

CHAPTER III

RESEARCH METHOD

A. The Research Design

This research is experimental research in quasi-experimental design. Kerlinger in Cohen stated that quasi-experiment is an apt description when being applied to much educational research where the random assignment of schools and classroom is quite impracticable.¹ Quasi Experiment is used when the researcher need to use intact group.²The research design form is the pre-test and post-test non-equivalent group design. This design should be familiar like pre-test and post-test of control group design. Two treatments were pre-test, administrated a treatment, and post-test. There were two variables used in this research. The first was Group-to-Group Exchange Strategy symbolized as (X) and the second was speaking ability symbolized as (Y) it involved two groups, an experimental group and a control group. According to Louis, the type of this research can be designed as follows:³

Table 1
The Research Design

Group	Pre-test	Treatment	Post-test
Experimental	O1	X	O2
Control	O3	-	O4

¹ Louis Cohen, et al, *Research Method in Education, Six ed*, (New York: Routledge, 2007), p, 282

² John W. Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative, and Qualitative Research*, (Boston: Pearson Education, 2008), p, 309

³ Ibid, p, 283

Where:

X : Treatment

O1 : Pre-test of Experiment Group

O2 : Post-test of Experiment Group

O3 : Pre-test of Control Group

O4 : Post-test of Control Group

B. The Location and Time of the Research

The location of this research was at senior high school 4 Pekanbaru.

This research was conducted from January to February 2014.

C. The Subject and Object of the Research

1. The subject of the research

The subject of this research was the second year students at senior high school 4 Pekanbaru, in the academic year of 2013/ 2014.

2. The object of the research

The object of this research was group-to-group exchange strategy and speaking ability.

D. The Population and Sample of the Research

The population of this research was the second year students at senior high school 4 Pekanbaru. It had 8 classes which consisted of 4 classes for science department, namely; XI IPA 1 by 32 students, XI IPA 2 by 32 students, XI IPA 3 by 32 students and XI IPA 4 by 30 students, while for classes for social department, namely; XI IPS 1 34 by students, XI IPS 2 by 30 students, XI IPS 3 by 30 students, and XI IPS 4 by 34 students. The total

number of the second year students at senior high school 4 Pekanbaru was 254 students.

Table 2
The Total Population of Second Year Students
at Senior High School 4 Pekanbaru

No	Classes	Population		Total
		Male	Female	
1	XI IPA 1	12	20	32
2	XI IPA 2	11	21	32
3	XI IPA 3	11	21	32
4	XI IPA 4	12	18	30
5	XI IPS 1	14	20	34
6	XI IPS 2	11	19	30
7	XI IPS 3	12	18	30
8	XI IPS 4	12	22	34
Total Population				254

The strategy used in taking sample was cluster sample. Cluster sampling randomly selects groups, not individuals.⁴ Having the sample, the researcher used lottery by passing out the small roiled paper marked by the sequence name of the class. Then after passing out the paper, the samples for the research were class XI IPS 2 as an experimental class and XI IPS 3 as a control class. The data can be seen in table follow:

Table 3
The Sample of the Research

No	Classes	Sample		Total
		Male	Female	
1	XI IPS 2	11	19	30
2	XI IPS 3	12	18	30
Total Sample				60

⁴ L.R. Gay, Peter Airasian. *Educational Research, sixth edition*, (London: Prentice-Hall), p. 129

E. The Technique of Collecting Data

In this research, the researcher used oral presentation test to collect the data to find out students' speaking ability. The test was done twice, before and after giving the treatment intended to obtain students' speaking ability of the second year at senior high school 4 Pekanbaru.

The data analysis presented the statistical result followed by the discussion about the effect of using group-to-group exchange strategy towards' speaking ability at the second year students at senior high school 4 Pekanbaru. The data were divided into classes; the experimental and control scores. The researcher used independent T-Test from SPSS. 16 versions to analyze the effect of using group-to-group exchange strategy toward students speaking ability of the second year students at senior high school 4 Pekanbaru.

In this research, the researcher used two raters to got the score of the students. There were pre-test and post-test at control class and pre-test and post test at experimental class. The rater assessed five components in giving students' speaking ability score; there are accent, grammar, vocabulary, fluency, and comprehension (the explanation about these looked in the chapter 3). In other words, the researcher analyzed about the score of the students' speaking ability of pre-test at control and experimental classes from two raters.

The data of this research were gotten from pre-test and post-test. The data were collected in the following procedures:

1. The students were given pre-test and post-test in oral presentation.
2. The students' speaking was recorded by the researcher and saved into flash disc. Then it was collected to evaluate the appropriate accent, grammar, vocabulary, fluently, and comprehension.
3. The researcher used two raters to score the students' speaking ability.
4. The researcher collected and summed up raters' score to get each student's score.

According to Hughes there were some components that should be considered in giving students' speaking ability score.⁵ Hughes describes as follows:

Table 4
Speaking Assessment

a. Accent

Score	Requirement
1	Pronunciation frequently unintelligible
2	Frequent gross error and a very heavy accent make understanding difficult, require frequently repetition
3	"foreign second" requires concentrated listening, and mispronunciations lead to occasional misunderstanding and apparent errors in grammar of vocabulary
4	Marked "foreign accent" and occasional mispronunciation which do not interfere with understanding

