

CHAPTER III

RESEARCH METHOD

This chapter covers research design, population, sample and sampling, variable of the study, research instrument, validity and reliability testing, normality and homogeneity testing, data sources, data collection method, and data analysis.

A. Research Design

In this study the researcher used Quasi-Experimental design with nonrandomized control group, pretest-posttest design. This research involved two groups of subject; they were experimental class and control class. The experimental class was taught speaking by using Information Gap and control class was taught without using Information Gap. The two groups were measured or observed not only after being exposed to a treatment of some sort but also before. So the researcher gave pretest and posttest to measure the different attained scores in speaking. The design of the study was taken from Ary (2006) and presented in the diagram below:

Table 3.1 The diagram of nonrandomized control group, pretest-posttest design:

Group	Pretest	Treatment	Posttest
C	Y_1	X	Y_2
D	Y_1	—	Y_2

(Taken from Ary, 2006)

Notes:

C: Experimental group

D: Control group

Y1: pre-test

Y2: post-test

X: Treatment on the experimental group

Based on the diagram above, the procedures of experimental research used nonrandomized control group, pretest-posttest design were:

1. Administering a pretest with a purpose of measuring speaking achievement of the eight grade student of VIII-C and VIII-D classes at MTs Darussalam Kademangan Blitar before being taught by using Information Gap and traditional method.
2. Applying the experimental treatment teaching speaking by Information Gap to the eight grade students of VIII-C class at MTs Darussalam Kademangan Blitar and applying traditional method of teaching speaking to VIII-D class.
3. Administering a posttest with a purpose of measuring speaking achievement of the eight grade student of VIII-C and VIII-D classes at MTs Darussalam Kademangan Blitar after being taught by using Information Gap and traditional method.

Different attribute to the application of the experimental treatment was determined by comparing the pretest and posttest scores. In this study,

the researcher wanted to know the effectiveness of using Information Gap toward students' speaking achievement by conducting an experimental research and providing a specific treatment. The effectiveness would be known after knowing the significant differences scores on speaking between the students taught by using Information Gap and those taught without using Information Gap.

B. Population, Sampling, and Sample

1. Population

Population is all elements that become the areas of the research. It consists of entire set of object, observation, or score that have something in common. The population in this research included the whole eight students of MTs Darussalam Kademangan Blitar at the second semester in the academic year 2017/2018. There were four classes comprised VIII-A, VIII-B, VIII-C, and VIII-D.

2. Sampling

Sampling is a technique of taking sample which gives opportunity for every element or population member to be chosen as sample. In this study the researcher used purposive sampling technique. It was technique to determine sample with a particular consideration. The main consideration was the chosen classes had homogenous speaking ability. In other words, the students in those classes had average proficiency in speaking.

3. Sample

Sample is a portion of a population. Since the population is too large, the researcher needs a sample. Based on the set consideration, they were two classes as the sample of the study; they were VIII-C class consisted of 37 students as the experimental class and VIII-D class consisted of 35 students as the experimental class. So, the total sample was 72 students.

C. Variable of the Study

A variable is a construct or characteristic that can take on different values or scores. Variables can be classified in several ways. According to Ary (2006:40), the most important classification is on the basis of their use within the research under consideration when they are classified as independent (X) and dependent (Y) variables.

Independent variables is variable that consequence of or upon antecedent variables. One independent variable must be the treatment variable. One or more group receives the experimental manipulation or treatment. In this study the independent variable was Information Gap used in teaching speaking.

Dependent variable is the response or criterion variable that is presumed to be caused by or influenced by the independent treatment condition and any other independent variables. In this study the dependent variable was the students' achievement in speaking skill.

D. Research Instrument

In order to have high quality of research data, the instruments used must meet requirements as good instruments. The instrument was used in this research was speaking test. In collecting the data, two kinds of test were administered, they were Pre-test and Post-test. Pretest was administered before teaching using Information Gap to experimental class and without using Information Gap to control class in teaching speaking. Meanwhile posttest was administered after doing a treatment by using Information Gap to experimental class and without using Information Gap to control class in teaching speaking.

