

CHAPTER III

RESEARCH METHOD

This chapter presents description of the research method of this study. It covers research design, population and sample, variable, research instrument, validity and reliability testing, normality and homogeneity testing, data and data sources, data collecting method and data analysis.

A. Research Design

The research belonged to experimental research design. According to Ary et al (2010:26) experimental research involves a study of the effect of the systematic manipulation of one variable(s) on another variable. The manipulated variable was called the experimental treatment or the independent variable. The observed and measured variable was called the dependent variable.

Specifically, this research was classified into pre-experimental research with one group pre test and post test design. In one the group pre-test and post-test design, a single group is measured or observed not only after being exposed to a treatment of some sort, but also before a treatment. A pre-test provides a measure on some attribute or characteristic that is assessed in an experiment before the group get a treatment, while a post-test measure on some attribute or characteristics that is assessed for participants in an experiment after a treatment.

Creswell (2004:20) states as follows; “An experimental design is used in which attitude are assessed both before and after an experimental treatment. The data are collected on an instrument that measure attitude, and the information collected is analyzed using statistical procedures and hypothesis testing”.

In addition, Creswell (2004: 18) says “A quantitative approach is one in which the investigator primarily uses post positivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and question, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data”.

The design of the study was illustrated in the following table.

Table 3.1 The Illustration of Research Design

| Pretest | Independent Variable | Post Test |
|---------|----------------------|-----------|
| Y1 | X | Y2 |

Where:

1. X represented the independent variable, which was manipulated by the researcher. In other word X was the treatment (Round Robin Technique).
2. Y represented the measure of the dependents variable. Y1 represented the dependent variable before the manipulation of the independent variable X. Y2 represented the dependent variable after the manipulation of the independent variable X.

The procedures of the pre-experimental research using one group pre-test and post-test design in this study were described as the followings:

1. Administering pre-test (Y1) with a purpose of measuring students' speaking ability in retelling stories before applying treatment.
2. Applying experimental treatment teaching speaking in retelling stories by using Round Robin Technique (X).
3. Administering post-test (Y2) with a purpose of measuring students' speaking ability in retelling stories after applying treatment.

In this study the researcher wanted to know the effect of round robin technique in speaking skills in retelling stories of second grade students of MA Ma'arif Udanawu Blitar. The effect was known after finding out the significant difference between the students' skill before being taught by using round robin technique and those are taught after using round robin technique.

B. Population and Sample

1. Population

According to Sugiyono (2011: 80) population is not only people, but also all of the quantity of object or subject that will be learnt, but also involve the whole of characteristics of the subject or object.

The population of the research were the second grade students of MA Ma'arif Udanawu Blitar in academic year 2016/2017. Each class consists of 40 students and there were 12 class. The total population were 480 students.

2. Sample

According to Sugiyono (2009: 118) the sample is some part of the total and characteristic that is has of the population. Meanwhile Ary et al (2006:167) sampling is the small group that is observed. Sampling is also as a way the researcher select number of individuals as a sample which present the population. Ary et al (2010:149) classifies two major types of sampling procedures in to probability sampling and non-probability sampling.

The researcher used non-probability sampling type purposive sampling technique. In purposive sampling, also referred to as judgment sampling, sample elements judged to be typical or representative are chosen from the population (Ary et al, 2010:156). In other words, the researcher should be sure that the sample is representative and suitable with the purpose of research since it was impossible to take the sample randomly in case of the design and the agreement of the school.

The researcher had taken a class of twelve classes from the second grade of MA Ma'arif Udanawu Blitar on academic year 2016/2017 exactly XI MIA 2 class. Consist of 40 students. The class consist of heterogeneous students (high, middle, and low ability).

In order to the apply the experimental stage, the samples must not be too good and too bad in their English achievement, especially speaking in retelling stories. In other words, the researcher took the typical sample.

It was intended to reduce the extraneous variable may appears since the design was pre-experimental research without control group.

C. Variable

A variable is a concept that stands for variation within a class of objects. Variables can be classified in several ways. The most important classification is on the basis of their use within the research under the consideration, when they are classified as independent variables or dependent variables (Ary et al, 2010:37).