⁵ Arthur Hughes, *Testing for Language Teacher*, (Cambridge: Cambridge University Press, 2003), p. 131

b. Grammar

Score	Requirement
1	Grammar almost entirely inaccurate except in stoke phrase
2	Constant errors showing control of view major patterns and frequently preventing communication
3	Frequent errors showing some major pattern uncontrolled and causing occasional irritation and misunderstanding
4	Occasional errors showing imperfect control of some pattern but no weaknesses that causes misunderstanding

c. Vocabulary

Score	Requirement
1	Vocabulary in adequate for even the simple conversation
2	Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc.)
3	Choice of word sometimes in accurate, limitations of vocabulary prevent discussion of some common professional and social topics.
4	Professional vocabulary adequate to discuss special interest, general vocabulary permit discussion of any non-technical subject with some circumlocution

d. Fluency

Score	Requirement
1	Speech is no halting and fragmentary that conversation is virtually impossible
2	Speech is very slow and uneven except for short or routine sentence
3	Speech is frequently hesitant and jerky; sentences may be left uncompleted
4	Speech is occasionally hesitant, with some unevenness caused by rephrasing and grouping for words

e. Comprehension

Score	Requirement
1	Understand to little for the simplest type of conversation
2	Understands only slow, very simple speech on common social and touristic topics; require constant repetation and rehashing
3	Understand careful, somewhat simplified speech when engaged in a dialogue, but may require considerable repetation and pephasing
4	Understand quite well normal educated speech when engaged in a dialogue, but occasional repetation or rephrasing

The result of speaking was scoring by using five components and each component had score or level. Each component had 20 as the highest score. The total of all components is 100. The specification of the test is as follows:

Table 5
The Specification of the Test

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

1. Procedure for Control Class in Collecting the Data

There were three procedures in collecting the data in control class as follow:

a. Pre-test

Pre-test was given by the teacher before the students were taught by using ordinary strategy from the real teacher of English. It was used to know students' speaking ability before being taught by using ordinary strategy from the real English teacher.

b. Treatment

The teacher explained the materials (narrative) on whiteboard as a medium, and then teacher asked the students to make an example of narrative. And then practice orally in front of the class.

c. Post test

After being taught to the students, teacher gave post test to know the students' speaking ability. It was used whether or not the students were able to speak well.

2. Procedure for Experimental Class in Collecting the Data

There were three procedures in collecting the data:

a. Pre-test

Pre test was given by the teacher before the students were taught by using the group-to-group exchange strategy. It was used to measure the students' speaking ability in speaking before they were taught by using the group-to-group exchange strategy.

b. Treatment

In treatment, the students were taught by using the group-to-group exchange strategy. The teacher explained to the students about the topic, and taught them by using the group-to-group exchange strategy.

c. Post test

Post test was a test that was given to the students after they were taught by using the group-to-group exchange strategy. It was used to know whether the students could easily speak by using group-to-group exchange strategy or not.

Finally, the result of the test in control and experimental classes was compared. By this result, the researcher could identify, whether the group-to-

group exchange strategy was an effective strategy that could be used in improving students' speaking ability.

Table 6
Topic of the Teaching Speaking in Each Meeting

No	Meeting	Topic
1	I	Mount Bromo
2	II	Ujang and His Family
3	III	Stone Flower and Bunga Batu
4	IV	The Lion and The Mouse
5	V	A Farmer and His Three Sons
6	VI	Two Travelers and a Big Three
7	VII	The Mouse Deer and The Crocodile
8	IX	The Farmer, The Seep, and Robbers

3. The Validity and Reliability of Test

The test used for testing students' speaking ability had to have reliability and validity. The test to be valid if it measures accurately what it is intended to measure.⁶ There are four types of validity; they are content validity, construct validity, concurrent validity, and predictive validity.⁷ To know the validity of the test, the researcher used construct validity.

According to Gay and Airisian, readability is the degree to which a test consistently measures whatever it is measuring.⁸ In this research, to know the reliability of the test, the researcher used inters rater readability, because the researcher had two raters in order to score the students' speaking ability. Inter judge readability can be obtained by having two (more) judges independently score to be compared to the score

⁶ Arthur Hughes, Loc. Cit, p. 26

⁷ Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*, (Jakarta: Bumi Aksara, 2009), p. 67

⁸ L.R Gay and Peter Airisian, Loc. Cit, p. 169

of both judges. Then, the score from rater 1 is correlated with the score from rater 2 by using Pearson Product Moment correlation formula through SPSS 16 version:

Table 7

Correlations

		rater.1	rater.2
rater.1	Pearson Correlation	1	.700**
	Sig. (2-tailed)		.000
	N	30	30
rater.2	Pearson Correlation	.700**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

From the output above, it could be seen that r calculation is 0.700 correlated to r table, df = 58% and 1%. Because df = 58 was not found from the t-table, so the researcher took df = 60 to be correlated either at level 5% or 1% r table is 0.700, while at the level 1% r table is 0.325. Thus, the r observation is obtained higher than r table, either at level 5% and 1%. So the researcher concluded that there is a significant correlation between score of rater 1 and score of rater 2.

F. The Technique of Data Analysis

In analyzing the data, the researcher used t-test formula. According to Gay and Peter Airasian, t-test is one of the statistics tests used to determine

whether two means are significantly different at a selected probability level.⁹

The data were analyzed by using SPSS 16,0 version.

The t-table is employed to see whether there is a significant difference between the mean score of gain both experiment and control group. The t-obtained value is consulted with the value of t-table at the degree of freedom $(df) = (N1+N2) - 2$ statistically hypothesis:

Ha : to > t-table

Ho :to < t-table

Ha is accepted it to > t-table or there is significant difference of using the group-to-group exchange strategy toward students' speaking ability of the second year students at senior high school 4 Pekanbaru.

Ho is accepted if to < t-table or there is no significant difference of using the group-to-group exchange strategy toward students' speaking ability of the second year students at senior high school 4 Pekanbaru.

⁹ L. R. Gay and Peter Airasian. Loc. Cit, p, 512