# CHAPTER III

## RESEARCH METODOLOGY

### A. Research Design

This research was a Quasi experimental research. Hatch and Farhady (1982: 22-23) state that the concept of experimental design is an idealized abstraction. The ultimate goal of any investigation is to conduct research that will allow us to show the relationship between the variable we have selected. Christensen (1988: 231) states that a special name of design in which the experimental and the control groups' post test scores are compare to assess the influence of the treatment condition. The special design name was Randomized Control Group Only Design. Suryabrata (2014: 104) states that this design consists of two groups were chosen by random. The first group was experimental group. It gave the treatment, and the second group was control group. It did not give the treatment. The design of this study can be figure out by this formula:

**Table 3.1**
**Research Concept**

| Group | Treatment | Post Test |
|-------|-----------|-----------|
| E     | T         | X         |
| C     | O         | X         |

Where:

    E      : Experimental group

    C      : Control group

    T      : Treatment (teaching by using drama technique)

    O      : Teaching without using the treatment

    X      : Post test

The researcher gave drama technique for the experimental class, and for the control class the researcher gave conventional technique. At the end of the research the researcher gave the post-test to both samples. The test was oral test. Every student conveyed the narrative text in front of the class with their own word.

## B. Population and Sample

### 1. Population

Population on this research was Class XI of Islamic Senior High School 1 Solok Selatan that consists of five classes by 149 students. Population was the total object of under study that was investigated.

**Table 3.2**
**Population of Class XI at Islamic Senior High 1  Solok Selatan**

| Class | XI IPA | XI IPK 1 | XI IPK 2 | XI IPS 1 | XI IPS 2 |
|---|---|---|---|---|---|
| Total Students | 34 | 33 | 34 | 23 | 25 |

The students were chosen as population based on assumption that they had learned English for one semester, so that they had experience in speaking English and they were also taught with the same teacher, material and syllabus.

### 2. Sample

Sample was part of population that can be manipulated; Gay (1987: 101) asserts that sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the

larger group from which they were selected. A sample was made up the individuals, items or events selected from a larger group referred to as population. The writer needed two groups (classes) to act the research sample. To get the representative sample of this research the writer used Cluster Random Sampling.

The writer did these steps:

a.  Collected the daily examination score data from all second grade students in first semester (Appendix II).

b.  Test of Normality

Normality test had an objective to know the population normal or not. (Appendix III) In this research, to do the normality test the researcher used Kolmogrov Smirnov and Shapiro Wilk. This test was SPSS test. If the data was significant or more than 0.05 the class was normal. Then, six classes had a normal data. Based on the graphics Q-Q Plot, if the data were around and near with the line, it meant, the data was normal.

**Table 3.3**

**Tests of Normality**

| | Class | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Score | IPK I | .101 | 33 | .200[*] | .950 | 33 | .129 |
| | IPK II | .077 | 34 | .200[*] | .961 | 34 | .268 |
| | IPA | .083 | 34 | .200[*] | .958 | 34 | .206 |
| | IPS I | .136 | 23 | .200[*] | .957 | 23 | .399 |
| | IPS II | .129 | 25 | .200[*] | .952 | 25 | .272 |

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. To see whether the sample normal or not in distribution, the 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, the researcher got the output as below:
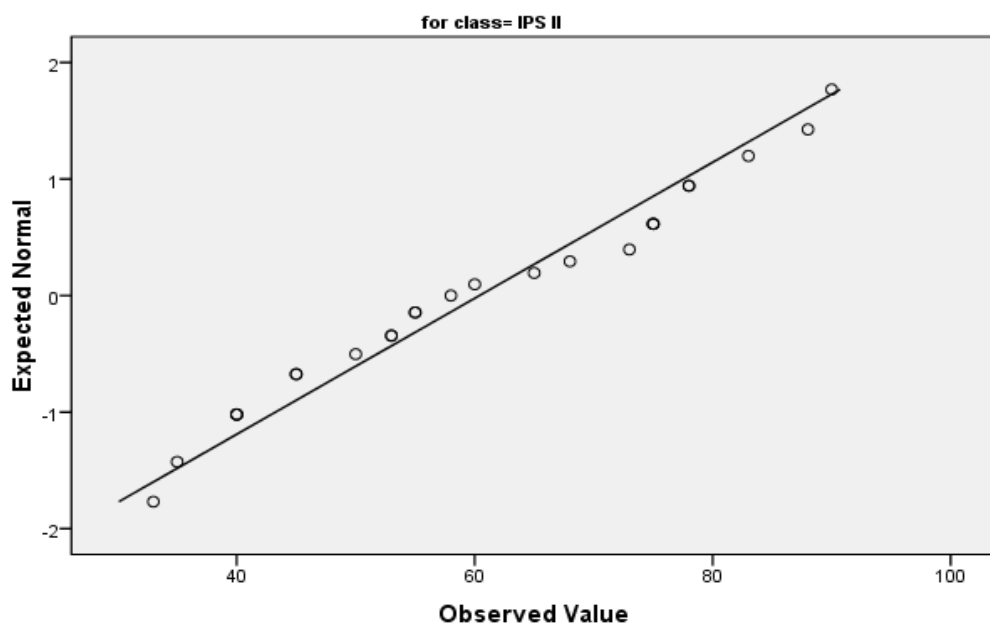
**Table 3.4**

