

## **CHAPTER III**

### **RESEARCH METHOD**

This chapter presents the research methodology used in this study. It comprises research design, population, sampling, and sample, research instrument, validity and reliability testing, data collecting method, and data analysis.

#### **A. Research design**

In this research, the researcher uses quantitative approach. This research statistics had an important role as a tool to analyze the data in a research, it is importance to think the design of the research. According to Muijs, (2004: 1) quantitative research is eexplaining phenomena by collecting numerical data that are analyze using mathematically based methods (in particular statistic). It means that quantitative research methods dealing with numbers and anything that is measurable in systematic way of investigation of phenomena and their relationships.

In this research, the researcher uses the correlative research. Latief (2011: 111) states that correlative research designs are used to measure the relationship between two or more continuous variables. It means that, in correlation research, the researcher looking for variables that seem to interact with one other, so that when we can see one changing, we have an idea of how the other will change when we can see one changing

## **B. Population, Sampling, and Sample**

### **1. Population**

As well as deciding what information the researcher need, the researcher also need to decide exactly what the population going to be. According to (Muijs, 2004: 37) population is the group that the researchers want to generalize finding to. It means that, population is the totally of a person or group that it able to help the researcher generalize of finding. According to Arikunto, (1998: 115-117) state that population is the whole or research subject. In other word population is a group of individuals or items that share one more characteristics from which data can be gathered and analyzed. The writer will take tenth grade student of MAN Kunir in academic 2014/2015 as the populations they are X C consist of 30 students, XB 30 student. The total population is 60 students.

### **2. Sampling**

According to Muij (2004: 38) sampling is sampling technique which based itself that every member of the population has an equal chance to be selected as sample. From this devinition above, sampling is the technique a researcher chooses his/her sample. It involves simple random sampling, systematic random sampling, stratified random sampling, random sampling. In this study, the writer used random sampling. Random sampling is a technique or tool or procedure essentially a maniversion of the initial population (Voegtle, 2006: 143). From this definition, random sampling is the technique or procedure that used to selecting sample that every person. The procedure of taking sample begins from invite the

student to write the name. Then, the entire name put inside of bottle, and the entire name are put in a bowl, and they are shaken thoroughly. Those numbers or names coming out are considered to be samples.

### **3. Sample**

Sample is a part of population. The researcher sample was the tenth grade students at MAN Kunir Wonodadi Blitar that are 20 students' from XB, 20 students' from XC. The total are 40 students'.

#### **A. Research Instrument**

##### **1. Questionnaire**

Questionnaire is listed of question or statement about student's learning style that is given for them at tenth grade to find the information of learning style such as of reading comprehension. The process of constructing questionnaire in this research, the writer takes it from the book quantum learning (Depoter, 1992: 125). The researcher reads some theories in the book especially in part of learning style theory then deciding the points of learning styles characteristics to made as Questionnaire which related with the student's or learner's learning activity based on the theory, and it has a function to know the students preference in their learning style. This method contains some questions about the issue which shown agreement or disagreement or certain conviction. The simplest way to describe the idea is to provide member of alternative answer for each question. For the analysis is this item, an alternative answer could be strongly agree, agree, Undecided disagree, strongly disagree.

In this research, the question was written in Indonesian. It was done to make easier the respondent answer the question. The questionnaire consisted of fifteen (15) multiple choice. In this part, the researcher asked to the students to choose one option, it means that the answers most reflect their personality or their real life. Each question consists of five (5) options of the answer, strongly agree, agree, undecided, disagree, strongly disagree. This questionnaire will be given to the students. The researcher asked to fill the questions which they are listed. The scores of each student would be marked as: Score 5 for item strongly agree, score 4 for item agree, score 3 for item undecided, score 2 for item disagree, score 1 for item strongly disagree

## **2. Test**

According to Arikunto, (2008: 33) test is means of collecting information, but when compared to other tool this test is more formally because it is full restrictions. According to him, has the dual function of a test that are measured the students and to measure the success of the teaching program.

