

CHAPTER III
RESEARCH METHOD

A. Research Design

The research is experiment research. Gay (2000) says that an experimental research is the only type of research that can test hypotheses to establish cause-effect relationships. And consist of two groups, they are experiment and control group. Basically, experimental research has three kinds of design: one short time case study, pre test-post test and post test only. In this research, the researcher used pre test- post test control design.

Based on Gay's view, it means that there are two classes involve in this research. They are the experimental and the other one is the control class. Both classes have the same topic, the same length of time. In this case, give the treatment by applying story telling in the teaching process for the experiment class and a conventional technique for the control class. There is one test in this research. It is post-test that occurred after learning process. The design of this research can be show by this formula:

Table I1
Research concept

Group	Independent Variable	Dependent Variable
E	X	O
C	-----	O

In this case,

- E =Experimental Group
- C = Control Group
- X = Treatment by using socio drama
- O = Post test

B. Population and Sample

1. Population

According to Arikunto (2002:108) population is the entire research subject. In addition, Gay, Mill, and Airasian (2000: 121) state that population is the group to which a researcher would like the results of a study to be generalizable.

According to Gay (2000: 102), population is the group of interest to the researcher, the group to which the result of the study will ideally generalize. The populations of this research are the second grade of Senior High School (SMAN IX) Padang in academic year 2016/2017. There are six classes at second grade of Senior High School (SMAN XI) Padang and only four classes that are used because the five classes are taught by same teacher. The distribution of students is state in the following table:

Table III
The Total of Students of Senior High School (SMAN IX) Padang
Class X IPA₁-XI MIA₄
Academic Year 2016/2017

NO	Class	Total
1	X MIA ₁	24
2	X MIA ₂	23
3	X MIA ₃	27
4	X MIA ₄	28
	TOTAL	104

Source: English Teacher of Senior High School (SMAN IX) Padang

2. Sample

Gay, Mill, and Airasian (2000: 121) state that sample is a group of individuals, items, or events that represents the characteristics of the large group. In addition, Yusuf (2014:150) states that sample is a part of the population that elected and represents the population.

This research used cluster sampling technique. According to Gay, Mill, and Airasian (2000:129) cluster sampling randomly selects groups, not individuals. In addition, Arikunto (2002: 119) states that cluster sampling is randomly selected groups. Moreover, Sugiyono (2012: 83) state that, cluster sampling or area sampling is used for determine sample, when object that would be researched or large source of data, example: people of a country, province or regency.

Cluster sampling is simple random sampling every unit is collected as one unit or cluster, (Yusuf, 2014: 158).

In this study, the researcher took class X MIA₁ and X MIA₁ as the sample, beside that the students in both of classes have similar knowledge of English since they were taught by the same teacher and material. In determining this class as sample, it was chosen the following procedure of flipping coin to device class experiment and control, the result of flipping coin researcher gave X MIA₁ as experimental group, and class X MIA₂ as control group.

According to Gay (2000:101) Sample is the process of selecting a number of participants for a study in such a way that they represent the large group from which they are selected. Gay also States that a good sample is the one that representative of the population from which select. In this research, researcher chooses one class to be the sample. The sample is taken by using random sampling. Gay (2000:10) stated random sampling is the process of selecting a sample in such a way that all individuals in the selected population have and equal and independent chance to select for the sample.

To get the representative sample of this research the researcher does these steps:

- a. Collect the Examination 1 score data from all students at second grade (X MIA₁-X MIA₄).
- 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 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 means that the data was normal.

Table IV					
Tests of Normality					
Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	Df	Sig.
.159	37	.019	.955	37	.140
.127	32	.200*	.943	37	.094
.124	38	.145	.946	37	.068
.182	38	.003	.811	32	.000
.269	35	.000	.861	35	.000

