CHAPTER III
RESEARCH METHOD

A. Research Design

In this research researcher used correlational research design. According to Creswell (2015) Correlational research is a research aimed to measure the level of correlation between 2 variables or more. Then the definition of descriptive correlational study is the research or study that define the result of study by descripting the numbers appears during and after the research.

According to Anderson (1998) Also correlational research involves the calculation of correlation coefficient which is a measure of the extent to which variables vary in the same way. It began from the correlation coefficient range from -1.0 to +1.0 with 0 meaning there was no relationship between the variables and 1.0 has a meaning there is a perfect correlation between the variables. A positive correlation is one in which a higher score of one variable is related to higher scores to others. This is expressed by a positive value for the correlation coefficient. When there is a negative sign, as one variable increases, scores on the other decrease.

Based on Arikunto (2006) the correlational descriptive research has 3 technique this technique is needed to ease the researcher during his research. These technique are:

a. Finding the evidence based on the data collection whether exist the correlation between variable or zero correlation.
b. Answer the question about the relationship between variable are strong enough, medium or weak relation.
c. Identify the correlation between variable are significance between each other or not.

Because of the design of the research is descriptive correlation purposed to get the visualization about an existing theory or current theory. To get the data analysis researcher used *SPSS statistic 22 application*.

B. Population and Sample

1. Population

According to Anderson (1998) population was the total number of people in the group studied by the researcher. Based on Creswell (2004) population is the whole people involved as subject research during the research. According to Ary (2010), the population can be defined as the number of anything that has to be categorized into one group that becomes the research subject. It could be human or animal or even plant.

Then the population in this research is 8th-grade students of SMP Islam Durenan. The total population of 8th-grade students in SMP Islam Durenan is 120 students. The table below explains the detailed number of students in each class.

Population of 8th grade Students SMP Islam Durenan

Table 3.1

Class	Number of Students
VIII A	28
VIII B	32
VIII C	28
VIII D	32
TOTAL	120

2. Sampling

According to Arikunto (2010) sampling is the technique of writer or researcher to determine the sample of research. There are many ways for the writer to determine the sample, based on the number of population.

In this research writer used probability random sampling. Probability random sampling according to Ary (2010) probability random sampling is the sampling technique where the writer defines the sample by stratified the population. This sampling was used if the type of sampling were heterogeneous sampling, it was stratified proportionally only by simple random.

This sampling technique used probability stratified random sampling. According to Arikunto (2012) stratified random sampling will take 25% of the total population, it

means if the total population of SMP Islam Durenan who sat in 8th grade were 120 students, then 25% of 120 students was 30 students. The sampling technique in this research used n = (total population according to stratum/ total population) x total number of samples.

Sampling Technique of 8th grade Students SMP Islam Durenan

Table 3.2

No	Class	Total Number Of Population Each Class In 8th	Sample
1	VIII A	28	28/120x30= 7
2	VIII B	32	32/120x30= 8
3	VIII C	28	28/120x30= 7
4	VIII D	32	32/120x30= 8
Total		120 students	30 students

3. Sample

According to Arikunto (2002) sample is the part of population where it can give a good presentation about the condition of population. The total population of students is 120 students, then from sampling technique, writer get the sample below.

Total Stratified Sample SMP Islam Durenan 2019/2020

Table 3.3

No	Class	Number
1	VIII A	7 students
2	VIII B	8 students
3	VIII C	7 students
4	VIII D	8 students
Total		30

C. Research Variables

In conducting research, it must h ed variable, the variable is a variant or character of selected sampling. According to Layman (2008), Research variables are anything in the form of what is determined by researchers to be studied to obtain information about it. Theoretically, variables can be defined as attributes of a person, or object, which has a "variation" between one person and another or one object with another object. These variables stand because of variations. Variables that do not have variations can be said to not be variables.

