

### III. METHODS

In this chapter, the researcher will discuss about research design, population and sample, data collecting technique, variables, the instrument, scoring criteria for writing test, validity and reliability, research procedure, data analysis and hypothesis testing.

#### 3.1 Research Design

The objectives of this research is to find out the improvement of students' ability in writing narrative text after being taught by using textless comic and which aspects of writing skill that are improved by using textless comic. This research was a quantitative in which one-group pretest-posttest was applied (Hatch and Farhady; 1982:22). The class got the treatment from the researcher and also got pre-test and post-test. In order to see whether textless comic can improve the students' writing skills or not, it is determined by the difference scores of pre-test and post-test.

The research design can be represented as follows:



Where:

**T1** : Pre-test

**X** : Treatment (using textless comic as media)

**T2** : Post-test

(Hatch and Farhady, 1982:22)

The improvement of students' writing skill is really caused by the application of the treatments in the class but not because of the repetition of the test. In this research, the researcher did the treatments three times in the class which were given after pre-test.

### **3.2 Population and Sample**

In this research, the researcher took the students of science class in the second grade of SMAN 1 Gadingrejo that consists of 4 classes as a population. Each class consists of 31 students. Their ages are in the range of 15 until 17 years old. The researcher used one class from the population as a sample. From the fourth classes, researcher used XI IPA 4 as the sample of this research.

### **Sampling Technique**

The sample classes were chosen by the English teacher of that school. The researcher chose this way to determine the sample class because he did not want to disturb teacher's teaching learning program that had been running at that time. The researcher took XI IPA 4 class as the experimental class. That class consisted of 31 students. There are twenty one of female students and ten of male students in the experimental class.

### **3.3 Instrument**

In this research, researcher used some instruments for conducting his research. The instrument was the test of writing ability of students' to write in the papers. The instrument of this research will be explained as follow:

#### **3.3.1 Pretest**

The researcher administered pre-test before treatment. It aims to know the students' writing skill before being given the treatment using textless comic. In the testing process, the students had to write a narrative text themselves. This result of the test became the evaluation before the use of textless comic as the medium in writing narrative text was applied in the class.

#### **3.3.2 Treatment**

This was done after pre-test to teach the students using textless comic. There were three times of treatments. The researcher treated the students using some classroom activities such as think-pair-share, case study, and group problem solving.

#### **3.3.3 Posttest**

Post test was administrated after treatments to see what are the elements of writing skill improved by using of textless comic. It can be seen from the average scores of pre-test and post-test. From the score of this test, the researcher intended to find out the effectiveness of using textless comic as the medium in writing narrative text. The result of the scoring then was compared with pre-test.

Consequently, the researcher knew how far the effectiveness of using textless comic as the medium in writing narrative text.

### 3.4 Scoring Criteria

Five aspects which were evaluated by the researcher were content, language use, form/organization, vocabulary and mechanic. The researcher used computation as follows:

1. Content is scored as much as 30% from the total sentences support the main idea (unity).
2. Language use is scored as much as 25% from sentences use correct grammar.
3. Form is evaluated as much as 20% from the total sentences are written in chronological order (coherence).
4. Vocabulary is scored 20% as much as from vocabularies are use correctly.
5. Mechanic is evaluated as much as 5% from use punctuation, spelling and capitalization correctly.

The criteria of scoring are determined based Jacobs et al (1981: 90) as follows:

Aspect	Criteria	Score
Content	- <b>Excellent to very good:</b> Knowledge able, substantive, through development of thesis, relevant theory.	30-27
	- <b>Good to average:</b> Some knowledge of subject, adequate range, limited development of thesis, mostly relevant to topic but lacks detail.	26-22
	- <b>Fair to poor:</b> Limited knowledge of subject, little substance, inadequate development of topic.	21-17
	- <b>Poor:</b> Does not show knowledge of subject, non-substantive, not pertinent, not enough to evaluate.	16-13

