

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

A research analysis is required. Survey research type with quantitative associative approach . Because this research is an associative research quantitative then, all variables are symmetrical there are no independent variables and dependent, because the two variables are symmetrical, namely students reading habit and students reading comprehension. This research is aimed find out the correlation between reading habit and reading comprehension at the second grade of SMAN 4 Parepare. This research is basically a field research since the data of this research was on the field.



Where:

X: students reading

Y: Students reading comprehension

B. Location and Duration of the Research

The location of this research was at SMA Negeri 4 Parepare. It one of the senior high school located in Ujung, Parepare. The duration of this research was one month.

C. Population and Sample

1. Population

Population of this research was the whole students of the second grade of SMAN 4 Parepare, where the number of classes are nine classes. The number of population can be seen as the table follow:

Table 3.1 Population of the students

CLASS	NUMBER OF STUDENTS
XI IPA 1	36
XI IPA 2	33
XI IPA 3	31
XI IPA 4	30
XI IPA 5	30
XI IPS 1	29
XI IPS 2	29
XI IPS 3	32
XI IPS 4	32
Total	312

Source: Administration of SMAN 4 Parepare.

2. Sample

The sample is a part or representative of the population under study. Assessment against the sample basically intended to find the top generalizations population or population characteristics (parameters), so that it can be done inference (inference) about the universe.

As for the samples in this study were students who taken from each class using a random sample or random technique. Meanwhile, in determining the sample size using techniques slovin, with an error rate of 10 %.

Table 3.2 Sample of the students

CLASS	NUMBER OF STUDENTS
XI IPA 1	9
XI IPA 2	9
XI IPA 3	9
XI IPA 4	9
XI IPA 5	8
XI IPS 1	8
XI IPS 2	8
XI IPS 3	8
XI IPS 4	8
Total	76

Source: Administration of SMAN 4 Parepare.

D. Instrument of Collecting Data

1. Questionnaire

Questionnaire is a data collection technique that is done by giving a set of questions or written statement to the respondent to be answered. The questionnaire is an efficient data collection technique when researchers know with certainty the variables to be measured and know what can be expected from the respondents.⁵¹

⁵¹Candrawati, W. S. B.A Correlational Study on Translation Ability, Reading Habit and Students' Reading Comprehension of the Tenth Grade Students of SMU N 1 Kebak Kramat Academic Year 2008/2009. Unpublished Thesis. (Surakarta: State University of Surakarta, 2009).

The questionnaires that used five alternative based on the Likert's Scale Types. Likert's Scale is used to measure attitude, opinion, perception based on the certain object or phenomena.⁵² The indicators of the questionnaire were explained as follows:

A: Selalu (Always)

B: Sering (Often)

C: Kadang-kadang (Sometimes)

D: Jarang (Seldom)

E: Tidak Pernah (Never)

The questionnaires were given to the students consist of many indicators. Indicators are taken from Julio Cesar's theory about the reading habit aspects, they are: reading amount of books, academic reading, reading frequency, non academic reading, motivation in the academic environment, and motivation in the family environment. The following table present the indicator use by the writer in the questionnaire.

Table 3.3 Reading Habit Indicators

No	Reading Habit (X) Indicators	Item Number
1	Reading Amount of Books	1, 2, 3, 4, 5
2	Academic Reading	6, 7, 8, 9, 10
3	Reading Frequency	11, 12, 13, 14, 15
4	Non Academic Reading	16, 17, 18, 19, 20
5	Motivation in The Academic Environment	21, 22, 23, 24, 25
6	Motivation in The Family Environment	26, 27, 28, 29, 30
TOTAL		30

⁵²Syofian Siregar, *Statistik Parametrik untuk Penelitian Kuantitatif*, (Jakarta: PT Bumi Aksara, 2013).

2. Reading Test

A test is a systematic procedure for observing one's behavior and it with the aid it with the aid of numerical or category system. A test is use to collect the data of students reading comprehension. The test of reading comprehension was an objective test in the form of multiple choice test consisting 20 items.

