X}_1 = \frac{\sum F_1 X_1}{\sum F_1} \quad (\text{Experimental group})$$

$$\bar{X}_2 = \frac{\sum F_2 X_2}{\sum F_2} \quad (\text{Control group})$$

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

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

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

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

The formula of t-test as follows (Sudjana,2002:239):

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

With;

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

Notes;

t : The value of t calculated / observer / obtained

\bar{X}_1 : Mean score of experiment sample

\bar{X}_2 : Mean score of control sample

n_1 : The number of subject of experimental group

n_2 : The number of subject of control group

S_1^2 : Standard deviation of experimental group

S_2^2 : Standard deviation of control group

The t_{table} was employed to see whether there was a significant difference between the mean score of both experimental group and control group.

The value of t_{obtained} was 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_{obtained} was less than the value t_{table} , the null hypothesis was accepted; on the contrary, if the value of t_{obtained} is equal or bigger than value of t_{table} , the alternative one is not accepted.

2. Mann-Whitney U test

The test was initially designed in 1945 by Wilcoxon for two samples of the same size and was further developed in 1947 by Mann and Whitney to cover different samples sizes. The test is also called Mann-Whitney-Wilcoxon (MWW), Wilcoxon rank-sum test. Wilcoxon –Mann- Whitney test or Wilcoxon two-sample test. If the data not normality and homogeneous used it.

In contrast, the null and two-sided research hypotheses for the nonparametric test are stated as follow:

H_0 : The two populations are equal versus

H_1 : The two populations are not equal

The test statistic for the Mann Whitney U Test is denoted U and is smaller of U_1 and U_2 , defined below.

$$U_1 = n_1 n_2 \frac{n_1(n_1+1)}{2} - R_1$$

$$U_2 = n_1 n_2 \frac{n_2(n_2 + 1)}{2} - R_2$$



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