In this research, the independent was the use of Round Robin Technique and the dependent variable was students' speaking skill in retelling stories.

D. Research Instrument

Research instrument is a device used by the researcher while collecting data to make her work become easier and get a better result complete and systematic in order to make the data easy to be processed (Arikunto, 2010: 192). In collecting the required data in this study, the researcher used test.

Test in simple term, is method of measuring a person's ability, knowledge of performance in a given domain (Brown, 2001: 384). The test used to measure the students' speaking skills before and after they taught by using Round Robin Technique. There were two kinds of test in this study. They were pre-test and post-test. Pre-test was given before the students were

taught by using Round Robin Technique and post-test after taught by using Round Robin Technique.

In this research the researcher uses the scoring guidance that covers five aspects: comprehension, vocabulary, grammar, fluency, pronunciation.

Harris presented the sample of an oral English rating scale that used 1-5 points. Below is the frame of Harris's oral English rating scale to know the score of the speaking test.

Table 3.2 Harris's oral English rating scale

| No | Criteria | Rating Score | Comments |
|----|---------------|--------------|--|
| 1 | Comprehension | 5 | Appears to understand everything without difficulty |
| | | 4 | Understand nearly everything at normal speed although occasionally repetition may be necessary |
| | | 3 | Understand most of what is said at slower than normal speed without repetition |
| | | 2 | Has great difficulty following what is said, can comprehend only social conversation. Spoken slowly and with frequent repetition |
| | | 1 | Not understand about |
| 2 | Vocabulary | 5 | Use of vocabulary and idioms is virtually that of native speaker |
| | | 4 | Sometimes uses inappropriate terms and must rephrases ideas because of lexical and equities |
| | | 3 | Frequently uses the wrong words conversation somewhat limited because of inadequate vocabulary |
| | | 2 | Misuse of words and very limited vocabulary makes comprehension quite difficult |
| | | 1 | Vocabulary limitation so extreme as to make conversation virtually impossible |

| | | | |
|---|---------------|---|---|
| 3 | Grammar | 5 | Make few (if any) noticeable errors of grammar and word order |
| | | 4 | Occasionally makes grammatical and or word orders errors that do not, however obscure meaning |
| | | 3 | Make frequent errors of grammar and word order, which occasionally obscure meaning |
| | | 2 | grammar and word order errors make comprehension difficult, must often rephrases sentence and or rest rich himself to basic pattern |
| | | 1 | Errors in grammar and word order, so, severe as to make speech virtually unintelligible |
| 4 | Fluency | 5 | Speech as fluent and efforts less as that of native speaker |
| | | 4 | Speed of speech seems to be slightly affected by language problem |
| | | 3 | Speed and fluency are rather strongly affected by language problem |
| | | 2 | Usually hesitant, often forced into silence by language limitation |
| | | 1 | Speech is so halting and fragmentary as to make conversation virtually impossible |
| 5 | Pronunciation | 5 | Has few traces of foreign language |
| | | 4 | Always intelligible, though one is conscious of a definite accent |
| | | 3 | Pronunciation problem necessities concentrated listening and occasionally lead to misunderstanding |
| | | 2 | Very hard to understand because of pronunciation problem, most frequently be asked to repeat |
| | | 1 | Pronunciation problem to serve as to make speech virtually unintelligible |

From the speaking criteria above, the researcher divide the standart of Assessment.

Table 3.3 Criteria Students' Score

| Grade | Level | Range of score |
|--------------|--------------|-----------------------|
| A | Excellent | 80 – 100 |
| B | Good | 70 – 79 |
| C | Fair | 60 – 69 |
| D | Poor | 1 – 59 |

Qualification of the scores:

80 – 100 = Exceeds the standard

70 – 79 = Meets the standard

60 – 69 = Approaches the standard

1 – 59 = Does not meet the standard

E. Validity and Reliability Testing

According to Ary (2010) research is always depend upon measurement. There are two important characteristic that every measuring instrument should process of validity and reliability.