In this research writer used 3 variables, students' motivation, students' emotional intelligence, and students' achievement in English as the variables. Because there is no treatment in this research so the dependent variable and independent variables will have another name. According to Faenkel (2008) In the case of correlational research design, we call the variables as a predictor (the variable that gives the prediction to other variables) and the criterion (a variable that gives criteria to be predicted by other variables). To say varied, researchers must find a group of data sources or varied objects. There are two kinds of variables in this study, namely:

1. **Predictor Variable**

   In the case of correlational research design because there is no treatment and manipulation the variable called predictor variables, where the function of this variable is predicting the outcome score toward the criterion variables. The predictor variables in this research contain two variables, there are:

   $X_{1:}$ Students Motivation

   $X_{2:}$ Students Emotional Intelligence

2. **Criterion Variable**

   Because of no treatment to dependent variables, the name of dependent variables become criterion variable. Then the criterion variables in this research is students achievement in English.

   Y: Students achievement in English

D. Research instrument

The soul of quantitative research is the instrument, in simple analogy, an instrument is a tool to measure and collect the data, the tools to finish the research. According to

Sugiyono (2008) research instrument is a tool for researchers to collect the data. Research instruments can be seen in many varieties, it can be documentation, questionnaire test, or recording interview.

The research instrument is supporting tools for the researcher to collect the data, Arikunto (2013). An instrument of research used to measure the variables that need to identify. Every instrument aimed to get the quantitative data accurately, it means every instrument need a clear scale, in this research author used some instrument to help him in collecting the data. In this research writer used 2 research instruments: questionnaire and test. For the questionnaire, itself the writer used it to measure the two predictor variables.

1. Questionnaire

a. Measuring Students Motivation

One of common instrument used in quantitative research to find the the answer of participant or sample is by questionnaire. According to Richard (2001) questionnaire is a group of structured question that should be answered by participant in limited answer. The answer of questionnaire was qualified by writer. By using questionnaire the writer got every information from sample about motivation and emotional intelligence. The writer used questionnaire to know and measure students academic motivation and students emotional intelligence.

The form of questionnaire in this research was closed questionnaire. It means the form of questionnaire was provided by the writer. The students can directly answer or givin response to the particular question/item given by the writer.

For the first predictor variable, students' motivation in learning, the writer provided the questionnaire taken from AMS (Academic Motivation Scales) created by McDonald in 2008. This scale will measure students' academic motivation correctly. This item is a Likert style question with 5 responses from close clode related" until "not related at all" presented by number 1. The total of questions is 36 questions and the AMS has 2 sub-scales. It will measure 3 kinds of motivation: Extrinsic motivation, intrinsic motivation. The questionnaire will be structured in a friendly world that will be understood by student's junior high school. All scale from this AMS has shown 0.77-0.90 alfa-coefficient, (Turner, Chandler, and Haffer, 2009) it means the instrument of Academic Motivation score is valid. This instrument has been identified by many researchers and administered in the western and eastern countries to measure students' motivation.

Academic Motivation Scale

Table 3.4

No	Sub-scale motivation	Indicators	Number positive	Number negative
1	1. Intrinsic Motivation	1. There is a desire and desire to succeed.	1,13,19	7,25,29
		2. There is encouragement and ideals for the future	2,8,21	14,26,31
		3. There is a need to learn English	3,15,22	9,27,32
	2. Extrinsic Motivation	1. There is an appreciation in learning	*4,10, *20	16, *28,*33
		2. A conducive learning environment	5,17,*23	11,34,36
		3. Interesting activities	6,18,24	12,30,*35
Number of questions			36	

Note : ***unvalid item of questionnaire's question**

This scale has been used in many educational level of every students in each grade. It was developed by western expert and has been tested to many students across country. It is found that every item in AMS (Academic Motivation Scale) was valid and it did not need any changes because the literature review has suggested to not make any changes inside it. For example the instrument has been tested in England, France and Turkish, even Indonesia.

