

CHAPTER III

METHOD OF THE RESEARCH

A. The Research Design

This research was designed as a quasi experimental research type Non-equivalent Control Group Design. According to Cresswell that experiment is you test an idea to determine whether it influences an outcome or dependent variable.¹

In this research, the writer used two classes to be samples, namely experimental group and control group. The experimental group will be taught by particular treatment (Contextual Redefinition Strategy) to develop their reading comprehension in narrative text. While control group only will be only a pre-test and post-test without particular treatment as given to experimental group.²

According to L.R. Gay, the design of this research can be illustrated as follows.³

Table 1
The research design

Class	Pre-test	Treatment	Post-test
Experimental	O₁	X	O₂
Control	O₁	-	O₂

Where :

O₁= Pre-test to Experimental Group and Control Group

= Receiving particular treatment

X= without particular treatment

¹Jhon. W. Cresswell. *Educational Research Planning, conducting, and Ecaluating Quantitative and Qualitative Research*. (New Jersey: prentice Hall, 2008),p.299

²*Ibid.*

³ L.R Gay and peter airasian, *education research: competencies for analysis and application*, sixth edition(new jersey&pearson education international,2000).p.625

O_2 = Post-test for Experimental Group and Control Group

B. The location and The time of the research

This research was conducted of eleventh grade students of state senior high school 1 Tambusai, RokanHulu Regency. The writer conducted this research from January - February 2014.

C. The subject and object of the research

1. The subject of the researat

This subject of this research wasthe eleventh grade of state senior high school Tambusai, RokanHulu Regency.

2. The object of the research

The object of this research was the effect of using Contextual Redefinition strategy on reading comprehension ofthe eleventh grade students of state senior high school 1 Tambusai, RokanHulu Regency.

D. The Population and The Sample of The Research

The population of this research was the eleventh grade students of state senior high school TambusaiRokanHulu Regency. The students were divided into 5 classes. It can be seen in the table below:

Table 2
The population of the first year students of state senior high school 1
TambusaiRokanHulu Regency

No	Classes	Population
1	XI IPA 1	25
2	XI IPA 2	25
3	XI IPS 1	30
4	XI IPS 2	30
5	XI IPS 3	32

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Based on the design of the research above, the population above was large enough to be all taken as sample of the research. Furthermore, because they are homogenous or because all samples had the same characteristic, the writer used cluster sampling to choose the classes taking the sample. So, the writer selected two classes of the students to be taken as samples XI IPS 2 as an experimental class and class XI IPS 3 as a control class.

Table III.3
The sample of the research
Sample of the Research

No	Classes	Population		Total
		Female	Male	
1	Experimental class (XI IPS 2)	19	11	30
2	Control Class (XI IPS 1)	20	10	30

E. The Technique Of Collecting Data

The data for this research were obtained by using test as instrument to collect the data. A test is a method of measuring a person's ability, knowledge, or performance in a given domain.⁴ To obtain the students' reading comprehension by using Contextual Redefinitionstrategy, the students were given a test. The test was multiple choice test, divided into two stages. The first was pre-test,itwas given before the treatment. The second was post-test,it was given after the treatment. According to

⁴H. Douglas Brown,Language Assessment: Principles and Classroom Practices. (San Francisco: Longman, 2003), p.3

J. Charles Alderson, multiple choice questions are a comment device for testing students' comprehension⁵. The test was used to collect the data that consisted of 25 items in the form multiple choice questions, and each item was given score 4. The test was used to know the score of students' reading comprehension. The category of score in reading test could be classified, as follows:⁶

Table III.4
The Scale of Students' Reading Comprehension

The Score of Reading Comprehension Level	Category
80-100	Very Good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

To analyze the data, the researcher used T- test formula in SPSS 16.0 version.

