CHAPTER III

RESEARCH METHODOLOGY

3.1 The Research Design

This research is Experimental research. According to Gay and Airasian (2000:367), Experimental research is " the only type of the research that can test hypthothesis to establish cause and effect relationship". In this research, the Researcher took take two class; one class is experimental class taught by 3H Strategy and other is as a control group taught by conventional strategy. In the experimental class, the students would be administrated by giving a pretest at the beginning of the teaching learning in order to know students' reading comprehension. Then, there would be given treatment at the middle. During the treatment, the writer was corporated by the observer. At the end, they would be given post test.

This research consisted of two variables; the independent variable is symbolized by "X" that is control class and the dependent variable is symbolized by "Y" that is experimental class. According to L.R. Gay, the design of this research can be illustrated as follows :

Table 3.1
Research Design

Group	Pre-Test	Treatment	Post-Test
A (Experimental class)	Test 1	√	Test 2
B (Control class)	Test 1	X	Test 2

A = Experimental Group
B = Control Group
T1 = Pre-Test to Experimental Group
√ = Receiving particular treatment
X = without particular treatment
T2 = Post-Test for Exprimental Group and Control Group

3.2 The Location and time of Research

The research had beenconducted in SMA TRI BHAKTI Pekanbaru on tuanku

tambusai. The time of research took on Oktober until November, 2016.

21

Table 3.2
Schedule of The Research

No	Meeting	Topics
1	Pre Test 4 Oct 2016	1. The boy who cried wolf 2. The goose and the golden eggs 3. A wolf and a dog 4. A fox and a cat
2	Meeting 1 6 Oct 2016	Smart Monkey and Dull Crocodile
3	Meeting 2 11 Oct 2016	Ugly Duckling and Beautiful Birds
4	Meeting 3 13 Oct 2016	Rabbit and Bear
5	Meeting 4 18 Oct 2016	Elephant and Mouse Deer
6	Post Test 20 ct 2016	1. The boy who cried wolf 2. The goose and the golden eggs 3. A wolf and a dog 4. A fox and a cat

3.3 Population of the Research

Population was a set or collection of all element consisting of one or more attribute of interesting. The research population can be in the form of a group of object, phenomena or tendencies. The object with in the population were the analysis before the final conclusion was failed to the whole population.

Table 3.3
Populationof the Research

Class	Total of the students
X1	21
X2	25
X3	24
Total Population	70

3.4 Sample of the Research

A sample was part of the population being examined at the time of research. The sample of research should less than the population. The sample must have the characteristics which represent all the population being observed in the research. In other words, the sample was a subject of individuals or cases from a population.

In this study, the researcher names cards based one each first year classes in SMA TRI BHAKTI Pekanbaru. After mix these cards for certain time, the writer take as sample of research. The researcher taken two classes as the sampleof this research, class X3 became the experimental group and X2became the control group,

Table 3.4
Sample of the Research

No	Class	Population	Sample
1	X3	24	24(Experimental group)
2	X2	25	25 (Control group)
	Total	49	49

3.5 The Research Instrumental

The research instrumental of this research had been reading test in form multiple choice test. The writer got test materials in SMA TRI BHAKTI Pekanbaru. The test that was used by the writer consist of 20 of multiple choice. It used to know the students reading comprehension. The blue print of test can be drawn as follows:

Table 3.5
Blue Print of the Pre-Test and Post-Test

Reading Text	Indicators	Number of Item
Smart Monkey and Dull Crocodile	1. Finding the character of the text	1
	2. Finding the complication of text	2
	3. Finding the kinds of tenses of text	3
	4. Finding the purpose of text	4
	5. Finding the message or moral lessons of text	5
Ugly Duckling and Beautiful Birds	1. Finding the character of the text	6
	2. Finding the complication of text	7
	3. Finding the kinds of tenses of text	8
	4. Finding the purpose of text	9
	5. Finding the message or moral lessons of text	10

Rabbit and Bear	1. Finding the character of the text	11
	2. Finding the complication of text	12
	3. Finding the kinds of tenses of text	13
	4. Finding the purpose of text	14
	5. Finding the message or moral lessons of text	15
Elephant and Mouse Deer	1. Finding the character of the text	16
	2. Finding the complication of text	17
	3. Finding the kinds of tenses of text	18
	4. Finding the purpose of text	19
	5. Finding the message or moral lessons of text	20

3.6 The Research Procedure

Meeting on treatment was the second meeting on the research, the procedure of collecting data for experimental group by 3H Strategy were as follows:

3.6.1 Pre-test

Before conducting a treatment, the researcher gave test to experimental group to answer the question from pre-test. Therewere 20 items for 60 minutes. The test consist of five texts and 20 multiple choice questions. It was used to know the students' reading comprehension of at narrative test atthe first year studentsof SMA TRI BHAKTI PEKANBARU. After evaluating the students' answers and computing the students' scores, the writer calculated their percentage in order to know their comprehension in reading.

