

CHAPTER III

RESEARCH METHOD

This chapter discusses the method used by the researcher in conducting this study. It cover research design, variable of the research, population and sample of the research, place and time, instruments of the research, data collection, and data analysis.

A. Research Design

To determine the influence of students' learning style on receptive skills achievement, this study employed Quantitative. Quantitative research is kind of method which used a numerical data and statistic technique. This study used causal comparative design. Causal comparative is kind an expost facto research which used to observe specific phenomena that has been happened. According to Donald Ary, et al. stated that causal comparative research purpose is to investigate cause and effect relationship between independent and dependent variables.⁶⁴ The aims of this study are to find out the influence independent variable (students' learning styles) to the dependent variable (receptive skills achievement).

There are three types of causal comparative research. The first is exploration causes, it investigates independent variables the subject. This outlines the reasons why certain research subjects seem different from the others. The second is the exploration of effects. This is related to the influence of certain things such as students' learning styles on dependent variable. The last is an

⁶⁴ Donald Ary et al., *Introduction to Research in Education, Wadsworth Cengage Learning, Wadsworth, Cengage Learning, 2010.*

exploration of consequences. This relates to the exploration of the interventions involved.⁶⁵ This study used second types of causal comparative research that is exploration of effects. It compared the effect of students' learning style and receptive skills achievement as the dependent variable.

B. The variable of the Research

There are two supporting variables in this research, independent and dependent variable. The independent variables can be determined as the variable that gives the effect to at least one variable while dependent variables is variable that independent variables affects. The independent variable of this research is students' learning styles and dependent variable is receptive skills achievement.

1. The students' learning style

Learning style in this research was the score that the students of XI class obtained after they answered the items on the questionnaire. The option that they choose determined what type of learning style they had. Whether they had visual, auditory, or had kinesthetic learning style.

2. Receptive skills Achievement

Achievement was what the students have achieved or the skills that they have mastered. In this research, the students' receptive skills achievement was score that students XI class after they answered listening and reading test.

⁶⁵ Jack R Fraenkel and Norman E. Wallen, *How to Design and Evaluate Research in Education*, 7th ed. (New York: McGraw-Hill, 2009).

C. Population and sample of the Research

As stated in Frankel & Wallen, population means all certain groups of people which are the result of research can be applied.⁶⁶ The target population in this research is all students at the eleventh grade in SMAN 1 Ngadiluwih academic year 2020/2021. There are eight classes, three classes for science programs and five classes to social programs (approximately 35 students in each class). The population can be seen in the table below:

Table 3.1

Table Population of the Research

Class	Students
XI MIPA 1	34
XI MIPA 2	35
XI MIPA 3	35
XI IPS 1	35
XI IPS 2	35
XI IPS 3	35
XI IPS 4	34
XI IPS 5	35
Total	278

**Source: English teacher SMAN 1 Ngadiluwih*

Sample is the group which the researcher gains information from.⁶⁷ He suggested that causal comparative studies have at least 30 students in each group. Thus, this research sample is considered sufficient. The sample of the research was the total of eleventh grade students of SMAN 1 Ngadiluwih. However, the researcher would take two classes for trying out the instruments. It was needed since the validity and reliability of the instrument were important for data

⁶⁶ Fraenkel and Wallen, 88.

⁶⁷ Jack R. Fraenkel and Norman E. Wallen, *How to Design and Evaluate Research in Education*, 7th ed (New York, NY: McGraw-Hill, 2009), 90.

collection. So, there would be six classes or 209 students considered as the sample of the research. This study just wanted to know whether there was significant effect or not between learning styles (VAK) on receptive skills. So, there are not any special and unique students to be investigated. However, in the data collection process there were 181 students as the accessible sample.

D. Place and time of the Research

This research was conducted at the eleventh grade of the SMAN 1 Ngadiluwih which located on Puskesmas street, Budi Mulyo, Branggahan, Ngadiluwih, Kediri East Java (64171). This research was conducted in the second semester of the academic year 2020/2021. The research would be conducted in June 2021. This school was one of the best senior high school in Ngadiluwih. This school was suitable for getting the data sources because the students of this school were taught by professional teachers who have many varieties of learning method.

E. The Instrument of the Research

The instrument used in this research was questionnaire and test which could be explained as follows :

1. The Questionnaire

The questionnaire was distributed to the sample about the students' learning style preference in statement form. The Questionnaire was adopted from De Porter, Reardon and Singer-Nourie in Quantum Teaching Book. The purpose of questionnaire was to find out in which type of learning styles the students was. The questionnaire was based on characteristics of each learning styles preferences (visual, auditory and kinesthetic learning styles). The questionnaire consists of 36

items. There are 12 items for each kinds of learning styles. The questionnaire in this instrument used *scale of frequency* consist of never, rarely, sometimes, always and often.

