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Sultan Syarif Kasim Riau

CHAPTER III

RESEARCH METHODOLOGY

A. Design of the Research

This research was a quasi-experiment research, which was intended to find out the effect of using Four Corners strategy to improve students' vocabulary mastery at the seventh grade of State Junior High School 1 Singingi, Regency of Kuantan Singingi.

According to Creswell (2008:314), the design of this research can be illustrated as follows

Table III.1

Research Design

Group	Pre-Test	Treatment	Post-Test
Experiment	X1	X	Y1
Control	X2		Y2

B. The Location and the Time of the Research

The research was conducted at the first year of State Junior High School 1 Singingi, Regency of Kuantan Singingi. This research was conducted from July to Augustus 2016

C. The Subject and the Object of the Research

The subject of this research was the first year students of State Junior High School 1 Singingi, Regency of Kuantan Singingi. The object



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of this research was the effect of Four Corners strategy on students' vocabulary mastery.

D. The Population and Sample of the Reserach

1. Population

The population of this research was the first year students at State Junior High School 1 Singingi Kuantan Singingi in 2016/2017 academic year, they were assumed to have the same level of proficiency and the same background.

2. Sample

The sample of this research was divided into two groups. The first was experimental group, it consisted of 25 students and the other was the control group that consisted of 25students.

Table III.2 The Population of the First Year of SMPN 1 Singingi Regency of Kuantan Singingi

No	Class	Total	
1	VII.1	24	
2	VII.2	24	
3	VII.3	24	
4	VII.4	25	
5	VII.5	25	
	Total		



E. The Techniques of Collecting Data

In this research, the writer used test as an instrument to collect data. The tests distributed were to measure the students' vocabulary mastery. The test was divided into; pre-test which was given before treatment and post-test was given after doing treatment. The test was given in multiple choices. The blue print of the multiple choices are as follows:

Table III.3 The Blue Print of the Test

No	Indicators	Question	Source
		Numbers	
1	Students know the meaning of	2	Text Book of
	the vocabulary	8	SMP Negeri 1
		9	Singingi
	4 ///	15	0 0
		20	4
2	Students know how to	4	Text Book of
	differentiate between synonym	10	SMP Negeri 1
	and antonym of English	12	Singingi
	vocabulary	17	
		18	
3	Students are able to use	3	Text Book of
	appropiate words to form	5	SMP Negeri 1
	sentences grammatically	7	Singingi
		13	
		14	
4	Students are able to differentiate	1	Text Book of
	words formation i.e. noun, verb,	6	SMP Negeri 1
	adverb, adjective, in accordance	11_	Singingi
	with correct English sentence	16	LLIZIO
	structure	19	

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The Validity and Reliability of the Test

Validity of the Test 1.

According to Gronlund in Brown (2003;22), validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful, in terms of the purpose of the assessment. Validity is measured what is intended to be measured. In validity of the instrument of the test, it can be seen from the difficulties of the test. On the other hand, the test is not too easy and the test is not too difficult. The standard level of difficulty is >0.30 and <0.70, Arikunto (2013:208). It means that the items are accepted if the level of difficulty is between 0.30-0.70 and rejected if the level below 0.30 (too difficult) and over 0.70 (too easy). Based on the try out result of the instrument validity to the 20 items, it was obtained that 19 items were valid.

Table III.4 The Analysis of Vocabulary Mastery Test Validity

r count	statement	status
0.626	0.30 < 0.626 < 0.70	valid
0.492	0.30< 0.492 < 0.70	valid
0.540	0.30< 0.540 < 0.70	valid
0.647	0.30< 0.647 < 0.70	valid
0.486	0.30< 0.486 < 0.70	valid
0.626	0.30< 0.626 < 0.70	valid
0.378	0.30< 0.378 < 0.70	valid
0.594	0.30< 0.594 < 0.70	valid
	0.626 0.492 0.540 0.647 0.486 0.626 0.378	0.626 0.30 < 0.626 < 0.70