Results of Validity Analysis of Item Instruments learning motivation

Table 3.5

No.	r-count	r-tabel (N=30) Taraf Sig 5%	Decision
1	0,495	0,361	Valid
2	0,784	0,361	Valid
3	0,840	0,361	Valid
4	0,107	0,361	Not valid
5	0,788	0,361	Valid
6	0,814	0,361	Valid
7	0,594	0,361	Valid
8	0,498	0,361	Valid
9	0,622	0,361	Valid
10	0,410	0,361	Valid
11	0,658	0,361	Valid
12	0,700	0,361	Valid
13	0,622	0,361	Valid
14	0,504	0,361	Valid
15	0,814	0,361	Valid
16	0,648	0,361	Valid
17	0,640	0,361	Valid
18	0,702	0,361	Valid
19	0,697	0,361	Valid
20	0,079	0,361	Not valid
21	0,648	0,361	Valid
22	0,585	0,361	Valid
23	0,083	0,361	Not valid
24	0,689	0,361	Valid
25	0,554	0,361	Valid
26	0,562	0,361	Valid
27	0,649	0,361	Valid
28	0,007	0,361	Not valid
29	0,373	0,361	Valid

30	0,562	0,361	Valid
31	0,671	0,361	Valid
32	0,722	0,361	Valid
33	0,088	0,361	Not valid
34	0,489	0,361	Valid
35	0,114	0,361	Not valid
36	0,593	0,361	Valid

From the trial it turns out that all items $r_{count} > r_{table}$, namely, 6 items of motivation instruments are declared not valid and 30 items of learning motivation instruments are declared Valid. The steps to test the validity of the questionnaire questions using SPSS 22.0 as attached.

b. Measuring Students Emotional intelligence

In this research writer used EI (Emotional intelligence) A2 appraisal to measure students emotional intelligence that was developed by Travis Bradbery in 2006. EI Appraisal is one of the best way to measure students Emotional Intelligence, because it has been administered in many country. The appraisal was created in 2001 by Dr. Travis Bradberry and Dr. Jean Greaves and it may be administered in either online form or in a booklet.

The EI appraisal is a skill-based assessment based on Daniel Goleman's four-factor taxonomy (Bradberry & Su, 2006). According to Goleman, EI consists of four components:

1) Self Awareness
2) Self-Management,
3) Social Awareness And
4) Relationship Management.

The EQ appraisal consists of 36 items and is performance based – it is designed to assess the behavior linked to EI skills. The assessment gives an overall EQ score, and a score for each of the four EI factors (Bradberry & Su, 2006). In this scale used Likert scale with number 1 until 5.

According to Mattew (2007) Research with The Emotional Intelligence Appraisal has found Cronbach alpha reliability ratings between .85 and .91 however, interestingly, a non-significant positive correlation was found between the appraisal and the popular EI test, the Mayer-Salovey-Caruso Emotional Intelligence Test.

Emotional Intelligence Appraisal

Table 3.6

No	Sub-scale emotional	Indicators	Number positive	Number negative
1	Self-awareness	a. Understand someone emotion, strenght and weakness	1,5	21,31
		b. Tuning into someones feeling	13,25	9,34
		c. Knowing someone capability	17	6,33
2	Self-management	a. Managing someone's motivation	2,26	*22,*35
		b. Managing someone behavior	*10,18,	15,36
3	Social Awareness	a. Understanding others feeling	3,7	30
		b. Understanding others saying	15	11
		c. Understanding the motive of someone in expressing feeling and saying	*19, 23	27
4	Relationship Management	a. Reach personal goal	16, 20	*29

		b. Know how to influence other	*28	8
		c. Know how to adapt to other people	4, 12,	24
Number of questions			36	

Note : ***unvalid item of questionnaire's question**

It has been claimed that scores on the Emotional Intelligence Appraisal predicted job performance more than the MSCEIT, and what's more, it also takes one-fifth of the length of time to administer.

