

III. METHODS OF THE RESEARCH

In order to reach the goal of this reasearch, there are several points will be discused in this chapter. They are classifying like the following: research design, population and sample, data collecting technique, scoring criteria, procedure of data collecting technique, data analysis, hypotheses test and schedule of the research.

3.1 Research Design

This research used quantitative method. The quantitative method was used to gather quantitative data and information dealing with numbers and anything that was measurable. Therefore, quantitative research involves analysis of numerical data, statistics, tables, and graphs often used to present results of research.

In this research, the researcher conducted the research by using one class and applied quasi experimental design that was one group pretest posttest design. The students were given a pretest, three treatments and a posttest. Concerning the effect of sentence combining practice in students' writing achievement, the two variables were formulated as follows:

$T_1 \quad X \quad T_2$

Where:

T1 : Pre-test

T2 : Post-test

X : Sentence Combining Practice

3.2 Population and Sample

The population of this research was the first year students of SMA Al Kautsar Bandar Lampung in academic year of 2014/2015 that consisted of eight classes. One class was used as the sample of this research. The observer used lottery technique to choose the treatment class. So those eight classes had the same chance to be the sample. After applying the lottery technique, class X.4 was chosen as the class sample, consisting of 35 students.

3.3 Data Collecting Technique

The following instruments were deployed for data collection. In collecting the data, the researcher used pre-test and post-test

a. Pre-Test

The aim of this test was to know students' descriptive writing achievement before they were given treatment. In this case, the researcher gave the topic to the students and let them create their own descriptive paragraph in approximately 10 sentences. The researcher used the pretest in 90 minutes.

b. Post-Test

The aim of this test was to know whether there was improvement or not in students' descriptive writing achievement after being given the treatment. The

observer gave the students test in 90 minutes. The observer gave same test with pre-test, which was the students were asked to make approximately 10 sentences of descriptive writing in a different topic from the pre-test. This test showed the improvement after using sentence combining practice

3.4 Scoring Criteria

Three aspects of writing were evaluated by the researcher: vocabulary, grammar, and organization, since the focus of this study were on the three mentioned aspects. The researcher used computation as follows:

1. Grammar was scored as much as 20 from sentences used correct grammar.
2. Organization was evaluated as much as 20 from the total sentences were written in chronological order (coherence).
3. Vocabulary was scored 20 as much as from vocabularies were used correctly.

The scoring criteria for writing was adopted from ESL Composition Profile (Jacobson, 2003)

Table 3.1 Scoring Criteria

Aspect	Criteria	Score
Grammar	- Excellent. All sentences written in the correct grammar/ few errors in past tense	20
	- Good. Some errors in past tense	15
	- Fair. Numerous errors in past tense	10
	- Poor. Frequent errors in past tense	5
	- Very poor. No sentence written in the correct grammar	0
Organization	- Excellent. Most of sentences are related to the main idea	20
	- Good. some sentences are related to the main idea	15
	- Fair. Few sentence related to the main idea	10
	- Poor. The sentences are unrelated to each other.	5
	- Very poor. No supporting sentences written in chronological order	0
Vocabulary	- Excellent. All vocabulary used correctly/ few errors in	20

	word choice	
	- Good.some errors in word choice	15
	- Fair. Occasional errors in word choice	10
	- Poor. Frequent errors in word choice	5
	- Very poor. No vocabulary used correctly	0

In reference to the content above, the researcher evaluated the aspects of descriptive text writing based on grammar, form or organization, and vocabulary. The lowest score was 0 and the highest score was 60 and divided by 6.

3.5 Procedure of Data Collecting Technique

In conducting research, the observer applied some steps as follows

1. Determining the population and sample

In this stage, the researcher chose SMA Al Kautsar Bandar Lampung as the population of this research. There were eight classes in the first year level. The observer took one class as the sample. Each class consisted approximately 35 students. And the class X.4 was chosen as the sample

2. Conducting pre-test

The pre-test was administered before the treatment session. The students were asked to write a short descriptive text.

3. Giving treatment

The sample class received treatment by using sentence combining practice.

4. Conducting post-test

The students were given a post-test on writing test. This test was aimed to measure the students' achievement on writing descriptive text.

5. Scoring students' writing test

Writing test was used to obtain the data of learners' writing competence.

6. Analyzing the score

Determining whether there was any significant improvement in students' writing achievement by using the score attained from the writing test.

7. Reporting the result of data analysis.

3.6 Instrument of the Research

To gain the data, the observer applied one kind of instrument that was writing test.

Writing Test

The Instrument of this research was descriptive writing test. The researcher conducted writing test to find out how far sentence combining practice improved students' writing achievement and what were the elements of writing that can be improved by sentence combining practice. The students were asked to write descriptive text with the topic already provided, the topics were "my bedroom" and "the person I love". The students were given a chance to make their writing for about 60 minutes.

3.6.1 Validity of the Writing Tests

Validity refers to the degree to which a method, a test or research tool actually measures what it is supposed to measure (Wellington, 2000:30). There are kinds of test validity: content validity, construct validity, and face validity.

Construct validity is the degree to which a test measures what it claims or purports, to be measured (Brown, 1996:231).

Content validity is a non-statistical type of validity that involves "the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured" (Anastasi & Urbina, 1997: 14).

Face validity is the extent to which a test is subjectively viewed as covering the concept it purports to measure. It refers to the transparency or relevance of a test as it appears to test participants (Holden, 2010: 637).

