

CHAPTER III RESEARCH METHODOLOGY

3.1 Research Method

The researcher used quantitative method as a method in this research. The kinds of quantitative research was correlation research. Frankael and Wallen (2009:328) stated correlation research as a relationship of two variables or more in which influence of them are tried to distract one another. Correlation also indicated towards the description about relationship between two variables. It means that, score within a certain range on the one variable is associated with scores within a certain range on the other variable.

The correlation coefficient in this research was interpreted to find out the relationship between students' skimming skill and students' reading comprehension. There were two possibilities of this research, namely positive correlation and negative correlation. In this research, statistical analytical was used to get the calculation of numeral data in which done gather by the researcher. Then, the researcher used correlation analysis to analyze the data.

3.2 Population, Sample, and Sampling Technique

3.2.1 Population

Population is the individual which is being searched. According to Setiyadi (2006:38), population is the entire individual who becomes the target in the research. According to Cohen (2000:92) population is collection of the samples. Sugiyono (2012:80) adds that population is the entire individual who becomes the target in the research.

Based on the theories above, it can be simply that population is the subjects that are involved in the research. In other words, population is the total number of students who were involved in this research. The population in this research was students of SMK N 2 Kotabumi at the eleventh grade which consists of 379 students.

Table 1
Population Of The Research

No	Classess	Number of Students
1	XI AKL 1	34
2	XI AKL 2	36
3	XI AKL 3	36
4	XIBDP	31
5	XIPKM 1	33
6	XIPKM 2	35
7	XIOTKP 1	35
8	XIOTKP 2	34
9	XI OTKP 3	35
10	XI TKJ 1	35
11	XI TKJ 2	35
Total		379

3.2.2 Sample

Sample is the representative of the population. Setiyadi (2006:38) stated that sample is the individual who gives the data. Sample is some of population

taken by the researcher (Arikunto, 2010:174). In addition, Sugiyono (2014:62) says that sample is a part of the total population and characteristics possessed by the population. There are two ways to select a sample. The first, if amount the population is less than 100, all of the population can be a sample. The second, if the population is more than 100, the researcher can take 10-15% or 20-25% from the population (Arikunto, 2006:1334). This related with argued by Roscoe in Sugiyono (2011:90) minimalized sample of the research are 30 people.

In this research, the researcher used the last option because amount of the population more than 100. So, the researcher took 10% as a sample from the population. The amount of population in this research are 379, then the researcher took 10% from that, $379 \times 10\% = 37,9$. In simply, there were 38 students as the sample in this research. They were students at eleventh grade of of SMKN 2 Kotabumi.

3.2.3 Sampling Technique

Sugiyono (2014:62) states that sampling technique is the way to take a sample. The researcher used proportional random sampling technique in this research. Sugiyono (2014: 64) adds proportional random sampling technique is the sampling technique applied in this research, for the sampling technique is proportional in randomly, each member of the population has an opportunity to be selected as members of the sample and each class is represented to be the sample in this research.

The procedure to take the sample in this research by using proportional random sampling that represented by numbered from 1 to the number of subjects. Then, the writer wrote the name of each students of each class in the populations

in piece of paper. After that, the researcher rolled and putt them in a can. The researcher shaked the can like a lottery, whose names that came out of the can, so it will be sample in this research.

3.3 Research Instrument

Creswell (2012: 338) states that instrument can be able a tool as measuring, observasing, or documenting the data. In this research, the researcher used a tool in form of a test to collect the data. There were two kind of tests, a test to measure the students' skimming skill by giving questionnaire to the students and another test to measure the students' reading comprehension by giving multiple choice test to the students. But firstly, the researcher should give a try out to students before the researcher apply the instrument. The researcher prepared 20 items number to be used as an instrument of reading comprehension and 10 statements on students' skimming skill on questionnaire in this research.