### Normal Q-Q Plot of Nilai
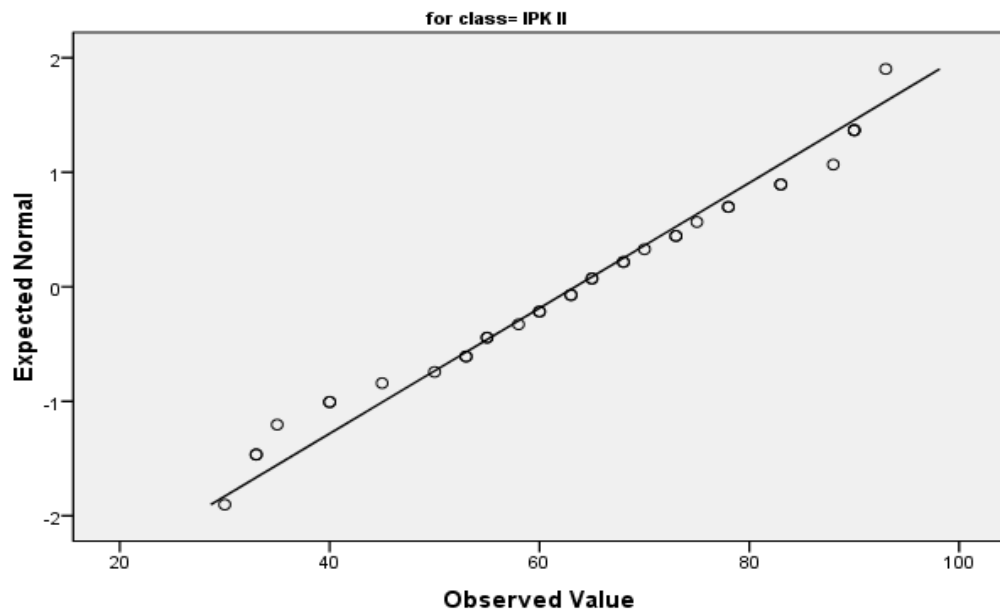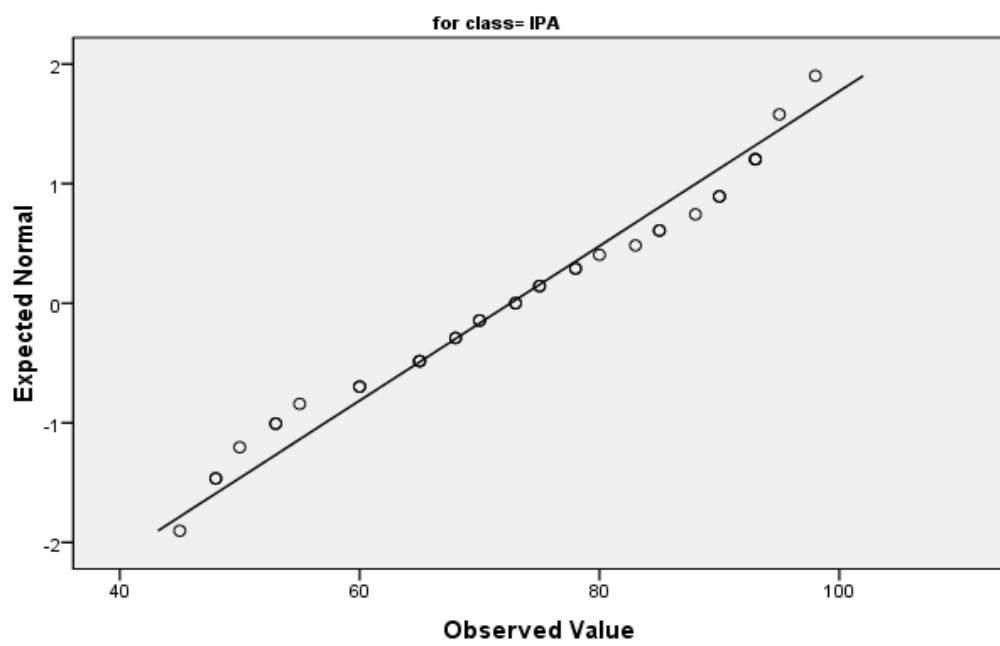
for class= IPK I



