

CHAPTER III

RESEARCH METHODOLOGY

1.1 Research Design

This research was categorized as an experimental design related to One Group Pretest- Posttest Design which was focused on a quantitative approach (Gay, 2000 : 389). It is conducted to find out the effect of Audio Lingual Method toward students' Pronunciation of the second year students at SMAN 1 Bungaraya.

In this research, the variables were classified into independent and dependent variable. According to Nunan (1992, p. 25) and Fraenkel and Wallen, (1990, p. 39) The variable which the experimenter expects to influence the other is called *independent variable* while the variable upon which the independent variable is acting is called the *dependent variable*. The independent variable in this research is the Audio Lingual Method. Audio Lingual Method became the treatment or manipulated variable.

The purpose of this research was to investigate the effect of the Audio Lingual Method toward the dependent variable. The dependent variable is students' pronunciation ability. This variable was the outcome of independent variable. In other words, this was the variable which the independent variable was assumed to be affected.

Therefore the experimental group was provided with pre-test, treatment, and post-test. The design was drawn by the following figure:

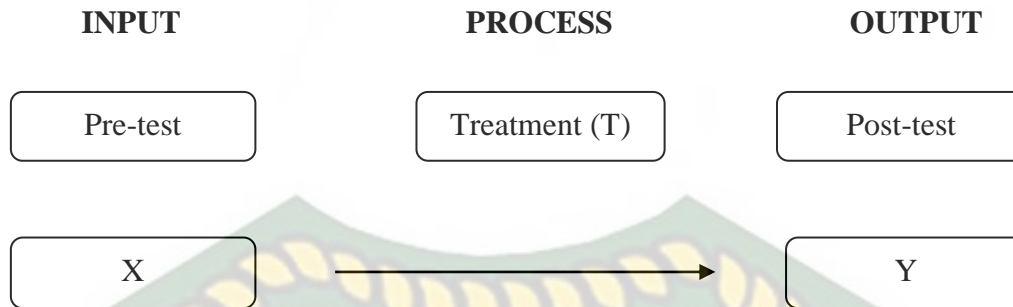


Figure 3.1 The Research Design

Where:

X : First measurement

Y : Second measurement

T : Treatment/ Process

3.2 The Location and Time of the Research

This research location was at SMAN 1 Bungaraya. The school is located at Sultan Syarif Kasim street Bungaraya Siak. The research was conducted in the of July up to August 2016.

3.3 Population and Sample of the Research

3.3.1 Population

Population is a group of people or things that attract the researcher and an object to generalize the result of the research (Frankel and Wallen, 1990,p. 68). In this research, the population this sample is the second year students of SMA Negeri 1 Bungaraya (XI Science 1) in academic year 2015/2016. The eleventh year students of SMA Negeri 1 Bungaraya have six classes and the numbers of students of each class consists 25,26,30,33,32, and 34 students. The total numbers of the eleventh year

students of SMA Negeri 1 Bungaraya were 180 students. As described by the following table:

Table 3.1 Population of the Research

No	Class	Number of Students	Group
1	XI IPA 1	25	Experimental
2	XI IPA 2	26	-
3	XI IPS 1	30	-
4	XI IPS 2	33	-
5	XI IPS 3	32	-
6	XI IPS 4	34	-
Total		180	-

3.3.2 Sample

According to Fraenkel and Walen (1990, p. 66) sample is a group in research study on which information is obtained. The sampling technique employed in this research is cluster random sampling technique. In this technique, the researcher identified naturally occurring group units, such as schools, classes, not individual subject and after that randomly selected some of these units for the research (Fraenkland Wallen, 1990: p. 72).

Cluster sampling was applied because there is the difficulty for selecting a random sample of individuals; besides, it is because in natural social settings, such as schools and other educational institutions, random assignment is often impossible.

The researcher employed this technique because it was easier to be implemented in schools and less-time consuming (Fraenkel&Wallen, 1990, p. 73).

Based on the consideration above, the samples is (XI IPA 1) which were selected by randomly based on the classification made by the school XI IPA 1 as the experimental group. Class XI IPA 1 consisted of 25 students. During the experiment, the experimental group was given several treatments in the period of four meetings.

