CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Method

According to Sugiyono (2009:3), research method is a scientific manner to get data with the purpose and specific uses. The quantitative research is the research which is aimed to determine the relationship between two or more variables. This research is a quantitative research in co-relational study. It means that the writer described the problem of students by using test. The writer used statistical analysis to calculate the numeral data and analyze them by using correlation analysis. The independent variable in this research was motivation in learning English (X) and the dependent variable was students' habit in updating status on social network (Y).

3.2 Population, Sample and Sampling Technique

3.2.1 Population

According to Sugiyono (2009:117), population is all of anything that include in the research. Meanwhile Arikunto (2010:173) stated population is all subjects of the research. Based on that statement, the population in this research was all of the eleventh grade students of SMA Negeri 3 Kotabumi academic year 2018/2019 which is consist of ten classes (start from XI MIPA 1-6 class, XI IPS 1-4 class) and the total amount of the students are 303 students.

For more detail, the population can be seen in the following table.

TABLE 1 THE POPULATION OF THE XI GRADE STUDENTS' OF SMA NEGERI 3 KOTABUMI ACADEMIC YEAR 2018/2019

NO	CLASS	AMOUNT OF STUDENT
1	XI MIPA 1	32
2	XI MIPA 2	31
3	XI MIPA 3	35
4	XI MIPA 4	31
5	XI MIPA 5	30
6	XI MIPA 6	27
7	XI IPS 1	26
8	XI IPS 2	28
9	XI IPS 3	32
10	XI IPS 4	31
TOTAL		303

3.2.2 Sample

According to Creswell (2012:142) sample is a subgroup of the target population that the writer plans to study for generalizing about the target population. Beside that Arikunto (2006:134) said that if the population is less than 100, it is be better to take all the population and if the populations are large, it can be better to take between 10-15% and 20-25%.

Based on the statement above, the writer took 15% of the total students' eleventh grade SMA Negeri 3 Kotabumi academic year 2018/2019 with the total amount of sample are 47 students.

3.2.3 Sampling Technique

Sampling technique is used to take a sample in the research. According to Margono (2010:125) sampling technique generally divided in two forms, first random sampling technique, second is non random sampling. In other word the form of sampling technique are probability sampling and non probability

sampling (Sugiyono, 2009:118). Besides, kinds of probability sampling are simple random sampling, proportional random sampling, disproportionate stratified random sampling, and cluster random sampling. In this research, the writer used proportional random sampling because the population is large. Besides that proportional random sampling is used because the population has component that not homogeneous and the strata proportionally (Sugiyono, 2009:120). The first way to take the sample is by using lists of students' name of ten classes. The second is by random their names by making small pieces of paper were rolled into a tin can. The third, the tin can mixed and the paper were dropped out from the tin. The last, this way repeated ten times to get the sample until 15% from each class.

TABLE 2
THE CALCULATION OF SAMPLING TECHNIQUE

NO	CLASS	CALCULATING
1	XI MIPA 1	$\frac{15}{100}$ x 32 = 5 students
2	XI MIPA 2	$\frac{15}{100}$ x 31 = 5 students
3	XI MIPA 3	$\frac{15}{100}$ x 35 = 5 students
4	XI MIPA 4	$\frac{15}{100}$ x 31 = 5 students
5	XI MIPA 5	$\frac{15}{100}$ x 30 = 5 students
6	XI MIPA 6	$\frac{15}{100}$ x 27= 4 students
7	XI IPS 1	$\frac{15}{100}$ x 26 = 4 students
8	XI IPS 2	$\frac{15}{100}$ x 28 = 4 students
9	XI IPS 3	$\frac{15}{100}$ x 32 = 5 students
10	XI IPS 4	$\frac{15}{100}$ x 31 = 5 students
TOTAL		47 students

3.3 Research Instrument

According to Sugiyono (2009:148) research instrument is a tool that is used to measure the data is observed in this research the writer would be used questionnaire to measure both of the variables (X) Motivation in learning English and variable (Y) Students' habit in updating status on social network by using English.

The instrument consist of 73 items that is used Likert Scale. Likert scale is used to measure the attitude, opinion, and perception someone or a group of people about social phenomenon Sugiyono (2009:134). The answer of Likert Scale has gradation from strongly agree until strongly disagree as follows:

a. Strongly Agree (Sangat Setuju)
b. Agree (Setuju)
c. Neutral (Ragu-ragu)
d. Disagree (Tidak Setuju)
e. Strongly Disagree (Sangat Tidak Setuju)

The writer would be translated the questionnaire into Indonesian language to make the students easy as fulfill every item.

3.3.1 Research Instrument of Students' Habit in Updating Status on Social Network by Using English

To measure the variable of dependent students' habit in updating status on social network by using English the writer used instrument in the form of questionnaire. This part discusses about the conceptual definition, operational definition and specification.

3.3.1.1 Conceptual Definition of Students' Habit in Updating Status on Social Network

Habits' in updating status on social network by using English is a way that stays and automatically which is done by students as a tool to increase a good habit that applying in daily live.

