

CHAPTER III

RESEARCH METHOD

This chapter presents the research method. It focused on research design, population and sample, research instrument, validity and reliability testing, normality and homogeneity testing, data collecting method, and data analysis.

A. Research Design

In conducting this research the researcher need a plan and steps that the researcher will take. Before conducting research the researcher should identified what the kind of the research, and need to make planning how the research will be conducted. Because of that, the researcher needs to decide the research design.

This study used pre-experimental research design. Another name of pre-experimental design is one group pretest-posttest design (Borg, *et al* 1989:670). This study classified as pre-experimental research design because it has little or no control of extraneous variable. According to Latief (2014:96) this design involves only one group as its subject and it involves three steps; pretest, treatments, and posttest. Firstly, the group was given pretest before the experimental treatment. After the treatment was finished, the post test was administered. The effectiveness of the instructional treatment is measured by comparing the average score of

the pretest and posttest. The design of this research can be seen at the table below:

Table 3.1 Diagram of One-Group pretest-posttest

Y1	X	Y2
Pretest	Treatment	Posttest

The procedures of pre-experimental research are:

1. Administering a pretest with a purpose of measuring speaking ability of the first grade students at SMAN 1 Kampak - Trenggalek before given treatment.
2. Applying the experimental treatment of teaching speaking by using silent viewing activity of the first grade students at SMAN 1 Kampak - Trenggalek.
3. Administering a posttest with a purpose of measuring speaking ability of the first grade students at SMAN 1 Kampak - Trenggalek after given treatment.

B. Population and Sample

1. Population

McMillan, (1996:85) states that a population is a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which we intend to generalize the results of the research. For a research that requires a large population for the source

of the data, the first step is to define the target population. Target population in educational research usually is defined as all the members of real or hypothetical set of people, events, or objects to which educational researchers wish to generalize the result of the research (Borg *et al* 1989:216). The target population of this study is all first grade students of SMAN 1 Kampak that consist of 172 students.

2. Sample

According to Cresswell (2012:142) sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. So that ways, selection of sample is very important steps in conducting a research study. Technique to take sample is sampling. According to Gay (1992:123) sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. This sampling has function to get information in population. This study the writer used purposive sampling technique. The researcher took one class of six classes from the first grade of SMAN 1 Kampak - Trenggalek. Based on analysis above, the researcher take class is X MIPA 1 who consists of 26 students.

C. Research Instrument

Instrument has important function in this research. Frankel (2005: 112) states: “Instrument is the device the researcher uses to collect data”. According to Nitko J (1989:32), “Test is a systematic procedure for observing persons and describing them with either a numerical scale or a category system”. The main instrument of this research is speaking test. Underhill in Allison (1987: 119) presents a wide range of elicitation techniques of speaking test. The condensed list that follows is slightly adapted from Underhill’s table of contents; discussion, oral report, decision making, role play, interview, learner description and re-creation (e.g. describe picture, describe information to map), form filling, making appropriate responses, questions and answer, reading blank dialog, using series of pictures, giving instructions/ description/ explanation, etc.

In this research, the instrument used is speaking test. There were two kind of test, they were pre-test and post-test. The researcher used test as instrument to collect the data. The pretest was administered before the students were taught by using silent viewing activity. The pre-test was administrated to know the students' speaking skill before being taught by using silent viewing activity. The pre-test asked the students to tell a narrative story based on topic that the researcher gave. Each student was given about 3 minutes to tell the narrative story. After getting score in pretest, the researcher gave treatment by applying silent viewing activity in speaking class. In this study, the role of English teacher was the researcher

herself. The process of teaching was done by researcher herself. The format of the procedure in giving treatment as follow:

1. Researcher explained the material about narrative text (definition, function of narrative, generic structure, characteristic of narrative text).
2. Researcher explained about silent viewing activity to the students.
3. Researcher showed the video with the sound off and ask student to retell the story based on the video using their own words.
4. Researcher give about 3 minutes to telling the story in front of the class

After giving treatment, the researcher administered post-test. This post-test was intended to measure student's speaking ability after being given a treatment. In this test, the students ask to tell a narrative story based on the video that the researcher gave. The students were given about 3 minutes to tell the story. In assessing students' speaking skill the researcher used scoring rubric. (See appendix 5)

D. Validity and Reliability Testing

1. Validity

Latief (204:223) states validity is the correctness of the assessment. The validity of a test concerns whether it is measuring what we think and say it is measuring (Allison, 2002:85). There are four types of validity that can be discussed in relation to research; four types of validity, content validity, criterion related validity, construct validity,

and face validity. In this study, the researcher use content, construct and face validity.

a) Face Validity

A test is said to have face validity if it measures what is supposed to measure. Face validity is hardly a scientific concept that is very important. A test which wasn't has face validity may not be accepted by test takers, teachers, education, authorities or employers. In this test, there are some aspects that were considered from this test to make a good test based on the validity.

- 1) The instruction must be clear for the students, what they should do in the test.
- 2) In this test, the students of first grade are instructed to tell story based on the silent video in the form of narrative text. Thus, the degree of difficulty of the test must be suitable with their level.
- 3) The consideration of time allocation must be clearly. The researcher given limited time about three minutes for each student.

b) Content Validity

Content validity is a kind of validity which depends on careful analysis of the language being tested and of particular test. In the content validity, the coverage of task becomes the evidence.

