CHAPTER III
RESEARCH METHOD

This chapter will present the description of research method that includes research design, research variables, population and sample, research procedure, research instrument, data collection, and data analysis. Below is the description of the research methodology.

A. Research Design

Creating a collection of techniques and processes to respond to a research question or test a research hypothesis is the goal of a research design. The research design is a useful planning tool for carrying out the study. Additionally, it provides compelling evidence to back up the conclusion. In order to design his research.

This research uses quantitative research as the method. Quantitative research focuses on objectivity. there is truth out there and measuring the phenomenon to be investigated, this research assigns a number to an interesting idea or construct. There are two categories of quantitative methodologies: experimental and non-experimental/descriptive (Schreiber and Asner-Self, 2011). This study uses experimental design. An essential component of experimental research is the deliberate control and manipulation of the variables that determine the events of interest, the introduction of interventions, and the measurement of the effects of such interventions (Cohen et al., 2007).

Pre-Experimental Design, True Experimental Design, Factorial Design, and Quasi Experimental Design are four different types of experimental designs that can be used as good study for research (Muijs, 2004). This research uses quasi-experimental. The quasi-experimental design is intended to approximate as closely as possible the advantages of the actual experimental design where the problems occur, such as having to implement the program in a natural school environment.

The researcher conducts quasi-experimental because the research sample used is purposive sampling technique, namely the selection of samples is not done randomly. And also, researchers provide treatment and examine changes from the

treatment that has been given to investigate the effect of the effect of watching animated video on listening skill of students with their different learning style.

B. Research Variables

A variable is an attribute of the object of the research. There are three variables that are involved in this research involvely :

1. Independent variable : Watching animated video
2. Dependent variable : Listening skill of students
3. Moderator variable : Learning Style

C. Population and Sample

The total number of research objects constitutes the population. The population can also be described as the total number of units or people whose traits are being investigated (Ary et al., 2019). In this research the subject of this research is the students in the eight grade in MTsN 6 Blitar. There are six classes in MTsN 6 Blitar. Each class consist 30 – 32 students. the researcher will choose two classes as a sample for the study from a whole eleventh grade students at MTsN 6 Blitar.

There are two out of six classes as sample in this research. One of the classes is experiment class, and the other is the control class. The researcher takes 60 participants as a sample of this research.

Table 3. 1

Table of Population of the Research

CLASS	STUDENTS
A	30
B	30
Total	**60**

A sample is a small group of people chosen to represent the full population from which it is derived. Two classes are chosen as sample. they are VIII.2 and VIII.3. The researcher chooses these classes because according to the English teacher’s considerationthese two classes are equal.

D. Research Procedure

The treatments in experimental class and control class are conducted for six meetings, including Learning style questionnaire, pre-test, class treatment, and post-test. follows the broad stages outlined below:

Table 3. 2

Schedule of Treatment

Meeting	Experimental Group	Control Group
1	Learning Style Questionnaire	Learning Style Questionnaire
2	Pre Test	Pre Test
3	Treatment 1 using animated video	Treatment 1 using Storytelling media
4	Treatment 2 using animated video	Treatment 2 using Storytelling media
5	Treatment 3 using animated video	Treatment 3 using Storytelling media
6	Post Test	Post Test

Table 3. 3

Treatment Activities

Meeting		**Experimental Group**	**Control Group**
1		The researcher shares questionnaire	The researcher shares questionnaire
2		The researcher gives pre-test	The researcher gives pre-test
Meeting	**Stages**	**Experimental Group**	**Control Group**
3,4,5 (Treatment)	Pre-teaching activities	The researcher Greets and ask students to pray The researcher explains about today's lesson. The researcher introduces the material about listening	The researcher Greets and ask students to pray The researcher explains about today's lesson. The researcher introduces the material about listening
	Whilst activities	The researcher gives the material of English listening	The researcher gives the material of English listening
		The researcher gives the students some unfamiliar words,	The researcher gives the students some unfamiliar words,

		expressions, and idioms that related to the animated video	expressions, and idioms that related to the material
		The researcher gives the time for students to watch animated video	The researcher plays the story to the students
		The researcher asks students to take notes about the material they watch.	The researcher asks students to take notes about the material they listen.
		The researcher divides students into several group, consist of 2 students then instructs each group to discuss about the movie	The researcher divides students into several group, consist of 2 students then instructs each group to discuss the material they listen.
		The researcher brings 2 groups to answer each other's questions from the opposing group	The researcher brings 2 groups to answer each other's questions from the opposing group
	Post activities	The researcher evaluates the students' performances	The researcher evaluates the students' performances
		The researcher summarizes the topic or material today	The researcher summarizes the topic or material today
		The researcher asks students to pray	The researcher asks students to pray
		The researcher closes the class	The researcher closes the class
6		Post-test	Post-test

E. Research Instrument

To measure the quasi-experimental, the researcher has some instruments. Instruments are like tools which are used by a researcher in using a method. The researcher instruments are used to get the primary data and supporting data. To colllect data in this study, the instrument used are *questionnaire* and *test.*

1. Questionnaire

An instrument in which a set of questions or statements must be answered by respondents whose purpose is to collect data according to the needs of the research. respondents provided written responses to questions or marked items indicating their responses. The data collection was also relatively fast because the researcher did not need to be present when filling out the questionnaire. This is a list of questions that must be answered to obtain information. In this study, the questionnaire was written in Indonesian to make it easier for respondents to understand the questions.