3.6.2 Treatments of Using 3H Strategy in Teaching Reading

The researcher carried out treatment by applying Text 3H Strategy in teaching reading comprehension of narrative text. The researcher give treatment 3H Strategy to experimental group for 4 meetings. The treatment had given to experimental group and had not give to control group. The steps of reading comprehension procedures by applying Text 3H Strategy are as follow :

1. Teacher explain narrative text.
2. Teacher give example narrative text to students'.
3. Teacher asks question related to the text.
4. Teacher demonstrates how to find the answer for here" question by locating relevant information on passage.
5. Students' practice applying this step with teacher's guidance and feedback.
6. Teacher demonstrates how to find the answer for "hidden" question by using the information on the passage to infer or predict the possible answer.

7. Student practice applying this step with teacher's guidance and feedback.

8. Teacher demonstrates how to the find the answer for "in my head" question by using the information which is not stated in the text or outside the text for instance from students' background knowledge.

9. Teacher reviews the strategy over the following lessons and uses it for the variety of text types.

3.6.3 Post-test

Post-test had beengiven after giving treatment (teaching and learning process). The items use for this test took be taken from items of the previous pre-test. The aim of holding a test after treatment is to find out weather or not there is any significant effect after teaching by applying 3H Strategy. After evaluating the students' answer and computing the students score, the Researcher calculate their percentage in order to know their ability level in reading .

3.7 Data Collecting technique

In order to collect the data, here are some procedures were taken by the researcher, there are:

1. The researcher visited to the school.

2. The researcher asked for permission to the head master and English teacher to take data of sample of the research.

3. The researcher gathered the students (sample) in particular classroom.

4. The researcher distributed the test to the students.

5. The researchers informed the students that the following teaching session is for reading text session.

   In order validate the test, it consulted to English teacher of this school and advisors. Moreover, the material based on curriculum and material was thought. The in order to find item difficulty, it try out to other students who do not belong to the members of sample. After that the item was used for pre-test and post-test. To find out there is any significant effect of the test used t-test.

3.8 Data Analysis technique

In analyzing data, the researcher used core of pre-test and post-test of the students. To know the score of the students on the tests, the writer give thescore based on the answers of the students. The scores which the writer gave, based on the answers of the scoring rubric (Department Pendidikan Nasional, 2009:29).

The first formula was used to find the means of each group. The mean can be calculated by using the following formula :

3.8.1   Mean score of each group

Mean   : $Mx = \frac{\sum X}{N}$

Where : Mx = mean score
            $\sum X$ = total score
            N = number of cases/ students

(Sudijono, 2009:81)

3.8.2 Difference (D) $\sum D$

The difference between variablel I (pre-test of X) and variable II (post-test or Y), so the difference (D)

$$D = X - Y$$

Where : D : Difference
      X : the score of variable I (Pre-test)
      Y : the score of variable II (Post-test)
(Sudijono,2009:306)

Next, we need to sum up all of D and we get $\sum$ D (the amount of Difference

3.8.3 Mean of Difference (MD)

$$MD : \frac{\sum D}{N}$$

Where : MD : mean of difference
      $\sum$ D: the amount of D
      N : Number of cases (students)
(Sudijono, 2009:306)

3.8.4   The Amount of D quadrate (D^2)

Next we quadrate each D and we can find D^2. After that we can sum up all of D^2 and we can get the amount of D^2 ($\sum D$)

3.8.5   Standard Deviation (SD$_D$)

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

Where : SD_D= Standard deviation

$\sum D^2$ = the amount of D quadrate

$\sum D$ = the amount of D

N   = the number of students(Sudijono,2009:307)

3.8.6   Standard Error of Mean Difference (SE $_{MD}$)

Standard Error of the Mean :

$$SE_{MD} = \frac{SD_D}{\sqrt{N-1}}$$

Where :

SE_{MD}: Standard Error of the Mean Difference

SD_D: Standard Deviation

N : Number of students

1 : Constant number

3.8.7   T-Test (To)

T-test (t_o) can we get by this formula :

$$t_o \ = \ \frac{M_D}{SE_{MD}}$$

Where= SE_{MD} = Standard Error of Mean Difference
SD_D = Standard Deviation
N   = Number of students
(Sudijono, 2009 : 307)

3.8.8   Formula to test the Hypothesis

After get T-test (t_o) we find the Degree of Freedom (df or db) with

the formula :

Degree of Freedom (*df*) :

$$df \qquad = (\ N_{pre} - 1) + (N_{pos} - 1)$$

Where :
df   =Degree of Freedom
N_{pre} = Number of the sample at the pretest
N_{pos} = Number of the sample at the posttest
1   = Constant Number

Based on the value of Degree of Freedom, we can find the value of t-table,

with the significance 5% and 1% :

This indicates that the alternative hyphothesis is accepted and null

hyphothesis is rejected.

In other words, if the value of t-calculated is smaller than the value of-table, this indcated that the null hyphothesis is accepted and alternative hyphothesis is rejected.

Criteria :　　　$t_o < t_{table}$ ⟶　　　H_o hypothesis is accepted

$t_{obs} > t_{table}$ ⟶　　　H_o hypothesis is rejected

(Sudijono, 2009 : 305-308)