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CHAPTER III

METHOD OF THE RESEARCH

A. Design of the Research

The type of this research is an experimental research. Ary (2010, p.26), stated that experimental research involves a study of the effect of the systematic manipulation of the one variable(s) on another variable thus, in experimental research, the research has purpose to try something that can influence the result of studying. The design of this research is a quasi-experimental research. Cohen (2007, p 274), stated that quasi-experiment is in the natural setting rather than the laboratory, but when variables are isolated, controlled and manipulated. In quasi experimental design, experimental group is separated from the non-equivalent control group indicates that the experimental and control groups have not been equated by randomization.

The design of this research used two classes. One class was a control class taught without using throwing and catching the ball and the other class was treatment/experimental class taught by using throwing and catching the ball. In both of classes, the researcher gave pre-test first. It was given to know the basic ability of students. After that, the researcher gave treatment by using throwing and catching the ball to the experimental class and without using throwing and catching the ball for the control class. The last one, after taught several meetings,

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the researcher gave post-test to know the significant effect between using throwing and catching the ball and without using throwing and catching the ball. The control class was also given the post-test to know the differences between both classes. In brief, the design can be seen in the following table:

Table III.1
Table of Research Design

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

Where:

- E = Experimental group
- C = Control group
- X1 = Pre-test in experimental group
- X2 = Pre-test in control group
- Y1 = Post-test in experimental group
- Y2 = Post-test in control group
- T = Treatment

B. Location and Time of the Research

The research was conduct at Senior High School 2 Pekanbaru, located in Payung Sekaki District at Nusa Indah street of Riau province. It was started from March – May 2018.

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C. Subject and Object of the Research

The subject of this research was the tenth grade students of state senior high school 2 Pekanbaru, and the object of this research was the effect of using Throwing and Catching the Ball toward students' speaking ability.

D. Population and Sample of the Research

1) Population of the Research

The population of this research was the tenth grades students of state senior high school 2 Pekanbaru. The students were divided into 4 classes. The number of the tenth grade students of senior high school 2 Pekanbaru is 280 students.

Table III.2
The Total Population of the Tenth Grade Students of State Senior High School 2 Pekanbaru

No	Class	Number of Students
1.	1 IPA 1	36
2.	1 IPA 2	36
3.	1 IPA 3	36
4.	1 IPA 4	36
5.	1 IPS 1	34
6.	1 IPS 2	34
7.	1 IPS 3	34
8.	1 IPS 4	34
Total Population		280

2) Sample of the Research

The total number of the tenth grade students of state senior high school 2 Pekanbaru was large enough to be taken all as sample of the research by using cluster sampling. According to Gay and Airasian (2000, P.129), cluster

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sampling selects based on group not individually, all the members of selected group have similar characteristics. It means that the subject of this research has the same material, the same grade, and the same teacher.

To select the sample, the researcher called chairman from each class to pull out the lottery. Each chairman pulled out a paper that includes an experimental class and control class. Chairman 1 IPA 1 got experimental group and chairman 1 IPA 2 got control class. Thus, in this research the researcher used 1 IPA 1 which consists of 36 students as experimental group and 1 IPA 2 which consists of 36 students as the control group.

Table III.3
Samples of the Research

No	Class	Total	
1.	2 IPA 1	36	Experimental Class
2.	2 IPA 2	36	Control Class

E. Technique of Collecting the Data

To find out the effect of throwing and catching the ball toward students' speaking ability at tenth grade of state senior high school 2 Pekanbaru, the researcher was used test as the instrument to collect the data. The researcher was helped by two raters by using the indicator of speaking ability.

The research was done the test to find out the result of teaching and learning process by using new strategy. In here, the researcher was used oral production test to collect the data.

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The kinds of the test given to the students are as follows:

- 1) Pre-test given to both classes, experimental and control class, by the researcher to know the basic ability of students' speaking.
- 2) Posttest given after teaching several times both of classes. It will give the researcher about the difference between students' speaking ability after being taught by using throwing and catching the ball and without using throwing and catching the ball.

The data will be collected through the following procedures:

1. Procedures of collecting data for experimental class

- a. Pretest

The pretest is carried out to determine the students' speaking ability.

- b. Treatment

The treatment is conducted for the experimental class. This use throwing and catching the ball and it is applied for about eight meetings.

- c. Posttest

After giving the treatment, the posttest is administered and analyzed as final data for this research.

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2. Procedures of collecting data for control class

a. Pretest

The control class is given pretest to know their speaking ability. The test is the same as experimental class.

b. No treatment

c. Posttest

Posttest is also given to control class, and the result is analyzed and used as final data for this research

There were some components considered in assessing the students' speaking ability. According to Hughes (2003, p.131), stated that there are some proficiency descriptions of speaking, which speaking ability are assessed based on the components of speaking as in the following:

