III. RESEARCH METHOD

This research was held to find out whether there was an influence of reading habit toward reading comprehension or not. This chapter included research design, population and sample, data collecting techniques, data analysis, research procedure, validity, reliability, and analysis of the instrument, and hypothesis testing as stated below

3.1 Research Design

This research was intended to investigate whether there was an influence of reading habit toward reading comprehension achievement. The writer used a quantitative methodology.

In this research, the writer used ex post facto research design because not giving any treatment. The research collected the data and found the correlation between cause and effects that happen.

The research design of ex post Facto co-relational study as follow:

X ⟶ Y

In which, X: Students' reading habit.

Y: Students' reading comprehends.

In collecting the data, the writer used questionnaire (X) to measure the students' reading habit, the purpose of it was to know reading habit of the students. After that, reading test (Y) was given to them to see their reading comprehension scores. Then, the writer would match between students' reading habit and their reading comprehension.

3.2 Population and Sample

The population of this research was the second year students of MAN 1 Sukarame Bandarlampung. as sample, one class was taken, which consisted of approximately 38 students. The writer took the sample from one class of the second year. The writer used the reading habit questionnaires and reading comprehension test which consisted of 20 items of reading habit questionnaires and 50 items of reading comprehension.

3.3 Data Collecting Technique

In collecting the data, the writer used the following technique. They were questionnaire and reading comprehension test. The questionnaire here was to know the reading habit of the student, and reading comprehension test here was to know how far the comprehending of the students from the text.

The researcher would use two instruments in this research, those were, Reading habit questionnaire and reading comprehension test.

3.3.1 Questionnaire

The aim of questionnaire was to find out the reading habit done by learners in reading text. In this research, each questionnaire had four options. This was done to clarify the reading habit of the students. The questions number 1,2,3,4,5,8,9,12,13,14,15,16,17,18,19,20 were used to identify good habit in reading, meanwhile, question number 6,7,10, and 11 were used to identify bad habit in reading. The writer uses the questionnaire which consists of 20 items that mostly adapted and modified from Atram (2008).

3.3.2 Reading Comprehension Test

The objective of reading comprehension test was to know the students' reading scores. In reading comprehension test, objective test used four options A, B, C, and D. The objective test was used rather than other types of test because it was assumed that the objective was more familiar to the students than other types of the test. So, they might understand the instruction of the test more easily. Besides, it was easier to score. The writer used the reading comprehension test which consisted of 50 items that adapted and modified from Lukito W (1987).

3.4 Research Procedure

In conducting the research, the writer used the steps as follow:

a) Determining the problem

   In order to determine the problem, the writer read the book that related to the topic.

b) Determining the instrument

In this research, the writer used appropriate instrument in order to be able to be interpreted. The instruments were:

1. The reading comprehension test, which consists of 50 items, was adapted and modified from Lukito W (1987)
2. The questionnaire which consists of 20 items was mostly adapted and modified from (Atram:2008)

c) Finding the sample

The sample of this research was one class of the second year students of MAN 1 Sukarame Bandarlampung, the class would be taken purposively. Moreover, the sample would be taken as many as 38 students from one class of XI IPA.

d) Trying out the instrument

Before distributing the instrument, the writer would be tried out them first in order to guarantee the result to be more valid.

e) Distributing the instrument

Both of instruments would be distributed on the same day.

f) Scoring the data

There were 20 items of questionnaires; each item provided four options which had different score. The score ranges from 1-4, 4 refers to always, 3 refers to often, 2 refers to seldom, 1 refers to never.

g) Analyzing the data

After the data was gathering, the researcher would analyze the result of reading habit and reading comprehension using *linear regression analyses*. The researcher would see whether there was significant influence of reading habit toward reading comprehension or not.

3.5 Try Out of the Instrument

To see whether the instruments could be used or not, the writer measured the validity, reliability, and analyzes the instruments.

According to Hatch and Farhady (1982:250) validity refers to the extent to which the result of the procedure serves the uses for which they were intended. Validity refers to the result of the test itself. Also validity is a matter of degree. It is not an all or nothing trait. A test can be highly valid for one purpose but not for another.

Hatch and farhady (1982:244) say that reliability is the degree to which a test produces consistent result under these limitations. Reliability can be defined as the extent to which a test produces consistent result when administered under similar conditions.

3.5.1 Questionnaire

3.5.2.2 Reliability of the Test

The writer measured reliability of the test by using Pearson Product Moment formula:

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

(Arikunto, 1997:69)

Where: $\sum X$ = total score of odd number

r_{xy} = the correlation of odd group and even group

X^2 = square of X

Y^2 = square of Y

N = total number of student

To see the reliability of the whole try out test, the researcher uses Spearmen Brown formula as follow:

$$r_{11=} \frac{2\,(r_{xy}11/22)}{1+r11/22}$$

(Arikunto, 2001:93)

Where: r_{11}= Coefficient reliability between odd and even number

r_{12} = Coefficient reliability for all items

The criteria of reliability:

a) A very low reliability ranges from 0.00 to 0.19

b) A low reliability ranges from 0.20 to 0.39

c) An average reliability ranges from 0.40 to 0.59

d) A high reliability ranges from 0.60 to 0.79

e) A very high reliability ranges from 0.80 to 1.00

Table 1. Specification of Questionnaire

No	Reading Habit Test	Item Number	Total Items
1	Reading Frequency	1, 8, 14, 16, 20	5
2	Reading Attitude	2, 4, 5, 9, 12, 13, 15, 17, 18, 19	10
3	The purposes of reading	3, 6, 7, 10, 11	5
TOTAL			**20**

(Atram, 2008)

3.5.2 Reading Test

The writer measured the validity and reliability of the test. Validity is used to measure the test valid or not while, reliability is the consistency of the test. Moreover, the writer also analyzed the test.

