CHAPTER III

METHOD OF THE RESEARCH

A. Research Design

The design of this research was an experimental research. According to Gay and Airasian (2000: 367), experimental research is the only type of the research that can test hypothesis to establish cause and effects relationship.

This research was conducted by using pre-test and post-test non-equivalent group design. There were two variables in this research. They were Schema Activation Strategy as independent variable (variable X), and reading comprehension as dependent variable (variable Y). This research used experimental and control classes. Therefore, the experimental class was provided with pre-test, treatment, and post-test. Meanwhile the control class was treated without using schema activation strategy. The design can be seen in the following table:

Table III.1

The Research Design

Group	Pre-Test	Treatment	Post-Test
Experimental	X1	T	Y1
Control	X2	-	Y2

Where**:**

X1   = Pre-test in experimental group

X2   = Pre-test in control group

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Y1	= Post-test in experimental group
Y2	= Post-test in control group
T	= Treatment

B. The Location and Time of the Research

The research was conducted at State Junior High School 1 Inuman Kuantan Singingi Regency from July to Augustus 2016.

C. Subject and Object of the Research.

1. The Subject of the Research

The subject of this research was the eighth grade students at Junior High School 1 Inuman Kuantan Singingi Regency.

2. The Object of the Research

The object of this research was using Schema Activation Strategy and reading comprehension in Descriptive Text of the eighth grade students at State Junior High School 1 Inuman Kuantan Singingi Regency.

D. Population and Sample of the Research

1. Population of the Research

The population of this research was the eighth grade students at State Junior High School 1 Inuman Kuantan Singingi Regency. There were three classes of the eighth grade students in this school. The following table is the details.

Table III.2

The Total population of the eighth grade Students of

State Junior High School 1 Inuman Kuansing Regency

No	Class	Students
1	VIII A	23
2	VIII B	23
3	VIII C	23
Total		**69**

2. Sample of the Research

Based on the total population above, the researcher took sample by using cluster random sampling technique. According to Freankel, Wallen, and Hyun (2011: 96), cluster random sampling technique is the selection of groups, or clusters, of subjects rather than individuals. Thus, the researcher concluded that cluster random sampling is a technique to take sample of the research by selecting group not individual. The processes of selecting the sample by using cluster random sampling technique, were: *first*, the researcher provided some small papers if the population consisted of 3 groups or classes so the small paper provided had to be 3 small papers. *Second*, the researcher wrote the name of group or classes such as 8A, 8B, 8C in each small paper, then rolled them. *Third,* the researcher would like to put them into a glass or box and shuffled them. Then, the researcher took twice the small paper to determine two groups (control and experiment group) which became the sample of the research in the design of Quasi-Experiment research. Then, two classes chosen were VIII A class and VIII

C class, and the total of them were 46 students. The specification of the population and sample could be seen on the table below:

Table III.3
The Total Sample of the eighth grade Students of
State Junior High School 1 Inuman Kuansing Regency

No	Class	Sample	Total
1	VIII A	Experimental Class	23 Students
2	VIII C	Control Class	23 Students
	Total		43 Students

The first class chosen was labeled as an experimental class (VIII A) treated by using Schema Activation strategy and the second class chosen was labeled as a control group (VIII C) treated without using Schema Activation strategy.

E. Technique of Collecting Data

Collecting the data is the most important thing in a research. In this research, the researcher used test to collect the data. The test was used to find out the students' reading comprehension. The type of the test was multiple choice items related to Descriptive Text. To get the data about the students' reading comprehension, the researcher used assessment based on the indicators of reading comprehension that had explained in the operational concept. The test was firstly tried out to find out which were the items of questions were too easy and too difficult. It was calculated by using the formula of item difficulty. The try out test consisted of 20 questions. The blue print of the try out of reading comprehension could be seen the table below:

Table III.4
Blue Print of Reading Comprehension (Try Out)

No.	Indicators	Items Number	Number of Items
1.	The students are able to find main idea of descriptive text.	1, 6, 11, 16	4
2.	The students are able to identify the generic structure of descriptive text.	2, 7, 12, 17	4
3.	The students are able to identify language feature of descriptive text.	3, 8, 13, 18	4
4.	The students are able to identify reference of descriptive text.	4, 9, 14, 19	4
5.	The students are able to identify inference of descriptive text.	5, 10, 15, 20	4
	Total		20 Items

