

### **III. RESEARCH METHODS**

In research methods, research design, population and sample, data collecting technique, instrument of the research, research procedure, and data analysis were presented. It was presented to clarify research question “is there any increase of students’ recount text writing ability at the first year of senior high school students taught by using Process Genre Model?”

#### **3.1 Research Design**

This research was a quantitative research. It would apply an experimental method. It aimed to find out whether there is increase of students’ recount text writing ability at the first year of senior high school students after being taught by using Process Genre Model.

This research used one group pre-post test design. This research would be dealt with one group which would receive treatment. Here, pre-test was given to capture the students’ initial ability before the treatment was delivered to the group. The treatment that would be applied was process genre model which would be given to the students. The researcher made one lesson plan where it was divided into four meetings. Post-test was given after the treatment in order

to find out the increase of students' writing ability. Thus, to know the increase of students' ability, the researcher saw the result of pre-test and the result of post-test. It meant that the result could be recognized by comparing the differences score between pre-test and post-test.

The design of this research could be descanted as follows:

$$\boxed{T1 \ X \ T2}$$

Where:

T1 : Pre-test

X : Treatment

T2 : Post-test

**(Hatch and Farhady A. 1982)**

### **3.2 Population and Sample**

The population of this research was conducted at the first year of SMAN 2 Bandar Lampung. There are nine classes, and one class was taken as the sample of the research. That class was X 1. The number of sample was 33 students. These students were selected purposively. The selection of the sample was done by using purposive sampling.

### **3.3 Data Collecting Technique**

In collecting the data, the researcher used the following technique:

## **1. Administering Pre-test**

Pre-test was administered by using written test. Pre-test was given before the treatment in order to know how far the competences of the students in writing recount text. By giving pre-test, we could know some problems of students in writing. The students were asked to compose recount text based on the theme and instruction given. The material of test that would be tested based on the curriculum that is used at school.

## **2. Treatment**

The researcher used Process Genre Approach as the treatment. The treatment was the form of applying that model to assist the students in writing recount text. The treatment was settled based on the lesson plan that consists of preparation, modelling and reinforcing, planning, the introduction of joint constructing, independent constructing, and revising. The researcher used one lesson plan that would be taught. The lesson plan was divided into four meetings. The first meeting included the activities of preparation, modelling and reinforcing, planning, the introduction of joint constructing and independent constructing. The second meeting was to revise the students' writing task. These procedures were same with the third and fourth meeting but the topics were different. The first topic was about holiday and the second topic was about unforgettable moment. The design of the lesson plan was based on the standard competence and the basic syllabus of the school which was developed by the researcher.

### **3. Administering Post-test**

Post-test was given after the treatment in order to know whether there is increase of students' recount text writing at first year of senior high school students that is taught by Process Genre Model. Equal to pre-test, the test is in written form and the materials that will be tested related to recount text. The result of the post-test would be compared with pre – test in order to know whether Process Genre Model can increase students' recount text ability significantly or not.

#### **3.4 Instrument of the Research**

There was only one instrument of the research going to be employed in this research. The instrument of the research was essay test. The researcher gave the instruction to the students to write their name and the class on a piece of paper. Then, the researcher gave the students the time to do the writing test at around 90 minutes. The directions were the students should choose only one topic from the topic given, and they should write text in form of recount text. The topics were in the form of personal recount. The evaluation criteria were content (20), organization (20), vocabulary (20), grammar (20), and mechanics (20).

##### **3.4.1 Scoring system**

The research used impression method; a method of scoring that used multiple marking (Heaton, 1991:147) in order to minimize the subjectivity. The researcher used two raters in scoring students' writing test. The first rater was the English



teacher of SMAN 2 Bandar Lampung and the second rater was the researcher. The formula was:

$$FS = \frac{\delta 1 - \delta 2}{2}$$

Where:

FS = Students' final score

$\delta 1$  = Score from pre-test

$\delta 2$  = Score from post-test

#### **3.4.1.1 Calculating of Mean**

The researcher listed the scores and calculates the 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 showed whether the test is easy or difficult. If the mean score is too high, it means the test is very easy for the students. And there is an error in giving the score for the students. A mean of 90 means that the test is easy while an average of 40 means that the test is difficult. According to Heaton (1991:175), the mean score of any test is the arithmetical average i.e. the sum of the separate scores is

divided by the total number of students. It is the most efficient measure of central tendency, but it is not always appropriate.

