

CHAPTER III

RESEARCH METHOD

In this chapter the researcher provides brief explanation about research method: research design, subject of the study, instrument, data collecting method, and data analysis.

A. Research Design

Sukardi (2003: 4) says:

“Penelitian adalah usaha seseorang yang dilakukan secara sistematis mengikuti aturan-aturan metodologi misalnya observasi secara sistematis, dikontrol, dan berdasarkan pada teori yang ada dan diperkuat dengan gejala yang ada”

Based from explanation above, it can be said that research is the work done by someone to prove the theory following the steps that have been set. Research design was used to arrange the setting of the research in order to get the valid data.

This research was conducted through a quantitative approach. This research is non-experimental. According Tanzeh (2011: 63) Quantitative research is research which basically uses deductive-inductive approach, meaning that departs from a theoretical framework, the notion of experts,

based on his experience and understanding of the researchers then developed into the problems and their solutions. Research design in this approach is specific and detailed. The resulting data is numeric data.

Furthermore, in this study, researcher used quantitative research to obtain the significance of the relationship between the variables studied were students' attitudes toward English with the achievement of students in English class.

Meanwhile the research design was a descriptive correlational study. Descriptive said to be intended to get a description of a reality that already exists or has occurred on the subject. In this design the researcher does not manipulate treatment or placement of the subject (Hajar: 1999: 111), while the descriptive correlational design called for the implementation uses statistical analysis technique called correlation. The correlation that states the level of relationship between the variables investigated.

B. Population, Sample, and Sampling

1. Population

Arikunto (2010: 72) said the overall population is the subject of research. Agreeing with this notion, Sugiyono (2010:117) states that population is a generalization region involves an object or a subject that has quality and special characteristics in which chosen by the researcher

to investigate and make-conclusion. It means that population refers to large group.

Judging from the number of members of the population, the population consists of a finite population and an infinite population (Usman, 2003: 181). The populations in this study about 300 students.

Table 3.1
Population

Class	Students
XI IPA	172
XI IPS	128
Total	300

Meanwhile, according to its characteristic (Bungin, 2008: 100), the population is divided into homogeneous populations and heterogeneous population. These students include a heterogeneous population. Overall this is because individuals in this population pick traits that differ from one student to another student.

2. Sample

Samples are part of the population who want to study (Bailey, 1994:83). As criterion, if the researcher has several hundred subjects in the population, they can determine approximately 20-30% of the subjects. If the number of members in a population subject only covers between 100 to 150 peoples, and in the collecting of data researchers

used questionnaires, the number of subjects should be taken entirely (Arikunto, 2010:95). Therefore, the sample in this research was the count approximately 20% from the population. The totals of samples in this study were 60 students.

3. Sampling

To determine the sample, this research use sampling. Riduwan (2010:11) says sampling is a way of taking a representative sample of the population. In this case, the technique that is taken is probably the sampling technique. This is a sampling technique in which all members of the population has an equal chance to be selected into the sample (Prasetyo, 2008:122). The sampling technique chosen is probably simple random sampling technique. Sampling was done by a randomized process. To determine the subjects as the sample, firstly researchers create a lottery numbering 1-300. 1-300 are an order of students in the population of IPA-1 through IPS-3. This lottery is inserted into the jar then stir. After the researchers took a paper and then write what number is stamped on the paper. This activity is carried out up to 60 times because of the total subject taken is 60 students.

C. Research Instrument

After the design of the research was designed, the next step was to

draw up the instrument. Research instrument occupies the most important position on the field to obtain the data. Research instrument is the most complicated part of the whole process of research. The things that need to be disclosed in the research instruments are:

a. Questionnaire

According to Riduwan (2005:25), the questionnaire is a list of questions to others who are willing to respond in accordance with the user's request. The goal is to find the complete information about the problem of respondents without worrying if the respondent gave an answer that does not correspond to reality in filling out the questionnaire.

The types of questionnaires by Joseph Muri (2005: 134):

1. *Closed Questionnaire*, questionnaires alternative predefined answers.

Respondents only choose between alternatives that have been provided.

2. *Open Questionnaire*, this questionnaire provides an opportunity for students to express their opinions about something in question in accordance with the views and abilities. Alternative answers are not provided. They created their own answers and sentences in the language itself.

3. *Closed and open questionnaire*, this questionnaire is a combination of the two forms that have been discussed. This questionnaire is a

combination of the two forms that have been discussed. It means that in this form, in addition to available alternatives, given also the opportunity for the students to express their own alternative answers, if no alternative is provided in accordance with the relevant state.