F. The Validity and Reliability of the Test

1. Validity

Before giving the test to the sample of this research, both of the tests were tried out with 30 students of second year science major. The purpose of the try out was to obtain validity and reliability of the test. The test can be to be valid if it measures accurately what is intended to measure.⁷ It was determined by

⁵J. Charles Alderson, *Assessing Reading* (New Jersey: Cambridge University Press , 2001), p. 211

⁶Suharsmi Arikunto, *Dasar – Dasar Evaluasi Pendidikan, Edisi Revisi*. (Jakarta: Bumi Aksara, 2009), p.245

⁷Arthur Huges, *Testing for Language Teacher, 2nd Edition* (Cambridge: Cambridge University Press), p. 26

finding the difficulty level of each item. The formula of item difficulty is as follows:

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

Where:

P : Index of difficulty

B : The number of correct answer

JS : The number of students

The difficulty of level of items shows how easy of particular of each item in a test is. The items that do not reach the standard level of difficulty are excluding from the test and they would be changed by the new items.

The standard level of difficulty used is < 0.30 and > 0.70 .⁸It means that the items are 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 (difficult) and over 0.70 (easy). Then, the proportion is represented by “p”, whereas the proportion incorrect is represented by “q”. it can be seen from the following tables:

TABLE III.5
The Students are Able to Find Factual Information

Variable	Factual Information					N
Item no.	1	9	13	16	24	30
Correct	17	14	16	17	14	
P	0.56	0.46	0.53	0.56	0.46	
Q	0.44	0.54	0.47	0.44	0.54	

⁸SuharsimiArikunto,*Dasar-DasarEvaluasiPendidikan*(Jakarta: Bumi Aksara,2008), p. 245.

Based on the table above, the proportion of correct answer for item number 1 shows the proportion of correct 0.56, item number 9 shows the proportion of correct 0.46 item number 13 shows the proportion of correct 0.53, item number 16 shows the proportion of correct 0.53 and item number 24 shows the proportion of correct 0.46. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70. It is pointed out that item difficulty in average of each item number for finding main idea is accepted.

Table III.6
The Students are Able to Find Main Idea

Variable	Main Idea					N
Item no.	2	6	11	17	23	30
Correct	16	16	14	15	16	
P	0.53	0.53	0.46	0.5	0.53	
Q	0.47	0.47	0.54	0.5	0.47	

Based on the table above, the proportion of correct answer for item number 2 shows the proportion of correct 0.53, item number 6 shows the proportion of correct 0.47, item number 11 shows the proportion of correct 0.46, item number 17 shows the proportion of correct 0.5, and item number 23 shows the proportion of correct 0.53. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70. It is pointed out that item difficulty in average of each item number for identify arguments is accepted.

Table III.7
Students are Able to Find Specific Information

Variable	Specific Information					N
Item no.	3	7	12	18	21	30

Correct	16	16	15	12	14	
P	0.53	0.53	0.5	0.4	0.46	
Q	0.47	0.47	0.5	0.6	0.54	

Based on the table above, the proportion of correct answer for item number 3 shows the proportion of correct 0.53, item number 7 shows the proportion of correct 0.53, item number 12 shows the proportion of correct 0.5, item number 18 shows the proportion of correct 0.4, and item number 21 shows the proportion of correct 0.46. Based on the standard level of difficulty “p” <0.30 and “q” > 0.70. It is pointed out that item difficulties in average of each item number for identifying recommendation are accepted.

Table III.8
Students are Able to Find Content

Variable	Find Content					N
Item no.	4	8	14	19	22	30
Correct	14	12	14	12	13	
P	0.43	0.46	0.6	0.66	0.53	
Q	0.47	0.54	0.4	0.34	0.47	

Based on the table above, the proportion of correct answer for item number 4 shows the proportion of correct 0.43, item number 8 shows the proportion of correct 0.46, item number 14 shows the proportion of correct 0.6, item number 19 shows the proportion of correct 0.66, and item number 22 shows the proportion of correct 0.53. Based on the standard level of difficulty “p” <0.30 and “q” >0.70. It is pointed out that item difficulties in average of each item number for identifying language features are accepted.

