CHAPTER III

RESEARCH
METHOD

This chapter consisted of research design, population and sample, research instrument and procedure of collecting data.

3.1 Research Design

The researcher used quantitative research design to conduct this research. The researcher also used experimental research design to test the theory whether it is gives significant effect or not with their ability. More specifically, this research used quasi experimental research design, the school does not allow the researcher to do randomization and do true experiment at SMP IT Al-Ibrah. It was because the classification of the class at SMP IT Al-Ibrah had been determined by the teacher it means that the researcher cannot change the classification of the group. So that, the researcher does not have access to full control the target.

There are two variables in this study. The first is speaking fluency as dependent variable and the second ELS app as independent variable. There were two groups in this study. They are experimental group and control group. Experimental group taught by using ELS app while control group taught by using storytelling with pictures.

Table 3.1 Design of experimental can be described as follows:

Group	Pre-test	Treatments	Post-test
Experiment	X	X	X
Control	X	-	X

Where X   : With treatment (using ELS app)

-   : Without treatment (using storytelling with pictures)

In the design above, quality of the subjects was first checked by pre-testing them. Then, treatment was given to the experimental group. The two groups were taught same topic with different media. The experimental group will be taught by using storytelling technique with ELS app. Meanwhile, the

control group will be taught by using story storytelling with pictures. Both groups got the same materials of learning. Pre-test and post-test were given to them. The result was computed statistically.

3.2 Population and Sample

3.2.1 Population

In this research, researcher choose the students SMP IT Al-Ibrah in second academic year 2018/2019. The reason why researcher takes this school because the teacher never used mobile application as a media in teaching but she usually uses discussion method. So, the researcher try to implement this strategy in the teaching learning process. In her teaching learning process. That was known by interviewed with English teacher in SMP IT Al-Ibrah. The population of this research is eighth grade students in SMP IT Al-Ibrah 2018/2019 academic year which consist of 97 students.

3.2.2 Sample

The researcher uses population sampling technique to determine the sample of this research. Population sampling technique is used if the total of population is used as sample. Two classes of 8th grade students were taken as the sample of this study. Those are VIII B and D as experimental group which consist of 48 students and VIII A and C as control group which consist of 49 students. So, the total numbers of students are 97 students.

Table 3.2.2 The Number of the eight grade students of SMP IT Al-Ibrah

No.	Grades	Group	Number of Students
1.	VIII B and D	Experiment	48
2.	VIII A and C	Control	49
Total Number of Students			**97**

3.3 Data Collection

In this study, researcher collects the data from speaking test by conducting a test before treatment to experimental group and control group. The first data is pre-test that is given for student of SMP IT Al-Ibrah. It was to know the student's ability before the students get treatments. After pre-test the researcher gives treatments for four times. Then, the researcher gives post-test to know the influence of ELS app in their speaking ability. After that, the researcher collects the data from students' pre-test and post-test score. Then, the researcher begins to analyze the data by SPSS program.

3.3.1 Research Instrument

The main instrument that is used in this research is speaking test. To reach the goal of this study, the researcher has to construct suitable test. He has to choose type of test and arrangement of test. In this study, the researcher uses the test as instrument to collect data**.** The test is given after the instruction explains the material. There are two tests that will be used by the researcher. Those are pre-test and post-test. Pre-test and post-test will be conducted to the Senior High School students. It is to find out whether they make progress in the speaking ability or not. The researcher designed of pre-test different with post-test but the test is still equal in the term of topic and item. The researcher designed speaking test by herself from guide book of the school and the internet. The selection of pre-test and post-test adapted with the syllabus at eight grade with focus on speaking skill. The test can be elaborated as follows:

3.3.1.1 Test

There are two tests which is used by researcher namely pre-test and post-test. It is given to experimental group and control group to know any progress or not in their speaking ability. Researcher develops the test based on their syllabus which focuses on speaking skill and the material is about desciptive and narrative text.

a. Pre-test

The data collected by pre-test in both of classes to know the differences between two classes which taught by storytelling with pictures and ELS app. Pre-test is held in both classes to know the student's

speaking ability before giving treatment. Pre-test is given to find out the initial different between experimental and control group as they have similar level in speaking ability. The test is in form of oral test because it is focus on speaking skill. The researcher will give pre-test different with post-test but the test is still equal in the term of topic and item.

b. Post-test

Post-test is conducted after giving treatment. For the experimental group, ELS app is used as a media to improve their speaking ability. For control group is using storytelling with pictures in their activity. Post-test was used to measure the student ability after giving the treatment.