Table III.4
Assessing Speaking from Each Components of Speaking

Components of speaking	Requirements	Score
Accent	Native pronunciation, with no trace of “foreign accent”	6
	No conficous mispronunciation. But would not be taken for a native speaker	5
	Marked “foreign accent” and occasional mispronunciation which do not interfere with understanding	4
	“foreign accent” requires concentrated listening, and mispronunciation lead to occasional misunderstanding and apparent errors in grammar or vocabulary	3
	Frequent gross and very heavy accent make understanding difficult, require frequent repetition	2
	Pronunciation frequently unintelligible	1
Grammar	No more than to errors during the interview	6
	Few errors, with no patterns of failure	5
	Occasional errors showing imperfect control of some patterns but no weakness that causes misunderstanding	4
	Frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding	3
	Constant errors showing control of very few major patters and frequently preventing communication	2
	Grammar almost entirely inaccurate except in stock phrases	1
Vocabulary	Vocabulary apparently as accurate and expensive as that of an educated native speaker	6
	Professional vocabulary broad and precise, general vocabulary adequate to cope with complex practical problems and varied social situations	5
	Professional vocabulary adequate to discuss special interest, general vocabulary permits discussion of any non technical subject with some circumlocution	4
	Choice of words sometimes inaccurate, limitations of vocabulary prevent discussion of some common professional and social topic	3
	Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc)	2
	Vocabulary in adequate for event the simplest conversation	1
Fluency	Speech on all professional and general topic as effortless and smooth as a native speaker	6
	Speech is effortless and smooth, but perceptively non native in speed and evenness	5
	Speech is occasionally hesitant, with some unevenness caused by rephrasing and groping for word	4
	Speech is frequently hesitant and jerky, sentence may be uncompleted	3
	Speech is very slow and uneven except for short or routine sentence	2
	Speech is so halting and fragmentary that conversation is virtually impossible	1
Comprehension	Understanding everything in both formal and colloquial speech to be expected of an educated native speaker	6
	Understanding everything in normal education conversation expect for very colloquial or low frequency items, exceptionally rapid or shirred speech	5
	Understanding quite well normal educate speech when engaged in a dialogue, but requires occasional repetition or rephrasing	4
	Understand careful, somewhat simplified speech when engaged in a dialogue, but may require considerable repetition and rephrasing	3
	Understands only slow, very simple speech on common social and touristic topic; requires constants repetition and rephrasing	2
	understanding to little for the simplest type of conversation	1

Note: for non native speaker, number 5 is the highest score

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Each component had 20 the highest score and the total of all components is 100. The specification is as follow:

Table III.5
The Specification of the Test Score

No	Speaking Skill	The Highest Score
1	Accent	20
2	Grammatical	20
3	Vocabulary	20
4	Fluency	20
5	Comprehension	20
Total		100

The test was given to both experiment and control classes. The students require to speak based on the topics provided. Then, the students' measured based on the indicators of speaking ability. There are two raters that given scores to the students' test. The classification of the students' score is shown in the table said by Arikunto (2009. P.245):

Table III.7
Classification of Students' Score

Score	Categories
80-100	Very good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

3. Validity

The test used for testing students' speaking ability had to have validity. Content validity will use in constructing the instrument of the test. According to Cohen et.al (2005, p.109), to demonstrate this form of validity

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the instrument must show that it fairly and comprehensively covers the domain or items that it purports to cover. The purpose of conducting the test is to find out students' speaking ability, thus the students have to speak English within 1-3 minutes based on the topic discussed. The material or the topic of the test must be related to the syllabus and the textbook used by the students. The textbook and syllabus of the school will be the guidance in determining the materials in pretest, treatment and also posttest in six meetings.

4. Reliability

According to Ary (2006, p.258), reliability is important in measuring instruments that require ratings or observations of individuals by other individuals. In this research, the researcher will use inter-rater reliability to find out reliability. Ary (2006,p.258) stated that inter-rater reliability is the extent to which two or more observers produce similar quantitative results when observing the same individual during the same time period. The researcher will have two raters to assess of students' speaking ability. Then, the scores of the rater 1 correlated with the scores of the rater 2. The following table is the categories of reliability in determining the reliability of the test.

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Table III.7
The Categories of Reliability

No.	Reliability	Level of Reliability
1	<0.0	Poor
2	0.0 to 0.20	Slight
3	0.21 to 0.40	Fair
4	0.41 to 0.60	Moderate
5	0.61 to 0.80	Substantial
6	0.81 to 1.00	Almost Perfect

(Landis and Koch :1977)

In determining the reliability of the test in the research, the writer used Cronbach's Alpha formula through SPSS 16. The following table described the reliability between score of rater 1 and score of the rater 2:

Table III.8
Reliability Statistics

Cronbach's Alpha	N of Items
.601	2

Based on the table III. above, it could be seen that the result of Cronbach's Alpha was 0.601. It means that the score given by the Rater 1 and Rater 2 was categorized moderate and the speaking test was reliable.

F. Technique of Analyzing the Data

To find out if there is a significant effect of using throwing and catching the ball on students' speaking ability at the tenth grade of state senior high school 2 Pekanbaru, the data were analyzed the data by using independent sample t-test formula and the data through SPSS 16.0 version.

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1. Independent sample t-test

According to Pallant (2011, p.239) an independent sample t-test is used when we want to compare the mean score of two different groups of people or conditions. It is to know is there any significant different between those who taught with throwing and catching the ball and those who taught without tharowing and catching the ball

2. Paired sample t-test

The researcher also use paired sample t-test to analysis the data, Pallant (2011, p.239) states that a paired sample t-test is used when we want to compare the mean scores for the same group of people on two different occasions, or when you have matched pairs. It is to know is there any significant effect of using throwing and catching the ball on students' speaking ability.