## CHAPTER III

## RESEARCH METHOD

## A. Research Design

This research is a correlational research. According to Creswell (2008, p. 338), correlation research is to describe and measure the degree of association (or relationship) between two or more variables or sets of scores. The method of this research is correlation because this research is to find out the relationship between two variables; variable X is lexical coverage and variable Y is reading comprehension. As Gay et al (Educational Research, 2000, p. 12) state that correlation research is a quantitative measure of the degree of correspondence between two or more variables. The data of this research were analysed by using Product-moment correlation formula. According to Crano and Brewer (2002, p. 128), the Pearson product-moment correlation coefficient is used to determine the extent of linear relationship, that is, the extent to which variation in one measurement is accompanied consistently by direct or inverse variation in the other measure. In reference to Cohen et al (2005, p. 193), the relationship in this context refers to any tendency for the two variables (or sets of data) to vary consistently. Thus, this research is to correlate between lexical coverage and reading comprehension of narrative text.

## B. Time and Location of the Research

This research was conducted on March 2018 at Junior High School 35 Pekanbaru which is located at 2 Tengku Bei/ Reformasi Street, Pekanbaru.

## C. Subject and Object of the Research

## 1. Subject of the Research

The subject of this research was the Eighth Grade of Junior High School 35 Pekanbaru in the academic year of 2017/2018.

## 2. Object of the Research

While the object of this research was the correlation between Students' Lexical Coverage and Their Reading Comprehension of Narrative Text at Junior High School 35 Pekanbaru.

## D. Population and Sample of the Research

## 1. Population of the Research

The population of this research was the eighth grade of Junior High School 35 Pekanbaru. It consisted of six classes; VIII $^{1}, \mathrm{VIII}^{2}, \mathrm{VIII}^{3}, \mathrm{VIII}^{4}$, VIII $^{5}$, and VIII $^{6}$. The total number of students of the eighth grade was 232 students.

Table III. 1
Total Number of the Eighth Grade of Junior High School 35
Pekanbaru

| No | Class | Students |
| :---: | :---: | :---: |
| 1 | VIII $^{1}$ | 38 |
| 2 | VIII $^{2}$ | 38 |
| 3 | VIII $^{3}$ | 40 |
| 4 | VIII $^{4}$ | 39 |
| 5 | VIII $^{5}$ | 40 |
| 6 | VIII $^{6}$ | 37 |
| Total |  | 232 |

## 2. Sample of the Research

The population of this research is quite big, so the writer took the sample of the population of the research. The writer used probability sampling, in the term of simple random sampling. Dealing with this, Cohen (2005, p. 110) states that in simple random sampling each member of the population has an equal chance to be selected. It can be said that all the groups of population have similar opportunity because they are homogenous. Morover, according to Arikunto (2006, p. 134), if the population is under 100, it is better to take all of them as sample but if the population is more than 100 , the sample can be taken between $10-15 \%$ or $20-25 \%$. In this research, the writer took the sample $15 \%$ for each class. The writer wrote the number of students' attendance list in a piece of paper and rolled it. Then the writer chose the sample randomly. The class VIII ${ }^{1}$, VIII $^{2}$, VIII $^{4}$, and VIII $^{6}$ were taken 6 students and for $\mathrm{VIII}^{3}$ and $\mathrm{VIII}^{5}$ were taken 7 students each class. There were 38 students as the sample in this research.

## E. Technique of Data Collection

Data Collection is very crucial in a research. Collecting data is used to collect data related to answer the research questions and it provides the accurate proof and solid foundation of research hypotheses (Singh, 2006). Collecting data needs techniques and procedures. There are various techniques that can be used to collect data. In this research, the writer collected the data by using:

## 1. Lexical Coverage Test

This test was to find out students' lexical coverage. The writer asked the students to read texts and then underline the word that they did not understand. Then, the writer gave test that was constructed by writer based on the indicators of lexical coverage in operational concept. The students were given the questions about the spelling of the words, the meaning of the words, the synonym of the words, the antonym of the words and the word classes of the word. The writer used multiple choice questions.

## 2. Reading Comprehension of Narrative Text Test

This test was to find out students' reading comprehension of narrative text. The test was constructed by writer based on the indicators of reading comprehension of narrative text in operational concept. The students were given the question about finding the factual information of narrative text, identifying the main idea of narrative text, locating the meaning of
vocabulary in context of narrative text, identifying reference, and making inference of narrative text. The writer used multiple choice questions.

