

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research methodology. It focuses the method used in conducting this study which covers Research Design, Subject of the Study, Data Collecting Method, Validity and Reliability Testing, Normality and Homogeneity Testing, Research Instrument, and Data Analysis.

A. Research Design

The design of the research is quantitative research. The type of this research is experimental research. Experimental research is a scientific investigation in which an investigator manipulates and controls one or more independent variables and observes the dependent variable or variables for variation concomitant to the manipulation of the independent variables (Ary, 1985:26).

In this research the researcher was conducted the quasi experimental design with non- randomized control design. Quasi experimental is a design of research which needs two groups to be tested. There are used two classes to be samples, namely experimental and control groups. This design focuses on treatment and outcome. The data was collected from pretest and posttest in order to know whether Cooperative Script method toward students' speaking ability is effective in teaching narrative text. According to Craswell (2008:3) below in the general overview of quasi-experimental design:

Table 3.1 Two Groups Pre-test Post-test Design

Group	Pretest	Independent Variable	Post Test
E	Y1	X	Y2
C	Y1	-	Y2

Note:

E : Experimental Group

C : Control Group

Y1 : Pre-test

Y2 : Post-test

X : Treatment

The experimental group were taught by particular treatments (Cooperative Script Method) to improve student' speaking ability. While control group were only given a pre-test and post-test without particular treatments as given to experimental group. These groups used different method, but both experimental and control groups were treated with the same test. So, there are two classes which are taken as the sample of this study. One class is the experimental group and the other class is the control group. The experimental group gets some treatments about using Cooperative Script method toward students' speaking ability and the control group does not get the treatments about using Cooperative Script method toward students' speaking ability. The research steps in the experimental group are pretest, treatments, post-test. The pre-test explores the students' speaking skill before they get the treatments. The post-test is given to the students after they get the treatments. Therefore, the data for the research are collected from the scores of two pre-tests and the two post-test and then the data are analyzed and evaluated using the *t-test*.

B. Population, Sampling and Sample

1. Population

Before the sample was collected, the researcher had to determine the population. According to Sugiono (2010:117) the population is groups of subject that is determined by the researchers to be studied and drawn the conclusions.

Population was the whole research subject. It was important that the research must be designed carefully and completely. The population in this research was the students of the 10th grade of MA Hasanuddin Siraman Blitar. The numbers of populations were around 48 students divided into two classes: X MIPA and X IIS. In this study, for the number of population was also used as a sample.

2. Sampling

According to Hadi (1990:75) Sampling is the ways of doing to get sample. Sampling was constituted to choose some of individual process in research so they or individual as a voluntary. The purpose of sampling is using some individual to get information about population. Sampling is the way to take sample.

3. Sample

Selection of the sample is very important step in conducting a research study. Sample is a part of population which will to be analyzed. Sample must be representative as one is to be able to generalize with confidence from the sample to population.

The sample of this research was taken from the population which consists of two classes only. It was X MIPA class as the experimental class, this class considered of 26 students and X IIS class as the control class, this class considered of 22 students. So, the total number of sample was 48 as respondents in this research.

C. Research Variable

There were two kinds of variables in this research. They were dependent and independent variables:

1. Dependent Variable

The dependent variable was students' speaking ability in learning English. Dependent variable was affected by independent variable.

2. Independent Variable

The independent variable was Cooperative Script method, which were the teaching aids that help students to improve speaking ability. Independent variable affected by dependent variable. It showed how the use of Cooperative Script method could improve speaking ability.

D. Research Instrument

The researcher use test for collect the data. The test consisted of pre-test and post-test. The pretest is given before the treatment, while post-test is given after the treatment. But before giving treatment to the subject, the researcher should conduct the try out in order to know the validity and reliability from the test that will conduct as a treatment. If the try out

already represented the validity and reliability of the treatment, the test can use in the treatment or called as a post-test, but if the try out does not represent the treatment, the researcher should make new item of the test that more measurable. In this research, the researcher use speaking test as the instrument. The test is used to know the Effect of Using Cooperative Script Method toward Students' Speaking Ability at the First Grade of MA Hasanuddin Siraman Blitar.

E. Validity

Validity means the extent to which an instrument measures what should be measured (Ary et al, 2009: 225). It means that the test will be valid when it measures what is supposed to measure. To ensure whether the test has a good validity, the researcher used content validity and construct validity.

