

CHAPTER III

RESEARCH METHOD

This chapter covers research design, population and sample, research variable, research instrument, validity and reliability testing, normality and homogeneity testing, data collecting method, and data analysis.

A. Research Design

This study belongs to a pre-experimental research design with quantitative approach. Pre-experimental research is a research design involved one group which is pre-tested and post-tested (Ary et al, 2002: 302). This is suitable with the condition met by researcher in the school that prohibits to create any new class for the research. In other words, the goal of experimental research is to determine whether causal relationship exists between two or more variables.

This research is classified into pre-experimental research design that uses one group pre-test and post-test. In the one group pre-test and post-test design, a single group is measured or observed not only after being treatment, but also before the treatment. Pre-test provides a measure on some attribute or characteristic that is assessed in an experiment before the group gets a treatment, while in the post-test measure on some attribute or characteristic that assessed for participants in an experiment after the treatment.

Table 3.1 The illustration of research design

Pre Test	Independent Variable	Post Test
Y1	X	Y2

X : Writing recount text through indirect feedback

Y1 : students' ability on writing before treatment.

Y2 : students' ability on writing after treatment.

The procedures of experimental research that use one group pre-test and post-test design in this study are described as follows:

1. Administering pre-test with a purpose of measuring students writing ability before applying treatment.
2. Applying experimental treatment teaching writing recount text by teacher's indirect feedback .
3. Administering post-test with a purpose of measuring students' writing ability after applying treatment.

As stated earlier on the design, this study was an experimental study about the effectiveness of using indirect feedback on students' achievement in writing recount text of the tenth grade at SMA Negeri 1 Tulungagung. The effectiveness was known after finding out the significant difference between the students writing ability before being taught by using indirect feedback and those are taught after using indirect feedback by comparing pre-test and post-test score.

B. Population, sampling, sample

1. Population

According to Nawawi (2012) population is the whole research objects which include human, things, animals, plants, indications, test value or events as data sources which have particular characteristics in a research. The population in this research included the whole tenth grade students of SMA Negeri 1 Tulungagung at the second semester in the academic year 2018/2019. There were 7 classes comprised X MIPA 1, X MIPA 2, X MIPA 3, X MIPA 4, X IPS 1, X IPS2, X IPS 3.

2. Sampling

Nawawi (2012) describes sampling technique as the way to take the sample whose numbers are appropriate to the sample size which will be used as real data source, by concentrating on the characteristics and the spread of population in order to get representative sample or truly represent the population.

In this reserach, the researcher used purposive sampling technique. It was technique to determine sample with a particular consideration. The researcher uses expert judgement to take some representatives or typical classes from population. The main consideration was from English teacher's recommendation. The English teacher recommended that class because the students are active and cooperative. However, they need an improvement in writing skill. In other words, the students in those classes had average proficiency in writing.

3. Sample

Sample can be defined as the smaller part of population. Since the population is too large, the researcher needs a sample. Based on the set consideration, they were X MIPA 4 class consisted of 36 students as the sample. More clearly, there were 36 students consisting of 13 males and 23 females as the participants of the study. Those 36 students were given a pretest, treatment, and post test during the research.

C. Research variable

A variable is defined as anything that has quantity or quality that varies. Santrock (2004: 47) explained that a variable is the characteristic or attribute of individual, group, or educational system that researcher is interested in.

There are two types of variable. Those are independent and dependent variable. Dependent variable is a variable that researcher is interested in to change or to be affected. While independent variable, is a factor that affects a dependent variable.

In this study, the independent variable is indirect feedback and the dependent variable is students' writing ability in recount text.

D. Research Instrument

Research instrument refers to any equipment used to collect the data (Arikunto, 2010:262). As an experimental research, the instrument used in this research was test. According to Ary et al (2010:201) test is a set of stimuli

presented to individual in order to elicit response on the basis of which a numerical score can be assigned.

The research instruments that the researcher used in this study were test and writing scoring rubric. The researcher used test to elicit and collect information on students' writing skill before and after giving treatment. There were two tests in this research; pre test, and post test. The form of test was recount writing test. Pretest was done within a week before giving the treatment. Then, posttest was done immediately after giving the treatment within a week too.