## F. The Validity and Reliability of the Test

## 1. Validity

According to Brown (2003, p. 22), validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms on the purpose of the assessment. Furthermore, Hughes (2003, p. 26) stated that a test is said to be valid if it measures accurately what it is intended to measure. It means that a test is valid if it really measures person's ability appropriately.

In this research, the writer used content validity. According to Brown (2003, p. 22), content validity is if a test actually samples the subject matter about which conclusions are drawn, and if it requires the test taker to perform the behaviour that is being measured. It means that the scores from the questions show the test is valid or not. The test was developed based on the curriculum standards and materials and then it was appraised by the English teachers.

In addition to content validity, it can be seen the item difficulty. According to Arikunto (2012, p. 223), the standard level of difficulty is $>0.30$ and $<0.70$. It means that the items are accepted if the level of difficulty is between 0.30-0.70 and rejected if the level of difficulty is below
0.30 (too difficult) and over 0.70 (too easy). The level of difficulty was calculated by using this following formula:


Note:
$P=$ index of difficulty
$\mathrm{B}=$ the number of correct answers
$\mathrm{JS}=$ the number of examinees or students

## a. Validity of Lexical Coverage Test

In validity of the instrument of the lexical coverage test, it can be seen by the difficulties of the test. It can be seen in the following table:

Table III. 2
Identifying the spelling of the words

| Variable | Spelling of words |  |  |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | $\mathbf{1}$ | $\mathbf{6}$ | $\mathbf{1 1}$ | $\mathbf{1 6}$ | $\mathbf{2 1}$ | $\mathbf{2 6}$ | $\mathbf{3 5}$ |  |
| Correct | 15 | 15 | 13 | 15 | 15 | 15 | 14 | $\mathbf{2 1}$ |
| $\mathbf{P}$ | 0.7 | 0.7 | 0.62 | 0.7 | 0.7 | 0.7 | 0.67 |  |
| $\mathbf{Q}$ | 0.3 | 0.3 | 0.38 | 0.3 | 0.3 | 0.3 | 0.33 |  |

Based on the table III. 2 the proportion of correct answer for item number 1 shows 0.7 , the item number 6 shows 0.7 , the item number 11 shows 0.62 , the item number 16 shows 0.7 , the item number 21 shows 0.7 , the item number 26 shows 0.7 , and the item number 35 shows 0.67 . Based on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was
pointed out that items difficulties in average of each item number for identifying the spelling of the words were accepted.

Table III. 3
Finding the meaning of the words

| Variable | Meaning of words |  |  |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | $\mathbf{2}$ | $\mathbf{7}$ | $\mathbf{1 2}$ | $\mathbf{1 7}$ | $\mathbf{2 2}$ | $\mathbf{2 8}$ | $\mathbf{3 1}$ |  |
| Correct | 11 | 15 | 13 | 11 | 13 | 15 | 15 |  |
| $\mathbf{P}$ | 0.52 | 0.7 | 0.62 | 0.52 | 0.62 | 0.7 | 0.7 |  |
| $\mathbf{Q}$ | 0.48 | 0.3 | 0.38 | 0.48 | 0.38 | 0.3 | 0.3 |  |

Based on the table III.3, the proportion of correct answer for item number 2 shows 0.52 , the item number 7 shows 0.7 , the item number 12 shows 0.62 , the item number 17 shows 0.7 , the item number 22 shows 0.62 , the item number 28 shows 0.7 , and the item number 31 shows 0.7 . Based on the standard level of difficulty "P" $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for finding the meaning of the words were accepted.

Table III. 4
Finding the synonym of the words

| Variable | Synonym of words |  |  |  |  |  |  | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | 3 | 9 | 14 | 19 | 24 | 27 | 33 | 21 |
| Correct | 13 | 15 | 14 | 15 | 15 | 15 | 15 |  |
| P | 0.62 | 0.7 | 0.67 | 0.7 | 0.7 | 0.7 | 0.7 |  |
| Q | 0.38 | 0.3 | 0.33 | 0.43 | 0.3 | 0.3 | 0.3 |  |

Based on the table III.4, the proportion of correct answer for item number 3 shows 0.62 , the item number 9 shows 0.7 , the item number 14 shows 0.67 , the item number 19 shows 0.7 , the item number 24 shows 0.7 , the item number 27 shows 0.7 , and the item number 33 shows 0.7 . Based
on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for finding the synonym of the words were accepted.

