CHAPTER III

METHOD AND PROCEDURES

This chapter presents: (1) method of research; (2) variables of the study; (3) operational definitions; (4) population and samples; (5) data collection; (6) data analysis

3. 1 The Method of Research

This research belongs to an experimental research. In this study used equasi experimental design. According to Fraenkel (2012) Quasi-experimental designs do not include the use of random assignment. They often have manipulation of the independent variable or control of the study setting, but rarely have randomization. In this design, a popular approach to quasi-experiments, the experimental Group A and the control Group B will selected without random assignment. Both groups took a pretest and posttest. According to Creswell (2013), Only the experimental group receives the treatment. The experimental group was given treatments by using Lost Twins Games, but the control group is not. This method was applied in 12 meetings including the pretest and posttest.

Cohen (2007) defines the figure of Pretest-Posttest Non equivalent Groups Design as follows:

O1	**X**	**O2**
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O3		**O4**

Where:

O_1 : Pretest for experimental group

O_2 : Posttest for experimental group

O_3 : pretest for control group

O_4 : posttest for control group

X : treatment in experimental group using Twins strategy

3.1 Research Variables

Variable can be considered as a construct, or particular property in which the researcher is interested. Based to Fraenkel, Wallen and Hyun et. al. (2012), variable is a concept or a noun that stands for variation within a class of objects, such as chair, weight, gender, color, size, shape, achievement, motivation

There are two kinds of variable. They are independent variable and dependent variables. Creswell (2012) argues that dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable. An independent variable is an attribute or characteristic that influences or affects an outcome or dependent variable. The independent variable in this study is Twins Strategy and the dependent variable is the students' in speaking skill.

3.3 Operational definition

In this research, the researcher presents operational definition. The operational definition provides a concrete description of the variables. The definitions of each session are offered to give the information related to the title of this study.

Improving means the process of making for something better in Speaking. In this study, this refers to get better achievement.

Twins Strategy is one of the strategies to make the students' speak ability bin different stages: asking question, describing a picture and discussion.

Speaking ability refers to the skill of the students communicate or say anything orally in transferring their ideas.

3.4 Population and Sample

3.4.1 Population of the Study

Population is the group to which the result of the study are intended to apply. According to Creswell (2012), population is a group of individuals who have the same characteristic. The population of this study was eighth grade students of MTS N 1 Palembang consisting of six classes. The total of the population are 182 students. The distribution of population is shown in following table:

Table 1. The population of the study

No	Class	Total
1	**VIII A**	**31**
2	**VIII B**	**33**
3	**VIII C**	**32**
4	**VIII D**	**28**
5	**VIII E**	**28**
6	**VIII F**	**30**
TOTAL		**182**

***Source** : MTS.N 1 Palembang in academic year 2018-2019)*

3.4.2 Sample of the Study

Trochim (2006) states that Sampling is the process of selecting units from a population of interest. It can be defined as a set of respondents (people) selected from a larger population for a survey when dealing with people. According to Fraenkel, et. al. (2012) argues that a sample in a research study is the group on which information is obtained.

In this research, the writer choose VIII D and E class with 56 students as the sample to observe by using convenience sampling method but two students in VIII D and VIII e were not including for the sample. According to Fraenkel, et. al., (2012) “Convenience sampling is a group of individuals who (conveniently) are available for study” (p. 99). Additionally, Cohen, et. al. (2007) argues that “convenience sampling or, as it is sometimes called, accidental or opportunity sampling involves choosing the nearest individuals to serve as respondents and

continuing that process until the required sample size has been obtained or those who happen to be available and accessible at the time" (p. 113).

The reason why this method was applied because after the writer had an interviewed and discussed with one of the English teachers and curriculum deputy at MTS 1 Palembang, the writer was asked to use two classes as the sample for experimental and control group.Then the teacher recommended class VIII D and class VIII E because these classes were available for study. The number of sample from two classes is fifty six students.