3.3.1.2 Operational Definition of Students' Habit in Updating Status on Social Network

Operationally habits' in updating status on social network by using English can be obtained from a questionnaire which contains 30 positive statements and 10 negative statements with the aspects were frequency, place, feeling, purposes. According to Sugiyono (2009:134), Likert Scale used to measure attitude, opinion, and perception someone or group of people about social phenomenon.

TABLE 3 THE ANSWER OF SELECTION LIKERT SCALE

POSITIVE STATEMENT	SCORE	NEGATIVE STATEMENT	SCORE
Strongly agree (Sangat setuju)	5	Strongly disagree (Sangat Tidak Setuju)	1
Agree (Setuju)	4	Disagree (Tidak Setuju)	2
Neutral (Ragu-Ragu)	3	Neutral (Ragu-Ragu)	3
Disagree (Tidak Setuju)	2	Agree (Setuju)	4
Strongly disagree (Sangat Tidak Setuju)	1	Strongly agree (Sangat Setuju)	5

3.3.1.3 Specification of Instrument Students' Habit in Updating Status on Social Network by Using English

Based on the conceptual and operational definition above, the instrument students' habit in updating status on social network by using English as follows:

TABLE 4 SPECIFICATION OF INSTRUMENT STUDENTS' HABIT IN UPDATING STATUS ON SOCIAL NETWORK BY USING ENGLISH

Variable	Aspect	Indicator	Positive	Negative	Total of Item Number
Students' Habit in Updating Status on Social Network by Using English	**Frequency**	Frequency of students in updating status on social network	1, 2, 3, 4, 5	31, 35	7
	Place	The place of students' comfortable in updating status on social network	6, 7, 8	36	4
	Feeling	Students feeling toward the activities in updating status on social network	22, 23, 24, 25, 26, 27, 28, 29, 30	32, 39, 40	12
	Purpose	Students Purposes in updating status on social network	9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 33	34, 37, 38	17
Total			31	9	40

3.3.2 Research Instrument of Motivation in Learning English

To measure the variable dependent student motivation in learning English, the writer used the instrument in the form of questionnaire. This research instrument also consists of conceptual definition, operational definition and specification of motivation in learning English.

3.3.2.1 Conceptual Definition of Motivation in Learning English

Motivation in learning English is like a power or drive that exists in someone to do something.

3.3.2.2 Operational Definition of Motivation in Learning English

Operationally, motivation in learning English is like a power or drive that exists in someone to do something then can be obtained from a questionnaire. The writer used motivation in learning English questionnaire which contains positive and negative statement with the amount was 33 items. The writer used Likert Scale, the Likert Scale used to measure attitude, opinion, and perception someone or group of people about social phenomenon (Sugiyono, 2009:134).

3.3.2.3 Specification of the Motivation in Learning English

Based on the conceptual and operational above, the specification of instrument motivation in learning English can be seen in the following table.

TABLE 5 SPECIFICATION OF INSTRUMENT MOTIVATION IN LEARNING ENGLISH

Variable	Sub variable	Aspect	Indicator	Item Number		Total Number of Item
				Positive	Negative	
Motivation in Learning English	Intrinsic	Goal	Students are able to having clear goal to achieve.	1, 2, 3, 4, 5, 6, 24	29	8
		Needs	Students are able to doing something in relation with their needs to achieve the learning goals.	7, 8, 9, 10, 11, 25	26	7
		Curiosity	Students are able to having a want-to-know feeling in learning English.	12, 13, 14, 15, 16, 17	27	7
	Extrinsic	Environment	Students are able to involving in the learning process because of environment encouragement.	18, 19, 20, 32	30, 31	6
		Reward	Students are able to involving in the learning process to get reward.	21, 22, 23	28, 33	5
Total				26	7	33

3.3.3 Validity of the Instrument

Instrument is a tool that used to measure the data is observed. According to Sugiyono (2009:148) the instrument of the research can be said valid if that instrument can be used to measure what should be measured. Thus, the validity data is not different from data that reported by the writer and the real data that happened in the object of the research. Generally, the validity of the instrument divided in two forms.

a. Content validity by try out the instrument to check the instrument statistically.
b. Construct validity by using expert judgment.

In this research, the writer used content and construct validity to check the instrument in the form of questionnaire both of instrument students' habit in updating status on social network and the instrument of motivation in learning English. The writer requested some lecturer in STKIP Muhammadiyah Kotabumi as the expert to check the construct validity. And then to check the content validity the writer done the try out in SMA Negeri 1 Way Pengubuan and statistically the writer used Pearson product moment formula (Sugiyono 2009:255), as follows:

$$r_{xy} = \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}}$$

Description:

r_{xy} :correlation coefficient between variable X and variable Y

Σ_{xy} : number of multiplying x by y

X^2 : square of x

Y^2 : square of y

3.3.4 Reliability of Instrument

Reliability can mean that something can be reliable enough if the instrument can be used as a tool to collect the data because they are already good and although the data is taken many times the results would be similar or consistence (Arikunto, 2006:178). The writer analyzed the reliability of the instrument by using Cronbach alpha formula as follows:

$$r_{11} = \left(\frac{K}{K-1}\right)\left(1 - \frac{\sum \sigma_b^2}{\sigma_t^2}\right)$$

Description:

r_{11} : reliability of the instrument

K : number of grains statement

$\Sigma\sigma^2_b$: number of variants grain

α^2_t : total variance

To know the score of r_{11} table was high or low, the writer should be compared with the r table of product moment formula. If the score was 0, it means that the instrument was not reliable and if the score was 1, it means that the instrument was absolutely reliable. The score which is hoped by the writer is score of 0.7 to 0.9; which means that the instrument was reliable.