In order to know the students get any progress, the formula was used as below:

$$I = M2 - M1$$

Where:

I : the improvement of students' ability

M2 : the average score of post-test

M1 : the average score of the post-test

**(Arikunto, 1997:68)**

#### **3.4.1.2 Scoring Writing Test**

To gain the data in this research, the researcher considered based on the following components below:

1. Content : the substance of the writing, the idea expressed (unity)
2. Grammar : the employment of grammatical forms and syntactic patterns
3. Organization : the form of the content (coherence)
4. Vocabulary : the selection of word that suitable with the content
5. Mechanics : the conventional devices used to clarify the meaning

**(Jacobs, 1981)**

This system of scoring criterion basically covers five aspects of scoring system in writing, and it would be elaborated as the explanation below:

A. Content. This aspect was evaluated from the idea expressed by using the criteria if score 20 indicated that all the developing sentences support the main idea, and 15 meant that three of developing sentences support the main idea. Score 10 denoted that two of developing sentences support the main idea, 5 showed that one of developing sentences supports the main idea, and 0 characterized that there is no developing sentences support the main idea.

B. Grammar. It refers to the employment of grammatical forms and synthetic pattern. This aspect was evaluated by using the criteria if score 20 meant all the sentences are written in the right form of past tense. Score 15 indicated three of the sentences are written in the right form of past tense, and 10 denoted that two of the sentences are written in the right form of past tense. Score 5 showed that one of the sentences is written in the right form of past tense, and 0 meant that there is no sentences are written in the right form of past tense.

C. Form. This aspect was scored by seeing the organisation of content. To score this aspect by using criteria, the criteria was if score 20 meant there are at least two right uses of transitional words and all supporting sentence are written in spatial order. Score 15 indicated there are at least one right uses of transitional words and all supporting sentence are written in spatial order, and 10 denoted that two of all supporting sentences are written in spatial order. Score 5 showed that one of the sentences is written in the right form of past tense, and 0 characterized that there is no supporting sentences are written in spatial order.

D. Vocabulary. The evaluation of this aspect could be seen from the suitable words that the students use. This aspect was evaluated by using criteria if score

20 meant that all of the vocabularies are used correctly, 15 showed that three fourth of the vocabularies are used correctly. Score 10 indicated that a half of the vocabularies are used correctly, 5 denoted that a quarter of the vocabularies are used correctly, and 0 showed that there are no vocabularies are used correctly.

E. Mechanics. It indicated the conventional devices used to clarify the meaning.

This aspect was evaluated by using criteria if score 20 indicated that all of the sentences use correct punctuation, spelling, and capitalization, 15 showed that three fourth of the sentences use correct punctuation, spelling, and capitalization. Score 10 indicated that a half of the sentences use correct punctuation, spelling, and capitalization, 5 denoted that a quarter of the sentences are use correct punctuation, spelling, and capitalization, and 0 showed that there are no sentences use correct punctuation, spelling, and capitalization.

To simplify the idea above, here were the scoring criteria used in writing skill:

**Table 3.1 Table of Specification in Writing Test:**

Writing Aspects	Criteria in writing test	Score
Content	Make an effective recount text by seeing the topic sentence and controlling the idea	20%
Organization	Use the transitional words in spatial order	20%
Grammar	Use past tense, correct grammatical and syntactic pattern	20%
Vocabulary	Use the suitable words	20%
Mechanics	Use correct graphic conventional of the language, including spelling, punctuation, capitalization, and paragraphs	20%

Based on the explanation above, the researcher evaluated the aspects of recount text writing based on content, grammar, organization, vocabulary, and mechanics. The lower score is 0 and the highest score is 100. The researcher divided the percent of score into the same percent (20% for each aspect) in order to know the highest and the lowest increase of those aspects.

### **3.4.2 Validity of the Test**

Validity refers to appropriateness, meaningfulness, and useful of the inferences a researcher makes (Fraenkel and Wallen, 1990:126). 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, it had to be analyzed from content and construct validity. In the content validity, the material and the test were composed based on the indicators and objectives in syllabus of KTSP curriculum. The materials that would be taught based on the student's handbook for first year of Senior High School. While construct validity focused on the kind of the test that was used to measure the students' ability.

Based on the content validity and construct validity, the materials that have been taught were about personal recount text. The topics discussed by the students in writing recount text were holiday and an unforgettable moment. The materials used were chosen based on 2006 English Curriculum of KTSP for first year high school students. The students were asked to write recount text based on the aspects of writing. The result of the test was administered by seeing those aspects. The possible maximum score for each aspect was 20.

### 3.4.3 Reliability of the Test

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. In short, it is the stability or consistency of scores over time or across raters. It is a measure of accuracy, consistency, dependability, or fairness of scores resulting from administration of particular examination.

