

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This research is an experimental research design. According to Nunan (1992: 47), experimental research is particularly concerned with the issue of external validity, and the formal experiment is specifically designed to enable the researcher to extrapolate the outcomes of the research from the sample to the broader population. It means that the writer analyzes the data from respondents of the research using statistical analysis in order to know the improvement achieved by the respondents by speaking after applying strategy of using collaborative learning.

There are two variables: independent variable and dependent variable. According to Brown (1998:10) independent variable is variable selected by researchers to determine their effect on or relationship with the dependent variable. Meanwhile, a dependent is observed to determine what effect, if any, the other types of variables may have on it. In the other words, the variables of focus- the central variable-on which other variables will act if there any relationships. The result of variable is thought to be caused by independent variable.

In this research, the writer uses a quasi experimental design because in quasi experimental design allowed us to not have a control group because sometimes is impossible to have a control group for your research project and time-series allow us to do this.

Table 3.1

The Research Design

Sample	Pre-Test	Treatment	Post-Test
VIII 9	T1	X	T2

Notations:

T1 : Pre-Test

T2 : Post-Test

X : Teaching Speaking through Pair Work

3.2 The Location and Time of Study

This research conducted at the second year students' at SMP N 25 Pekanbaru. This researched conducted from August 15th until the end of September 2017.

3.3 The Population and Sample of Research

The population of this research in the second year of SMP N 25 Pekanbaru. The total population are 272 Students. Researcher using simple random sampling for taking the sample. The way of taking the sample by writer knows the population is homogeny. The writer select in a group not individual.

Table 3.2

Distribution of the Population

No	Classes	Number of Students
1	VIII 1	30
2	VIII 2	30
3	VIII 3	30
4	VIII 4	30
5	VIII 5	31
6	VIII 6	30
7	VIII 7	30
8	VIII 8	31
9	VIII 9	30
	Total	272

Because limitation of time, the writer takes only one class in order to apply a pair work to the students' speaking ability. The writer choose one class of the second year students at SMP N 25 Pekanbaru as the sample. They are VIII 9 as experimental class, which consist of 30 Students.

3.4 The instrument of Research

The material pf this research takes from speaking of descriptive text. The matterial teaches as follow:

Table 3.4

The Blueprint of Research Materials

No	Materials	Activity
1	Describing Someone	The teacher prepare a picture based on the topic and students discus about picture and presenting in front of the class
2	Describing Place	
3	Describing Things	

3.5 The Data Collection Technique

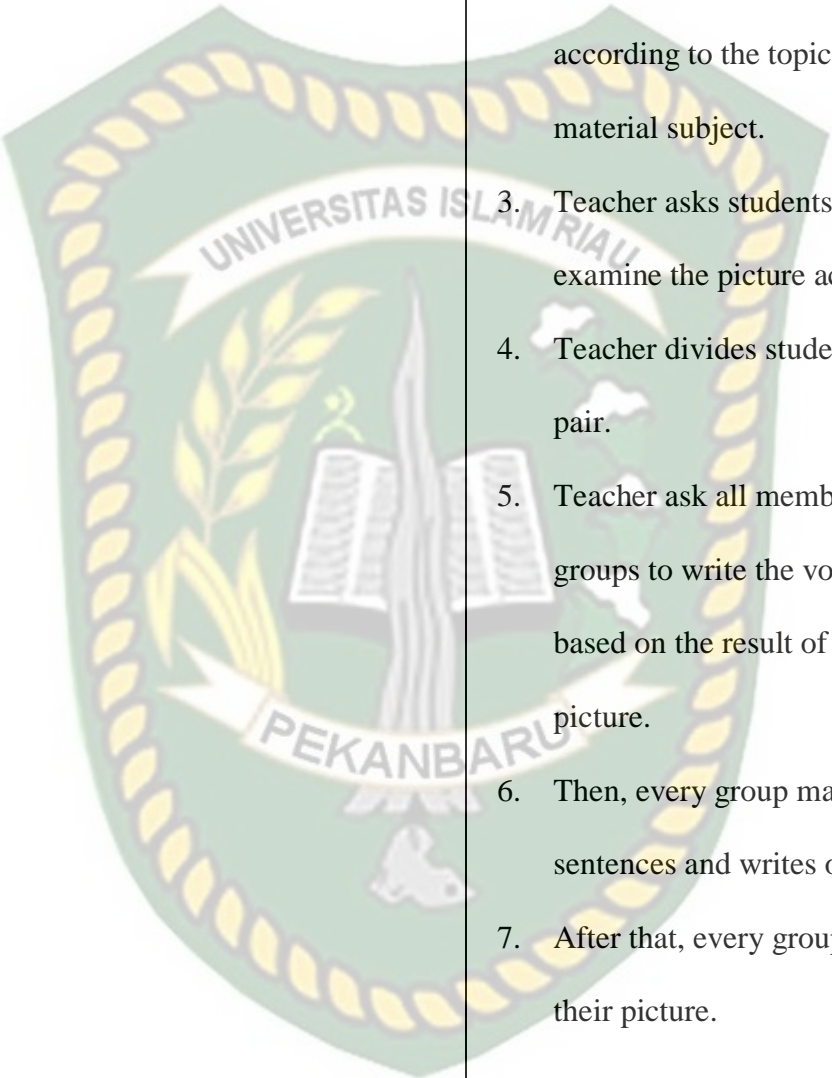
In collecting the data, there are two times of time test used. The first is the pre-test and second is post-test.

