

### **III. METHODS**

In order to answer the research question and achieve the objective of the research, research method should be constructed thoroughly. The research method consists of research design, population and sample of the research, data collecting technique, procedures of collecting data, the instrument of research, validity and reliability of the test, data analysis, and then hypothesis testing.

#### **3.1. Research Design**

This research employed a quantitative design which was aimed to find out whether teaching using animation film can improve students' narrative writing ability. This research was conducted based on the pre-experimental method. It applied *one group pre test-post test design* modified from the idea suggested by Setiyadi (2006: 131). This experimental method deals with one experimental class. The experimental class was the class which got the treatment by animation film. The experimental class was given the pre-test and post-test in order to measure the improvement of students' narrative writing. The pretest was used to find out the students' performance about narrative writing and the post-test was used to look how far the improvement of students' writing ability after the treatments.

The research design can be symbolized as follow:

**K : T1 X T2**

K : Experimental class

T1 : Pre-test

X : Treatment (teaching narrative text using animation film)

T2 : Post-test

(Setiyadi, 2006: 131)

### **3.2. Population and Sample**

According to Sugiyono (2010), population are group of people or things involving their characteristics and qualities that becomes research subject. In this research, the population was second grade students of SMA Negeri 1 Way Jepara and the sample was XI IPA 3 class. The researcher selected sample randomly.

### **3.3. Data Collecting Technique**

1. Pre-test

The pre test was administered before the treatments. It was to see the basic quality of students' writing performance before receiving treatment. The students was given the narrative writing test. The students was given the direction to make narrative text. In the direction, the students was given two topic stories. The topics were fable and indonesian tale stories. The time allocation of pre test was 90 minutes.

## 2. Post-test

The post-test was administered to the students after they got the treatments. It was done to find out the improvement of students' narrative writing after being taught using animation film. The students was given the direction to make narrative text. In the direction, the students was given two topic stories. The topics were fable and indonesian tale stories. The time allocation of pre test was 90 minutes.

### **3.4. Procedure of Data Collecting Technique**

The collecting the data the researcher made some steps:

#### 1. Selecting materials for treatment

The researcher selected some samples of narrative texts from some English books, and magazines, or internet. The researcher used the animation film as a teaching media. The animation film was taken from the internet or Dvd.

#### 2. Determining the population and selecting the sample

The population of this research was one of the classes at SMA negeri 1 Way Jepara, Lampung Timur. The class was XI IPA 3 which researcher chose.

3. Administering the pre-test

The researcher conducted the pre-test before giving the treatments and it was in 90 minutes. The pre-test was conducted to know the students' ability about narrative writing text. The students would be asked to make narrative writing freely.

4. Conducting the treatments.

After giving the pre-test to the students, the experimental class will be given treatment in 3 meetings. The time of the treatment were 90 minutes, based on the time allocation in the syllabus of the second grade of SMA. The experimental class was given the treatment by using animation film as a media and would be explained about the narrative text materials.

5. Administering the post-test

The post-test was conducted to measure the students' narrative writing improvement. The test was in form of writing. The students were going to be asked to develop their narrative text writing based on the animation film that was played.

6. Analyzing the data

After scoring pretest and posttest, the data were analyzed by using SPSS software program. It was used to find out the means of pre-test and post-test and how the improvement was.

### **3.5. Instrument of The Research**

To gain the data, the researcher applied one kinds of instrument: writing test.

#### **Writing test**

The instrument of this research was narrative text writing test. The researcher administered writing test to find out whether students' narrative writing could improve or not by using animation film. The students were asked to write a narrative text. The students would be given a chance to make writing for about 90 minutes.

### **3.6. Scoring Criteria**

The students can succeed in writing if their writing includes five aspects of writing. Therefore, five aspects of writing are evaluated in the students' paragraph writing in the form of narrative text. They are content, organization, grammar, vocabulary, and mechanic.

In scoring the student's draft, the researcher used the scoring criteria (adopted from Harris, 1979: 68-89).

1. Content : the substance of the writing, the idea expressed (unity).
2. Grammar : the employment of grammatical forms and syntactic patterns.
3. Organization: the organization of content (coherence).
4. Vocabulary : the selection of word that suitable with the content.

5. Mechanic : the conventional devices used to clarify the meaning.

**Table 3.1 Scoring Criteria (adopted from Harris, 1979: 68-89)**

Aspect	Criteria	Score
Content	- Excellent. All developing sentences support main idea.and relevant to assign topic.	20
	- Good. Rather relevant to the topic and easy to understand	15
	- Fair. Relevant to the topic but is not quite easy to understand.	10
	- Poor. Quite relevan to the topic but is not quite easy to understand	5
	- Very poor. There is no developing sentence support the main idea.	0
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 word choice	20
	- 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
Mechanic	- Excellent. Few errors of punctuation, spelling, and capitalization/ used correctly	20

	- Good. Occasional errors of punctuation, spelling, and capitalization.	15
	- Fair. Numerous errors of punctuation, spelling, and capitalization	10.
	- Poor. No mastery of convention, dominated by errors of punctuation, spelling, and capitalization	5
	- Very poor. No punctuation, spelling, and capitalization used correctly	0

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

**Table 3.2 Table of Proportion in Writing Tests' Score:**

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

Based on the explanation above, the researcher evaluate the aspects of narrative text writing based on content, grammar, organization, vocabulary, and mechanics. The lower score is 0 and the highest score is 100.