3.3.1 Instrument of Reading Comprehension

a. Conceptual Definition of Reading Comprehension

Reading comprehension is a complex process that reader should effort to construct an idea and then convey them to the text. During the process of constructing idea, reader employs the various abilities on reading and connects to the he or his real world knowledge with knowledge in language.

b. Operational Definition of Reading Comprehension

Reading Comprehension in this research as a independent variable (Y). Operationally, reading comprehension is a final result from the respondents' answer based on the the comprehend text in reading activity. In this research, the researcher provided a test to measure students' reading comprehension by multiple choices in 20 questions which consisted of 4 choices. In scoring the result, teacher gave the score 1 for every correct answer and the score 0 for every incorrect answer to the students. Hence, the highest score was 100. There are some indicators to measure the students' reading comprehension by Brown (1994: 26) :

- 1). Finding the main idea in the paragraph
- 2). Finding the expression/idioms/phrases in the paragraph
- 3). Grammatical features
- 4). Finding the details information
- 5). Finding written and unwritten information from the text
- 6). Inference
- 7). Finding the moral value or purpose of the text
- 8). Finding the suitable words to completing the text

c. Specification of Reading Comprehension Instrument

Based on the conceptual and operational definition of reading comprehension above, the specification of the test on reading comprehension as follows:

Table 2
Specification Instrument of Reading Comprehension

No	Variable	Aspects	Indicators	Item number	Total Item
1	Reading Comprehe nsion	Finding the main idea and topic	Identify the main idea from the text	35,36	2
2		Findings references	Identify the information that stated in passage	4,18,23	3
3		Finding the vocabulary	Identify the vocabulary in the text	2,10,14,24,33,37	6
4		Finding stated and unstated details of the text	Identify the detail information of the text	1,9,28,32	4
5		Identifying moral value of the text	Identify the moral values which is in the text	5,12,15,16	4
Total					20

In conclusion, the instrument is encompass some reading comprehension techniques in some aspect of reading assessment.

3.3.2 Instrument of Skimming Skill

a. Conceptual Definition of Skimming Skill

Skimming skill is to identifying main idea in a text without read all of the text. Reader only read in any parts that important and usually main idea in there, such as in first paragraf and last paragraf. It is so helpful and useful to do when

the readers have many texts that should be read but does not any times. So its more effective way to do

b.Operational Definition of Skimming Skill

Skimming skill in this research as dependent varibale (X). In this research, the researcher used a questionnaire to measure the students' skimming skill. There were 10 statements that should answered the students by giving a checklist (√). In scoring system, the range was 1 until 5 score. Give 1 score to strongly disagree, give 2 score to disagree, give 3 score to neutral, give 4 score to agree, and give 5 score to strongly agree. The researcher use this instrument to know how far students' understanding about skimming skill by giving answer in the questionnaire. Based on the guidance for skimming, Mc Whorter (1992:81) states that there are some general guidance on skimming :

- 1). The Tittle
- 2). The Subtittle
- 3). The Introductory Paragraph
- 4). The Headings
- 5). The First Sentence on Each Paragraph
- 6). Key words
- 7). The tittle or Legend of Any Maps, Graphs, Charts, or Diagrams
- 8). The last Paragraph

c. Specification of Skimming Skill Instrument

Brown (2003:213) states that assessment for skimming skill is straight forward: the test-maker skimming a text and answer questions. So, the researcher

used a questionnaire to measure skimming skill that consist on 10 statements there. Statements on the questionnaire relate with the aspects of reading comprehension (main idea, inference, reference, vocabulary, and supporting details). There were five options in questionnaire, namely : strongly agree, agree, neutral, disagree, and strongly disagree. The students should only give a checklist (√) on the questionnaire. Based on the conceptual and operational definition above, the table above will show the specifications of the instrument. They are:

Table 3
Specification Instrument of Skimming

No	Statements	Agreement				
		SD	DA	N	A	SA
1.	Skimming increased my interest in learning English.					
2.	Skimming facilitated me to find the main idea in the text.					
3.	Skimming facilitated me to predict the content of the text.					
4.	Skimming helped me to save the time in reading and understanding the text.					
5.	Skimming facilitated me to specify the reference.					
6.	Skimming make me easier to answer the question of the text.					
7.	Skimming facilitated me to find the specific information from the text.					
9.	Skimming helped me by getting material faster.					
10.	Skimming helped me to understand new vocabulary					
11.	Skimming helped me to predict the events from the text.					

