

CHAPTER III

RESEARCH METHOD

This chapter presents the research method. It focused on research design, population and sample, research instrument, validity and reliability testing, research procedure, data collection method, and data analysis.

A. Research Design

This study used pre-experimental research design with quantitative approach. This study is classified as pre-experimental research design because it has little or no control of extraneous variable. Firstly, the students were given pretest before the experimental treatment. After the treatment was finished, the post test was administered. The effectiveness of the instructional treatment is measured by comparing the average score of the pretest and posttest.

The procedures of pre-experimental research are:

1. Administering a pretest with a purpose of measuring speaking ability of the first grade students at MAN Tulungagung 2 before giving treatment.
2. Applying the experimental treatment of teaching speaking by using practice-rehearsal pairs strategy of the first grade students at MAN Tulungagung 2
3. Administering a posttest with a purpose of measuring speaking ability of the first grade students at MAN Tulungagung 2 after giving treatment.

Table 3.1 Pre-test and post-test pre-experimental research design

Sample	Pre-test	Treatment	Post-test
Experimental group	Y1	X1, X2, X3	Y2

Y1 : students speaking ability in pre-test

X : Treatment teaching speaking by using practice rehearsal pairs

Y2 : Students speaking ability in post-test

B. Population and Sample

1. Population

According to Sugiyono (2011: 80) population is not only people, but also all of the quantity of object or subject that will be learnt, but also involve the whole of characteristic of the subject or object.

The population of the research was the first grade of MAN 2 Tulungagung in academic year 2015/2016. Each class consist of 25, 26, 40, 44, 42 students. The total population was 173 students.

Table 3.2 X Class Population

X MIA 1	X MIA 2	X MIA 3	X MIA 4	X MIA 5
25	26	40	44	42

2. Sample

According to Sugiyono (2011: 118) the sample is some part of the total and characteristic that is has of the population. In this study, the researcher took one class as sample.

The technique is using Stratified Random Sampling. The researcher divides the entire population into different subgroups or strata then randomly selects the final subject proportionality from the different strata. And the sample is class X MIA 4, the total number of the student are 45, it consist of 34 and 11 male.

C. Research Instrument

Instrument is needed to collect the data collection. The instrument was used to achieve the accuracy of the data and can indicate that researcher was successfully in this research. The researcher used an oral test to get students' speaking score.

The researcher give test to the students twice, those are pre-test and posttest. Pretest was given before giving the treatment and post-test was given after giving the treatment. The instrument that was used in this research was speaking test. To the pre-test instruments, the researcher provided one topic. The students must choose one picture and then describe the picture with they own words.

The researcher conducted pre-test with the topic without instrument's try out. Pre-test finished within a week before giving the treatment. Then, the researcher gave the treatment. It finished a week before post-test. It means that, the researcher was done treatment spend three meetings. And then, post-test finish immediately after giving treatment.

Then to assess students' speaking, the researcher set up analytic scoring rubric which include the criteria such as vocabulary, fluency, pronunciation, and grammar. The reason to vocabulary in number one, the vocabulary was very influential in speaking. If the students do not have vocabulary, so they cannot speak. Beside, fluency was important too in speak clarity. So, the success of student's speaking can be seen from speak fluency. And then is pronunciation. It is very important too, if the students have good pronunciation the speaker will be understand what they talking about clearly. And the last was accuracy, it was focus on grammar. Actually, the accuracy was not most important to speak, but if the students used good grammatical so theirs speaking can be seen well and prefect.

To asses students' speaking skill the researcher used scoring rubric as follows:

Table 3.3 Speaking Scoring Rubric

Speaking Rubric	4	3	2	1
Vocabulary	Uses varied vocabulary	Uses adequate vocabulary: some word	Uses limited vocabulary	Uses less vocabulary and it's not

		usage irregular		express anything
Fluency	Speaks fluently, any hesitations do not interfere with communication	Speaks with occasional hesitation	Speaks hesitantly because of rephrasing and searching for words	Speaks in single word utterances and short patterns
Pronunciation	In pronouncing the words are perfect, here is no any wrong in pronouncing the words	In pronouncing the words are mostly very good, there is little wrong in pronouncing the words	In pronouncing the words are incorrectly, but just some of the words	In pronouncing the words are incorrectly, still have many wrong to pronounce the words.
Grammar	Uses simple past tense and conjunction in telling the experience, limited mistake acceptable	Uses simple past tense and conjunction in telling the experience but there are several mistakes	Uses simple past tense and conjunction in telling the experience, many significant mistake	Uses simple past tense and conjunction in telling the experience, it totally wrong

D. Validity and Reliability Testing

1. Validity

According to Latief (2014: 223) validity is the correctness of the assessment. In this study, the researcher used content validity and construct validity to know the validity of the test.

a. Content Validity

Content validity is a kind of validity which depends on careful analysis of the language being tested and of particular test. The researcher

adjusted the test with the learning syllabus that contains of standard competence and basic competence.

