III. METHOD OF THE RESEARCH

3.1 Research design

The design of this research is a descriptive statistic analysis, a quantitative one. In collecting the data, the researcher carried out an experiment. In this case, the treatment the writer carried out is model composition guided writing technique. The researcher used control group pretest post test research design. The researcher used two classes. The first class was experimental class, and the second one was control class. Experimental class was the class which was taught by the researcher using her technique while control class was taught by the English teacher of SMA Surya Dharma 2 Bandar Lampung using Grammar Translation Method (GTM). This design involves two groups formulated as follows:

G1 T1 X T2
G2 T1 O T2

Where:
G1 : experimental class
G2 : control class
T1 : pretest
T2 : post test
X : treatment
O : no treatment
(Hatch and Farhady, 1982:21)

3.2 Subject of the Research

The subject of the research was the first year students of SMA Surya Dharma 2 Bandar Lampung in second semester and 2009/2010 learning year. There were only two classes of the first year of SMA Surya Dharma 2 Bandar Lampung, so the researcher took these two classes. The first class (X.1) was the experimental class and the second class (X.2) was the control class. The researcher took this school because there had no same research conducted there before.

3.3 Data Collecting Technique

For this research, the writer used pretest, treatment and post test as the technique to collect the data.

1. **Pre test**

   According to Donald J. Pratt (2002), pre test is the test given before treatment to see the students' writing ability. In this research, pre test was given in the form of written test before given model composition guided writing as a treatment. This pre test was also intended to serve control for the post test result. It would be applied in both control and experimental class by giving the same topic and direction. Because the writer focused on the descriptive text especially the description of place, the writer asked the students to compose a descriptive text based on the topic given. The topic of pre test was 'my classroom'. The text should consist of 10-15 sentences with 75-100 words or more. There were five aspects the writer tried to assess, they were: content, organization, vocabulary, grammar, and mechanic. The direction of the test

was as follows: ‘write a descriptive text describing your classroom”. The time allocation was 30 minutes.

2. Treatment

In this research, the writer used model composition guided writing as a treatment. This technique was only given to experimental class while control class has no treatment. After the students got the idea about what to write, teacher guided them to develop their writing task using model composition guided writing. First, teacher gave them an example of descriptive text with the same topic of students’ writing task. Then, students followed the model to their writing task but they should change all information that not appropriate with them. After doing some correction to their writing task, students revised it.

2. Post test

According to Houghton (2000), post test is a test given after a lesson or a period of instruction to determine what the students have learned. The post test was given after the treatment, which is guided writing was applied. This test was assigned to obtain the data of the effect of guided writing in students’ descriptive text writing achievement. In this post test, the students of experimental class were instructed to write a descriptive text using model composition guided writing while students of control class were instructed to write a descriptive text using their common way. The topic of post test was ‘my bedroom’. The text should consist of 10-15 sentences with 75-100 words or more. There were five aspects the writer tried to assess, they were: content, organization, vocabulary, grammar, and mechanic. The direction of the test

was as follows: ‘write a descriptive text describing your bedroom”. The time allocation was 30 minutes.

3.4 Research Procedures

In conducting the research, the writer used some procedures as follows:

1. Determining subject of the research

   Since the first year class in SMA Surya Dharma 2 Bandar Lampung only consists of two classes, the researcher took these two classes and divided them into experimental and control class.

2. Administering pre test

   Pre writing test was used to get the first data of learners’ writing ability.

3. Administering treatment

   Treatment was given in the form of model composition guided writing.

4. Administering post test

   Post test was used after the treatment to get the second data.

6. Analyzing the data

   Determining whether model composition guided writing can be used to increase students’ descriptive text writing ability or not.

7. Drawing findings and conclusion from the data

3.5 Statistical Hypothesis

To see whether guided writing can increase students’ writing ability or not, the researcher built the hypothesis as follows:

Ho = model composition guided writing cannot increase students' descriptive text writing ability.

H1 = model composition guided writing can increase students' descriptive text writing ability.

3.6 Scoring criteria of Writing Test

There are five aspects that evaluated by the researcher in post test pre test writing test. Those are: content, organization, vocabulary, grammar, and mechanic (Harris, 1974:68-69).

- Content scored 20% from the total sentences supporting the main idea.
- Organization scored 20% from the total sentences written in logical division.
- Vocabulary scored 20% from vocabularies used correctly.
- Grammar scored 20% from sentences with a correct grammar.
- Mechanic scored 20% from the use of punctuation, spelling, and capitalization correctly.

