

III. RESEARCH METHODS

This chapter discusses about research design, population and sample, data collecting technique, research procedures, instrument of the research, scoring criteria, data treatment, data analysis, and hypothesis testing.

A. Research Design

This research was quantitative research and the writer used one-group pretest-posttest design. Even though the internal validity of this design is questionable and many other factors which could affect the students' improvement (Hatch and Farhady, 1982:20), it is easy and useful way of getting preliminary information. In this research, before the first teaching, pretest carried out and after three times teachings using the treatment (roundtable technique), a posttest was conducted. This was done to find out whether roundtable technique can increase students' writing ability. This research design can be presented as follows:

T1 X T2

Where:

T1: pre-test: it is a test aims to see the students' ability (in this research, the researcher focus on writing ability) before they are given such kind of treatment (roundtable technique).

T2 : post-test: it is a test to see the students' ability of a certain skill (writing ability) after they have given treatment (roundtable technique).

X : treatment:in this research, the teacher treats the students by applying roundtable technique in teaching descriptive text writing.

(Hatch and Farhady, 1982:20)

B. Population and Sample

Population of this research was SMA Xaverius Pringsewu that has six classes of the first year. Each class has the same opportunity to be chosen as the sample. The sample was only one class and it has been selected by using simple probability sampling. The writer wrote these six classes on a small paper, one class for one piece of small paper. Then, the writer took only one paper randomly to choose the sample.

C. Data Collecting Technique

In order to collect the data, there were two tests would be tested to the students:

1. Pretest

The writer administrated this test in 90 minutes. The purpose of this test is to know how far the students ability in mastering descriptive text writing before the treatment. In this test, the students were distributed writing pretest sheet which has been stated by clear instructions and directions. The students were asked to create descriptive text of one member of their families (it can be father, mother, brother, sister, grandfather, etc.)

2. Posttest

This test was also being done in 90 minutes. This was done in order to see the students' improvement in descriptive text writing after two times treatments (roundtable technique). This test was similar with the writing pretest. One that

makes them different was that in the posttest, the students were asked to compose a descriptive text of their favorite actors or actress.

D. Research Procedures

The procedures were being done in this research are:

1. Determining Population and Sample

The population of this research was the first year of SMA Xaverius Pringsewu in the 2011/2012 learning year that consists of 6 classes, and one class was taken as the sample. The sample was selected using simple probability sampling.

2. Selecting Writing Materials

In selecting the writing materials, the writer saw the newest syllabus of the first year of SMA based on KTSP (School Based Curriculum) and the students' handbook. The topics of the writing were describing a person.

3. Conducting Pretest

The researcher conducted pretest before treatment of roundtable technique. This test took at least 90 minutes. The pretest was conducted to investigate the students' present writing ability before treatment. The topic chosen were describing a person; member of families (father, mother, brother, sister, etc.). After they have finished writing, they submitted their writing and the teacher judged their writing based on the five components of writing; content, vocabulary, organization, language use, and mechanics.

4. Giving Treatment (Roundtable Technique)

The treatments of roundtable technique were conducted in the class for three meetings in which 2 x 45 minutes were distributed for each meeting;she did

the treatments in three meetings by assuming that she will get the target she wants, that was increasing their descriptive text writing ability through this technique in three meetings. The researcher herself conducted the class. The activities of roundtable technique done by the researcher during the treatments can be seen in Appendix 2-4.

5. Conducting Posttest

The posttest aimed to know the progress of students' writing ability after being given treatment. This test was administered in 90 minutes. This test was similar with the pretest, one that differ them is the topic; the topic is describing favorite actors or actress.

6. Analyzing the Data

First, the data, in the form of score gained from pretest and posttest was tabulated and calculated its inter-rater reliability and intra-rater reliability. Then, she calculated minimal score, maximal score, and mean of the pretest and the posttest and its standard deviation. After that, the hypothesis was tested using Repeated Measures T-Test and the result tells us whether roundtable technique can increase students' writing ability in writing descriptive text.

7. Making Conclusion

The last step was making conclusion based on result of the tested hypothesis.

E. Instrument of the Research

Since students' writing ability has been evaluated, writing test was the instrument of this research. Heaton (1991: 137) suggests that writing can be a useful testing tool since it provides the students with an opportunity to demonstrate their ability

to organize language material, using their own words and ideas, and to communicate. In this research, the students were asked to write a descriptive text of a person. There were two writing tests in this research; the writing pretest and the writing posttest. The tests were accompanied by: detail instructions and directions including time allocation.

