CHAPTER III

RESEARCH METHOD

This chapter presents the research method. It focuses the method used in conducting this study which covers research design, populations and samples, variable, research instruments, validity and reliability, data and data sources, data collecting method, and data analysis.

A. Research design

This research used quantitative approach because it was intended to find out the influence of a variable to another one. Besides, its data are in the form of numbers and they are analyzed statistically. The design of this research is Quasi-experimental. This design is applied because the researcher comparing two group. It is comparing between experimental class and control class. In experimental class the students gave pretest, treatment and posttest. In control class the students is not given treatment only as control.

The researcher conducts quasi experimental research design by using two groups pretest and posttest. For more detail about the design of quasi-experimental, see the table below:

Table 3.1 the Design Pattern of the Study

Groups	**Pretest**	**Treatment**	**Posttest**
Experiment	YI	X	Y2
Control	Y3	-	Y4

54 (Ary, et.al 2010:316)

Note:

E : Experimental group

C : Control group

Y1 : Pretest for experimental group

Y2 : Posttest for experimental group

X : Treatment

Y3 : Pretest for control group

Y4 : Posttest for control group

Based on two groups on the table above the first was the experimental group that would receive a treatment (X) while the second group was the control group that did not receive he treatment (-). Both of them would receive pre-test to obtain the first data about students' reading comprehension score before treatment. The Experimental group (E) was given treatment of being taught by Cooperative Script (X) while the control group (C) was being taught without Cooperative Script (-). For the conclusion is both of them would be given post-test to obtain the second data about students reading comprehension score. By using T-test, the scores were compared to find out of there was significance

difference of reading comprehension ability before and after being taught by using Cooperative Script.

B. Population and sample

1. Populations

Population is the whole subject of the research which has certain quality and characteristics. Population is a set to which a researcher wishes to generalize. According to Ary et al. (2010:148) population defines as all members of any well-defined class of people, events, or objects. While Arikunto (2013:173) states "Population is the whole subject of research". Based on Lodico et al (2006:13) the population is the large group to which the researcher would like the result of a study to be generalizable. It means that the population is least one characteristic of differentiates it from other groups. Supported by Creswell (2008:151) population is group of individuals who have the same characteristic. As a description above, the researcher take conclusion that the population is a whole research subject used by the researcher. So, population is very important part in a research.

Population in this study is all of the first grade students of MA Hasanuddin Siraman in the academic years 2018/2019

Table 3.2 List of population

Class	Total
X IPA 1	30
X IPA 2	30
X IPS	30
Total	90

2. Samples

According to Ary et al. (2010:148) sample is a portion of a population. It means that the sample is a set of data consisting of only a part of the research. In other word, good sample must be represented of the entire as possible, so that the generalization of the sample as true as population. Supported by Creswell (2008:152) sample is a subgroup of the target population that the researcher plants to research for generalizing about the target population.

Sampling is the way that used by the researcher to select the number of individuals as a sample in study. In this research the researcher used purposive sampling technique. In this study, samples were taken from two classes from the first grade at MA Hasanuddin Siraman. They were X IPS class as a control group taught without using Cooperative Script and X IPA 1 class as the experimental group taught by using Cooperative Script. The researcher decided to choose the class because the English teacher suggested

using XIPA1 and XIPS class to conduct the research and two classes have the same criteria and are possible to be used as research. The teacher suggested to using the class because the students in these class include into active students and will good to give treatment for them.

C. Variables

A variable is everything that will become that object of research or the influencing. According to *Ary et al* (2010) is a construct variable or characteristic that can take on different values or scores. In the other words, variable is anything that can change the result of a research. Based on the title, the research has two kinds of variables, they are:

1. Independent variable (X)

   Independent variable is a variable in which is observer the side effect. Independent variable can appear and exist by itself without any other supported. It influences and gives special effect. In this study, the used of Cooperative script (X) was the independent variable

2. Dependent variable (Y)

   A dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable Creswell (2012:115). This is the effect of independent variable. This variable was not manipulated by the researcher, but it was affected by the independent

variable. It was symbolized by "Y". Depend variable of this research was student's scores in reading comprehension.

D. Research Instrument

In this study the researcher used a test as an instrument. Where a test is a set of stimulate presented to an individual in order to elicit response on the basis of which a numerical score can be assigned (*Ary et al*, 2010:201). It means that the test conducted by the researcher would provide the data of students' score in reading comprehension in the form of numerical score. The test was given two times that are pre-test and post-test.

Test the validity of the test by viewing the material criterion of validity, the right to use words and language. Questions used in accordance with the basic competencies and indicators, the question are not confusing. This test instrument validated by the teacher of the class before the test is tested to class and grade control experiment.

1. Pretest

A pre-test provides a measure on some attribute or characteristics that asses for participant in an experiment before receive a treatment (Creswell 2008:301). Pretests given to the students before the researcher teach by cooperative script. Pretest is needed to know the basic competence and

their prior knowledge. The researcher gave the test that contains 20 items multiple choices.