Table III.10
Students are Able to Find Make Inference

Variable	Find Make Inference					N
Item no.	5	10	15	20	25	33
Correct	13	14	13	15	13	
P	0.43	0.46	0.43	0.5	0.43	
Q	0.47	0.56	0.57	0.5	0.57	

Based on the table above, the proportion of correct answer for item number 5 shows the proportion of correct 0.43, item number 10 shows the proportion of correct 0.46, item number 15 shows the proportion of correct 0.43, item number 20 shows the proportion of correct 0.5, and item number 25 shows the proportion of correct 0.43. Based on the standard level of difficulty “p”<0.30 and “q”>0.70. It is pointed out that item difficulty in average of each item number for identifying purpose is accepted.

2. Reliability

Brown says that reliability has to do with accuracy of measurement. This kind of accuracy was reflected in obtaining similar results when measurement was repeated on different occasions or with different instruments or by different persons. The characteristic of reliability was sometimes termed consistency.⁹It Means that the test was reliable when an examiner’s results were consistent on repeated measurement.

To obtain the reliability of the test, the mean and standard deviation of test should be first found. Reliability in general refers to appropriateness of a given test of any of its component part as measure of what it was purposed to measure.

⁹ H. Douglass Brown, *Language Assessment: Principles and Classroom Practices*. (New York: Pearson Education Inc, 2003), 19.

It means the test will be valid to the extent that was measured what it was supposed to measure.

The reliability coefficients for good identified kinds of structure text and reading comprehension test were expected to exceed 0.0 and closed 1.00. Heaton states that the reliability of the test is 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 given, the writer used the formula as follows:¹⁰

$$\text{KR 25: } r_i = \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2}$$

Where:

K : number of items in the instrument

Pi : proportion of subject who answered the item correctly

Qi : proportion of subject who answered the item wrong (1-pi)

p_iq_i : the multiplication result between p and q

S_t² : total variance

Firstly, the writer calculates the total variance:

$$S_t^2 = \frac{x^2}{n}$$

Where:

¹⁰Sugiyono. *Statistik untuk Penelitian* (Bandung: Alfabeta, 2007) p ,359.

n : number of respondents

$$\begin{aligned}x^2 &= \sum xt^2 - \frac{(\sum xt)^2}{n} \\&= 80776 - \frac{(1552)^2}{30} \\&= 80776 - \frac{2408704}{30} \\&= 80776 - 80290.133 \\&= 485.867\end{aligned}$$

$$\begin{aligned}s_t^2 &= \frac{x^2}{n} \\&= \frac{485.867}{30} \\&= 16.20\end{aligned}$$

$$\begin{aligned}r_i &= \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2} \\r_i &= \frac{25}{(25-1)} \frac{16.20 - 6.19}{16.20} \\r_i &= \frac{25}{24} \frac{10.01}{16.20} \\r_i &= 1.04 \times 0.62 \\r_i &= 0.618\end{aligned}$$

Based on the result above, it also can be stated that the reliability was high. To know the test is reliable or not, the value of r_{11} must be compared with the product moment. The value of r_{11} must be higher than r table. From calculation above the value of r_{11} is higher than r_t at 5% significance level that is

0.325 while r_t at 1% significance level is 0.418. So it can be concluded that. The instrument is reliable because the value of r_{11} is higher than r_t .

G. The Technique of Data Analysis

This research was talking about the effect of using Contextual Redefinition in narrative text. The technique of data analysis used in this research was T- test formula. According to Hartono, T-test is one of the statistical tests used to know whether or not there is a significant difference of the two samples of mean in two variables.¹¹ The data were analyzed by using statistical analysis. The different mean was analyzed by using independent sample T- test SPSS 16 version. This technique was used to know the effect of using Contextual Redefinition strategy on reading comprehension on narrative text.

The t – table was employed to see whether was a significant difference between the mean of score of both experimental and control group. The t – obtained value was consulted with the value of t – table at the degree of freedom (df) = $(N_1+N_2) - 2$ which was statistically hypothesized:

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

$$H_o : t_o < t - \text{table}$$

H_a is accepted if $t_o > t - \text{table}$ or there is an effect of using Contextual Redefinition Strategy on reading comprehension on narrative text. Than H_o is accepted if $t_o < t - \text{table}$ or there is no effect of using Contextual Redefinition Strategy on reading comprehension on narrative text.

¹¹Hartono Statistika untuk Penelitian, Yogyakarta: Pustaka Belajar, 2008, P.208