

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research used quantitative research design. Form of this research was a quasi experimental research. This design was based on the fact that the researcher wants to know for sure the effect of using Ed Sheeran song toward students' pronunciation ability in the class.

Experimental research design is a research method used to find the effect of certain treatments (Zaenal, 2020). Another understanding of the experimental research design, namely, experimental research is research that is intended to determine whether there is a result of "something" imposed on the subject under study. While in this study, one group designated as the experimental class, the other group designated as the control class. The researcher used the English song as a teaching media in the experimental class, while the control class used printed media as media.

Table 2 Research Design

Class	Pre-Test	Treatment	Post-Test
A	01	-	02
B	01	X	02

Note:

- A : Control Class
- B : Experimental Class
- 01 : Pre-test
- 02 : Post-test
- X : English Song
- : Printed Media

B. Population, Sample and Sampling Techniques

1. Population

Arikunto in (Sinaga et al., 2024) defines the term of "population" denotes the complete set of subjects under investigation. When a researcher aims to study all elements within a specific research area, it qualifies as a population. The population of the research is the students of the Second grade of SMP N 6 Metro. The total of

population in this research is 56 students. This research conducted on June until finish. It include preparation of instrument complication, getting the research letter, collecting the data, analyzing, the data listening and the research result.

2. Sample and Sampling Techniques

Sample, namely, a portion or representative of the population studied using certain methods (Ramadhan, 2023). If the population is large, and it is impossible for the researcher to study everything in the population, for example due to limited funds, manpower and time, the researcher can use samples taken from that population. In this study, it was obtained that class 8.8 as the experimental group and 8.9 as the control group. Class 8.8 consists of 30 students as an experimental class and 8.9 as a control class also consists of 26 students.

This study used a sample selection technique, namely cluster random sampling and determine which class would be the group to be studied. The following are the steps that the researcher took to select the group to be studied:

- a. Write down all class on a piece of paper.
- b. After cutting and rolling the paper, it is placed inside a glass.
- c. The paper is taken out by shaking the glass.
- d. Two classes (8.8 and 8.9) were chosen and given the chance to turn into the control class and the experimental class.
- e. After rolling up, both paper are put back into the glass
- f. The experimental class focused on the first roll of paper (8.8)
- g. The control class assigned to the second roll of paper (8.9)

C. Research Variable

There were two variables in this research, they were Independent variable (X) and Dependent variable (Y).

1. Independent Variable

Creswell in (Hijerah et al., 2024) states that Independent variable (X) is an attribute or characteristic that influences or affects an outcome or dependent variable, Independent variable is variable that cause, influence, or effect outcomes. It also called treatment, manipulate, or predictor variables Independent variable of this research is English song.

2. Dependent Variable

According to Creswell in (Hijerah et al., 2024) a dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable. Dependent variable is the variable that depends on the independent variable. It is the result of the influence of the independent variable. Dependent variable of this research is the students pronunciation ability.

Table 3 Research Variable

Group	Independent Variable	Dependent Variable
Experimental Group	English Song	Students` Pronunciation Ability
Control Group	-	Students` Pronunciation Ability

Based on the explanation above, the researcher concluded that there are two variables in this study, they are X as a (English Song) and Y as a (students' Pronunciation Ability).

D. Validity and Reliability

1. Validity

Validity is the degree of accuracy between the power that the researcher can report and the data that occurs in the object of the research. Validity is all about how well the data matches up with what the researcher can actually report (Aisyah, 2023). In this research, the researcher used face validity as a validity test. Face validity is described as whether a test appears to be a good measure or not. So, the test questions must represent the material being discussed. In terms of validity, the material presented is in accordance with the expert's assessment material.

Assessing by expert carried out in this validity test to evaluate the validity of the chosen instrument. The evaluation was provided by two experts. The test instrument would be examined by experts to determine how well it administered to

students. There are five criteria of validation by the experts as follow: (1) Very Poor, (2) Poor, (3) Enough, (4) Good, and (5) Very Good.

2. Reliability

Instrument reliability is a reliable measurement result. Instrument reliability is required in order to gather information in line with the measuring objectives. In the other hand the test instrument must be valid; Furthermore, the instrument being tested need to be reliable. Reliability refers to the consistency or stability of a set of test scores (Priscilla, 2022).

If the test or assessment procedure provides a reliable score, the results are consistent on each occasion. If giving the same test to the same student or the matched student on two different occasions. The test must produce the same result. Then a test can be trusted reliable. High and low reliability is indicated by a number called the reliability coefficient.

In this research, the reliability test used internal consistency which uses the Alpha Cronbach with SPSS. According to Johnson in (Priscilla, 2022) Internal consistency, the consistency with which the items on a test measure a single construct Coefficient alpha or also called Cronbach's alpha. The manual calculation used in the Alpha Cronbach stated by (Arikunto, 2010) as follows:

$$r_{11} = \left(\frac{k}{k-1} \right) \left[1 - \frac{\sum \sigma^2 b}{\sigma^2 t} \right]$$

Note :

r_{11} : The reliability coefficient

k : The number of questions

$\sum \sigma^2 b$: The variant of questions

$\sigma^2 t$: Score Variant

The table of criteria for the Alpha Cronbach's reliability test according to (Sutrisno, 2016) as follows:

Table 4 Reliability Criteria

Reliability Index	Criteria
0.81 – 1.00	Very good
0.61 – 0.80	Good
0.41 – 0.60	Quite
0.21 – 0.40	Poor
0.00 – 0.20	Very poor

(Sutrisno, 2016)

E. Data Collecting Technique

1. Pre-Test

Before the researcher gave treatment to the group to be studied, the researcher gave the students a pre-test. The purpose of the pre-test is to find out the students' initial conditions before the researcher gives treatment. The test is a method for assessing students' knowledge, skills, feelings, and intelligence. There were 20 words from the lyrics of the song that have been selected to be submitted to students. Assessment of student pronunciation assessed from a score of 1 to 5. So if students pronounce all the words perfectly, then students got a score of 100.