Content validity is relevant. It means that the items or tasks in the test match what the test as a whole is supposed to assess. Where the objectives of the programmer are set out in detail, for example in a syllabus that lists skills or functions, then the content validity can be assessed by comparing the kind of language generated in the test against the syllabus (Underhill, 2006 : 106).

The instrument of study had content validity because the items were materials used for teaching speaking at the first graders of MAN 2 Tulungagung. Also, the content validity since the tests was designed based on main competence and basic competence in syllabus Curriculum of 2013 since the school implements the Curriculum of 2013 in the time the researcher conducted this research. Table 3.4 shows the main and basic competence in the curriculum 2013.

Table 3.4 Main Competence and Basic Competence in Curriculum of 2013.

Main Competence	Basic Competence
4. Analyzing, thinking, and performing in both concrete and abstract field related to the development of what has been learn in school individually, and being able to use the method	4.8 Capture the meaning of the recount oral and write.

based on the theory in science.	
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b. Construct Validity

Construct Validity is one kind of validity that is measure the ability which is supposed to measure. For speaking test it should having such of knowledge of speaking such as pronunciation, fluency. Construct validity is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perception (Brown 2004:25). The pre-test and the post-test used oral test, in which students were asked to tell their experience based on the picture. It can be said that these test has construct validity because the product test is in the form of speaking.

2. Reliability

Reliability is necessary characteristic of any good test for it to be valid at all. Reliability means the stability of test score, a test cannot measure anything well unless it measure consistently (Harris 1969: 14). According to Brown (2004:20) a reliable test is consistent and dependable. It can be said also that reliability is the consistency of the results of the acquisition during the study in the classroom. The result of a language skill assessment has high reliability if the result precisely represents the true level of the skill being assessed.

a. Inter Rater Reliability

Inter Rater Reliability used to assess the students which different judges give value based on the same criteria.

To make sure instruments (test) are reliable, the researcher analyzed the result of pre-test and post-test used inter-rater reliability involving two raters in checks the student's results of pre-test and post-test. To make sure that the researcher measure the students' speaking objectively, scoring rubric was used. Whereas, to achieve the reliability of the raters, the researcher using the scoring rubric. Then, the researcher calculated two sets of score to get the correlation between them. The formula to find the correlation was *Pearson Product-Moment* in IBM SPSS Statistic 16.0. Table 3.1 shows the analytic scoring rubric; table shows the result of pre-test, and table 3.2 showing the statistical calculation of *Pearson Product-Moment* in IBM SPSS Statistic 16.0. The Pretest has correlation score 0.97. That is perfect correlation. The Posttest has correlation score 0.94. That is perfect correlation.

3. Normality Testing

Normality testing is very important testing that was conducted by the researcher before analyzing the data. The both test was conducted to fulfill the criteria of parametric statistic whether the researcher can use t-test, z-test, or f-test to analysis the data. While the meaning of parametric according to Garson (2012:08) is significance test which assume a certain distribution of the data

(usually the normal distribution). The most common significance tests are t-test, z-test, and f-test. In order to be able to decide the formula used for analysis, the normality testing was done in this study. As the result can be seen in the table 3.3 as follow;

Normality is one of the testing data that assumes the data is parametric or non-parametric test; the researcher should determine the normality of the data. The researcher using formula Kolmogorov-Smirnow test of SPSS IBM 16.0. It is supported by Lubis (2008) who point out that normality testing of distribution data was conducted by using kolmogorov smirnov statistical which the tool has been available in spss. Widiyana (2012) stated that the ways that can be used to test whether the residual variable has a normal distribution as follow;

1. If the significance value or probability > 0.05 , so residual has normal distribution.
2. While the significance value or probability < 0.05 , so residual hasn't normal distribution.

Table 3.5 shows the statistical calculation of Kolmogorov-Smirnov test.

Table 3.5. One-Sample Kolmogorov-Smirnov Test

		Unstandardize d Predicted Value
N		45
Normal Parameters ^{a,b}	Mean	67.1333333
	Std. Deviation	3.08699424
Most Extreme Differences	Absolute	.183
	Positive	.183
	Negative	-.098

Kolmogorov-Smirnov Z	1.227
Asymp. Sig. (2-tailed)	.098

- a. Test distribution is Normal.
- b. Calculated from data.

Based on the output of the above, it was known that the significant value is 0.098. While, to fulfill the provision of normal distribution is if the significance value or probability > 0.05 (Widiyana, 2012). In fact, the result of normality testing is gather than 0.05 ($0.098 > 0.05$). So, it can be concluded that the data that has been tested has normal distribution.

