

CHAPTER III

RESEARCH METHOD

A. Research Design

The type of this research was an experimental research. According to Creswell (2008, p.299), experimental research is used when the researcher wants to establish possible cause and effect between the independent and the dependent variables. The design of this research was a quasi-experimental research. Based on Creswell (2008, p.313), Quasi-experiment research is testing an idea (practice) to determine whether it influences an outcome or dependent variable.

According to Gay and Airaisian (2000), experimental research is the only type of the research that can test hypotheses to establish cause-and-effect relationship. This research used quasi-experimental design which used the observation. It involved two classes, an experimental group and a control group. The experimental group means the students who were given the treatment by using Three-Minute-Pause strategy, while the control group is a group of students who were not given the strategy. This research aimed at to find if there is a significant effect of using Three-Minute-Pause strategy in teaching reading.

The experimental group was taught by using particular treatment of Three-Minute-Pause strategy to enhance their reading comprehension. In addition, control group was only given a pre-test and post-test without particular treatment as given for experimental group. This research design can be presented in the table below: (Cresswell, 2008, p.313).



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as given for experimental group This research design can be presented in the table below: (Cresswell, 2008, p.313).

Table III.1
Research Design

GROUP	PRE-TEST	TREATMENT	POST-TEST
Experimental Class	O1	X	O2
Control Class	O3	-	O4

Note

- O₁ : Pre-test for Experimental Class
 O₂ : Post-test for Experimental Class
 O₃ : Pre-test for Control Class
 O₄ : Post-test for Control Class
 X : Treatment by using Three-Minute-Pause Strategy

After giving particular treatment to the experimental group by using Three-Minute-Pause strategy, the scores between experimental and control groups were analyzed by using statistical formula.

B. Location and Time of the Research

The research was conducted at State Junior High School 13 Dumai located at Tuanku Tambusai Street, Dumai City. The research was conducted from March to April 2017.

C. Subject and Object of the Research

The subject of the research was the second grade students of State Junior High School 13 Dumai, and the object of this research was using Three-Minute-Pause



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Strategy toward students' reading comprehension of narrative text at the second grade of State Junior High School 13 Dumai.

D. Population and Sample of the Research

The population of this research was all the students at the second grade of SMPN 13 Dumai in 2016-2017 academic years. There consisted of four classes, consisted VIII.1, VIII.2, VIII.3, VIII.4.. The total number of the second grade students at SMPN 13 Dumai was 112.

Table III.2
Table of the Population

NO.	CLASS	POPULATION	FEMALE	MALE
1.	VIII.1	27	17	10
2.	VIII.2	30	20	10
3.	VIII.3	28	19	9
4.	VIII.4	27	17	10
TOTAL POPULATION		112	73	39

The researcher took two classes as sample by using cluster sampling. According to Gay and Airasian (2002, p.135), cluster sampling selects based on group not individually, all the members of selected group have similar characteristics. The researcher used class VIII.1 as experimental class which consisted of 27 students and VIII.4 as control class which consisted of 27 students as the sample. Class VIII.1 was be experimental class, and class VIII.4 was be control class. So the total number of sample was 54 students.

Table III.3

The Sample of the Research

No.	Class	Male	Female	Total



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1.	VIII.1	10 students	17 students	27 students
2.	VIII.4	10 students	17 students	27 students
Total				54 students

E. The Technique of Collecting the Data

Collecting data is the most crucial thing in a research. In this research, the researcher used test in collecting the data. The researcher gave treatment four meetings and two meetings for collecting the data. The treatment was about teaching reading comprehension by using Three-Minute-Pause Strategy and the instrument was a test. The type of test was multiple choice that consisted of twenty items. It was divided into two types-pre-test and post-test. Pre-test and post-test were given to both of classes.

1. Pre-test

The test was a written test and the type was a multiple choice. There were five indicators of reading comprehension; each indicator was represented by four questions, so the total number of the test was twenty items. This test was given to both of the classes-control and experiment classes-before each class was given the treatment.

2. Post-test

The test was a written test and the type was a multiple choice. There were five indicators of reading comprehension; each indicator was represented by four questions, so the total number of the test was twenty items. This test was given to both of the classes-control and experiment class after each class was given the



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treatment. For further information about the instruction of the text, the writer shows the blueprint of both tests as follows:

Table III.4
The Blueprint of the Test

Number	Indicator of items	Number of Questions
1.	The students can identify the main topic of narrative text.	1,9,13,17
2.	The students can identify specific information of narrative text.	2,6,14,16
3.	The students can identify the communicative purpose of narrative text.	3,7,11,19
4.	The students can identify generic structure of narrative text.	4,10,12,20
5.	The students can identify reference of narrative text	5, 8, 15, 18

After the students did the test, then the researcher took the total score from the result of the reading comprehension test. According to Arikunto (2009:245), the interpretation of students score is classified as follows:

Table III. 5
The Classification of Students Score

The Level Score	Category
81-100	Very Good
61-80	Good
41-60	Enough
21-40	Poor
0-20	Fail

Validity and Reliability of the test

1. Validity of the test

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Validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms on the purpose of the assessment (Brown, 2003, p 3). A validity of the test is achieved if the test really measures the test takers' ability. It Furthermore, Hughes (2005, p.26) stated that a test is said to be valid if it measures accurately what it is intended to measure. According to Brown (2003:22), validity is the most complex criterion of an effective test, and arguably the most important principle, the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose of the assessment. It means that to assess students' ability needs the validity.