3.5.2.1 Validity of the Test

"A test can be said valid if the test measures the object to be measured and suitable with criteria" (Hatch & Farhady, 1982). They also stated that there were basic types of validity. They were face validity, content validity, construct validity, and criterion-related validity.

1. Face validity, concerns with the layout of the test.

2. Content validity, depends on a careful analysis of the language being stated;
3. Construct validity, measures certain specific characteristic in accordance with a theory of language learning;
4. Criterion-related validity, concerns with measuring the success in the future as in replacement test.

According to the types of validity above, the researcher used content and construct validity. The validity of reading test referred to the content and construct validity in which the question represents five sort of reading skill that we knew that quite the same the reading skill, i.e. *determining main idea, finding the detail information, reference, inference, and vocabularies.* They were parallel to the skill required by the language curriculum. Then, Construct validity is concerned whether the test is actually in line with the theory of what reading comprehension means (Hatch and Farhady, 1982). To make sure the test reflects the theory in reading comprehension, the researcher examined whether the test questions actually reflect the means of reading comprehension or not.

Table 2. Specification of Reading Comprehension Test

No	Reading Comprehension Test	Item Number	Total Items
1	Determining main idea	1, 2, 12, 18, 25, 27	6
2	Identifying specific information	3, 4, 5, 7, 8, 10, 19, 22, 24, 28, 31, 32, 33, 34, 36, 40, 41, 42, 44, 45, 46, 49	22

3	Reference words	14, 17, 21, 30, 38, 47	6
4	Inference words	6, 9, 11, 16, 26, 37, 39, 48, 50	9
5	Vocabulary	13, 15, 20, 23, 29, 35, 43	7
TOTAL			**50**

(Lukito W, 1997)

3.5.2.2 Reliability of the Test

The writer measured reliability of the test by using Pearson Product Moment formula:

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

(Arikunto, 1997:69)

Where: $\sum X$ = total score of odd number

r_{xy} = the correlation of odd group and even group

X^2 = square of X

Y^2 = square of Y

N = total number of student

To see the reliability of the whole try out test, the researcher uses Spearmen Brown formula as follow:

$$r_{11}=\frac{2\,(r_{xy}11/22)}{1+r11/22}$$

(Arikunto, 2001:93)

Where: r_{11}= Coefficient reliability between odd and even number

r_{12} = Coefficient reliability for all items

The criteria of reliability:

f) A very low reliability ranges from 0.00 to 0.19

g) A low reliability ranges from 0.20 to 0.39

h) An average reliability ranges from 0.40 to 0.59

i) A high reliability ranges from 0.60 to 0.79

j) A very high reliability ranges from 0.80 to 1.00

3.5.2.3 Item Analysis

A. Level of Difficulty

To measure the level of difficulty of each item test, the writer used the following formula:

$$FV = \frac{R}{N}$$

Where: FV = the index of difficulty

R = the number of the correct answer

N = the number of the student taking the test

(Heaton, 1991:179)

Classification:

a. An item with FV 0.00 – 0.30 ……. Hard

b. An item with FV 0.31 – 070 ……. Fair

c. An item with FV 0.71 – 1.00 ……. Easy

B. Discrimination Power

According to Arikunto (1993:213) discrimination power is the ability of item to differentiate between the students who have high ability and those who have low ability.

To measure the discrimination power of each test item, the writer used the following formula:

$$D = \frac{Correct\ U - Correct\ L}{\frac{1}{2}n}$$

Where: D = discriminating power index

U = upper half

L = lower half

n = number of candidate in one group

(Heaton, 1991:180)

3.6 Data Analysis

To analyze the data in this study, the writer used quantitative technique was used to test the effect of the dependent variable. The statistical method used was simple linear regression analysis

Simple linear regression based on functional relationships or causal one independent variable with the dependent variable (Sugiyono, 2012: 261).Simple linear regression formula is as follows:

$$Y = a + bX$$

Where:

$$a = \frac{(\Sigma Y)(\Sigma X^2) - (\Sigma X)(\Sigma X)(\Sigma XY)}{n\Sigma X^2 - (\Sigma X)^2}$$

$$b = \frac{n\Sigma Y - (\Sigma X)(\Sigma Y)}{n\Sigma X^2 - (\Sigma X)^2}$$

X = Independent Variable

Y = Dependent Variable

a = Constant (the value of Y when X = 0)

b = Regression coefficient (value increase or decrease)

(Sugiyono, 2012)

But, the researcher practically used simple linear regression in SPSS 17.0 (Statistical Program for Social Science).

3.7 Hypothesis Testing

The hypothesis testing can be stated as follows:

H0 is accepted if there is no influence of reading habit toward reading comprehension. (H0= Significance/Probability > 0,05).

Hi is accepted if there is significant influence of reading habit toward reading comprehension. (H1 = Significance/Probability < 0,05).