1. Content validity

The test is said to have content validity if the content of test represent the purpose of the test. The test to measure students' speaking ability is speaking test. Isnawati (2014:27) state that "the test will have content validity if it includes a proper sample of the structure or content which is relevant with the purpose of the test".

Thus, the researcher can conclude that the test were valid in content validity because the material are tested have been taught to the students. The researcher made this test based on the course objective in

the syllabus of MA Hasanuddin Siraman Blitar. Therefore, this test was valid in term of content validity.

Table 3.2 Content Validity

Main Competence	3.8 Menganalisis fungsi social, struktur test, dan unsur kebahasaan beberapa teks naratif lisan dan tulis dengan memberi dan meminta informasi terkait legenda rakyat sederhana, sesuai dengan konteks penggunaannya.
Basic Competence	4.8 Menyajikan teks naratif pendek dan seerhana terkait legenda rakyat secara lisan dan tulis dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan secara benar dan sesuai konteks.
Indicator	<ul style="list-style-type: none"> - Mengidentifikasi struktur teks dan unsur kebahasaan pada teks naratif lisan dan tulisan - Menjelaskan fungsi sosial pada teks naratif lisan dan tulisan - Menceritakan teks naratif - Menulis teks naratif pendek disertai dengan ilustrasi gambar
Technique	Speaking test
Instrument	<ul style="list-style-type: none"> - Pretest - Post Test

Based on the the Table 3.2 above, the instrument of the test could be said have the content validity because the test has equal purpose with the core competence and basic competence in syllabus of Curriculum of 2013, which testing the students' speaking ability with the correct structure.

2. Construct validity

Construct validity is one kind of validity that measures the ability which is supposed to measure. The word 'construct' refers to any underlying ability which is hypothesized in the theory of language ability (Isnawati, 2014:29). Based on theory above, in the test the researcher asked the students to present their idea about topic that was given. In this research, the researcher administered a speaking test and the technique of scoring the students' speaking ability is based on the five aspects of speaking. According to brown (2004:172-173), the aspect of speaking consists of five items: Grammar, Vocabulary, Comprehension, Fluency, and Pronunciation. The scoring rubric of speaking can be seen in appendix 2.

3. Face validity

According to Ary et. Al (2010) mentioned that face validity refers to the extent to which examines believe the instrument was measuring what was supposed to measure. Therefore, the test was said to have face validity if examiner believe the instrument measures what was supposed to measure. A test that did not face validity may be refused by the teacher and advisor.

In this research, the researcher had the face validity by consulting with English teacher of the first grade at MA Hasanuddin Siraman Blitar. After getting feedback from the English teacher, the researcher made some revisions on the instrument. The viewpoints that

should be revised were about the instructions, the grammatical errors and instruction.

F. Reliability

Reliability was a measure of accuracy, consistency, dependability of scores resulting from administration or particular examination.

According Ary et. al (2010) reliability was the extent to which a test measures accurately and consistency. According to Arikunto as cited in Lestari (2017:36), reliability was enough instruments can believe to use as a tool to collect data, because this instrument was good. Instrument that was can believe, that reliable would the result of data that could also believe.

In this research the writer used inter-rater reliability where the two scorers did the scoring and the two sets of scores gotten from the two scores were calculated to get the correlation coefficient. The two scorers were the researcher herself and her partner who was from the English teacher. The researcher chooses the rater because he can understand every point in the scoring rubrics.

In this researcher, the researcher conducted the reliability test with try out (post-test) for students the first grade of MA Al Umron Blitar by using *Pearson Product-Moment* in IBM SPSS Statistics 23 for getting correlation coefficient. The criteria of reliability instrument in Pearson product – moment divided into 5 classes, those are very reliable, reliable,

enough reliable, rather reliable, and less reliable according to Ridwan (2004:136). The criteria of reliability can be showed as below:

Table of 3.3 Criteria of Reliability

Interval Coefficient	Correlation
0.80 – 1.00	Very reliable
0.60 – 0.79	Reliable
0.40 – 0.59	Enough reliable
0.20 – 0.39	Rather reliable
0.00 – 0.19	Less reliable