Table 2. The sample of the study

No	Class	Number of Students
1.	VIII. D	28 (experimental group)
2.	VIII. E	28 (control group)
	Total	56 Students

3.5 Data Collection

3.5.1 Test

According to Brown (2004) a test is an equipment for measuring the ability, knowledge, or performance of a person in a given domain. It means that, test used to measure the students' skill of students' learning achievement.

In this research, I used experimental design with oral test. In doing an experimental research usually two groups (experimental and control group) were involved and compared to find the improvement of a treatment. In collecting the

obtained data used two kind of test. There were pre-test and post-test. The source of the test was taken from syllabus for eleventh grade students. The purpose was to know how was the students' achievement in speaking skill especially in daily performing daily expression. To know the score of the students; speaking ability. It used speaking scoring by Harris (1974.

3.5.2 Pretest

Pretest is the test is given before giving some treatments. It was gave the pre-test to the students in oral test form. There were 56 students joined the pretest. The oral test procedures were divided into some steps: 1) asking the students to do a oral test, 2) dividing the students randomly into some groups which consist of two students (pairs) in each group to did role play, 3) the students choose a situation to perform their dialogues by guessing the pictures and describing by their own words in 3-5 minutes. 4) recording the dialogues of the students the two raters gave the score. 5) the score were taken in five criteria, which are the scores of pronunciation, grammar, vocabulary, fluency, and comprehension. 6) finally, to get the mean, the scores from all criteria were sum and divided into five.

3.5.3 Posttest

Posttest is the test that given after giving some treatments. The test was similar with the pre-test. There were 60 end of the program of the research. Post test is the both groups, experimental and control groups. The

test used to know the students' speaking skill after the treatment. The result of this test was be compares with the result of pre-test in order to know the effect of Twins Strategy in teaching speaking.

3.6 Data Instrument Analysis

3.6.1 Validity Test

According to Fraenkel & Wallen (2009), that validity is the most important idea to consider when preparing or selecting an instrument for use, the term validity, as used in research, refers to the appropriate, meaningfulness, correctness and usefulness of any inferences a researcher was based on data obtained through the use of an instrument. There are several types of validity but in this research the observer only use two type of validity, they are construct validity and content validity.

3.6.2 Content Validity

Content validity is very important since it is an accurate measure of what it is supposed to measure. In order to judge whether or not a test has the content validity, specification of the skills or structures is made based on the curricullum and syllabus of Junior High School.

3.6.3 Construct Validity

Construct validity is concerned with whether the test is actually in line with the theory of what it means to know the language that is being measured, it has been examine whether the test questions actually reflect what it means to know a language (Shohamy, 1985 , p.19). It means that the

test can measure certain aspect based on the indicator. The observer examine it by referring the aspect that would be measured with the theories of those aspects (Pronunciation, Vocabulary, Fluently, Comprehension, and Grammar). The writer were select the two validators based on three criteria: they graduated from master degree of English Study program, have five years teaching experience, and achieved TOEFL score above 550.

Table 3

Test specification in descriptive text of speaking

Objectives	Teaching and learning activities	Evaluation	Times allocations (minutes)	Indicators	Score grades
To measure the students' speaking ability for transactional conversation.	To use the format or method as oral test which the aspects considered as parts of measurement in speaking ability. Such a pronuncation, grammar, vocabulary, fleuncy, and comprehension.	To Tell a Descriptive Monologue with given the topic.	3 – 5 minutes	Based on rubric for scoring which has some criteria. Such as pronunciation, grammar, vocabulary, fluency, and comprehension.	There are some score 1-25

3.5.4 Reliability Test

Reliability test measure whether research instrument used for pretest and posttest activities was reliable or not. Reliability means that the scores from an instrument are stable and consistent (Creswell, 2012). The score of reliability were obtained from oral test analysis which is done twice using the sample and instruments.

To estimate the reliability of the test, inter-rater reliability is used. According to Brown (1996), inter-rater reliability is essentially a variation of the equivalent form type of reliability in that the score are usually produced by raters and correlation coefficient is calculated among them. Inter – rater reliability is common occurrence for classroom because of unclear scoring criteria, fatigue, and bias toward particular good and bad students (Brown, 2004).

