CHAPTER III

RESEARCH METHODOLOGY

A. Research Methodology

Methodology explains how conduct the study including the proposed research design, the population of concern, the sampling procedure, the measuring instruments and any other information relevant to the conduct of the study.[1]In methodology, the researcher not only knows the research methods or techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation, how to apply particular research techniques, but they also need to know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why.

The approach which is used by the researcher is Quantitative Method. The former in quantitative involves the generation of data form which can be subjected to rigorous

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[1]Donald Ary, Lucy Cheser Jacobs, Chris Sorensen and AsgharRazavieh, *Introduction to Research in Education*, 95.

quantitative analysis in a formal and rigid fashion.[2] Quantitative research also seeks to determine a relationship between two or more variables. It is primarily related to numerical data, measurement and statistical analysis. The procedures of data collection and analysis are usually planned before.

In this research, the writer uses the experimental research to know the real data that got from the respondent. Experimental research is a research method that tests the hypothesis which has the form of cause and effect relations by manipulating dependent variables during manipulating time, the writer has to control extraneous variables, perhaps the transitional that occurred really as an effect of manipulating which is out caused by other variables. Nunan, experiments are carried out in order explore that strength of relationship between variables.[3]

The researcher does the data analysis with collecting the data from the field it means that the researcher must go to the place of the research. Moreover, in this research the researcher uses classroom action research because in the research there will be pre-

[2]C.R. Khotari, *Research Methodology: Methods and Techniques*, (New Delhi: New Age International Limited, Publishers, 2004), 5.

[3]David Nunan, Research Method and Language, (New York:Cambridge university press, 1999), 24-25.

test and post-test get the data where two classes are involved in this research, it is video class and song class. Both of use treatment because the researcher wants to compare were is more effective method in listening teaching between video and song. Both of classes received a pre-test on whatever instrument is used to assess the effect of the experiment before the treatment has been given. To make this research more clear, the researcher provided the research design as follows:

Table 3.1
Research Design

No	Class	Pre-test	Treatment	Post-test
1.	Video class	X	X	X
2.	Song class	X	X	X

1. **Time and Place**

The research will be held at SMA Al-Munawaroh Cilegon, which is located on Jl. H. Leman Pintu Air Gerem, Cilegon. The research will be held from September until October 2017. The researcher chooses this school because the students there felt difficult in their listening ability.

This research will be held to the students in the tenth grade whice consist of to classes, one class for video class and another for song class. Each class consist of 23 students.

2. Research Design and Methodology

This research uses quantitative method, the design of research is experiment research, John W. Best defined experimental research as the description and analysis of what will be or what will occur, under carefully controlled condition.[4] Thus the keywords in experimental research are:

1. What will be

2. What will occur

3. Carefully controlled condition.

The experimental research is choosen to determine influences an outcome or dependent variable, which is the effect of using video and song in learning listening to the students of tenth grades SMA Al-Munnawaroh Cilegon. In investigating the effect of using video and song in learning listening, two classes of ten grades are selected. Which is taught by using video and

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[4]Aggarwal, J. C. *Essentials of educational psychology.* Vikal Publishing House, 2002), 48.

song the first step, the researcher explains the topic of video and song then ask the students some question related to the topic, after that they watch the video and listening a song, and then they answer the question related to the information of the video and song.

3. **Population and Sample**

A population is a group of individuals who have the same characteristic. For example, all teacher would make up the population of teachers and all high school administrators in a school distric would make up the population of administrators. As these examples illustrate, populations can be small or large. You need to decide what group you would like to study.[5] The population of this research is all students of tenth grades at SMA Al-Munnawaroh Cilegon. They are X A, X B, X C, and X D. With the total population are 90 students.

A sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. In an ideal situation, you can select a sample of

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[5] Creswell, Jhon W. *Educational research: Planning, conducting, and evaluating quantitative.* Upper Saddle River, NJ: Pearson Education, 2016), 140.

individuals who are representative of the entire population.[6] The samples of this research are Classes Tenth of X A and X B which each class consist of 46 students.

4. Technique of Data Collection

Collocation test which was used as the pretest and posttest involved 10 filling the blank and 10 multiple choice. It was administrated to all forty students with the scores from 0 to 100. Collecting data is an important thing, in this research the technique of data collection which is used by the writer are :

a. Pre-test

Pre-test is conducted before the implementation of collocation instruction to find out the everage score of listening of the class which observed. Pre-test provides a measure on some attribute of characteristic that the listening assess for participant in an experiment before they receive a treatment.[7]

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[6]*Ibid*, 141.

[7]Jhon W. Creswell, *Education Research Methodology,* (Boston: Pearson Education, Inc., 2012), 297.

b. Post-test

Post-test was used to find out if collocation instruction is effective to teach A comparative listening skills through video and song.

5. **Technique of Data Analysis**

In analyzing the data, the writer uses statistical calculating of t-test to find out the difference score of students achievement in learning listening skills by using video and using song. The writer uses comparative technique. The comparative technique is an analysis technique to evaluate hypothesis concerning the differences between two variable examined statistically.The result of post-test is experiment class is named by XA and the result of the post-test in class is named by XB, the researcher has been analyzed by some steps.

The steps for statistic analyze are :

a. Investigating students' worksheet gives describe score in table.

b. Determine mean variable XI with formula

Note: X A (Sample of class video)

$$M_{1=}\frac{\sum X_1}{N_1}$$

M_1 = the average of variables score

Σ = sum of frequency X of the student's score

N_1 = number of students

a. Determine mean variable X2 with formula

Note: X B (Sample of class song)

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

b. Determine deviation score variable X1 with formula

X1 = X1 – M1

X_1 : class video

M_1 : the average of variables score

c. Determine deviation score of variable X2 with formula

X2 = X2 – M2

Df = N1 + N2 – 2

X_2 : class song

M_2 : the average of variables score

d.   The conclusion from this research can be seen from the result

of the t test.

$$t = \frac{M_{1-}M_2}{\sqrt{\frac{\left(\sum X_1^2 - X_2^2\right)\left(N_{1+N_2}\right)}{\left(N_{1+N_2}-2\right)N_{1.}N_2}}}$$

M1 : Gained score of the data class video

M2 : Gained score of the data class song

$\sum X_1{}^2$: Sum of square deviation of class video

$\sum X_2{}^2$: Sum of square deviation of class song

N_1 : The number of students class video

N_2 : The number of students class song

Df   : Degree of freedom