CHAPTER III

RESEARCH METHOD

This chapter describes research design, population and sample, instrumentation, procedure of the research and technique of data analysis.

A. Research Design

The design of this research was an experimental research. Post-Test design was used in this research.Gay (2000:367) states experimental method was the only method of research that can truly test hypotheses concerning cause and effect relationship and because the researcher wants to know the effect of Role Play Technique in teaching speaking at the first year students of State Islamic Senior HighSchool 1 Padang. This was called post-test only design because there was 1 test in after did the treatment.

There were two classes involved the one was experimental class and the other one was control class. After the researcher gave the treatments during five times, One class was functioned as experimental class provided some treatments Role Play Technique in teaching speaking and the control class provided some treatments by teaching technique used in the target school and target grade exactly, the treatment was given to experimental class four meetings and also four meetings in control class. At the end of the research, the researcher gave post test to the students to know their skills in speaking.

Table 3.1
The design of the research

No.	Group	treatment	posttest
1	E	x	O
2	c	-	O

Where:

E = Experimental class
C = Control class
X = Experimental treatment (Role Play)
O = Post-test

B. Population and Sample

1. Population

According to Creswell (2012:142) a population is a group of individuals who have the same characteristic. The population of this research was the class X of state Islamic Senior High School 1 Padang.

2. Sample

Creswell (2012:142) states a sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. Sample is a part of the population for the research. Researcher use cluster random sampling to get sample. According to Gay (2000:123) random sampling is the process of selecting a sample in such a way that all individual in the defined population had an equal and independent chance of being selecting for the sample.

The sample was taken by cluster random sampling. Gay (1987:110) says that cluster random sampling is sampling in which group, not individuals, are randomly selected. The researcher used this sampling

strategy because it was hard to regroup the existed group. The samples of this study will be X IPA 2 as the experiment class and X IPA 3 as the control class, the selected samples are assumed homogenous since the students are classified based on a same average knowledge and score by the school. Then, number of all sample are 60 students; 30 students were in the experimental group and 30 students were in the control group. Dealing with the sample size of experimental research, 60 students were representative enough to be the sample of this research.

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 3.2

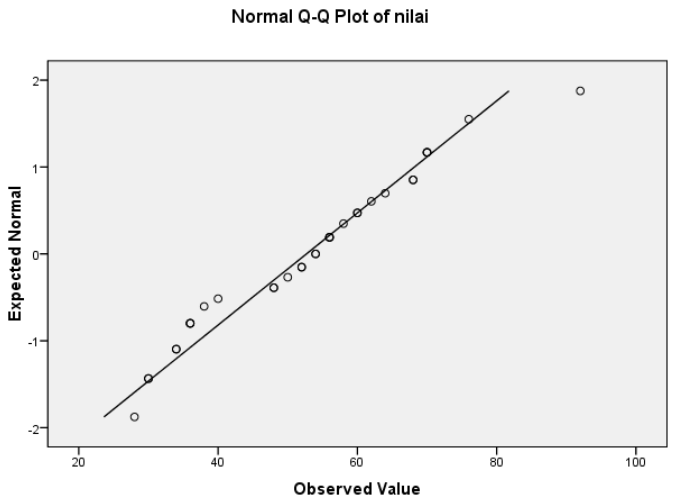
Tests of Normality

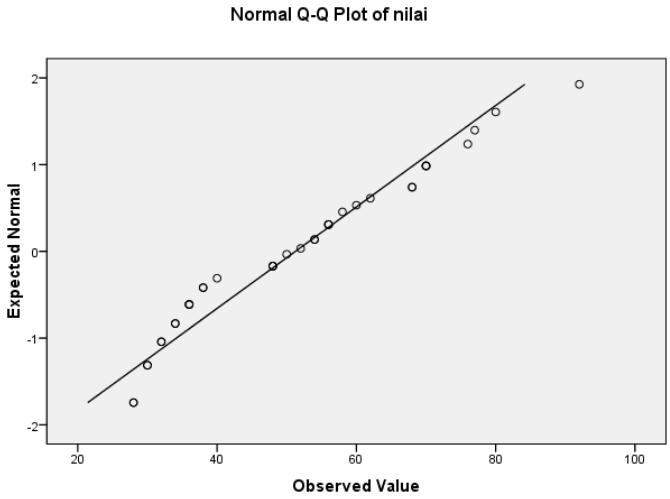
		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	kelas	Statistic	Df	Sig.	Statistic	df	Sig.
nilai	1	.142	36	.064	.944	36	.068
	2	.110	30	.200*	.960	30	.279
	3	.111	30	.200*	.950	30	.137