In this study, validity of the writing test covered content and construct validity.

a. Content Validity of the Test

Furlong and Lovelace (2000: 72) state that a test is said to have content validity when the items of the test accurately represent the concept being measured. The writing test is developed in reference to standard competency and basic competencies stated in the first year of the second semester of English subject. It means that the whole materials which are covered in the test reflect the materials which are given to the tenth grade students. The test was considered as valid in content validity since the test of writing constitutes a representative sample of the language skill and structure and also the material used were chosen based on 2006 English Curriculum of KTSP for tenth grade students.

b. Construct Validity of the Test

Construct validity is achieved by considering whether the test measures just the ability which it is supposed to measure. In this study, there were three aspects or characteristics that were assessed in students' writing, namely; grammar, organization, and vocabulary that were suggested by the notion suggested by Jacobson (2003)

3.6.2 Reliability of the Writing Test

The reliability of a research instrument is the degree of consistency and dependence with which the instrument measures the attribute. Wellington (2000: 200) states that reliability is also used in connection with research methods in order to estimate the degree of confidence in the data. Reliability refers to the extent to which a test or technique functions consistently and accurately by yielding the same results at different times or when used by different researchers. In this research, inter-rater reliability was used. Inter-rater reliability is established when the results of the writing test are assessed using subjective judgment. It was applied to know whether or not the data of the writing score that were given by two raters were reliable. The researcher was the first rater and the teacher of SMA Al-Kautsar as the second rater in gaining students' score. The second rater had 11 years teaching experience and graduated from S1 English Department, University of Lampung. After the raters gained the results, they were compared. When there was a high degree of agreement, the procedure could be considered reliable. In order to determine the level of the instrument reliability, the norm of categorizing the reliability coefficient was employed. The following table was the norm of adopted categorizing the reliability coefficient. To determine the level of reliability of scoring system, the Spearman Rank Correlation was applied in the data. The formula is:

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

where :

r : coefficient of rank correlation

d : difference of rank correlation

N : number of students

(Sugiyono, 2006: 28)

This table shows the value of the reliability coefficient.

Table 3.2 Value of Reliability Coefficient

Reliability coefficient	Reliability Content
0.800- 1.000	Very High
0.600- 0.799	High
0.400- 0.599	Fair
0.200- 0.399	Low
0.000- 0.199	Very Low

Based on the standard of the reliability above, the result of the calculation showed that the reliability coefficient of pre test was very high, while reliability coefficient of post test was high. It inferred that the test procedure was administered under similar condition.

It can be seen from the table below:

Table 3.3 Result of Reliability Test of Pre-test and Post-test

	(r-value)
Pre-test	0.8193277
Post-test	0.7070028

According to the table above, it is found that the reliability coefficient of pre-test were 0.8193277 respectively (see appendix 6). Meanwhile the reliability

coefficient of post-test were 0.7070028 respectively (see appendix 7). Based on standard criteria list, both of the test considered as reliable and, therefore could be used in this research.

3.7 Data Analysis

The researcher will compute the students' score in order to find out the students' achievement in writing descriptive text through sentence combining practice:

1. Scoring the pre test and post test and tabulate the result.
2. Finding the mean of pre test and post test, as follows:

$$m = \frac{\sum d}{N}$$

m : Mean

$\sum d$: Total score of students

N : Number of students

3. Drawing conclusion from tabulated result of the test given by comparing the mean of pretest and the post test.

3.8 Hypotheses Test

The hypothesis testing which showed that there was improvement of students' writing achievement was approved at the significant level of 0.05 ($P < 0.005$).

The writer used the level of significance 0.05 in which the hypothesis is approved if $\text{sign} < p$. It means that the probability of error in the hypothesis is only 5%.

The formulation is :

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S_D} \quad \text{With : } S_D = \sqrt{\frac{\sum D^2 - \left(\frac{1}{n}\right)(\sum D)^2}{n-1}}$$

Where:

\bar{x}_1 = Mean from pre-test

\bar{x}_2 = Mean from post-test

S_D = Standard error of differences between means

n = Subjects on sample

(Hatch and Farhady, 1982:114)

H_1 : There is significant improvement of students' writing achievement from pretest to posttest through sentence combining practice.

H_0 : There is no significant improvement of students' writing achievement from pretest to posttest through sentence combining practice.

The criteria for accepting the hypothesis are as follows:

1. If the t-ratio is higher than t-table: H_1 is accepted
2. If the t-ratio is lower than t-table: H_0 is accepted

The researcher used SPSS to calculate the result whether it was significant or not based on the hypothesis.

Beside the hypothesis tested above, the researcher also had another hypothesis which stated that organization was the most affected aspect in rising point. With the formulation:

$$\text{Increase} = \bar{x} 1 - \bar{x} 2$$

Where:

$\bar{x} 1$ = Mean of each aspect from post-test

$\bar{x} 2$ = Mean of each aspect from pre-test

3.9 Schedule of the Research

The researcher held meetings to get the data. The first meeting was pre-test followed by three times meeting for treatment. And the last, post-test was conducted to find out the students' increase score in their writing achievement.

Table 3.4 Schedule of the Research

The schedule	Time
Pre-test	Wednesday, April 1 st 2015
First treatment	Saturday, April 4 th 2015
Second treatment	Wednesday, April 8 th 2015
Third treatment	Saturday, April 18 th 2015
Post-test	Wednesday, April 22 nd 2015

The first activity was done in one meeting, followed by 35 students. The process in this step covered pre-test. The result of pre-test showed the students' writing achievement before the treatment.

The treatments were done in three meetings followed by the same class before. The process in this activity covered pre activities, while activities, and post-activities.

The fifth activity done in one meeting by the same class before. The process in this step covered post-test. This activity proved the effectiveness of sentence combining practice in students' writing achievement.