

CHAPTER III

RESEARCH METHOD

In this chapter, the researcher presents the research design, the population and sample of the research, research instrument, validity and reliability testing, normality and homogeneity testing, data collecting method, and data analysis.

A. Research Design

The researcher conducted this research by using quantitative research approach. The design that was used was Quasi-Experimental design. The quasi experimental design was used because this method does not require random sampling (Jackson, 2008: 318). In this research there were two groups or two classes of subject that was involved. They are experimental group and control group. The experimental group was taught using cue card while the control group was taught without using cue card. Both experimental and control group speaking ability were measured before and after being exposed to a treatment by using pre-test and post-test. The design of the study was taken from Ary (2006) that can be seen at the table below:

Table 3.1 Randomized Subjects, Pretest–Posttest Control Group Design

Group	Pre-Test	Independence Variable	Post-Test
Experiment Group	Y1	X	Y2
Control Group	Y1	-	Y2

The experimental group was the seventh graders of SMPN 1 Ngunut Tulungagung in 7F class, while the control group was in 7J class. Y1 on that table mean pre-test. The purpose of pre-test was to measure the students speaking ability before the process of teaching in both experimental and control group and to ensure that both groups' speaking ability before the process of teaching are equal. Then, X was considered as treatment namely the teaching process by using cue card as instructional media. This treatment only given to experimental group, while the control group are taught using conventional teaching method without using cue card. Next, Y2 was known as post-test. This one was given to students of experimental and control group after the process of teaching. The purpose of post-test was to measure the students of experimental group's speaking ability after taught using cue card and to know the students of control group's speaking ability after taught without using cue card. By using this form of research, the researcher could analyze the influence of experimental treatment by comparing students of experimental and control group pre-test and post-test score. The effectiveness would be identified after knowing the significant difference between the students speaking ability of experimental and control group after the process of teaching.

B. Population, Sampling, and Sample

1. Population

The population of this research was all of seventh grader students of SMPN 1 Ngunut in academic year 2018/2019 in the second semester. There were 11 classes comprised 7A class to 7K class. A population was a set (or collection) of all

elements possessing one or more attribute of interest. In line with Arikunto (1998: 115) that states the whole subject research was called population of research.

2. Sampling

Sampling was a technique of taking sample which gives opportunity for every element or population member to be chosen as sample. According Charles (1995:96) a sample was a small group of people selected to represent the much larger entire population from which it was drawn. It can conclude that sampling was a technique of taking a group of unit selected from large group or population.

In this research, the sample was taken in term of purposive sampling technique. Sugiyono (2018: 85) states that purposive sampling was a technique of collecting data with some considerations e.g. the limited time, energy and cost. According to Ary *et al*, (2010:156) “purposive sampling also referred to as judgment sampling. Sample elements judged to be typical, or representative, are chosen from the population”. The main consideration was the chosen classes had homogenous ability. In other words, the students in those classes had average proficiency in speaking.

3. Sample

Sample was a small group of people selected to represent the much larger entire population from which it was drawn. To take the sample, researcher must surely that the sample can represent all characteristics from population. As states by Sugiyono (2018:81) “sample must represent the population”.