Form of the questionnaire used in this study is closed questionnaire. This means that the questionnaire is a list of questions has been provided by the researcher to the students as research subjects. In terms of answer, this questionnaire is a questionnaire directly because students answer directly filled by the students themselves on subjects attitudes towards the English language. The questionnaire in this study used Likers scale with 4 answer choices that answer choice strongly agree the worth 4 points, agree had 3 points, disagree had 2 points, , and strongly disagree had 1 point. Totally about 25 questions. The questionnaire is on appendix 1.

b. Test

The test is an instrument or tool to measure a person's behavior or performance (Hajar, 1999: 177). This measurement is a series of questions posed to each subject that demands the fulfillment of cognitive tasks. With this instrument the researchers obtain a value of the data or the results of student achievement, that these data will be processed to determine the relationship of attitudes to the achievement of English

class XI MAN Trenggalek. The tests were given to students in the form of multiple choice questions with 5 answer choices. Totally were 25 questions and is based on the English material they have learned in the second semester. The detail of English achievement test on appendix 2.

Before the instrument is used as a data collection tool, the instrument is tested. The trial is intended to instrument the instrument in the form of a questionnaire to be valid and reliability before it is distributed to the respondents. The data of instrument try out on appendix 3 and 4.

D. Validity and Reliability Testing

Validity is a measurement that shows the validity levels of an instrument. A valid instrument has high validity. The other way, the fewer instruments mean it has low validity (Arikunto, 2010: 168). The formula is using *Cronbach Alpha* by using *SPSS 16.0 for Windows*. Criterion validity testing in consultation with the value of the Spearman's ranked correlation coefficient table, with $\alpha = 5\%$, if $r_{count} > r_{tabel}$ the item about the proficiency level as valid. Based to the $DF = 60 - 2 = 58$ then based on r table is 0.259. after Having calculated known number 9 and number 12 on the questionnaire is invalid because $r_{count} < r_{tabel}$, whereas in English is known there are 7 questions that are not valid. the invalid number were not

included in the assessment.

An instrument that has reliable will produce the reliable data too. If the data related with the fact, so how many time the data taken, it will be same. The reliability show the consistency and stability the measurement score (Sarwono, 2006: 219). The reliability is measure by *SPSS 16*. Criteria for testing the reliability of test consulted with the value of the Spearman's ranked correlation coefficient table, if $r_{count} < r_{table}$ the test items tested unreliability. Based on *Cronbach's Alpha* standardized test items according to the item the value is $0.850 > r_{table}$. That's mean the entire test reliably. Meanwhile according to a questionnaire the value of *Cronbach's Alpha* $0.875 > r_{table}$. Mean overall questionnaire also reliable.

E. Normality and Homogeneity Testing

1. Normality Test

Normality test is used to test whether a variable is normal or not. Normal here means if the data has a normal distribution. To test the normality of the data can use the *One Sample Kolmogorov-Smirnov* test with the provision that if Asymp. Sig > 0.05 , the data were normally distributed (Asmarani, 2008:234). In this case the normality using *SPSS (Statistical Product and Service Solutions) 16.0 for Windows*.

Based from the normality result on appendix 8, the figures obtained by questionnaire *Sign* 0,689 and the English test *Sign* 0,123.

Because of the *Sign* value $> 0,05$ it can be concluded that the data were normally distributed.

2. Testing Homogeneity

Homogeneity test is used to test whether a t-test the data model of homogeneous or not. If homogeneity is met then the researchers can perform advanced data analysis stage, if not then there should be a correction methodology. Based on the data obtained from the calculation results *Kolmogorov-Smirnov test* on appendix 8, can be seen through the homogeneity of significant value. If significant value $> 0,05$ then the data can be said to be homogeneous. The homogeneity table test showed significant meaning $0.55 > 0.05$, so that the data can be said to be homogeneous.

The steps of the data analysis are:

1. Determine the formulation of hypotheses

H_0 : There is no significant correlation of the of the students attitude and their English achievement for second grade students of MAN Tenggalek.

H_a : There was a significant correlation of the of the students attitude and their English achievement for second grade students of MAN Tenggalek.

2. Determine the basis for decision making

- a. Based on the sign

If $\text{sig} < 0.05$, then H_0 is rejected

If $\text{sig} > 0.05$, then H_0 received

- 3. Make a conclusion

- a. If $\text{sig} < 0.05$ or $t \text{ count} > t\text{-table}$, then H_0 is rejected and H_a accepted.

Thus the hypothesis which says "there is a correlation of the students attitude and their English achievement for second grade students of MAN Tenggalek " is significant.

- b. If $\text{sig} > 0.05$ or $t \text{ count} < t \text{ table}$, then H_0 is accepted and a rejected.

Thus the hypothesis which says "there is no correlation of the the students attitude and their English achievement for second grade students of MAN Tenggalek " is not significant.