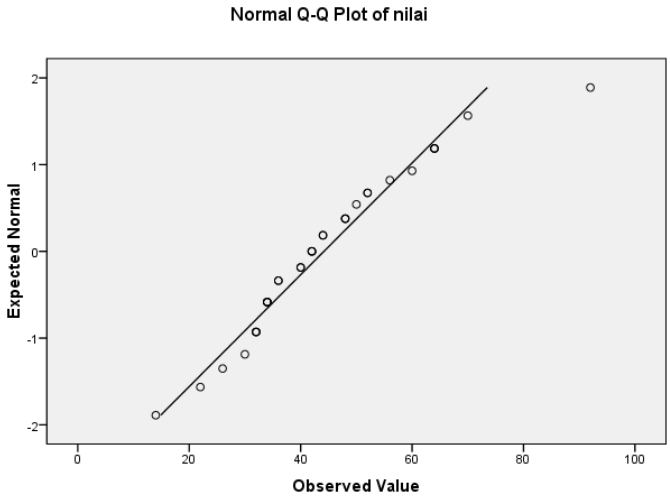
a. Lilliefors Significance Correction

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

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:







3. 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 3.3

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
nilai	Based on Mean	.673	2	98	.512
	Based on Median	.744	2	98	.478
	Based on Median and with adjusted df	.744	2	96.514	.478
	Based on trimmed mean	.697	2	98	.500

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 IPA_2 and class control was X IPA_3.

Table 3.4
Sample of the Research

No	Class	Description
1.	X IPA_2	Experimental Class
2.	X IPA_3	Control Class

C. Place and Time of the Research

This research hold in State Islamic Senior High School 1 Padang. The treatment will be conducted at X grade students. This research did four times meeting where the treatment is once a week for experimental class. The treatment carried out based on the teaching schedule of Islamic Senior High School 1 Padang.

D. Instrument of the Reasearch

The instrument of research was role play. The researcher made the test and gave the test for the last meeting, the test was used to collect the data about the students' improvement of speaking skill in terms of pronunciation, grammar, vocabulary, fluency, and comprehension.

In this test the researcher will make 3-4 cadrs for a pair group it named as "Role card A", "Role card B" and "Role card C". In those card the researcher will make the instructions that should do by the students, for example:

Role Cards for Recount

Role Card A:

You and your friend come to cinema there is a film promotion about nationality the main caracter is Adam Malik, the cashier of that cinema persuade you to watch by telling how was Adam Malik's struggle:

1. Tell that you are not interested

Role Card B:

You and your friend come to cinema there is a film promotion about nationality the main caracter is Adam Malik, the cashier tell you how was Adam Malik's struggling:

1. Tell the cashier you like Adam Malik so much

Ask your friend to buy the ticket

Role Card C:

You are a cashier of a cinema you have a duty to promonte a new film about nationality:
Tell the customer about Adam Malik's Struggle

Table 3.5

Blue Print of Speaking Test

No	Type of Test	Indicator	Item Text	Number of Item	Item
1	Speaking Test (Role Play)	The students are able to express their expression in good pronounciation, grammar, vocabulary, fluency, comprehension	Reportation	3	- Role Card A - Role Card B - Role Card C
Total				3	

To determine the students' speaking component score in post test, researcher used the ESL composition profile by (Hughes 111-113). Those criteria can be seen from table below:

Table 3.6
Indicators of speaking based on Hughes' theory

No	Items	Criteria of each item	Score
	Pronun-ciation	1. Pronunciation frequently unintelligible.	0
		2. Frequent gross errors and a very heavy accent make understanding difficult, require frequent repetition.	1
		3. "Foreign accent" requires concentrated listening, and mispronunciations lead to occasional misunderstanding and apparent errors in grammar or vocabulary.	2
		4. Marked "foreign accent" and occasional mispronunciations which do not interfere with understanding.	2
		5. No conspicuous mispronunciations, but would not be taken for a native speaker.	3
		6. Native pronunciation, with no trace of "foreign accent"	4
	Grammar	1. Grammar almost entirely inaccurate phrases.	6
		2. Constant errors showing control of very few major patterns and frequently preventing communication.	12
		3. Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding.	18
		4. Occasional errors showing imperfect control of some patterns but no weakness that causes misunderstanding.	24
		5. Few errors, with no patterns of failure.	30
		6. No more than two errors during the interview.	36
	Vocabulary	1. Vocabulary inadequate for even the simplest conversation.	4
		2. Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc.)	8

		3. Choice of words sometimes inaccurate, limitations of vocabulary prevent discussion of some common professional and social topics.	12
		4. Professional vocabulary adequate to discuss special interests.	16
		5. Professional vocabulary broad and precise	20
		6. Vocabulary apparently as accurate and extensive as that of an educated native speaker.	24
	Fluency	1. Speech is so halting and fragmentary that conversation is virtually impossible.	2
		2. Speech is very slow and uneven except for short or routine sentences.	4
		3. Speech is frequently hesitant and jerky, sentences may be left uncompleted	6
		4. Speech is occasionally hesitant, with some unevenness caused by rephrasing and grouping for words.	8
		5. Speech is effortless and smooth, but perceptibly non-native in speech and evenness.	10
		6. Speech on all professional and general topics as effortless and smooth as a native speakers'	12
	Compre-hension	1. Understands too little for the simplest type of conversation	4
		2. Understands only slow very simple speech on common social and touristic topics.	8
		3. Understands careful, somewhat simplified speech when engaged in a dialogue.	12
		4. Understands quite well normal educated speech when engaged in a dialogue.	15
		5. Understands everything in normal educated conversation.	19
		6. Understands everything in both formal and colloquial speech to be expected of an educated native speaker.	23