After the researcher had tried out the test, the researcher could make the pre and post test by omitting the items invalid. The blue print of reading comprehension after the test was tried out could be seen the table below:

Table III.5
Blue Print of Reading Comprehension (Pre and Post-Test)

No.	Indicators	Question Number (Pre-Test)	Question Number (Post-Test)
1.	The students are able to find main idea of descriptive text.	1, 6, 11, 16	1, 6, 11, 16
2.	The students are able to identify the generic structure of descriptive text.	2, 7, 12, 17	2, 7, 12, 17
3.	The students are able to identify language feature of descriptive text.	3, 8, 13, 18	3, 8, 13, 18
4.	The students are able to identify reference of descriptive text.	4, 9, 14, 19	4, 9, 14, 19
5.	The students are able to identify inference of descriptive text.	5, 10, 15, 20	5, 10, 15, 20
		20 Items	20 Items

Then, the researcher gave the test twice, before and after the treatment intended to obtain the students' reading comprehension of the eighth grade students at Junior High School 1 Inuman Kuantan Singingi Regency.

F. The Validity and the Reliability of the Instrument

1. Validity

The tests used to measure the students' comprehension in reading should be valid and reliable. The test can be valid if it measures accurately whether the test is appropriate, meaningful, and useful (Hughes, 2003: 26-27). In this research, the writer used construct validity to know the validity of reading comprehension test. In order words, the tests were given based on material that they had learned. In validity of instrument of the test, it can be seen from the difficulties of the test. It means the test is not too easy or not too difficult.

Before the tests were given to the sample of this research, the tests were tried out to 23 students of the eighth grade (class 8B). The purpose of the try out was to obtain validity and reliability of the tests. It was determined by finding the difficulty level of each item. The formula of item difficulty is as follows:

$$FV = \frac{R}{N}$$

Where:
FV	: Index of difficulty
R	: The number of correct answer
N	: The number of students

According to Arikunto (2009: 245), 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 is rejected if the level of difficulty is below 0.30 (the item is too difficult) and over 0.70 (the item is too easy). The proportion of correct is represented by "p", whereas the proportion of incorrect is represented by "q". The calculation of item difficulty could be seen from following tables:

Table III.6
Finding out the Main Idea in Descriptive Text

Variable	Identifying Main Idea				N
Item No	1	6	11	16	
Correct	10	10	9	15	
P	0.43	0.43	0.39	0.65	23
Q	0.57	0.57	0.61	0.35	

The table above showed the proportion of correct answer. For item number 1 obtained the proportion of correct 0.43, item number 6 obtained the proportion of correct 0.43, item number 11 obtained the proportion of correct 0.39, item number 16 obtained the proportion of correct 0.65. Based on the standard level of difficulty "p" <0.30 and >0.70, it was pointed out that the items for identifying main idea in descriptive text were valid.

Table III.7
Identifying the Generic Structure of Descriptive Text.

Variable	Identify the generic structure of descriptive text.				N
Item No	2	7	12	17	
Correct	15	7	10	11	
P	0.65	0.30	0.43	0.48	23
Q	0.35	0.70	0.57	0.52	

The table above showed the proportion of correct answer. For item number 2 obtained the proportion of correct 0.65, item number 7 obtained the proportion of correct 0.30, item number 12 obtained the proportion of correct 0.43, item number 17 obtained the proportion of correct 0.48. Based on the standard level of difficulty "p" <0.30 and >0.70, it was pointed out that the items for identifying of generic structure of descriptive text were valid.

Table III.8
Identifying the Language Feature of Descriptive Text.

Variable	Identify the language feature of descriptive text.				N
Item No	3	8	13	18	
Correct	15	15	14	13	
P	0.65	0.65	0.61	0.57	23
Q	0.35	0.35	0.39	0.43	

The table above showed the proportion of correct answer. For item number 3 obtained the proportion of correct 0.65, item number 8 obtained the proportion of correct 0.65, item number 13 obtained the proportion of correct 0.61, item number 18 obtained 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 items for identifying language feature of descriptive text were valid.