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Tabel 3.3

Normality Population

Tests of Normality

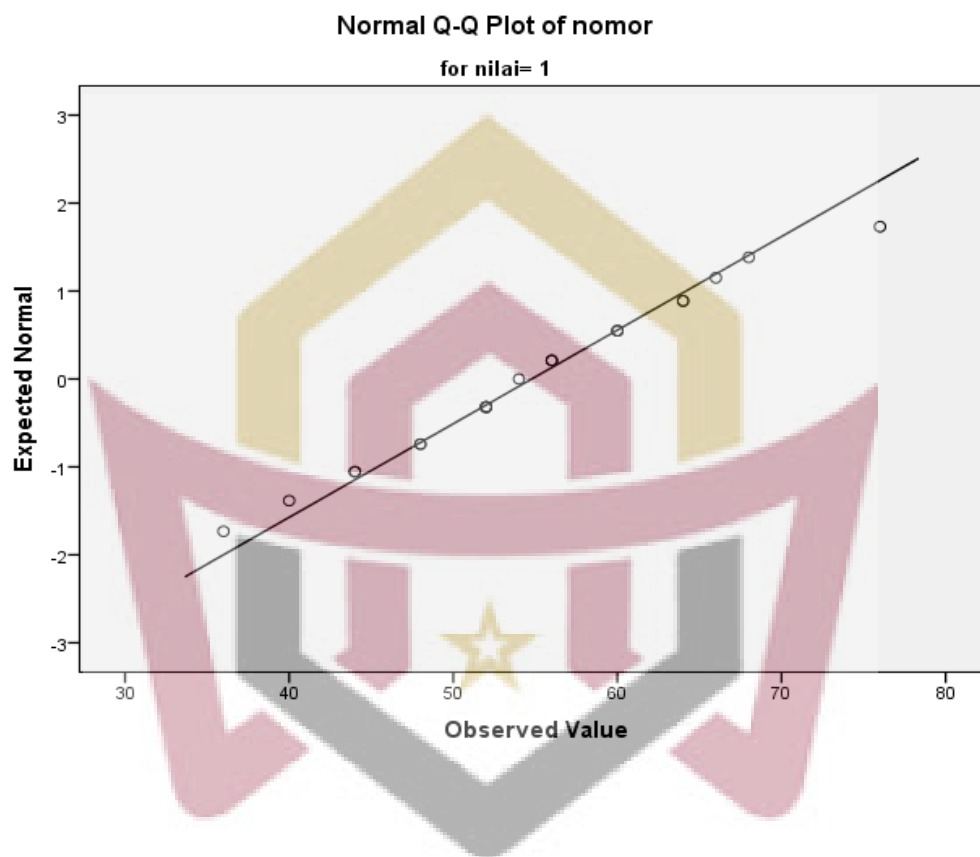
	Nilai	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
nomor	1	.123	23	.200*	.985	23	.973
	2	.092	24	.200*	.969	24	.631

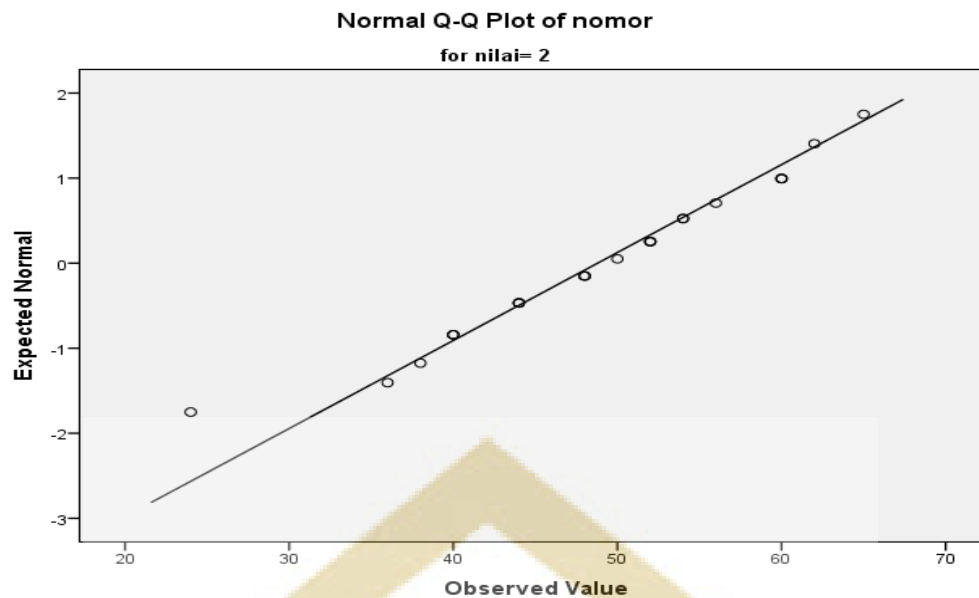
*. This is a lower bound of the true significance.

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 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 is in the surrounding of aslant and athwart line. From the normality test, researcher got the output as below:





From the graphic above can be seen that the drops spread around the line. So, it can be concluded that the distribution of all the population were normal

c. Test of Homogeneous Variances

After doing the normality test, then researcher analyzed the homogeneous variation test. This test had an objective as to know the sample homogeneity or not. This test used SPSS with test, if the data are significant or the data more than 0.05 it means the data was homogeneous.

Tabel 3.4**Homogeneity Population****Test of Homogeneity of Variance**

	Levene Statistic	df1	df2	Sig.
Based on Mean	,050	1	45	,825
Based on Median	,058	1	45	,811
Based on Median and with adjusted df	,058	1	44,975	,811
Based on trimmed mean	,051	1	45	,823

- a. After getting the class. The sample of this research consisted of two groups: an experimental group and control group. Then the researcher chose two classes as the sample. In determining experimental group and control group, the researcher used cluster sampling. So, Class X MIA₁ as experimental class and Class X MIA₂ as control class.