Validity of a test is the extent to which it measures what it is supposed to measure and nothing else. In the other words, validity test is used to determine if the test can be implemented or not. Based on the test result that was collected from respondent the writer tested the question to find out the question valid or not with validity construct by using SPSS. The criteria of validity test can be seen as follows:

- a. If $r_{xy} > r_{table}$ mean that instrument or item of the question is valid
- b. If $r_{xy} < r_{table}$ mean that instrument or item of the question is not valid

Before the test was given to the sample of this research, the writer did try out the test items. The test given to the students was considered not too difficult or not too easy. According to Arikunto (2008:208), the test is accepted if the degree of difficulty is between 0.30-0.70. It means that the instrument of the research is called valid if the instrument has been examined

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from the experience such as tryout. It was determined by finding the difficulty level of each item.

The difficulty level of an item shows how easy or difficult a particular item in a test. The items that do not reach the standard level of difficulty are excluding from the test and they are changed with new items that are appropriate. The standard level of difficulty used is >0.30 and <0.70 . It means that an item is accepted if the level of difficulty is between 0.30-0.70, and it rejected if the level of difficulty is less than 0.30 (the item is too difficult) and over than 0.70 (the item is too easy).

Table III.6
The Students' ability to identify the main topic of narrative text

Variable	Identifying the main topic				N
Item no	1	9	13	17	30
Correct	19	18	18	18	
P	0.40	0.53	0.47	0.53	
Q	0.374	0.374	0.374	0.374	

Based on the table III.6, the proportion of correct answer for item number 1 obtained the proportion of correct 0.40, item number 9obtained the proportion of correct 0.53, item number 13obtained the proportion of correct 0.47, item number 17obtained the proportion of correct 0.53. Based on the standard level of difficulty “p” >0.30 and <0.70 , it was pointed out that the difficulty level of each item number for identifying the main topic was accepted.



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Table III.7**The Students' ability to identify the specific information of narrative text**

Variable	Identifying specific information				N
Item no	2	6	14	16	30
Correct	17	18	17	18	
P	0.60	0.57	0.53	0.57	
Q	0.374	0.374	0.374	0.374	

Based on the table III.7, the proportion of correct answer for item number 2 gained the proportion of correct 0.60, item number 6gained the proportion of correct 0.57, item number 14gained the proportion of correct 0.53, item number 16gained the proportion of correct 0.57. Based on the standard level of difficulty “p” >0.30 and <0.70 , it was pointed out that the difficulty level of each item number for identifying specific information was accepted.

Table III.8**The Students' ability to identify the communicative purpose of narrative text**

Variable	Identifying the communicative purpose				N
Item no	3	7	11	19	30
Correct	17	13	14	13	
P	0.63	0.60	0.50	0.60	
Q	0,374	0,374	0,374	0,374	

Based on the table III.8, the proportion of correct answer for item number 3 got the proportion of correct 0.63, item number 7got the proportion of correct 0.60, item number 11got the proportion of correct 0.50, item number 19got the proportion of correct 0.60. Based on the standard level of difficulty

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“p” >0.30 and <0.70 , it was pointed out that the difficulty level of each item number for identifying the communicative purpose was accepted.

Table III.9
The Students' ability to identify generic structure in narrative text

Variable	Identifying generic structure				N
Item no	4	10	12	20	30
Correct	15	15	17	16	
P	0.60	0.67	0.47	0.63	
Q	0.374	0.374	0.374	0.374	

Based on the table III.9, the proportion of correct answer for item number 4 obtained the proportion of correct 0.60, item number 10 obtained the proportion of correct 0.67, item number 12 obtained the proportion of correct 0.47, item number 20 obtained the proportion of correct 0.63. Based on the standard level of difficulty “p” >0.30 and <0.70 , it was pointed out that the difficulty level of each item number for identifying the generic structure was accepted.

Table III.10
The Students' ability to identify reference of narrative text

Variable	Identifying reference				N
Item no	5	8	15	18	30
Correct	13	18	14	13	
P	0.57	0.53	0.50	0.57	
Q	0.374	0.374	0.374	0.374	

Based on the table III.10, the proportion of correct answer for item number 5 gained the proportion of correct 0.57, item number 8 gained the proportion



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of correct 0.53, item number 15 gained the proportion of correct 0.50, item number 18 shows the proportion of correct 0.57. Based on the standard level of difficulty “ p ” >0.30 and <0.70 , it was pointed out that the difficulty level of each item number for identifying reference was accepted.