Table 3.5

Teaching activities

NO	MEETING	TEACHING ACTIVITY
1	First Meeting / Pre-test	Before giving treatment to the students, teacher give Pre-test to the student in order to know to early background ability of student in

		<p>speaking test. The pre-test of speaking is a descriptive text.</p>
<p>2</p>	<p style="text-align: center;"> Second – fourth Meeting / Treatment </p>	<p>After Pre-test the students, the teacher gave treatment use picture describing while teaching and learning process. The procedures of picture describing in teaching and learning is conducted in the following activities :</p> <p>A. Pre-teaching activities:</p> <ol style="list-style-type: none"> 1. Teacher greets the students to make them involved in teaching and learning process. 2. Teacher checks the students attendace. 3. Teacher did warm up that guides to the topic would be discussed <p>B. While teaching activities:</p> <ol style="list-style-type: none"> 1. Teacher introduces and explain

		<p>about picture describing in teaching and learning process.</p> <ol style="list-style-type: none"> 2. Teacher prepare picture according to the topic or material subject. 3. Teacher asks students to examine the picture accuracy 4. Teacher divides students in pair. 5. Teacher ask all members of groups to write the vocabularies based on the result of their picture. 6. Then, every group make sentences and writes on paper 7. After that, every group describe their picture.
<p>3</p>	<p style="text-align: center;">Fifth meeting</p>	<p>After the teacher explain, steps picture describing of descriptive text, the researcher gave post-test to the students to order to know the increaase in speaking ability after</p>

		<p>give the treatment by picture describing. The researcher asked the students speak a descriptive text (Monologue) in front of the classroom.</p>
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3.6 Data Analyze Technique

Table 3.6
Indicator of Speaking Ability

No	Indicator Assesed	Score			
		1	2	3	4
1	Pronunciation				
2	Grammar				
3	Fluency				
4	Comprehension				
5	Vocabulary				

(Brown:2004)

Explanation of score:

1 = incompetent

2 = competent enough

3 = competent

4 = very competent

To compare the result of the data from pre-test and post-test with the same subject, the writer used the Repeated Measures T-Test, and the data was calculated using the product moment formula, as follow:

The formula :

1. To analyze the data and to know the average score of the student's speaking ability, the researcher presented the data by using this formula:

$$\sum fx = \frac{SA}{5} \times 20 \frac{P + G + V + F + C}{5} \times 20$$

Σfx : the sum of the students' ability score

P : the pronunciation

G : the grammar

V : the vocabulary

F : the fluency

C : the comprehension

2. Finding the Mean Score

$$M_x = \frac{\sum X}{N}$$

Where :

M_x = mean score of experimental group

$\sum X$ = total score of experimental group

N = Number of cases/students

(sudijono,2010:18)

3. Find out the standard deviation is using this formula

$$SD = \sqrt{\frac{\sum \bar{X}^2}{N - 1}}$$

SD = Standard deviation

$\sum x$ = Total score

N = Number of students

1 = Constant number

4. To find out the standard error of means, it can be found by using formula :

$$SE = \frac{SD_D}{\sqrt{N}}$$

SE = Standard Error of Mean Difference

SD_D = Standard Deviation

N = Number of Students

5. Find out t-test statistic. The formula as follow:

$$T_0 = \frac{M}{SE}$$

Where:

t_0 = The t-test statistic

M = Mean of Difference

SE = Standard Error of Mean Difference

(Sudijono, 2009: 307)

If t-table employed to see whether there was a significant difference between the mean score of pre-test and post-test of experimental class. Then, it also use to see whether there is significant difference between the mean score of pre-test and post-test of control group. The value of obtain is consult with the value of t-table. The data analyzes by using simple regression for hypothesis with 5% (0.05) of significant level.

If the value t-obtained is bigger than the value of t-table, the null hypothesis is accepted. On the contrary, if value of t-obtained is equal, bigger or smaller than the t-value, the alternative is not accepted.