CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

The design of this research is Correlational research. It is a type of nonexperimental research in which the researcher measures two variables and assesses the statistical relationship (i.e., the correlation) between them with little or no effort to control extraneous variables.This research attempts to get the empirical data as a quantitative research that intended to investigate whether there is a significant correlation between the students who read by using E-book and textbook toward their reading achievement. The design of this research as follows :

The research design is formulated as follows:

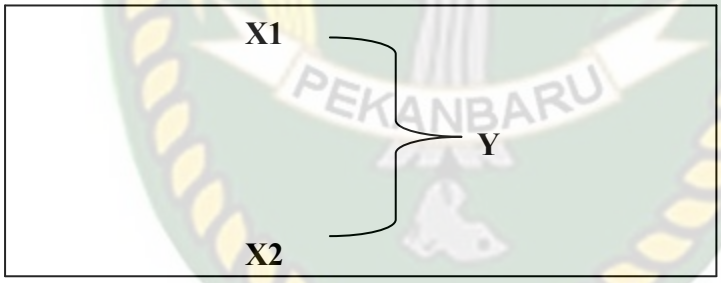

Figure. 3.1 Research Design

In which:

X1 : Students' interest in reading E-book (Questionnaire)

X2 : Students' interest in reading textbook (Questionnaire)

Y : Students' Reading Achievement (Test)

3.2 Location and Time of the Research

This research conducted in FKIP UIR. The research time started on November 2017 until December 2017.

3.3 Population and Sample of the Research

The population of this research is the third semester English students of FKIP UIR in Academic 2017-2018.The sample of this research is taken through random sampling technique. Each member of the population has an equal chance of being selected as subject. The entire process of sampling is done in a single step where each subject selected independently of the other members of the population. The writer uses lottery to find the class. All sample are written in a roll paper, and the writer chooses two classes to be the samples. The sample of this class is Class A. They are 30 students in the class.

3.4 Instrument of the Research

1. Reading Test

The researcher used multiple choice test with four option answer (a, b, c, or d). And total of the question is 30 questions. Test is used to know the students' reading achievement. The test was tried out before it was used. The goal was to check whether the instrument which used the criterion of a good test or not. The researcher used the indicators of reading comprehension which proposed by Cain et.al (2004). Furthermore, the researcher designed the blue print of reading comprehension test based on indicators. The indicators are taken from Cain et.al (2004).

Table 3.1 Indicators of Reading Comprehension

Variables	Indicators	Numbers items
Reading Comprehension	Finding main idea	1, 6, 11, 16
	Factual Information	2, 7, 12, 17
	Making reference,	3, 8, 13, 18
	Understanding meaning of words based on context	4, 9, 14, 19
	Making inference	5,10,15, 20

Dealing with the instrument, Arikunto (2012:27) emphasizes that there must be an item analysis in order to obtain a good instrument. The analysis for the try out test included the analysis of validityand reliability.

a) Validity of the Test

Gay and Airasian (2000:163) state that validity is the most important characteristic of the test or measuring instrument can posses. The good validity may be taken from item score.

In this research, the validity testing involved its content, construct and item validity. The items of the test made through the guidance of the specification of reading test. Furthermore, validity is analyzed by giving the constructed as the parallel of the total score. The parallel could be understood as a correlation. In purpose to gain the data, the researcher used the correlation Product Moment and assisted by using SPSS 24.

Then, after gaining the value of r of the test, then researcher compared to value of r table in order to establish whether the correlation was significant or not. If the value of r gained was equal or bigger than r table, the correlation was considered significant or valid. From the calculation, it was found that there were 20 items VALID and 10 items were INVALID. The researcher could not revise the invalid items and also the researcher did not use the 10 invalid items because their correlation value and their discrimination power were below r_{table}. Then the researcher kept the same texts after the try out was done and only the invalid items that the researcher should be deleted.

b) Reliability of the Test

According to Brown (2010:27), "a reliable test is consistent and dependable". It means that reliability is the degree of the test consistently measures what should be measured. In this research, the reliability of the items was analyzed by using Alpha Cronbach analysis (Flanagan, 2012).In purpose to establish the category of reliability, the researcher used as follow (Arikunto 2012:89):

0.00 – 0, 20 : not reliable

0, 21 – 0,40 : low

0, 41 – 0, 60 : moderate

0, 61 – 0,80 : high

0, 81 – 1,00 : very high

After the calculation, it was found that the test was reliable because the reliability is 0.884 with 30 items of questions. It can be summarized that, the reading test is reliable and it can be categorized a very good instrument for a classroom test and it could be used in this research.