3.3.2 Validity

Validity is measurement of the test item. Validity is needed before giving pre-test and post-test to know the item of test is valid. The researcher did validity testing in order to know whether the test is valid or not. Here the researcher used content validity to verify the validity of pre-test and post-test that was given to the students. According to Ary (1990:258) content validity is not always in numeric form, but it can be shown by the test's item reflect to the course and objective in curriculum guides, syllabus, course books and worksheet. For testing the content validity, the researcher compares the instrument content to the subject basic on curriculum and syllabus of Junior High School. If the test content appropriate with the curriculum guides, syllabus, and course books, it means the test have content validity and the test item can give to the students. The test determines whether the items of the test represent the objective. Reading and listening included objective item whereas speaking and writing included subjective item. This study included in subjective test, the content validity was measured by relating the content of the instrument with content standard in Indonesian curriculum. The instrument of this study is in the form speaking test which measured the ability in students' speaking skill. Here the researcher will be helped by the English teacher to check the instrument based on curriculum and syllabus.

3.3.3 Reliability

The reliable was when the rubric is consistent and trusty in

measurement (Brown, 2001:386). The reliability is used to know whether the rubric is reliable or not. To measure the reliability of a subjective test such as speaking test, the researcher used the rubric for score students' speaking skill that have been adapted from Harris (1999). All aspects in scoring rubric had covered some criteria of students' speaking skill.

3.3.4 Procedure of Collecting Data

In collecting data, researcher does some procedures. The first is researcher makes pre-test and post-test item. Next step is researcher makes a subject into two group as control group and experimental group. Then, the researcher gives treatment to experimental group ELS app and control group storytelling with pictures. The fifth step is researcher gives post-test to experimental group and control group and the last step is analyzing the data from pre-test and post-test by using SPSS 25.0 program.

Table 3.3.4 The Schedule of Implementation

No.	Meeting	Activities
1.	First meeting	Giving pre-test for experimental and control group
2.	Second meeting	Giving first treatment about narrative text
3.	Third meeting	Giving second treatment about narrative text
4.	Fourth meeting	Giving third treatment about narrative text
5.	Fifth meeting	Giving fourth treatment about narrative text
6.	Sixth meeting	Giving post-test for experimental and control group

In this study, the researcher conducts four meetings to apply ELS app implemented by eight grade student in speaking ability at SMP IT Al-Ibrah. Indeed, based on the table 3.3.4 the researcher makes four lesson plans of each class. Further, in this study the researcher gives pre-test and post-test before and after the treatment.

3.3.5 Scoring Guide

This study use scoring technique based on the standard criteria of speaking performance. The scoring guide used the method of analytical and

was chosen because it was ideally suited to the classroom situation. According to Brown (2004) there are some criterias that used to measure student's speaking ability such as; pronunciation, content, vocabulary, fluency and comprehension. From those some criterias, they have each score and the name is rating scale. It used to help the researcher to give score for students' performance. The researcher uses analytical scoring rubric because it is provide more detailed feedback, scoring more consistent across students and provides more guidance for instructional planning. The aspects that the researcher used is adapted from Harris (1999). It can be seen in the following table:

Table 3.3.5 The Scoring Rubric of Speaking

No	Criteria	Rating Scale			
		Poor 1	Fair 2	Good 3	Excellent 4
1.	Fluency	Students hesitant too often when speak which interfere communica- tion	Students speak with some hesitant with often interfere communica- tion	Students speak with some hesitant but it does not really interfere communica- tion	Students speak bravely and clearly with little hesitant that does not interfere communica- tion
2.	Pronunciation	There are an error with more than	There are an error with 10-12 pronuncia	There are an error with 6-8 pronunciation	There are an error with 3-5 pronunciat

		15 pronunciati ti on	ti on		io n
3.	Content	The content does not match at all with the theme which is chosen by the teacher and forget to arrange the content with the generic structure	The content is little bit match with the theme which is chosen by the teacher and arrange the content with the generic structure but not well organize	The content is match with the theme which is chosen by the teacher and arrange the content with the generic structure but nor well organize	The content is match with the theme which is chosen by the teacher and the generic structure is well organize
4.	Vocabular y	Able to use more than 15 words	Able to use more than 20 words	Able to use more than 25 words	Able to use more than 30 words

5.	Comprehen-sion	Deliver ing monolo gue with limited understand-ing of content	Deliver ing monolo gue with some understand-ing of content	Deliver ing monolo gue with many understand-ing of content	Deliver ing monolo gue with full understand-ing of content. There is no repetition and full of rephrasing

Konversi nilai = $\dfrac{\text{Skor total siswa}}{\text{Skor maksimum perangkat test}}$ **x 100**

3.4 Data Analysis

After conducting pre and post-test, the next step is analyzing the data. In conducting a research, it is necessity to analyze the data in order to interpret the data obtained from the field. The data analysis is carried out in order to answer the research problem with the data obtained through pre and post-test. The researcher analyzes the data by using independent sample t-test. Since the samples are small and the groups are independent, the t-test for independent samples is carried out to determine whether there is any difference between experiment and control group.

