CHAPTER III

RESEARCH METHOD

A. Research Design

This research is an experimental research. According to Cresswel, experiment is test an idea (or practice or procedure) to determine whether it influences an outcome or dependent variable[1]. The design of this research is quasi experimental research. Gay and Airaisian stated that experimental research is the only type of the research that can test hypotheses to establish cause-and-effect relationship.[2] It uses quasi-experimental design which uses the observation. It involves two classes, an experimental group and a control group. The experimental group means the students who are given the treatment by using Showdown strategy, while the control group is a group of students who are not given the strategy. This research is aimed to find if there is a significant effect of using showdown strategy in teaching reading.

The experimental group was taught by using particular treatment of showdown 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.So the design of this research can be illustrated as follows:

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[1] Jhon, W. Cresswell. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. (*New Jersey: Pearson Education. 2008), pp. 299.
[2] L.R Gay and Peter Airasian, *Educational Research Competencies for Analysis and Application*, (New Jersey: Prantice-Hall Inc, 2000),.Pp.367

This research design can be seen in the table below (Quasi-Experimental Design):[3]

Table III. 1
Research Design

| GROUP	PRE-TEST	TREATMENT	POST-TEST
Experimental	Test 1	X	Test 2
Control	Test 1	-	Test 2

E : Experimental Group

C : Control Group

T1 : Pre-test to experimental group and control group

X : Receive the treatment using showdown strategy

T2 : Post-test to experimental group and control group

After giving particular treatment to the experimental group by using Showdown strategy, the scores between experimental and control groups were analyzed by using statistical formula. It was aimed to know there was or there was no effect of variable X into variable Y. The design of variable relationship can be illustrated as follows:

Table III. 2
Variable Design

$$X \xrightarrow{\text{effect}} Y$$

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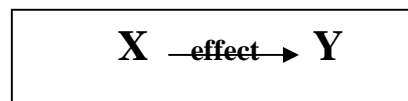
[3] Jhon W Creswell. *Ibid.*, pp. 314

B. Location and Time of the Research

   1. Time of the research

      This research was conducted from April to May 2014.

   2. Location of the research

      This research was conducted at MTsN Andalan Pekanbaru located on Jalan Amal Hamzah No. 1 Pekanbaru.

C. Subject and Object of the Research

   1. Subject of the research

      The subject of this research was the eighth grade students at MTsN Andalan Pekanbaru in 2013/2014 academic year.

   2. Object of the Research

      The object of this research was the effect of using Showdown strategy toward students' reading comprehension.

D. Population and Sample of the Research

      The population of this research was all of the eighth grade at MTsN Andalan Pekanbaru. The total number of population was students that can be seen as follows;

Table III. 3
The Population and Sample of the Eighth Grade Students
at MTsN Andalan Pekanbaru

No	Class/Major	Population	Sample
1	VIII.1	30	Experimental Class
2	VIII.2	30	Control Class
3	VIII.3	35	
4	VIII.4	35	
5	VIII.5	30	
6	VIII.6	30	
7	VIII.7	35	
8	VIII.8	35	
	Total	260	

From the table above, it is seen that the total of population is 260. In addition, in taking sample of the population the researcher uses cluster-sampling technique. According to Gay and Airasian, cluster sampling does not select the individual, but it selects groups. All of the members of selected groups have similar characteristic.[4] The writer used lottery to choose two classes from eighth classes. The writer took only two classes as sample of the research. Furthermore, the sample of this research was 60 students. The sample was divided into two groups. The first group was experimental class, it consisted of 30 students in the class VIII.1and the other one was control class that consisted of 30 students in the class VIII.2 .

E. Technique of Collecting Data

In this research, the writer used tests pre-test and post-test for collecting data. The test was used to measure the students' comprehension in reading. The data of this research were the score of the students' reading

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[4]L.R. Gay, *Opcit.* ,pp. 129

comprehension obtained by using reading test. The first test was given before the treatment. Second, post-test was given after doing the treatment to the students. The type of the test was multiple choice tests which consisted of 20 items. Every multiple choice item consisted of four answers (a, b, c, and d). The test was intended to obtain reading comprehension of the eighth grade students at MTsN Andalan Pekanbaru. The scores of narrative text were classified in the table below:[5]

Table III. 4
The Classification of Students' Score

The Score Level	Category
80 – 100	Very Good
66 – 79	Good
56 – 65	Enough
40 – 55	Less
30 – 39	Fail

For furrther information about the instruction of the text, the writer showed the blue print.

