

CHAPTER III

RESEARCH METHODS

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 research used pre-experimental research design. This research is classified as pre-experimental research design because it has little or no control of extraneous variable. Sugiono (2004) stated that pre-experimental research design is needed because there are many independent variables that cannot manipulated, this design can implemented if there no control of extraneous variable and cannot tell if treatment had any affect. Firstly, the students were given pretest before the experimental treatment. After the treatment finished, the post test was administered. The effectiveness of the instructional treatment is measured by comparing the average score of the pre test and post-test.

The procedures of pre-experimental research are:

1. Administering a pretest with a purpose of measuring speaking skill of the first grade of MAN 2 Tulungagung before giving treatment.

2. Applying the experimental treatment of teaching speaking by using Roleplay strategy two times of first grade of MAN 2 Tulungagung.
3. Administering a posttest with a purpose of measuring speakingskill of the second grade students at first grade of MAN 2 Tulungagung after giving treatment.

Table 3.1 Table of Pre-test and Post-test Pre-experimental Research Design

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

Y1: Students pronunciation ability of experimental group in pre-test.

X: Treatment teaching pronunciation by using Role-play.

Y2 : Students pronunciation ability of experimental group in post-test.

B. Population and Sample

1) Population

According to Polit and Hungler (1999: 37) the population as an aggregate of totality of all the object, subject or member that conform to a set of specification. Researcher took the population of research at Man 2 Tulungagung consisting of 25 until 44 students in each class. And total of students in first grade in MAN 2 Tulungagung is 171 students

2) Sample

Ary(2006:167) said that Sampling small group is observed in process of selecting a number individual for a study in such way that the individual represent the large group from which they was selected. In this case sample of research is in first grade of X science 5 of MAN 2 Tulungagung that consist of 44 students 16 male and 28 female, in this case researcher use probability sampling with Stratified random sampling to choose the object of research according.

3) Research instrument

Research instrument has important function it is the generic term that researchers use for a measurement device (survey, test, questionnaire, etc.). The researcher is using test to collect information on students' speaking before and after giving treatment. There are two tests in this research, pre-test and posttest. The first is Pre-test. Pre-test is before treatment process. Pre-test is to know students' speaking skill before they get treatment. The test is story telling about fable orally

The second is posttest. Posttest is after treatment process. The test is similar with pre-test, it is story telling about fable orally. The posttest is to know the students' speaking skill after they get treatment.

The researcher can assess the students' test based on scoring rubric. The scoring rubric show on the table 3.3 below:

Table 3.3 Scoring rubric

Element of Speech	Score			
	1	2	3	4
Consonant				
Vowel				
Syllables in grammatical ending				
Word stress				
Intonation/pitch				
Total Score				

The score of the scale and the response of the option were credited 4, 3, 2, and 1. Conversely the responses of the option were credited 1, 2, 3, and 4. Scoring criteria:

Table 3.4 Criteria of Speaking Scoring Rubric

Aspect	Need Improvement 1 pt	Satisfactory 2 pts	Good 3 pts	Excellent 4 pts

Consonant (30)	If pronounce the consonant in word is not right (below – 54%)	If pronounce the consonant in word is less (50% - 69%)	Students pronounce nearly appropriate(70-80%)	pronunciation in Consonant Well
Aspect	Need Improvement 1 pt	Satisfactory 2 pts	Good 3 pts	Excellent 4 pts
Intonation/pitch (35)	If the intonation is unclear and inaccurate	If the intonation is less clear and less accurate	If the intonation is clear, accurate	If intonation native alike
Aspect	Need Improvement 1 pt	Satisfactory 2 pts	Good 3 pts	Excellent 4 pts
Grammatical ending (20)	If the level of accuracy (Under 54%)	If the level of accuracy (54% - 69%)	If the level of accuracy (70% - 84%)	If the level of accuracy (80% - 100%)
Aspect (15)	Need Improvement 1 pt	Satisfactory 2 pts	Good 3 pts	Excellent 4 pts
Word stress (15)	If the Word stress of accuracy (Under 54%).	If the Word stress of accuracy (55% - 69%).	If the Word stress of accuracy (70% - 79%)	If the Word stress of accuracy (80% - 100%)

Calculation of Score:

1. Maximum score : 4 x number of aspect assessed (5) = 20

2. Minimum score : 1x number of aspect assessed (5) = 5

Students score : score x 5 = 100

C. 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 programs 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 pronunciation at the first graders of MAN 2Tulungagung. 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 3.5 shows the main and basic competence in the curriculum 2013.

Table 3.5 Main Competence and Basic Competence in Curriculum of 2013

Main Competence	Basic Competence
4. Analyzing, thinking, and performing about story of legend that they learn before by focus on structure and elements of language	4.15 arrange narrative text with simply oral and write texts about fable by focus on social function, structure, and elements of language

b. Construct Validity

Construct validity is one kind of validity that is measure the ability which is supposed to measure. For pronunciation test it should having such of knowledge of pronunciation such as vowel, consonant, grammatical ending, intonation and word stress. 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 speak based on the questions. It can be said that these test has construct validity because the test is in the form of pronunciation.

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). 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 checking the student's results of pre-test and post-test. To make sure that the researcher measure the students' pronunciation 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 from two judges in pre-test and posttest to get the correlation between them by using IBM SPSS Statistic 16.0 with formula of *Parson Product Moment* criteria. Table 3.6 shows the analytic scoring rubric of pre-test and table 3.7 shows the analytic scoring rubric of post-test. Table 3.6 shows that Pearson Correlation (X1) is 1.00 and

Pearson Correlation (X2) is 0.982. So, the scoring pre-tests of two judges are correlation.