There were five options in each item (A, B, C, D, E). The writer took some of the questions that have significant correlation with the students compulsory book, such as Look Ahead (Published by Erlangga) and students work sheet (LKS – Lembar Kerja Siswa Sakti SMA XI, published by CV Arya Duta) and many other sources from the internet. The writer marked 1 for each item which is answered correctly and marked 0 for the wrong answer.

The indicators of reading comprehension test were taken from Henry Guntur Taringan theory. The indicators are described below:

Table 3.4 Reading Comprehension Indicators

No.	Aspects	Items	Total
1	Reading for Details	1, 2, 8, 11, 18	5 items
2	Reading for Main Idea	6, 14, 19	3 items
3	Reading for Sequences	4, 7	2 items
4	Reading for Inference	3, 12, 17	3 items
5	Reading for Classifying	5, 13	2 items
6	Reading for Evaluating	9, 15, 20	3 items
7	Reading for Comparing	10, 16	2 items
Total			20 tems

a. The Validity Test and Reliability Test Research Instrument

1) The Validity Test

An instrument is valid when if it is able to measure what the researcher are going to measure.⁵³ There are two criteria to determine validity of test items, as follows:

- a) If $r_{\text{value}} > r_{\text{table}}$ at the level significance of 5%, it means that the instrument is valid
- b) If $r_{\text{value}} < r_{\text{table}}$ at the level significance of 5%, it means that the instrument is not valid

The calculating of validity test used correlation formula from Statistical Package for Social Science (SPSS). The result of the validity test items are consulted to r_{table} for $N = 76$ at the level of significance of 5 %. The result showed that the coefficient validity of reading habit and reading comprehension were valid.

The results of the instrument validity test, the data can be said to be valid, if the value of r is calculated greater than r_{table} , or if the sig. (2-tailed) value < 0.05 , then the instrument can said to be valid.⁵⁴

Testing the validity of each item of the statement using items, namely correlates the score of each question item with the total score which is the sum score statement item. Researchers use the product moment formula with using the IMB SPSS Statistic 21 application to test the statement items about students reading habit (X) and students reading comprehension at the second grade of SMAN 4 Parepare (Y) with the number of respondents 76 students. With the condition if r_{count} is greater

⁵³Syofian Siregar, *Statistik Parametrik untuk Penelitian Kuantitatif*.

⁵⁴ Syofian Siregar, *Parametric Statistics for Quantitative Research Completed with Comparison of Manual Calculation and SPSS Version 17*.

From the r_{table} , the statement item is declared valid at the significant level $\alpha = 5\%$.

The results of the analysis of the two variables can be seen in the following table.

Table 3.5 Results of the Validity Test of Students Reading Habit (Variable X)

Number of Item	Correlation Coefficient		Information
	R_{count}	R_{table}	
Item No. 1	0,554	0,220	Valid
Item No. 2	0,664	0,220	Valid
Item No. 3	0,319	0,220	Valid
Item No. 4	0,603	0,220	Valid
Item No. 5	0,524	0,220	Valid
Item No. 6	0,392	0,220	Valid
Item No. 7	0,525	0,220	Valid
Item No. 8	0,605	0,220	Valid
Item No. 9	0,397	0,220	Valid
Item No. 10	0,201	0,220	Invalid
Item No. 11	0,550	0,220	Valid
Item No. 12	0,485	0,220	Valid
Item No. 13	0,200	0,220	Invalid
Item No. 14	0,502	0,220	Valid
Item No. 15	0,328	0,220	Valid
Item No. 16	0,465	0,220	Valid
Item No. 17	0,306	0,220	Valid
Item No. 18	0,321	0,220	Valid
Item No. 19	0,373	0,220	Valid
Item No. 20	0,391	0,220	Valid
Item No. 21	0,695	0,220	Valid
Item No. 22	0,556	0,220	Valid
Item No. 23	0,476	0,220	Valid
Item No. 24	0,076	0,220	Invalid
Item No. 25	0,420	0,220	Valid
Item No. 26	0,501	0,220	Valid
Item No. 27	0,591	0,220	Valid
Item No. 28	0,446	0,220	Valid
Item No. 29	0,762	0,220	Valid
Item No. 30	0,577	0,220	Valid