Results of Validity Analysis of Item Instruments Questionnaire Emotional intelligence

Table 3.7

No.	r-count	r-table (N=30) Taraf Sig 5%	Decision
1	0,760	0,361	Valid
2	0,653	0,361	Valid
3	0,828	0,361	Valid
4	0,508	0,361	Valid
5	0,510	0,361	Valid
6	0,807	0,361	Valid
7	0,585	0,361	Valid
8	0,379	0,361	Valid
9	0,624	0,361	Valid
10	0,282	0,361	Not valid
11	0,653	0,361	Valid
12	0,842	0,361	Valid
13	0,624	0,361	Valid
14	0,470	0,361	Valid
15	0,807	(	Valid

16	0,695	0,361	Valid
17	0,439	0,361	Valid
18	0,705	0,361	Valid
19	0,270	0,361	Not valid
20	0,695	0,361	Valid
21	0,635	0,361	Valid
22	0,253	0,361	Not valid
23	0,597	0,361	Valid
24	0,695	0,361	Valid
25	0,371	0,361	Valid
26	0,525	0,361	Valid
27	0,601	0,361	Valid
28	0,268	0,361	Not valid
29	0,328	0,361	Not valid
30	0,528	0,361	Valid
31	0,684	0,361	Valid
32	0,709	0,361	Valid
33	0,546	0,361	Valid
34	0,452	0,361	Valid
35	0,219	0,361	Not valid
36	0,717	0,361	Valid

From the trial it turns out that all items $r_{count} > r_{table}$, namely, 6 items of motivation instruments are declared not valid and 30 items of learning motivation instruments are declared Valid. The steps to test the validity of the questionnaire questions using SPSS 22.0 as attached.

c. English Achievement Test

To make sure the detailed result of this research, writer used test to test the criterion variable. The criterion variable in this research is student's achievement in English. Then beside the documentation of students report, the writer also used achievement testing in English for junior high school.

The time of conducting the test was similar with the distribution of questionnaire. Students were informed by the teacher that the result of the test will not give influence to their academic result. Each class get their test in the similar day.

The writer provided English achievement test for the population. The form of the test consist of 30 multiple choices question. Each question has 4 choices A, B, C, and D. Every true answer will be scored by 4, so it if a students can answer all of the question 30x3+10= 100, the maximum score will be 100.

The test will was taken from the first semester of student's basic competence in 8th grade class. The test was considered suitable for students in each class to measure their achievement. To make the achievement test the writer also presented the first semester basic competence of 8th grade students.

The test in this test was validated by the expert. The expert of this research was 2 expert that also teach in the level of 8th grade students. It means this achievement test was validated by the expert and by the process of SPSS 22.

Basic Competence of 8th Students First Semester

Table 3.8

No	Basic Competence 8th Grade	Indicator	Materials
1.	3.1 Applying text structure and linguistic elements to carry out social functions from expressions asking attention, checking understanding, valuing good performance, and asking and expressing	a. Students are able to asking about expression of asking attention	a. Expression of asking attention
		b. Students are able to complete about expression of checking understanding	b. Expression of checking understanding

	opinions, and their responses, according to the context of their use.	c. Students are able to express about giving opinion and give response on it	c. Expressing opinion
		d. Students are able to give certain response of valuing good performance	d. expressing of valuing good performance
		e. Students are able to give response about other opinion toward the text	e. Expressing opinion
2.	3.2 Applying text structure and linguistic elements to carry out social functions states and asks about the ability and willingness to take an action, according to the context of its use.	a. Students are able to asking favor from friend	a. Expression of asking help
		b. Students are able to give response to the someone help	b. Expression of refusing help and accepting it
		c. Students are able to complete the black text about future tense	c. Introduction to future tense
3.	3.3 Applying the structure of the text and linguistic elements to carry out social functions from the expression of giving instructions, inviting, prohibiting, asking permission, and how to respond, in accordance with the context of their use.	a. Students are able to giving instruction to other	a. Expression of giving instruction
		b. Students are able to fulfil the content of invitation	b. Expression of asking invitation
		c. Students are able to know the purpose the invitation	c. Expression of making invitation
		d. Students are able to asking permission	d. Expression of asking permission
		e. Students are able to expressing prohibition	e. Expression of prohibition