In fulfilling the criteria of good test, reliability and validity of the test should be considered.

1. Validity

A test is said to be valid if it measures accurately what is intended to measure. There are some types of validity; content validity, constructs validity, and face validity (Hughes, 1989:22). The validity of the test of this research related to:

a. Face Validity

According to Heaton (1988: 160), a test refers to have face validity if the test item looks right to other testers, teachers, moderators, and testees. It is therefore, often useful for showing a test to colleagues or friends. Only if the test is examined by other people can some of the absurdities and ambiguities then be discovered. Moreover, the students' motivation is maintained if a test has good validity. If, in the other hand, the test appears to have little of relevance in the eyes of the students, it will clearly lack face validity. Possibly as a direct result, they will not put maximum effort into performing the task set in the test. However, most designers of communicative tests regard face validity as the most important of all types of test validity. Therefore, in order to get face validity of the writing tests, the tests that contains of the instructions and the directions has

been examined by the researcher's advisors and English teachers until the test looks right and understandable.

b. Construct Validity

A test, part of test, or a testing technique is said to have construct validity if it can be demonstrated that it measures just the ability which it is supposed to measure (Hughes, 1989:26). Furthermore, Heaton (1988: 161) states that if a test has construct validity, it is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning. This type of validity assumes the existence of certain learning theories or constructs underlying the acquisition of abilities and skills. In this research, the researcher measured the students' ability in descriptive text by using writing tests. In those tests, they are asked to create a descriptive text of person. Those tests have construct validity since based on writing theory, writing tests of describing person is adequate measure of writing skill.

c. Content Validity

While the content validity means that the test may be said to have content validity if the test reflect such an analysis of mastery of a specific skills or the content of a particular course of study (Harris, 1969:19). It is also supported by Heaton (1988: 160) who mentions that content validity depends on a careful analysis of the language being tested and the particular course objectives. This test should be so constructed as to contain a representative sample of the course, the relationship between the test items and the course objectives always being apparent. In this way, the

test should achieve content validity and reflect the component skills and areas which the test writer wishes to include in the assessment. In her research, the researcher tried to have content validity of her test by constructing the tests which reflect five components of writing; content 30 per cent, organization 20 per cent, language use 20 per cent, vocabulary 25 per cent and mechanics 5 percent. These total of percentages taken form the ESL composition profiles.

2. Reliability

Reliability refers to the consistency of the measure. A test is said to be reliable if its scores remain relatively stable from one administration to another (Hatch and Farhady, 1982:144). It means that a test is valid if it has stable score from one test to another test. To ensure the reliability of the pre-test and post-test score and to avoid subjectivity of the writer, *inter-rater reliability* would be evaluated. It was evaluated by two or more judges or raters. In this research, the first rater was the writer herself and the second rater was her classmate, Deri Herdawan. Both of them discussed and put in mind of the writing criteria in order to obtain the reliable result of the test. She also evaluated *intra-rater reliability*. In this case, the same rater (the writer) evaluated it by repeating the assessment of the students' writing again 4–6 days later. She evaluated it twice in the range time two days. Therefore, there were two final scores of each student; but, the researcher took only the score in inter-rater reliability.

After getting the students' final score and calculating the score, the writer used *rank-orders correlation* to see whether the tests (pre- and post-test) are reliable or

not. Both of *inter-rater reliability* and *intra-rater reliability* result of those tests were calculated by *rank-orders correlation* whose formula is:

$$\rho = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}$$

Where: ρ : coefficient of rank correlation
 N : Number of students
 D : the different of rank correlation
 $1-6$: Constant number

(Hatch and Farhady, 1982:143)

In this case, to interpret the reliability of the tests, the coefficient of rank correlation was considered through the standard criteria bellows:

0.00 – 0.20 is *very low*; if the result of the reliability is about 0.00 to 0.20, it is categorized to very low reliability;
 0.20 – 0.40 is *low*; if the result of the reliability is about 0.20 to 0.40, it is categorized to low reliability;
 0.40 – 0.70 is *medium*; if the result of the reliability is about 0.40 to 0.70, it is categorized to medium reliability;
 0.70 – 0.90 is *high*; if the result of the reliability is about 0.70 to 0.90, it is categorized to high reliability;
 0.90 – 1.00 is *very high*; if the result of the reliability is about 0.90 to 1.00, it is categorized to very high reliability;