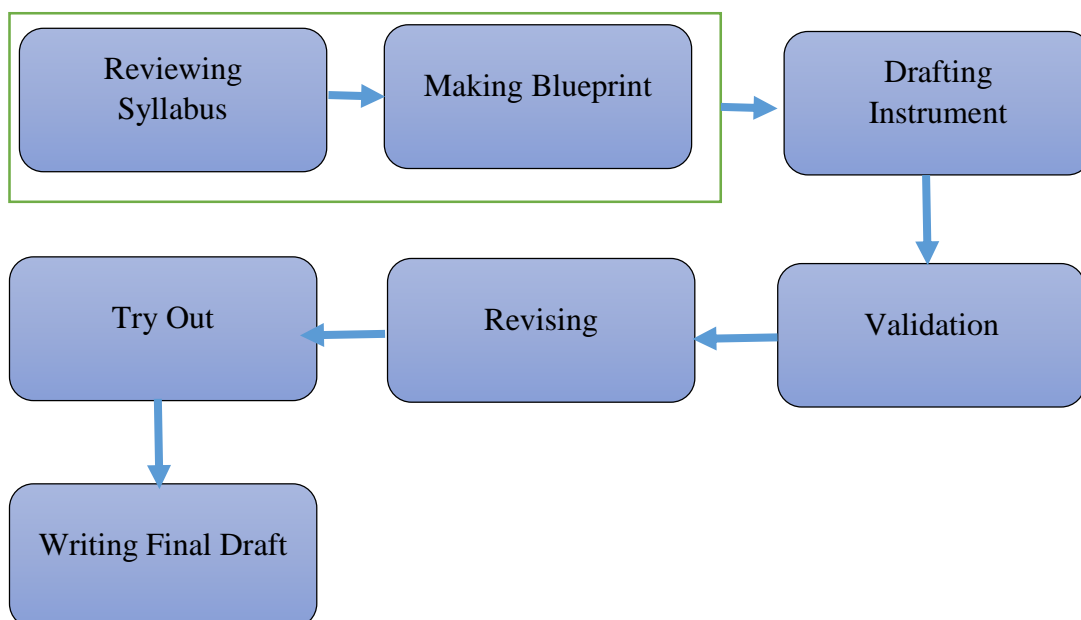
In this research the researcher took 64 samples from two classes that were 7F and 7J class. 7F student consist of 32 students as experimental group while 7J

student consist of 32 students as control group. The reason of choosing that two class is because the recommendation by English teacher of SMPN 1 Ngunut Tulungagung.

C. Research Instrument

In order to get data, the researcher need to do the measurement. Then, the tools to measure what should be measured in a research called instrument. The instrument used in this research was speaking test. Arikunto (1998: 130) states that test was question which was used to measure the skills, knowledge, intelligence, achievement aptitude, and another capability of someone or a group of people. In order to have high quality of research data, the instruments used must meet requirements as good instruments. Process of instrumentation was done by the researcher as below:

Table 3.2 Process of Instrumentation



Process of instrumentation to develop instrument in this research through seven stages. They are; Reviewing syllabus, making blueprint, drafting instrument, validation, revising, try out, and final drafting. The description are below:

a. Reviewing Syllabus

In this stage, the researcher reviewed the syllabus of eleventh grade students related to material which being the object of research. In this research, the researcher used descriptive text as the material. The syllabus can be seen in *appendix 1*.

b. Making Blueprint

The researcher could make the blueprint after reviewing syllabus of eleventh grade students. So the items of instrument will be correlated with the material. The blueprint can be seen *appendix 2*.

c. Drafting Instrument

After reviewing the syllabus to developing a blue print of instrument, the researcher drafting the instrument. In this research, the researcher drafting a speaking test by giving 10 pictures to the students. Then the students have to choose one picture and describe it using their own word. There were two kind of speaking test for pre-test and post-test. The form of test can be seen in *appendix 3*.

d. Validation

Validation did by the researcher to consider some aspects of blueprint and items of instrument. It has a purpose to make a good test based on the expert to measure face validity, content validity, and construct validity. The form of validation can be seen on *appendix 4*.

e. Revising

At the revising stages, the researcher rearranged the aspect of blueprint and instruction for the test items based on the comment and suggestion from the expert validation.

f. Try Out

The purpose of try out is to make sure that the instrument was valid and reliable before it was applied in research class. This stage done before pre-test and post-test in class that was not used as research class on Tuesday, 5th of March 2019 in 7K class. In this research, the researcher decided to choose ten students as the sample of try out. They were instructed to describe one picture of pre-test and one picture of post-test. So, one students should describe two picture orally. The score of try out can be seen on *appendix 5*.

g. Writing Final Draft

This is the last stage of instrumentation process. In this stage the researcher drafted the complete research instrument. This stage done after the researcher sure that the research instrument was valid and reliable based on the statistic accumulation by SPSS 23.0 program.

