

III. METHOD

This chapter discusses the design of this research and how to collect the data from the samples. The researcher includes the data collecting technique and the procedure of this research, the scoring system and how the data are analyzed. The population and sample, data collecting technique, research procedures, validity and reliability, treatment of data, hypothesis test are also presented in this chapter.

3.1 Design

In this research, the researcher conducted quantitative research based on experimental method. This study applied one-group pretest-post test design of pre-experimental design. In this research the students were given pretest before treatment and they were given post test after treatment. The researcher used one class as the sample of the research. The design can be presented as follows:

T1 X T2

T1 means pre-test

X means treatment

T2 means post-test

(Setiyadi, 2006:131-132)

The research was conducted in 5 (five) meetings. The first meeting was for pre test, the other three meetings for treatments and one last meeting for post test. The pre test was done to find out the students' basic ability in writing descriptive text before treatment. Then, treatments were done to guide the students in writing descriptive text. The last, post test was done to find out the students' increase in writing descriptive text. It was also to make sure that realia could be used to increase students' writings. Each meeting took two lesson hours (2 X 45 minutes).

The criteria whether teaching writing using realia could increase students' descriptive text writing ability was determined by the differences between the scores of the pre-test and post-test. If there was a progress from the pre test to the post test, it means that realia can increase the students' descriptive text writing ability. In other words, if there is no progress from the pre test to the post test, it means that realia cannot be used to increase the students' descriptive text writing ability and the teacher needs to evaluate the implementation of realia on the students' descriptive text writing.

3.2. Population and Sample

Population and sample are necessary in a research, and so it was also in this research. The researcher did research in a school; it was Junior High School level, where the population and sample of the research was the students of the school. The detailed explanation of the population and sample is as follows.

3.2.1. Population

The population of this research was the students of SMPN 2 Bandar Mataram, Lampung Tengah in the year 2011-2012 Class 2. There were 4 classes for second year and the researcher took one class of the second year students.

3.2.2. Sample

The researcher took the sample by choosing one class as the target of the research. The class was the second grade of Junior High School; this class was class VIII A which had 40 students. In this research, the researcher gave tests and treatments to all students but the researcher only chose 20 students as sample of the research; it was done because the researcher found in the result of pretest many students who cheated in doing their test, so that the researcher decided to take only 20 students who did not cheat in their tests and tasks as sample.

3.3. Research Instruments

To figure out whether the objective of the research was achieved or not, the researcher used research instrument. The instrument of the research was test. There were pretest and post test. The tests were conducted in the first and last meeting of the research. The tests were pre test before the treatment and post test after the treatment. The test asked the students to write the descriptive text based on the topics given by the researcher. The topics were (1) A Fruit which I Like, (2) A Person I like with, (3) My Favorite Place. The same topics were given in both tests. Then, the students had

to choose the same topic in the pre-test and post-test (see Appendix 3). The students should minimally write 6 sentences for their descriptive text. Both pretest and post test took 90 minutes.

3.4. Data Collecting Technique

The data gained based on students' score on the pre-test and post-test clarified as follows.

1) Pre-test

Pre-test in order to find out the students' scores before the treatment was applied. The researcher gave some topics to be chosen by students. Then the students were asked to write descriptive texts that consist of at least six sentences. It required 90 minutes for the test.

2) Post-test

Post-test was given after the treatments were conducted. This test was to know the score of writing after treatments and to know how far the increase of the students' descriptive text writing ability from pre-test to post-test. In this test the researcher gave the same topic to the students as they choose in the pre test. The text should consist of at least six sentences. It took 90 minutes for this test.

3.5. Research Procedures

The procedures of the research were as follows:

1. Determining the population and samples

In this stage, the researcher chose SMPN 2 Bandar Mataram, Lampung Tengah as the population and sample of this research. There were 4 (four) classes for the second grade; they are VIII A, VIII B, VIIC and VIII D. The researcher took one class as the sample of the research. The researcher chose class VIII A as the sample of the research.

2. Finding and selecting materials to be taught and tested

In this stage, the researcher found some topics for the pre test. The topics were taken from the students' handbook and based on the teaching and learning syllabus. The topics were describing fruit, person and place.

