

CHAPTER III

RESEARCH METHOD

In this chapter, The discussion is divided into four sub topic. They are research design, population and sample, research instrument, validity and reliability testing, data collecting method and data analysis.

A. Research Design

One of important things that should be considered in conducting research is research design. Research design is commonly defined as the way of thinking and doing preparation to complete and achieve the goal of research (Burn n, Grove sk, 2005). This study can be regarded a quantitative research. Quantitative care about measuring relationships among available variable (Hopkins, 2000). This type of research puts more emphasizes in collecting data in the form of number. To express the relationships between data variables this thesis uses correlation formula. Correlation study is one in which there are no independent variable. Correlation research produces indexes that show both the direction and the strength of relationships among variables, taking into account the entire range of these variables. This index is called a correlation coefficient.

B. Population and sample

1. Population

Population is defined as a group of element or cases, whether individual, objects, or events that conform to specific criteria and to which we intend to generalize the result of the research (James H, 2008). The population

of this study is all freshmen students around 34 students that enroll in Madrasah Aliyah Unggulan that consist of 6 men and 28 women.

2. Sample

Because the population is limited. Therefore, sample in this research is the whole freshmen students who enroll in Madrasah Aliyah Unggulan that consist of 6 men and 28 women.

C. Research Instrument

In order to collect data for research, the researcher used some methods and instruments. Methodology is a way used by researcher in order to collecting data in order to easier the research and better result in short the data is more accurate, more completed, and more systematically so that it will be easier to be analyzed (arikunto, 2010:203). In this study use two instruments i.e. English Learning Anxiety questionnaire (ELAQ), and English test.

1. English Learning Anxiety questionnaire (ELAQ)

The questionnaire in this study was a modified version of English Learning Anxiety Questionnaire (ELAQ), which was partially based upon a questionnaire foreign language classroom anxiety scale (FLCAS), developed by Horwitz, and Cope (1986) to assess learners' anxiety about the target language learning. This newly-modified version of questionnaires English learning anxiety questionnaire (ELAQ) with 25 items used a 4-point Likert type scale ranging from "always" (4 point) to never" (1 points). "Always" was counted as 4 points, "sometimes" as 3 points, "seldom" as 2 points, and

“never” as 1 point. The higher the total points, the more anxious the students are. The first part of the questionnaire was a personal English Learning background questionnaire. It was intended to investigate students’ general English learning experience, especially those experiences related to learners’ English learning anxiety. The second part of the questionnaire was an English learning anxiety questionnaire (ELAQ), which was used to investigate participants’ language anxiety in English learning.

In order to facilitate the participants’ understanding of the questionnaire items, this instrument was conducted in the participants’ native language, Bahasa Indonesia, to avoid unnecessary misreading and miscomprehension.

2. English test

In this study, the test that use in this study is English test that was developed based on syllabus that the teacher used in the school in which covering one semester. During developing the test, the researcher was guided by the teacher. The test consists of 25 items that served in multiple choices. The teacher suggested using semester one syllabus as reference in developing the test. The test consists recount text, procedure text, narrative text and announcement.

D. Validity and Reliability Testing

The researcher used questionnaire and test as instrument to collect the data. Questionnaire is used suppose to measure students’ anxiety level in learning English. In other hand, the test is used to measure students’ English

achievement. To make the data more valid and reliable, it needs validity and reliability testing both of them.

1. Validity of the instrument

a. English Learning Anxiety Questionnaire (ELAQ)

Another important instrument that uses to collect the data in this study is questionnaire. To make the data is accurate, validation of the questionnaire is important thing to be considered. The questionnaire is adoption of questionnaire foreign language classroom anxiety scale (FLCAS), so it must be evaluated by the expert, the teacher and the lecturer, before it is distributed. It also needs to be try out to know whether all item of questionnaire is understood by the participant.

b. English test

Sukardi (2005:122) stated validity is degree that indicates in which a test measures what intended to measure. Validity is very important because one of the mains characteristic of test, without having this characteristic data is not accurate. To make the test valid, the researcher use content validity. The test is said to have content validity if its contents constitutes a representative sample of language skill, structures etc being tested. (Ida Isnawati. 2003: 27). The test that use to collect the data in this research is valid base on content validity because the each item of the test is wrote base upon syllabus that use in 10 grade English for second semester (see appendix 1). Besides that, face validity is also used by the researcher. The

test is evaluated by the teacher after it was developed. finally, try out is also done by the researcher.