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9	0.654	0.30< 0.654 < 0.70	valid
10	0.594	0.30< 0.594 < 0.70	valid
11	0.660	0.30< 0.660 < 0.70	valid
12	0.651	0.30< 0.651 < 0.70	valid
13	0.542	0.30< 0.542 < 0.70	valid
14	0.448	0.30< 0.448 < 0.70	valid
15	0.378	0.30< 0.378 < 0.70	valid
16	0.638	0.30< 0.638 < 0.70	valid
17	0.677	0.30< 0.677 < 0.70	valid
18	0.095	0.30> 0.095 < 0.70	invalid
19	0.633	0.30 > 0.633 > 0.70	valid
20	0.507	0.30< 0.507 < 0.70	valid

2. Reliability of the Test

According to H. Douglas Brown (2003;20), reliability has to do with accuracy of measurement. This kind of accuracy is reflected in obtaining the similar result when measurement is repeated on different occasions or with different instruments or by different persons. The characteristic of reliability is sometimes termed consistency. It means that we can say the test is reliable when an examinee's results are consistent on repeated measurement. According to Arikunto (2013:65), there are the interpretations of reliability as follows:

a. Between 0.800-1.00: very high

b. Between 0.600-0.800: high



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c. Between 0.400-0.600: enough

d. Between 0.200-0.400: low

e. Between 0.00-0.200: very low

To obtain the reliability of the test given, the writer used the formula KR20 as follows (Sugiyono, 2014:359);

$$\mathit{KR20:} r_i = \frac{k}{(k-1)} \left\{ \frac{\mathit{st}^2 - \sum pq}{\mathit{st}^2} \right\}$$

Where:

k : number of items in the instrument

P : proportion of students who answered the item correctly correctly : proportion of students who answered the item wrong (1-pi)

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

St²: total variance

Firstly, the researcher calculated the total variance:

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

Where:

n : number of respondents

$$x^{2} = \sum xt^{2} - \frac{(\sum xt)^{2}}{n}$$

$$= 4452 - \frac{(315)^{2}}{24}$$

$$= 4452 - \frac{99225}{24}$$

$$= 4452 - 4134.375$$

$$= 317.625$$

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 $st^2 = \frac{x^2}{n}$ $st^2 = \frac{317,625}{24}$ = 13,23

$$ri = \frac{k}{k-1} \left\{ \frac{S_{t^2 - \sum P_i q_i}}{S_{t^2}} \right\}$$

$$ri = \frac{24}{(24-1)} \left\{ \frac{13,23-4,41}{13,23} \right\}$$

$$ri = \frac{24}{23} \left\{ \frac{8,82}{13,23} \right\}$$

$$ri = 1.04 \times 0.97$$

$$ri = 1,00$$

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

State Islamic University of Sultan Syarif Kasim Riau G. Technique of Data Analysis

In analyzing the data, the witer used the statistical calculation of independent sample T-test formula. The independent sample T-test was used to find out the significant difference between students' vocabulary mastery by using and without using Four Corners strategy.

The data were analyzed by using SPSS 16. in order to find out the result of the students who are taught by using and without using Four Corners strategy. In order to get the effect size of the two variables (post

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test scores of experimental and control group), the researcher used the formula in Cohen et al, (2007:522) as follows:

$$Eta\ Squared = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

Where:

=the t-value (calculated by SPSS)

 N_1 =the number in the sample of group one

 N_2 = the number in the sample of group two

Classification of effect size by Cohen in Pallant (2005;201):

.01= smalll effect

.06= moderate effect, and

.14= large effect the classification

Statistically the hypothesis is:

H_a: t_o>t-table

 $H_o: t_o < t$ -table

- 1. Ho is accepted if t_o< t-table, there is no significant effect of using Four Corers strategy on students' vocabulary mastery at State Junior High School 1 Singingi, Regency of Kuantan Singingi.
- 2. Ha is accepted if t₀>t-table, there is a significant effect of using Four Corners strategy on students' vocabulary mastery at State Junior High School 1 Singingi, Regency of Kuantan Singingi.