3. Conducting pre test to the students and getting the result

In this stage, the researcher prepared some topics and suitable realia. Then, the researcher asked the students to choose one of the topics to be written by them in their descriptive text writing. The time was 90 minutes for this test.

4. Giving treatment by teaching descriptive text by using realia

In this step, the researcher explained the procedure in writing descriptive text and she made an example of descriptive text by using realia. The researcher also explained clearly about realia and how to use it in making descriptive text. Then, the students were asked to make the descriptive text after the researcher gave

explanations and example of good descriptive text by using realia as media to be described.

5. Conducting the post test

After giving treatment to the students, the researcher gave the same topic to the students as they chose in the pre test. Then they were asked to write the descriptive text based on the topic they chose. It required 90 minutes for this test.

6. Scoring the students' writing

Scoring the students' writing was done after conducting the post test. In this step of the research procedures, the researcher gave score based on the five aspects of writing. The five aspects were content, organization, vocabulary, grammar and mechanic. In scoring, the researcher used two raters in order to avoid the subjectivity of the researcher. The first rater was the researcher and the second rater was the English teacher of the class.

7. Analyzing the data

Then, the researcher analyzed the result of the pre test and post test of the students. To see whether there is a progress or not on the students' descriptive text writing ability after being taught by using realia, the researcher analyzed the increase by comparing the scores of pre test and post test of the students.

8. Making a report

The last stage, after analyzing the result of the tests, the researcher reported the increase of the students' descriptive text writing achievement after being taught by using realia.

3.6. Scoring System

There are five aspects evaluated in writing; they are content, organization, vocabulary, grammar and mechanic (adapted from Heaton, 1991: 135). The following table presents the five aspects of evaluating which was used.

Table 3.1. Table of Specification

No	Aspect of Writing	Definition	Percentage
1	Content	The substance of the writing, the idea expressed.	20 %
2	Organization	The form of content (coherence).	20 %
3	Vocabulary	The selection of word that suitable with the content.	20 %
4	Grammar	The employment of grammatical forms and syntactic patterns.	20 %
5	Mechanic	The conventional devices used to clarify the meaning.	20 %

(Adapted from Heaton, 1991:135)

The researcher gave score 20% in each aspect of writing in order to be easier in calculating.

The scoring criteria are as follows:

1. Content

The score of the content ranges as the followings:

- 16-20 = Excellent: all developing sentences support main idea.
- 11-15 = Good: three of all developing sentences support main idea.
- 6-10 = Fair: two of developing sentences support main idea
- 1-5 = Poor: one of developing sentences support main idea

2. Organization

The score of the organization ranges as the followings:

- 16-20 = Excellent: Fluent, all sentences in chronological order.
- 11-15 = Good: loosely organized but some sentences in chronological order.
- 6-10 = Fair: not fluent, few sentences are disconnecting each other.
- 1-5 = Poor: does not communicate, no organization.

3. Vocabulary

The score of vocabulary ranges as the following:

- 16-20 = excellent: effective word, choice and usage.
- 11-15 = good: occasional errors of word, choice and usage but meaning not obscured.
- 6-10 = fair: frequent errors of word, choice and usage.
- 1-5 = poor: there is no word, choice and usages are correct.

4. Grammar

The score of grammar ranges as the following:

16-20 = excellent: effective complex constructions, grammar.

11-15 = good: effective but simple grammar.

6-10 = fair: major problems in simple grammar.

1-5 = poor: no mastery of grammar rules.

5. Mechanic

The score of the mechanic ranges as the followings:

16-20 = excellent: conventions are correct.

11-15 = good: occasional errors of punctuation, spelling, capitalization.

6-10 = fair: frequent errors of punctuations, spelling and capitalization.

1-5 = poor: no mastery of conventions.

3.7. Validity and Reliability

3.7.1. Validity

Validity is a matter of relevance. It means that the test measures what is claimed to measure. To measure whether the test has good validity or not, the writer analyzes the test from content validity and constructs validity.