In this research, to score the students' speaking, the researcher used analytical oral language scoring rubric. The criterion of success of the students speaking ability adapted and matched from Brown (2003). They were as follow:

Table 3.2 Analytic Oral Language Scoring Rubric

No	Elements of Speaking	Weight	Score	Criteria
1.	Grammar	30%	1-6	The student doesn't use simple past tense and conjunction, it totally wrong.
			7-12	The student uses less simple past tense and doesn't use conjunction in telling self experience.
			13-18	Uses simple past tense and conjunction in telling self experience, but there are many significant mistakes.

			19-24	Uses simple past tense and conjunction in telling self experience, but there are several mistakes.
			25-30	Uses simple past tense and conjunction in telling self experience without mistakes.
2.	Vocabulary	25%	1-5	Uses inadequate vocabulary and it's not express anything.
			6-10	Uses sufficient vocabulary and not detail to express self experience
			11-15	Uses sufficient vocabulary but less detail to express self experience.
			16-20	Uses varied vocabularies but less detail to express self experience.
			21-25	Uses varied and detail vocabularies to express self experience.
3.	Fluency	20%	1-4	No specific fluency description.
			5-8	Speak in single word utterance, very slow and short pattern.
			9-12	Speak hesitantly because of rephrasing and searching word.
			13-16	Speak fluently with occasional hesitation.
			17-20	Speak fluently with only slight hesitations that do not interfere with communication.
4.	Pronunciation	15%	1-3	Errors in pronunciation are frequent.
			4-6	Pronunciation frequently unintelligible.
			7-9	Some pronunciation is unclear and error but still can be understood.
			10-12	A few unclear and error pronunciation but still can be understood easily.

			13-15	Pronunciation is clear and correct.
5.	Comprehension	10%	1-2	Can't tell self experience from given topic.
			3-4	Can tell self experience from given topic but there are many mistakes.
			5-6	Can tell self experience from given topic but there are some mistakes.
			7-8	Can tell self experience from given topic but still little mistakes.
			9-10	Can tell self experience from given topic without any mistakes.

E. Data and Source of Data

In this study the data were taken from the students' scores of the eight grade students at MTs Darussalam Kademangan Blitar in the academic year 2017/2018 from speaking test (pre-test and pos-test). Those data were used to know the students' achievement in speaking between the students taught by Information Gap and those taught without using Information Gap. The data source in this study was the students of VIII-C and VIII-D classes of MTs Darussalam Kademangan Blitar.

F. Validity and Reliability Testing

According to Ary (1985) researcher is always dependent measurement. On the way to making accurate judgment about the competence of the students, there are two important characteristics that every measuring instrument should go through a process; validity and reliability check.

1. Validity Testing

Validity is the degree to which a test measure what it is supposed to measure. Brown (2003: 22) explained that validity is the most complex criterion of an effective test and the most important principle of language testing. According to Gronlund (1998) as quoted in Brown (2003:22) stated that validity is the extent to which inferences made from assessment results are appropriate, meaningful, and useful in terms of the purpose of the assessment. Thus, a valid test should measure what the researcher wanted to measure.

In this research, the researcher considered the content and construct validity for the test as the instrument of research.

a. Content Validity

Content validity is a kind of validity which depends on careful analysis of the language being tested and a particular test. Hughes (2003:26) stated that test is considered to have content validity if its contents constitutes a representative sample of language skills, structures, etc. with which it is meant to be concerned According to Mousavi (2002) as cited by Brown (2003: 22) explained that a test is valid if it requires the students to perform the behavior that is being measured.

The most proper role for achieving the content validity for the speaking test was to test the students' speaking performance directly. The researcher also looked at the syllabus when constructing the test

and the test was suitable to the syllabus of English for Junior High School in the competence of speaking. Content validity was shown in the table below:

3.3 Content Validity of Speaking Test

No.	Competence indicator	Speaking test
1.	Students are able to create spoken monologue texts of recount	Perform short recount text in front of class

b. Construct Validity

Brown (2003:25) explained that “Construct is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perception”. In the term of construct validity, the test is considered to have construct validity if it can be demonstrated that it measures just the ability which is hypothesized in a theory of language ability. Both in the pre-test and post-test, the researcher gave speaking test thought oral test. The tests were considered to have construct validity for the purpose of testing proficiency in speaking skill.