(Sudijono, 2007:193)

After calculating the data (see Appendix 12-15), the result of the two reliabilities can be seen in the following tables:

Table 3.1 Inter-rater Reliability

Reliability	Pretest	Posttest	Criteria
	0.99	0.99	Very High Reliability

Table 3.2 Intra-rater Reliability

Reliability	Pretest	Posttest	Criteria
	0.99	0.99	Very High Reliability

In Table 1, the criterion of reliability of the pretest and posttest is very high reliability. It means that both of the raters were consistent in scoring the students' writing. While in Table 2, the criterion of reliability of the pretest and posttest is very high reliability. It means that the rater were consistent in scoring the students' writing even though it was done in different time.

F. Scoring Criteria

This research was aimed at finding out whether roundtable technique could improve students' writing ability. Basically, there are five aspects or criteria of writing will be evaluated by the researcher; Content, Organization, Language Use, Vocabulary, and Mechanics.

Furthermore, the ESL composition was used because it provides a well defined standard and interpretive framework for evaluating a composition of students' communication effectiveness which is suggested to be used in evaluating students' writing (Jacobs, 1981:90).

Here are the ESL composition profiles devised from (Jacobs: 1981) in Reid (1993:236-237):

1. Content aspect is clarified as the following:
 - 5 This range of score belongs to the students who are '*excellent to very good*'. It can be seen from the writing result of the students who can express their ideas clearly, which is, by providing concrete and specific details to clarify the general ideas the students are presenting. Obviously, the successful writing has enough details to make the reader see the writer's picture, feel his feelings, think his thoughts, and understand his ideas.
 - 4 The students who get this score can be classified into '*good to average*' students. It can be seen from students' who are good enough in developing the topic. Besides, it is found that the students' writing is already unified. However, the students' writing still needs more clarity to avoid confusion of the reader's understanding.
 - 3 This range of score belongs to '*fair to poor*' students who show little substance in their writing. Actually, they do not clearly state their meaning since they mostly write in general. As a result, the reader of their composition may feel confused about what the writing is about because there is unclear restriction of the topic. The students need to provide concrete and specific details for it to be clear.

- 2 Students who get score within this range are considered '*very poor*'. The students only write simple information which sometimes does not clarify the meaning of the topic, and even does not relate to the topic they intend to develop. They obviously show very poor knowledge of writing descriptive text.
2. Organization aspect uses the following scoring system:
- 5 In this aspect, students who are fluent in organizing their ideas in the order belong to '*excellent to very good*' students. Since the focus of this teaching learning is in writing descriptive, hopefully the students are able to write based on the generic structure. It is found that the students' writing exhibits coherence; means that the ideas flow smoothly.
- 4 The students who belong to '*good to average*' group are good enough in organizing their composition. It is also found that the students' main ideas stand out. They are good in sequencing the events happened in their writing.
- 3 If the students' ideas are still confusing and disconnected, they belong to '*fair to poor*' students. They need to follow the order of the events to make their writing be more logical.
- 2 The students who get score in this range are considered '*very poor*' since they have only a little knowledge of how to organize their writing chronologically. Their ideas jumble from one event to another which results in reader's confusion. In other words, the students' writing has no organization needed in narrative structure which is characterized by sequencing the events.
3. Vocabulary aspect uses the following systems:
- 5 The students get score in this range when they use the words effectively and appropriately. They also exhibit the choice of words by using synonymy, connotation, or idioms in expressing the ideas. The students who get this range of score belong to '*excellent to very good*'.
- 4 The students who belong to '*good to average*' have adequate range of vocabulary. Occasional errors of words/idiom form, choice, and usage are still found in the students' writing result.
- 3 The students who get this score belong to '*fair to poor*' students. They have problems in using appropriate words to express their ideas. Sometimes they misunderstand the words because they think that these words sound alike if they are spoken.
- 2 The students who belong to '*very poor*' are essentially translate the words. It happens since they have little knowledge of English vocabulary.
4. Language Use scoring system is as follows:
- 5 The students are classified into '*excellent to very good*' students when they can write effective sentence, in simple and complex constructions. The students use appropriate tenses and beautify their composition by variation of sentences, for example, the using of passive form, inversion, and complex sentence.
- 4 The students who get this range of score are considered to be '*good to average*' group. It is found that the students can write effective sentences, even mostly are still in form of simple constructions. Meanwhile, they also use appropriate tenses in their writing.
- 3 '*Fair to poor*' students still make problems in simple or complex constructions. Their errors are mostly in using tenses, for instance, the students still use present tense in writing descriptive text.
- 2 The students who belong to '*very poor*' obviously show no mastery of sentence construction rules. The students need extra practice to write sentence grammatically.
5. Mechanics aspect uses scoring system as the following:
- 5 The students who get 5 in mechanics belong to '*excellent to very good*'. The students show mastery of conventions which can be seen from their appropriate and correct use of spelling, punctuation, capitalization, and paragraphing.
- 4 The students' ability in mechanics is considered to be '*good to average*' if they can write correct spelling and punctuation well. Errors are found occasionally and considered to be their lack of concentration in writing.