2. Questionnaire

Questionnaire was used to find out the students' reading interest. The questionnaire was designed based on the following indicators proposed by Sufi (2009):

Table 3.2 Indicator of Reading Interest

No	Indicator	Number of items
1.	Enjoyment	1,2,3,4,6
2.	Motivation	5,7,8,9,10
3.	Attention	11,12,13,14
4.	Need	15,16,17
5.	Desire	18,19,20

Adapted from Sufi (2009)

The questionnaireis determined by using Likert Scales model which indicated Always (A), Very Often (VO), Sometimes (S), Rarely (R), or Never (N) with each statement responded by the students to a series of statement. Positive statements were assigned the points as follows: A=5, VO=4, S=3, R=2, N=1. But, for negative statements that point values were A=1, VO=2, S=3, R=4, N=5.

a) Validity of Questionnaire

The researcher analyzed the data of questionnaire by using *Pearson Product Moment (Correlation Matrix)* proposed by Arikunto (2008:72) and to analyze the validity, the researcher used *SPSS 24 for windows*. In validating the data, the researcher tried it out to another class which did not include sample class. After that, the researcher used *Bivariate Pearson* in order to find out the validation of the questionnaire. df=24-2= 22 = 0.404 (r table). Where; $r_o > r_{table}$ or $r_o = r_{table}$ it can be called valid. All of the instrument were valid.

b) Reliability of Questionnaire

In this research, the reliability of the items was analyzed by using Alpha Cronbach analysis (Flanagan, 2012).In purpose to establish the category of reliability, the researcher used as follow (Arikunto 2012:89):

0.00 – 0, 20 : not reliable

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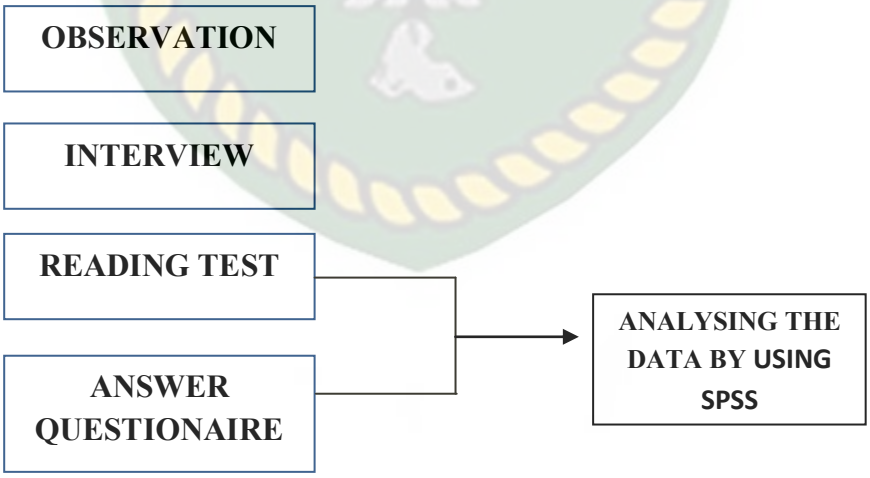
Based on the table above, the value of Cronbach's Alpha or reliability of questionnaire is 0.938 with 30 items. It can be summarized that the reliability is categorized very high and reliable.

3.5 Data Collection Technique

Data collection techniques conducted in this study is to provide a set of questiounnaire and test reading for the third semester English Department of FKIP UIR Pekanbaru. Before the researcher gave the reading test and questionnaire, the researcher did the observation to know the real phenomena about the students' problem about reading. After that the researcher did the interview to the students to clarify the result of the researcher's observation. Furthermore, the researcher did the research. There were some steps to get the data. First, the researcher gave the reading test to the students. The researcher gave test based on the reading comprehension indicator. Then, the researcher gave the questionnaire to know the students' interest between e-book and Textbook. After that the researcher analysed the students' score in reading test and the result of questionnaire by using SPSS.

Figure 3.2. The Procedure of Collecting the Data.



According to Harris (1986: 124) in Dayanti (2012) states that scrores students can classified Into four hearts in the level of mastering. The score indicates level students achivment, the taxable income level of attainment The comparative that level students, and comparative formula is used:

Table 3.3 The clasification of students Score

Classification	Scores
Good to Exellent	80-100
Average to Good	60-79
Poor to Average	50-59
Poor	00-49

(Harris, 1986:124) in Dyanti (2012)

3.6 Data Analysis Technique

Data analysis is the application of one or more statistical techniques to a set of data as collected. Before using statistical technique, the researcher needs to see whether the data are normally distributed . In testing the hypotheses of this research, the researcher will using Pearson Correlation test. The bivariate Pearson Correlation produces a sample correlation coefficient, *r*, which measures the strength and direction of linear relationships between pairs of continuous variables. By extension, the Pearson Correlation evaluates whether there is statistical evidence for a linear relationship among the same pairs of variables in the population, represented by a

population correlation coefficient, ρ ("rho"). The Pearson Correlation is a parametric measure.This measure is also known as Pearson's correlation and Pearson product-moment correlation (PPMC). For manual formula is as follow:

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