

## CHAPTER III

### RESEARCH METHOD

This chapter presents and discuss about the research method, which are research design, population and sample, instruments, the criteria of good test, data collection and data analysis.

#### A. Research Design

There are many kinds of research design. According to Tuckman, research is a systematic attempt to provide answers to questions. Such answers may be abstract and general as is often the case in *basic research*, or they may be highly concrete and specific as is often the case in *demonstration or applied research*. In both kinds of research, the investigator uncovers facts and then formulates a generalization based on the interpretation of those facts.<sup>1</sup> The purpose is to invent answer the research question through the application of the scientific procedures. The chance of research design depend on the kind of the study carried out.

Here the researcher used experimental research. Experimental research provides a systematic a logical method for answering the question. According to Donald Ary, Experimental method is only method of research that can truly test hypothesis concerning cause and effect relationship. It represent the most

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<sup>1</sup> Tuckman, Bruce W., *Conductional Educational Research: Second Edition* (The United States of America: Harcourt Brace Jovanovich, 1978), 1

valid approach to the solution of educational problems, both practical and theoretical and to the advancement of education as a science.<sup>2</sup>

Based on the explanation above, this study is called Quantitative Research. Quantitative Research defines that quantitative study as a numerical method of describing observation of material characteristic. Before the researcher gives the treatment to the experimental, the researcher gives both of groups' questionnaires to know the students' motivation in learning experimental groups, before get treatment. After giving treatment to the experimental groups, the researcher will give test to both of groups namely is post-test. This test measure the students' speaking in learning English, if the score is good after using guessing games success.

The result of the test was analyzed testily by using test. The test is used to determine just how great the difference between two means must be for it to judge significance.<sup>3</sup> The design can be follow:<sup>4</sup>

**TABLE 3.1**

**Research Design**

	Group	Pre-test	Treatment	Post-test
R	Experimental	T1	X	T2
P	Control	T1	-	T2

Notes:

T1 : Pre-Test

T2 : Post-Test

X : Treatment

<sup>2</sup> Donald Ary. L.R, *Educational Research* (USA: Florida International University, 1992), 298

<sup>3</sup> Popham, W. James and Kenneth A. Siratnik, *Educational Test Use and Interpretation. Second Edition* (New York: Harper & Row, 1967), 124

<sup>4</sup> Donald Ary, *Introduction to Research in Education Second Edition* (United State of America, 1979), 124

## B. Variable

Variable are condition or characteristic that the experimenter manipulates, controls and observes.<sup>5</sup> A variable is defined as something that varies one case to another. The dependent variable which one observes and measures to determine the effect of the independent variable. Independent variable (the major variable) is the variable which is selected manipulated and measured by the researcher.<sup>6</sup>

There are two variables, independent variable and dependent variables. The dependent variable is the condition or characteristic that experimenter manipulate in the experiment. The dependent variable is condition or characteristic that appears, disappears or change as the experimenter introduced, removes or change independent variable. In this research, the independent variable is using role play as the strategy in teaching speaking. In the other hand, the dependent variable is the student's speaking.

## C. Location of The Research

This research is taken in Islamic Junior High School (MTs) Zainul Hasan Suwaluh Pare Kediri. This school is a formal education Institution. The location of this research is at *Masjid* Street No. 329 Suwaluh Sambirejo Pare Kabupaten Kediri.

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<sup>5</sup> John, W. Best, *Research in Education* (New York: Prentice Hall), 59

<sup>6</sup> Suharsmi, Arikunto. *Procedure Penelitian*. (Jakarta: Rhineka Cipta.2002), 98

## **D. Population and Sample Research**

### **1. Population**

Knowing population and sample in the research is very important. Because making mistakes to determine the population will affect the sample, so the researcher will explain about the population and sample research.

According to AS. Hornby population is particular group or type of people inhabiting an area. Population is a set of all elements, which the characteristic will be observed. It is important for the researcher to know the researcher area in order to conduct research easier. Actually there is no certain criteria in determining the research area, but it must be stated clearly where the research itself will be conducted.