Table 3.2
Indicator of learning style instrument

No	INDICATOR	ITEM NUMBER
1	Visual learning style	1,2,3,4,5,6,7,8,9,10,11,12
2	Auditory learning style	1,2,3,4,5,6,7,8,9,10,11,12
3	Kinesthetic learning style	1,2,3,4,5,6,7,8,9,10,11,12

2. Test

The researcher conducts the second instrument by giving test. Test given by researcher to measure the achievement of receptive skills that is listening and reading tests. Listening test was adopted from English Assessment Test Book for Senior High School grade XI and National Examination 2013. Reading test was adopted from MGMP. The test consisted of several topics in first semester. Listening skills test consist of 20 and reading test consist of 25 questions in multiple choice form.

Table 3.3
Specifications of Listening Test

Objectives	Sub skill	Number of Item
The students are able to decide expression about asking and giving opinion	Identifying the expression of asking and giving opinion	Part A = 1, 2,3 ,4 ,5 ,6 ,7 ,8 ,9 ,10
The students are able to hear and comprehend a short talk	Identifying main idea and the aim of short talk	Part B = 1, 2,3,4,5
Students are able to hear and comprehend short conversations between two speakers. There are	Identifying the aim of short dialogue	Part D = 1
	Identifying the	Part D = 2

three or four question in each conversation	purpose of speaker's talk about specific information	
	Making a Prediction	Part D = 5
	Identifying the important details	Part D = 3, 4
Students are able to hear and comprehend a long academic topic audio text. There are three or five question in each audio discussion text	Identifying main	Part C = 1, 3
	Identifying the purpose of speaker's talk about specific information	Part C = 5
	Making a Prediction	Part C = 2
	Identifying the important details	Part C = 4

Table 3.4
The Specification of Reading Test

No	Objectives	Number of Item
1	Students are asked to recognize main idea of the text and what the text mainly talk about	1,2,7, 13, 14, 16, 17, 21
2	Students are able to identify information from the text that is explicitly stated and also recognize the inference	4, 8, 9, 10, 15, 23, 24, 25
3	Students are asked to recognize specific details according to the text	3, 11, 19, 22
4	Students are able to identify information from the text that is implicitly stated	5, 18, 20
5	Students are asked to identify the words or phrases meaning	6, 12
6	Understanding expressions about aggreging something	-

Then, the result of listening test and reading test of the students would be calculated using the formula as follow:

$$\text{Students' score} = \text{Students' correct answer} \times 1$$

E. Data Collection

In collecting the data, the questionnaire and test were used. The researcher preparing the questionnaire first, then followed by receptive skill test (Listening, and reading). The first step was distributing adopted questionnaire to respondents which consisted of items that represent the three kinds of learning styles; visual, auditory and kinesthetic learning styles from DePorter et. al., in Quantum Teaching book. In answering the questionnaire, the students were given 15-30 minutes and the students were asked to choose one option by giving mark (X) or checklist (√). Then, scoring the data from the questionnaire to determine kind of learning styles of each respondent. The Questionnaire was distributed online using Google form at <https://forms.gle/DZ2yAkvu2mn9QRbJ7>, and some were filled out in the face-to-face meeting. There were thirty seven students who filled out the questionnaire in the classroom, and the least 144 students were filling out online through the Google form.

The second step was conducting listening and reading test for students to find out students' receptive skills achievement. Conducting test, the listening and reading test was conducted for 60 minutes for each class. The test was also conducted online with Google form at <https://forms.gle/BoKZ7u6Y48z3NbGZ8>, and some were performed the test in the face-to-face meeting. There were thirty seven students who did the reading and listening skills test in the classroom, and the least 144 students accomplished the task online through the Google form. To control the online test, the researcher provided Google meeting video conference while the students were doing the test.

F. Data Analysis

After collecting the data, the researcher analyzed the data. In this quantitative research, the data was analyzed using statistic method. In this case, the research tested the hypothesis using statistical calculation called independent sample t-test and MANOVA by using SPSS version 25.0 based on the decision, if *p-value* was $< \alpha$, H_0 would be rejected while *p-value* was $\geq \alpha$, H_0 would be not rejected. However, before testing the hypothesis, there would be some prerequisite test that have to be done. Normality test and homogeneity test were conducted before independent sample t-test. Then, homogeneity test of variances and homogeneity of covariance matrices would be conducted before MANOVA.