CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research was an experimental research. In a simple definition, experimental research is the only type of research that can test hypotheses to establish cause and effect relationship (Gay & Airasian, 2000, p. 321).

Experimental research is divided into three group designs; they are pre experimental, true experimental, and quasi experimental design (Gay & Airasian, 2000, p. 378). Then, the kind of this research was a quasi-experimental by using pre-test and post-test non equivalent control group. Quasi experimental research is the stuff of field experimentation (Cohen, et.al, 2007, p. 282). This research involved two groups; they were an experimental group and a control group. This research tried to find the difference between students' reading comprehension taught by using OK4R method and taught without using OK4R method.

Therefore, there were two variables in this research, first was using OK4R method as the variable X and second was students' reading comprehension as the variable Y. The type of this research can be designed as follows (Cohen, 2007, p. 276):

TABLE III.1

Research Design

Group	Pre-test	Treatment	Post test
E	O_1	X	O_2
C	O_3	-	0_4

E   = Experimental Group
C   = Control Group
O_1 = Pre-test to Experimental Group
O_2 = Post-test to Experimental Group
X   = Receive the treatment using OK4R method
O_3 = Pre-test to Control Group
O_4 = Post-test to Control Group

B. Location and Time of the Research

This research was conducted at State Senior High School 1 Kundur Karimun regency from January to February in 2017.

C. Subject and Object of the Research

The subject of this research was the eleventh grade students of State Senior High School 1 Kundur Karimun regency and the object of this research was using OK4R (Overview, Key Ideas, Read, Recall, Reflect, Review) method on students' reading comprehension.

C. Population and Sample of the Research

1. Population

The population of this research was the eleventh grade students. There were six classes of the eleventh grade students. It consisted of three social

classes and three science classes. The total of population was 203. It can be

seen from the following table:

TABLE III.2
The Total Population of the Eleventh Grade Students at State Senior High
School 1 Kundur Karimun Regency

No	Class	Population
1.	XI IPA 1	34
2.	XI IPA 2	33
3.	XI IPA 3	33
4.	XI IPS 1	34
5.	XI IPS 2	34
6.	XI IPS 3	35
	Total	203

2. Sample of The Research

Sample is the amount of participants that is selected by the researcher

to collect the data of research. According to Gay and Airasian (2000),

sampling is the process of selecting a number of individuals for a study in

such a way that they represent the larger group from which they were

selected. In selecting the participants, the writer used cluster random

sampling technique. She had chosen the classes to be the sample by lottery.

They were class XI IPS 1 as an experimental class and class XI IPS 2 as

control class. In addition, both classes were given pre-test and post-test.

Also, the experimental class was given the treatment by using OK4R method

and control class was given the conventional method.

TABLE III.3
Sample of the Research

No	Group	Class	Number of Student
1	Experimental Class	XI IPS 1	34
2	Control Class	XI IPS 2	34
Total			68

D. Technique of Collecting Data

In collecting the data for this research, the writer used test as a technique to collect the data. This technique was used to find out the students' score in reading comprehension of narrative text. The test was given in the pre test and post test. Pre test was used to determine students' reading comprehension before getting treatment. Post test was used to determine students' reading comprehension after getting treatment. The number of each pre and post test consisted of 20 items. After the students did the test, then the writer took the total score from the result of reading comprehension test. The classification of the students' score can be seen as follows: (Arikunto, 2009, p. 281)

Table III.4

The Classification of Students' Score

Score	Categories
80-100	Very Good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

Furthermore, below is the description of the Blue-print of the test. It was developed into the questions of test. The instrument of reading comprehension of narrative text in this research included some aspects. They were about identifying the orientation of the text, identifying complication of the text, identifying social function of the text, identifying reference of the text, and identifying the generic structure of the text. So, the students had to choose the best answer.

TABLE III.5
Blue Print of Reading Comprehension

No	Indicator of Variable Y	Number of Items
1	The students are able to identify the orientation of narrative text	2, 6, 13, 19
2	The students are able to identify complication of narrative text	5, 7, 12, 17
3	The students are able to identify social function of narrative text	1, 8, 11, 16
4	The students are able to identify the meaning of word of narrative text	4, 9, 14, 18
5	The students are able to identify the generic structure of narrative text	3, 10, 15, 20
	Total	20

Furthermore, below is the description of validity, reliability, homogeneity, and normality of data of this research.

