

CHAPTER III

RESEARCH METHODOLOGY

This chapter consists of research design, research method, population and sample, instruments, data collection techniques and, analysis.

A. Research Method

According to Creswell (2009), the research method is an inquiry that has three types, which are qualitative, quantitative, and mixed methods approach that provides a specified direction for procedures in research design. In this research, the researcher used quantitative design. Furthermore, Creswell (2009) defined that “quantitative research is an approach for testing objective theories by examining among variables that can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures.” Quantitative research contains two types; those are experimental design and non-experimental design.

B. Research Method

In this research, the researcher used a quasi-experimental research design, which is one of the types from the quantitative experiment design. “Quasi-experimental design identify a comparison group that is as similar as possible to the treatment group in terms of baseline (pre-intervention) characteristics of the user of a program/policy, which to find any difference in outcomes between the treatment and comparison groups” (White and Sabarwal, 2014).

The quasi-experimental design uses the nonequivalent (pre-test and post-test) control group design, in which the experimental group and the control group are selected without random assignment. Both of the groups take a pre-test and post-test, but only the experimental group receives the treatment (Creswell, 2009).

In this research, there is an experimental group and control group. The experimental group was using the communicative approach, which used the reading aloud method, while the control group was using the scientific approach. This research uses the Pretest-Posttest Group Design because this research aims to determine the effectiveness of communicative approach with reading aloud method and compared with the scientific approach in teaching students' pronunciation. The results of the pretest and posttest of the two groups were compared to be examined whether the treatment given in the experimental group had a more significant effect on students' pronunciation ability.

C. Location and Time of The research

The Location of this research at SMPN 1 Cipanas that took place on Mbah Kilong Street No. 067, Sindanglaya, Cipanas – Cianjur 43253. The research process was carried out on March 5th until 29th 2019.

D. Population and Sample

1. Population

Population is defined as all members of any well-defined class of people, events, or objects. It means that the population is a large group to be the

object of the research (Ary, 2010). Based on these definitions, the study population was seventh-grade students at SMPN 1 Cipanas consisting of eleven classes with a total of 346 students.

2. Sample

The sample of this research are two classes. According to Ary (2010), A sample is a portion of a population. It means sample is a small group from population. Based on the definition above the sample of the research, the student in the population was seventh grade at SMPN 1 Cipanas with eleven class.

The researcher chose VII E as the experimental group consisted of 20 students, and VII D as the control group consisted of 20 students. As the experiment class, the students were asked to describe the subject using Communicative Approach especially Reading Aloud. While the control class using Scientific Approach.

E. Instrument

To got the data, the researcher used some instruments. According to Birmigham (2003), research instruments are simply devices for obtaining information relevant to your research project, and there are many alternatives from which to chose. It means an instrument is a tool for collecting data.

1. Test

Test is valid to the extent that its source permit one to draw appropriate, meaningful, and useful inferences and it is reliable to the extent that whatever it measures, it measures consistently (Anderson, 1998) It means

to test in this research is oral test, The pre-test takes the form of a simple conversation text and is read out by two students in turn.

a. Pre-Test

Before the treatment begin the researcher used pre-test to know students' pronunciation skill. In the pre-test, participants were asked to read a conversation text in pairs with their friends, they were read in turn.

b. Post-Test

After giving the treatment, the researcher give the post-test to the experimental class and also to the control class. The test was similar to the pre-test. The post-test will be done after the treatment given to the students to read text conversations in pairs with their friends, they were read in turn.

c. Scoring System

The Researcher uses a rating scale proposed by Arthur Hughes (1989) to score the students' result in oral test and the researcher only uses the pronunciation criteria since the researcher only assess students' pronunciation through reading. This is a 5-level rating scale. This rating scale measures the students' pronunciation skills. The rating scales for the oral test modified from Arthur Hughes can be seen as follow:

Score	Criteria
80 – 100	Reading consist of almost appropriate pronunciation.
61 – 80	Reading consist of hardly incorrect pronunciation.
41 – 60	Reading consist of some inappropriate pronunciation.
21 – 40	Reading consist of mostly inappropriate pronunciation.
0 – 20	Reading consist of very poor pronunciation.