4.	3.4 Applying the structure of the text and linguistic elements to carry out the social function of the text of personal invitations and greeting cards, according to the context of their use.	a. Students are able to know the purpose of greeting card	a. Greeting card
		b. Students are able to conclude the content of invitation	b. Expression and response to invitation
5.	3.5 Applying the structure of the text and linguistic elements to carry out social functions express and ask the existence of people, objects, animals in numbers that are not certain, in accordance with the context of their use.	a. Students are able to express about the existence	a. Expression of asking existence
		b. Students are able to classify the use of question word	b. Question word:how many? How much?
		c. Students are able to use the question about certainity	c. Expression of certain
6.	3.6 Applying the structure of the text and linguistic elements to carry out the social function of expressing and asking for actions / events that are carried out / occur routinely or are general truths, in accordance with the context of their use.	a. Students are able to expressing for action	a. Expression of asking help
		b. Students are able to give response to the request	b. Expression of asking help
		c. Students are able to about daily	c. Adverb of frequency: rarely, sometimes, always
7.	3.7 Applying the structure of the text and linguistic elements to carry out social functions states and asks	a. Students are able to understanding dialogue and give response to it	a. Understanding dialogue About can, could, may

	actions / events that are being carried out / taking place at this time, in accordance with the context of their use.	b. Students are able rearrange the sentence correctly	b. Past tense

By developing the test from this competence, it will able to measure students achievement correctly. It will be deliver to students in online testing by Google Form App that will ease the students to answer it, the students are supposed to answer and write down the answer in the case of the choice, then submitted to the writer the answer in the form of answer sheet photo.

Result Validity of 8th Achievement Test Instrument

Table 3.9

Number	r-count	r-table	Decision
1	0,511	0,361	Valid
2	0,516	0,361	Valid
3	0,609	0,361	Valid
4	0,608	0,361	Valid
5	0,481	0,361	Valid
6	0,536	0,361	Valid
7	0,620	0,361	Valid
8	0,568	0,361	Valid
9	0,512	0,361	Valid
10	0,463	0,361	Valid
11	0,454	0,361	Valid
12	0,516	0,361	Valid
13	0,542	0,361	Valid
14	0,512	0,361	Valid
15	0,572	0,361	Valid
16	0,641	0,361	Valid
17	0,529	0,361	Valid
18	0,560	0,361	Valid
19	0,606	0,361	Valid
20	0,473	0,361	Valid

21	0,619	0,361	Valid
22	0,442	0,361	Valid
23	0,566	0,361	Valid
24	0,555	0,361	Valid
25	0,469	0,361	Valid
26	0,493	0,361	Valid
27	0,458	0,361	Valid
28	0,454	0,361	Valid
29	0,420	0,361	Valid
30	0,572	0,361	Valid

E. Instrument Testing

To get a good measurement scale on an instrument, the instrument must have validity in the reliability of the instruments that will be used in the study. The instrument used in research must have been through a preliminary study, the researcher must analyze the preliminary study data to see the validity and reliability of the instrument to be used. According to Alias Baba quoted by Iskandar (2014), validity is the extent to which the research instrument measures precisely the construct of a rigorous variable

In this research the writer used the validity and reliability testing to make sure the test is valid:

1. Validity

   Validity is how students can understand the question without any question or the measurement of how appropriate the questionnaire will be administered. Based on Ary (2010) Validity is a measure that shows the levels of the instrument's validity or validity. An instrument is said to be valid if it can measure what is desired can reveal the data of the variables studied appropriately.

   There are lot of ways to reach the validity of the instrument to complete the data. Mostly in the correlational research used content validity and construct validity: The

validity of the content validity is obtained when using the desired area content measurement tool (content area) at any given degree. Validity contains, among others, in the field of learning. Learning outcomes tests are issued to measure the content or goals that have been agreed on by students. Because of that, content validity is also called curricular validity.