1. Validity

In research, validity is a requirement in the test. The validity of test is very important to prove that the test can be used. According to Cohen, et. al (2007), validity is an important key to effective research. It means that the

research is called as effective if the test is valid. Besides, Ary, et. al (2010) stated that validity is the most important consideration in developing and evaluating measuring instruments. Based on the statement above, validity is a way to know that the instrument can be used in research. On the other hand, Gay & Airasian (2000) stated that validity is concerned with the appropriateness of the interpretations made from tests score. The way to obtain the validity of instrument of this research was through the try out. It consisted of 5 components, they are:

1. The students are able to identify the orientation of narrative text.

2. The students are able to identify the complication of narrative text.

3. The students are able to identify the social function of narrative text.

4. The students are able to identify the meaning of narrative text.

5. The students are able to identify the generic structure of narrative text.

According to Arikunto (2012), the formula of each item difficulty is as follows :

$$P = \frac{B}{JS}$$

Note:

P = Index of difficulty or facility

B = The number of correct answers

JS = The number of examiners or students

The standard level of difficulty used 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 it is rejected if the level of difficulty is below 0.30 (difficult) and over 0.70 (easy). Then, the proportion is represented by "P", whereas the proportion incorrect is represented by "Q".

Table III.6

Students' Reading Comprehension of Identifying

Social Function of Narrative Text

Variable	Identifying Topic				N
Item no.	1	6	11	16	
Correct	13	22	22	24	20
P	0.37	0.62	0.62	0.68	
Q	0.62	0.37	0.37	0.31	

Based on the Table III.4, the proportion of correct answer for item number 1 shows the proportion of correct 0.37, item number 6 shows the proportion of correct 0.62, item number 11 shows the proportion of correct 0.62, and item number 16 shows the proportion of correct 0.68. Based on the standard level of difficulty "P" >0.30 and <0.70, it is pointed out that item difficulties in average of each item number for identifying the social function of text were accepted.

Table III.7

Students' Reading Comprehension in Identifying

Orientation of Narrative Text

Variable	Identifying Topic				N
Item no.	2	7	12	17	
Correct	16	23	20	19	20
P	0.45	0.65	0.57	0.54	
Q	0.54	0.34	0.42	0.45	

Based on the Table III.5, the proportion of correct answer for item number 2 shows the proportion of correct 0.45, number 7 shows the proportion of correct 0.65, number 12 shows the proportion of correct 0.57, number 17 shows the proportion of correct 0.54. Based on the standard level of difficulty "P" >0.30 and <0.70, it is pointed out that item difficulties in average of each item number for identifying the orientation of text were accepted.

Table III.8

Students' Reading Comprehension in Identifying Complication of

Narrative Text

Variable	Identifying Topic				N
Item no.	3	8	13	18	
Correct	17	24	14	19	20
P	0.48	0.68	0.40	0.54	
Q	0.51	0.31	0.60	0.45	

Based on the Table III.7, the proportion of correct answer for number 3 shows the proportion 0.48, item number 8 shows the proportion 0.68, item number 13 shows the proportion 0.40, and item number 18 shows the proportion 0.57. Based on the standard level of difficulty "P" >0.30 and <0.70, it is pointed out that item difficulties in average of each item number for identifying the complication of text were accepted.

Table III.9

Students' Reading Comprehension in Identifying the Meaning of Word

of Narrative Text

Variable	Identifying Topic				N
Item no.	4	9	14	19	
Correct	14	13	19	23	20
P	0.40	0.37	0.54	0.65	
Q	0.60	0.62	0.45	0.34	

Based on the Table III.8, the proportion correct answer for item number 4 shows the proportion 0.40, item number 9 shows the proportion 0.37, item number 14 shows the proportion 0.54, and item number 19 shows the proportion 0.65. Based on the standard level of difficulty "P" >0.30 and <0.70, it is pointed out that item difficulties in average of each item number for identifying the meaning of word were accepted.