Here, the researcher used test to measure students' comprehension in reading. Researcher applied and instruction to choose the best answer in reading comprehension test consist of (25) multiple choice. The students' must notice the sentence or the story before they are answer the question.

This test has been conducted try out in another class and the result that the instruction of this test not to confuse to the student. And they can be done well. It can be assumed that the instruction was good and clear, so it was not necessary to revised. The essential requirement of test is valid.

## **D. Validity and Reliability**

### **1. Validity**

Muijth, (2004: 67) state that validity is probably the single most important aspect of the design of any measurement of the instrument educational research. It can be conclude that validity is the process that refers to how wel the test measures what it is purported to measure. However good our research design statistical analyses, the results will be meaningless if the researchers aren't actually measuring what the researcher is purposing to measure. According to latif, (2011: 223) valid means correct. It means that when the researcher claim that the result of students writing assessment is valid, the researchers convinced that the writing assessment result correctly reflects the students' writing skill as distinct from their reading skill, or from their knowledge of vocabulary. Validity is very important because one of main characteristic of test, without having this characteristic a test is not important.

#### **a. Content Validity**

Content validity is the process of establishing the representativeness of items with respect to the domain of skills, task, knowledge and so forth of whatever is being measured. Content validity refers to whether or not the content of the manifest variables. Validating the instrument, the researcher also consults the instruments related to the test with the lecturer and teachers who expert in teaching English language. The test in this research had fulfilled the content validity because the materials of this test were taken from the topic in the English book of the tenth grade student.

## **b. Construct validity**

Construct validity is the capacity for the measuring certain specific characteristics in accordance with the theory of language behavior and learning, in this research, reading comprehension test is tested aim to see their ability of student in student comprehension in reading text. Construct validity a slightly more complex issue relating to the internal structure of an instrument and the concept it is measuring (Muijh, 2004: 68). A test is said to have construct validity if it can be demonstrated that it measures just the ability which supposed to measure. Reading comprehension test can be assessed in the form multiple choices. Meanwhile, learning style is used questionnaire,

## **2. Reliability**

While validity refers to degree of correctness of the writing skill assessment results in representing the writing skill being. Reliability of the result of language skill assessment refers to the preciseness of the language skill assessment result in representing the actual level of the skill of the examinees' (latief, 2011: 212). It means that, reliability of instrument is needed to make sure that the instrument can be consistent if used in other time. Therefore, the instrument as the test is reliable.

In this case, before the researcher conduct research in this class, the researcher made a test consist of 25 question of multiple choice, and then the researcher asked two experts to give correction about this test, such as style, lay out the test, grammar, vocabulary and content. After that, the researcher revises the this test. And the researcher tried it out to 9 students to know how far the

reability of the instrument. The researcher used SPSS 16.0 version to account the data collected. So the researcher know whether this test have reability or not. The result of computing can be seen below:

**Table Reabiliti 3.1**

Cronbach's Alpha	N of Items
.754	25

Based on the table above, it showed the reliability of croncach's alpha is 0.754. the value conbach's alpha can be be interpreted as follow:

**Table 3.2 Cronbach's Alpha Interpretation**

<b>Cronbach's Alpha</b>	<b>Interpretation</b>
0,00 – 0,20	Less Reliable
0,21 – 0,40	Rather Reliable
0,41- 0, 60	Quite Reliable
0,61 – 0,80	Reliable
0,81 – 1,00	Very Reliable

Based on the table above, it can be conclude that the instrument of this research was in the category of reliable because  $0.61 < 0.754 < 0.80$

### **E. The Technique of the Data Collection**

The technique of the data collection of learning style is used non-test technique. There were two instruments of non-test technique applied; they were questionnaire. In answering the questionnaire, the students are asked to choose

one option by giving mark (X) or checklist (√). To identify the students' preference in learning style, the writer counted the mean score of each learning style type (visual, auditory, and kinesthetic). The students' highest mean score of learning style determined in which type they were. The data of the students' comprehension in reading was collected by the test.

