

## CHAPTER III

### METHODOLOGY OF RESEARCH

#### A. Research Method

According to Srinagesh Experimental research is the theme of this book. This introductory chapter attempts to delineate the scope of the book. The research referred to here is limited to that in science and its byproduct, technology. This demands a closer look at the word “science” itself, followed by the need to define the activity broadly accepted as scientific research. The so-called theoretical research in science (s) is out of our bounds. We also need to steer past quite a few activities colloquially referred to as “research – ing.” Our concern is limited only to experimental research in science. While noting that those who do and enjoy research for its own sake are exceptions, this chapter points out some characteristic features in the working lives of career reseachers, who are the rule.<sup>1</sup>

In this research, the Quasi-Experimental Pretest-Posttest Group Design has been used. Quasi-experiments include assignment, but not a random assignment of participants to groups. This is because the experimenter cannot artificially create groups for the experiment.<sup>2</sup>

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<sup>1</sup> K. Srinagesh, Ph.D, *The Principles Of Experimental Research* ( Universitas of Massachusetts, Dartmouth, 2006), 1.

<sup>2</sup> John W.Creswell, *Educational Research; Planning and Conducting Quantitative and Qualitative Research*, (Boston: Pearson, Fourth Edition, 2012), 309.

Quasi-experimental designs do not have a random assignment. We do not have the opportunity for a random assignment of students to a teacher or class. The common term for this type of group of participants is intact. For that, the researcher selected two classes, one is the control class and the other is the experimental class. The research design would be presented as follows:

**Pre- and Posttest Design**

**Time**

|                           |         |                        |          |
|---------------------------|---------|------------------------|----------|
| Select Control Group      | Pretest | No Treatment           | Posttest |
| Select Experimental Group | Pretest | Experimental Treatment | Posttest |

Quasi-Experimental Designs.<sup>3</sup>

In this research, the students are given pre-test to know their basic skill in listening. The result of the pre-test will be used to indicate students' listening to measure their previous skill before treatment. At the end of the program, students will be given post-test in order to know their achievement after the treatment through listening about narrative text.

**B. Place and Time**

1. Place: The place of this research is at SMA Negeri 8 Serang, Banten.
2. Time: This research time will be conducted on the eleven grade students of SMA Negeri 8 Serang in academic year 2019/2020.

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<sup>3</sup> John W.Creswell, *Educational Research; Planning and Conducting.....*, 310.

### **C. Variable of the Research**

A variable is something that can change, such as 'gender' and are typically the focus of a study.<sup>4</sup>

From the states above can be concluded that variable as classifying data into units. It means that variable can be classified according to how they are measured and according to their function in the research. There were two variables of this research, they were as follows:

- a. The independent variable of this research is youtube video (X).
- b. The dependent variable of this research is the students' listening skill (Y).

### **D. Population and Sample**

The research chooses the population and the sample from students at SMA Negeri 8 Serang. It is should come from the same grade level; eleventh grade which are taught by the same teacher.

From the population, the sample of this study was the students from two selected classes, the first class is the experimental group and the second class is the control group. Each class consisted of 40 students; however, to anticipate the research samples' absences, this study only took 30 students from two selected classes. As a result, the total fix numbers of the sample are

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<sup>4</sup><http://changingminds.org/explanations/research/measurement/variables.htm> ( 11 February 2019).

60 students. The sample is chosen based on the consideration that students at this level have sufficient experience in listening skill.

*Table 3.1*

*The Sample of The Study*

| No    | Class    | Sum of Student |
|-------|----------|----------------|
| 1.    | XI MIA 1 | 30             |
| 2.    | XI MIA 4 | 30             |
| TOTAL |          | 60             |

## **E. Data collection**

### a. Pre-test

Pre-test was done to know the students listening skills before being treatment.

*Table 3.2*

*Procedure of Pre-Test*

|  |
|--|
| The teacher notifies that she will hold a pretest                  |
| The teacher provides topics for each student                       |
| The teacher conveys the minimum member of words for the test       |
| The teacher delivered the test-taking technique                    |
| The teacher conveys the time to test                               |
| The teacher allows students to work on the pre-test narrative text |

b. Post-test

After the treatment, the students gave post-test by the teacher.

The test was the direct test which measured.