Table III. 10

Students' Reading Comprehension in Identifying Generic Structure of

Narrative Text

Variable	Identifying Topic				N
Item no.	5	10	15	20	
Correct	18	16	14	24	20
P	0.51	0.45	0.4	0.68	
Q	0.48	0.54	0.6	0.31	

Based on the Table III.9, the proportion of correct answer for item number 5 shows the proportion 0.51, item number 10 shows the proportion 0.45, item number 15 shows the proportion 0.4, and item number 20 shows the proportion 0.68. Based on the standard level of difficulty "P" >0.30 and <0.70, it is pointed out that item difficulties in average of each item number for identifying generic structure of text were accepted.

2. Reliability

A test must first be reliable as measuring instrument. According to Brown (2004), a reliable test is consistent and dependable. Reliability has to do with accuracy of measurement. The kind of accuracy is reflected in obtaining of similar results when measurement was repeated on different occasions or with different instruments or by different persons. It can be concluded that the test is reliable when an examiner's results are consistent on repeated measurement. In obtaining the reliability of the test, the means and standard deviation of the test should be obtained. Generally, reliability refers to

appropriateness of a given test of its component part as measure of what it was purposed to measure. It means that the test is valid to the extent that is measured what it is supposed to measure. According to Arikunto (2012), the level of reliability as follows:

1. 0.0-0.20   = reliability is low

2. 0.21-0.40   = reliability is sufficient

3. 0.41-0.70   = reliability is high

4. 0.71-1.0   = reliability is very high

Table III.11

Case Processing Summary

		N	%
Cases	Valid	34	.100
	Excluded[a]	0	.0
	Total	34	.100

Table III.12

Reliability Statistic

Cronbach's Alpha	N of Item
.392	2

Based on the table above, it can be seen that the value of Cronbach' Alpha is .392. Based on Arikunto level above, it can be said that reliability was

accepted which was 0.71<0.392<1.0 or higher than 0.71 and lower than 1.0. It also can be stated that reliability is very high.

3. Homogeneity

Homogeneity test is a test to identify whether the objects of the research (three or more samples) have the same variance. The method used in homogeneity test is the biggest variant compared to smallest variance. Homogeneity of variances is also called as equal variances.

In this research, the writer used SPSS 20 to assess the homogeneity of the data. The result of assessing the homogeneity can be seen as follows:

Table III.13

Test of Homogeneity

Levene Statistic	df1	df2	Sig.
.530	1	66	.469

From the table, it was known that the value of significance (sig.) was 0.469. Data are homogenous or variant when the value Sig. is higher than 0.05. Based on the table, it was clear that Sig. was higher than 0.05 which

indicates the homogeneity of the data. The comparison can be stated as 0.469 > 0.05.

4. Normality

Assessing normality of data is used to describe a symmetrical, bell shaped curve, which has the greatest frequency of score in the middle, with smaller frequency towards the extremes. In this research, the researcher assessed the normality of data by using kolmogorov smirnov test from SPSS 20 version. The result of the test can be seen as follows:

Table III.14

Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Post-test experiment	.147	34	.060	.947	34	.102
Post-test control	.164	34	.021	.941	34	.065

a. Lilliefors Significance Correction

Based on the table above, it can be seen that the significant (Sig.) of Post-test in Experimental group was 0.60. Then, the significant (Sig.) of post-test in Control group was 0.21. The data of this research were normal. It was measured by using Kolmogorov Smirnov table. It explains that the data called normal if > 0.05. So, the data gotten from this research were normal.

E. Technique of Analysis Data

In order to find out whether there is a significant difference on students' reading comprehension taught by using OK4R Method and students' reading comprehension taught without using OK4R Method. The data were analyzed statistically. In investigating the difference between students' reading comprehension taught by using OK4R Method and by using conventional method, the writer compared the scores of post-test of the experimental group and control group of this research. The different means were analyzed by using T-test formula through using SPSS 20 version. Statistically, the hypotheses are:

H_a : t_0 > t-table

H_0 : t_0 < t-table

H_a is accepted if t_0 > t-table or there is a significant difference between students' reading comprehension taught by using OK4R Method and students' reading comprehension taught without OK4R Method.

H_0 is accepted if t_0 < t-table or there is no significant difference between students' reading comprehension taught by using OK4R Method and students' reading comprehension taught without using OK4R Method.