Therefore, the scoring criteria which have been modified by the researcher would be as follows:

1. **Content**

   The score of content ranges as the followings:

   20 = Excellent, all developing sentences support the main idea.

   15 = Good, 75% of developing sentences support the main idea.

   10 = Fair, 50% of developing sentences support the main idea.

   5 = Poor, 25% of developing sentences support the main idea.

0 = Very poor, no developing sentences support the main idea.

2. Organization

The score of organization ranges as the followings:

20 = Excellent, all the supporting sentences are written in logical division.

15 = Good, 75% of all the supporting sentences are written in logical division.

10 = Fair, 50% of all the supporting sentences are written in logical division.

5 = Poor, 25% of the supporting sentences are written in logical division.

0 = very poor, there is no supporting sentences are written in logical division.

3. Vocabulary

The score of vocabulary ranges as the followings:

20 = Excellent, all vocabularies used correctly.

15 = Good, 75% of vocabularies used correctly.

10 = Fair, 50% of vocabularies used correctly.

5 = Poor, 25% of vocabularies used correctly.

0 = Very poor, no vocabularies used correctly.

4. Grammar

The score of grammar ranges as the followings:

20 = Excellent, all sentences use a correct grammar.

15 = Good, 75% sentences use a correct grammar.

10 = Fair, 50% sentences use a correct grammar.

5 = Poor, 25% sentence uses a correct grammar.

0 = Very poor, no sentences use a correct grammar.

5. Mechanic

The score of mechanic ranges as the followings:

20 = Excellent, all punctuations, spelling, and capitalization are used correctly.

15 = Good, 75% punctuation, spelling, and capitalization are used correctly.

10 = Fair, 50% punctuation, spelling, and capitalization are used correctly.

5 = Poor, 25% punctuation, spelling, and capitalization are used correctly.

0 = Very poor, no punctuation, spelling, and capitalization are used correctly.

3.7 Data Analysis

In analyzing the data, the writer used some procedures as follows:

3.7.1 Scoring writing Test

The researcher used impression method i.e. a method of scoring that used multiple marking (Heaton, 1991:147) in order to minimize the subjectively. The researcher used two raters in scoring students' writing test. The formula is:

$$\mathbf{FS} = \frac{S1 + S2}{2}$$

Where:
FS = Students' final score
S1 = Score from rater 1
S2 = Score from rater 2

3.7.2 Calculating of mean

After obtaining the result of the students' test, the researcher focused on their writing components. The writer listed the scores and calculated their means through mean formula as follows:

$$\bar{x} = \frac{\sum x}{N}$$

Where:
$\bar{x}$ = mean
$\sum x$ = total scores
N = number of students

Mean told us how difficult or easy a test is. According to Heaton (1991, p.175), the mean score of any test is the arithmetical average i.e. the sum of the separate scores divided by the total number of students. It is the most efficient measure of central tendency, but it is not always appropriate. A mean of 90 means that the test is easy; while an average of 40 means that it is difficult.

3.7.3 Standard Deviation

According to Heaton (1991, p.177) standard deviation (s.d) is another way of showing the spread of scores. It measures the degree to which the group of scores deviates from the mean; in other words, it shows how all the scores are spread out and thus gives a fuller description of test scores than the range which simply describes the gap between the highest and the lowest marks and ignores the information provided by all the remaining scores. The formula is as follows:

$$\textbf{s.d} = \sqrt{\frac{d^2}{N}}$$

Where:
s.d = standard deviation
N = the number of the scores
d = the deviation of each score from mean
(Heaton, 1991:177)

3.7.4 Range

According to Heaton (1991, p.176), range is one simple way of measuring the spread of marks in based on the difference between the highest and the lower scores. Thus, if the highest score on a 50 item test is 43 and the lowest 21, the range is from 21 to 43: i.e. 22.

3.7.5 Treatment of the Data

a. Random Test

The random test was conducted if the data from the experimental class and the control class was taken randomly still doubtful. The data should be tested again by using SPSS 15 to know the random test.

b. Normality Test

The normality test was used to measure whether the data in the experimental class and control class were normally distributed or not. In this case, the writer used the One-Sample Kolmogorov –Smirnov Formula (SPSS 15) to test the normality of the data.

c. Homogeneity Test

The homogeneity test was used to know whether the data in the experimental class and control class were homogeneous or not. In this research, the writer used Independent Sample Test (SPSS 15) to know the homogeneity of the test.