Because the data is normal, t-test as one of parametric testing was chosen for the data analysis. It is supported by Chan (2003) point out that since the normality assumption is satisfied, we can use the paired T-test to perform the analysis: In SPSS, use *Analyze, Compare Means, and Paired Samples T test*.

E. Data Collection Method

The data collecting method and instrument are needed to obtain the research data. The data were collected from the pre-test and post-test. The pre-test was administered before the treatment and the post-test was administered after the treatment. In this research, the researcher used oral test to know the students' score of speaking skill.

1. Pre-test

The purpose of doing pre-test is to get speaking score before doing the treatment. Pre-test was designed for the purpose of diagnosing pre-existing students' achievement in speaking skill; furthermore, it was administered before the treatment was given to the students. Pre-test was used to measure the students' speaking ability before new strategy applied. The researcher conducted pre-test in the beginning of study. The teacher gives a picture to the student. Then the students tell their experience based on the picture with their own words. Before starting practice speaking, students must think first about the possible vocabulary to help the students in expressing ideas. In pre-test, the students started expression their ideas without using Practice Rehearsal Pairs Strategy in the classroom. This test is given in order to know how far the students' speaking ability.

2. Treatment

Treatment was given to the students in teaching speaking Achievement. It was purpose to know the students' speaking Achievement after giving treatment. Treatment is a strategy by the researcher that can be accepted by the students or not. The researcher conducted treatment while two meetings. In the beginning of study, the researcher introduced Practice Rehearsal Strategy to the students. Although they have not known Practice Rehearsal Strategy before, when the researcher explained Practice Rehearsal Strategy and its steps, they understood quickly. Also, when the researcher asked them to apply this

strategy, they are very enthusiastic. There are some steps in using Practice Rehearsal Strategy

1. The researcher divides the students into some groups.
2. The group must consist of two students, or we can call pair.
3. Choosing one student as explanatory or demonstrator and one student as observer.
4. The researcher tell to the students how the rules, the rule is the explanatory or demonstrator will explain or demonstrate how to do he skill that has been plan and the observer must observe the explanation from their friend.
5. The students must exchange their task. And the second demonstrator will demonstrate different skill that has been fixed.
6. This process will continue until the student can achieve the targeted skill

3. Post-test

The purpose of the post-test is to get speaking score after doing the treatment. Post-test was one kind of test which given after gaining the score in pre-test and conducting treatments. It was purpose to known the result of the new strategy given is there effective or not. Post-test it was conducted within once meeting. The teacher gives a picture to the student. Then the students tell their experience based on the picture with their own words. Before starting practice speaking in front class, identify clues and think about possible

vocabulary used to describe the clue was also conducted in classroom to help the students in expressing their ideas when practice speaking.

F. Data Analysis

In this research, the researcher used quantitative data analysis technique to know the students' achievement. The quantitative data was analyzed by using statistic method. The analysis of data was used to analyze and calculate data from the students' achievement in speaking through a Practice Rehearsal Strategy. The quantitative data of this research collected from the tests conducting. The researcher conducted test to the students before and after they were taught by using Practice Rehearsal Pairs Strategy. To analyze the data, the researcher did some steps. They are as follows:

1. Speaking

In speaking, the students were asked to describe the clue. The students developed their speaking based on the clue from the researcher. In this research, the researcher only used one class.

2. Scoring

In assessing of students' speaking, the researcher used scoring rubric. Here, the researcher determined criteria in the scoring rubric with different values, such as vocabulary with value 30, fluency with value 35, pronunciation with value 20, and grammar with value 15.

From this assessment, the researcher can measure students' speaking and find out the students' score of each item. The formula to find out total score as follow:

$$\text{Score} = \frac{\text{Score obtained}}{\text{Total score}} \times 100$$

3. Statistical Analysis

Here, the researcher used t-test, using SPSS statistic 16 program to ensure the effectiveness and to get stronger conclusion. The t-test was taken from the students, test-result which has conducted before and after being taught using Practice Rehearsal Pairs Strategy.

After analyze the data from tests. The researcher would know the effective or not of Practice Rehearsal Pairs Strategy toward students' speaking ability at first grade of MAN 2 Tulungagung.

G. Hypothesis Testing

To know the effectiveness of Practice Rehearsal Pairs Strategy in this research, the researcher is analyzing the data of students' oral test (pre-test and post-test) and scores their speaking achievement by using statistic calculation. If the result of t_{table} is bigger than $t_{obtained}$ at the level of significance 0.05, the null hypothesis cannot be rejected indicating that Practice Rehearsal Pairs Strategy is

not effective toward students' speaking achievement. By contrast, if $t_{obtained}$ is bigger than t_{table} at level of significance 0.05, null hypothesis can be rejected indicating that Practice Rehearsal Pairs Strategy is effective toward students' speaking achievement.