2. Reliability Testing

A test considered to have reliability if it is consistent and dependable. According to Mousavi (2002) as quoted by Brown (2003: 20) explained that “If the students are given the same test or matched students on two different occasions, the test should yield similar results”. The

words ‘similar result’ here means that almost impossible for the students to get exactly the same scores when the test is repeated the following day. Reliability is a measure of accuracy, consistency, dependability of fairness of scores resulting from administration of particular examination.

In this test, the researcher used inter-rater where the researcher involved two raters in scoring the students’ speaking achievement by using the same scoring rubric. Two raters in this research were the English teacher and the researcher herself. After that, the researcher analyzed the correlation of two scores by using Pearson correlation which is called *Pearson Product Moment*. For analyzing the correlation, the researcher used *SPSS 16.0 for window* to know the reliability of test instruments. The result of reliability testing by using *SPSS 16.0 for windows* can be seen from the table:

Table 3.4 Correlation of pre-test (try-out)

		Correlations	
		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.951**
	Sig. (2-tailed)		.000
	N	10	10
Rater_2	Pearson Correlation	.951**	1
	Sig. (2-tailed)	.000	
	N	10	10

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.951**
	Sig. (2-tailed)		.000
	N	10	10
Rater_2	Pearson Correlation	.951**	1
	Sig. (2-tailed)	.000	
	N	10	10

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

Based table on the result above, Pearson Correlation was 0.951 and numeral significance was 0.000. This result of Pearson correlation (0.951) was closer to 1 and the numeral significant was lower than ($0.000 < 0.05$). It means that the test was reliable.

Table 3.5 Correlation of post-test (try-out)

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.944**
	Sig. (2-tailed)		.000
	N	10	10
Rater_2	Pearson Correlation	.944**	1
	Sig. (2-tailed)	.000	

N	10	10
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** . Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, Pearson Correlation was 0.944 and numeral significance was 0.000. This result of Pearson correlation (0.944) was closer to 1 and the numeral significant was lower than ($0.000 < 0.05$). It means that the test was reliable.

G. Normality and Homogeneity Testing

Before analyzing the significant difference between the students taught using Information Gap and those taught without Information Gap, the data should be normal distribution and homogenous. To measure the data computation were normal distribution and homogenous, the researcher conducted normality testing and homogeneity testing. The result as follow:

1. Normality Testing

Normality testing is used to determine whether the data gained has normal distribution or not. In this study, researcher used SPSS 16.0 *for windows* with *Shapiro-Wilk* to test the normality of the data gained. The normality of the data can be seen based on the significant value (α) = 0.050 rules as follows: The hypotheses for testing normality are:

- a. H₀: Data is in normal distribution
- b. H_a: Data is not in normal distribution.

There is also certainty in taking decision of normality testing, as follow:

- a. If the value of significance > 0.050 , H_0 is accepted.
- b. If the value of significance < 0.050 , H_0 is rejected.

The result of normality testing can be seen on the table 3.6 below:

Table 3.6 Normality Testing of Experimental Class and Control Class

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Experiment	.119	35	.200*	.982	35	.809
Control	.120	35	.200*	.984	35	.887

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Based on the output from SPSS above it was known that the significance value from pre-test of experimental class was 0.809 and the significance value from pre-test of control class was 0.887. The significant value on pre-test of experimental class were bigger than 0.05 ($0.809 > 0.05$). The significant value on pre-test of experimental class was bigger than 0.05 ($0.887 > 0.05$). Both significant value of experiment class and control class were bigger than 0.05. It means that H_0 was accepted and H_a was rejected. So, it can be interpreted that both of data (pre-test of experiment class and control class) were in normal distribution.