2. Reliability

Reliability is how consistent the instrument be tested to other samples. Azwar (2009) states "reliability means consistency". The result of a measurement can be trusted if several times of conducting measurement in the same sample are relatively the same since the aspect that is measured is not change. The reliability of the instrument was the result of a measurement that can be trusted. It was necessary to get the data based on the purpose of measurement. Reliability, on the other hand, refers to the consistency of measurement.

Cronbach Alpha interpretation based on Triton

Table 3.10

Cronbach values	Interpretations
0,00 – 0,20	Less reliable
0,21 – 0,40	Rather reliable
0,42 – 0,60	Quite reliable
0,61 – 0,80	Reliable
0,81 – 1,00	Very reliable

The instrument that had value between 0,00-0,20 were less reliable, the instrument that had value between 0,21-0,40 were rather reliable, the instrument that had value between 0,41-0,60 were quite reliable, the instrument that had value between

0,61-0,80 were reliable, and the instrument that had value between 0,81-0,100 were very reliable

In this study used 2 kinds of questionnaire taken by several resources. Before being distributed to the sample, the instruments were trying out to the other class to get the reliability. From the answer of students' response in questionnaire the researcher then analyzed using reliability test based on Cronbach's Alpha.

Reliability Testing

Reliability tests are conducted l out that the test can be trusted or relied upon. Reliability test using SPSS 22.0 computer program assistance. Data for reliability testing is taken from previous validity test data.

Output Reliability Testing of Academic Motivation in SPSS 22.0

Table 3.11

Reliability Statistics

Cronbach's Alpha	N of Items
,936	36

The determination of reliability can be seen in the Reliability Statistics table in the Cronbach's Alpha column. The research instrument is said to be reliable if the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6. Based on the results of the reliability test, it can be seen that the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6, 0.936> 0.6. So it can be concluded the question of learning motivation questionnaire is reliable.

Output Reliability Testing of Emotional Intelligence Questionnaire using SPSS 22.0

Table 3.12

Reliability Statistics

Cronbach's Alpha	N of Items
.949	36

The determination of reliability can be seen in the Reliability Statistics table in the Cronbach's Alpha column. The research instrument is said to be reliable if the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6. Based on the results of the reliability test, it can be seen that the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6, namely 0.949> 0.6. So it can be concluded the question of learning motivation questionnaire is reliable.

Output Relilability Testing Achievement Test 8th grade students Using SPSS 22.0

Table 3.13

Reliability Statistics

Cronbach's Alpha	N of Items
.910	30

The determination of reliability can be seen in the Reliability Statistics table in the Cronbach's Alpha column. The research instrument is

said to be reliable if the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6. Based on the results of the reliability test can be seen that the value of the alpha coefficient (Cronbach's Alpha) is more than 0.6, namely 0.910> 0.6. So it can be concluded the question of learning motivation questionnaire is reliable.

F. Data and Data Source

1. Data

   Based on Martono (2014) Data can be defined as a collection of information, information, or figures recorded from an event or a collection of information that is used to answer research problems. The data collected in this study has come from students result in fulfilling the questionnaire that will be measured their level of academic motivation and students' emotional intelligence, the other data come from the achievement test that will be measured their English achievement.

2. Data source

   The data source come from 8^{th} students of SMP Islam Durenan.

G. Data Collection

Data collection techniques are ways that are traveled and the tools used by researchers in collecting data. Arikunto (2013). Then in this research the technique of data collection are:

1. Distributing Questionnaire

   The questionnaire method is a list of questions given to other people with the intention that the person given is willing to respond according to user requests. In this study, the authors used a questionnaire method that is direct. With the direct contact between researchers and respondents voluntarily will provide objective and fast data, Richard (2001).

   According to Sugiyono (2013) Questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer. By using a Likert scale, the variables to be measured are translated into indicator variables.

Then the indicator is used as a starting point for compiling instrument items which can be statements or statements.

The questionnaire was distributed to each class of students SMP Islam Durenan. Every student is submitted data on the same day from every grade. They were instructed to read and answer the questionnaire honestly based on their feeling. They were not allowed to talk with their classmate.

