

### **III. RESEARCH METHODS**

This chapter explains about the design of the research, population and sample, instruments, validity and reliability, data collecting technique, procedure, and data analysis.

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

The purposes of this research were to find out whether guiding questions technique could be used to increase senior high school students' ability in writing or not, and to be more specific to investigate which aspect of writing increased the most after learning writing using guiding questions technique in narrative paragraph writing. This research was also intended to find out the difficulties they faced in term of aspects of writing namely content, organization, vocabulary, language use, and mechanic. The one group pretest post test design was used in conducting the research in order to answer research questions number 1 and 2. Meanwhile, to answer research questions number 3, a questionnaire was given to the students. The one group pre test post test design can be seen as follows:

T1 X T2 (Setiyadi, 2006:132)

T1 : pre-test

X : treatment using guiding questions technique

T2 : post-test

A quantitative approach was used by using SPSS 16 to analyze the result of students' pre test and post test and to know whether there was significant increase or not.

### **3.2. Population and Sample of the Research**

The population of the research was all students of second grade of SMA Negeri 1 Belitang of 2014/2015 academic year who were still in their fourth semester. There were 9 classes of second grade and the number of students varied from 32-34 students. Then, one class that was XI IPS2 chosen randomly as the sample of the research using lottery. The students were given treatments for increasing their writing skill especially in narrative paragraph writing using guiding questions technique involving 5W+1H question words.

### **3.3. Instruments**

There were two instruments used in this research namely questionnaire and writing tests.

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

A pre-test was given to the students to find out their current proficiency especially in narrative writing. The test was given before implementing guiding questions technique in the class. The test generally asked the students to write a narration with instructions such as the students should choose one of the topic given, use past tense, and develop the topic into certain number of words. To complete the test, the students were given 90 minutes.

#### **2. Post-test**

After being taught using guiding questions technique, the students were given a writing test to know their achievement. In the test, the students were asked

to compose a narrative text with from one of the topics given and develop it into certain number of words. Same with the pre-test, the posttest should be done by the students in 90 minutes.

### 3. Questionnaire

Questionnaire is a set of questions given to a group of people in order to collect data about some topics. Here, it was used to find out the students' difficulties in learning narrative writing especially after being taught using guiding questions technique. The questions were also related to students' responses toward the technique after the treatments.

### **3.4. Validity and Reliability**

In order to determine the validity and reliability, the researcher analyzed the data based on content validity and inter rater reliability.

#### **3.4.1. Validity**

Validity is the extent to which it measures what it is supposed to measure and nothing else (Heaton, 1988:159). To analyze the validity of the test, the researcher considered it from content validity.

Content validity is concerned with whether the test is sufficiently representative and comprehensive. In this type of validity, the material given should be suitable with the curriculum. In this case, the curriculum used was 2013 Curriculum. In this research, the material was about narrative paragraph which was supposed to be learned by senior high school students, especially second graders. Therefore, the content was considered valid.

### 3.4.2. Inter Rater Reliability

Reliability refers to the consistency of the measure. A test is said to be reliable if its scores remain relatively stable from one administration to another (Hatch and Farhady, 1982:144). Therefore, inter-rater reliability was used to determine the reliability in this research. It refers to the concern that two same marks or grades are awarded if the same test papers are marked by two or more different examiners (Heaton, 1988:162). So, the raters scored students' works from pre test and post test and then the reliability from each test could be determined. The researcher asked the English subject teacher as another rater to score the students' works. Another rater beside the researcher was Didi Franzhardi, M.Pd. who has been teaching English for 15 years and is currently a lecturer in STIT Misbahul Ulum Gumawang and STKIP Nurul Huda. The scoring also used same criteria using ESL Composition Profile by Jacobs et al. (see appendix 3). By using same standard in scoring, it was expected that more reliable result could be achieved.

To determine the reliability, the researcher used the formula of reliability (Harris, 1974:142) as follows.

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

R : Reliability

N : Number of Students

d : The different of rank correlation

1-6 : Constant number

After calculating the reliability, the researcher used the standard of reliability (Arikunto, 1998:260) below to determine the criteria.

The criteria of reliability:

- a. Reliability ranges from 0.00 to 0.19 = very low
- b. Reliability ranges from 0.20 to 0.39 = low
- c. Reliability ranges from 0.40 to 0.59 = medium
- d. Reliability ranges from 0.60 to 0.79 = high
- e. Reliability ranges from 0.80 to 1.00 = very high

The calculations to determine the reliability of pre test and post test can be seen in appendix 9 and 10. The result for pre test is 0.92 and for post test is 0.93 which are both considered very high.

### **3.5. Data Collecting Technique**

To collect the data, the researcher used writing tests and questionnaire. The writing tests were used for collecting data on students' ability in narrative writing to answer research questions number 1 and 2 while questionnaire was used for collecting data on students' difficulties in narrative writing to answer research questions number 3. The explanations are as follows:

#### 1. Pre test

In order to know the students' initial ability in writing before being given treatments, the students were given a writing test of composing narrative paragraph. Below are instructions for pre test along with the topics to be developed by the students (for complete form of pre test, see appendix 4)

1. Write your name and your class
2. Choose one of the topics below

- a. A frightening experience
  - b. A happy experience
3. Use past tense for the verbs you use!
  4. Make a narration that consists of 100-150 words!

## 2. Post test

After being given three times treatments, the students were asked to do a post test to find out the result of those treatments. The result of pre test and post test were compared to find out whether or not guiding questions technique could be used to increase students' narrative writing achievement and to investigate which aspect of writing performed best by them. Below are the instructions given for doing post test and the complete form of post test can be seen in appendix 5.

1. Write your name and your class
2. Choose one of the topics below
  - a. Spider in the Garden
  - b. Made A Snowman
  - c. Went to A Beach
3. Use past tense for the verbs you use!
4. Make a narration that consists of 100-150 words!

## 3. Questionnaire

The purpose of questionnaire was to find out students' difficulties in narrative writing in term of aspect of writing as the third research question (see appendix 6). The result of questionnaire could also be used as additional and supporting data for the findings in the research since it was related to students' responses toward the technique and also their attitude toward English.

### **3.6. Procedure**

The procedure of the research was conducted as follows:

1. Giving pre test to the students as the sample of the research.
2. Giving treatment. The sample of the research was taught about narrative writing using guiding questions technique. The treatment was done three times.
3. Observation. While doing the treatment, an observation was done by the researcher to find out students' difficulties in writing generally.
4. Giving post test. After being given treatments about narrative writing using guiding questions technique, the students were given a writing test to find out whether their achievement increased or not and to find out which aspect of writing performed best by them.
5. Giving questionnaire about students' difficulties and problem in narrative writing after being taught through guiding questions technique and their responses toward the technique.
6. Analyzing the data  
After all the data were collected, they were analyzed to find out the answers of the research questions.

### **3.7. Data Analysis**

After the data from students' writings were collected, they were analyzed with the analytic scoring namely ESL Composition Profile in *Testing ESL Writing: A Practical Approach* (Jacobs et al., 1981) in Reid (1993:235-237). The advantage of analytic scoring is that it separates various factors and skills and so can be used by teachers and students to diagnose writing strengths and weaknesses. This

analytic scoring was used because it covered all aspects of writing and the score level as well so that the researcher can find the gain more easily by comparing the results of pre test and post test. Then it could be found out whether the use of guiding questions technique could increase students' writing skill or not and which aspect increased the most compared to other aspects. The analytic scoring can be seen in appendix 3.

This is the end of chapter 3 that explains about the design of the research, population and sample, instruments, validity and reliability, data collecting technique, procedure, and data analysis.