Source : (Khazaal : 2018)

Notes:

SD : strongly disagree

D : disagree

N : neutral

A : agree

SA : strongly agree

A test can be categorized as a good test if the test will cover of two test requirements as satated by Arikunto (2006:168). They are validity test and reliability test.

3.4 Validity Test

In order to know whether the instrument that is used in the research that suitable with the measurement of instrument or not, it needed validity test. In addition, Setiyadi (2006:21) stated that validity relates to the use of measurement in a research and relates to reliability of measurement. In this research, the researcher used content validity to measure instrument of reading comprehension test and pearson product moment correlation to measure students' skimming skill. The research conducted both of test to know the test has good vailidity or not.

3.4.1 Content Validity

According to Best and Khan (1995:219) content validity defines to the degree to which the test actually measures, or is specifically related to, the traits for which it was designed. Content validity is based upon careful examination of course textbooks, syllabi, objectives, and the judgments, of subject matter specialist. In this research, the researcher used reading instrument point by Biserial Correlation. The formula is as follows:

$$r_{pbis} = \frac{M_p - M_t}{S_t} \sqrt{\frac{p}{q}} \quad (\text{Arikunto, 2010:326})$$

Notes:

r_{pbis} = Coefficient be serial point correlation.

- M_p = Mean, value from all subjects which answer correctly.
 M_t = Mean, total value (average value from all the subject)
 S_t = Deviation Standard
 P = Total Subject which answered correctly that we look for the correlation.
 Q = Proportional of subject who answer un correctly ($q=1-p$)

The criterias of content validity test is the calculation of the result r_{pbis} ($r_{observed}$) is consulted with r_{table} score. If the result of $r_{observed} \geq r_{table}$, it means that the instrument is valid and can be used for the research. The minimum requirement to consider the validity qualify is if the result of $r = 0.3$.

3.4.2 Pearson Product Moment

The researcher provided several questions to students in order to get the result of valid or not the test. In this research, the researcher used *Pearson Product Moment* to measure the correlation coefficient of the reliability between odd and even number (reliability of half test), the formula as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum y^2 - (\sum Y)^2\}}} \quad (\text{Arikunto, 2010:72})$$

description:

- r : correlation coefficient of the odd and even parts
 \sum_{xy} : the sum of the odd and even parts
 $\sum X$: the sum of the odd parts scores
 $\sum Y$: the sum of the even parts scores
 $\sum X^2$: the sum of square of the odd and even parts for each student
 $\sum Y^2$: the sum of square of the odd and even parts for each student
 $(\sum X^2)$: the sum of the squared of the odd and even parts

$(\sum Y^2)$: the sum of the squared of the odd and even parts

N : total of the respondents

3.5 Reliability Test

In every research, it is important to measure the consistency of a test (reliability) also. According to Setiyadi (2006:16), reliability is consistency of measurement. A good test will be good parameter if the score that given by examiners is constant. So whenever and whomever the test will be conducted, the result still can be believed. In this research, the researcher use Split Half to measure reliability of instrument of students' reading comprehension, the formula is as follows:

$$r_{11} = \left\{ \frac{n}{n-1} \right\} \left\{ \frac{S^2 - \sum pq}{S^2} \right\}$$

If get the score of reliability test (r_{11}), then the researcher will consultation to r product moment table (r_{table}) with the standard signification is 5%. If the result is $r_{11}(r_{count}) > (r_{table})$, it means the data is consistant.

Meanwhile, the instrument reliability is the consistency of a measuring instrument or how far the instruments could be measured the same subject at different times but show relatively similar results. To get the data of reliability test of questionnaire, the researcher used alpha formula by Arikunto (2010:239). The formula is as follows:

$$r_{11} = \left\{ \frac{n}{n-1} \right\} \left\{ 1 - \frac{\sum \sigma b^2}{\sigma_t^2} \right\}$$

Notes:

r_{11} = coefficient of reliability

k = number of items or number of questions

$\sum \sigma b^2$ = number of items variance

σ_t^2 = total variance

If the result of r_{observed} is similar or bigger than the r_{table} , it means the instrument is reliable.