The questionnaire is used to investigate the students' learning style who are categorized as visual, auditory, and kinesthetic learner. The questionnaire is given before the start of the treatment process for students. The questionnaire contains answers with Strongly agree, agree, disagree, and strongly disagree. The items of learning style questionnaires are adopted from Quantum Teaching written by DePorter, B., Reardon, M., and Singer-Nourie, S (DePorter et al., 2000). The total number of the highest points on the indicators is regarded as the students' preferred learning styles. The complete questionnaire can be seen in Appendix.

Table 3. 4

Learning Style Instrument Indicators

NO	KINDS OF LEARNING STYLES	ITEM NUMBER
1	Visual	1,2,3,4,5,6,7
2	Auditory	1,2,3,4,5,6,7
3	Kinesthetic	1,2,3,4,5,6,7

2. Listening Test

The researcher used the pretest and post-test. Pre-test is a series or a test or exam given to students at the beginning of learning or certain activities. It is to measure students' listening skills before the treatment given. While post-test is a series or a test or exam given to students after a material or action has been

taught. It is conducted to measure students' competence in comprehending the listening and its vocabulary after the treatment given. The test is adapted from students' handbook that has a listening section.

F. Data Collection

A questionnaire and a listening test is used as the devices for gathering the data for this investigation. The following information is gathered by the researcher for this study: The eighth-grade students were chosen as the population in the beginning by the researcher. Second, one of the eighth graders is used as an experimental sample by the researcher. Third, before beginning the treatment, the researcher conducts a pre-test to gauge the students' starting knowledge. Fourth, the researcher uses storytelling for the control group and animated video for the experimental group. Fifth, the researcher conducts a post-test to measure the students' listening abilities following the intervention. The researcher next examined the test findings after completing the aforementioned steps. Analysis was done to get significant data outcomes.

G. Data Analysis

1. Data Analysis of Questionnaire

   There are 21 items of the questionnaires. The students are asked to respond on the questionnaire contains answers with Strongly agree, agree, disagree, and strongly disagree. The score for each item is 4, 3, 2, and 1

2. Data Analysis of Listening Test

   The data is analyzed using quantitative forms by the researcher. Quantitative data is processed to obtain a numerical representation, to describe a series of numbers, and to portray numbers in the form of averages, frequencies, and percentages.

Meanwhile, the quantitative data for this study is gathered using a quantitative technique known as the post-test of the experimental and control groups. To analyze the data, the researcher used ANCOVA on SPSS programs 25.0. Following the completion of the test, the researcher compared both tests to determine whether or not there is a significant effect of watching animated video on listening skill of students. Following the collection of data from the experimental and control

groups' pre- and post-tests, the researcher employed descriptive analysis, followed by the normality test, homogeneity test and ANCOVA, which are discussed as follows:

a. Descriptive Analysis

This is conducted to obtain an overview and exposure of the research data which includes the amount of data, maximum value, minimum value, and average value.

b. Prerequisite Test

A common statistical technique for measuring and comprehending data structure in a higher dimension is the analysis of covariates. A number of presumptions, including the normality of the multivariate, the homogeneity of the covariance matrices, and the homogeneity of the variances, should be established before performing the ANCOVA computation.

1) The Normality Test

The multivariate analysis requires a normal distribution population. To deal with the normality, one-sample Kolmogorov-Smirnov test was used. If the value of significance (p) > .05, the distribution of the data is normal.

2) The Homogeneity of Regression

To fulfill the pre-acquisition test dealing with ANCOVA analysis, there must be no interaction between the covariate and independent variable proven by P value obtained is higher than 0.05 ($p > \alpha$). The covariance matrices are homogenous if the significance value is higher than .05.

3) The Homogeneity of Variances

A homogeneity test is used to determine if two or more sample data groups originate from homogeneous (i.e., populations with the same variance). The homogeneity of variances between the control and experimental groups is calculated using Levene's test. Pre- and post-test variance homogeneity is similar if the homogeneity test of variance result is greater than 0.05.

4) Linier Relationship Between Covariate and Dependent Variable

The purpose of the test of covariate linearity is to evaluate the relationship between the covariate and dependent variable. It can be estimated by the significant value ($p < \alpha$ (.05).

c. ANCOVA

ANCOVA is a statistic used to measure the effect of independent variables called categorical on several dependent variables that display quantitative data. This analysis is also known as Analysis of Covariate. In this research, to test the hypothesis, the ANCOVA analysis had done with SPSS 16.0. Here are the criteria for Hypothesis testing.

1) If it is obtained that the significance value (2-tailed) < 0.05, it can be concluded that there is a significant difference between students' speaking ability taught by using Digital Storytelling better than the students' speaking ability taught by printed text. It means that Ha1 (Alternative hypothesis) is supported or Ho1 (Null hypothesis) is rejected.

2) If it is obtained that the significance value (2-tailed) > 0.05, it can be concluded that there isn't any between students' speaking ability taught by using Digital Storytelling better than the students' speaking ability taught by printed text. It means that Ha1 (Alternative hypothesis) is not supported or Ho1 (Null hypothesis) is not rejected.

The hypothesis of this research consists of Ho (Null Hypothesis) and Ha (Alternative Hypothesis). Here are the descriptions of the hypotheses:

1. Ho : There is significant difference in listening skill between students who are taught by using watching animated video and that those taught by using story telling

   Ha : There is significant difference in listening skill between students who are taught by using watching animated video and that those taught by using story telling

2. Ho : There is no significant effect on listening skill of visual students taught by using watching animated video

   Ha : There is significant effect on listening skill of visual students taught by using watching animated video

3. Ho : There is no significant effect on listening skill of auditory students taught by using watching animated video

Ha : There is significant effect on listening skill of auditory students taught by using watching animated video

4. Ho : There is no significant effect on listening skill of kinesthetic students taught by using watching animated video

Ha : There is significant effect on listening skill of kinesthetic students taught by using watching animated video