3.8 Validity

According to Heaton (1991, p.159), the validity of a test is the extent to which it measures what it is supposed to measure and nothing else. From the statement we know that a good test must be well in measuring what is intended to measure as well as consistent in judging the result. Since this research analyzed the students' writing achievement, the writer gave the writing test with the topic given that is appropriate top the curriculum. Besides that, in this research the writer used two most important types of validity, those are: content validity and construct validity.

1. **Content Validity**

   O'malley and Pierce (1990) define content validity as the correspondence between curriculum objectives and the content of the assessment. This kind if validity is the most important type of validity for performance assessment. Heaton (1991, p.160) states that content validity depends on a careful analysis of the language being tested and of particular course objectives. The 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.

2. **Construct Validity**

   Heaton (1991, p.161) sates that, if a test has a construct validity, it is capable of measuring certain specific characteristic 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. From the statement above we know that, as a test must produce

significant information about a writer's ability to communicate effectively in English, this test is meant to measure the students' writing achievement by assigning their writing ability before and after the treatment. Their achievement, then, will be compared and analyzed to see whether the treatment brings significant result to their writing achievement or not.

After calculating the result of students' writing ability, the researcher found that her test has a high validity. It can be seen from table of frequencies of pre-test and post-test in experimental class and control class that the percentage of validity is 100% or no missing value (see Appendix 6). It means that the test the researcher given to the students has 100% validity value.

3.9 Reliability

In order to determine the reliability of the test, inter rater reliability was used by the researcher i.e. "the extent to which different raters agree about the assigned score of rating" (Shohamy, 1985":71). It means that more than one rater was used by the researcher. In this case, the researcher used two raters in scoring the students' writing test. To measure the reliability of the raters, the researcher used Rank-Difference Method. The formula is as follows:

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

Where:

ρ : Rank-Diference

$\sum D$: The sum of difference between each pair of ranks.

(Harris, 1974:142)

In this case, the writer also used the standard of reliability (Arikunto, 2006:276) below:

0.8 – 1.0 = very high
0.6 – 0.8 = high
0.4 – 0.6 = medium
0.2 – 0.4 = low
0 - 0.2 = very low

After calculating the students' text writing, the writer calculated the data using rank order formulation (see Appendix 5). The result of reliability can be seen in the following tables:

Reliability of Inter-Raters in Experimental Class

	Pre-test	Post-test	Criteria
Reliability	0.73	0.76	high reliability

Reliability of Inter-Raters in Control Class

	Pre-test	Post-test	Criteria
Reliability	0.76	0.83	high reliability

Reliability of Intra-Rater

	Pre-test post-test rater 1	Pre-test post-test rater 2	Criteria
Reliability	0.73	0.75	high reliability

From the criteria of reliability and calculation above, it can be concluded that reliability of the raters in experimental and control class are high. It means that the second rater's way of scoring was similar to the researcher (the first rater). They have the same scoring system so that there is no subjectivity in scoring the student's writing. Besides, the scoring criteria help the raters in scoring the students' writing accurately. In addition, the result shows that the raters scored the students' writing consistently and fairly.

3.10 Hypothesis Testing

To demonstrate if the hypothesis of this research is sustained, hypothesis test is performed on the data by using One Sample Test.

The hypothesis testing which shows that model composition guided writing can increase students' descriptive text writing ability approved at the significant level of 0,05 in which $\alpha < 0{,}05$ (Setiyadi, 2006:97). The hypothesis was analyzed by using statistical computerization (SPSS 15.0), the formula is:

$$T = \frac{\bar{x} - \mu}{\frac{sd}{\sqrt{n}}}$$

Where:
T = t value
$\bar{x}$ = sample average
μ = Parameter value
Sd = standard deviation
n = number of students

(Hatch and Farhady, 1982:104)

The criteria are:

Ha (alternative hypothesis) is accepted if *alpha level* is lower than 0.05 ($\alpha<0.05$)

Ho (null hypothesis) is accepted if *alpha level* is higher than 0.05 ($\alpha>0.05$).

Since the hypothesis of the research is model composition guided writing can increase students' descriptive text writing ability, this hypothesis will be accepted if *alpha level* is lower than 0.05.