D. Validity and Reliability

1. Validity

Validity is an important key to an effective research. Validity is a measurement which shows the grade of an instrument. Ary et.al. (2010: 162) states that validity is the extent to which an instrument measures what is designed to measure. There are four types of validity; 1) content validity, 2) criterion validity,

3) construct validity, and 4) face validity. In this research, the researcher used content validity and construct validity to know the validity of test.

a. Content Validity

Content validity is a kind of validity that depends on correspondence between curriculum objectives and the objectives being tested. It means that a test is said valid if its objectives are same with the curriculum objectives. In this case, the researcher developing the test by referring to the syllabus that contain standard competence and basic competence. Then, the researcher also check the curriculum to know what the students must be able to do in a certain level, especially for seventh graders in second semester. The researcher found that in the second semester, the seventh graders must be able to speak and write descriptive text. The blue print of the test can be seen in *appendix 2*.

b. Construct Validity

Construct validity is the appropriateness of the interpretations that we make on the basis of test score (Bachman and Palmer, 1996:21). In the term of construct validity, the test is considered to have construct validity if it can be demonstrated that it measures just the ability which is hypothesized in a theory of language ability. For speaking test, it should measure the knowledge of sub-abilities of speaking such as vocabulary, grammar, pronunciation and fluency. The sub-abilities can be measured if the form of test is in the form of oral test. Both in pre-test and post-test, the researcher gave speaking test though oral test. Therefore, the test were considered to have construct validity for the purpose of testing proficiency in speaking mastery.

2. Reliability

Reliability means the stableness of scores; a test cannot measure anything well unless it measures consistently (Harris, 1969:14). Brown (2003: 20) explained that “If the students are given the same test or matched students on two different occasions, the test should yield similar results”. The reliability of a subjective test like speaking can be done using *rater reliability*. There are two kinds of *rater reliability*. Firstly, *inter rater reliability* that can be done by two scorers doing the scoring. Secondly, *intra rater reliability* that can be done by a scorer doing the scoring twice.

In this research, the researcher developing the test used *inter rater reliability* where the researcher involved two raters in scoring the students’ speaking ability. The raters or scorers here was the eighth semester student from English department of IAIN Tulungagung. The researcher decided to choose her because she has ability to understand all point in scoring rubric for speaking ability. The researcher did the try out in 7K class on Tuesday, 5th of March 2019. After that the researcher assess students’ speaking ability then asked the second rater to do scoring using the same scoring rubric. The score can be seen on *appendix 8*.

After getting the score of try out from both of the raters or scorers, the researcher calculated the score of pre-test and post-test using SPSS 0.23 program to know the reliability coefficient. The result of reliability testing can be seen in this bellowing tables:

Table 3.3 Reliability of Pre-test from Score of Try Out

		Rater1	Rater2
Rater1	Pearson Correlation	1	.768**
	Sig. (2-tailed)		.009
	N	10	10
Rater2	Pearson Correlation	.768**	1
	Sig. (2-tailed)	.009	
	N	10	10

**.

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

From the table above, it showed that the result of reliability of pre-test by using *pearson product moment* in SPSS 23.0 was 0.768.

Table 3.4 Reliability of Post-test from Score of Try Out

		Rater1	Rater2
Rater1	Pearson Correlation	1	.635*
	Sig. (2-tailed)		.048
	N	10	10
Rater2	Pearson Correlation	.635*	1
	Sig. (2-tailed)	.048	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

From the table above, it showed that the result of reliability of post-test by using *pearson product moment* in SPSS 23.0 was 0.635.

Table 3.5 Value of cronbach's alpha

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

From the tables above, it showed that the result of reliability by using *pearson product moment* in SPSS 23.0 was 0.768 for pre-test and 0.635 for post-test. If we analyze with using values of cronbach's alpha it can conclude that the instrument for both pre-test and post-test was reliable.