Population is a set of elements, which the characteristic will be observed. It is important for the researcher to know the researcher area in order to conduct the researcher easily. The researcher chooses the second grade at MTs Zainul Hasan Suwaluh Sambirejo Pare Kediri.

### **2. Sample**

Selection of sample is very important in conducting a research study. A sample is small group that is observed and a population is defined as all members of any well-defined class of people, events or subject. Thus, sample is a part of population that is observed. The small group that is sample in this research, there are two classes at the second grade. The researcher takes class A for experimental group and B for control group.

According L.R Gay, sample is one that is representative of population from which selected. The small group that observed is sample in this research. There are two classes at the second grade, class A and class B. The researcher takes both of class and random those class. The students that have odd number are experimental class and the students who have even number are control class. Gay States that random sampling is the process of selecting a sample in such way that all individuals in the defined population have an equal and independent chance of being selected for the sample.<sup>7</sup> According to Gay; "In general, random sampling involves defining the population, identifying each member of the population, and selecting individuals for the sample on a completely chance basis. One way to do this is to write each individual's name on a separate slip of paper, place all the slips in a hat or other container, shake the container , and select the slips from the container until the desired number of individuals is selected".<sup>8</sup>

#### **E. Treatment Procedure**

Treatment is used to know the effective of using role play to increase students' speaking. The function of the treatment is to make the situation and the condition of teaching learning more interesting. Teaching and learning here is about speaking. The researcher used a treatment that is *role play teaching strategy* as a treatment. The materials used for teaching learning speaking are asking for help, offering help, accepting help, rejecting help. Here, the

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<sup>7</sup> Gay, L.R., *Educational Research Competencies for Analysis and Application Fourth Edition* (New York: Mac Millan Publishing, 1992), 126

<sup>8</sup> Gay, L.R., *Educational Research*, 127

researcher gave a treatment in experimental group is thought using role play and non-treatment for control group. In control group is also given speaking lesson but with usual method that the teacher used. Before giving treatment, the researcher will present to the aim of using role play to the teacher and also the students.

Then instruction in experimental group was the researcher divided the class into four group in which each group consisted of five students. After that, the students made a dialogue based on the theme on the group. The researcher gave 30 minutes to discuss and made a dialogue in a group before performed in front of the class.

#### **F. Instrument of the Research**

To know the effectiveness of teaching speaking by using role play, the writer will give oral test to the students. Because the test is oral test, the writer divided the score into five criteria, which are the scores of pronunciation, grammar, vocabulary, fluency and comprehension. Each criteria, then, is rated into five scale of rating scores, it is based on David P. Haris scale rating scores.<sup>9</sup>

After that, to get the mean, the scores from all criteria are sum and divided into five. The pre-test had been given before the treatment was given. Moreover, the post-test was given after he had given the treatment to the class.

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<sup>9</sup> David P. Haris, *Testing English as a Second Language*, (New York: Mc. Graw Hill Book Company), 84-85

Research instrument is very important to obtain the result of the study. It is a set of method, which used to collect the data. In this research the researcher used test.

### 1. Test

Djiwandono said that test is a set of tool, procedure or an activity presented to an individual in order to elicit attitude that gave information about the basis of individual knowledge in certain object.<sup>10</sup> In this research, the test was given in oral test. This type was chosen because it is appropriate in learning speaking and it is suitable to apply it. The researcher used two kinds of test, they were pre-test and post-test. Pre-test is used to measure the student's speaking ability after the treatment and to know the progression on both experimental and control group. While giving pre-test and post-test to experimental and control group, the researcher measured their scores at that time by looking at the scoring system constructed by formula as follow:

**Table 3.2**  
**The Criteria of the Test Result**

Table	Score
81 – 100	Very Good
66 – 80	Good
56 – 65	Fair
46 – 55	Bad
0 – 45	Very Bad

<sup>10</sup> M Soenardi Djiwandono. *Tes Bahasa dalam Pengajaran*. (Bandung: ITB, 1996), 1

The examiner scores the students' result using the scoring system above after they are totaling all components of speaking test.