F. Data Collecting Method

Data collecting method is the technique used by the researcher to obtain data. This data gathering took place in MAN Trenggalek especially for second grade Students. This research was ordered May, 22-30 2014. Data is collected by:

- 1. Step and technique to collect data

- a. Distributing questionnaire

Questionnaire is one way of gathering data regarding learning style. In distributing questionnaire, the researcher shared it to the all

classes in a week. The questionnaires were completed out of class time. The students were required to respond to the questions freely without limited time. Before that, the students were asked to give the immediate response and that they shouldn't hesitate and change their answers. The questionnaires were collected and response was entered into the computer for data analyses. In this study, the questionnaire used to get the data about students attitudes toward the goals and the content of English, students attitudes in studying English, and students deepening in English learning. The questionnaire was given a week before giving English testing.

Table 3.2
Lattice work

NO	Variables	Indicators	Related Number
1	Attitudes towards the goals and content of the English language course	• Understand and convinced of the importance of the purpose and content of the English language	1, 2, 13, 14, 20, 21, 22,
2	Attitudes toward studying English subjects	• seriousness in learning	3, 4, 8, 9, 10, 12, 18, 23, 24,
3	Attitudes toward deepening English subjects	• Efforts to deepen the subjects of English	5, 6, 7, 11, 15, 16, 17, 19, 25

b. Test

The test is a series of questions or exercises that are used to

measure student achievement. With this method the researchers obtain a value of the data or the results of student learning outcomes, that these data will be processed to determine the relationship of attitudes with student learning outcomes.

2. Qualification data

1. Sources of data

Sources of data are one of the most vital in the study. According Arikunto (2010: 172) is a result of recording the data either in the form of research facts and figures. The data source is the subject of where the data can be obtained (Arikunto, 2010: 161).

The sources of the data used in this study are:

a. Primary Data

Primary data is data obtained directly from the source, observed and recorded for the first time (Marzuki, 1989: 55). Primary data from this study is the calculation of the value of the attitude questionnaire data and students English score.

b. Secondary Data

Secondary data is data that is not cultivated itself was collected by the researcher (Marzuki, 1989: 56). Secondary data from this study was data of student class XI.

2. Variable

Variable is any entity that can take on different values.

Charles (1995: 29) states that the variable is characteristic that growing niche to differ from individual to individual, though any two or more individuals may have the same trait variable or measure. In this study, there are two variables attitude and English achievement. The both of them are as independent variables.

G. Data Analysis

Data analysis is the process of arranging the order of the data, organizing it into a pattern, category and description of the basic unit. Data analysis is a review of a series of activities, grouping, systematization, interpretation and verification of the data so that a phenomenon has social, academic and scientific (Tanzeh, 2011: 69).

In this study, the researcher used quantitative data analysis techniques, the data that can be realized with the figures obtained from the field. The quantitative data was analyzed by the author using statistics. To express the relationship between the data variables, this thesis used statistical package *SPSS 16.0 for Windows*.

At first the researcher measured the attitude of the respondent. Next, the researcher correlated them with average scores on the student

achievement. All the data gained from questionnaire and achievement tests, scores were in the form of number. To analyze the relationship between variables, Pearson Product Moment correlation analysis was used. Type of correlation is used bivariate correlations. Correlation bivariate correlation is used to measure the relationship between the independent variables and the dependent variable (Sarwono, 2006: 82).

Correlation can result in positive or negative numbers. If the correlation indicates a positive number then the relationship between the two variables are unidirectional. Unidirectional have great significance if the independent variable the dependent variable is also large. If the correlation produces a negative number then the relationship between the two variables is not unidirectional. Not unidirectional have great significance if the independent variable dependent variable is small. Figures correlations ranged from 0 to 1, with the provision that if the numbers close to one then the stronger the relationship between the two variables. If the correlation number is close to zero then the weaker the relationship between the two variables.

Table 3.3

Interpretation Correlation

<i>r</i>	Interpretation correlation
0,00 – 0,20	Very low
0,20 – 0,40	Low

0,40 – 0,70	Moderate
0,70 – 0,90	High
0,90 – 1,00	Very high

Data processing is a follow-up activity after the data collection carried out (Bungin, 2013: 164). In quantitative research, data processing is generally carried out through checking stage (editing), scoring (scoring), the process of identity (coding), and the process of disclosure (tabulating).

1. Editing

Editing is an activity that is performed after the investigators finished collecting data in the field. This process begins by giving the identity of the questionnaire and the learning achievement that have been missed. Then check out one by one the sheet of data collection instrument, and then check the points and answers available.

2. Scoring

Scoring is providing value to the questionnaire statement by converting the answer in the form of letters converted into numbers. The highest value is 4 and the lowest value is 1.

3. Coding

After editing the questionnaire, the next step is coding. That is the data that has been edited so that the identity is given a particular meaning when analyzed. Coding system for each variable will be

displayed in Chapter IV.

4. Tabulating

Tabulating is entering data in a certain table and arranges the numbers and counts them.

5. Writing Research Report

In the end a study should be conducted data analysis process written and recorded to be used as a report. This report is very important because it is the beginning for the quality of research evidence to assess its accuracy in solving real problems.