1. Validity

Brown(2004:22) states that validity is the most complex criterion of an effective text and the most important principle of language testing. It is the extent to which inferences made from assessment result are appropriate, meaningful and useful in terms of the purpose of the assessment. The measure whether the test has a good validity, the researcher analyzed the test from content validity and face validity.

In this study, the researcher checked content validity and face validity, and the researcher asked the students perform to retelling stories. The researcher made this test based on the course objective in the syllabus of second grade of MA Ma'arif Udanawu Blitar in academic year 2016/2017.

a) Content validity

According to Gay (1992:156) content validity is the degree to which a test measures an intended content area. Content validity is a kind of validity which depends on a careful analysis of the language being tested and of the particular test. A test is done to have content validity if its contents a represented sample of the language skill, structure, etc. 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. The content validity in this research can be showed as follows:

Table 3.4 Content Validity

| Competence Standard | Indicators | Speaking Test |
|---|--|--|
| To express the meaning of the short functional text and the simple monologue text in the form of narrative in the daily living context. | Students are able to tell narratives using spoken English. | Choose one of the stories that you have watch from the video, then tell the story with your own words. |

b) 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 does not have face validity may not be accepted by test takers, teachers, educators, authorities or employers. In this test, there are some aspects that are considered from this test to make a good test based on the validity.

1. The instruction must be clear for the students
2. In this test, the students can conduct a short conversation about valuable experience in front of the class. The instruction based on syllabus and suitable with their level.
3. Time allocation must be clearly. The teacher give limited time, about 5 minutes for a group work to perform.

2. Reliability

According Brown (2004:20) a reliable test is consistent and dependable, if the students are given the same test on two different occasions, the test should yield similar result. Reliability is the characteristic of very good test for it to be valid. A test must be reliable as a measuring instrument. Reliability coefficients allow us to compare the reliability of different test. The ideal reliability coefficient is 1. It means that a test with a reliability of coefficient of 1 has precisely the same results for a particular set of test-takers regardless of when it happened to

be administered. On the contrary, a test which has a reliability coefficient of zero would give sets of result quite unconnected with each other.

Quoting Lado's statement in Isnawati, Huges(1989) mentioned that a reliability coefficient for vocabulary, structure and reading test should be in the range of 0.90 to 0.99, while listening comprehension test are usually in the 0.80 to 0.89 range and peaking test must be in the range of 0.70 to 0.79.

In this tryout, the researcher used inter rater reliability, where the researcher used two raters scoring speaking skill. The first raters was the researchers and the second is the teacher of English. The researcher used Alpha Cronbach formulation.

According to triton in Sujianto (2009:97) the value of cronbach's alpha can be interpreted as follow:

Table 3.5 Cronbatch's Alpha Interpretation Based on Triton

| Cronbatch's Alpha | Interpretation |
|--------------------------|-----------------------|
| 0.00-0.20 | Less reliable |
| 0.21-0.40 | Rather reliable |
| 0.41-0.60 | Enough reliable |
| 0.61-0.80 | Reliable |
| 0.81-1.00 | Very reliable |

The researcher used SPSS 16.0 for Windows to know the reliability of test instruments. The computation can be seen in Appendix 2. The result showed that the reliability of Conbrach's Alpha was 0.77.

It was found the test was reliable because the value was 0.77, it was between (0.61-0.80 : reliable).).

F. Normality and Homogeneity Testing

1. Normality Testing

Normality test are used to determine whether a data set is well modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed. Normality test is intended to show that the sample data come from a normally distributed population.

To know the normality, the researcher used kolmogorov-smirnov test with SPSS.16. Kolmogorov-Smirnov D test is a test of normality for large samples. The result can be seen in Appendix 3.

The hypotheses for testing normality are:

- a. H_0 : Data is in normal distribution
- b. H_a : Data is not in normal distribution.

