CHAPTER III

RESEARCH METHOD

A. Research Design

The type of the research was an experimental research. According to Cresswell (2008) Experiment is you test an idea (or practice or procedure) to determine whether it influences an outcome or dependent variable. The design of this research was a pre-experimental design, in which the researcher used one group pretest-posttest design. According to Gay and Airasian(2012) "One group pretest-posttest design is a design that involves a single group in which it is pretested, exposed to treatment and posttest." Thus, before applying the treatment, the researcher administered pretest, and then posttested the students' reading comprehension. In order to know the effect of using small group discussion in reading comprehension, the researcher compared the students' reading score before and after getting the treatment. In this research the researcher was given only one class in taking the data, therefore the researcher used pre-experiment design in taking the data at State Islamic Junior High School Andalan Pekanbaru. The description of this design can be seen as follows.

20

Table. III.1
One Group Pre-test Post-test Design
Donal (2010)

Pretest	Trearment	Posttest
Y1	X	Y2

Y1   : Test before treatment

X   : Treatment

Y2   : Test after treatment

There were two variables in this research, the first is the use of small group discussion as independent variable (X variable), and the second is reading comprehension as dependent variable (Y variable).

B. The Time and Location of the Research

This research was conducted on January until February 2018, in State Islamic Junior High School Andalan Pekanbaru. It is located at Amal Hamzah Street number 1 Pekanbaru.

C. The Subject and the Object of the Research

The subject of this research was the Eight Grade Students of State Islamic Junior High School Andalan Pekanbaru. The object of this research is the use of small group discussion strategy on reading comprehension.

D. The Population and Sample

1. The Population of the Research

The population of this research was all of the eight grade students at State Islamic Junior High School Andalan Pekanbaru. It consisted of 10 classes; they were VIII 1, VIII 2, VIII3, VIII 4, VIII 5, VIII 6, VIII 7, VIII 8, VIII 9, VIII 10 class. The total of population of this research was 310 students the specification of population can be seen on the table II below :

Table III.2
The Total Population of the Eighth Grade Students at Islamic Junior High School Andalan Pekanbaru

Classes	Number of Student
VIII 1	32
VIII 2	30
VIII 3	30
VIII 4	30
VIII 5	32
VIII 6	30
VIII 7	32
VIII 8	32
VIII 9	30
VIII 10	32
TOTAL	310

2. The Sample of the Research

Based in the limitation of the research, the researchers took one class of the sample because the researchers used pre-experimental design that do not need control class. The researcher choosed sample by using cluster random sampling. According to Gey (2012) cluster random sampling randomly select the group, not individuals. In using cluster random sampling, the researcher used rolled-up paper which is all VIII grade classes was written.Therefore, the researcher selected one class as sample in this research. It is class VIII 9 which consisted 30 students.

E. The Technique of Collecting Data

This research was quantitative research by using one group pre-test and post-test design. According to Richards (2010) test is any procedure for measuring ability, knowledge, or performance. In this research, pretest (T1) was given before the researcher teach narrative text by using small group discussion technique, and post test (T2) was given after being taught narrative text by using small group discussion technique.

In order to get the data needed to support this study, the researcher used the technique as follow :

1. Test

According to Brown (2003) stated that a test refers to a method to measure one's ability, knowledge, intelligence, or performances in a

supplied area. There were two tests in this research the first is pre-test and second is post-test. Pre-test was done before doing the treatment and post-test was done after doing the treatment. This technique found out how the students' reading comprehension in understanding narrative text. First, the researcher explains about narrative text to the students, after that the researcher gave question for all of the students, because the limited of time, the researcher gave the students 20 questions by using multiple-choice there were 75 minutes. Students answered a text within 5-6 minutes and each question was answered in 1 minute.

To find out the effect of using small group discussion strategy on students' reading comprehension of the eight grade students at State Islamic Junior High School Andalan Pekanbaru, the researcher administers the test to assess students' reading comprehension.

2. Try Out

Try out was used to know validity and reliability. The researcher conducted the try out at the eight grade students State Islamic Junior High School Andalan Pekanbaru. There were 30 questions. The blue print can be seen on the table III below:

Table III.3
Blue Print of the Test

No.	Indicators	Item Number
1	Identifying main idea in narrative text	1,6,11,16, 21, 26
2	Identifying language future in narrative text	2,7,12,17, 22, 27
3	Identifying the generic structure in narrative text	3,8,13,18, 23, 28
4	Identifying the meaning of vocabularies in narrative text	4,9,14,19, 24, 29
5	Identifying the conclusion in narrative text	5,10,15,20, 25, 30

Among 30 multiple-choice questions in try out, researcher only used 20 questions for a test (pre-test and post-test). Each question is scored 5. The researcher takes the total score from the result of the reading comprehension test. The classification of the students' score is shown in the table III.4 as follow:

Table III.4
Classification of Students' Score

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

3. Validity

Every test, whether it short, informal classroom test or a public examination should be as valid as the test constructor can make it. There are many kinds of validity, two of them are constructor validity and content validity. According to Colton (2007) construct is ensuring that instrument designers and respondent have a shared definition of the construct. The constructor of validity is refers to the suitability between the results of the measuring instrument and the ability to be measured. According to Hughes (2003) a test is said to be valid if it measure accurately what it is intended to measure. It means that a test is valid if it really measures what we actually want to be measured. According to Hughes (1989) content validity is a representative sample of language skills, structure, etc. with which it is meant to be concerned. The content of validity is the accuracy of a measuring instrument in terms of the contents of the measuring instrument. In this research the researcher will use construct validity. Because, the test must aim at providing a true measure of the particular skill in which it is intended to measure.

Before the test was given to the sample of this research, the test was tried out to the students of the second grade. The purpose of try out is to obtain validity and reliability of the test.

Finally, the researcher determined the validity by referring to the material that was given to the students based on the students' text book. In other words, the test given to the students were based on the material that they had learned. To find out the validity of test, researcher calculated it by using SPSS 17.00 version. The standard value of validity is $r_{item} > r_{table}$. Based on the try out result, it was determined that some of the items were invalid. The result of try out is as follows.

Table III.5
The Item Validity of Try Out

Item Number	r-item	r-table	Result
1	0.53	0.35	Valid
2	0.55	0.35	Valid
3	0.52	0.35	Valid
4	0.52	0.35	Valid
5	0.54	0.35	Valid
6	0.55	0.35	Valid
7	0.60	0.35	Valid
8	0.56	0.35	Valid
9	0.60	0.35	Valid
10	0.51	0.35	Valid
11	0.74	0.35	Valid
12	0.66	0.35	Valid
13	-0.44	0.35	Invalid
14	0.66	0.35	Valid
15	0.64	0.35	Valid
16	0.35	0.35	Valid
17	0.08	0.35	Invalid
18	0.60	0.35	Valid
19	0.64	0.35	Valid
20	0.03	0.35	Invalid
21	0.52	0.35	Valid
22	0.17	0.35	Invalid
23	0.60	0.35	Valid
24	0.64	0.35	Valid
25	0.66	0.35	Valid
26	-0.02	0.35	Invalid
27	0.72	0.35	Valid
28	0.24	0.35	Invalid
29	0.60	0.35	Valid
30	0.38	0.35	Valid

4. Reliability

A test must be reliable as measuring instrument. Reliability is necessary characteristic of any good test for it to be valid at all a test must first be reliable as a measuring instrument. According to Lodico (2000) reliability is referred to consistency as a meaning obtaining approximately the same score for an individual over repeated testing. The good quality of instrument is determined by the instrument reliability. According to Cohen et.al, (2007) the guidelines for reliability is as follows:

Table III.6
Category of Reliability

No	Reliability	Category
1	>0.90	Very highly reliable
2	0.80-0.90	Highly reliable
3	0.70-0.79	Reliable
4	0.60-0.69	Minimally reliable
5	<0.60	Unacceptly low reliability

In this research, the researcher used software SPSS 17 version to calculate the reliability of test. There were two kinds of questions used in the test, so there were two calculation of reliability. The result of multiple choice test reliability is as follows:

Table III.7
Reliability Statistic

Cronbach' Alpha	N of Items
.911	24

The reliability of test was 0.911. It is categorized into very high reliable level.

According to Brown (2003), reliability has to do with accuracy of measurement. To obtain the reliability of the test, it must be known the mean and standard deviation of test. Reliability in general refers to appropriateness of a given test or any of its component parts as measure of what it is purposed to measure. It means the test is valid to the measure what it is supposed to it.

F. The Technique of Analyzing the Data

In this research, the writer analyzed the data by using Paired Sample T-test formula. According to Pallant (2010), T-test is used to determine whether two means are significantly different at a selected probability level. The researcher also used use SPSS 17.0 program to analyzed the data. Based on the formulations of the problem, the researcher will be analyzed the data through the following procedures for each problem by using SPSS

After found the difference, the researchers' found out the effect size of the phenomenon. Pallant (2010) stated that effect size statistic provide an

indication of the magnitude of the differences between your groups (not just whether the difference could have occurred by chance). The effect size statistic used in this research is eta squared. For t-test, SPSS does not provide eta squared values. The formula of eta squared is as follows:

$$\text{Eta squared} = \frac{t^2}{t^2 + (N_1 - 1)}$$

Where:

n^2 : Eta Square

t : t obtained

n_1 : The number of experimental class

The guidance here from Cohen (1988) is that 0.01= a very small effect; 0.06= a moderate effect; and 0.14= a very large effect.

The formula is use to know the effect of Small Group Discussion Strategy on Students' Reading Comprehension at State Islamic Junior High School Andalan Pekanbaru.