

CHAPTER III RESEARCH METHODS

In this chapter, there were seven points would be explained namely research design, population and sample, data collecting technique, research procedures, instruments of the research, data treatment, data analysis, and hypothesis testing.

3.1 Research Design

In this research, the researcher applied one-group time series design. In this research design, control group and experiment group were the same. Setiyadi (2006:137) said that although the effect of repeating treatment can reduce its internal validity, the use of one group as control and experiment group can decrease the influence of extra variable through the test result. Furthermore, this kind of research requires the series of data or test. So, in this research the researcher tried to compare some test results. This research design can be presented as follows:

T1 T2 T3 X T4 T5 T6

(Setiyadi, 2007:137)

Where:

T1, T2, T3: These were the tests which were given after teaching writing skill by using lesson plan which did not use the technique. It was used to see the students' ability (in this research, it focused on writing ability) after teaching and learning

process. These tests used three different topics. They were computer, internet, and facebook.

X: This was treatment which was given to the students. In this research, the teacher treated the students by applying KWL Technique in teaching hortatory exposition text by three different topics i.e. computer, internet, and facebook.

T4, T5, T6: These were the tests which are given after the treatments. It was aimed to know the students' ability of certain skill (writing ability) after they are given treatment (KWL Technique). These tests conducted three different topics on its process namely computer, internet, and facebook.

3.2 Population and Sample

The population of this research is MAN 1 (Model) Bandar Lampung that had ten classes of the second year. The sample was only one class and it had been selected by using simple probability sampling. The writer wrote these ten classes on a small piece of paper, one class for one piece. Then, she took only one paper randomly as the sample.

3.3 Data Collecting Technique

In order to collect the data, there were two kinds of tests were tested.

3.3.1 The Tests before Treatments

These three tests were done in order to see students' ability on writing hortatory exposition text in terms of content, organization, vocabulary, language use, and

mechanics. These were applied after teaching by using lesson plans which did not use the technique. Each test was administered in 45 minutes. In this test, the students were given writing test sheets which had been stated by clear instructions and directions. The students were asked to create hortatory exposition text of the topics computer, internet, and facebook.

3.3.2 The Test after Treatments

These three final tests were also done in 45 minutes. The purpose of these tests was done to know students' test results on writing hortatory exposition text in terms of five writing components applied after treatments (KWL Technique). In administering these tests, the researcher gave the students writing test sheets which state clear instructions and directions. The topics of the tests were also computer, internet, and facebook.

3.4 Research Procedures

The procedures which are done in this research are:

3.4.1 Determining Population and Sample

The population of this research was the second year of MAN 1 (Model) Bandar Lampung in the 2011/2012 learning year that consists of ten classes. However, only one class was taken as the sample. It was selected by using simple probability sampling. The chosen class was XI IPS 4.

3.4.2 Selecting Writing Material

In selecting the writing materials, the writer looked at the syllabus of the second

year of SMA based on KTSP (School Based Curriculum) and the students' handbook. The type of text which was used in this research was hortatory exposition text.

3.4.3 Conducting the Series of Teachings and Tests

These series of teaching and test took three meetings where those were done in 2×45 minutes per meeting. On each meeting, the first 45 minutes was used to apply teaching writing by using lesson plans which did not apply the technique. Then, 45 minutes left was used to conduct the test.

3.4.4 Applying the Series of Treatments (KWL Technique) and Tests

These treatments of KWL Technique and tests were applied in the class for three meetings. It took 2×45 minutes for each meeting where the researcher divided it 45 minutes for treatment and 45 minutes for test. The purpose of treatments which were conducted in three meetings was to see the improvement of students' writing ability on hortatory exposition text by using KWL Technique on three different topics: computer, internet and facebook. The researcher herself conducted the class. The activities of these treatments could be seen in appendices.

Meanwhile, the researcher conducted the tests after the students were given treatments of KWL Technique. It also took 45 minutes in test. It was aimed to know the progress of students' writing ability on hortatory exposition text after applying KWL Technique in their writing class.

3.4.5 Analyzing the Data

After conducting the entire test, the next point was analyzing the data. There were

three steps in analyzing the data. First, the data in the form of score gained from beginning tests and final tests were tabulated and calculated its inter-rater reliability. Second, she calculated mean, standard deviation, minimal score and maximum score which were gotten from the students' scores calculated. Those data were used by the researcher to measure students' attainment. Then, the researcher interpreted those data to get the description of students' ability in writing hortatory exposition text by using Repeated Measures. The writer used Repeated Measures T-Test to test the hypothesis.

3.4.6 Making conclusion

The last point that would be done in the research procedure was making conclusion. It was considered based on the result of the study relating to the research questions.

3.5 Instruments of the Research

The instruments of this research were writing tests. There were six writing tests in this research i.e. three tests before treatments and three tests after treatments. The tests were carried out by detail instructions and directions including time allocation. In this research, the students were asked to write a hortatory exposition text using KWL Technique.

Here were some points that considered in the instruments of research. They were validity, reliability and scoring system.

3.5.1 Validity

Heaton (1991:159) says that validity of a test is the extent to which it measures what it is supposed to measure and nothing else. In the other word the test must aim to provide a true measure of the particular skill. The validity of the test of this research relates to face validity, construct validity, and content validity.

3.5.1.1 Face Validity

Heaton (1991:159) states that a test has this type of validity if the test item looks right to other testers, teachers, moderators, and testees. In order to reach this face validity, the test contained instructions and directions which were examined by researcher's advisors and English teacher until the test looked right and understandable.