Reliability is the measure of how stable, dependable, trustworthy, and consistent a test is in measuring the same thing each time (Worthen et al., 1993). In this case, the researcher used two raters in scoring the students' writing test. The formula was as follows:

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

Where:

$r$  : Rank – difference

$\sum D$  : The sum of difference between each pairs of ranks

**(Harris, 1974:142)**

In this case, the researcher also used the standard of reliability (Arikunto, 1998:260) below:

0.81 – 1.0 = very high

0.61 – 0.8 = high

0.41 – 0.6 = medium

0.21 – 0.4 = low

0 – 0.2 = very low

The writing tests are considered reliable if the test of reliability could reach the range of 0.61 – 0.8 (high reliability). Referring to the result of the calculation, the reliability coefficient of pre-test and post-test was acceptable. It can be seen from the following table:

**Table 2. The Result of Reliability Test of Pre-test and Post-test**

Test	Reliability Coefficient
Pre-test	0.933
Post-test	0.904

Based on the table above, it was found that the reliability coefficient of pre-test was 0.933 and the reliability coefficient of post-test was 0.904. It meant that all of those tests were considered as very highly reliable. Thus, those results could be used in this research.

### **3.5 Research Procedure**

There were three steps that would be done in research procedure, they were:

#### **a. Planning**

##### **1. Preparing the pre-test**

This test was prepared by providing the topic and materials that would be tested. The test was in written form.

## 2. Preparing the Materials.

The materials that were prepared to the students related to the curriculum that were used at school and also appropriate to introduce Process Genre Model in teaching recount text writing to the students in class.

## 3. Preparing the post-test

This test was prepared by providing the topic and materials that would be tested in the post-test. The topic based on the materials that would be taught.

### **b. Application**

After making planning, the planning that had been prepared could be applied.

There were some steps that should be applied, they were:

- In the first meeting, the pre-test was given. This test gave in written form.  
The test papers administered to the students for experimental class. The students were asked to do the test based on the instruction that had been given.
- After performing pre-test, the next steps could be done by giving the treatment to the students, they would be taught by Process Genre Model.  
The treatment was taught to assist the students in writing recount text. The treatment was settled based on the lesson plan that has been prepared. There was one lesson plan that was divided into four meetings. The first meeting included the activities of preparation, modelling and reinforcing, planning, the introduction of joint constructing and independent constructing.



Revising the students' writing task was held in the second meeting. These procedures were same with the third and fourth meeting. The difference was in the material that would be taught in each meeting.

- And in the last meeting, post-test was given to the students. Equal to pre-test, this test was also in the written form. It contained the materials about recount text that had been taught.

### **c. Reporting**

The last point that should be done in the research procedure was reporting.

Reporting is the action where the researcher had got the result of the research.

And the steps that were done in reporting were:

- Analyzing the data from pre-test and post-test and reading the result whether there is any increase of students' recount text writing ability at the first year of senior high school students who are taught by using Process Genre Model.
- Making a report on the findings

### **3.6. Data Analysis**

The researcher analyzed the result of pre-test and post-test of the experimental class to get the appropriate data. If the post-test is better than pre-tests, it means that there is a progress on students' achievement. And the contrary, if the pre-test is better than post-test, it means that the treatment that is applied is not successful to increase the students' ability in writing recount text.

### **3.6.1 Data Analysis on Pre-test and Post-test**

Pre-test and post-test were given to the students in the same procedure. A hypothesis was started with the alpha level at 0.05. The data gathered through pre test and post-test computed one by one by using SPSS. Three steps were accomplished covering normality test, and paired sample t-test.

#### **3.6.1.1 Normal Distribution Test**

Normal distribution test was calculated before t-test. It was aimed to investigate whether or not the distribution of pre-test and post-test were normally distributed. The statistical calculation of normality test used Kolmogorav-Smirnov by following three steps below:

1. Setting the level of significance ( $p$ ) at 0.05 and establishing the hypotheses as follows:

Ho : the variances of experimental class are normally distributed.

Ha : the variances of experimental class are not normally distributed.

2. Analyzing the normality distribution with Kolmogorav-Smirnov test.
3. Comparing the asymp.sig with the level of significance to test the hypothesis.

If the asymp.sig  $> 0.05$ , the alternative hypothesis is rejected but the null hypothesis is not rejected, and the distribution of the data is normal.