Source: Output Data of SPSS Statistic IMB 21

After testing the validity of variable X (Students Reading Habit) which consists of Of the 30 statement items with r_{table} 0.220, it is known that of the 30 statement items It has 3 invalid statement items and 27 statement items that are valid. This is because the r_{xy} value obtained from the statement items is more the value is compared to the value of r_{table} , the statement items said to be valid.

Table 3.6 Results of the Validity Test of Students Reading Comprehension (Variable Y)

Number of Item	Correlation Coefficient		Information
	R_{count}	r_{table}	
Item No. 1	0,351	0,220	Valid
Item No. 2	0,280	0,220	Valid
Item No. 3	0,281	0,220	Valid
Item No. 4	0,458	0,220	Valid
Item No. 5	0,251	0,220	Valid
Item No. 6	0,393	0,220	Valid
Item No. 7	0,315	0,220	Valid
Item No. 8	0,280	0,220	Valid
Item No. 9	0,270	0,220	Valid
Item No. 10	0,242	0,220	Valid
Item No. 11	0,231	0,220	Valid
Item No. 12	0,166	0,220	Invalid
Item No. 13	0,221	0,220	Valid
Item No. 14	0,033	0,220	Invalid
Item No. 15	0,198	0,220	Invalid
Item No. 16	0,366	0,220	Valid
Item No. 17	0,151	0,220	Invalid
Item No. 18	0,099	0,220	Invalid
Item No. 19	0,221	0,220	Valid
Item No. 20	0,474	0,220	Valid

Source: Output Data of SPSS Statistic IMB 21

After testing the validity of the Y (Student Reading Comprehension) variable consists of 20 question with r_{table} 0.220 known that of the 20 items question 5 items including invalid and 15 items declared valid. This is because the value of r_{xy}

obtained from the statement items is greater its value is compared with the value of r_{table} then the statement items said to be valid.

2) The Reliability Test

The instrument reliability test aims to determine the extent to which the measurement results remain consistent, if two or more measurements of the same symptoms are carried out using the same measuring device. The instrument reliability test is carried out using the IMB statistic SPSS 21 application. The techniques used to measure the reliability of a research instrument, namely the Cronbach Alpha technique. This technique can be used to determine whether a research instrument is reliable or not, if the answer given by the respondent is in form of a political scale.

The reliability coefficient categories are as follow:

- 0.90 - 1.00 = Very high reliability
- 0.70 - 0.90 = High reliability
- 0.40 - 0.70 = Moderate reliability
- 0.20 - 0.40 = Low reliability
- 0.00 - 0.20 = Small/ Very low reliability.⁵⁵

Table 3.7 Reliability Variable X (Reading Habit)

Reliability Statistics	
Cronbach's Alpha	N of Items
.878	27

Source: Output Data of SPSS Statistic IMB 21

Based on the table above the reliability of the instrument variable X (Students Reading Habit) obtained Cronbach's Alpha value of 0.878 at the level significant $\alpha =$

⁵⁵Amalia Puspita Dewi, *Jurnal Pembelajaran Matematika Menggunakan Pendekatan Concrete Pictorial Abstract (CPA) Untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa* (Universitas Indonesia : 2018).

5%, then the statement instrument is said to be very high reliable. So, instrument test data on variable X is valid and reliable for all items statement, then it can be used for measurement data in order data collection.

Table 3.8 Reliability Variable Y (Reading Comprehension)

Reliability Statistics	
Cronbach's Alpha	N of Items
.304	15

Source: Output Data of SPSS Statistic IMB 21

Based on the table above the reliability of the instrument variable Y (Students Reading Comprehension) obtained Cronbach's Alpha value of 0.304 at the level significant $\alpha = 5\%$, then the statement instrument is said to be low reliable. So, instrument test data on variable Y is valid and reliable for all items statement, then it can be used for measurement data in order data collection.