3.5.1.2 Construct Validity

A test is said to have construct validity if it is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning (Heaton, 1991:161). In this research, the researcher measured the students' ability in hortatory exposition text by using writing test.

3.5.1.3 Content Validity

According to Heaton (1991:160), on the construction of a test should describe in very clear and precise terms the particular language skills and areas to get content validity. In this research, content validity was reached by constructing the test which reflects writing components by considering the writing evaluation criteria and scoring system of writing suggested by Jacob.

3.5.2 Reliability

Reliability, according to Harris (1974:144), refers to the consistency of the

measure. A test is said to be reliable if its score remain relatively stable from one administration to another. Moreover, Heaton (1991:162) argues that in order to be reliable, a test must be consistent in its measurements. This denotes the extent to which the same marks or grades are awarded if the same test papers are marked by (1) two or more different examiners or (2) the same examiner on different occasions. The first way names inter-rater reliability while the second one is called intra-rater reliability. The researcher, however, applied only the first way in measuring the test in order to get reliability. That is inter-rater reliability. First, the researcher invited her classmate as the second rater. Then, both researcher and her classmate marked the result of the test. The scores from both researcher and her classmate were used as the data of the research.

3.5.3 Scoring System of Writing

The scoring system of this research is adopted from Jacob et al in Reid (1993: 236-237). It could be described as follows:

Content

30-27 *Excellent to very good*: knowledge substantive, development of thesis/topic relevant to assign topic.

26-22 *Good to average*: some knowledge of subject, adequate range, limited development thesis, mostly relevant to topic but lack detail.

21-17 *Fair to poor*: limited knowledge of subject, little substance, inadequate development of topic

16-13 *Very poor*: limited knowledge of subject, non-substantive, not pertinent or not enough to evaluate.

Organization

20-18 *Excellent to very good*: fluent expression, ideas clearly stated/supported, well organized, logical sequencing, cohesive.

17-14 *Good to average*: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.

13-10 *Fair to poor*: non-fluent, ideas confused or disconnected, lack logical sequencing and development.

9-7 *Very poor*: does not communicate, no organization, or not enough to evaluate.

Vocabulary

20-18 *Excellent to very good*: sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate register.

17-14 *Good to average*: adequate range, occasional errors of word/idiom, form, choice, usage but meaning not obscured.

13-10 *Fair to poor*: limited range, frequent errors of words/idiom form, choice, usage but meaning confused or obscured.

9-7 *Very poor*: essentially translation, little knowledge of English vocabulary, idioms, words form, or not enough to evaluate.

Language Use

25-22 *Excellent to very good*: effective complex construction, few errors of agreement, tense number, word order/function, articles, pronoun, and preposition.

21-18 *Good to average*: effective but simple construction, minor problems in

simple construction, several errors of agreement, tense, word order/function, articles, pronoun, preposition, but meaning seldom obscure.

- 17-11 *Fair to poor*: major problems in complex/simple construction, frequent errors of negation, agreement, tense, number, word order/function, article, pronoun, preposition and/or fragments, run-ons, deletion, meaning confused, or obscured.
- 10-5 *Very poor*: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate.

Mechanics

- 5 *Excellent to very good*: demonstrated mastery of conventions, few errors spelling, punctuation, capitalization, paragraphing.
- 4 *Good to average*: occasional errors of spelling, punctuation, capitalization, paragraphing, but meaning not obscured.
- 3 *Fair to poor*: frequent errors of spelling, punctuation, capitalization, paragraphing, poor hand writing, meaning confused or obscured.
- 2 *Very poor*: no mastery convention, dominated by errors of spelling, punctuation, capitalization, paragraphing, hand writing illegible, or not enough to evaluate.

3.6 Data Analysis

In analyzing the data, the researcher used the data of mean, standard deviation, minimum and maximum score which were gotten from the students' scores

calculated. Those data were used by the researcher to measure students' attainment. Then, the researcher interpreted those data to get the description of students' ability in writing hortatory exposition text by using One Way Anova, Repeated Measures T-Test, and Two Way Anova. The writer used Repeated Measures T-Test to test the hypothesis.

3.8 Hypothesis Testing

To demonstrate if the hypothesis of this research was sustained, the data was calculated and interpreted by using Repeated Measures T-Test. The hypothesis testing which showed that KWL (Know, Want, and Learn) Technique can improve students' ability in writing hortatory exposition text would be approved at the significant level of 0.05 in which $\alpha < 0.05$ (Setiyadi, 2006:97). The hypothesis would be analyzed by using statistical computerization (SPSS 16.0), the formula is:

$$T = \frac{\bar{x}_1 - \bar{x}_2}{sd} \quad \text{in which} \quad S \frac{d}{x} = \frac{Sd}{x}$$

Where:

\bar{x}_1 = mean of pretest

\bar{x}_2 = mean of posttest

$S \frac{d}{x}$ = standard error differences between two means

Sd = standard deviation

(Hatch and Farhady in Nova, 2010:40)

H_1 : KWL (Know, Want, and Learn) Technique improves students' ability in writing hortatory exposition text.

H_0 : KWL (Know, Want, and Learn) Technique cannot improve students' ability in writing hortatory exposition text.

The criteria are:

H_a (Alternative hypothesis) is accepted if alpha level is lower than 0.05 ($\alpha < 0.05$)

H_0 (null hypothesis) is accepted if alpha level is higher than 0.05 ($\alpha > 0.05$)