2. The Result of Homogeneity Testing

Homogeneity testing is used to determine whether the data gained has a homogeneous variance or not. To know the homogeneity, the researcher used Test of Homogeneity Variance formula by using SPSS program 16.0 version. Homogeneity testing was done after doing the distribution score of group involved. The computation of homogeneity testing uses *Test of Homogeneity of Variances* in SPSS 16.0 for windows by the value of significance (α) = 0.050. The homogeneity of data can be decided based on the hypothesis of homogeneity as follow: Before doing homogeneity testing, the researcher decided hypothesis in this homogeneity as follow:

- a. H₀: 1 variance (Experimental group and Control group) was homogenous.
- b. H_a: 1 variance (Experimental group and Control group) was not homogenous.

There is also certainty in taking decision of homogeneity testing, as follow:

- a. If the value of significance > 0.050 , H₀ is accepted.
- b. If the value of significance < 0.050 , H₀ is rejected.

The result can be seen in table as follow:

Table 3.7 Homogeneity Testing of Experimental Class and Control Class

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
.369	1	70	.546

Based on the output from SPSS above it was known that the significance value was 0.546, it means that the significant is more than 0.05 ($0.546 > 0.05$). It means that H_0 was accepted and H_a was rejected. So, it can be interpreted that the homogeneity testing of variance in both group in this research showed that the data had homogeneous variance, so it was qualified to be analyzed.

H. Description of Treatment

In this study, the treatment conducted three meetings since the researcher has no authority to conduct more than it moreover the class did not belong to the researcher herself. The treatment was given after administering the pretest and before the posttest. The first meeting is conducted on April 9th 2018, the second meeting is conducted on April 12th 2018, and the third meeting is conducted on April 16th 2018. The procedures of treatment can be seen as follow:

1. First, treatment was conducted on April 9th 2018

Before beginning applied Information Gap in teaching speaking, the researcher conveyed about the element recount such as the generic structure of recount and the use simple past tense. Then, the researcher introduced the technique of Information Gap, especially in speaking by sharing information. Then, she grouped the students consist of 2 students. After that, she gave exercise to the students. The students should speak by asking and giving information they have base on the work sheet given by the researcher. The topic was about "What did you do on...?".

2. Second, treatment was conducted on April 12th 2018

The researcher explained about conjunction of time for recount monologue. Then, gave exercise to the students. The researcher reminded how to do the exercise based on explanation before. The students should speak by asking and giving information they have base on the work sheet given by the researcher. The topic was about "A Terrible Day".

3. Third, treatment was conducted on March 16th 2018

The researcher explained about adverb and prepositional phrase of time for recount monologue. Then, gave exercise to the students. The researcher reminded how to do the exercise based on explanation before. The students should speak by asking and giving information they have base on the work sheet given by the researcher. The topic was about "A Bomb on Plane".

I. Data Collecting Method

Data collection method is the way the researcher collect data. Method of data will provide reality about some steps which are used in the process of collecting data. Researcher used two kinds of tests. They were:

1. Pre-test

Pre-test refers to a measure or test given to the subject prior to the experimental treatment. It was administering for both VIII-C class as the experimental class and VIII-D class as control class to measure their basic speaking ability. Pre-test was administered to experimental class on Saturday, 7th April 2018 and to control class on Monday, 9th April 2018.

2. Post-test

Post-test was a measure on some attribute or characteristics that was assessed for participant in an experiment after treatment. Post-test was administered for the experimental class and control class after the treatment finished. The researcher applied Information Gap for experimental class and applied traditional method for control class. Post-test was administered to the experimental class on Friday, 20th April 2018 and to the control class on Wednesday, 8th April 2018.

J. Data Analysis

Data analysis is a technique to analyze data to know the result of a research. In analyzing data, the researcher used quantitative data by using statistical program *SPSS 16.0 for windows*. The quantitative data analysis was

used to know the significant differences on the students' speaking ability between the students taught by using Information Gap and those taught without using Information Gap.

Data obtained from the post-test from both group of Experiment class and Control class would be analyzed statistically using *Independent-Sample T-Test* through *SPSS 16.0 for windows*. The researcher used t-test to know the significant value was higher or smaller than 0.05. The technique of data analysis used by the researcher belonged to quantitative data analysis.