

CHAPTER III METHODOLOGY

This chapter focuses on discussion of the method that the researcher uses in conducting the study. It involves research design, population and sample, data collection, and data analysis.

3.1 Research Design

The design of this research is experimental research design. Ary et al (2009) states that experimental research involves a study of the effect of the systematic manipulation of one variable on another variable and here the researcher used quasi experiment. Quasi experiment research is an elaboration from true experiment research when the researcher does not have full control of the variable. The researcher uses quasi experiment, because the classification of the class had been determined by the school and the researcher can not select the sample randomly.

In this research, the researcher will group the students into two groups, experiment group and control group. Then the researcher uses tests to get the data. There are two tests in this research, pre test and post test. From the test, the researcher can find the result of pre test and post test and know the effect of drama technique on students speaking ability at the eight grade of SMPN 2 Cerme.

The design of this study is control group pre-test post-test as be drawn as :

Group	Pre Test	Treatment	Post Test
E	X1	T	X2
C	X1	-	X2

Table 3.1 Research Design of Quasi Experimental Design

- E : Experimental group (which given treatment)
- C : Control group (which not given a treatment)
- X₁ : Pre-test (before the experimental treatment)
- X₂ : Post-test (after giving a treatment)
- T : Treatment

From the table above, it could be seen that both of classes will be give pre test in the beginning of the research and next, the researcher gives a treatment drama technique for experiment group and teaches use pair work technique in the control group. After giving

treatments, the researcher will give the students a post test and for the last the researcher tries to find out the mean differences between pre test and post test.

3.2 Population and Sample

The population of this study is the eight grade students. The researcher takes two classes which consist of 64 students as data sample in this research. Determine the sample, the researcher uses cluster sampling. One class will be taken as the sample of this study that are VIII A consist of 32 students as the experimental group and VIII B consist 32 students in the control group.

3.3 Data Collection

3.3.1 Instrument of the Study

Instrument is tool used by the researcher to collect the data. Instrument is very important to measure the validity of the tests to make sure that the tests are valid and without instrument it is impossible that the researcher can collect the valid data. There are two tests that used by the researcher. That are pre and post test will be conducted in eight grade students of SMPN 2 Cerme. The researcher designed pre test that different with post test but have same topic and items. The researcher adapt the selection of the test from silabus eight grade of Junior High School and the focus is speaking ability which is narative.

3.3.1.1 Test

The researcher use test as intruments. Instruments can create to know whether the research successful or not. There are two test that are pre test and post test. It is to gain the data of the students in mastering speaking ability. The content of the item is based on the standard of competences in the syllabus of eight grade of SMPN 2 Cerme and will be focuses on speaking ability.

3.3.1.2 Pre Test

Pre test will be give before doing the treatment. It is spoken test to measure students speaking ability. From the result of pre test, the researcher will get early the students speaking ability.

3.3.1.3 Post Test

Post test used to know the effect of drama technique on sudents speaking ability after getting a treatment. This post-test is given after the experiment group is given the treatment.

3.3.2 The Procedure of Collecting Data

To collect the data, the researcher make a procedure. For the first step is asking permission to the school where the study will be conducted. The second step is the researcher prepares pre-test and post-test about drama. The third step is the researcher makes a subject into two group as experiment and control group. The fourth step is the researcher gives the treatment to experiment group by drama technique while for control group, the researcher teach them using their teacher technique that is pair work technique. The treatment will be done six times. In each meeting, the researcher will discuss with English teacher about the meeting. The fifth step is the researcher gives the post test to experiment and control group. The last is analyzing the data for pre test and post test by using SPSS 16.0 program.

3.3.3 Scoring Guide

To assess the students speaking test, the researcher adapted scoring guide of speaking by Humaira, Muslimin, and Lamusiah (2017) and already modify by the researcher. The scoring guide whereas, the researcher divides the scoring guide into four criteria, they are: excellent if they get 81-100, good if they get 61-80, average if they get 41-60, and poor if they get 20-40. Here is the rubric of speaking ability.

Components	4 (81-100)	3 (61-80)	2 (41-60)	1 (20-40)	Total
Pronunciation 25%	There are an error pronunciation within 5-3 pronunciation	There are an error pronunciation within 10-14 pronunciation	There are an error pronunciation within 15- 19 pronunciation	There are an error pronunciation more than 20 pronunciation	
Grammar 15%	There are an error grammar within 5-3 grammar	There are an error grammar within 10-14 grammar	There are an error pronunciation with 15-19 grammar	There are an error grammar more than 20 grammar	
Vocabulary 20%	Able to use more than 30 words	Able to use more than 25 words	Able to use more than 20 words	Able to use more than 10 words	
Fluency 25%	The students speak bravely and clearly with little hesitant but does not interfere communication	The students speak clear enough, even though with some hesitant but does not interfere communication	The students speak slowly with some hesitant but often interfere communication	The students speaking too slow and too hesitant. Often when speak which interfere communication	
Comprehension	The students	The students	The students	The students only	