Language Use	- <b>Excellent to very good.</b> Effective complete constructions, few error of agreement, tense, number, word order, function, pronouns, and preposition.	25-22
	- <b>Good to average.</b> Effective but simple construction, minor problem in complex construction, several error of agreement, preposition but seldom obscured/	21-18
	- <b>Fair to poor.</b> Major problem in simple construction, frequent error of negation, agreement, tense. Number, word, pronoun. Meaning confused.	17-11
	- <b>Very poor,</b> virtually no mastery of sentence construction rules, dominated errors, does not communicate, not enough to evaluate.	10-5
Organization	- <b>Excellent to very good.</b> Fluent expression, ideas clearly stated/supported, well-organized, logical sequencing, cohesive.	20-18
	- <b>Good to average.</b> Somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.	17-14
	- <b>Fair to poor.</b> Non-fluent, ideas confused or disconnected, lacks logical sequence and development.	13-10
	- <b>Very poor.</b> Does not communicate, no organization, not enough to evaluate	9-7
Vocabulary	- <b>Excellent to very good.</b> Sophisticated range, effective words/idioms and usage, word form mastery, appropriate register.	20-18
	- <b>Good to average.</b> Adequate range, occasional errors of idiom choice, usage but meaning not obscured.	17-14
	- <b>Fair to poor.</b> Limited range, frequent errors of idiom/words, meaning confused or obscure.	13-10
	- <b>Very poor.</b> Essentially translation, little knowledge of English vocabulary, not enough to evaluate	9-7
Mechanic	- <b>Excellent.</b> Few errors of punctuation, spelling, and capitalization/ used correctly	5
	- <b>Good.</b> Occasional errors of punctuation, spelling, and capitalization.	4
	- <b>Fair.</b> Numerous errors of punctuation, spelling, and capitalization	3
	- <b>Poor.</b> No mastery of convention, dominated by errors of punctuation, spelling, and capitalization	2

The researcher evaluated the aspects of writing based on the content, language use, form/organization, vocabulary and mechanic. The lowest score is 0 and the highest score is 100.

### **3.5 Validity**

Validity is an extent to which an instrument really measures the objective to be measured and suitable with the criteria (Hatch and Farhady, 1982:250). Validity is a matter of relevance. A test is said to be valid to the extent that it measures what is supposed to measure. This means that it relates directly to the purpose of the test. Actually, there are five types of validity but researcher only wants to describe two of those types of validity, there are content validity and construct validity. Content validity is intended to see whether the test is good reflection of what have been taught. Construct validity focuses on the kind of the test that is used to measure the ability (Hatch and Farhady, 1982:250). In this research, researcher administered a writing test and the technique scoring students' writing was based on five aspects; content, language use, form, mechanic, and vocabulary.

### **3.6 Reliability**

Reliability is measure of accuracy consistency, dependability, or fairness of scores resulting from administration of particular examination. Reliability of the test is consistency which a test yields the same result in measuring whatever it does measures. So, a test cannot measure anything well unless it measures consistently (Haris, 1974:14). Reliability of the pre-test and post-test writing were examined by using statistical measurement proposed by Shohamy (1985:213).

The statistical formula is:

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

Notes:

- R : Reliability  
 N : Number of the students  
 d : The difference of the rank correlation  
 1-6 : Constant number

After finding the coefficient between raters, researcher then analyzed the criteria.

There are five criteria according to Hatch and Farhady (1982:247). They are:

- a. A very low reliability            ranges from 0.00 to 0.19
- b. A low reliability                    ranges from 0.20 to 0.39
- c. An average reliability            ranges from 0.40 to 0.59
- d. A high reliability                    ranges from 0.60 to 0.79
- e. A very high reliability            ranges from 0.80 to 1.00

After calculating the data, the result of reliability could be seen in the following tables:

Raters Reliability

<b>Reliability</b>	<b>Pretest</b>	0,94	A very high reliability
	<b>Posttest</b>	0,65	A high reliability

### 3.7 Research Procedure

The procedures of the research are as follow:

1. Constructing an instrument for pre-test and post-test
2. Selecting the population and sample of the research
3. Trying out the instrument (writinging test)
4. Administering the pre-test
5. Conducting the treatments
6. Administering the post-test
7. Analyzing the test result (Pre-test and Post-test)

### **3.8 Data Analysis**

In order to see whether there is an improvement of students' writing skills, the researcher examined the students' score using these following steps:

1. Scoring the pre-test and the post-test
2. After getting the raw score, researcher tabulated the result of the test and calculated the score of the pre-test and post-test. Then, the researcher used SPSS to calculate mean of pre-test and post-test to see whether there is an influence or not after students were taught by using textless comic.
3. Drawing conclusion from the tabulated result of the pre-test and post-test. The researcher used statistic computerization, for example, repeated measures T-test of Statistical Package for Social Science (SPSS) for windows version 15 to test whether there is an influence or not.

### **3.9 Hypothesis Testing**

The hypothesis testing is used to prove whether the hypothesis process in this research is accepted or not. The hypotheses were analyzed by using repeated

measures T-test of Statistical Package for Social Science (SPSS) windows version

15. The hypotheses are as follow:

1.  $H_0$  : There is no improvement of students' writing ability after being taught by using textless comic.  
 $H_1$  : There is an improvement of students' writing ability after being taught by using textless comic.
  
2.  $H_0$  : There is no improvement in the aspects of writing; content and organization after being taught by using textless comic.  
 $H_1$  : There is an improvement in the aspects; content and organization of writing after being taught by using textless comic.

If  $P < 0,05$   $H_1$  is accepted

If  $P > 0,05$   $H_0$  is not accepted

The researcher 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 5% only.