Table III. 5
Finding the antonym of the words

| Variable | Antonym of words |  |  |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | $\mathbf{4}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ | $\mathbf{2 5}$ | $\mathbf{3 0}$ | $\mathbf{3 4}$ |  |
| Correct | 13 | 12 | 15 | 14 | 13 | 15 | 14 | $\mathbf{2 1}$ |
| $\mathbf{P}$ | 0.62 | 0.57 | 0.7 | 0.67 | 0.62 | 0.7 | 0.67 |  |
| $\mathbf{Q}$ | 0.38 | 0.43 | 0.3 | 0.33 | 0.38 | 0.3 | 0.33 |  |

Based on the table III.5, the proportion of correct answer for item number 4 shows 0.62 , the item number 10 shows 0.57 , the item number 15 shows 0.7 , the item number 20 shows 0.67 , the item number 25 shows 0.62 , the item number 30 shows 0.7 , and the item number 34 shows 0.67 . Based on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for finding the antonym of the words were accepted.

Table III. 6
Identifying the word classes of the words

| Variable | Word class of word |  |  |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ Item No. | $\mathbf{5}$ | $\mathbf{8}$ | $\mathbf{1 3}$ | $\mathbf{1 8}$ | $\mathbf{2 3}$ | $\mathbf{2 9}$ | $\mathbf{3 2}$ |  |
| Correct | 15 | 13 | 14 | 14 | 13 | 15 | 14 | $\mathbf{2 1}$ |
| $\mathbf{P}$ | 0.7 | 0.62 | 0.67 | 0.67 | 0.62 | 0.7 | 0.67 |  |
| $\mathbf{Q}$ | 0.3 | 0.38 | 0.33 | 0.33 | 0.38 | 0.3 | 0.33 |  |

Based on the table III.6, the proportion of correct answer for item number 5 shows 0.7 , the item number 8 shows 0.62 , the item number 13 shows 0.67 , the item number 18 shows 0.67 , the item number 23 shows
0.62 , the item number 29 shows 0.7 , and the item number 32 shows 0.67 . Based on the standard level of difficulty " $P$ " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for identifying the word classes of the words were accepted.

## b. Validity of Reading Comprehension of Narrative Text Test

In validity of the instrument of the reading comprehension of narrative text test, it can be seen from the difficulties of the test. It can be seen in the following table:

Table III. 7
Finding factual information of narrative text

| Variable | Factual information of narrative text |  |  |  |  | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ Item No. | $\mathbf{1}$ | $\mathbf{6}$ | $\mathbf{1 1}$ | $\mathbf{1 6}$ | $\mathbf{2 1}$ |  |
| Correct | 15 | 14 | 13 | 15 | 15 | $\mathbf{2 1}$ |
| $\mathbf{P}$ | 0.7 | 0.67 | 0.62 | 0.7 | 0.7 |  |
| $\mathbf{Q}$ | 0.3 | 0.33 | 0.38 | 0.3 | 0.3 |  |

Based on the table III.7, the proportion of correct answer for item number 1 shows 0.7 , the item number 6 shows 0.67 , the item number 11 shows 0.62 , the item number 16 shows 0.7 , and the item number 21 shows 0.7. Based on the standard level of difficulty "P" $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for finding factual information of narrative text were accepted.

Table III. 8 Identifying main idea of narrative text

| Variable | Main idea of narrative text |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | $\mathbf{2}$ | $\mathbf{7}$ | $\mathbf{1 2}$ | $\mathbf{1 7}$ | $\mathbf{2 2}$ |  |
| Correct | 11 | 15 | 12 | 10 | 9 | $\mathbf{2 1}$ |
| $\mathbf{P}$ | 0.52 | 0.7 | 0.57 | 0.48 | 0.43 |  |
| $\mathbf{Q}$ | 0.48 | 0.3 | 0.43 | 0.52 | 0.57 |  |

Based on the table III.8, the proportion of correct answer for item number 2 shows 0.52 , the item number 7 shows 0.7 , the item number 12 shows 0.57 , the item number 17 shows 0.48 , and the item number 22 shows 0.43 . Based on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for identifying main idea of narrative text were accepted.