**a. Pre-Test**

Pre-test is a test which given before the researcher gave treatment to the students. Giving pre-test is important, because this is to know the students' speaking if they are have good pronunciation, it can be say that they have good speaking in learning English. This test consist of 10 items of questions.

The first step in experimental research, the researcher gave pre-test to experimental and control group. The aim of this pre-test is to know the basic of the students' speaking ability before giving a treatment.

Pre-test was handled on 15<sup>th</sup> of May 2015. In pre-test, the researcher asked the students to make a group and each group consist of 3 or 4 students to make conversation in front of the class. The time was limited each group has 5 – 10 minutes to do it. The topic was based on material will be taught, such as asking help dialogue.

The examiner measured the students' result of the test at that time. There were some categories in testing speaking must be measured. They were fluency, pronunciation, grammar, vocabulary, and comprehension. After getting the scale on each category, the examiner totaled all scales. Then to know the result of the students' test, the examiner saw the table categories of the test which had been available by the researcher.



**b. Post-test**

This test aim to know the proression both control and experimental group, the material of post-test is almost same as pre-test. It means to know the score of the students before get treatment and after get treatment by using role play.

Post-test would be given to all of sample after the experimental groups get some treatments. This test aims to know about progression of the students speaking ability after treatment is effective or not.

Post-test was handled on 1<sup>st</sup> of June 2015. The test of post-test was almost the same as pre-test. The researcher asked the students to make a group and each group consist of 3 or 4 students to make a conversation 9in front of the class. The time was limited each group has 5 – 10 minutes to do it. The topic was based on material will be taught, such as asking help dialogue.

In measuring, the examiner must have more pay attention to listen to the students' speaking. Like in pre-test, each students must have been measured according to their fluency, pronunciation, grammar, vocabularies, and comprehension. After getting the scale on each category, the examiner totaled the scales. Then, to know the result of the students' test, the examiner saw the table categories of the test which has been available by the researcher.

The scoring was done a mark sheet consisting of 5 categories to asses with 1–5 scales for each category. The categories were fluency,

pronunciation, grammar, vocabularies, and comprehension.<sup>11</sup> This table of score speaking test:

**Table 3.3**  
**Scales of Component in Testing Oral production**

No.	Aspect to be Evaluated	Descriptions	Scale
1.	Fluency	Speech every day conversation and classroom discussion fluent and effortless. Approximating that of a native speaker.	5
		Speech every day conversation and classroom discussion generally fluent, with occasional lapses while the students searches for the correct manner of expression.	4
		Speech every day conversation and classroom discussion frequency disrupted by the students search for the correct manner of expression.	3
		Usually hesitant; often forced into silence by language limitation.	2
		Speech for halting and fragmentary as to make conversation virtually impossible.	1
2.	Pronunciation	Pronunciation and intonation approximate that of native speaker.	5
		Always intelligible although the listener is conscious of a definite accent and occasional inappropriate intonation patterns.	4
		Pronunciation problems necessitate concentration on the part of listener and occasionally lead to misunderstanding.	3
		Very hard to understand because of pronunciation problems. Must frequently repeat in order to make him/ herself understood	2
		Pronunciation problems so serve as to make speech virtually unintelligible.	1
3.	Grammar	Grammar and word order approximate that of native speaker.	5
		Occasionally makes grammatical end/or word order errors that do not obscure meaning.	4
		Make frequent errors of grammatical and word order that occasionally obscure meaning.	3

<sup>11</sup> Kathryn Z. Weed. *Practical English Language* (McGraw-Hill Education, 2006), 149

		Grammatical and word order errors make comprehension difficult. Must often rephrase and/or restrict to basic pattern.	2
		Errors in grammatical and word order so serve to make speech virtually unintelligible.	1
4.	Vocabulary	Use of vocabulary and idioms approximate that of native speaker.	5
		Student occasionally uses inappropriate term and/or must rephrase ideas because of lexical inadequate.	4
		Student frequently uses wrong words conversation somewhat limited because of inadequate vocabulary.	3
		Misuse of words and very limited vocabulary, comprehension quite difficult.	2
		Vocabulary limitations so extreme as to make conversation impossible.	1
5.	Comprehension	Understand everyday conversation and normal classroom discussion	5
		Understand nearly everything at normal speech. Although occasional repetition may be necessary.	4
		Understand most of what is said as slower than normal speech without repetition.	3
		Has great difficulty following what is said. Can comprehend only social conversation spoken slowly and with frequent repetition.	2
		Cannot every day to understand even simple conversation.	1

After scoring this categories, the next step is totaling the scores.