### Normal Q-Q Plot of Score

for class= IPS II

## Normal Q-Q Plot of Nilai

### for class= IPK II



## Normal Q-Q Plot of Nilai

### for class= IPA
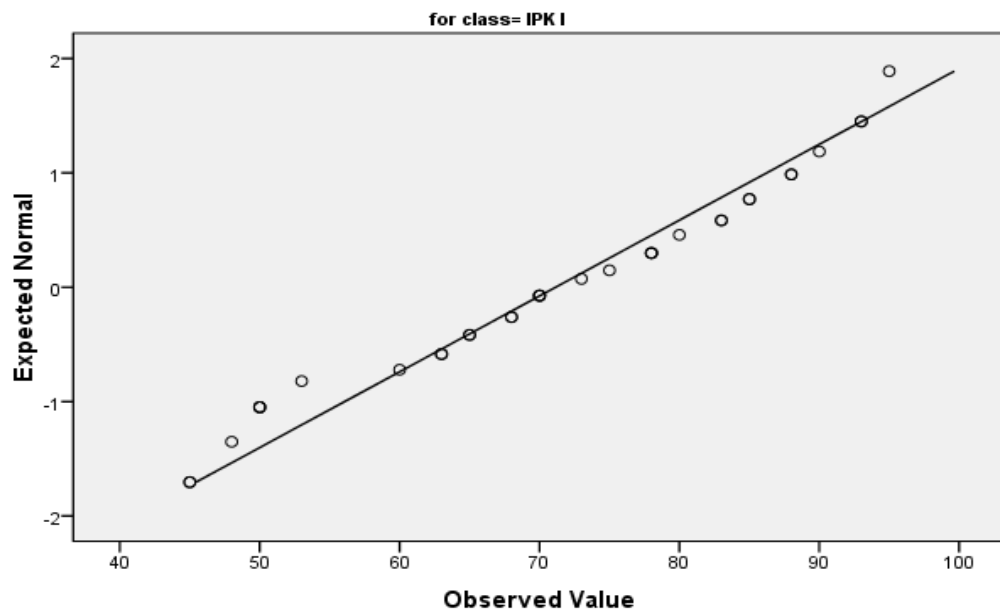
## Normal Q-Q Plot of Nilai

for class= IPS I
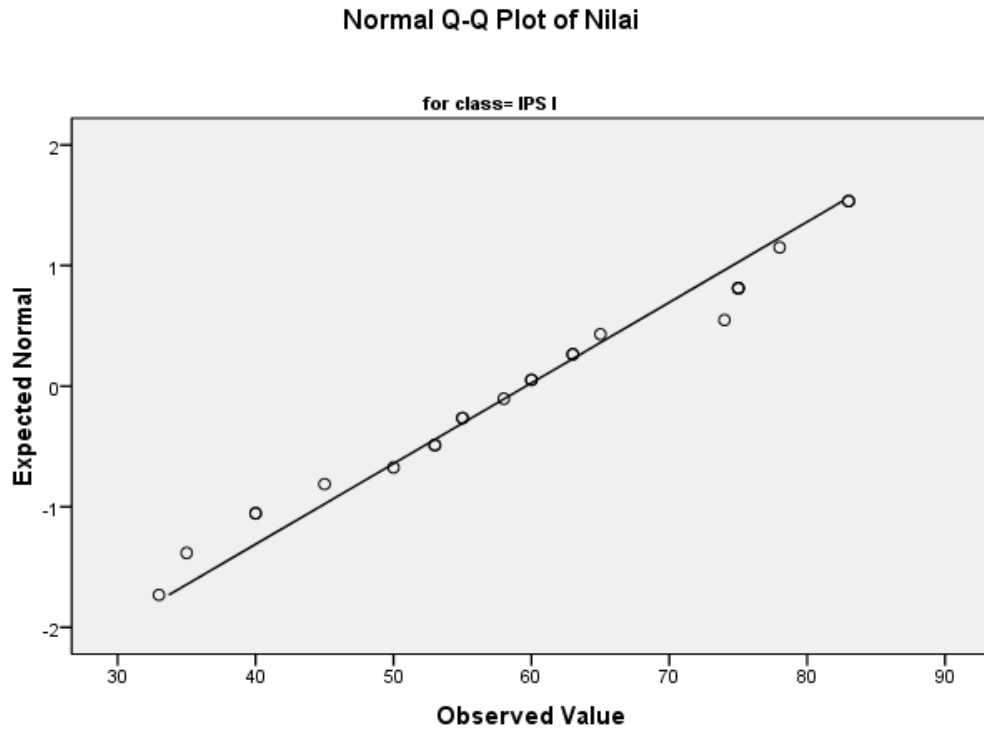


c. Test of Homogeneous Variances

**Table 3.5**

**Test of Homogeneity of Variance**

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| VAR0001 | Based on Mean | .606 | 4 | 144 | .659 |
| | Based on Median | .575 | 4 | 144 | .681 |
| | Based on Median and with adjusted df | .575 | 4 | 138.859 | .681 |
| | Based on trimmed mean | .603 | 4 | 144 | .661 |

After done the normality test and got the normal data. Then the writer did the homogeneous variation test. This test had an objective as to know the sample homogeny or not. This test used SPSS with levee test, if the data were significant or the data were more than 0.05 it meant the data was homogeneous (See Appendix IV).

After 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 piece of paper. Class control was XI IPK 1 and experimental class was XI IPA 1.

**Table 3.6**

**Sample of Research**

| CLASS | NUMBER OF STUDENTS | AVERAGE |
|---|---|---|
| XI IPA 1 (Experiment Group) | 34 STUDENTS | 68,83 |
| XI IPK 1 (Control Group) | 33 STUDENTS | 69,50 |

**C. Variables**

There are three variables in this research:

1. Independent Variable, variable which was influenced with another variable or treatment that was given to students in experiment class was Drama technique in learning speaking.

2. Dependent Variable, the indication which appeard from treatment was result of students' speaking cognitive aspects that were gotten from test that were given at the end research.

3. Control Variable, variables which were kept same teacher, syllabus, curriculum, subject, and same material of subject.

## D. Time and Place

This research was held in Islamic Senior High School 1 Solok Selatan. The students were observed at second grade student at first semester. This research was done in six times meeting on July until August. The treatment was carried out based on the teaching schedule of Islamic Senior High School 1 Solok Selatan.

## E. Instruments

Instrument is a tool to collect the data. The researcher used speaking test to measure student's speaking ability. The test was performance assessment. It meant that drama itself became the tool of assessing. For example, when the students perform the drama like Malin Kundang and then the researcher assessed their speaking. The students convey narrative text in front of the class with their own word. The teacher depicts students' speaking ability in speaking based on Hughes' assessment; they are in grammar, pronunciation, fluency, vocabulary and comprehension.

After giving the treatment for six meetings, the researcher gave two classes post-test in order to know the students' speaking skill.

## F. Procedure of the Research

### a. Preparing

The researcher used two classes to collect the data, the researcher taught the students using drama technique for experimental class, and a conventional technique for control class. However, the material of the teaching is the same speaking material. In short, the researcher had proposed 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.