#### **F. Data analysis**

Data analysis method is technique to analyze the obtained data. Analyze data is useful for the research, because the raw data taken from the field are meaningless if they are not analyzed.

Creswell, (2012: 338) state that, correlation is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. In the case of only two variables, this means that two variables share common variance, or they co-vary together. Because the research deals with quantitative data with consist of two variable that is learning style and reading comprehension, the researcher applies statistic method, therefore, used correlative research to analyze the data.

In this research, all the data are gained from the result of the questionnaire and test in the form of number. All the data therefore analyzed quantitative. Since this research is to know the correlation between two variables. The research is to know the correlation between two variables. The researcher applied correlation analysis by using Spearman Rank Correlation technique. The researcher used it because the data obtained from the two variables was exposed in term in quantitative score, and the data was using in ordinal data. Spearman rank



correlatio is a non parametric test that is used to measure th degree of association between two variables.

Here the researcher used the simple formula of Spearman Rank technique. It could be gotten the correlation coefficient value ( $r$ ) of two variables. Those variables X was students' score in the Questionnaire and variable y was reading score in.

**Table 3.3 The interpretation Coefficient Correlation ( $r$ )**

<b>Interval coefficient</b>	<b>Interpretation</b>
0,00– 0,20	The correlation is very low
0,20 - 0, 40	The correlation is low
0,40 - 0, 70	The correlation is moderate
0,70- 0,90	The correlation is high
0,90– 1,00	The correlation is very high

^ If the correlation coefficient ( $r$ ) obtained is smaller than or equal to the “ $r$ ”, Ha (There is significant correlation between student’s learning style and reading comprehension of tenth grade students at MAN Kunir Wonodadi Blitar Academic Year 2014/2015) is rejected. It means that, there is no significant correlation between student’s visual learning style preference and reading comprehension of tenth grade students at MAN Kunir Wonodadi Blitar Academic Year 2014/2015). Conversely, if the correlation coefficient ( $r$ ) obtained is greater than or equal to the “ $r$ ” product moment table value, Ha is accepted or Ho is rejected. It means that, there is significant correlation between student’s visual learning style and reading comprehension of Tenth grade students at MAN Kunir Wonodadi Blitar in academic Year 2014/2015).

All related to data analyze is explained more in chapter IV. Following is brief description of them.

### **1. Editing**

Editing process is done after the researcher finishes collected data from the field. This process started with giving identifies the questionnaire and Testing of reading comprehension. Score transcript and then checking the instrument, pointing and answering one by one.

### **2. Coding**

Instead of reading all the questionnaires and looking at scores of samples' reading test, coding system of data was very useful. It made data readable in more efficient way and time. Coding system for each variable will be displayed in Chapter IV together with analysis.

### **3. Tabulating**

In tabulating, the researcher entered the data in the tables to describe the data so the researcher was easier in understanding the structure of the data.

### **4. Analyzing data using SPSS**

After Each Variable was coded and put into tables, then the data were analyzed using SPSS 19.0 (Statistical Package For Social Science). Using Spearman Correlation Method, this thesis outcome was analyzed after calculating the entire variable.

### **G. The Statistical Hypothesis**

The statistical hypothesis with consists of Ha (Alternative Hypothesis) and H0 (Null Hypothesis) with the significance level  $\alpha = 0.05$  in this research was formulated as follow:

$$H_0 : \chi^2 = 0$$

$$H_a : \chi^2 \neq 0$$

H0 : There was no significant relationship between students' visual learning style in their comprehension in reading

Ha : There was a significant relationship between students' visual learning style in their comprehension in reading

The hypothesis criterion was according to Chi-Square analysis "Rejecting H0 if counted  $\chi^2 > \chi^2_{table}$  or  $\chi^2 > \chi^2_{(k-1)(r-1)}$  and accepting H0 if counted  $\chi^2 < \chi^2_{Table}$  or  $\chi^2 < \chi^2_{(k-1)(r-1)}$ ."