Then the result is multiplied 4. So, the best score is 100 and the worth is 20.

## 2. Questionnaire

The second instrument of this research is a questionnaire. It is used by the researcher to know the student's response toward the teacher's strategy at the effect of role play in teaching English. In this questionnaire, the researcher have several questions for the students in order to be answered

by them based on their assumption about using role play. The questions are given in Indonesia in order to avoid the misunderstanding. The questions are about the student's opinion about the teacher's strategy in teaching and the student's response about the material given.

### **G. Criteria of a good Test**

To know whether the test is good or not, the researcher checks it through the reliability, validity, difficulty of level and discrimination power of each items of test. The following is explanation about reliability, validity, difficulty of level and discrimination power.

#### **1. Reliability**

Reliability is the test that extent which measures consistently from one time to another.<sup>12</sup> Donald Ary states that the reliability of a measuring instrument is degree of consistency with which it measures whatever it is measuring.<sup>13</sup> It means that a test can not measure anything well unless it measure constantly. In this test uses interlay reliability. It has to use two testers in order to the data more reliable.

The reliability refers to the score consistency of a group. Estimates of such consistency typically involve correlation coefficients. The consistency of the score will give coefficient result 1. if it happens, it means that the reliability of the test is perfect. But if the reliability coefficient is 0,

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<sup>12</sup> John W. Best, *Research in education*, 199

<sup>13</sup> Donald Ary, *Introduction to Research in Education*, (United States of America:Library of Congress Cataloging in Publication data,1979) , 206

the test would give series of results quite unconnected with each other, in the sense that the score can not predict the next score.

The reliability of the test was measured by an internal consistency technique using alpha formula. It was used to look for the reliability of the student's scores in which the scores of each items were 1 for true answer and 0 for wrong answer. The formula is as follow:

$$KR_{21} = \frac{K}{K-1} \left( 1 - \frac{M(K-M)}{KS^2} \right)$$

Where :

K : the number of items in the test

M : the mean of the test score

S : the standard deviation of the test scores

## 2. Validity

Validity is defined as the degree to which a test measures what it claims to be measuring.<sup>14</sup> John W. Best states that a test is valid if "it measures what it claims to measure."<sup>15</sup> is where a test measure scope substance that wants to measure.<sup>16</sup> This research uses construct validity. It is used because this research wants to know and measure the students' motivation that the students have. However, content validity refers to the

<sup>14</sup> Brown, James Dean, *Understanding Research in Second Language Learning* (USA: Cambridge University Press, 1988), 101

<sup>15</sup> John W Best, *Research in education*, 197

<sup>16</sup> Sukardi, *Metodologi Penelitian Pendidikan Kompetensi dan Prakteknya*, (Yogyakarta: Bumi Aksara, 2003), 123

degree to which the test actually measures, or it is specifically related to the traits for of which it designs. The valid test of a subject would measure subject itself and not other than it.

#### **H. Procedure of Experiment**

When the researcher did the research, he has to do some procedures before doing the research. The first, the researcher asks permission to the principle of MTs Zainul Hasan Suwaluh. The permission to carry out and facilitate the experiment was taken after fully elaborating the aims, and procedure of the research. Then, the researcher did workshop with the teacher in charge of carrying out the strategy. The researcher proposes the experiment will be done approximately in three weeks. At this workshop detailed of the strategy was discussed. Then, the simple class was chosen. After getting permission from principle of MTs Zainul Hasan Suwaluh, the researcher gives pre-test to both experimental and control group. Then the researcher gives some treatments to experimental group while control group does not give any treatment. The last the researcher gives post-test to both experimental and control group. After knowing the result from pre-test, the researcher continues to give treatment to experimental group using role play to teaching speaking. Then, the researcher gives post-test to the experimental and control group to know that role play is effective to increase students' speaking ability or not. The researcher takes the second grade as the observation, those class A and B.

