

CHAPTER III

RESEARCH METHOD

This chapter presented the research method. It focused on the method used in conducting this research. The decision covers research design, population and sample, research instrument, validity and reliability testing, data collection method and data analysis.

A. Research Design

Research design from this study is the researcher use quasi experimental to determine the validity of conclusion can be drawn the study. Ary et al, (2002:302) state that there are three kinds of experimental research, it can be classified as pre experimental design, true experimental or quasi experimental.

The researcher used quasi experimental design to test a theory. Latief (2019) said that the subjects of the research may not be applicable to the population since the subjects are not randomly selected from the population. Quasi experimental design consist of two group or two class pre test and post test design with quantitative approach. Lodico (2006) Quantitative studies, such as experimental studies, generally want to know if the results obtained on the sample would also be true if the entire population was included in the study. In here, choose two group to do pretest then make some treatment and the last post test.

In two group pre test and post test design usually involves three steps : (1) administering a pretest measuring the dependent variable, (2) applying the

experimental treatment X to the subjects, and (3) administering a post test, again measuring the dependent variable.

Table 3.1 Diagram of Two Group Pretest-Posttest Design

	Pre test	Independent variable	Post test
G1		X	
G2			

Where:

G1 : experimental group

G2 : control group

X : treatment

In this study, the procedurs of experimental research that use two group pre test and post test design are :

1. Administering a pre test measuring students' listening skill of the first grade at SMPN 1 Ngantru Tulungagung.
2. Applying the experimental treatment teaching by using cartoon movie to students listening ability of the first grade at SMPN 1 Ngantru Tulungagung.
3. Administering a post test measuring listening skill of the first grade at SMPN 1 Ngantru Tulungagung.

In the application of quosai experimental design is post test and pretest to get a score. When score collected, the researcher can look the score in pre

test and post test to look what difference the exposure to the teaching media has did. In this study differences between students listening skill before are taught using cartoon movie and after taught by using cartoon movie. So, the researcher hope that the students can easy to understand from the material and fun.

B. Population and Sample

Latief (2019) state that target population is usually too large to reach, so the researchers usually limit the sources of the data into the accessible population, the sources of data that the researchers have access to get the data from. The population of this research is the first grade of SMPN 1 Ngantru Tulungagung in the academic year of 2020/2021. Total number of population are 10 class. There are class 7A,7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J. The rearcher choose this school because the student can active and intellegent. This school have sufficient media.

The sample of this research are 2 class of the first grade of SMPN 1 NGANTRU. The researcher choose class VII J and VII I. The number of students on class VII J are 32 students and class VII I are 32 students.

Table 3.2 The Research Sample by Class

No	Class	Number of Students
1.	VII-J	32
2.	VII-I	32

The table above showed that sample was divided into two classes. The first was VII-J class as the experimental group which was given cartoon movie as a treatment. The second was VII-I as the control group which not uses cartoon movie.

In this study the researcher used a purposive sampling technique. Ary et al (2010) state that classifies sampling into probability sampling and non-probability sampling, in purposive sampling also referred to as judgment sampling, sample elements judge to be typical, or representative, are chosen from the population. So, purposive sampling is a type of sampling the selected sample were two classes with similar skill. The sampling used with similar skill in listening.

C. Data and Data Source

The data of this study analyzed to know the effectiveness between two variables. The two variable are the effect of cartoon movie to listening ability. The data of this study were collected from the students' score taken from post test of both classes to know whether taught by cartoon movie and not taught by cartoon movie to listening ability. This study, the researcher used quantitative approach. The data of this study was the students' work in administering post test. Administering post test is the method used by the researcher to give or work on the text to obtain a score.

D. Variable

Variable is defined as “characteristic that tend to different from individual, thought any two or more individuals may have the same variable trait or measure”. Variables must be clear in construct as well as in content. This research uses experimental design. Latief (2019) state that only experimental research investigated cause and effect relationship, the effect or the influence of X-variable to the Y-variable.

The variable in this study consist of independent variable and dependent variable. **Independent variable is cartoon movie and dependent variable is students listening skill.** In here, independent variable can influenced by dependent variable and dependent variable can influence by independent variable. So, cartoon movie can influenced to students listening ability.

E. Methods of Data Collection

Data collection method is the way used by researcher to collect the data. There are some method to collect the data by researcher. Latief (2019) state that in developing data collection instrument, a resercher has to start by defining the construct of what is meant with the students listening skill.

The researcher used pre test and post test to collect the data. Pre test was a test given to students before the experimental treatment. It was administering for both VII I as control class and VII J as experimental class to measure their listening ability. After the pre test, the researcher give treatment to students’ by using cartoon movie. For the experimental class, the researcher used the cartoon movie, whereas for the control class, the used the standard technique. The last is

post test, the purpose of the post test is to assess their capacity following treatment. A post test was given to both the experimental class and control class.