### b. Learning process

**Table 3.7**
**Procedure for Experimental and Control Group**

| Procedure for Experimental Group |
|---|
| A. Pre Speaking Activity<br><br>  1. Apperception<br>  2. Greeting<br>  3. Praying.<br>  4. Checking Students attendance.<br>  5. Asking the students about the previous material.<br>Motivation<br>    ➤ Give them some guiding questions that guide them to the topic.<br>    ➤ Students respond teacher's questions based on their experience.<br>    ➤ Teacher states purpose of the lesson.<br>    ➤ Write a topic of the lesson on the whiteboard. |
| B. Whilst Speaking Activities<br>    1. The students divide into small group discussion that |

consist of four or five until ten students
2. The teacher shows a video of drama story and the teacher guides the students make notebook after watch a video of the story
3. The students learn how to pronounce the word in the story
4. The teacher gives the students some fragment of narrative story.
5. The teacher guides the students to find fragment of the story and they have to reconstruct the story
6. The student rehearsal the drama to repair their pronunciation
7. Performing the drama in class
8. The teacher gives evaluate based on the performance.
9. The teacher applauds performance of the students.

C. Post Speaking Activity
1. Review and conclude the lesson together with the students
2. Give enrichment homework.
3. Close the class

| Procedure for Control Group |
|---|

A. Pre Speaking Activity
1. Apperception
   ➢ Greeting
   ➢ Praying.
   ➢ Checking Students attendance.
   ➢ Asking the students about the previous material.
2. Motivation
   ➢ Give them some guiding questions that guide them to the topic.
   ➢ Students respond teacher's questions based on their experience.
   ➢ Teacher states purpose of the lesson.

B. Whilst Speaking Activities
1. The teacher states the topic and gives script of narrative text
2. The teacher shows a video of narrative story and the teacher guides the students make notebook after watch a video of the story
3. The students listen to the teacher's explanation about narrative text.
4. The students are divided into small group discussion that consist of four or five until ten students
5. The students answer the questions that teacher gave
6. The teacher asks the students to make narrative text based on their language.

| |
|---|
| 7.  They perform their text in front of the class. |
| 8.  The teacher gives evaluate based on the performance. |
| 9.  The teacher applauds performance of the students. |
| B.  Post Speaking Activity |
| 1.  Review and conclude the lesson together with the students |
| 2.  Give enrichment homework. |
| 3.  Close the class |

### c.  Evaluation

After doing the learning process, so the next step was the final test. The test was given to group as a sample. The test was an oral test in drama form. The students had been given explanation about the components of speaking that were measured. They were grammar, vocabulary, pronunciation, fluency and comprehension.

## G.  Technique of Data Collection

In this case, the researcher used speaking test to measure students' speaking ability. In applied, the researcher measure based on their performance. It means that drama became the tool of assessing. For example, when the students perform the drama like Malin Kundang and then the researcher assessed their speaking. The speaking test was the urgent position in this research because the result of the study found from the result score of posttest that given to know students' speaking ability in two classes. In scoring the students' speaking ability, the researcher decided to choose the one constituted by Hughes (2003: 131-132) for measurements of speaking ability.

**H. Technique of Data Analysis**

The technique of students' speaking ability was analysed by using Hughes assessment which are consists of five components such as accent (pronunciation), grammar, vocabulary, fluency, and comprehension. Technique of data analysis in this research was statistical procedure. It gave an away to analyse the differences between the groups. To analyse the students` score, the researcher used T-test means a statistical procedure used to determine whether both of groups are in the same ability or not. T-test was analysed from students' speaking score in post-test

The data which were got from final result were analyzed by following steps:

1. Test of normality.

   Test of normality was intended to see whether data distribute normal or not. Test of normality used Liliefors test that was stated by Sudjana (2005: 239-241)

2. Hypothesis Testing

   Hypothesis testing intends to prove whether hypothesis is correct or not, it means whether result study of experimental class is better than that control class.

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

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

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

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

b.  This formula was 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 was 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 by Sudjana (2005:239).

$$t = \frac{\overline{X_1} - \overline{X_2}}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

With;

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

Where:

t           :The value of t calculated / observer / obtained

$\overline{X_1}$           :Mean score of experiment sample

$\overline{X_2}$          :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 significant difference between the mean score of both experimental and control group.

The analysis of t-formula describes that if the t-calculated is equal or less than the critical value t-table, the hypothesis is rejected; and if value of t-calculated is bigger than t-table, the hypothesis is accepted.

UIN IMAM BONJOL
PADANG