Table 3.2 Sample of the Research

Subjects	Classes	Genders	Amount	Total
Experimental group	XI IPA 1	Male	5	25
		Female	20	
Total Sample			25	25

3.4 Research Instrument

3.4.1 Tests

The test has been given in this research are pre-test and post-test: Pre-test has been conducted in the first meeting in order to find out students' initial pronunciation proficiency. (See appendix 2. Post-test has been conducted in the last program of this research after giving some treatments and exercises to the experimental group in a certain period of time. The aimed of this test is to find out whether or not teaching speaking, especially pronunciation teaching, using Audio Lingual Method.

3.4.2 Audio Recorder

Audio recorder used to record students' voice during the test to gain the data related to the scoring system.

3.4.3 Rating Scale

The researcher has been given some assessments to the students in order to get the data. The assessments were scored by using rating scale. The scoring procedure was made by the researcher referring to *Analytical Oral Language Scoring Rubric* and other references with some modifications as shown in the following scoring guide below.

Table 3.3 Analytic Scoring Rubric of Prosodic Features

Focus/Rating	Failed 1	Low 2	Good 3	Very Good 4	Excellent 5
Intonation	Phonetically incorrect that confuse listeners	Frequent errors	Occasional errors	Comprehensible	Phonetically correct and can be understood
Rhythm	Phonetically incorrect that confuse listeners	Frequent errors	Occasional errors	Comprehensible	Phonetically correct and can be understood
Linking	Do not complete utterances	Most utterances contain errors	Utterances are generally comprehensible	Utterances are more comprehensible	Genuine effort to sound like a native speaker

Stress	Most stress patterns in words are incorrect	Slow rate of stress patterns in words	General error in using stress patterns in words	Appropriate stress patterns in words	Excellent control of stress patterns in words
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Adapted from Mariane Celce-Murcia et al (2000)

3.5 Research Procedure

3.5.1 The Research Preparation

1. Preparing Lesson the Plan

The researcher was designed the lesson plan for the experimental group and propose for four meetings.

The first and the last meeting allocated to conducted the pretest and post-test while the rest four meetings was allocated to apply the treatment using the Audio Lingual Method. The lesson plan was designed based on the National curriculum of English for eleventh grade students which consists of Competence Standard, Basic Competence, Indicator, Instructional Objective, Lesson Materials, Method/ technique, Steps of the activity, Source Lesson, and the evaluation. Where as, the lesson plan for the control group use the English teacher's lesson plan.(*See appendix 1*)

2. Preparing the Material

The material in this research taken from English entitle "Pronunciation task and Accurate English: A Complete Course in Pronunciation, "English

Pronunciation Made Simple.” Besides, the researcher also used some relevant Audio Lingual materials (Effortless English) and some relevant books and sources taken from Internet.

3.5.2 Research Implementation

1) Administering Pre-test

Pre-test was conducted in the first meeting to measure students' initial pronunciation ability. In the pre-test, the students was assigned by read (orally) a dialogue from the text book. The pre-test has been conducted on July 23, 2016. (See appendix 2)

2) Conducting the Treatments

The Experiment was conducted on July 30, 2016. During the experiment, the researcher was meat the experimental group twice a week. The treatments has been given to the experimental group in four meetings. The treatment only drilling Audio Lingual Method (rhythm and intonation) in context (dialog).

4. Administering the Post-test

After conducted the treatments for 4 meeting, the post-test was administered to both experimental and control group. The text used in the post-test is similar with the text administered in the pre-test. In analyzed the result of the post-test, the researcher employed t-test formula using SPSS 24. Experimental has been given the same pre-test and post-test in order to find out whether or not the experimental group makes development in their pronunciation ability after the implementation of Audio Lingual Method .(See appendix 2)

The general schedule of the research is show in the table below:

Table 3.4 General Schedule of the Research

No	Experimental Group	
1	23 March 2016	Pre-test
2	30 March 2016	Dialog 1 and first treatment
3	2 August 2016	Second TreatmentDialog 1
4	6 August 2016	Thirddreatment
5	9 August 2016	Fourth treatment
6	13 August 2016	Post-test

During the treatment, the researcher had to provided the material and some tasks to the students as in the following table:

Table 3.5 Blueprint of Pronunciation Test

No	Topics	Number of Items	Total
1	Stess	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	10
2	Rhytim	11,12, 13, 14, 15, 16, 17, 18, 19, 20	10
3	Intonation	21, 22, 23, 24, 25, 26, 27, 28, 29, 30	10

3.6 Data Collection Technique

In order to get the data from the students pronunciation ability, the researcher collected the data by given pre-test and post-test to the students.