F. Instrument

The instrument in this research is Test. In this study using pretest and posttest. Latief (2019) state that if it happens that the students in the experimental group remember the questions of the pretest and have found out the correct answer before the posttest is administered, their answers to the posttest do not show the result of the experiment.

From text above, the test which is given is listening ability in the form of pretest and post test. Pretest is given to the students before the researcher do a treatment. Post test is given to the students after the researcher do a post test and get the treatment. The treatment is taught listening ability to the students by using cartoon movie.

In this research, the researcher gives 36 questions to the students. The kinds of questions are 20 multiple choice, 10 blank sentence (missing words) and 6 answer questions . The qualification of pretest and post test is the students will get 1 value for correct answer and 0 for incorrect answer for multiple choice, the students will get 3 value for correct answer and 0 for incorrect answer for blank sentence and the students will get (5 value for no fault of grammar and the vocabulary is good and suitable) (4 value for sometimes there is fault of grammar that influence the meaning and the vocabulary) (3 value for often faults in grammar and the vocabulary is often unsuitable) (2 value for many faults in

grammar and incorrect vocabulary) (1 value for serious problem in grammar and the vocabulary is limited), and (0 for incorrect answer for essay).

G. Methods Data Analysis

The method data analysis from this study used experimental research. Creswell (2014) an experimental design is used in which attitudes are assessed both before and after an experimental treatment. Experimental research is a powerful research method to establish cause and effect relationship involving two or more variables, the variable that becomes the cause (independent) and the variable that becomes the effect.

When the researcher can only assign randomly different treatments to two different classes, the researcher uses quosai experimental research design.

So, to collect the data using quosai experimental research. The first, researcher use the pretest to two class experimental class and control class. Then, the researcher make a treatment used cartoon movie in experimental class and make a conventional treatment to class control. The last is the researcher use the post test to two class experimental and control class. The purpose is applied to look the score between in the pretest and post test.

H. Hypothesis Testing

The statistical test was intended for comparing two means, which is the means of before and after treatment. The way to test whether the null hypothesis can be rejected is by comparing T-value of the obtained statistics is more than 0,05. The hypothesis testing of this study is as follow,

If the significance level is more than 0,05 the alternative hypothesis is accepted and the null hypothesis is rejected. It means that there is different score on student's listening ability after and before being taught by using cartoon video.

If the significant level less than 0,05 the alternative hypothesis is rejected and the null hypothesis is accepted. It means that there is a not significant different score on student's listening ability after and before being taught by using cartoon video.

I. Validity and Reability

In this study, the test should have validity and reability because both of them is very important principle of language testing. Before using the test, firstly the researcher had try out for post test to students of first grade of SMPN 1 Ngantru, Tulungagung.

1. Validity

According to Brown (2004: 22) as quote by Isnawati (2011:16) validity is the extent to which inferences made from assessment result are appropriate, meaningful and useful in terms of the purpose the assessment. The researcher used content validity and construct validity in this research.

a. Content validity

To have content validity, the coverage of the tasks becomes the evidence. The test is from researcher the form of lesson plan made by researcher themselves. The researcher using cartoon video to give media

to learning in During. When the researcher send the audio cartoon, the students hear and pay attention. The student can give some conclusion or answer the question that has been given from the researcher. So, the researcher can correct when the students can answer in accordance with the given context.

b. Construct validity

The instrument of this research was constructed based on appropriate theory listening ability to qualify the construct validity. The researcher constructed the instrument in the form of multiple choice question, blank sentence and essay. It was chosen due several reasons such as: multiple choice is more more flexible and effective, blank sentence can make student listen clearly and the last essay to get higher level.

Before the researcher give the text to students, the researcher consulted to English teacher of SMPN 1 Ngantru Tulungagung. After consulted by teacher, the researcher consulted to English lecturers at IAIN Tulungagung was selected that is Dr. Susanto as the advisor of this reasearch to check the test.

2. Reliability

Reliability is one of criteria of a good test, must be valid and reliable. The test is reliable when it derives similar results if it administrated twice in the same condition.

The researcher used a split-half method to get two row scores as prove of test consistency. One of the technique to check the reability of instrument by deviding two parts. The reability index is reflected by the correlation of those parts. The students of VII-H were divided into two groups. The first half of students were called as top group and the last half were called as bottom group. After get two rows of score, the researcher used Spearman Brown in SPSS 16.0 for windows to find out the reability of the test. The result of computation then was compared the table to see the reability level. Sarwono (2015: 249) proposed the criteria of reability as shown below:

Table 3.3 Criteria of Test Reability

No	Score	Criteria
1.	If the Guttman Split-Half Coefficient $\geq 0,80$	Reliable
2.	If the Guttman Split-Half Coefficient $\leq 0,80$	Unreliable

The compitation result from SPSS 16.0 for reability testing multiple choice, blank sentence and essay can be seen on the table:

Table 3.4 The Result of Reability Testing Multiple Choice

Reliability Statistics		
Cronbach's	Value	.631
Alpha	N of Items	10 ^a
	Value	.749
	N of Items	10 ^b
	Total N of Items	20
Correlation Between Forms		.773
Spearman-Brown	Equal Length	.872
Coefficient	Unequal Length	.872
Guttman Split-Half Coefficient		.861

a. The items are: soal1, soal2, soal3, soal4, soal5, soal6, soal7, soal8, soal9, soal10.

b. The items are: soal11, soal12, soal13, soal14, soal15, soal16, soal17, soal18, soal19, soal20.