E. Operational Definition of Variable

1. Reading Habit

This research focus on reading habits. Reading habit are a students routine reading activity for obtains the message, instrument or knowledge to be conveyed author. Reading habits include four aspects, namely time, willingness, motivation and environment.

2. Reading Comprehension

This research focus on reading comprehension. Reading comprehension is the ability of the students to interpret and understand the facts and information expressed in the reading. in this study, reading comprehension was tasted explanation text.

F. Procedure of Collecting Data

The procedure use in collecting data include non test form of reading habit questionnaires and reading comprehension tests in the form of multiple choice tests.

Reading habit questionnaires were given to the students in order to determine their reading habit score, and multiple choice of reading comprehension tests were use to measure reading comprehension score of the students of second grade of SMAN 4 Parepare.

G. Technique of Data Analysis

The technique data analysis in this research used descriptive statistical techniques and inferential statistics to facilitate the analysis of the research data, the researcher used SPSS. The writer calculated the perquisite testing requirement analysis such as validity, reliability, linearity, and normality test before calculating the statistical testing Pearson Product Moment Correlation. The technique data analysis of the research as follows:

a. Descriptive Statistic

Data analysis used descriptive statistic, which describes the existing data to obtain fact from respondents, hence more easily to understand. The analysis used with descriptive statistic was done by collecting, compiling, presenting, and analyzing all data of all variables in terms of percentage, frequency distribution, diagram, graph, mean and standard deviation.

a. Test Requirements Analysis

Test requirements analysis is needed to determine whether data analysis for hypothesis testing can be continued or not. This section is discussed various test requirements analysis, such as test data normality, homogeneity, and linearity.

b. Data Normality Test

The purpose of conducting a normality test on a series of data is to know whether the data population is normally distributed or not. When data normally distributed, it can be used a parametric type statistical test. Meanwhile, if the data is not normally distributed, then a statistical test is used nonparametric.

The normality test was carried out by the Kolmogorov-Smirnov test on SPSS Statistic 21 for Windows. With the following test rules

If Probability (sig) > 0.05, then the data is normally distributed

If Probability (sig) < 0.05 then the data is not normally distributed

c. Data Linearity Test

The purpose of the linearity test is to determine whether between dependent variable (Y) and independent variable (X) have a linear relationship. Test this usually used as a prerequisite in applying the linear regression method.

Linearity test using the IMB SPSS statistic 21 for Windows with the test criteria, namely If the probability value > 0.05, then the relationship between variables X and Y is linear. If the probability value < 0.05, then the relationship between variables X and Y is not linear

b. Statistical Hypotesis

The calculating of the correlation coefficient of the result of both of test was analyzed by applying the formula of product moment correlation as follow:

$$r_{xy} = \frac{N \sum xy - \sum x \cdot \sum y}{\sqrt{(N \sum x^2 - \sum x^2)(N \sum y^2 - \sum y^2)}}$$

Where

r_{xy} : Correlation Coefficient

N :The number of students/subjects participating in the test

$\sum x$:The sum of score in reading habit

$\sum y$:The sum of score in reading comprehension and analytical exposition text⁵⁶.

To find out the correlation between X and Y, significant or not, used the definition of the refuse or accept hypothesis as follows:

Ho = refuse if R-value \leq r-table

Ha = accept if R-value \geq r-table

Table 3.9 Guidelines for interpretation of correlation coefficients⁵⁷

Coefficient Interval	Level relationship
0, 00 – 0, 199	Very low
0, 20 – 0, 399	Low
0, 40 – 0, 599	Medium
0, 60 – 0, 799	Strong
0, 80 – 1, 000	Very strong

⁵⁶Suharsimi Arikunto, *Prosedur Penelitian* (Jakarta: RinekaCipta 2002).

⁵⁷Sugiono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, R & D*.