CHAPTER III
RESEARCH METHODOLOGY

A. The Research Method

Experimental research is unique in two very important respects. It is the only type of research that directly attempts to influence a particular variable, and when properly applied, it is the best type for testing hypotheses about cause-and-effect relationship.[1] According to Nunan experiment is "A procedure for testing a hypothesis by setting up a situation in which the strength of the relationship between variables can be tested."[2] Based on Nunan there are three types of the experiment such as:[3]

Pre-experiment   : May have pre- and post-treatment tests, but lacks a control group

Quasi-experiment : Has both pre- and post-tests and experimental and control groups, but no random assignment of subjects

True experiment : Has both pre- and post-tests, experimental and control groups, and random assignment of subjects

In this research, the writer uses experimental research designs with quasi-experiment type to determine the effectiveness of YouTube channel *BBC Learning English* to improve students' pronouncing the English consonants /ʃ/, /ʒ/, /tʃ/, /dʒ/, /θ/, and /ð/. In this design, an experimental class teaching and learning activity using YouTube channel "BBC Learning English" as teaching material but in control class teaching and learning activity without YouTube

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[1] Jack R. Fraenkel, Norman E. Wallen, and Helen H. Hyun, *How to Design and Evaluate Research in Education* (New York: McGraw-Hill, 8th ed., 2012), 265.

[2] David Nunan, *Research Methods in Language Learning* (New York: Cambridge University Press, 1992), 230.

[3] Nunan, *Research Methods in Language Learning*, 41.

channel "BBC Learning English" as teaching material. To make this research more clear, the writer provided the research design as follows:

Table 3.1 Quasi Experiment Design

No	Class	Pre-test	Treatment	Post-test
1	Experimental class	X	X	X
2	Control class	X	O	X

B. The Place and Time of the Research

In collecting the data, the writer holds the research at the seventh grade of SMPN 21 Kota Serang in academic year 2019/2020. The school is located on Jl. Komp. Taman Pesona, Taktakan, Kota Serang, Banten 42162. And for the time, the writer conducted from September 30, 2019, to October 09, 2019.

The writer's reasons choose this school because the condition of students in English ability, especially in pronunciation skill need to increase and the situation in this school very comfortable to take the research.

C. The Population and Sample

1. Population

According to Fraenkel et al., say that "the population of interest is usually a group of persons (students, teachers, or other individuals) who processes certain characteristics."[4] The population of this research is all students of the seventh grade of SMPN 21 Kota Serang in academic year 2019/2020. There are 6 classes

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[4] Fraenkel, et al., *How to Design and Evaluate Research in Educational*, 92.

at the seventh grade of SMPN 21 Kota Serang, which the total population is 211 students.

2. Sample

According to Nunan "sample is a subset of individuals or cases from within a population".[5] The writer takes two classes as sample research from six classes. It is class C as an experimental class with 36 students and class E as a control class with 34 students.

D. The Research Variables

According to Nunan "variable is a property or characteristic which may differ from individual to individual or from group to group."[6] This research, there are two variables included, which are: YouTube channel *BBC Learning English* as (X) variables or independent variable and students' pronunciation as (Y) variable or dependent variable.

E. The Research Instrument

The research instrument is a device for systematically collecting data by the researcher.[7] The writer uses test to know the students' ability in pronouncing the English consonants /ʃ/, /ʒ/, /tʃ/, /dʒ/, /θ/, and /ð/. In this study, the writer used 30 instructions to pronounce words as the best choice to apply for the test instrument.

[5] Nunan, *Research Methods in Language Learning*, 232.
[6] Nunan, *Research Methods in Language Learning*, 232.
[7] Fraenkel, et al., *How to Design and Evaluate Research in Educational,* G-4.

To get data, the writer gives pre-test before treatment and post-test after treatment. Pronunciation is rated on a scale from 0-3 according to the following descriptors.[8]

0.0 – 0.4	Frequent phonemic errors and foreign stress and intonation patterns that cause the speaker to be unintelligible
0.5 – 1.4	Frequent phonemic errors and foreign stress and intonation patterns that cause the speaker to be occasionally unintelligible
1.5 – 2.4	Some consistent phonemic errors and foreign stress and intonation patterns, but speaker is intelligible
2.5 – 3.0	Occasional nonnative pronunciation errors, but speaker is always intelligible

While for the writer to easily use the pronunciation scale above. The writer made 30 instructions to pronounce words in pre-test and post-test instrument. And the researcher informs the results of the data obtained to the teacher concerned to obtain valid data about assessing students' pronouncing the English consonants /ʃ/, /ʒ/, /tʃ/, /dʒ/, /θ/, and /ð/.

F. The Technique of Collecting Data

According Brown "test is a method of measuring a person's ability, knowledge, or performance in a given domain."[9] For collecting the data, the writer gives the students two tests, which are pre-test and post-test.

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[8] Celce-Murcia, Marianne, Donna M. Brinton, and Janet M. Goodwin, *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages* (US: Cambridge University Press, 14th printing, 2006), 347.

1. Pre-test

   The pre-test is given to students before the writer applying YouTube channel *BBC Learning English* in teaching pronunciation. The writer conducted the pre-test both of the experimental class and control class. The function of the pre-test is to know the main scores students' pronouncing the English consonants /ʃ/, /ʒ/, /tʃ/, /dʒ/, /θ/, and /ð/ in the experimental class and the control class. In the pre-test, the writer gives 30 instructions to pronounce words.

2. Post-test

   Post-test is given to students after the writer doing different treatment in experimental class and control class. During the research, control class only receives the traditional teaching pronunciation while experimental class receives treatment of applying YouTube channel *BBC Learning English.* In the post-test, the writer gives 30 instructions to pronounce words.

G. The Technique of Data Analysis

For the next step of this research, the writer process and analysis the data. The writer compares the data between the experimental class and the control class. To find out the differences in students' score, the writer used the statistical calculation of the t-Test.

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[9] H. Douglas Brown, *Language Assessment Principles and Classroom Practices* (New York: Longman, 2013), 5.

The step for statistic analyze that are:

1. Determining the mean of variable x1 by the formula :

$$M_1 = \frac{\sum X_1}{N_1}$$

2. Determining the mean of variable x2 by the formula :

$$M_2 = \frac{\sum X_2}{N_2}$$

3. Determining the score deviation of variable x1 by the formula :

$$x_1 = X_1 - M_1$$

4. Determining the score deviation of variable x2 by the formula :

$$x_2 = X_2 - M_2$$

5. Making quadrant X_1, then summed it and obtained $\sum X_1{}^2$

6. Making quadrant X_2, then summed it and obtained $\sum X_2{}^2$

7. Determining $t°$ by the formula :

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right)\left(\frac{N_1 + N_2}{N_1.N_2}\right)}}$$

8. Determining t-table in significance level 5% and 1% with df:

$$df = (N_1 + N_2) - 2$$

9. Giving interpretation of $t°$

10. Summing up

Notes :

M_1 = Mean score of the experimental class

M_2 = Mean score of the control class

$\sum x_1^2$ = Sum of square deviation score in experiment class

$\sum x_2^2$ = Sum of square deviation score in control class

N_1 =   Number of students of experiment class

N_2 = Number of students of control class

2   = Constant number

df   = Degree of Freedom (df = $N_1 + N_2 - 2$)