Observation as a research method tells us that it is research characterized by a prolonged period of intense social interaction between the researcher and the subjects, in the milieu of the latter, during which time data, in the form of field notes, are unobtrusively and systematically collected (Bogdan, 1972). To get the information about students' pronunciation, the researcher observation. Observation used to answer the second and third research question.

Participant Activity Observation Checklist	
Location	: SMPN 1 Cipanas – Cianjur
Group	: Experiment / Control
Date	:
Time	:
Treatment	:

[illegible]

Tabel 3.3
Observation Criteria for Participant

Participant Activity Observation Criteria	
Location	: SMPN 1 Cipanas – Cianjur
Group	: Experiment / Control
Date	:
Time	:
Treatment	:

No.	Criteria	Yes	No
1.	The participant ready to follow the lesson		
2.	The participant pays attention to the researcher		
3.	The participant follows the researcher instruction		
4.	The participant active in learning activities		
5.	The participant asks a question related to the method		
6.	The participant are interested in the lesson		
7.	The participant can answer the question from the researcher in English		
8.	The participant have the enthusiasm or motivation during the teaching process		

3. Interview

Interviews involve a set of assumptions and understandings about the situation which are not normally associated with a casual conversation (Denscombe, 2011). In this research, the researcher used an interview to support observation result in answering the second and third research question. The technique of interview that performed by the researcher was choosing three students from experimental group, three students from control group, and English teacher.

Tabel 3.4
Interview Guidelines Before The Implementation

Student's Interview Before The Implementation
1. Apakah kamu menyukai pelajaran Bahasa Inggris? 2. Sejak kapan kamu mulai mengenal pelajaran bahasa Inggris? 3. Apakah pelajaran bahasa Inggris menurut kamu sulit, kenapa? 4. Apakah kamu menyukai metode yang selama ini diajarkan guru bahasa Inggris kamu? 5. Apakah kamu merasa bosan dengan pelajaran bahasa Inggris? 6. Apakah urutan skill yang paling sulit dipelajari (Grammar, Vocabulary, Pronunciation, or Spelling? 7. Kenapa skill tersebut menjadi yang paling sulit? 8. Pembelajaran bahasa Inggris seperti apa yang kamu inginkan untuk kedepannya?

Tabel 3.5
Interview Guidelines After The Implementation

Student's Interview Before Treatment
1. Bagaimana pendapat kamu mengenai pelajaran pronunciation? 2. Pernahkah kamu mendapatkan pelajaran mengenai pronunciation sebelumnya? Kalau sudah, menurut kamu susah atau mudah? 3. Bagaimana pendapat kamu mengenai metode reading aloud dalam pembelajaran pronunciation? 4. Manakah yang lebih kamu sukai, belajar pronunciation menggunakan reading aloud atau tidak menggunakan apapun? 5. Apakah kamu tertarik dan senang saat mendapatkan materi pronunciation dengan metode reading aloud? 6. Menurut kamu, metode reading aloud dalam pelajaran pronounciatin itu mudah dilakukan atau tidak ? 7. Menurut kamu, apakah metode reading aloud tersebut dapat meningkatkan kemampuan belajar siswa khususnya dalam pronunciation di kelas? 8. Setelah mendapatkan pelajaran pronounciatin dengan metode reading alaoud, apakah yang kamu rasakan? Belajar pronunciation di kelas menjadi lebih menyenangkan atau tidak? 9. Selama mendapatkan pelajaran pronounciatin dengan metode reading aloud, adakah kesulitan yang kamu hadapi? 10. Kesan apa yang kamu rasakan mengenai metode reading aloud dalam pelajaran pronunciation ?

F. Data Collection Techniques

Data collection in this research was carried out twice, namely during the pre-test before the research activities took place, and post-test activities after the activity took place. Pre-test and post-test were conducted in the two groups studied, namely the experimental group and the control group. In the pre-test, participants were asked to read a conversation text in pairs with their friends, they were read in turn. The researcher used a pre-test to measure the degree of students' pronunciation ability and post-test to see the improvement after the chosen method is implemented.

G. Data Analysis

Data analysis is an activity after data from all respondents is collected. Activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on variables and types of respondents, presenting data for each variable under research, performing calculations to answer the problem formulation, and calculating to test the hypothesis that has been proposed (Sugiyono, 2016). Data analysis is a simplification of data into one of the most readable and interpreted forms. After the data is collected, the writer performs data processing to facilitate analysis. By analyzing this data can provide useful meaning in solving research problems.