Table III.9
Identifying reference of descriptive text.

Variable	Identify the reference of descriptive text.				N
Item No	4	9	14	19	
Correct	10	8	15	10	
P	0.43	0.35	0.65	0.43	23
Q	0.57	0.65	0.35	0.57	

The table above showed the proportion of correct answer. For item number 4 obtained the proportion of correct 0.43, item number 9 obtained the proportion of correct 0.35, item number 14 obtained the proportion of correct 0.65, item number 19 obtained the proportion of correct 0.43. Based on the standard level of difficulty "p" <0.30 and >0.70, it was pointed out that the items for identifying reference of descriptive text were valid.

Table III.10
Identifying Inference of descriptive text

Variable	Identifying Inference of descriptive text				N
Item No	**5**	**10**	**15**	**20**	
Correct	8	12	10	12	
P	0.35	0.52	0.43	0.52	
Q	0.65	0.48	0.57	0.48	**23**

The table above showed the proportion of correct answer. For item number 5 obtained the proportion of correct 0.35, item number 10 obtained the proportion of correct 0.52, item number 15 obtained the proportion of correct 0.43, item number 20 obtained the proportion of correct 0.52. Based on the standard level of difficulty "p" <0.30 and >0.70, it was pointed out that the items for identifying inference of descriptive text were valid.

2. Reliability

Reliability is a necessary characteristic of a good test. Brown said that "a reliable test is consistent and dependable". It means that the test should be similar when the tester gives the same test to the same respondent on two different occasions or in the other word is consistent. The reliability coefficients for good reading comprehension test were accepted to exceed 0.0 and closed 1.00.

According to Timbunan in Zelly (2011:53) the reliability of test was considered 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

To obtain the reliability of the test, the researcherr used KR 20 formula (Sugiyono, 2008:186) as follows:

$$KR\ 20: ri = \frac{k}{(k-1)}\left\{\frac{S^2 - \sum pq}{S^2}\right\}$$

Where:

n : number of items in the instrument

p : proportion of subject who answered the item correctly

q : proportion of subject who answered the item wrong (1-p)

$\sum pq$: the multiplication result between p and q

S : variance

The reliability of the test can be seen as follows:

$$KR\ 20: r_{11} = \frac{n}{(n-1)}\left\{\frac{S^2 - \sum pq}{S^2}\right\}$$

$$= \left(\frac{20}{19}\right)\left(\frac{105 - 4.80}{105}\right)$$

$$= (1.05)\left(\frac{100.2}{105}\right)$$

$$= (1.05)(0.95)$$

$$r_{11} = 0.99$$

From the data above, the reliability of the test r_{11} is 0.99 so it can be analyzed that the instrument is **reliable**.

G. Technique of the Data Analysis

1. Normality and Homogeneity of the Test

Before analyzing the data by using t-test formula, the researcher had to find out the normality test of the data. The normality test of the data was analyzed by using Kolmogorov-Smirnove technique with SPSS 16 version.

Analysis:

H_a : population with normal distribution

H_o : population with not normal distribution

If the probability > 0.05 H_o was accepted

If the probability < 0.05 H_o was rejected

2. Analysis Data of Independent Sample T-test

In analyzing the data, the researcher used the score of pre-test and post-test of the students from both of experimental and control classes. In order to find out whether there was or not a significant effect of using schema activation strategy on students' reading comprehension in descriptive text, the data were analyzed by using independent sample t-test. In taking the conclusion, the researcher concluded by comparing t-observe with t-table.Analysis:

H_o : t-observe < Probability value

H_a : t-observe > Probability value

H_o is accepted if to < Probability value or there is no significant difference between students' reading comprehension taught by using schema activation strategy taught without using it.

H_a is accepted if to > Probability value or there is a significant different between students' reading comprehension taught by using schema activation strategy taught without using it.

To identify the level of the effect of using schema activation strategy on students' reading comprehension in descriptive text of the eighth grade at state junior high school 1 Inuman Kuantan Singingi Regency, it was calculated by using eta squared formula:

$$\text{Eta Squared} = \frac{t^2}{t^2 + (n1 + n2 - 2)}$$

Where: t   : value of t table
          n1 : number of students of first group
          n2 : number of students of second group