15%	deliver with full understanding of content. There is no repetition and full of rephrasing	understand nearly everything at normal speed without repetition in deliver the content	understand most the content at slower than normal speed even though repetition in deliver the content	little understand the content and there are some repetition in deliver the content	
-----	---	--	---	--	--

Scoring Technique

Scoring students each aspects = Score obtained X weight

Scoring students total score = Sum each score

Scoring Grade:

20-40 : Poor

41-60 : Average

61-80 : Good

81-100 : Excellent

3.3.4 Validity

Before conducting pre test and post test as instrument of this research, the researcher will be test the validity of the item. The instrument called valid, if it has validity. Content validity is a kind of validity which measures the content of school based curriculum or KTSP. To test the content validity, the researcher compares it to the subject based on English curriculum and syllabus of eight grade. If it is reflects with curriculum and syllabus, the test is valid. Then, the second is construct validity. Construct validity is the validity that indicates the extent to which a test measures the theoretical constructs on which the test is based. Here, the researcher conducts a test to measure the capability of students speaking in drama. So that the researcher adjusts the content validity with the curriculum and syllabus of Junior High School.

3.4 Data Analysis

After conducting pre-test and post-test, the researcher will be analyze the data by using SPSS 16.0 program. Analyze the data is very important in order to interpret the data obtained from the field. The data analysis is carried out in order to answer the research problem. The researcher analyzes the data by using independent sample t-test. The result of t-test is to determine whether there is significant effect between experiment and control group.

3.4.1 Homogeneity Test of Variance

Homogeneity test of variance uses to know that both of two groups are equal or in same position. The researcher uses Levene's test of homogeneity. The Levene's test defined as follow:

$$W = \frac{(N - k) \sum_{i=1}^k N_i (Z_{i.} - Z_{..})^2}{(k - 1) \sum_{i=1}^k \sum_{j=1}^{N_i} (Z_{ij} - Z_{i.})^2},$$

Where:

W : The result of the test

K : The number of different groups to which the sampled case belong

N : The total number of cases in all groups

N_i : The number of cases in the i group

Y_{ij} : The value of measured variable for the J^{th} case from i^{th} group

$$Z_{ij} = \begin{cases} |Y_{ij} - \bar{Y}_i|, & \bar{Y}_i \text{ is a mean of the } i\text{-th group,} \\ |Y_{ij} - \tilde{Y}_i|, & \tilde{Y}_i \text{ is a median of the } i\text{-th group.} \end{cases}$$

The significance of W is tested against $F(\alpha, k-1, N-k)$ where F is a quintile of the test distribution, with $k-1$ and $N-k$ is degrees of freedom, α is the chosen level of significance (usually 0.05 or 0.01). Then the following procedures in analyzing the homogeneity by using SPSS version 16.0. For the first, insert the pretest score of both groups in the data view. Second, go to the analyze menu, select compare means and choose independent sample t-test. Last, interpret the homogeneity test output, the researcher looks (sig.) at the Levene's test column to know whether the quality of variance in group of score is homogeneity or not. If the sig. $> \alpha$ (0.05), two populations of variances are homogeneous or adequate but if sig. $< \alpha$ (0.05) two populations of variance are not homogenous or not adequate.

3.4.2 Hypothesis Testing

The purpose of hypothesis testing is to know whether any significance effect of drama technique on students speaking ability or not. The hypothesis of this research could be formulated as:

H_0 : There is no significant effect of drama technique on students speaking ability between experiment and control group

H_1 : There is significant effect of drama technique on students speaking ability between experiment and control group.

The step of calculating the data that are: the tests of hypothesis research and setting α (alpha) level at 0.05 (two tailed test). Then the next step is finding t-value using independent

sample t-test and comparing the probability with level of significance for testing the hypothesis. If the sig. (2-tailed) > α (0.05), H0 can be accepted, but if the sig. (2-tailed) < α (0.05), H0 can be rejected. It means that H1 accepted. The formula of calculating t-test is:

$$t = \frac{(X_1 - X_2) - (\mu_1 - \mu_2)}{S_{X_1 - X_2}}$$

In calculating t-test, the researcher use SPSS 16.0 version with the following procedures. For the first step, input the data between experiment and control group using the data view. The second step, analyze and selecting compare means then choose independent sample t-test output, then automatically it could answer to the research question about the comparison between two groups. In addition the final result was collected by means of pre test and post test score and it is to know the significant effect on students speaking ability at eight grade of SMPN 2 Cerme by using drama technique.