Table III.11
Validity test

Question no	Score	Result
1	0.40	Valid
2	0.60	Valid
3	0.63	Valid
4	0.60	Valid
5	0.57	Valid
6	0.57	Valid
7	0.60	Valid
8	0.53	Valid
9	0.53	Valid
10	0.67	Valid
11	0.50	Valid
12	0.47	Valid
13	0.47	Valid
14	0.50	Valid
15	0.50	Valid
16	0.57	Valid
17	0.53	Valid
18	0.57	Valid
19	0.60	Valid
20	0.63	Valid

2. Reliability of the test



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According to H. Douglas Brown (2003:19), that reliability has to do with accuracy of measurement. Reliability is also a crucial component in a test. Reliability in quantitative research is essentially a synonym for dependability, consistency and replicability over time, over instruments and over groups of respondents (Cohen, 2007:146). As a result, a test was not valuable if it is not consistent and produced different results every time.

The standard reliability was considered as follows (Heaton, 1980:159):

0.00 – 0.20 = Reliability low

0.21 – 0.40 = Reliability sufficient

0.41 - 0.70 = Reliability high

0.70 - 1.00 = Reliability very high

To obtain the reliability of the test given, the writer used SPSS 22.0 to find out whether the test was reliable or not.

**Table III.12
Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
.811	20

In sum, the reliability of and itwas categorized intovery high level. It means that the instrument was reliable.

The Normality and Homogeneity Test

1. The Normality of the Test

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In order to know whether the data has normal distribution or not, the researcher used Kolmogorof-Smirnov method as the formula to analyze the data. In this research, the researcher analyzed the data by using SPSS (Statistical Product and Service Solutions) 22.0 version program. The SPSS result for Kolmogorov-Smirnov Z test would be interpreted as follows:

p-value (Sig.) > 0.05 = the data is in normal distribution

p-value (Sig.) < 0.05 = the data is not in normal distribution

The result of normality of post test score in experiment and control class was computed by using SPSS version 22.0. It is presented in the following table:

Table III.13
Tests of Normality

Tests of Normality							
	Group	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Score	1.00	.164	27	.060	.916	27	.032
	2.00	.154	27	.101	.947	27	.181

a. Lilliefors Significance Correction

Based on the data above at significance kolmogorof-smirnov which is 0.060 and 0.101. The probability was higher than 0.05. It means that the population was in normal distribution or H_a was accepted.

2. The Homogeneity of the test

The homogeneity test was used to measure whether the data is correlated from true population or not. Data homogeneity of variance test was calculated



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by using SPSS version 22.0. The SPSS result for Levene test was interpreted as follows:

p -value (Sig.) > 0.05 = the data is homogeneous

p -value (Sig.) < 0.05 = the data is not homogeneous

The result of homogeneity test of post-test data or Levene test which was computed by using SPSS version 22 is presented in the following table:

Table III.14
Test of Homogeneity of Variances

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
1.030	1	52	.315

To find out the homogeneity of the test, the writer used SPSS 22. Referring to the table above, it could be seen that sig is $0.315 > 0.05$ (5%). In conclusion, the data of test was homogenous.

H. Technique of Data Analysis

In this research, the researcher statistically analyzed the data by using SPSS 22.0 version. First, the researcher analyzed the data by using independent sample t-test to know whether the result of the research is statistically significant or not. According Julie Pallant (2001:184), the results presented in the analysis of the above independent sample t-test will obtain we choose two sets of score which will be unlikely to occur by chance, because it does not tell the magnitude of the intervention's effect.

The data of the research was analyzed by using T-test formula. T-test was obtained by considering the degree of freedom (df) = $(N_1+N_2) - 2$. Therefore, in



calculating the effect size for independent sample t-test, the writer used the following formula:

$$\text{Eta Square } (\eta^2) = \frac{t^2}{t^2 + (n_1 + n_2 - 2)}$$

Where:

t = the value will be found

N= number of students

In order to interprete the eta squared values, the guideline quoted from Cohen (1988) in Julie Pallant (2001:184) can be read as follows:

Table III.14
Interpretation of Eta Squared for Effect Size

No.	Value	Effect
1.	0.01	Small Effect
2.	0.06	Moderate Effect
3.	0.14	Large Effect

* Adabted from Cohen (1988)

Statistically the hypotheses are:

$H_a = t_o > t_{\text{table}}$

$H_o = t_o < t_{\text{table}}$

Criteria for hypothesis:

a. H_a is accepted if $t_o > t_{\text{table}}$ orthere is a significant effect of using Three-Minute-Pause Strategy on students' comprehension in reading narrative text at State Junior High School 13 Dumai.

b. H_o is accepted if $t_o < t_{\text{table}}$ or there is no significant effect of using Three-Minute-Pause Strategy on students' comprehension of reading narrative text at State Junior High School 13 Dumai.