Critic area is in which H_0 is rejected when the significance value is lower than 0.05 ($\alpha = 5\%$). The analysis is as follows:

Based on the output from SPSS above was known that the significance value from pre-test was 0.145 and from the post test was 0.316. Both value from pre-test and post-test are bigger than 0.05. The significant value on pre-test was 0.145 and it was bigger than 0.05 ($0.145 > 0.05$). It means that H_0 was accepted and H_a was rejected and the data was in normal

distribution. Then, for post-test score the value of significant was 0.316 and that was bigger than 0.05 ($0.316 > 0.05$). It also means that H_0 was accepted and H_a was rejected and the data was in normal distribution. So, it can be interpreted that both of data (pre-test and post-test score) were in normal distribution.

2. Homogeneity Testing

Homogeneity testing is intended to make sure that the collected manipulation data in analysis is truly taken from population which is too different each others. Especially in a correlative study which is predictive, the model which is used must be appropriate with the composition and its distribution.

To know the homogeneity, the researcher used Test of Homogeneity Variance formula by using SPSS program 16.0 version. Homogeneity testing was done after doing the distribution score of group involved. The variance can be said homogeneous if the significance of the result is more than 0.05. According to Prayitno (2009:89), The criteria of testing, if the significance is smaller than 0.05 ($\text{sig.} < 0.05$) that the data is not homogeneous; on the contrary, if the significance is bigger than 0.05 ($\text{sig.} > 0.05$) that the data is homogenous.

The researcher used Test of Homogeneity Variances with SPSS.16. The result can be seen in Appendix 4. Based on the table in Appendix 4, the test was homogeneity because its significant was 0.387, it means that the significant is more than 0.05 ($0.387 > 0.05$). The homogeneity testing of

variance in experimental group for retelling stories by using Round Robin in this research showed that the data had homogeneous variance, so it was qualified to be analyzed.

G. Data and Data Sources

1. Data

According to Arikunto (2010:172) data is written facts or notes gotten by the researcher that will be organized in research activity. Data can be in the form of fact or numbers.

Data in this research were needed to answer the research questions. In this research the data were students' speaking scores' gotten from retelling story test. The data was from experimental group.

2. Data Source

Data source can be defined as the subject in whom the data is taken (Arikunto, 2010:172). There are two kinds of data sources; primary data source and secondary data source. Primary data source is data taken directly from the field, while secondary data source is data not taken directly from the field. In this study the data source was primary data source, since the data were students' speaking scores that were taken from the test.

H. Data Collecting Method

Data collecting methods were the way of collecting data used in this research. The data collection was a systematic and standard procedure to obtain necessary data. Furthermore, the data itself had very important role in a research, because without data it was impossible to get result of the research. The data used in this study are: number from students' speaking score.

The researcher collected the data from the students' score of pre-test and post-test. The researcher gave students pre-test to know the students' speaking ability before the researcher gave treatment. Researcher gave post-test to the students after the researcher giving treatment. The result of pre-test and post-test and then the researcher compare them. The technique of collecting data was clarified as follow:

1. Pre-test

At the first meeting, the researcher gave a pre-test to the students. It was conducted to know the students score in speaking. This test was given in order to know how far the students ability in retelling stories.

2. Post-test

Post-test is to measure their ability after treatment process, this test was given to know the basic competence for 40 students and to know their earlier knowledge after they get treatment. It was done to know the final score and to know the students, difference competence before and after they get treatment.

A pos-test was given in order to know the scores of the students after they were taught by Round Robin Technique.

I. Data Analysis

Data analysis was the way data analyzed by the researcher. In managing and analyzing the data collected, the researcher used a quantitative data analysis technique using statistical method. This technique used to find the significant difference on the students' speaking ability before and after being taught using Round Robin Technique (pretest and posttest).

The first data (pre-test) was the score of students' speaking before taught using Round Robin Technique and the data result (post-test) of speaking skill was data of average score of speaking skill after they are taught by using Round Robin Technique.

To get the achievement of speaking skill test, the writer gave the students speaking test after the students got treatment by using Round Robin Technique. The test was conducted by retelling stories one by one. To know the significant differences of the speaking ability before and after taught using Round Robin Technique, the researcher in this research uses paired sample T test at SPSS 16.0 for windows.