Face validity concerns with how the test looks. Face validity of the test was achieved by arranging the instruction of the test as clear as possible. The writer consulted her advisors to make the instruction of the test were easily understood by the students.

Content validity is concerned with whether or not the test is sufficiently representative and comprehensive for the test to be valid measure it supports to measure in the content validity of the material given was suitable with the curriculum used. Furthermore in the research, the writer reports the tests are valid because they were based on the syllabus that is used by the teacher. Meanwhile, content validity was achieved by reflecting what had been taught to the students. In the research, the writer taught based on the syllabus that was used by the teacher.

Construct validity focuses on the kind of test that is used to measure the ability. In this research writer administered a writing test. The scoring covered five aspects of writing; they are content, organization, vocabulary, grammar, and mechanic.

Construct validity examines whether the test is actually in line with the theory of what it means to know the language, whether the test is actually a reflection of what it means to know a language (Shohamy, 1985: 74-75). Here the materials are arranged based on the curriculum and are adopted from the students' handbook for the second year of SMP students. Construct validity was achieved by looking if the test measured just the ability which it was supposed to measure. In the research, the researcher measured writing skill referring to the five aspects of writing (content, organization, vocabulary, grammar and mechanic). The writer put the five aspects on the work sheet of the tests and explained to the students that the score is based on the five aspects. So, the students would get focused on those five aspects when they were writing their descriptive text. In conclusion, the test was valid.

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|----------------------------|---------------------------|
| 3. an average reliability | ranges from 0.40 to 0.59 |
| 4. a high reliability | ranges from 0.60 to 0.79 |
| 5. a very high reliability | ranges from 0.80 to 0.100 |

Slameto (1998:147)

The researcher considered that both raters would achieve the reliability if the inter-rater reliability had reached ranged 0.60-0.79 (a high reliability) in this research, it was found that the result of inter reliability of pretest was as follows:

Inter-rater reliability in pretest

$$\begin{aligned}
 R &= 1 - \frac{6 \cdot \sum D^2}{N(N^2 - 1)} \\
 &= 1 - \frac{6 \cdot (27)}{20 \cdot (20^2 - 1)} \\
 &= 1 - \frac{162}{7980} \\
 &= 1 - 0.020 \\
 &= 0.98
 \end{aligned}$$

It means that rater 1 and rater 2 have suitability, while inter-rater reliability in post test is as follows.

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

$$\begin{aligned}
&= 1 - \frac{6(240)}{20(20^2 - 1)} \\
&= 1 - \frac{1440}{7980} \\
&= 1 - 0.180 \\
&= 0.82
\end{aligned}$$

The researcher's calculation showed that the reliability coefficients were acceptable.

The coefficients were 0.98 for pretest and 0.82 for post test.

3.8. Data Treatment

In treating the data, the writer used the following procedures:

3.8.1. Random Test

The random test was conducted to find out whether the students' data in the sample class fitted the criterion of randomization or not. The samples were tested by using Run Test in SPSS 15. The hypotheses of the random test were:

H_0 = The data is not random

H_1 = The data is random

The level of significance used was 0.05. H_1 is accepted if the result of the random test is higher than 0.05 ($p > 0.05$).

3.8.2. Normality Test

The purpose of composing the normality test was to find out whether the data were normally distributed or not. The writer used SPSS 15 to analyze the data in order to find the value. The hypothesis of the normality test were:

H_0 = The distribution of the data is not normal

H_1 = The distribution of the data is normal.

The level of the significance used was 0.05. H_1 was accepted if the result of the normality test is higher than 0.05 ($p > .$).

3.9. Hypothesis Testing

To know the gain the researcher compared the result of pre-test and post-test. The data was analyzed by using t-test in order to know the significance of treatment effect.

The formula of t-test analysis is:

$$t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}}$$

with

$$\sum x^2 d = \sum d^2 - \frac{(\sum d)^2}{N}$$

The criteria are:

With t-table (0.01)

H_1 is accepted if the t-ratio is higher than t-table, or (t-ratio > t-table)

H_0 is rejected if t-ratio is lower than t-table, or (t-ratio < t-table)