2. Treatment

After doing the pre-test, the researcher gave treatment to experimental group. The aim of the treatment is to develop students' mastery of pronunciation. In the media treatment used Ed Sheeran song. The researcher conducted a treatment in 3 times. Each meeting took 45 minutes long using a song to learn the pronunciation of the lyrics. The material for the first meeting is the students had to identifying verb from the lyrics of the song. The researcher played "perfect' by Ed Sheeran in the first meeting and then the students had to pronounce the verb. In the second meeting, the students had to identifying adjective from the lyrics of the song. The researcher played "photograph' by Ed Sheeran in the second meeting and then the students had to pronounce the adjective. While in the last meeting, the students had to identifying noun from the lyrics of the song. The researcher played "Thinking Out Loud' by Ed Sheeran in the last meeting and then the students had to pronounce the noun.

3. Post-Test

The post-test was used to determine students' mastery of pronunciation after teaching with the song, how much students pronounce the vocabulary correctly given after the treatment process is carried out. The questions used were the same as those used by the researcher in the pre-test, but with different numbers. Assessment of student pronunciation assessed from a score of 1 to 5. So if students pronounce all the words perfectly, then students got a score of 100.

F. Research Instrument

Instrument as the tool of research which is used in each methods. It means that instrument is a tool or facilities that are used by the researcher collect the data completely and systematically. According to Widoyoko in (Purwono et al., 2023) valid and appropriate instruments are required for collecting data, because good research instruments must have validity and reliability. The instrument is valid if the instrument can be used to measure what should be measured (Sugiyono, 2014). The researcher gave a test as an instrument in this research. An oral test is used in pre-test and post-test. The pre-test is given to the students to measure their pronunciation skill before the treatment and the post test gave to measure their pronunciation ability after giving the treatment.

In this study, the type of pronunciation test in pre-test and post-test used an oral test. The score of the test is based on criteria on the pronunciation test rubric. Pre-test and post-test assessments used the following pronunciation scoring rubric:

Table 5 Rubric of Scoring Pronunciation

Aspect	Score	Description
Pronunciation	1	The pronunciation is perfect. The words are easy to understand and have the native speaker's accent.
	2	The words are easy to understand with a certain accent. Clearly understandable
	3	The words are easy to understand with a particular accent. Understandable.
	4	Unclear pronunciation. The words are difficult to understand.
	5	The words are very difficult to understand. The pronunciation is incomprehensible

(Rachmawati, 2020)

G. Data Analysis Technique

Based on (Sugiyono, 2013) data analyzing is an activity after data from all respondents or other data sources are collected. Activities in data analysis are: grouping data based on variables and types of respondents, tabulating data based on variables from all respondents, presenting data for each variable studied, performing calculations to answer the problem formulation, and performing calculations to test the hypotheses that have been proposed. In this study the data was analyzed using the following techniques:

1. Identification of data. The data was identified by the researcher using the prior student results.
2. Calculating the score on the pre test.
3. Using the Ed Sheeran song to teach pronunciation while receiving treatment
4. Calculating the score on the post test.
5. Submitting the result, after completing all steps the researcher can draw conclusions

The formula was tested using the normality and homogeneity tests by the researcher.

1. Normality Test

The normality test was conducted to determine whether the data came from a normally distributed population or not. In this research the researcher used SPSS to test normality. To determine normality, the Sig score can be used which is in the results of the Shapiro-Wilk calculation. The criteria for normality test according to (Sari, 2019) are if P value higher than $\alpha(0.05)$ so, H_0 is accepted and H_1 is rejected. But if P value is smaller than $\alpha(0.05)$ so, H_0 is rejected and H_1 is accepted. H_0 means that the data is normal distribution. H_1 means that the data is not normal distribution.

2. Homogeneity Test

Its aim to determine if a variance (diversity) of data from more than one group is homogeneous or heterogeneous (Sunengko, 2022). In this research the researcher used ANOVA with SPSS calculations by two criteria as follows:

- a. When the significance value is > 0.05 it means homogenous.
- b. When the significance value is > 0.05 it means not homogenous.

H. Hypothesis Test

According to the hypothesis of the research, there were two hypotheses as follows:

1. First Hypothesis

The researcher used Paired Sample T with SPSS for testing the first hypothesis. Paired Sample T test is a way to test the difference in averages of two samples from the same group (Anggara & Anwar, 2017). Paired Sample T test is used when the data is normally distributed. There are two criteria for Paired Sample T test using SPSS calculation as follows:

- a) If the significant value (Sig) > 0.05 , H_0 is accepted
- b) If the significant value (Sig) < 0.05 , H_a is accepted

2. Second Hypothesis

The researcher used Independent Sample T with SPSS for testing the second hypothesis. Independent Sample T test is a way to test the difference in averages between two samples from different groups (Anggara & Anwar, 2017). Independent Sample T test is used when the data is normally distributed and the data is homogeneous. There are two criteria for Paired Sample T test using SPSS calculation as follows:

- a) If the significant value (Sig) > 0.05 , H_0 is accepted
- b) If the significant value (Sig) < 0.05 , H_a is accepted