Table III. 5
The Blue Print of the Test

No.	Indicators	Items Number
1.	Identify main idea in narrative text	1, 6, 11, 16
2.	Identify generic structure in narrative text	2, 7, 12, 17
3.	Identify vocabulary in narrative text	3, 8, 13, 18
4.	Identify pronominal reference in the narrative text	4, 9, 14, 19
5.	Identify moral value in narrative text	5, 10, 15, 20

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[5]Suharsimi Arikunto. *Dasar - Dasar Evaluasi Pendidikan*. (Jakarta: Bumi Aksara, 2009). P. 208

1. **Validity**

Before the items were used to get the data, all of them were tried out first. Try out was intended to know the value of the test.The test was given to the students not too difficult or not too easy. The purpose of the try out was to obtain validity and reliability of the test. The test is said to be valid if it measures accurately what is intended to measure.[6] It was determined by finding the difficulty level of each item. The formula of item difficulty is as follows:

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

Where:

P = Difficulty level

B = The number of correct answer

JS = The number of students

The level of difficulty was used to show how easy and difficult an item was. The items that do not reach the standard level of difficulty are excluded from the test and they are replaced with new items that are appropriate.

According to Arikunto the test is accepted if the degree of difficulty is between 0.30 – 0.70.[7]It means that an item of the test is accepted if the level of difficulty is between 0.30 – 0.70 and it is rejected if the level of difficulty is less than 0.30 and over than 0.70.

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[6]Arthur Huges. *Opcit.*,pp.26
[7]Suharsimi Arikunto. *Opcit.*, pp. 208

Then,the proportion correct was represented by "p" , whereas the proportion incorrect was represented by "q". The calculation of item difficulty can be seen as follows:

Table III.6
The students are able to identify the main idea

Variable	Identify the main idea				N
Item No.	1	6	11	16	
Correct	16	19	16	16	20
P	0.53	0.63	0.53	0.53	
Q	0.47	0.37	0.47	0.43	

Based on the table above, the item numbers of question for identifying the main idea were 1, 6, 11, and 16. It shows that the proportion of correct answer of the test. The proportion of correct answer for test item number 1 is 0.53, the proportion of correct answer for test item number 6 is 0.63, the proportion of correct answer for test item number 11 is 0.53, and the proportion of correct answer for test item number 16 is 0.53. Then, based on the standard level of difficulty "p" is >0.30 and <0.70. So, the items of identify the main idea were accepted.

Table III.8
The students are able to identify generic structure

Variable	Identify generic structure				N
Item No.	2	7	12	17	
Correct	21	16	15	15	20
P	0.7	0.53	0.5	0.5	
Q	0.3	0.47	0.5	0.5	

Based on the table above, the item numbers of question for identifying generic structure were 2, 7, 12, and 17. It shows the proportion of correct answer of the test. The proportion of correct answer for test item number 2 is 0.7, the proportion of correct answer for test item number 7 is 0.53, the proportion of correct answer for test item number 12 is 0.5, and the proportion of correct answer for test item number 17 is 0.5. Then, based on the standard level of difficulty "p" is >0.30 and<0.70. So, the items of identify generic struture of the text were accepted.

Table III.7
The students are able to identify vocabulary

Variable	Identify vocabulary				N
Item No.	3	8	13	18	
Correct	17	17	19	16	20
P	0.57	0.57	0.63	0.53	
Q	0.43	0.43	0.37	0.43	

Based on the table above, the item numbers of question for identifying vocabulary were 3, 8, 13, and 18. It shows that the proportion of correct answer of the test. The proportion of correct answer for test item number 3 is 0.57, the proportion of correct answer for test item number 8 is 0.57, the proportion of correct answer for test item number 13 is 0.63, and the proportion of correct answer for test item number 18 is 0.53. Then, based on the standard level of difficulty "p" is >0.30 and<0.70. So, the items of identify vocabulary of the text were accepted.