2. Documentation

Documentation according to Martono (2008) Collecting documents or often called the documentation method is a method of data collection that is done by collecting various documents relating to research problems. This document can be in the form of government documents, research results, photographs or drawings, diaries, financial reports, laws, someone's work, and so on.

H. Data Analysis

Data analysis is the process of analyzing the collected data. According to Sugiyono (2008) is the activity of the author to analyze the submitted data during the research. Several activities in data analysis classifies the data based on variables and participant variety, serves the data from the participant in each variable, serves the variable from the data than wanted to be identified, make an analysis to answer the research problem, and make a calculation to test the submitted hypothesis.

In the process of data analysis, 3 steps must be done by the writer, namely as follows:

1. Descriptive statistics

Descriptive statistics are statistical analyzes that are used to analyze data by describing or describing data that has been collected is According to Kenton (2019) Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire or a sample of a population. Descriptive statistics are broken down into measures of central tendency and measures of variability (spread).

2. Statistical assumption

In statistical assumption writer give the reasons why the writer used the certain statistical operation to find the certain result of desired process. Testing Statistical Assumptions in Research discusses the concepts of hypothesis testing and statistical errors in detail, as well as the concepts of power, sample size, and effect size. It introduces SPSS functionality and shows how to segregate data, draw random samples, file split, and create variables automatically. It then goes on to cover different assumptions required in survey studies, and the importance of designing surveys in reporting the efficient findings.

3. Normality and linearity testing

a. Normality Test

Sujianto (2006) states that normality testing is test to measure whether the data have normal distribution so it can be used in parametric statistic Based on the definition above, the purpose of the conducting normality test was to know whether a certain variable normal or not. The data that was normal means the distribution data were normal was one of the condition to conduct parametric test. For the data that abnormal should analyze by using non-parametric test. Santoso(2006), normality test data is usual thing that is conducted before statistics method are applied.

Akbar (in Sujianto 2006:78) states “Kolmogorov-Smirnov is statistical testing that conducted to know the distribution of a certain data that has ordinal. Whereas Chi-square for the data that has nominal scale. Santoso (2006:78) states “if the Sign.-value or probability value >0,005 the distribution is normal (symmetrical).

Normality test was done towards the three scores (students emotional intelligence score, students academic motivation score and students English achievement score).

Obtaining Questionnaire about The Correlation of Students Emotional Intelligence and Motivation toward Students English Achievement in Students of SMP Islam Durenan

Table 3.14

No	Subject	Emotional intelligence (X1)	Academic motivation (X2)	Achievement Test (Y)
1.	A.I	128	128	91
2.	I.M	133	133	82
3.	R.L.F	131	133	91
4.	A.D	139	139	100
5.	R.A.K	131	131	85
6.	R.A.S	120	120	70
7.	N.H.S	122	120	61
8.	M.F.K	135	135	82
9.	H.B	122	122	58
10.	D.N.Z	135	135	91
11.	C.A	128	120	76
12.	A.P	135	135	97
13.	D.P.A.D	130	130	82
14.	F.R.A.	131	131	85
15.	L.A	131	131	94
16.	M.Y.A.S	126	126	70
17.	N.A.S.D	130	130	85
18.	R.G.A.S	107	122	64
19.	W.O	135	135	85
20.	N.N	122	122	79
21.	M.Y	131	131	58
22.	M.D.M	124	124	64
23.	L.R	122	122	79
24.	I.P	131	131	55
25.	G.T.M	135	135	58
26.	E.H.R	125	125	52
27.	C.D.N	124	124	55
28.	A.R.P.R	125	125	58
29.	A.Y.S	139	139	76
30	S.R	139	139	70

The hypotheses involved were:

a. H0: The data is in normal distribution

b. Ha : The data is not in normal distribution

The analysis of which hypothesis was accepted refers to the significance value (α = 5%). The null hypothesis (H0) would be rejected when the *Asymp. Syg* value was lower than 0,05 (*Asymp. Sig* < 0,05). The resulted of the normality testing done by using *SPSS 22.0 application*.