Then, to assess students' writing, the researcher set up analytic scoring rubric which included the criteria such as (1) Content, (2) Organization, (3) Vocabulary, (4) Grammar, and (5) Mechanics.

E. Validity and Reliability Testing

Validity and reliability of instrument are integral parts in conducting a study since the instrument which will be used must be valid and reliable before using it to collect the data. In this research, the researcher ensured that the instrument (test) was valid and reliable by doing validity and reliability testing as follows:

1. Validity

Validity is measuring what it is designed to measure. In language testing, Brown (2004) defines validity as the extent to which inference made from assessment results are appropriate, meaningful, and useful in

terms of the purpose of assessment. Before conducting the research, the researcher ascertained that the instrument had three kinds of validity as follows:

a. Face validity

Face validity refers to the degree to which a test looks right, and appears to measure the knowledge or abilities it claims to measure, based on subjective judgement or the examinees who take it, the administrative personnel who decide on its use, and other psychometrically unsophisticated observers (Brown, 2004). The test in this research was designed to measure students' writing skill. 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 students, what they should do in the test.
- 2) In this test, students of first grade are instructed to write recount text. Thus the degree of the test must be suitable for their level.
- 3) The consideration of time allocation must be clearly. The researcher gives time about 45 minutes for each students.

b. Content validity

Content validity is correspondence between curriculum objectives and objectives being assessed. The instrument in this research achieved content validity since the test was designed based on main competence and basic competence in Curriculum of 2013 since the school

implements the Curriculum of 2013 in the time the researcher conducted this research. Table 3.2 shows the main and basic competence in the Curriculum of 2013.

Table 3.2 : Main competence and basic competence in curriculum of 2013

Core Competence	Basic Competence
4. Analyzing thinking, and performing in both concrete and abstract field related to the development of what has been learnt in school individually, and being able to use the method based on the theory in science.	4.7 Composing simple written and spoken recount texts about activity and events by concerning on the social function, text structure, and language features correctly according to its context

c. Construct validity

Construct validity deals with the relationship between a test and a particular view of language and language learning (Johnson, 2001: 303). Construct validity was concerned with whether the test was actually in line with the theory of what it meant to know the language that is being measured, it examined whether the test given actually reflect what it means to know a language. For writing test, it should have knowledge of sub-abilities of writing such as content, organization, language use, vocabulary, and mechanics that were suggested by Jacobs et al (1981: 90). Those knowledge only can be measured if the form of the test is in the form of writing test.

Therefore, it can be said that the test has construct validity because the product of the test is in the form of writing.

2. Reliability

Hatch and Farhady (1982:243) established that the reliability of a test could be defined as the extent to which a test produces consistent result when it administered under similar conditions. A test could be considered reliable if the test has a consistent result. The result of a language skill assessment has high reliability if the result precisely represents the true level of the skill being assessed.

In the test, the researcher used *Cronbach's Alpha* to know the reliability of the test. The researcher tried to check the empirical reliability by using *Cronbach's Alpha* and to analyze the reliability the researcher used SPSS 16.0 after trying out the instrument.

The criteria of reliability according to Sujianto (2009:97), the value of *Cronbach's Alpha* as follows:

Table 3.3 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

Table 3.4 Reliabilty testing of try Out

Case Processing Summary			
		N	%
Cases	Valid	36	100.0
	Excluded ^a	0	.0
	Total	36	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.811	5

Based on the table 3.4 reliability statistics, the result of *Cronbach's Alpha* was 0.811. It was higher than 0.005. It can be concluded that the test were very reliable.

F. Normality and Homogeneity Testing

Before analyzing the significant difference between the students taught after using indirect feedback and those taught without using indirect feedback, 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.

1. Normality Testing

Normality testing was used to measure whether the distribution of test was in normal distribution or not. The normality of data was important

because the data could be considered to represent the population when it was normal distribution.