The researcher used SPSS version 25.0 to compute statistics of students speaking skill in short functional text. This study is conducted in order to find the effect of the treatment whether is significant or not ELS app. Assumption for the independent t-test where: (1) Independence: Observations within each sample must be independent (they do not influence each other); (2) Normal

Distribution: The two population must be normally distributed. In this study included in parametric research which divided into two kinds of data; ratio and interval. The data of this study is ratio because zero has value or absolute zero. If the data are ratio, the data is definite homogeny and normal distribution.

Last, (3) Homogeneity of Variance: The two populations must have equal variance (the degree which the distributions are spread out is approximately equal).

3.4.1 Normality Distribution Test

To analyze the normal distribution, this study used Kolmogorov Smirnov Sample in SPSS version 25.0. It is aimed to find out the distributions of pretest score in two groups are normally distributed or not. In this case the result of the normality distribution is also used to find out the normality distribution between two groups (experimental group and control group) in pre-test score are normal or not. The first step in calculating the normality distribution test state that the hypothesis:

Ho : the score of the experimental and control group are normality distributed.

The second step is calculating the normality distribution test tried to compare the Sig. with the level of significance for testing the hypothesis. If the Sig. is more than the level significance (0.05) the null hypothesis is accepted, the score normally distributed. On the other hand, if the Sig. is less than the level of significance (0.05) the null hypothesis is rejected. The procedure analyze is press menu, click Analyze, click Descriptive Statistic, click Explore and move all variable to Dependent List box, click Plots and tick Normality Plots with test then Continue.

3.4.2 Homogeneity Test of Variance

Homogeneity test of variance used to know whether two groups are in the same position. For homogeneity test, the researcher used Levene's test of homogeneity in SPSS 25.0 version because Levene's test of the homogeneity used to assess the equality of the variance for a variable calculates for two or more groups. In this study has two groups; experimental group and control

group.

Based on Shadish (2002), the procedures in analyzing the homogeneity by using SPSS version 25.0 are as follow: first, makes two columns. The first column is a group and the second column is a score, after the pre-test and post-test data from both experimental and control group are input, then click Analyze, Compare Means, and then Independent Sample T-test, input the score into Test Variable and the grouping variable, then click define groups to determine group 1 (for experimental) and group 2 (for control) click continue and the last click OK.

3.4.3 Hypothesis Testing

Independent t-test used to find out the significant difference of using ELS app implemented by eight grade students to improve speaking ability between experimental and control group. The steps of t-test calculation are:

1. Test the hypothesis of the research and the setting α (alpha) level at 0.05 (two-tailed test). The hypothesis in this research could be formulated as follow:

   Null hypothesis is $\mu1-\mu2 = 0$ ($\mu1=\mu2$)

   Alternative hypothesis is $\mu1-\mu2 \neq 0$ ($\mu1 \neq \mu2$)

   H_O: There is no significance effects of using ELS app on students speaking skills at eight grades of SMP IT Al-Ibrah.

   H_1: There is significance effects of using ELS app on students speaking skills at eight grades of SMP IT Al-Ibrah.

2. Finding t-value using Independent - Sample T-Test and comparing the probability with the level of significance for testing the hypothesis. After the scores compute in SPSS 25.0 version, then see the output of Independent- Sample T-Test and interpret the output that if sig. (2-tailed) > α (0.05), the researcher should accept the H0, but if sig. (2-tailed) < α (0.05), the researcher can be rejected the H_O, it means H1 is accepted. T-test calculates to find out the comparison of two means between pre and post test score of experimental and control group. In analyzing the data, the researcher uses independent t-test.

In calculating t-test, the researcher uses SPSS 25.0 version. The first steps, input the data of post-test in SPSS program between experimental and control group, then click Analyze then Compare Mean Then Independent Sample T-Test. In Independent Sample T- Test, input the score variable into Test Variable column, and group variable Grouping Variable column, then clicks Define Group, choose group 1 (for experimental) and group 2 (for control), then click OK.