The researcher only took 10 students to be samples in conducting try out. The table of data on the (Table 3.4) was the score obtained from the tryout. After obtaining the two scores, the researcher did a reliability testing and got the result as presented on (Table 3.5)

Table 3.4 The scores obtained from the try out (post-test)

Subject	Rater 1	Rater 2
A	55	60
B	60	64
C	50	54
D	48	52
E	55	58
F	60	65
G	62	66
H	58	64
I	65	68
J	60	58

The result of reliability testing can be seen from table:

Table 3.5 The Result of Reliability

		Correlations	
		Rater1	Rater2
Rater1	Pearson Correlation	1	,917**
	Sig. (2-tailed)		,000
	N	10	10
Rater2	Pearson Correlation	,917**	1
	Sig. (2-tailed)	,000	
	N	10	10

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

The result of calculation showed that reliability coefficient was 0.917 and the ideal reliability coefficient was 1. In this research, the calculation was comparable to 1, it means the instruments of this research was very reliable because 0.917 closer the reliability coefficient to 1.

G. Normality and Homogeneity Testing

1. Normality Testing

Normality test was one of the important requirements that might be followed in analyzing the data of the research. It was done to examine if the distribution of data collected was normal or not. The researcher uses normality test to check whether the post-test score of experimental group and control group are normally distributed or not. In this study, researcher used IBM SPSS Statistics 23 with *One-Sample Kolmogorov-Smirnov* to test the normality of the data gained. The normality of the data can be seen based on the significant value (α) = 0.050 rules as follows:

- H_0 : If the value of significance > 0.050 , means the distribution data was not normal distribution
- H_a : If the value of significance < 0.050 , means the distribution data was not normal distribution

2. Homogeneity Testing

Homogeneity testing conducted to know whether the gotten data has a homogeneous variance or not. The homogeneity test was conducted to know whether the variety of data both experimental and control classes was same or not. Homogeneity test is important since the result of research would be generalized in a population. In this research, the researcher conducted testing the homogeneity by using IBM SPSS Statistics 23 by the value of significance (α) = 0.050. The homogeneity of data can be decided based on the hypothesis of homogeneity as follow:

- H_0 : If the value of significance > 0.050 , means data was homogeneous.
- H_a : If the value of significance < 0.050 means data was not homogeneous.

H. Data Collecting Method

Data collecting method is process to collect the data in the research. To get the data, the researcher used method of data collecting as follow:

1. Pre-test

Pre-test is conducted to measure participants' attributes or characteristics before they get the treatment. The pre-test is to know the students achievement in speaking before the treatment carried out. The pre-test was held on May, 14th 2019. The test was given to the experimental class namely X-MIPA and the control class namely X-IIS. Both of experimental and control class were given the same test, the topic is narrative text; the story of Lake Toba. The researcher asked to the students to make a group in pairs, and then the researcher chose the students who as a speaker and who as a listener. Then, make a summary about their topic and practice their speaking in front of the class with their partner for maximum 5 minutes. When the students show their performance, the researcher recorded them, then made the score used scoring rubric to compute the score of pre-test.

2. Post-test

Post-test is held to measure the participants' attributes or characteristics after they get the treatments. The post test was given to the experimental class and control class. It was given in order to know students achievement in speaking ability after they were taught by using Cooperative Script in experimental class and without using Cooperative Script in control class. Post-test was held on May, 17th 2019. It was conducted to know the students speaking ability of experimental and control class after the treatment. Both of experimental and control class were given the same test, the topic is

narrative text; the story about snow white. Post-test for experimental class was given after treatment or taught by using Cooperative Script Method. While post-test for control class, was given after taught without using Cooperative Script method. It was done to know the final score and to know the student difference competence before and after they get treatment.

I. Data Analysis

Data analysis is a technique to analyze data to know the result of a research. In analyzing data, the researcher used quantitative data by using statistical program IBM SPSS Statistics 23. The quantitative data analysis was used to know the significant differences on the students' speaking ability between the students who are taught by using Cooperative Script Method and the students' who are taught without using Cooperative script Method.

Data obtained from the post-test from both group of Experimental class and Control class would be analyzed statistically using *Independent-Sample T-Test* through *IBM SPSS Statistics 23*. The researcher used t-test to know the significant value was higher or smaller than 0.05. The technique of data analysis used by the researcher belonged to quantitative data analysis.