From the result of calculation that had been showed in Kolmogrov-Smirnov test, it could be known that the significance level of pre-test and post-test was 0.200 and  $0.200 > 0.05$  (see Appendix 7). Therefore, for the hypothesis, the alternative

hypothesis was rejected and the research hypothesis was accepted. It meant that the variances of data in pre-test and post-test were normally distributed.

#### **3.6.1.2 Homogeneity Test**

After the result of testing normality of distribution was found, the researcher should also test the homogeneity of variance. The homogeneity test was used to know whether the data in the experimental class was homogenous or not. In this research, the researcher used SPSS 17 to know the homogeneity of the test. The procedures were as follow:

1. Setting the level of significance ( $p$ ) at 0.05 and establishing the hypotheses as follows:

Ho : the variances of the class are not homogenous.

Ha : the variances of the class are homogenous.

2. Analyzing the homogeneity of variance with One-Way ANOVA.
3. Comparing the asymp.sig with the level of significance to test the hypothesis.

If the asymp.sig  $> 0.05$ , the alternative hypothesis is accepted but the null hypothesis is rejected, and the distribution of the data is homogenous.

From the result of calculation that had been showed in homogeneity of variance test, it could be known that the significance level of homogeneity in pre-test was .264 and the significance level of homogeneity in post-test was .148. It meant that .264 and .148  $> 0.05$ . Therefore, for the hypothesis, the alternative hypothesis was accepted and the null hypothesis was rejected. It can be inferred that the variances of data in pre-test and post-test were homogenous.

### 3.6.1.3 Random Test

The random test is conducted if the data from the class is taken randomly still doubtful. The data should be tested again by using SPSS 17 to know the random test. These were the procedures to follow in calculating random test of pre-test and post-test:

1. Setting the level of significance ( $p$ ) at 0.05 and establishing the alternative hypothesis for pre-test and post-test data analysis. The hypotheses were stated as below:

Ho : the variances of the class are random.

Ha : the variances of the class are not random.

2. Analyzing random test with Nonparametric Tests by using SPSS 17
3. Comparing  $r$ ,  $n1$  and  $n2$  where  $r$  means Number of Runs,  $n1$  means Cases < Test Value, and  $n2$  means Cases  $\geq$  Test Value, with the level of significance at 0.05 for testing hypothesis and reporting the findings: "Ho is accepted if  $n1 < r < n2$  with the level of significance at 0.05.

From the result of calculation that had been showed in random test, it could be known that in pre-test  $r = 17$ ,  $n1 = 14$ , and  $n2 = 19$  and it meant that  $14 < 17 < 19$ . For post-test, the results were  $r = 18$ ,  $n1 = 14$ , and  $n2 = 19$  and it also meant that  $14 < 18 < 19$ . Therefore, for the hypothesis, the alternative hypothesis was rejected and the null hypothesis was accepted. It could be inferred that the variances of data in pre-test and post-test were random.

#### 3.6.1.4 Paired Sample t-test

After revealing the result of those tests, the next statistical computation was analyzing paired sample t-test. Paired Samples t-test compares the means of two variables. It computes the difference between the two variables for each case, and tests to see if the average difference is significantly different from zero. These were the procedures to follow in calculating paired sample t-test of pre-test and post-test data:

1. Setting the level of significance ( $p$ ) at 0.05 and establishing the alternative hypothesis for pre-test and post-test data analysis. The hypotheses were stated as below:

Ha : there is significant difference between the means in pre-test and post-test

Ho : there is no significant difference between the means in pre-test and post-test

2. Analyzing Paired Sample t-test by using SPSS 17
3. Comparing  $t_{value}$  and  $t_{table}$  with the level of significance at 0.05 for testing hypothesis and reporting the findings: “Ho is rejected if -  $t_{value} < t_{table}$  or  $t_{value} > t_{table}$  with the level of significance at 0.05.

From the result calculation of this test, it could be known that  $-12.107 < -2.036$  or  $12.107 > 2.036$  and  $0.00 < 0.05$ . Therefore, for the hypothesis, the null hypothesis was rejected and the research hypothesis was accepted. It meant that there is significant different between the mean of pre-test and the mean of post-test.

### 3.6.2 Hypothesis Testing

The hypothesis testing which shows that there is any increase of students' recount text writing would be approved at the significant level of 0.05 in which  $\alpha < 0.05$  (Setiyadi, 2006:97).

To determine whether the first hypothesis is accepted or rejected, the following criteria acceptance were used:

Ha = There is any increase of students' recount text writing that is taught by  
Process Genre Model

Ho = There is no increase of students' recount text writing that is taught by  
Process Genre Model.

The criteria were:

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 ( $\alpha > 0.05$ ).