Further, the reliability of speaking test was obtained. The score of the students' speaking test is calculated by three expert judgements. The result showed that speaking test with the instruction, topic, time allocation, content and rubric were appropriate.

3.6 Data Analysis

In analyzing the data, t-test is used to find out the significance difference for both group in experiment class, t-test is used to compare two means. The data are analyzed by using the Statistical Package for Social Science (SPSS)

type 22. Moreover, the researcher used and described some techniques as follows:

3.6.1 Instrument Analysis

In this study, the students in both groups experimental and control are give pretest and posttest. The test is in the form of speaking test. The same instruments test are is used in pretest and post test for experimental and control group. In analyzing the students' speaking rubrics, I used rubric from Harris (1975). There are five components that should be score, they are; grammar, vocabulary, fluency, and comprehension. The highest score in each aspect is 5, while the lowest score is 1.

The scores obtained from rubric will be multiplied by four to get the score that is an appropriate with the grading system and they are converted into the following grading system:

Table 4. The classification of Speaking Categories Students' Score

The range of Score	Speaking Categories
21 - 25	Excellent
16 - 20	Good
11 - 15	Average
6 - 10	Poor
1 – 5	Failed

To analyze the data from the pre-experimental study, the writer submited the data by using stastistical analysis and the Statistical Package for Social Science (SPSS) type 22. Meanwhile, the independent sample t-test measured whether or not there is any significant difference on the eleventh grade students' speaking ability who is taught by Twins Strategy and who is not. In this case, Ithe writer used paired sample t-test to find out whether there is significance improvement in scores between the result of pre-test and post-test in experimental group. In analyzing the data, I describe some techniques as follows:

3. 8. 1 Data Description

In data description, there are two analysis to be done. They are; (1) distribution of frequency data and (2) descriptive statistic.

3. 8. 2 Distribution of Data Frequency

In distribution of frequency data, the students score, frequency, percentage are achieved. The distribution of frequency data are for from students pretest scores in control group, students posttest scores in control group, the students pretest scores in experimental group, and students posttest scores in experimental group. Then, the distribution of frequency data is displayed in a table analysis.

3.8.3 Descriptive Statistics

In descriptive statistics, number of samples, the lowest score, the highest score, mean, standard deviation, and standard error of mean are

obtained. Descriptive statistics are obtained from students' pretest and posttest scores in control and experimental group.

3.8.4 Prerequisite Analysis

Prerequisite analysis is an analysis which is done before testing the research hypotheses. It measures whether or not the obtained data from students' pretest and posttest scores in both groups (experiment and control) are normal and homogeny.

a. Normality Test

Normality test is used to measure the obtained data is normal or not. According to Flynn (2003), states that a value less than 0.05 indicate that the data are non-normal. In measuring normality test, the writer used *I-Sample Kolmogorov Smirnov* in SPSS version 22 program. The normality test is used to measure students pretest and posttest scores in control and experimental groups.

b. Homogeneity Test

Homogeneity test is used to whether the obtained data are homogeneous or not. According to Flynn (2003), the data can be categorized homogeneous whenever it is higher than 0.05. the homogeneity test is used to measure students' pretest and posttest scores in both groups (experimental and control). In measuring homogeneity test, Levene Statistics in SPSS program software version 22 is used.

3.8.5 Hypotheses Testing

To prove the formulated research problem, the instruments of research hypothesis testing was required, as follows :

a. to measure a significant difference between two variables, independent sample t-test is used for testing students' posttest scores in experimental group and posttest in control group. A significant difference is found whenever the p-output is lower than 0.05 and t-obtained is higher than t-table (with df= 56).
b. to measure a significant difference more than two variables, two ways ANOVA is used for testing students' posttest scores in experimental and posttest in control groups. A significant difference is found whenever the p-output is lower than 0.05 and t-obtained is higher than t-table (with df=56)