Table 3.5**Sample of the Students at the tenth grades at****State Senior High School IX Padang**

Class	Amount of the students
X MIA -1	23
X MIA -2	24
TOTAL	47

After doing normality test, then researcher analyzed the homogeneous variation test. This test has an objective as to know the sample homogeneity or not.

Table V
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
VARIABLE	Based on Mean	2.909	4	175	.023
	Based on Median	2.710	4	175	.032
	Based on Median and with adjusted df	2.710	4	149.52	.032
	Based on trimmed mean	2.871	4	175	.025

- b. After getting the class. The sample of this research consists of two groups: an experimental group and control group. Based on the six classes above, the researcher chose two classes as the sample.

The writer chooses two classes as experimental and control group, based on the mean class that had similarities, the sample of the research takes by using random sampling. To decide the sample, the writer uses random sampling. As the result as follow:

Table VI
Sample of Research

No	Class	Total
1	X MIA ₁ (Experimental class X)	24
2	X MIA ₂ (Control class)	23

C. Place and time of the research

This research was held in Senior High School (SMAN XI) Padang. The treatment was conducted at second grade students. The treatment that given to experiment class is socio drama technique.

This research will be done for six meeting, the first until fifth meeting is giving treatment to the students. The last meeting is giving the posttest. The researcher taught teaching practice at Senior High School (SMAN XI) Padang, July 2017.

D. Variable

There were three variables in this research:

1. Dependent Variable, Evelyn hatch and Anne Lazaraton (1991 :63) stated dependent variable is the major variable that will be measure in the research. The indication which appear from treatment is result of students' speaking cognitive aspects that are get from test that are given at the end research.
2. Independent Variable, Evelyn hatch and Anne Lazaraton (1991 :64) stated independent variable is a variable that the researcher suspect may relate to another variable or treatment that gives to students in experiment class which was socio drama in learning speaking.

E. Instrument of the research

Instrument is a tool to collect data from the sample. This research uses test as instrument. The test is speaking test form interview. This test is

to identify the students speaking abilities in speaking aspect: grammar, pronunciation, fluency, vocabulary and comprehension..

After five times treatment, researcher gives post test to both of classes the post test is interviewed test. Researcher gives some questions for each student's of the both of classes, experimental class and control class. Hughes stated (2003:119) that interview is traditional form and has at least one potentially serious drawback. The test result is evaluate by concerning five aspects: pronunciation, grammar, vocabulary, fluency, and comprehension.

Instrument is a tool to collect data from the sample. According to Sugiyono (2012: 133) instrument of research is used to measure a value of the research's variables. According to Brown (2003: 3) a test is a method of measuring a person's ability, knowledge, or performance in given domain. Performance test is used to collect the data. This test was conducted to know whether there was significant effect of simulation technique toward students' speaking skill or not.

In order to get students' speaking scores, oral proficiency scoring is categorized by Hughes (2003:131-132) into some indicators for speaking assessment such as accent, grammar, vocabulary, fluency, comprehension, as table below:

Table 3.6**Sample of Instrument in Giving Speaking Scores:**

WEIGHTING TABLE							
	1	2	3	4	5	6	(A)
Accent	0	1	2	2	3	4	4
Grammar	6	12	18	24	30	36	36
Vocabulary	4	8	12	16	20	24	24
Fluency	2	4	6	8	10	12	12
Comprehension	4	8	12	15	19	23	23
							Total
							99

From the table above, that the researcher evaluated sentence by sentence of students short talk and then gave the score of the students. It is based on the six points of rating scale Hughes namely 1-6.

F. Procedure of the experiment**1. Preparing**

In this step, this research prepares the steps such as determine the research time, prepares the lessons plan arranged by curriculum, explain to the students about the planning in learning process, prepare the final test.

2. Learning Process

Table VII
Treatment procedure for Experimental Class

Teaching Activities	Activities	Time
Pre Activities	a) Greeting b) Praying c) Checking student's attendance d) Teacher ask the last material Building Knowledge of the Field a) Encourage students to speak English by asking questions that relevant with the topic that will learn. b) Introduce learning objective to students. c) The teacher gives the explanation which related to the text	15minutes
Main Activities 1. Exploration	Modeling of the Text a) Teacher explains the material about: <ol style="list-style-type: none"> 1. The purpose of the text 2. Generic structure of the text 3. language features of the text and difficult words) and teacher asks the students to comprehend the text by answering the question b) Teacher gives example of a narrative text c) Teacher tells the story. d) Teacher explain the story which related to the text topic. <ol style="list-style-type: none"> 1. Teacher is getting to start to tell the story. 2. Teacher use suitable mime 	60 minutes

