

CHAPTER III

RESEARCH METHOD

A. Research Design

This research wants to describe the difference of students' ability in answering matching and multiple choice test items on dialogue conversation. For this research, the writer uses descriptive quantitative approach. By using this approach the writer can know how far students' ability and significance of differences of students' ability in answering two items of test, the writer can also explain and describe about the difference of students' ability in answering matching and multiple choice based on students' answer result. Based on the result of students' answer, the writer can know whether matching is easier or more difficult than multiple choice.

B. Research Setting

The location of this research is in MAN 3 Banjarmasin, Jl. BatuBenawa I no. 61 RT 63, subdistrict Banjarmasin Tengah. This research is applied to students at grade X of MAN 3 Banjarmasin academic year 2014/2015. This research has been conducted from April 28 to June 28, 2015.

The writer chooses this school because at that time the writer did teaching practice 2 there. In addition, the writer taught also English for students of grade X X B and X F. At the time, the school will hold semester middle examination (UTS), the writer asks students what is the type of test items do you like, matching or multiple choice? Some students said matching easier than multiple

choices, although some students answer that multiple choice is easier. For this research, the writer uses matching and multiple choice as the test items for students to comprehend the dialogue and answer the questions that relate to the dialogue.

C. Population and Sample

The population of this research is limited to students at Grade X of MAN 3 Banjarmasin academic year 2014/2015. The total numbers of population are 242 that include six classes. They are class X A consists 40 students, class B consist 39 students, class X C consists 39 students, class X D 41 consists students, class X E consists 41 students, and class F consists 41 students.

Because the total of the students are 242, the writer will take sample about 37% of 242 students. The writer also does purposive random sampling for taking the sample research. The research will take 15 students from each class of grade X. So, total sample of this research is 90 students. The writer thinks that those 90 students can represent the total population of this research.

D. Research Instrument

Research instrument is used to know how the difference of students' ability in answering matching and multiple choice test items on dialogues at Grade X of MAN 3 Banjarmasin academic year 2014/2015. The writer can know whether matching is easier or more difficult for students in comprehend contents dialogue based on the data result of students' answer of the research instrument.

The data about this research are gained by holding the test which was made by the writer.

For analyzing the data, the writer feels necessary to determine design of measurement to know the difference of students' ability in answering matching and multiple choice test items on dialogue conversations. There are two categories of the data that are matching and multiple choices test items. Questions for matching and multiple choices should be similar because the result of two kinds of the test items will be compared. It is 20 questions for matching and 20 questions for multiple choices. Finally, there are 40 questions that students should answer. There are two types of test items below:

1. Matching

There are 20 questions. In this part, students will serve some dialogues, and in those dialogues, there are some blanks statements, the students have to comprehend the dialogues and match the blanks statements with options statements. Every correct answer will be scored 5 and every correct answer will be scored 0. Total correct answers are 100.

2. Multiple Choice

There are 20 questions in multiple choices. In this part, the students are required to understand the dialogues, there are some blanks statements there, the students have to choose the best statement for the blank statements of the dialogues among the option answers. Every correct answer will be scored 5 and every correct answer will be scored 0. Total correct answers are 100. The students' answer results will be scored, as follow:

$$\text{Students' score} = \frac{\text{receive score}}{\text{maximal score}} \times 100$$

So, the highest score is 100 and the lowest is 0.

The students' score will be categorized into five levels as follow:

80 – 100 = very good

70 – 79 = good

60 – 69 = fair

50 – 59 = poor

0 – <50 = very poor (Harris, 1969, p.9)

Mean of the score is got by the pattern below:

$$M = \frac{\sum fX}{N}$$

M : mean score

\sum : accumulating score

N : number of respondent

Measurement is said well if it has good validity, reliability, degree of test difficult, and degree of question distinctive. Here, the writer used validity and reliability to test the measurement that will be provided for the students.