3.6 Data Collecting Technique

In this research, the researcher applied two methods to collecting the data. They were multiple choice test and questionnaire. The description of the test as follows :

1. Multiple Choice Test

The researcher provided 20 questions in multiple choice that consist of four options: a, b, c, or d. This test was conducted by the researcher in order to get the score of students' reading comprehension.

2. Questionnaire

The researcher distributed the questionnaire to the students in order to the researcher got the information about students' understanding on skimming. There were 10 statements that provided the researcher in the test. The students as respondents should choose the response categories, namely sd, da, n, a, and sa and give the checklist (\checkmark) on the answer.

3.7 Technique of The Data Analysis

In order to conduct a good arrangement, the researcher used a parametric statistic formula to find out the relation between students' reading comprehension

and students' skimming skill. There were two assumptions that should be fulfilled in parametric statistic, they were normality and homogeneity test.

3.7.1 Normality test

To know the data is distributed normal or not, the reasearcher was conducted the normality test. The researcher usedLiliefors's formula by Sudjana (2005:466) to measure the normality test in this research. The formula is as follows :

- a. Determine the raw by using the following 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. Determine the oppportunity of each raw numbers with the formula:

$$F(Z_i) = P(z \leq z_i)$$

- c. Determine the proportion by using the formula:

$$S(z_i) = \frac{\text{Numbers } Z_1, Z_2 \dots Z_n \text{ that } \leq Z_i}{n}$$

- d. Calculate absolute price using the formula: $|F(z_i) - S(z_i)|$

- e. Determine the largest absolute value which is called L_0 , and then compare L_0 with L_{table} . The data has normal distribution if $L_0 < L_{\text{table}}$.

3.7.2 Homogeneity test

The researcher conducted a homogeneity test to measure whether the samples of the research are really homogeneous or not. The researcher used

formula by Bartlett and the test criteria are: H_0 is accepted if $x^2_{count} \leq x^2_{table}$ of chi-square, it means that the data is homogeneous.

Sudjana (2005:263) states the steps to measure the homogeneity of the data as follows:

- a. Determine the composite of variant from all of the sample using the

$$\text{formula: } s^2 = \frac{\sum(n_i-1)s_i^2}{\sum(n_i-1)}$$

- b. Determine B score by using the formula $B = (\log s^2) \sum(n_i-1)$

- c. Calculate $x^2 = (in 10) \{B - \sum(n_i - 1) \log s_i^2\}$ and the hypothesis that should be proved is $H_0: \sigma_1^2 = \sigma_2^2 \dots = \sigma_n^2$ (the variant of the data is homogeneous)

3.7.3 Hypothesis test

After the researcher conduct normality test and homogeneity test, then the researcher conducted the hypothesis test. The researcher used *Pearson Product Moment* and the formula as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}} \quad (\text{Arikunto, 2010:72})$$

Notes:

r_{xy} = Correlation coefficient of variable X and Y

$\sum xy$ = The sum of the products of X and Y

$\sum X$ = The sum of X scores

$\sum Y$ = The sum of Y scores

$\sum X^2$ = The sum of square of X score

$\sum Y^2$ = The sum of square of Y score

$(\sum X^2)$ = The sum of squared X scores

$(\sum Y^2)$ = The sum of squared Y scores

N= The number of respondent

The result of the hypothesis test should be interpreted to r_{table} to find whether there was correlation between students' skimming skill and students' reading comprehension. The criteria of the test: If $r_{xy} > r_{table}$ then H_0 is rejected, and H_a is accepted. It means that there was correlation between the variables, and vice versa.

Because r_{xy} only showed the coefficient of correlation to find out the significant test, it is used t-test. Sugiyono (2010:184) states the formula is as follow:

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

Notes:

t = Significant of correlation

r = Coefficient correlation r_{xy}

n= Total sample

The test criteria is as follows:

If $t_{observed}$ is greater than the t_{table} at the significance level of <0.05 , the correlation is significant. Based on the formula of hypothesis test, the hypothesis in this research proved:

H_a : There was a significant correlation between skimming skill and students' reading comprehension at the eleventh grade students of SMKN 2 Kotabumi in academic year of 2020/2021.

H_0 : There was no significant correlation between skimming skill and students' reading comprehension at the eleventh grade students of SMKN 2 Kotabumi in academic year of 2020/2021.