In the first meeting, the researcher has been given a pre-test to the students in order to gain the data from the students' pronunciation ability. The researcher read the dialogue to the students and asks them to imitate the dialogue. Then, the researcher records their voice while the students imitate the dialogue. After the researcher get the data, the researcher tried to analyzed the students task from their record. This pre-test aimed to know students ability before using Audio Lingual Method while study about pronunciation. The second step that the researcher should do is giving a treatment to the students in 4 meeting. In that meeting, the researcher applied Audio Lingual Method and drill them while teaching pronunciation.

In the last meeting, the researcher was given a post-test to the students in order to get the data about students pronunciation after conduct a treatment. They has been given the same dialogue like a pre-test before. After that, the researcher collected their record and analyzes it. The purpose of giving a post test is to know is there alteration between students pronunciation ability in pre-test and post-test.

3.7 Data analysis Technique

After collecting the data, the pronunciation tests was analyzed by using scoring criteria. In this research, the researcher took the score based on the quality of

pronunciation produced by the students. The scoring was taken twice in both are in pretest and posttest. The scoring focused only on the students' pronunciation of English. The researcher focused on pronunciation instead of intonation and stress because pronunciation will be the same whether in pronouncing words/phrases/sentences. The researcher used pronunciation rating scale modified from Mariane Celce-Murcia et al (2000), since she only scored the quality of pronunciation. Students has been given some words, phrases, or sentences to pronounce and their pronunciation will be recorded. The researcher then scores the pronunciation using the rating scale as a guideline then analyzing in by using SPSS 24 Version.

Data Analysis on the Pre-test and Post-test

A pre-test will be administered to experimental group. The aimed of pre-test and post-test are to investigated the students' initial ability and to investigate the initial equivalence between the groups.

The process of analyzing the data as follows:

- Mean score of each group

$$M_x = \frac{\sum X}{N}$$

Where : M_x = Mean

\sum = The total of scores

N = Number of Cases / students

(Sudijono, 2009: 81)

- Difference (D) and $\sum D$

The difference between variable I (pre-test of X) and variable II (post-test or Y), so the Difference (D)

$$D = X - Y$$

Where :

D = Difference

X = the score of variable I (pre-test)

Y = the score of variable II (post-test)

(Sudijono, 2009: 306)

Next, we need to sum up all of D and we got $\sum D$ (the amount of Difference).

- Mean of Difference (MD)

$$MD = \frac{\sum D}{N}$$

Where :

MD = Mean of difference

$\sum D$ = The amount of D

N = Number of cases (students)

(Sudijono, 2009: 306)

- The Amount of D quadrate (D^2)

Next we quadrate each D and we can find D^2 . After that we can sum up all of D^2 and we can get the amount of D^2 ($\sum D^2$)

- Standard Deviation (SD_D)

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

Where : SD_D = Standard deviation

$\sum D^2$ = The amount of D quadrate

$\sum D$ = The amount of D

N = The number of students

(Sudijono, 2009: 307)

- Standard Error of Mean Difference (SE_{MD})

$$SE_{MD} = \frac{SD_D}{\sqrt{N-1}}$$

Where : SE_{MD} = Standard Error of Mean Difference

SD_D = Standard Deviation

N = Number of students

(Sudijono, 2009: 307)

- T-Test (T_0)

T-test (t_0) can we get by this formula :

$$t_0 = \frac{M_D}{SE_{MD}}$$

Where : t_0 = T-test

M_D = Mean of Difference

SE_{MD} = Standard Error of Mean of Difference

(Sudijono, 2009: 307)

- Formula to test the Hypothesis

After get T-test (t_0) we find the Degrees of Freedom (df or db) with the formula :

$$\text{df or db} = N - 1$$

(Sudijono, 2009: 307)

Based on the value of Degrees of Freedom, we can find the value of t in t-table, with the significance 5 % and 1 % :

$t_0 \geq t_t = H_0$ is rejected, H_a is accepted

$t_0 < t_t = H_0$ is accepted, H_a is rejected

(Sudijono, 2009: 305-308)