## CHAPTER III

## METHOD OF INVESTIGATION

This chapter deals with research design, the source of data, technique of data collection, and technique of data analysis.

### A. Research Design

To analyze the data, this research applies descriptive qualitative research method from Berg adapted by Djama'an in Muhammad (2011: 30) which is qualitative research. This research focuses on descriptions of the charactericts and it is only describing something because the aims to present the validity, the reliability, the difficulty level, and the discriminating power of English first semester test.

According to Sugiyono (2017: 7-8) Qualitative research called with the new one postpositivistic method includes natural setting and interpretation the findings data which is the phenomena based on range. The writer describes the result of an item analysis on English first semester test for eighth grade students of SMP N 2 Tonjong in the academic year 2017/2018 especially in Brebes regency.

### B. The Source of Data

The data of this research are taken from SMP N 2 Tonjong in Brebes regency, on the first semester for eighth grade students in the

academic year 2017/2018. The data consist of the item test, students answer sheet, and interview to the teacher.

**C. Technique of Data Collection**

Technique of data collection uses documentation and interview method. The writer acts as observer.

**D. Technique of Data Analysis**

Technique of data analysis uses four kinds of procedure. Based on Sudijono (2011: 185-395), the steps to analyze the item are as follows:

1. Analysing the Validity.

   The steps to analyze the validity through content validity are as follows:

   a. Prepare computing tabel to analyze test item.

   b. Find out mean from total score by using the pattern.

   c. Find out the standard total deviation by using the pattern.

   d. Compute the average score on the tabel.

   e. Compute correlation coeficient and interpretation of the result based on the degree of validity ($r_{xy} > r_{tabel}$).

2. Analysing the Reliability

   The steps to analyze the reliability are as follows:

   a. Compute the score from the uneven number on each students.

   b. Compute the score from the even number on each students.

   c. Compute correlation coeficient "r" product moment ($r_{xy}$).

   d. Compute realibility coefecnt test ($r_{11} > r_{tt}$)

e. Give the interpretation about $r_{11}$.

3. Analysing the Difficulty Level

The steps to analyze the difficulty level are as follows:

a. Prepare computing tabel to analyze test item.

b. Give point 1 to the right answer and 0 point for the wrong answer at tabel based students answer sheets.

c. Compute the difficulty level by use the pattern.

d. Interpretation the result based on the degree.

4. Analysing the Discriminating Power

The steps to analyze the discriminating power are as follows:

a. Divide of students answer sheet based on high and lower group.

b. Compute the score by use the pattern.

c. Interpretation the result based on the degree.