2. Reliability of the instrument

a. English Learning Anxiety questionnaire (ELAQ)

Another instrument which researcher use in this study is questionnaire. Questionnaire is used to get the data of students' level of anxiety. It is very important to make the questionnaire reliable. Reliable testing which researcher use to assess this questionnaire is cronbach's alpha by using SPSS 16.0. The result of calculation is showed bellow:

Table 3.3 Questionnaire reliability

		N	%
Cases	Valid	10	100.0
	Excluded ^a	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.710	25

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
77.50	24.944	4.994	25

Base on the calculation above, the value of cronbach's alpha is 0.710, and $0.710 > 0.600$ as limitation of cronbach's alpha. So, the questionnaire can be said reliable

b. English test

In this case, test is used to asses students' English achievement. it is very important to make the test reliable. Reliability means that score from an instrument are stable and consistent. To gain the reliable the researcher use test retest. Try out done on Saturday, 18 April 2015 and it done again on Saturday, 9 May 2015. To calculate reliability for English test the researcher use test retest by using SPSS 16.0. the table of data and the calculation are showed bellow:

Table 3.1 Score of Test Retest

Subject	First score	Second score
A	72	74
B	44	46
C	40	42
D	64	62
E	72	80
F	52	54
G	52	72
H	76	80
I	64	60
J	92	92

Base on the data above, the result of SPSS version 16.0 for windows is showed bellow:

Table 3.2 Test Retest Reliability

Descriptive Statistics			
	Mean	Std. Deviation	N
first test	62.80	16.006	10
second test	66.20	16.123	10

Correlations			
		first test	second test
first test	Pearson Correlation	1	.914**
	Sig. (2-tailed)		.000
	N	10	10
second test	Pearson Correlation	.914**	1
	Sig. (2-tailed)	.000	
	N	10	10

** . Correlation is significant at the 0.01 level (2-tailed).

The result of calculation showed reliability coefficient was 0.914 and the ideal reliability coefficient is 1. In this study the calculation was comparable to 1 (0.914 ~ 1) it means that the test is reliable

E. Normality Testing

Normality testing was used to know whether each instrument have normality or not. The main reason of conducted normality testing in this research that it was necessary for the researcher to know that the population or data involved in the study was in normal distribution. One of the well-known ways to test the normality in a research used *One-Sample Kolmogorv-Smirnov test*. This could be done easily by using SPSS 16.0 program. Normality test was done towards the two scores (anxiety questionnaire and English test) obtained from the

students. The data was presented as the following table (see table 3.2).

Table 3.4:Anxiety and English Test Score

No.	Kode	X_1	X_2
1	AKM	96	36
2	AT	80	52
3	ANL	59	68
4	BRM	63	72
5	DP	54	72
6	DAI	87	44
7	FF	92	56
8	IA	66	64
9	IM	60	72
10	LS	77	52
11	LN	82	48
12	LJD	66	60
13	MFS	61	80
14	MSW	52	80
15	MSG	82	52
16	NAU	84	76
17	NDM	58	68
18	NSW	68	64
19	NM	45	92
20	NU	66	64
21	RN	57	76
22	RO	75	52
23	RFN	76	56
24	SNF	56	76
25	SM	58	72
26	SZ	84	48
27	SS	78	52
28	SA	84	48
29	VOS	53	80
30	YNH	80	52
31	YSPD	85	48
32	MW	56	76
33	RDI	92	40
34	MW	72	40
		2404	2088

The hypotheses involved were:

- a. H_0 : The data is in normal distribution
- b. H_a : The data is not in normal distribution

The analysis of which hypothesis was accepted refer to the significance value ($\alpha = 5\%$). Null hypothesis (H_0) would be rejected when the *Asymp. Sig* value was lower than 0,05 (*Asymp. Sig* < 0,05). The resulted of the normality testing done by using SPSS below (see table 3.6).

Table 3.5: Table Normality using One Sample Kolmogorov-Smirnov Test
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		34
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	7.12878517
Most Extreme Differences	Absolute	.200
	Positive	.200
	Negative	-.186
Kolmogorov-Smirnov Z		1.165
Asymp. Sig. (2-tailed)		.132
a. Test distribution is Normal.		

The value of *Asymp. Sig. (2-tailed)* was 0,132 which were higher than 0,05. As a result, the Null hypothesis (H_0) was accepted while the Alternative Hypothesis (H_a) was rejected. Accordingly, all data from the scores was in a normal distribution.

E. Data Collection Method

In conducting this research, the researcher distributes questionnaire and administering test as method of collecting data.