To find out whether the instrument was reliable, it can be seen from the Guttman Split-Half Coefficient column. The table 3.4 above showed that coefficient was 0,861 which was bigger than 0,80. According to Sarwono, it means that the instrument used by researcher was reliable.

Table 3.5 The Result of Reability Testing Blank Sentence

Reliability Statistics		
Cronbach's Alpha	Value	.801
	N of Items	5 ^a
	Value	.598
	N of Items	5 ^b
	Total N of Items	10
Correlation Between Forms		.685
Spearman-Brown Coefficient	Equal Length	.813
	Unequal Length	.813
Guttman Split-Half Coefficient		.806

a. The items are: soal1, soal2, soal3, soal4, soal5.

b. The items are: soal6, soal7, soal8, soal9, soal10.

To find out whether the instrument was reliable, it can be seen from the Guttman Split-Half Coefficient column. The table 3.5 above showed that coefficient was 0,806 which was bigger than 0,80. According to Sarwono, it means that the instrument used by researcher was reliable.

Table 3.6 The Result of Reability Testing Essay

Reliability Statistics

Cronbach's Alpha	Value	.416
	N of Items	3 ^a
	Value	.411
	N of Items	3 ^b
	Total N of Items	6
Correlation Between Forms		.698
Spearman-Brown Coefficient	Equal Length	.822
	Unequal Length	.822
Guttman Split-Half Coefficient		.800

a. The items are: soal1, soal2, soal3.

b. The items are: soal4, soal5, soal6.

To find out whether the instrument was reliable, it can be seen from the Guttman Split-Half Coefficient column. The table 3.6 above showed that coefficient was 0,80 which was same as 0,80. According to Sarwono, it means that the instrument used by researcher was reliable.

J. Normality and Homogenety Testing

Normality and homogenety testing are one of pre-requirement test used for analyzing data in an independent sample t-test. Before analyzing the data, the researcher conduct preliminary data analysis:

1. Normality Testing

Normality testing was used to determine whether the data were normally distributed. The researcher used *Kolmogorov-Smirnov test* with SPSS 16.0 to know the normality of large sample. According to Nurul Chojimah (2020) normality testing as follows:

- a. H_0 : The data are normally distributed
- b. H_a : The data are not normally distributed

From normality testing above, the data was normally distributed if H_0 was accepted and the data was not normally distributed if H_a was accepted. The significance level : 0,05 used *Kolmogorov-Smirnov test* from SPSS 16.0. This research used 64 students as the research sample.

2. Homogeneity Testing

Homogeneity testing was used to ensure that the data manipulation collected or firmly obtained from completely different population. The researcher used t-test of homogeneity of variances with SPSS 16.0 to test of the homogeneity. The value of significance (α) = 0,05. Based on Stanislaus (2009), the basic decisions making in homogeneity testing were as follows:

- a. If the significance value $> 0,05$ then the data distribution is homogeneous
- b. If the significance value $< 0,05$ then the data distribution is not homogeneous

K. Prosedure of the Reserch

The procedure in this research showed the step completed and how the research was conducted by researcher. This research, the treatment by using cartoon movie was applied only to the experimental group. While the control group was taught by using conventional treatment. The treatment was given before conducting post test. The schedule which presented the prosedure of this research can be seen on the table below:

Table 3.7 Research Schedule

No	Group	Meeting	Date	Time	Activity
1.	Experimental (VII-J)	1	Tuesday, February 23 th 2021	1-2	Pre-test
	Control (VII-I)		Wednesday, February 24 th 2021	1-2	Pre-test
2.	Experimental (VII-J)	2	Tuesday, March 16 th 2021	1-2	Treatment 1 by using cartoon movie
	Control (VII-I)		Wednesday, March 17 th 2021	1-2	Treatment 1 by conventional method
3.	Experimental (VII-J)	3	Tuesday, March 23 th 2021	1-2	Treatment 2 by using cartoon movie
	Control (VII-I)		Wednesday,	1-2	Treatment 2 by

			March 24 th 2021		conventional method
4.	Experimental (VII-J)	4	Tuesday, April 5 th 2021	1-2	Post-test
	Control (VII-I)		Wednesday, April 6 th 2021	1-2	Post-test

The treatment by using cartoon movie was given only to VII-J students as the experimental group. While VII-I students as the control group was taught by using conventional method. In addition, the instrument was tried out to VII-H students on March 25th 2021.