2. Posttest

A post-test is a measure on some attributes or characteristics that is assessed for participants in an experiment after a treatment (Creswell 2008:301). After the treatment, posttest was given to the student. The test items of the posttest are exactly the same as those in the pretest. The goal of the posttest is to measure students' reading comprehension between experiment group and control group.

E. Try Out the Instrument

The purpose of try out the instrument was to find out the quality of the research instrument that used for collecting the data, the test was chosen as the instrument tried out beforehand. The try out was conducted on May 13th 2019 to different subject that is on XIPA 2 class before truly conducting the research to the sample of research. It was supposed to determine the quality of the test as the instrument of the research. The result of the try out the instrument was analyzed statistically to know the validity and reliability that will be discussed below:

1. Validity

Fraenkel and Wallen (2005:113) states that a valid instrument is that measures what it is supposed to measure. Validity is the most important idea to consider when preparing or selecting an instrument for use.

According to Ary(2010:225) validity is the most important consideration in developing and evaluating measuring instruments. Historically, validity was defined as the extent to which an instrument measured what it claimed to measure. The focus of recent views of validity is not on instrument itself but on the interpretation and meaning of indicates how deep the instrument can measure the target of the research. In this study, the researcher used content and construct validity to measure whether the test.

a) Content Validity

Content validity is prime of importance for achievement test, a test called have content validity if the content of the test can represent sample of the language skill. Creswell (2012:619) said that content validity is the extent to which the questions in the instrument and the score from these questions are representative of all the possible questions that could be asked about the content or skill.

In this study, the test which was given twice at pre-test and post-test was in the form of multiple choices. The test was made up based on course objective the syllabus of the first grade students of MA Hasanuddin Siraman.

The test specifications of instrument in this research could be shown from the table.

Table 3.3 the Test Specifications of instrument

Basic Competences	**Indicators**	**Test Items**	
		Pre-test	**Post-test**
3.8 Comparing social functions, text structures and linguistic elements of several oral and written narrative texts by giving and asking information about narrative text, according to the context of their use.	1. Understanding and identifying the meaning of functional the text.	1,6,7,9,10 16,18,20	6,1,2,4,5 11,13,15
	2. Understanding and identifying the characteristics of the text	2,8,11,19	7,3,16,14
	3. Understanding and identifying complete statement based on the text.	3,4,12,13,17	8,9,17, 18 ,12
	4. Understanding and identifying or able to know main idea of the text	5,14,15	10,19,20
	Total	20	20

SCORE = $\frac{\text{Number of correct items}}{\text{Total questions}} \times 100$

The table above shows the specifications of instrument which represented the material. Total all specifications are 20 items in the form of multiple choices test and the value score of every question is 5 points, thus a total of all is 100 points.

b) Construct Validity

According to *Ary et al* (2010:231), construct validity focuses on test scores as a measure of a psychological construct. The word construct refers to any underlying ability which is hypothesized in a theory of language ability. It means that the instrument was made up based on the theory which the instrument would measure. In this research, the instrument has been constructed based on reading comprehension theory. After the instrument was constructed, the test was tried out and then the researcher used SPSS 23.0 of Pearson Correlation to count the validity test per items.

Basic decisions making in validity testing per items are as follows:

1. If the score of $R_{hitung} > R_{table,}$ it means that the test items is valid.
2. If the score of $R_{hitung} < R_{table,}$ it means that the test items is not valid.

The process calculation of validity testing by using SPSS 23.0 version for windows found that the 20 questions of multiple choices which had been tried out were valid. The result of validity can be seen as follows:

Table 3.4 the Result of Construct Validity

No items	R. Hitung	R. Table	Keterangan
Item 1	0.935	0.349	Valid
Item 2	0.970	0.349	Valid
Item 3	0.970	0.349	Valid
Item 4	0.960	0.349	Valid
Item 5	0.879	0.349	Valid
Item 6	0.970	0.349	Valid
Item 7	0.935	0.349	Valid
Item 8	0.879	0.349	Valid
Item 9	0.935	0.349	Valid
Item 10	0.970	0.349	Valid
Item 11	0.970	0.349	Valid
Item 12	0.960	0.349	Valid
Item 13	0.935	0.349	Valid
Item 14	0.970	0.349	Valid
Item 15	0.839	0.349	Valid
Item 16	0.879	0.349	Valid
Item 17	0.935	0.349	Valid
Item 18	0.970	0.349	Valid
Item 19	0.850	0.349	Valid
Item 20	0.935	0.349	Valid

2. Reliability

A test like any other type of instrument is used to measure, should give the same result every time it measure and should be practical to. A test

must be reliable as a measuring instrument. Isnawati (2011:18) says that a reliable test is consistent and dependable. Reliability test instrument can be done by using Cronbach's Alpha. According to Triton in Sujianto (2009:97) the value of Cronbach's Alpha can be follow:

Table 3.5 Cronbach's Alpha interpretation

Cronbach's Alpha	Interpretation
0.00-0.20	Less reliable
0.21-0.40	Rather reliable
0.41-0.60	Quite reliable
0.61-0.80	Reliable
0,81-1,00	Very reliable

The result of reliability testing by using SPSS 23.0 can be seen from the table:

Table 3.6 result of reliability

Reliability Statistics

Cronbach's Alpha	N of Items
.992	20

Based on the table 3.6 above, the results of reliability testing can be seen from the reliable value in the cronbach's alpha. If the significance value is > 0.6, the data can be said to be reliable. From the table above it can be seen that the cronbach's alpha column shows a significance of 0.992 which means > 0.6 so that is can be said to be reliable.

F. Data and data sources

Data is the kinds of information researcher obtain on the subjects of their research (Fraenkel and Wallen, 2005:112). Data in this research are quantitative data. In this study the data are in the form of score and get from the pre-test and post-test from the sample of the study.

Meanwhile, the data source is subject where the data can be taken (Arikunto 2013:161). The data took from the primary data source called as primary data. Primary data is source of data from which the researcher can collect the data directly. Ary (1985) stated that, the primary data is the data that are collected directly from sample. In this study, the primary data source was the first grade student of MA Hasanuddin Siraman in the academic year 2018/ 2019.

G. Data collecting method

Data collecting method was the method that was used by the researcher to collect data. Tanzeh (2009:57) stated that data collecting is systematic and standardized procedure to obtain the necessary data. Data of this study was collected by administering test. In this research, the data was collected by administering test they were pre-test and post-test. The pre-test and post-test were about reading. Both pre-test and post-test consist of some question related to the reading.

1. Pretest

A pre-test provides a measure of some attribute or characteristic that you assess for participant in an experiment before they receive the treatment (Creswell, 2008:301). The researcher gave pre-test for experimental group conducted on May 14^{th,} 2019 and for control group may 13th, 2019. The pre-test was administered before treatment process. Pre-test is needed know how far the students' reading comprehension ability. The pre-test was in the form of multiple choices consisting of 20 items. This kind of tests was chosen to avoid subjectivity that may affect unreliability of the tests. Multiple choices are the most obvious advantage is that Scoring can perfectly reliable. Scoring should also be rapid and economical. A further considerable advantage was that it was possible to include more items than other forms of other tests since the test takers have only to make a mark on the paper. The time was allocated for this test was 30 minutes. There are 30 students' in experimental group and 30 students' in control group.

2. Treatment

This treatment procedure was adapted from Suprijono (2011) by applying the steps of using Cooperative Script technique. Treatment here meant that the researcher applied Cooperative Script technique in teaching process. The treatment was given to experimental class two times. The

treatment was given twice due to the limited time. The process of this technique described as follow:

a) The teacher divides the students in pairs or in group.
b) The teacher distributes the narrative texts to each the student.
c) The students read and make summary of narrative text such as: orientation, complication, a sequence of events, resolution, coda in (a snow white) text in Pairs.
d) The teacher makes regulations who the first as the speakers and the second as the listener.
e) The speakers read completely the summary with the main idea. While the listeners listen to the speakers' presentation.
f) The teacher changes the role that the first pair as speakers is changed as listeners and who the first pair as listeners are changed as speakers.
g) The teacher and the students make conclusion of summary
h) Closing

This teaching strategy was taught for experimental for group 3 times on May 14th, May 15th and May 18th, 2019, while the control group would be taught without using Cooperative Script.

3. Posttest

The last method used to collect the data is administering posttest. A posttest is a measure of some attribute or characteristic that is assessed for

particpant in an experiment after a treatment (Creswell, 2008:301). After the treatment, the post-test was given to the students for experimental group on May 18th, 2019, and for control group on May 14th, 2019. The test items in the post test the same as the pre-test, but it has the difference number from the pre-test. The purpose of the post-test was to measure students' reading comprehension ability after being taught by using Cooperative Script. The post-test was in the form of multiple choices which is consisting of 20 items. The time that was allocated for this post-test was 30 minutes.

H. Data analysis

Data analysis is a review of a series of activities, grouping, systematization, interpretation and verification of data so that a phenomenon has social value, academic, and scientific (Tanzeh, 2009:69). Ary et al. (2010:95) explains that data analysis indicate how the researcher will analyze the data to the test the hypothesis and/or answer the research question. While Khotari (2004:18) explains after the data have been collected, the researcher turns to the task of analyzing the data.

The data obtained from research result of students test that were analyzed quantitatively. Quantitative analysis was done by using statistic which is called statistical analysis. The quantitative data of this research is analyzed by statistical computation. The data collected was processed by comparing the score

between control group and treatment group to see whether there is significant different between students who given by treatment and not. In this research the researcher was used independent sample test through SPSS 23.0.