	<p>based on the character of the story.</p> <ol style="list-style-type: none"> 3. Teacher combine the sound effect to the mime. 4. Teacher monitors student to ensure that they are focused. 5. Teacher asks questions to clarify student feedback. 6. Teacher uses eye contact to look students into the story. 7. Teacher is modelling the story as well as possible. <p>Join Construction of the Text</p> <ol style="list-style-type: none"> a) Teacher divides students in small groups b) Teacher gives opportunity to the students to cooperate in group. c) Students work in their group to make their own story based on the outline that given <p>Independent Construction of the Text</p> <ol style="list-style-type: none"> a) Teacher asks the students to practice their story in front of the class b) The students present their work and the teacher lead them how to present the text correctly. c) Teacher asks another to pay attention. Teacher monitor their act to make improvement for their grammar and vocabulary mastery 	
<p>Post Teaching Activities</p>	<p>Closing</p> <ol style="list-style-type: none"> a) Teacher gives positive feedback to the students' performance b) Teacher gives praises of reward to the students' success. c) Teacher motivates students who were not successful yet. 	<p>5 minutes</p>

	d) Teacher gives the conclusion of the class activity	
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3. Evaluation

After doing the learning process so the next step is the final test.

The test is an oral test. The teacher explained the components of speaking that are measure. They are grammar, vocabulary, pronunciation, fluency and comprehension.

G. Technique of Data Collection

The data are collected through a post-test score. The researcher gives post test to students after doing treatment for five meetings to know students' speaking ability by applying socio drama technique. The test is speaking test formed interview. In both of the test, the students are interviewed by the interviewer one by one. The scoring of this research based on students abilities in speaking such as; pronunciation, vocabulary, grammar, fluency and comprehension. There are many scoring in speaking abilities according Hughes (2003: 131-132) scoring technique as follow:

Table VIII
Speaking score Hughes

No	Items	Criteria of Each Item	Score
1	Pronunciation	Pronunciation frequently unintelligible.	1
		Frequent gross errors and a very heavy accent make understanding difficult, require frequent repetition.	2
		“Foreign accent” requires concentrated listening, and mispronunciations lead to occasional misunderstanding and apparent errors in grammar or vocabulary.	3

		Marked “foreign accent” and occasional mispronunciations which do not interfere with understanding.	4
		No conspicuous mispronunciations, but would not be taken for a native speaker.	5
		Native pronunciation, with no trace of “foreign accent”	6
2	Grammar	Grammar almost entirely inaccurate phrases.	1
		Constant errors showing control of very few major patterns and frequently preventing communication.	2
		Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding.	3
		Occasional errors showing imperfect control of some patterns but no weakness that causes misunderstanding.	4
		Few errors, with no patterns of failure.	5
		No more than two errors during the interview.	6
3	Vocabulary	Vocabulary inadequate for even the simplest conversation.	1
		Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc.)	2
		Choice of words sometimes inaccurate, limitations of vocabulary prevent discussion of some common professional and social topics.	3
		Professional vocabulary adequate to discuss special interests.	4
		Professional vocabulary broad and precise	5
		Vocabulary apparently as accurate and extensive as that of an educated native speaker.	6
4	Fluency	Speech is so halting and fragmentary that conversation is virtually impossible.	1

		Speech is very slow and uneven except for short or routine sentences.	2
		Speech is frequently hesitant and jerky	3
		Speech is occasionally hesitant, with some unevenness caused by rephrasing and grouping for words.	4
		Speech is effortless and smooth, but perceptibly non-native in speech and evenness.	5
		Speech on all professional and general topics as effortless and smooth as a native speakers'	6
5	Comprehension	Understands too little for the simplest type of conversation.	1
		Understands only slow, very simple speech on common social and touristic topics.	2
		Understands careful, somewhat simplified speech when engaged in a dialogue.	3
		Understands quite well normal educated speech when engaged in a dialogue.	4
		Understands everything in normal educated conversation.	5
		Understands everything in both formal and colloquial speech to be expected of an educated native speaker.	6

Researcher was scoring technique of Hughes in this research to assess students' speaking.

H. Technique of Data Analysis

The concept of Sudjana (2005: 23) and Statistical Software Program SPSS version 15 that uses to analyze the students' score in post-test. In this case, t-test mean a statistical procedure used to determine whether both of groups are in the same ability or not.

In analyzing the students' test score, some steps will do before analyzing the different mean by using t-test formula as follows:

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

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

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

2. This formula is used 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 is used 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 is followed by Sudjana (2005: 239)

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

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

Where:

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 employ to see whether significant difference between the mean score of both experimental and control group. The value of obtained consult with the value of t table at the degree of freedom $(n_1-1) + (n_2-2)$ and the level of confidence of $95\%= 0, 05$. If the value of obtain is less than the value of t table, the null hypotheses accept. On the contrary, if the value of t- obtained is equal or bigger than the value of t table, the alternative one is not accept.