In this step the researcher will explain how to procedure of the experiment. There are some ways to make this research so easy to catch the students and make them interested in increasing their speaking by using role play. The procedures of teaching are *pre-teaching* activity, teaching activity and post-teaching activity. After performing a pre-test and treatment, the researcher gives a test in accordance with the instructions with the provided. Students choose several asking for help to be practiced in front of the class. Each group consists of three to four students. While the students perform it in front of the class the researcher gives value to every performance of them.

In the first meeting of treatment, the researcher gives vocabularies about asking for help and the example expression of asking for help. After that, the students are asked to present the dialogue in front of the class. In the second meeting, the researcher gives the situation, and asked the students to create the dialogue, and to present it in front of the class.

Schedule of activities during the research is as follow:

**Table 3.4**

**Schedule of Activities during the Research**

<b>Meeting</b>	<b>Topic</b>	<b>Experimental Group (date)</b>	<b>Control Group (date)</b>
First	Get Permission to the Principle from the School	-	-
Second	Pre-test	18 <sup>th</sup> of May 2015	18 <sup>th</sup> of May 2015
Third	Treatment I	20 <sup>th</sup> of May 2015	-
Fourth	Treatment II	27 <sup>th</sup> of May 2015	-
Fifth	Post-test	1 <sup>st</sup> of June 2015	1 <sup>st</sup> of June 2015

### I. Technique of Collecting Data

In collecting data the researcher used oral test performance. The students are asked to make a dialogue about invitation. When they perform in front of the class, the researcher tested their performances the score is considered based on some criteria; those are fluency, pronunciation, grammar, vocabularies, comprehension. In this research, the test was divided into two kinds, they are pre-test and post-test. The researcher gave pre-test and post-test to experimental group and control group. Knowing the result of the test, the researcher gave treatment to experimental group. The, they got post-test both of them. The result of the test is concluded whether role play strategy is effective and increase the students' speaking ability or not.

### J. Data Analysis

After the data have been obtained then data should be analyzed. In this study, the gain score of experimental and control groups were calculated by using t-test. T-test is used to compare the mean of those groups. The result would be significance if T-test is same or higher than T-table.

In the beginning of the step, the researcher counts the mean of experimental and control group. The formula is:<sup>17</sup>

$$Me = \frac{\sum X_e}{N}$$

$$Mc = \frac{\sum X_c}{N}$$

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<sup>17</sup> Gay, L.R., *Educational Research*, 407



- Where :
- Me : The mean score of experimental group
- Mc : The mean score of control group
- $\sum X_e$  : The sum of all scores of experimental group
- $\sum X_c$  : The sum of all scores of control group
- N : The number of the sample

Then, the researcher counts the difference means between the mean of pre-test and post-test in both experimental and control group. The formula is:

$$Me = Me (\text{Post}) - Me (\text{Pre})$$

$$Mc = Mc (\text{Post}) - Mc (\text{Pre})$$

After counting the differences between two means, the researcher calculates the significant difference between two means (experimental and control group). The t-test formula is:<sup>18</sup>

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{Ss_1 + Ss_2}{N1 + N2 - 2}\right)\left(\frac{1}{N1} + \frac{1}{N2}\right)}}$$

Note:

- t : t-observation
- $X_1$  : the mean of experimental group
- $X_2$  : the mean of control group
- $Ss_1$  : the standard deviation of experimental group
- $Ss_2$  : the standard deviation of control group

<sup>18</sup> Sukardi, *Metodologi Penelitian Pendidikan* (Jakarta: Bumi Aksara, 2007), 90

N1 : the total number of experimental group

N2 : the total number of control group

The last step, the researcher compares the t-test of table with the degree of freedom ( $df = N1+N2-2$ ) and the significant level is alpha 5%. If calculate  $t > t$  table, it means that there is significant of effectiveness of using role play to increase students' speaking.