E. Normality and Homogeneity Testing

Before analyzing the significant difference between the students taught using Cue Card and those taught without using Cue Card, the data should be normal distribution and homogenous. To measure the data computation were normal distribution and homogenous, the researcher conducted normality testing and homogeneity testing. The result as follow:

a. Normality Testing

Normality test has purpose to know whether the data distributed normally or not. In this research, the normality test was done by using *Shapiro Wilk* test. Based on Garson (2010:21), *Shapiro Wilk* is recommended for small and medium samples up to $n = 2000$. The samples of this research are 64 students that means it less than 2000 samples.

The normality of the data can be seen based on the significant value (α) = 0.05. The considerations of testing normality are:

1. The data has normal distribution, if the significance $> 0,05$
2. The data doesn't have normal distribution, if significance $< 0,05$

After get the scores from pre-test and post-test, the researcher calculated the data using SPSS 23.0 program and the result of normality testing can be seen on the tables below:

Table 3.6 Test of Normality Pre-Test

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
7F	.926	32	.031
7J	.925	32	.028

a. Lilliefors Significance Correction

From the table above, it showed that the result of normality of pre-test by using *Shapiro Wilk* in SPSS 23.0 was 0.031 for experiment class and 0.028 for control class.

Table 3.7 Test of Normality Post-Test

Tests of Normality			
	Shapiro-Wilk		
	Statistic	df	Sig.
7F	.915	32	.015
7J	.931	32	.041

a. Lilliefors Significance Correction

From the table above, it showed that the result of normality of pre-test by using *Shapiro Wilk* in SPSS 23.0 was 0.015 for experiment class and 0.041 for control class.

Based on the tables above, all significant of pre-test and post-test score was more than 0.05 ($> 0,05$). So it can be concluded that the research data in the pre-test and post-test have normal distribution.

b. Homogeneity Testing

Homogeneity testing has purpose to determine if two or more populations (or subgroups of a population) have the same distribution of a single categorical variable. Ary et.al (2010: 286) states that another method that can make groups reasonably comparable on an extraneous variable is to select samples that are as homogeneous as possible on that variable. To know the homogeneity the researcher used one way ANOVA by using SPSS program 23.0 version. The considerations of testing homogeneity are:

- a. The data are homogeny, if the significance $> 0,05$
- b. The data are not homogeny, if significance $< 0,05$

After get the scores from pre-test and post-test, the researcher calculated the data using SPSS 23.0 program and the result of normality testing can be seen on the tables below:

Table 3.8 Test of Homogeneity of Pre-test Variances

Pre-Test Result

	df1	df2	Sig.
Levene Statistic	1	62	.281

Based on the result of testing homogeneity using one way ANOVA above, the significant of group that was taught using cue card was 0.281 on pre-test. The significant of group higher than significant level 0.05. It means the data were homogeny.

Table 3.9 Test of Homogeneity of Post-test Variances

Post-Test Result

Levene Statistic	df1	df2	Sig.
.013	1	62	.911

Based on the result of testing homogeneity using one way ANOVA above, the significant of group that was taught using cue card was 0.911 on post-test. The significant of group higher than significant level 0.05. It means the data were homogeny.

F. Data Collecting Method

Data collecting method is the way how the researcher collect the data of research. In this research, the researcher collected the data by administered tests. Test was a method of measuring a persons' ability knowledge, or performance in a given domain (Ary, Jacobs, & Sorensen, 2010:316). The researcher used two kinds of tests, they are:

1. Pre-test

The researcher applied pre-test to know students' speaking ability before receiving the treatment. The form of test was oral test. The researcher administered some picture of animal, person, and thing and the students should describe it orally. It was administering to the 7F students as experimental group and 7J students as control group in SMPN 1 Ngunut Tulungagung. Pre-test of 7F students was held on Wednesday, 20th of March

2019 and pre-test of 7J students was held on Thursday, 21st of March 2019.

The duration for pre-test was 2x40 minutes.