In this research to measure the normality testing, the researcher used SPSS 16.0 *One Sample Kolmogorov – Smirnov* method by the value of significance (α) = 0.05. Basic decisions making normality testing were as follows:

- a. If the significance value > 0.05 , the data had normal distribution
- b. If the significance value < 0.05 , the data did not have normal distribution.

The result of normality testing can be seen in the table below:

Table 3.5 The result of normality testing

One-Sample Kolmogorov-Smirnov Test		PRE_TEST	POST_TEST
N		36	36
Normal Parameters ^a	Mean	58.44	64.44
	Std. Deviation	10.355	10.421
Most Extreme Differences	Absolute	.149	.165
	Positive	.149	.165
	Negative	-.127	-.099
Kolmogorov-Smirnov Z		.893	.991
Asymp. Sig. (2-tailed)		.402	.280

a. Test distribution is Normal.

From the table above, the significance of pre test in Kolmogorov-Smirnov was 0.402 and it was higher than 0.05. The result of post test

in Kolmogorov-Smirnov was 0.280 and it was higher than 0.05, so it could be concluded that the data were normal.

2. Homogeneity Testing

Homogeneity testing was intended to know whether the variance of data was homogeneous or not. In this case, the researcher wanted to find out the variance score of the sample. In this case to measure the homogeneity testing, the researcher analyzed the sample by using SPSS 16.0 (*ANNOVA*). The value of significance (α) was 0.05. basic decisions making in homogeneity testing were as follows:

- a. If the significance value > 0.05 , the data distribution was homogeneous
- b. If the significance value < 0.05 , the data distribution was not homogeneous.

The researcher used pre tests' and post test' score to see the homogeneity. The result of homogeneity testing can be seen as below:

Table 3.6 The result of homogeneity testing

Test of Homogeneity of Variances

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Levene Statistic	df1	df2	Sig.
.120	1	70	.730

From the table 3.6 above, the result of homogeneity testing, the significance was 0.730 and it was higher than 0.05. It could be concluded that the data distribution was homogeneous, so it was qualified to be analyzed.

G. Data Collecting Method

The aimed of this research was to gain the data on the students' recount writing ability score before the treatment (pre test) and after the treatment (post test). During three week study, the students followed the researcher on direct meeting. In the beginning of the study, within a week, the researcher conducted pre test. Pre test was conducted before the treatment administered. It was to see the basic quality of students' recount writing performances before receiving the treatment. In pre test, the students started making the first draft.

Then, in the interval of pre test, the researcher introduced indirect feedback to the students. The researcher explained correction codes to indicate error types in indirect feedback. The researcher asked students to make a recount text, then the teacher gave indirect feedback to the students' writing error and they revised it.

After gaining the score in pre test and conducting treatment, the researcher administered posttest to know how effective the treatment was. The researcher gave evaluative comment and feedback when the students finished making the draft. The schedule of the research consisting of some activities illustrated as follow

Table 3.7 Schedule of researcher's activities

No	Date	Activities
1.	March 29 th , 2019	Giving pre test
2.	April 10 th , 2019	Giving the first treatment by using lesson plan 1 (Appendix 2)
3.	April 17 th , 2019	Giving the second treatment by using lesson plan 2 (Appendix 3)
4.	April 24 th , 2019	Giving the third treatment by using lesson plane 3 (Appendix 3)
5.	April 30 th , 2019	Giving Post test

H. Data Analysis

In this research, the researcher used a quantitative data analysis technique to know students' ability before and after being taught by using indirect feedback. The quantitative data was analyzed by using statistical method. Then, the data which were gained from pre test and post test were analyzed by using t-test for dependent sample. This was also known as the correlated or non independent or *Paired Sample T test*. The measure was to be analyzed by the dependent t test was the mean difference between the paired scores. Pre test and post test score of the same individuals are an example of paired scor (Ary, 2010:176). *Paired Sample T Test* was used when the sample were pair or correlate where each individual results in two data. In other words, the scores for pre test and post test were correlated because those scores were resulted by the same individual. To know the significant difference, the researcher used SPSS 16.0.