Table III. 9
Locating the meaning of vocabulary in context of narrative text

| Variable | Meaning of vocabulary in context of |  |  |  |  | $\mathbf{N}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{3}$ | $\mathbf{8}$ | $\mathbf{1 3}$ | $\mathbf{1 8}$ | $\mathbf{2 3}$ |  |
| Item |  |  |  |  |  |  |
| Correct | 13 | 13 | 14 | 13 | 15 | $\mathbf{2 1}$ |
|  | 0.62 | 0.62 | 0.67 | 0.62 | 0.7 |  |
| $\mathbf{Q}$ | 0.38 | 0.38 | 0.33 | 0.38 | 0.3 |  |

Based on the table III.9, the proportion of correct answer for item number 3 shows 0.62 , the item number 8 shows 0.62 , the item number 13 shows 0.67 , the item number 18 shows 0.62 , and the item number 23 shows 0.7 . Based on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number
for locating the meaning of vocabulary in context of narrative text were accepted.

## Table III. 10 Identifying reference

| Variable | Reference |  |  |  |  | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | 4 | 9 | 14 | 19 | 24 | 21 |
| Correct | 13 | 14 | 14 | 15 | 11 |  |
| P | 0.62 | 0.67 | 0.67 | 0.7 | 0.52 |  |
| Q | 0.38 | 0.33 | 0.33 | 0.3 | 0.48 |  |

Based on the table III. 01 the proportion of correct answer for item number 4 shows 0.62 , the item number 9 shows 0.67 , the item number 14 shows 0.67 , the item number 19 shows 0.7 , and the item number 24 shows 0.52 . Based on the standard level of difficulty " P " $>0.30$ and $<0.70$, it was pointed out that items difficulties in average of each item number for identifying reference were accepted.

Table III. 11
Making inference of narrative text

| Variable | Inference of narrative text |  |  |  |  | $\mathbf{N}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item No. | $\mathbf{5}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ | $\mathbf{2 5}$ |  |  |
| Correct | 15 | 11 | 15 | 10 | 10 |  |  |
| $\mathbf{P}$ | 0.7 | 0.52 | 0.7 | 0.48 | 0.48 |  |  |
| $\mathbf{Q}$ | 0.3 | 0.48 | 0.3 | 0.52 | 0.52 |  |  |

Based on the table III. 11 the proportion of correct answer for item number 5 shows 0.7 , the item number 10 shows 0.52 , the item number 15 shows 0.7 , the item number 20 shows 0.48 , and the item number 25 shows 0.48. Based on the standard level of difficulty "P" $>0.30$ and $<0.70$, it was
pointed out that items difficulties in average of each item number for making inference of narrative text were accepted.

## 2. Reliability

According to Gay et al (2000, p. 165), reliability is the degree to which a test consistently measures whatever it is measuring. It means that reliability is to measure the consistency and the quality of the test score. Creswell (2008, p. 159) stated that internal consistency reliability is the instrument administrated once, using one version of the instrument and each participant in the study complete the instrument. It means that the writer tried out the instrument. The purpose of the try out is to obtain reliability of the test. The classification of reliability test is considered as follows (Cohen et al, 2005, p. 506).

Table III. 12
Table of Cronbach Alpha

| Cronbach Alpha | Internal Consistency |
| :---: | :---: |
| $>0.90$ | Very highly reliable |
| $0.80-0.90$ | Highly reliable |
| $0.70-0.79$ | Reliable |
| $0.60-0.69$ | Minimally reliable |
| $<0.60$ | Unacceptably low reliable |

## a. Reliability of Lexical Coverage Test

For lexical coverage test, the writer gave the try out to 21 students. After getting the result, the writer used Cronbach Alpha Formula to find out the reliability of the test through SPSS 23 .

# Table III. 13 <br> The Reliability of Lexical Coverage Test 

Reliability Statistics

| Cronbach's <br> Alpha | N of Items |
| :--- | ---: |
|  | .767 |

From the table above, it can be seen that the value of Cronbach Alpha is 0.767 . It means that the items of the test are reliable.

## b. Reliability of Reading Comprehension of Narrative Text Test

For reading comprehension of narrative text test, the writer gave the try out to 21 students. After getting the result, the writer used Cronbach Alpha Formula to find out the reliability of the test through SPSS 23.

Table III. 14
The Reliability of Reading Comprehension of Narrative Text Test
Reliability Statistics

| Cronbach's <br> Alpha | N of Items |
| :--- | ---: |
| .859 | 25 |

From the table above, it can be seen that the value of Cronbach Alpha is 0.859 . It means that the items of the test are highly reliable.