2. Post-test

The researcher applied post-test to know students' speaking ability after receiving the treatment. The form of test was oral test. The researcher administered some picture of animal, person, and thing and the students should describe it orally. It was administering to the 7F students as experimental group and 7J students as control group in SMPN 1 Ngunut Tulungagung. Post-test of 7F students was held on Saturday, 20th of April 2019 and pre-test of 7J students was held on Thursday, 18th of April 2019. The duration for pre-test was 2x40 minutes.

G. Research Procedure

Treatment was done in experimental group that was 7F class after administering pre-test. The cue card that used was a piece of card that contains picture and clues that the students had to describe the picture on the cue card orally. One student got one cue card. The topic of picture on cue cards was adapt from syllabus of curriculum 2013 that can be seen on *appendix 1*. The topic of picture was people, animals, and things.

The treatment done on four meetings and the procedure of research was done by researcher as bellow:

1. First treatment, done on 23rd of March 2019. The topic was about animals.

The procedure of treatment as bellow:

- a. In the first meeting, researcher explained about descriptive text such as purpose, generic structure, and language use in descriptive text to the students. The time allocation was 10 minutes.
 - b. Then researcher explain about cue card involves the explanation and the procedure to use. The time allocation was 5 minutes.
 - c. Then the researcher give example by showing one cue card contain a picture of cat and some clues, then describing that in front of class. The time allocation was 5 minutes.
 - d. Next, researcher gave students opportunity to ask if they still don't understand about the material or the procedure.
 - e. Then, the students divided into 8 groups and each group got a cue card that contain a picture of animal and clues about its characteristics.
 - f. After the students got the cue card, they asked to write the description of picture on their cue card. The time allocation was 10 minutes.
 - g. Next, the researcher asked a representative from each group to come forward and presenting the result of group work that was describing the picture on cue card orally. The time allocation for presentation for each group was 3 minutes.
 - h. In the last, the researcher gave evaluation about some mistakes that the students did during the process of discussion using cue card.
2. Second treatment was done on 27th of March 2019. The topic was about people. The procedure of treatment as bellow:

- a. Firstly, the researcher reviewed about the last material to call students' memory. Then the researcher explained about what material that the students going to learn.
- b. After that, by showing the picture of a person on cue card the researcher asked the students about some vocabulary that related with people as second topic.
- c. Then the researcher give example by showing one cue card contain a picture of Korean boy band member and some clues, then describing that in front of class. The time allocation was 5 minutes.
- d. Next, researcher gave students opportunity to ask if they still don't understand about the material.
- e. Then, the students divided into 8 groups and each group got a cue card that contain the picture of a person (famous person/a particular profession/artist) with clues of their characteristics.
- f. After the students got the cue card, they asked to write the description of a picture on their cue card. The time allocation was 10 minutes.
- g. Next, the researcher asked a representative from each group to come forward and presenting the result of group work that was describing the picture on cue card orally. The time allocation for presentation for each group was 3 minutes.
- h. In the last, the researcher gave evaluation about some mistakes that the students did during the process of discussion using cue card.

3. The third treatment was done on 10th of April 2019. The topic was about things. The procedure was same with the second procedure but only different on the topic. The picture on cue card were about things around students such as shoes, T-shirt, doll, radio, etc.
4. The fourth treatment was done on 13th of April 2019. In this treatment the researcher used to review all material start from describing animals, people and things. The procedure was same with the second and third treatment but the topic were three that were animals, people, and things. Each group got one cue card that can be contain picture of animal such as elephant or artist or the picture of shoes because the cue card was distributed randomly.

H. Data Analysis

Data analysis is the way researcher analyze the data of research. In this research, the researcher used quantitative data analysis. The researcher conducted test before and after giving treatment to experimental and control group. Then, after all data have gathered the researcher calculated the data using SPSS 23.0 program. The T-test was used in order to find out the differences of the students' score of speaking after taught using cue card. If the difference was significant, it means that cue card was effective to use in teaching speaking.