CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the methodology which is applied in the research. It consists of research design, research method, population and sample, instrument, and data collection technique.

A. Research Method

In this research, the writer used quantitative research method. Quantitative research method are research methods dealing with numbers and anything that is measurable in a systematic way of investigation of phenomena and their relationships. It is used to answer questions on relationships within measurable variables with an intention to explain, predict and control a phenomena (Leedy 1993). Quantitative method typically begins with data collection based on a hypothesis or theory and it is followed with application of descriptive or inferential statistics.

B. Research Design

In doing research, the writer used pretest and posttest design. The writer administrated a pre-test before teaching speaking using round robin technique. Then the writer computed the mean differences between the pre-test and posttest scores. This research was classified as pre-experimental design because it was little or no control of extraneous variables. In the One-Group pretest-posttest design, a single group was measured or observed not only after being exposed to a

treatment of some sort, but also before. Arikunto (2006) state that One-Group pretest-posttest design which used one group with to observation condition that doing without another group, so every subject is a control class for itself.

C. Population and Sample

1. Population

Population is a large group to which a researcher wants to generalize his or her sample result (Christensen, 2000:158). Population is the set of all elements. It is the large group to which a researcher wants to generalize his or her sample result (Burke 2000: 158). In line with Burke, Arikunto (2002: 108) says that population is all the individuals of that group.

The population in this research was the tenth grade students of SMA Pasundan 4 Bandung in the academic year of 2017/2018. They were grouped into seven classes where each class consists of 30 students so the total populations were 210 students.

2. Sample

A sample is a set of elements taken from a large population (Christensen, 2000:158). Sample is part of population being researched (Arikunto 2002:109). It can be concluded that sample is a small portion of a population assigned according to certain rules.

The sample of this research came from one class of tenth grade students of SMA Pasundan 4 Bandung in the academic year of 2017/2018. The total sample

in this research was thirty students. They understood when someone spoke English but they did not want to use their English in speaking. They were afraid of someone who was laughing them and they were afraid to do mistakes.

D. Instruments of the Research

The instrument of this research was oral production test. The items of the test were a topic discussion. The teacher gave a topic and the students discussed it. The writer monitored the students' utterance. There were five components used to analyze speech performance. This research was only focused on three aspects of speaking namely vocabulary, pronunciation, and fluency. Each aspect measured based on oral proficiency scoring test categories purposed by Sapani (1990) as follow.

Table 3.1 Rubric Scoring Speaking

Categories	Description	Score
Vocabulary	Occasional phonemic errors but generally comprehensible and nearly perfect	4
	There exist several errors in pronunciation but it is generally accepted	3
	Many phonemic errors, very difficult to perceive meaning	2
	Incomprehensible and many words mispronounced and incorrect	1
Pronunciation	The word choice generally relevant with the situation and have variation	4
	The words have already been relevant with the topic and situation, they however do not have any variation yet	3
	There are still lots of words used inappropriately	2
	Poor and irrelevant words related to the topics and the situation given	1

Fluency	The speaker generally speaks naturally and continuously	4
	There are some pauses but speaker manages to rephrase and continue	3
	It runs less continuously, there often pauses	2
	There are long pauses, utterances left unfinished or no response	1

E. Data Collecting Technique and Analysis

1. Data Collection Technique

The writer used test in collecting the data. There were two kind of tests, namely pretest and posttest.Pre-test was administered before treatment that was given to know how far the students speaking skill especially for the material would be taught by the teacher in this research. The test was consisted of oral test. The teacher asked the students to giving an opinion about a topic which given by teacher. The teacher gave for about five minutes to prepare and after the students ready. They must come in front of class to speak. At that time, the researcher gave point for them.

After giving the pretest, the researcher giving the treatment to students, The researcher giving five treatments with the right material using round robin technique. The teacher gave the posttest to the students after giving the treatments. The next type of the posttest was also in the form of oral production test. The test was administered to investigate whether the round ro bintechnique could improve the students' speaking skill. The teacher asked the students to giving an opinion but with different topic with pre test. At that time, the researcher gave point for them.

2. Data Analysis

To analyze the data, this research used SPSS (Statistical Product for Service Solution). According to Best (1998: 212) statistics is a body of mathematical techniques or processes for gathering, organizing, analyzing, and interpreting numerical data. SPSS is a comprehensive system for analyzing data. SPSS can take data from almost any type of file and use them to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analysis. The writer used inferential statistical data by using SPSS version 25.0 program to know mean, standard deviation, range, normality test, and non parametric test.

a. Mean

The mean (M) is simply the arithmetic average of all the scores. It is calculated by summing all the scores and then dividing the sum by the number of scores (Mc Millan & Schumacher, 2001:215).

b. Standard Deviation

The standard deviation is a numerical index that indicates the average variability of the scores (Mc Millan & Schumacher, 2001:221).

c. Range

The range is the most obvious measure of dispersion. It is simply the difference between the highest and lowest scores in the distribution (Mc Millan & Shumacher, 2001:220).

d. Normality Test

Normal curve or distribution is a bell-shaped curve or distribution is a theoretical distribution which shows the frequency or probability of all the possible values that a continuous variable can be taken (Kaswan and Suprijadi 2016). The writer used Kolmogorov-Smirnov formula in SPSS 25 version for windows. If the Asymp. sig. is more than the level of significance (0.05), the scores is normally distributed. Then the writer can continue the analysis of data homogeneity and t-test. If the Asymp. sig. is lower than the level of significance (0.05), the scores were not normally distributed, on the point of that, the writer cannot continue the analysis of data homogeneity. The writer should do Nonparametric Test using Wilcoxon.

e. Nonparametric Tests

Based on Best (1977:289), nonparametric or distribution-free test is used when the nature of the population distribution from which samples are drawn, is not known to be normal, variables are expressed in nominal form (classified in categories and represented by frequency counts). Nonparametric tests were used because they are based upon counted or ranked data rather than on measured values. They were less precise, have less power than parametric tests, and were not as likely to reject a null hypothesis when it is false. Of the many nonparametric tests, six of the most frequently used are described and illustrated here, *Chi Square (X^2) test, Median test, Mann-Whitney test, Sign test, Wilcoxon matched-pairs signed ranks test, and Spearman rank order coefficient of correlation (p).*

The writer chose the Wilcoxon matched-pairs signed ranks test. It is supported that the Wilcoxon test is somewhat similar to the sign test, but is more powerful because it test not only direction but also magnitude of difference between matched groups. Wilcoxon test, like the sign test, deals with matched samples made up of matched pairs of individuals and is not applicable to independent samples (Best, 1977:299).