## G. Normality of the Test

The writer found out the normality of data before analysing the data by using Pearson Product Moment Correlation. Normality is used to find out whether or not the data are normal distribution. According to Pallant (2007, p. 57), assessing normality of data is used to describe a symmetrical, bell shaped curve, which has the greatest frequency of scores in the middle, with smaller frequency towards the extremes. It can be assessed by using Kolmogorov Smirnov. It is interpreted as follows:
$p$-value $($ Sig. $)>0.05=$ the data are normal distribution
$p$-value (Sig.) $<0.05=$ the data are not normal distribution

## Table III. 15 The Descriptive Statistic for the Normality Test

| Tests of Normality |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: |
|  Kolmogorov-Smirnov $^{\mathrm{a}}$   <br>  Statistic df Sig. <br> Lexical Coverage .133 38 .090 <br> Reading Comprehension <br> of Narrative Text .129 38 .110 |  |  |  |  |

From the table above, it shows that the significant value of lexical coverage is 0.90 and reading comprehension of narrative text is 0.110 . According to Kolmogorov Smirnov Formula, if $p$-value > 0.05, it can be said that the data are distributed normally. From the table above, the data of lexical coverage are normal because $0.90>0.05$ and the data of reading
comprehension of narrative text are normal because $0.110>0.05$. It can be concluded that the data distribution is normal.

## H. Technique of Data Analysis

## 1. Lexical Coverage

To interpret the classification of the students' lexical coverage, the percentage was evaluated based on the following formulation. It is based on Hu and Nation (2000, p. 408).

$$
\text { Lexical coverage }=\frac{\text { number of known words in a text }}{\text { tokens in a text }} \times 100
$$

Then to interpret the category of the students' lexical coverage, it could refer to the following coverage points. It is based on Prichard and Yuko (2011, pp. 210-211).

Table III. 16
The Category of Coverage Points

| Categories | Criteria |
| :---: | :---: |
| Lower <br> threshold | A percentage at which comprehension becomes <br> possible; a percentage at which few learners below <br> have any significant comprehension of the text <br> (reffered to by Hu and Nation, 2000, as potentially <br> being between 80 and 90\%) |
| Significant <br> increase <br> threshold | A coverage point above which learners' mean <br> comprehension increaseas significantly (95\%, based on <br> Laufer, 1989) |
| Adequate <br> comprehension <br> threshold | A percentage at which most learners achieve "adequate <br> comprehension" (suggested as 95\% in Laufer; <br> hypothesiszed as 98\% coverage in Hun and Nation) |
| Upper <br> threshold | A point above which an increase in coverage does not <br> lead to improved comprehension (if it exists, it is likely <br> $98-99 \%$ ) |

## 2. Reading comprehension of narrative text

To interpret the classification of the students' reading comprehension of narrative text, the scores were evaluated based on the following categories. It was adapted from Kunandar (2013, p. 129).

Table III. 17
The Category of Reading Comprehension

| Score | Categories |
| :---: | :---: |
| $91-100$ | Very Good |
| $81-90$ | Good |
| $71-80$ | Enough |
| $60-70$ | Less |
| $0-59$ | Fail |

## 3. The Correlation between Lexical Coverage and Reading

 Comprehension of Narrative TextIn this research, the writer used Pearson Product Moment Correlation as statistical analysis. The correlation was computed as the correlation of the relationship between the students' lexical coverage (X) and their reading comprehension of narrative text (Y). It consists of interval and interval (scale) variables.

According to Pallant (2010:129), if the significance 2-tailed value is bigger than 0.05 ( $\mathrm{p}>0.05$ ), this indicates that there is no violation of the assumption of equality of variance and that equal variances are assumed for the variable concerned. Then, if the significance 2 -tailed value is smaller than 0.05 ( $\mathrm{p}<0.05$ ), this indicates that there is violation of the assumption of equality of variance and that equal variance are assumed for the variable concerned. In the process of data analysis, the writer used SPSS 23 version.

Then, to find the correlation coefficient, the writer used the following categories (Hartono, 2010, p. 87).

Table III. 18
Coefficient Correlation

| No | Coefficient Correlation | Level of Correlation |
| :---: | :---: | :---: |
| 1 | $0.000-0.200$ | Very Low |
| 2 | $0.200-0.400$ | Low |
| 3 | $0.400-0.700$ | Medium |
| 4 | $0.700-0.900$ | Strong |
| 5 | $0.900-1.000$ | Very Strong |