- 3 The students who get score 3 belong to 'fair to poor' students. Errors of spelling, punctuation and capitalization are still found frequently in the students' writing. These students are still lack in the mastery of conventions. Most of them still think that mechanics aspect is not really important in writing.
- 2 The students who get 2 belong to 'very poor'. Their composition is dominated by errors of spelling, punctuation, capitalization, and paragraphing. The students need to pay serious attention in mechanics since this aspect is also very important in writing.

The explanation above can be simplified as the following table of specification:

Table 3.3 Table of Specification

No	Aspect of Writing	Definition	Percentage
1.	Content	Referring to the substance of writing, the experience of the main idea (unity).	20%
2.	Organization	Referring to the generic structure of descriptive text, ideas clearly stated and supported, having logical sequencing, cohesive, and coherence.	20 %
3.	Language Use	Viewing the use of correct grammatical and syntactic pattern refers to the language features of descriptive text.	20 %
4	Vocabulary	Considering several criteria such as the errors of words formation, improper word choice, and idiom usage.	20%
5	Mechanic	Referring to the errors of spelling, punctuation, capitalization, and paragraphing.	20%

In order to make easy in scoring the students' writing, the researcher edited the ESL composition profiles above; she gave the same weight score for all aspects. She decided the highest score is 5 and the lowest score is 2). The possible score are gained by students based on the criteria above will rank from 0-100. Take for example, if a student gets scores for content: 5, organization: 3, language use: 4, vocabulary: 3 and mechanics: 3, the total or the final score will be 72; it is resulted from the computation of all aspects score $(5+3+4+3+3) \times 4$.

G. Data Treatment

Before the writer analyzed the data, it was necessary that the writer had to find out whether the data was random or not or whether the data had normal distribution or not. There were two kinds of the data treatment in this research:

1. Random Test

Random Test is used to ensure whether the data is random or not. One of the assumption should be fulfilled in using T-Test is the data should be taken from random sample in a population. In this research, H_0 was accepted if $\text{sign} > \alpha$, and the researcher used the level significant 0.05.

2. Normality Test

This test was used to measure whether the data is normally distributed or not. The hypothesis is accepted if $\text{sign} > \alpha$. In this case, the research uses the level of significance of 0.05.

3. Homogeneity Test

This test is used to know whether the data are homogeneous or not. The hypothesis is accepted if $\text{sign} > \alpha$. In this case, the research uses the level of significance of 0.05.

H. Data Analysis

In analyzing the data gained, the writer analyzed the students' score using these steps. The first step was scoring the pretest and the posttest. The second was tabulating the students' score of the pretest and the posttest using rating scale. And the last step was drawing conclusion by comparing the means of pretest and posttest score to see the value of significance by using Repeated Measures T-Test of SPSS version 15.

I. Hypothesis Testing

In order to test the hypothesis, the writer compared the pre-test and post-test score by using Repeated Measure T-test of SPSS since the data comes from the same sample. This test is also known as paired T-test or dependent sample T-test (Setiyadi, 2006:170).

With t-table 0.05 (see Appendix 18), the hypothesis that has been mentioned is accepted with the following criteria:

1. If $t\text{-value} > t\text{-table}$, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. It means that roundtable technique can increase students' ability in writing descriptive text.
2. If $t\text{-value} < t\text{-table}$, the alternative hypothesis (H_a) is rejected and the null hypothesis (H_o) is accepted. It means that roundtable technique can not increase students' ability in writing descriptive text.