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

Table 3.7
Weighting Table

Component of speaking	WEIGHTING TABLE						Score
	1	2	3	4	5	6	
Accent	0	1	2	2	3	4	
Grammar	6	12	18	24	30	36	
Vocabulary	4	8	12	16	20	24	
Fluency	2	4	6	8	10	12	
Comprehension	4	8	12	15	19	23	
Total							

Table 3.8
Model of Students' Scoring Sheet of Speaking Post Test for Experimental Class/ Control Class

No	Students' Name	Categories					Score
		P	G	V	F	C	
1							
2							
3							
4							
↓							
33							
Average							

E. Procedure of the Research

The procedure of this research was conducted in two classes. They were experimental class and control class. Both of classes were treated for five meetings. As mentioned before the experimental class was treated by using Role Play Technique while control class was treated without Role Play Technique in the last meeting, the researcher gave a test to see the students' the effect of role

play technique which involves five components. This research did in several steps as follows:

1. Preparation
    a. Determining the research place and time
    b. Determining the population and sample of research.
    c. Preparing the lesson plan arranged by curriculum
    d. Explaining to the students about the planning in learning process.
    e. Preparing the post test
2. Application

The application in the process of teaching used Role Play Technique. It is conducted in three main point teaching activities in the classroom. The first activity was pre activity that namely apperception and motivation. The second activity was main activity namely observing, questioning, exploring, associating and communicating. The last activity researcher concluded the materials and closes the class.

Table 3.9
Procedures of Experiment

NO.	EXPERIMENTAL CLASS	TIME
1.	a. Greeting b. Praying c. Check attendance d. Asking the students about the last material	5 Minutes
2.	Observing a. Teacher show the report text (5) b. Students observe the text (5) c. Students answer teacher question orally (5) Questioning Teacher lead student to give comment or ask question	15 Minutes

	based on the the text (5) Exploring a. Teacher gives motivation to the student related to the – text (5) b. Teacher explain the students' knowledge about the the text such as the goal, generic stucture and language feature of the text (5) c. Teacher explains the element of report text (the goal, generic structure and language feature of report-text) (10) d. Teacher gives learning about role play (10) Assosiating a. Teacher ask the students to divide their group of 3-4 (2) b. Teacher ask each group to create the script (3) c. Teacher insists the students to decide the role (5) d. After five minutes, teacher ask the students to compile their idea and make it to be various kinds of situation. (10) Communicating a. The students role play their script (25) b. Teacher monitors the students' activity c. After role play Teacher revises students false (3) d. Students asks students to practice outside of school (2)	5 Minutes 30 Minutes 20 minutes 30 Minutes
3.	a. The teacher conclude the lesson b. Teacher gives advice to the students c. Teacher close the lesson and class	5 Minutes

3. Last section

After doing the learning process for 3 meetings, the next step was the final test. The test was role play. The students were given explanation about the components of speaking that are measure such as pronunciation, grammar, vocabulary, fluency and comprehension.

In finishing:

a. Giving the test to experimental class and control class in the last meeting.
b. Processing data towards experimental class and control class.
c. Taking conclusion from technique of data collection.

F. Technique of Data Collections

There is a kind of data to be collected in this research it was students` speaking test. The speaking test gave in the last meeting of the research. As researcher has mentioned before, this research had two classes as sample, they were control class and experimental class. In control class, the students were tested without giving treatment by using Role Play Technique, while in experimental class this test gave after giving treatment by using Role Play Technique

G. Technique of Data Analysis

The researcher used the statistical procedures to analyze the scores. It gave 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 was used to determine, whether there was 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 did before analyzing the different mean by using t-test formula as follows:

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

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

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

b. This formula used to decide standard deviation of experimental group;

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

c. This formula 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, 2000; 171)

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

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

Note:

t = the value of t calc

$\overline{X_1}$ = Mean score of experimental group

$\overline{X_2}$ = Mean score of contro

S_1^2 = Standard deviation of experimental group

S_2^2 = Standard deviation of control group

n_1 = Number of experimental group

n_2 = Number of control group

The $t\text{-}_{table}$ employed to see whether there was a significant difference between the mean score of both experimental group and control group. The value of $t\text{-}_{calculated}$ consulted with the value of $t\text{-}_{table}$ at the degree of freedom $(n_1\text{-}1) + (n_2\text{-}1)$ and the level of confidence of 95% = 0.05. If the value of $t\text{-}_{calculated}$ was less than the value $t\text{-}_{table}$, the null hypothesis was not accepted; on the contrary, if the value of $t\text{-}_{calculated}$ was equal or bigger than value of $t\text{-}_{table}$, the alternative one was accepted.