Table III.9
The Students are able to identify pronominal reference

Variable	Identify pronominal reference				N
Item No.	4	9	14	19	
Correct	18	17	17	16	20
P	0.6	0.57	0.57	0.53	
Q	0.4	0.43	0.43	0.43	

Based on the table above, the item numbers of question for identifying pronominal reference or narrative text were 4, 9, 14, and 19. It shows that the proportion of correct answer of the test. The proportion of correct answer for test item number 4 is 0.6, the proportion of correct answer for test item number 9 is 0.57, the proportion of correct answer for test item number 14 is 0.57 and the proportion of correct answer for test item number 19 is 0.53. Then, based on the standard level of difficulty "p" is >0.30 and <0.70. So, the items of identify pronominal reference were accepted.

Table III.10
The Students are able to identify moral value

Variable	Identify moral value				N
Item No.	5	10	15	20	
Correct	19	18	20	14	20
P	0.63	0.6	0.67	0.47	
Q	0.37	0.4	0.33	0.53	

Based on the table, the item numbers of question for identifying moral value are 5, 10, 15, and 20. It shows that the proportion of correct

answer of the test. The proportion of correct answer for test item number 5 is 0.63, the proportion of correct answer for test item number 10 is 0.6, the proportion of correct answer for test item number 15 is 0.67, and the proportion of correct answer for test item number 20 is 0.47. Then, based on the standard level of difficulty "p" is >0.30 and <0.70. So, the items of moral value of the text were accepted.

2. **Reliability**

According to Sugiyono reliable instrument is the instruments when used several times to measure the same object, in a different time would produce the data. Furthemore, Heaton states that reliability is the accuracy of the result obtained by the instrument or measurement.[8] Heaton also states that, the reliability of the test is considered as follows:

a. 0.0 – 0.20   = reliability is low

b. 0.20 – 0.40   = reliability is sufficient

c. 0.40 – 0.70   = reliability is high

d. 0.70 – 0.1   = reliability is very high

To obtain the reliability of the test given, the writer used the formula as follows:[9]

KR 20: $ri = \dfrac{k}{k-1} \ \dfrac{St^2 - \sum Piqi}{St^2}$

Where:

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[8]J.B Heaton, *Writing English Langugae Test*. (New York: Cambridge University, 1988), pp. 159

[9]Sugiyono, *Statistik Untuk Penelitian*, (Bandung: Alfabeta, 2007), pp.359

K   = Number of item in the instrument

P_1 = Proportion of subjects who answered the .tem correctly

q_1 = Proportion of subjects who answered the item incorectly

   $(1 - p_1)$

$\sum Piqi$ = The multiplication result between p dan q

St^2 = total variance

We must first calculate the total variance before:

$$St^2 = \frac{X^2}{n}$$

N   = Number of respondents

X^2 $= \sum Xt^2 - \frac{\Sigma Xt^{\,2}}{n}$

   $= 4172 - \frac{342^{\,2}}{30}$

   $= 4172 - \frac{116969}{30}$

   $= 4172 - 3898,8$

   $= 273,2$

St^2 $= \frac{273,2}{30}$

   $= 9,10$

$$ri = \frac{k}{k-1}\;\frac{St^2 - \sum Piqi}{St^2}$$

ri $= \dfrac{20}{20-1}\;\dfrac{9,10-4,78}{9,10}$

   $= \dfrac{20}{19}\;\dfrac{4,32}{9,10}$

$$= 1, 05 \times 0,47$$

$$= 0, 49$$

Based on the result above, it also can be stated that the reliability was high.

F. Technique of Analysis Data

In analyzing the students' reading comprehension on narrative text, the writer used the standard minimum score (KKM) of English lesson in MTsN Andalan Pekanbaru. It was 75 for students' reading comprehension. It means that for those who got score 75, they passed the standard minimum score (KKM), while those who got score < 75 they did not pass the standard minimum score (KKM).

In analyzing the data, the writer used scores of pre-test and post test of the experiment and control classes. The writer used the statistical calculation independent sample T-test formula by using SPSS 17 version. Independent t-test was used in order to find out whether or not there was significant effect of using showdown strategy of the eighth grade students at MTsN Andalan Pekanbaru.

The t-table was also employed to see whether or not there was a significant effect between the mean score of both experiment and control groups. The t-obtain value is consulted with the value of t–table at degree of freedom (df) = (N1+N2)-2 .

Statically hypothesis is:

$H_a = t_o > t\text{- table}$

$H_o = t_o < t - table$

a. H_a is accepted if $t_o >$ t- table. It can be said that there is significant effect of using strategy on students' reading comprehension.

b. H_o is an accepted if $t_o < t -$ table. It can be said that there is no significant effect of using strategy on students' reading comprehension.