A test will have content validity if it represents sample of language skills. The researcher adjusted the test with the learning syllabus that contains of standard competence and basic competence. (See appendix 1)

c) Construct Validity

Brown (2003:25) states that construct validity is any theory, hypothesis, or model that attempts to explain observed phenomena in universe of perceptions. Construct may or may not be directly or empirically measured their verification often requires inferential data. Gay (2012:161) states that construct validity is amass convergent, divergent, and content-related evidence to determine that the presumed construct is what is being measured. Construct validity is a slightly more complex issues relating to the internal structure of an instrument and the concept it is measuring. Based on the theories above the researcher created the test based on the material that is suitable for the students at first grade of SMAN 1 Kampak - Trenggalek. Furthermore, in the class the researcher asked the student used the suitable test for the student at first grade of SMAN 1 Kampak - Trenggalek the test is speaking about telling narrative story. This test was to measure the student ability in speaking.

2. Reliability

Reliability is necessary characteristic of any good test for it to be valid at all. Reliability means the stability of test scores; a test cannot measure anything well unless it measures consistently (Harris, 1969:14). In addition, reliability measures accuracy, consistency, and dependability of fairness of scores resulting from administration of particular examination. The result of a language skill assessment has high reliability if the result precisely represents the true level of the skill being assessed. To know the reliability of instrument used in this research, the researcher had tried them out before conducting them into the pretest and posttest.

Table 3.2 Cronbach's Alpha Interpretation Based on Triton

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 tryout test:

Table 3.3 Reliable Testing

Case Processing Summary			
		N	%
Cases	Valid	26	100.0
	Excluded ^a	0	.0
	Total	26	100.0

a. Listwise deletion based on all variables in the procedure.

Cronbach's Alpha	N of Items
.781	6

According to table 3.4 *reliability Statistics*, the result of *Cronbach's Alpha* was 0.781 it was higher than 0.05 so, all of the item of test is reliable.

E. Normality and Homogeneity Testing

1. Normality

Normality testing is used to measure whether the distribution of test is in normal distribution or not. Based on Priyatno (2012: 33 in Arumsari 2014: 56) said that the normality of data is important because the data can be considered to represent the population when it is in normal distribution. In this research to measure the normality testing, the researcher using SPSS with One-Sample Kolmogorov-Smirnov method.

Normality testing was conducted to determine whether the data were normal distribution or not. The researcher used SPSS.18 One-Sample Kolmogorov-Smirnov test by the value of significance (α) = 0.050. Basic decisions making in normality testing were as follows:

- a. If the significance value $>$ 0.050, the data has normal distribution.

- b. If the significance value < 0.050 , the data does not have normal distribution.

The result could be seen below:

Table 3.4 Normality Testing

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.123	26	.200*	.974	26	.716
posttest	.160	26	.084	.930	26	.079

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

According to the result of normality testing, the significance of pre-test in *Kolmogorov-smirnov* was 0.200 and it was higher than 0.05. The result of post-test in *Kolmogorov-Smirnov* was 0.9741 and it was higher than 0.05, so it could be concluded that the data was normal.

2. Homogeneity

The test of homogeneity in this research was also conducted through SPSS. Test of homogeneity was conducted to know whether the data from two classes had the same or different variant. The test of homogeneity was using Levene's table. Sig. score in Levene table should be above 0.05 in order to have homogeneity distribution data. These two kind of tests were conducted in pre-test score and post-test score.

After being analyzed on SPSS and finding out that the data distribution was normal and homogenous, the writer analyzed the pre-test and post-test of experimental and control classes. The writer used t-test formula to conduct t-test in manual calculation. T-test is used to compare the scores between experimental and control class. So the writer used t-test to find out the difference between experimental class which was taught by using silent viewing technique and control class which was taught without using silent viewing technique.

Table 3.5 The result of homogeneity Testing

Test of Homogeneity of Variances

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Levene Statistic	df1	df2	Sig.
.544	1	50	.464

From to table 3.6 above the result of homogeneity testing, the significances was 0.464 and it was higher than 0.05, so it could be concluded that the data distribution was homogeneous.

F. Data Collecting Method

Data collection method is the method to obtain the data in the research. In this research the data collection method is administering test that consist of pretest and posttest. The procedure of administering test was clarified as follow:

1. Pre-test

As the first meeting, the researcher gave a pre-test to the students. It was conducted to know the students score in speaking before being taught the treatment. This test is given in order to know how far the students ability in speaking of narrative text. The test is oral test.

2. Post-test

The post-test is given to the students after conducting the treatment of using silent viewing to increase the students' speaking ability.

G. Data Analysis

In this research, the researcher used a quantitative data analysis technique to know the students achievement before and after being taught by using silent viewing activity. The quantitative data was analyzed by using statistical method. Here, the researcher conducted test to the students before and after taught by applying silent viewing activity. The result of the test was compared to know whether there is significant different of the students' speaking score. Therefore, the researcher used paired sample T test at SPSS to analyze the data. The researcher used Paired sample T test because the data was gotten from one scorer but produce two kinds of scores; the score of pretest and posttest.