This research uses numerical calculations, and the analysis is done using statistics. Therefore, this research is included in quantitative research. Quantitative research methods can be interpreted as research methods based on

the philosophy of positivism, used to examine specific populations or samples, sampling techniques are generally carried out by random, data collection uses research instruments, data analysis is quantitative/statistical in order to test hypotheses that have been established (Sugiono, 2016). The statistics used in this research is descriptive statistics.

Descriptive statistics are used to analyze data by describing data that has been collected as it is without intending to make a conclusion. Before using descriptive statistical analysis, the collected data which is pretest and posttest scores are analyzed with several formulas which are a range, interval, mean, variance, standard deviation, and n-gain. The writer analyses the data by using the requirement test before, which consists of a normality test, homogeneity tests, and a significance test.

1. Descriptive Statistic

In the descriptive statistics showed up the frequencies of the score, such as percentile values, central tendency (mean, median, mode and sum), dispersion (standard deviation, variance, range, minimum, maximum, and standard error mean), and distribution (skewness, and kurtosis). In finding the descriptive statistics scoring, the writer used IBM SPSS Statistics Version 25.

2. Test of Normality

Normality test was to determine whether the data from the population normally or not. This test was a purpose for ensuring the distribution of data which were accomplished from the population had normal distribution

or not. Normality test used is Kolmogorov-Sminor test. The researcher tested the normality of the test by using SPSS 25. The criteria of the testing follow:

- 1) If the value $(p) > \text{significant } (\alpha = 0,05)$, it means that the sample from the population H_0 was accepted and H_0 was rejected (normal distribution).
- 2) If the value $(p) < \text{significant } (\alpha = 0,05)$, it means H_0 was rejected and H_0 was accepted (not normal distribution).

3. Homogeneity Test

Homogeneity test was done to know the variance in the population of research homogeneity or not. Homogeneity test was to measure the data of the population homogeneity or not. The researcher uses SPSS 24 in this research. the criteria of the testing follow:

- 1) If the value $(p) > \text{significant } (\alpha = 0,05)$, H_0 is accepted, it means that the sample has homogenous variant which means the data was valid.
- 2) If the value $(p) < \text{significant } (\alpha = 0,05)$ H_0 was rejected, it means that samples do not have a homogenous variant which means the data was valid.

4. Significant Test

A significance test was conducted to know the significant differences between the mean score of the experiment class and the control class by comparing the data calculated using statistical data analysis. If the data distribution is normal and homogeneity, the test will be continued with the T-

Test. If the data distribution is normal but not homogeny, the test will be continued with T'-Test. If the data distribution is not normal, the test will be continued by using the Mann Whitney U test. The steps were using IBM SPSS Statistics Version 25 to measure the significance test as follow:

a. Independent Sample T-Test

The writer analyzes the score between the experimental and control classes. This test assumes the normality of data. The data analysis technique in this study is statistical analysis with a t-test to determine the effectiveness of two approaches in teaching students' vocabulary.

T-test criteria are as follow:

- a) If $t_{\text{value}} \leq t_{\text{table}}$, H_0 is accepted.
- b) If $t_{\text{value}} \geq t_{\text{table}}$, H_0 is rejected.

b. Mann Whitney U-Test

Mann Whitney U-test is a non-parametric test which is used to determine the median difference between 2 free groups if the data scale of the dependent variable is ordinal or interval/ratio but not normally distributed.

Mann Whitney U Test criteria are as follow:

- a) If $t_{\text{value}} \leq t_{\text{table}}$, H_0 is accepted.
- b) If $t_{\text{value}} \geq t_{\text{table}}$, H_0 is rejected.

5. N-Gain

The n-gain score is computed to know the improvement of participants by comparing the value of post-test and pre-test. There are three criteria of n-

gain score, those are high gain (n-gain score > 0.7), medium gain ($0.3 < \text{n-gain score} < 0.7$), and low gain (n-gain score < 0.3). To Calculate the gain score, the writer used formula as follow:

$$\text{N-Gain} = \frac{(\text{Posttest Scores} - \text{Pretest Scores})}{(MMS - \text{Pretest Scores})}$$

MMS = Maximal Standard Score