1. Questionnaire

Questionnaire is some of written questions use to get information from respondent/ sample. According to arikunto (2010:38), there are two kind of questionnaire base on the way in answering. There are opened questionnaire and opened questionnaire. Opened questionnaire give opportunities to the respondents to answer the questions using their own word, but closed questionnaire is served in option of choices.

In this study, the researcher used closed questionnaire and the questions are written both in Bahasa Indonesia and English. The questionnaire is modification of which was partially based upon a questionnaire foreign language classroom anxiety scale (FLCAS), developed by Horwitz, and Cope (1986). To make the questionnaire is easier to understand by the respondent , the researcher effort to translate it to bahasa indonesia. The questionnaire consist of twenty five questions which are served in multiple choices. Each question consists of four options which show degree of anxiety level. Type of this questionnaire is likert scale. According to Sugiono (2011: 93), likert scale is used to measure attitude, opinion , and perception of individual or group of individual about social phenomena.

Qualification of questionnaire score as follow:

- a) Score 4 for the option always
- b) Score 3 for the option sometimes
- c) Score 2 for the option seldom
- d) Score 1 for the option never

By the qualification, it indicates the higher score was respondent got, the higher level of anxiety was respondent have. The researcher distributed the questionnaire on Saturday, 30 May 2015. Before distributing the questionnaire, the researcher explain how to complete it and allowed the respondent to ask if getting difficulty. The researcher calculated the scores a day after distributing.

2. Test

Besides using questionnaire to collect data, the researcher used test to get score of students' English achievement. The test was developed based on the syllabus that the teacher uses. The test consists of 25 item which were served in multiple choice form. By the test, the researcher supposed to asses students' English achievement. It was administered after the students complete the questionnaire in the same day. The researcher allowed the students complete the test in an hour. The scores of the test were calculated two days after it was held.

F. Data Analysis

The purpose of this research was to measure the correlation between students' level of anxiety and their English achievement. The data of the study

were analyzed by using statistical analysis. Statistic technique for determining relation between pairs of score knows as correlative procedure (Arikunto, 2010:143). Moreover, Arikunto (2010:128) says that the correlation indicates whether the relationship between paired scores positive or negative and the strength of this relationship.

A research which uses statistical technique definitely uses quantitative analysis. Quantitative data analysis is so called statistical analysis. It means that the result of the data served up in numerical form. In this research, all data gained from the result of the questionnaires and tests were in the form of number. All the data, therefore, analyzed quantitatively. Since this research was to know the correlation between two variables, the researcher applied bivariate correlation analysis by using person's product moment technique. The research used person's product moment coefficient correlation technique, because the data obtained from the two variables (questionnaire of anxiety) were expressed in terms of quantitative scores. Thus, the r was appropriate correlation calculate.

In this research, the researcher used mean score to know result questionnaire anxiety and the achievement students of English test. In this research, variable X_1 was "anxiety" score in questionnaire, while variable X_2 was "English achievement" score in test. The formula of mean score was (Siregar 2012:337)

For variable X : $M_x = \frac{\sum X}{N}$ and variable Y : $M_y = \frac{\sum Y}{N}$

Explanation : $\sum X$ = The sum of the X score

$\sum Y$ = The sum of the Y score

N = Number of cases / subjects

Because the data which are collected are interval data, the researcher will use pearson product moment formula to analyze coefficient correlation (r) between two variables. The formula was :

$$r = \frac{n(\sum xy) - (\sum x \cdot \sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$\sum xy$ = The sum of the product of paired X and Y scores

N = Number of cases or subjects

$\sum x$ = The sum of the X scores

$\sum y$ = The sum the Y scores

$\sum x^2$ = The sum of the squared X score

$\sum y^2$ = The sum of the squared Y score

To decided the result of correlation between two variables, is strong or weak the research set standard based on the standard that was established as follow: If the coefficient correlation is closed to 1 or -1, it means that the correlation among two variables is strong. Meanwhile, if the coefficient

correlation is closed to 0, it is weak correlation among variables. The significant coefficient correlation tested at the level of significant. The product moment table of significance shown below:

Table 3.6 : Interpretation Table of the Value r

The value of "r"	Interpretation
Between 0,800 up to 1,00	High
Between 0,600 up to 0,800	Fair
Between 0,400 up to 0,600	A bit low
Between 0,200 up to 0,400	Low
Between 0,00 up to 0,200	Very low

Arikunto (2010:319)