### **3.7. Validity and Reliability**

A test can be said whether it is usable or not if it has fulfilled the criteria of validity and reliability. The writing test was the decisive instrument of this research. Therefore, it

was important to measure validity and reliability of the test in order to get valid and reliable data.

### **3.7.1. Validity of The Test**

A test could be considered valid if the test measured the objectives to be measured and suitable with the criteria (Hatch and Farhady, 1982: 250). According to the Hatch and Farhady (1982: 281) there are two basic types of validity; content validity and construct validity. In order to measure whether the test has a good validity, those two types of validity would be analyzed.

Content validity is concerned with whether the test is sufficiently representative and comprehensive for the test. In the content validity, the material was given suitable with the curriculum. Content validity is the extent to which a test measures a representative sample of the subject matter content, the focus of content validity is adequacy of the sample and simply on the appearance of the test (Hatch and Farhady, 1982: 251). This research used narrative writing test that was supposed to be comprehended by the second year of senior high school 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 second year senior high school.



Construct Validity is concerned with whether the test is actually in line with the theory of what it means to know the language that is being measured, it would be examined whether the test given actually reflect what it meant to know a language. In this research, scoring criteria was based on the five aspects of writing; content, organization, vocabulary, grammar, and mechanic that were suggested by the notion suggested Harris et al (1979: 68-69).

### 3.7.2 Reliability of The Test

Hatch and Farhady (1982:243) states that the reliability of a test can be defined as the extent to which a test produces consistent result when it administered under similar conditions. In order to ensure the reliability of scores and to avoid the subjectivity of the research, there were inter-rater reliability. Inter-rater reliability was used when score on the test was independently estimated by two or more judges or raters.

To measure how reliable the scoring is, this study uses *Spearman Rank Correlation* with the formula:

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

Notes:

$r$  : Coefficient of rank correlation

$d$  : Difference of rank correlation

$N$  : Number of students

(Sugiyono, 2006: 228)

In this case, the coefficient of rank correlation will be analyzed with the standard of reliability as follows:

1. 0.80 - 1.0 : very high reliability
2. 0.60 - 0.79 : high reliability
3. 0.40 - 0.59 : medium reliability
4. 0.20 - 0.39 : low reliability
5. 0.0 – 0.19 : very low reliability

(Arikunto, 1998: 260)

**Table 3.3 The Realibility of Raters**

<b>Reliability</b>	<b>Pre test</b>	<b>Post test</b>	<b>Criteria</b>
	0.7434372	0.8498331	High Reliability

Based on the table above, it was found that the reliability coefficients of pre test were 0.7434372. And the reliability coefficients of post test were 0.8498331. And according to the standar criteria, both of test were high reliability. Therefore it could be used in this research. (See Appendix 8and Appendix 9).

The writing tests were considered reliable if the tests reached the range of 0.60-0.79 (high reliability). The result of the calculation showed that the reliability coefficient of the pre-test and post-test was acceptable.

### **3.8. Data Analysis**

After collecting data, the researcher analyzed using a number of procedures. The result of students' performance in pre-test were compared with the result of their pos-test to the impact of the instruction in their writing performance. The data were analyzed using SPSS software program.

The next step was presenting data. After the data have been collected and classified, the data were presented. Finally, the last step was taking conclusion of the whole presented information.

### **3.9. Data Treatment**

#### **1.9.1 Normality Test**

The researcher use normal test to treatment the data. This test is used to Measure whether the data are normally distributed or not. The criteria of normal distributions are:

Ho: The distribution of the data is normal

Ha: The distribution of the data is not normal

The Hypothesis is accepted if the result of the normality test is higher than 0.05

( $\text{sig} > \alpha$ ). In this case the researcher used the One Sample – Kolmogorov – Smirnov Test (SPSS) to test the normality test.

#### **3.10. Hypothesis Testing**

The hypothesis testing was used to prove whether the hypothesis proposed in this research was accepted or not. SPSS was used to know the improvement of treatment effect. The hypothesis is analyzed at significance level of 0.05 in which the hypothesis is approved if  $\text{Sig} < \alpha$ . It means that probability of error in hypothesis is only about 5%.

After collecting the data, the researcher recorded and analyzed them in order to find out whether there was an increasing in students' ability in writing or not after the treatment.

The researcher used Paired Sample T-test to know the level of significance of the treatment effect.

The formulation is:

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

And

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

Md = mean from the differences pretest and posttest (posttest-pretest)

Xd = deviation of each subject (d – md)

$\sum x^2 d$  = total of quadratic deviation

N = subjects on sample

(Arikunto, 2010: 349-350)

The criteria are:

H<sub>0</sub>: There is no improvement of the students' narrative writing ability after being taught by using animation film.

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

H<sub>1</sub>: There is an improvement of the students' narrative writing ability after being taught by using animation film.

The criteria H1 is accepted if alpha level is lower than 0.05 ( $\alpha < 0.05$ ).