3.4 Data Collecting Technique

Technique that used by the writer is to collecting the data by using questionnaire on both of variable (X) motivation in learning English and (Y) students' habit in updating status on social network. The instrument consists of 73 items, the independent variable consists of 33 items and the dependent variable consists of 40 items. The calculation to give the score (5, 4, 3, 2, 1)started from strongly agree, agree, neutral, disagree, strongly disagree for positive statement. Then the negative statement start from the score (1, 2, 3, 4, 5) for the answer strongly agree, agree, neutral, disagree, strongly disagree.

3.5 Data Analysis

Technique analysis data is a technique that used to analyze the data that has been collected based on Sudjana (2005:466). After the writer collects the data, the data would be analyzed to examine hypothesis of the research. Before, the data is analyzed, the writer done pre-test; normality test and homogeneity test as the prerequisite by using statistic parametric. After that, the data would be analyzed by using following procedures are:

3.5.1 Normality Test

In the first data analysis, the writer used normality test. Normality test used to know the data from the sample were normal or not. To calculate the normality of a group of test it is used Lilliefor's formula by following steps as follows:

a. determine the raw number by using the formula

$$Z_i = \frac{x_i - \bar{x}}{S}$$

Description:

Z_i = Number of raw

x_i = The values obtained

$\bar{x}$ = average

S = standard deviation

b. opportunity determiners each raw numbers with the formula:

$$F(Z_i) = P(Z \leq Z_i)$$

c. determine the proportion by using the formula:

$$s(z_i) = \frac{numbers z_{1,} z_{2,\ldots} z_n that \leq z_i}{n}$$

d. calculating absolute price using the formula:

$$|F(Z_i) - S(Z_i)|$$

e. determining the largest absolute value, which is called L_0 ,and then compare L_0 with L_{table}

f. Normal criteria if $L_0 < L_{table}$ so, the group has normal distribution.

3.5.2 Homogeneity Test

The second of measured data analysis is homogeneity test. Homogeneity test was done to find out the sample taken is homogeneous. To calculate homogeneity from one sample with variable (X) and (Y) data, it is used Bartlett test. The formula of the steps as follows:

a. Looking for the combined variances from all of the samples:

$$S^2 = \frac{\sum(n_i - 1)s_i^2}{\sum(n_i - 1)}$$

Description:

n_i = total of students

S_i^2 = the variances score

b. looking for log S^2

c. looking for B value with formula below:

$$B = (\log S^2) \sum (n_i - 1)$$

d. calculating χ^2 by using formula:

$$\chi^2 = (2.3026).B - \sum (n_i - 1) \log S_i^2$$

e. comparing χ^2_{calc} with χ^2_{table} for $\sigma = 0{,}05$ and degree of freedom df = k − 1

f.the criteria of this test based on criterion of Sudjana (2005:263) is as follows:

$If \chi^2_{calc} < \chi^2_{table,}$ So the variance is homogenous

3.5.3 Hypothesis Test

The third measured of data analysis is hypothesis test. The hypothesis test is used by the writer using product moment formula. The data was calculated by using the excel program.

The formula is as follows (Arikunto, 2010:319)

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{N\sum Y^2 - (\sum Y)^2\}}}$$

Description:

r_{xy} = The correlation between coefficients

$\sum X$ = The sum of X score

$\sum Y =$ The sum of Y score

$\sum X^2 =$ The sum of squared X

$\sum Y^2 =$ The sum of squared Y

After the calculation r_{xy} found by using the correlation product moment formula, it was interpreted to r score table to find out whether or not there is significant correlation between students' motivation in learning English and their habit in updating status on social network by using English.

r interpretation value as follows:

0.800 - 1.000 = Very high

0.600 – 0.800 = High

0.400 – 0.600 = Enough

0.200 - 0.400 = Low

0.000 – 0.200 = Very low

The testing criteria are as follows:

If $r_{score} < r_{table}$ means that H_0 is accepted and H_a is rejected

If $r_{score} \geq r_{table}$ means that H_0 is rejected and H_a is accepted

3.5.4 Significant Test

The last is data analysis; the data analysis was to find out the test of correlation significant whether the correlation found can be applied to the entire population of over 100 people, it is important to test it significance using a significance test (Sugiyono, 2009:257) as follows:

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

Description:

t = t-test

n = the total number of students in the class

r = correlation between two samples

The criteria of the test as follows:

$if\ t_{observed} \geq t_{table}$ Means that H_0 is rejected (significant correlation between variables X and Y)