*Table 3.3*

*Procedure of Post-Test*

|  |
|--|
| The teacher informs him that a post-test will be held        |
| The teacher provides topics for each student                 |
| The teacher conveys the minimum number of words for the test |

**F. Research Procedure**

In this research, it has been implemented three steps, they were as follows:

1. Planning

After making the planning, the planning applied based on the research procedure. There were some steps that had been planned.

The procedure of making the planning of the research can be seen as follow:

a. Determining the subject

In this case, eleven grade has been chosen as the subject of the research. There was one class as control class and the other class as an experimental class.

b. Administering Pre-test

Pre-test has been given and aimed at capturing the students' speaking skill. The pre-test took during 90 minutes both experimental and control class.

c. Giving Treatments

The treatments have been given within two meeting for experimental class and control class too. In the experimental class it have been used video youtube as the media in teaching listening, while in the control class it used conventional way listening have been used.

d. Administering the Post-test

Post-test have been done to find out whether there was an increase in the students' listening achievement or not.

e. Analyzing the data

In analyzing the data, due to knowing the difference between students' listening achievement before and after giving the treatments. The data were distributed into the scoring table based on the pre-test and post test systematically.

1. Application

After making the planning, it was tried to apply the research procedure that has been already planned. There are some steps in doing this research:

- a. In the first meeting, the pre-test has been given.
- b. After giving the pre-test, the students have been given the treatment.

There were three meetings in the control class and three meetings in the experimental class. It has been delivered the meeting in an experimental class by using a video youtube. While in control class this research has been given the treatment by using the listening skills. The treatments have been given in three meeting because to know the differences between the control class and the experimental class significantly.

- c. The last meeting the post-test has been given.

## 2. Reporting

In this research, reporting has been done for the last procedure. There were two steps in reporting. The steps were as follow:

- a. Analyzing the data that is already received from pre-test and post-test.
- b. Making a report on the findings.

## **G. Scoring Scale for Evaluating Students' Listening Skills**

- a. Excellent - 5 - The student is attentive, courteous and sensitive to the ideas, tone and purpose of the presentation; intellectual curiosity,

attention to the task, and sensitivity to others help to create a productive climate in and for the group.

- b. Proficient - 4 - The student is attentive and courteous; purposefully and confidently listens to the presentation.
- c. Satisfactory - 3 - The student is courteous and willing to listen to others; accepts ideas of others.
- d. Limited - 2 - The student is easily distracted; lacks confidence to receive ideas easily and clearly; may use language, tone, or nonverbal behavior inappropriate for the occasion; is an insecure member of the group.
- e. Poor - 1 - The student is uninvolved in the activity and lacks courtesy.<sup>5</sup>

*Table 3.4*

| <b>Standards of Scoring</b> | <b>Range of Score</b> |
|-----------------------------|-----------------------|
| Excellent                   | 80 – 100              |
| Proficient                  | 73 – 79               |
| Satisfactory                | 65 – 72               |
| Limited                     | 60 – 64               |
| Poor                        | 55 – 59               |

## **H. Data Analysis**



The technique used in this data analysis is the quantitative method and will be described in statistical form. To analysis data the writer uses t-Test. The t-Test is the most frequently used measure in second language research when comparing mean scores for two groups. It supposed to know whether experimental versus control class when taking the same test has the same score or not. The writer uses the following formula<sup>6</sup> :

1. To search Mean Variabel X with formula :

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

2. To search Mean Variabel Y with formula :

$$M_y = \frac{\sum Y}{N}$$

3. Determine the total square of error in experimental class, with formula:

$$\sum x^2 = \sum x^2 - \frac{(\sum x)^2}{N}$$

4. Determine the total square of error in control class, with formula :

$$\sum y^2 = \sum y^2 - \frac{(\sum y)^2}{N}$$

5. To calculate  $t_{\text{test}}$  with formula :

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{Nx + Ny} - 2\right) \left(\frac{Nx \cdot Ny}{Nx + Ny}\right)}}$$

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<sup>6</sup> Anas Sudjono, *Pengantar Statiska Pendidikan*, (Jakarta: PT Raja Grafindo Persada 2017), 317.

$M_X$  = Mean score of the experimental class

$M_Y$  = Mean score of the control class

$\sum X^2$  = Sum of square deviation score in experimental class

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

$N_X$  = Number of student of control class

$N_Y$  = Number of student of control class

2 = Constant number

6. Determine the  $t_{table}$  with formula :

$$Df = N_X + N_Y - 2$$