1. Validity

An item has good validity if score on item in question has a fit or alignment the direction of the total score or there is a positive correlation between score items and total score significantly. Total score as the dependent variable here is domiciled (the dependent variable) while the score of the items located as

independent variable (independent variable). On the other hand, we can say an item is valid if the item score has positive correlation with total score significantly (Sudijono, 2012, p.258).

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{p/q}$$

r_{pbi} : Koefisien of biserial Point Correlation that represent the correlation power between variable I and variable II as koefisien of item validity

M_p : Average score of testee that answered the items correctly

M_t : Average from total score

SD_t : Standard deviation from total score

p : proportion of testee who can answer the items correctly

q : proportion of testee who answer the items incorrectly

2. Reliability

A reliable test is consistent and dependable. If you give the same test to the same students or matched students on two different occasions, the test should yield similar result (Sudijono,1998, p.253).

$$r_{11} = \left(\frac{n}{n-1} \right) \left(\frac{Sd^2 - \sum pq}{Sd^2} \right)$$

r_{11} : koefisien of reliability test completely

n : number of items

1 : constant

Sd^2 : Standard deviation

p : Proportion of testee who can answer correctly

q : Proportion of testee who answer incorrectly

E. Data Collecting Procedure

1. Technique of Data Collecting

The writer uses three techniques of data collection in this research are:

a. Test

The students are tested to know how the differences of students' ability in answering matching and multiple choice on dialogues. The applied test in this research is written test.

b. Observation

The writer comes to MAN 3 Banjarmasin and observes how the students at grade X answer both of test items, matching and multiple choices in the classroom.

c. Documentary

The aim of this technique is to look for all written reports or documents that keep some detailed data about primary and secondary data.

F. Data Analysis Procedure

1. Data Processing

Data processing is divided into four steps as follow:

a. Editing

The purpose of this technique is to re-examine all collected data and make sure whether the data have already completed or not.

b. Coding and Classification

The writer makes certain code on all collecting data to classify them into each category.

c. Tabulating

The writer tabulates all collected data based on frequency computing of each answer the following formula:

$$P = \frac{F}{N} \times 100$$

P = percentage

F = total respondent

N = number of respondent

d. Interpreting

Data that has been edited and coded will be interpreted by the writer.

The interpretation of the writer does not change the means of data.

2. Data Analysis

The writer will analyze the data after the data has been collected and interpreted and the writer analyzes the data by using descriptive

quantitative approach. In this step, the writer makes conclusion by using Z_{count} formula. There are some steps to process the data until the writer gets the answer, those are:

1. The writer counts the mean score of each test items by using the formula:

$$M = \frac{\sum fX}{N}$$

2. The writer counts SD of each test items by using the formula:

$$SD = \sqrt{\frac{\sum fx^2}{N}}$$

3. The writer counts Z_{count} of two test items by using the formula:

$$Z_{\text{count}} = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2}{n_1} + \frac{SD_2^2}{n_2}}}$$

4. The writer gives interpretation to Z_{count} with consulting t table or Z_{table} .

Consulting score of Z_{count} with Z_{table} table:

- In significant degrees Z_{table} 5%.
- In significant degrees Z_{table} 1%.

5. The writer makes a conclusion:

- If $-Z_{1/2\alpha} \leq Z_{\text{count}} \leq Z_{1/2\alpha} = H_0$ will be accepted and H_a will be rejected.
- If $-Z_{1/2\alpha} > Z_{\text{count}} > Z_{1/2\alpha} = H_0$ will be rejected and H_a will be accepted.

In this research, the writer states two hypothesis, those are:

- Zero Hypothesis (H_0)

There are not significant differences of students' ability in answering matching and multiple choice test items on dialogues at grade X of MAN 3 Banjarmasin academic year 2014/2015.

- Alternative Hypothesis (H_a)

There are significant differences of students' ability in answering matching and multiple choice test items on dialogues at grade X of MAN 3 Banjarmasin academic year 2014/2015.

Explanation:

- M : mean score
- Σ : accumulating score
- N : number of respondent
- SD : standard deviation
- $Z_{1/2\alpha}$: standard of belief that is used in a research.