Table 3.6 Correlation of pre-test's score

		Correlations	
		X1	X2
X1	Pearson Correlation	1	.982**
	Sig. (2-tailed)		.000
	N	44	44
X2	Pearson Correlation	.982**	1
	Sig. (2-tailed)	.000	
	N	44	44

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

Table 3.7 shows that Pearson Correlation (Y1) is 1.00 and Pearson Correlation (Y2) is 0.978. So, the scoring posttests of two judges are correlation.

Table 3.7 Correlation of posttest's score

		Correlations	
		Y1	Y2
Y1	Pearson Correlation	1	.978**
	Sig. (2-tailed)		.000
	N	44	36
Y2	Pearson Correlation	.978**	1
	Sig. (2-tailed)	.000	
	N	36	36

		Y1	Y2
Y1	Pearson Correlation	1	.978**
	Sig. (2-tailed)		.000
	N	44	36
Y2	Pearson Correlation	.978**	1
	Sig. (2-tailed)	.000	
	N	36	36

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

3. Normality Testing

Normality testing is very important testing that was conducted by the researcher before analyzing the data. The both of test conducted to fulfill the criteria of parametric statistic whether the researcher can use t-test, z-test or f-test to analysis the data. The most common significance tests are t-test, and f-test. In order to able decide the formula used analysis, the normality testing was done in this study. As the result, show on the table 3.8.

Normality is one of the testing data that assumes the data is parametric or no-parametric test: the researcher should determine the normality of the data. According to 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. Widiananda (2012) state that they can be used to test whether the residual variable has a normal distribution as follow:

1. If the significant value or probability > 0.05 , so residual has normal distribution.
2. While the significant value or probability < 0.05 , so residual has not normal distribution.

Table 3.8 shows the statistical calculation of Kolmogorov-Smirnov test.

Table 3.8 One-sample Kolmogorov-Smirnov test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Predicted Value
N		44
Normal	Mean	33.2727273
Parameters ^a	Std. Deviation	10.20383075
Most Extreme	Absolute	.226
Differences	Positive	.226
	Negative	-.117
Kolmogorov-Smirnov Z		1.502
Asymp. Sig. (2-tailed)		.022
a. Test distribution is Normal.		

Based on the output of the above, it was known that the significant value is 0.22. While, to fulfill the provision of normal distribution is if the

significance value or probability > 0.005 . In fact, the result of normality testing is gather that $0.005 (0.22 > 0.005)$. So it can be concluded that the data has normal distribution.

Because the data is normal, T-test as one of parametric testing was chosen for the data analysis.

D. Data collecting method

1. Pre-test

Pretest is Pre-testing the opportunity to see what questions work well, what questions sound strange, what questions can be eliminated and what needs to be added. in Pre-test students were given some task to read about fable story and translate them, students were given 30 minute to understanding about fable that they take next each students were Speak directly to teacher and he will give the point, and other students that not go forward to read the story yet must translate to Indonesia so class was conducive and quite the pretest was given at 4th Mei 2016.

2. Treatment

After the students were given pretest teacher gave treatment before post test. Treatment gave for students have better value. The treatment was give in this

research was Role-play. First teacher will read about a text of drama in front of the class by good pronunciation and students will repeat it until they do it well then the teacher will divide students into some groups and teacher gave the theme for each groups it must be different between group first until the last. Teacher gave some fable to students than explain about the rule of Role-play but it focused on their speaking before it students must read the dialogue that they have and determine each character of the story. They must understand how to speak every word in the dialogue with good pronunciation teacher gave example first and students will learn about it. Each group must correct about the pronunciation of their member. students will give 1 week to prepare their role-play and remembering the dialogue the treatment was given two times at 11th and 18th Mei 2016.

3. Post-Test

Post-test is 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 in post test teacher gave final value for students about how to Pronoun well. Post-test gave by the teacher with pronunciation test. Students gave same task with the Pre-test given and teacher will see how Roleplay effective to make students better to pronouncing the posttest was given at 28th Mei 2016.

E. 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. To analyze the data, the researcher did some steps. They are as follows:

1. The researcher scored the students' performance.

The scoring consists of four items, as the researcher explained in treatment.

Table 3.6 Scoring in Speaking

No	Aspect	Score
1	Consonants	1 – 4
2	Vowels	1 – 4
3	Grammar	1 – 4
4	Word stress	1 – 4
5	Intonation	1 – 4

The score of the scale and the response of the option were credited 4, 3, 2 and 1. Conversely the responses of the option were credited 1, 2, 3, and 4.

2. Researcher calculated the mean of pre-test and post-test.

In assessing of students' pronunciation, the researcher used scoring rubric. Here, the researcher determined criteria in the scoring rubric with different values, such as consonant with value 4, vowels with value 4, Grammatical

ending with value 4, word stress with value 4 and intonation with values 4. From this assessment, the researcher can measure students' pronunciation and find out the students' score of each item. The formula to find out total score as follow:

$$\text{Students score} \quad : \text{score} \times 5 = 100$$

3. Statistical Analysis

Here, the researcher used t-test, using statistical 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 role-play Strategy. After analyze the data from tests, the researcher would know the effective or not of role-play strategy toward students' pronunciation ability at first grade of MAN 2 Tulungagung.