The result of Normality testing

Table 3.15

One-Sample Kolmogorov-Smirnov Test

		Emotional intelligence	Student Motivation	Achievement Test
N		30	30	30
Normal Parameters[a,b]	Mean	128.87	129.10	75.10
	Std. Deviation	6.887	6.059	14.162
Most Extreme Differences	Absolute	.132	.126	.120
	Positive	.087	.117	.120
	Negative	-.132	-.126	-.120
Test Statistic		.132	.126	.120
Asymp. Sig. (2-tailed)		.193[c]	.200[c,d]	.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

The value of Asymp. Sig. (2-tailed) were 0,193 and 0.2 which were higher than 0,05 (0,193 > 0,05) and (0.2 > 0,05) . As a result, the Null hypothesis (H0) was accepted while the Alternative Hypothesis (Ha) was rejected. Accordingly, all data from the scores was in a normal distribution.

b. Linearity Test

Linearity in variables is tl ıditional mean value of the dependent (criterion) variable which is a linear function of the independent (predictor) variable. Linearity in parameters is a linear function of parameters and can be linear

in variables. The linearity test is performed to determine whether the data of each was variable has a linear relationship with the criterion variable. The guideline used to determine the linearity is to look at the results of the analysis on the deviation from linearity lane. The provisions used for decision making are if the significance value on the deviation from linearity> 0.05, then the relationship between the variables and linearly dependent variables are concluded.

Linearity Test Results Students Emotional Intelligence toward Students English Achievement at 8th students SMP Islam Durenan 2020/2021

ANOVA Table 3.16

			Sum of Squares	Df	Mean Square	F	Sig.
Achievement Test * Emotional intelligence	Between Groups	(Combined)	2411.250	11	219.205	1.159	.377
		Linearity	1191.904	1	1191.904	6.300	.022
		Deviation from Linearity	1219.346	10	121.935	.645	.758
	Within Groups		3405.450	18	189.192		
	Total		5816.700	29			

From this result, we can conclude that student's emotional intelligence and achievement are linear. The writer can terminate this statement because from the table 3.16 Sign 0,758 was higher than 0,05.

Linearity Test Results St s Academic Motivation toward Students English Achievement a tudents SMP Islam Durenan 2020/2021

ANOVA Table 3.17

	Sum of Squares	Df	Mean Square	F	Sig.

Achievement Test * Student Motivation	Between Groups	(Combined)	2614.800	10	261.480	1.552	.197
		Linearity	1278.472	1	1278.472	7.586	.013
		Deviation from Linearity	1336.328	9	148.481	.881	.558
	Within Groups		3201.900	19	168.521		
	Total		5816.700	29			

From this result, we can conclude that students' academic motivation and achievement are linear. The writer can terminate this statement because from table 3.17 Sign 0,558 was higher than 0,05.

4. Hypothesis testing

In this research, the writer used the hypothesis testing correlation product moment. Based on Sudjiono (2009) correlation product moment is testing that aimed to find the coefficient of the predictor and criterion variable correctly. Pearson's correlation coefficient, r, tells us about the strength of the linear relationship between x and y points on a regression plot. However, the reliability of the linear model also depends on how many observed data points are in the sample. We need to look at both the value of the correlation coefficient r and the sample size n together. The writer performs a hypothesis test of the "significance of the correlation coefficient" to decide whether the linear relationship in the sample data is strong enough to use to model the relationship in the population.

Interpretation of r Product Moment Correlation Index Numbers

Table 3.18

The amount of "r" product moment (r_{xy})	**Interpretation**
00,0-0,20	There is a correlation between the X and Y variables, but the correlation is very weak or very low
0,20-0,40	Between the X and Y variables there is a correlation, but the correlation is weak or low
0,40-0,70	Between variables X and Y there is a correlation, which is moderate or sufficient
0,70-0,90	Between variables X and Y there is a correlation, strong or high
0,90-1,00	Between variables X and Y there is a correlation, which is very strong or very high