

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This study the writer used descriptive methodology. This descriptive study was designed to obtain information concerning particular issues and then describe them. Descriptive research was presented a board range of activities that have in common the purpose of describing situation or phenomena. In this study used descriptive methodology because it described the quality of the teacher-made English UKK test item for academic 2012/2013 for seventh graders of Muhammadiyah 9 Surabaya focusing on the validity, realibility, and items analysis.

B. Research Setting

The study was conducted at Muhammadiyah 9 Surabaya which is located on Jl. Jojoran 1/50 Surabaya. Muhammadiyah 9 Surabaya has chosen as the field of study because of the following reasons. Muhammadiyah 9 Surabaya is one of many schools that develop English test by the teacher themselves, but the teacher rarely analyzes their own test. In fact, some English tests have been conducted by Muhammadiyah 9 Surabaya. So, it still questioned whether the test has a good quality or not.

C. Data Of The Study

The data of this study as followed:

- a. The teacher-made English UKK test and the answer key in academic 2012/2013 for seventh graders of Muhammadiyah 9 Surabaya.
- b. The students' answers sheet of the teacher-made English UKK test
- c. The students' scores of the teacher-made English UKK test.
- d. Standard of graduates' competence academic year 2012-2013

D. Research Instrument

This study used official document to answer the entire question of the study. The teacher-made English UKK test, the answer key and Standard of Graduates Competence academic year 2012-2013 were used to answer the validity of the test. The students' answers sheet and the students' scores of the teacher-made English UKK test were used to answer realibility, the index of difficulty and index of discrimination, distractors of the teacher-made English UKK test.

E. Data Collection Technique

This study used the score of the students and the item test as data: both were the documents. So, the appropriate technique in this study was documentation. Data of the research were collected through the following steps.

- a. The data of the teacher made English UKK test item for academic 2012/2013 and its answer key of were collected from the English teacher of Muhammadiyah 9 Surabaya who developed the test.
- b. The data of the students' answer sheet of the teacher made English UKK test item for academic 2012/2013 were collected from the English teacher of Muhammadiyah 9 Surabaya who developed the test.
- c. The data of the students' score of the teacher made English UKK test item.
- d. The data of standard of Graduates competence academic years 2012/2013 which were collected from curriculum of KTSP.

F. Data Analysis Technique

1. Analyzing face validity

Face validity would be high if the students or test takers encounter some or the entire characteristic of good face validity, as follow:

- a. The test well-constructed and familiar format task,
- b. The test was doable within the allotted time limit,
- c. The items were clear
- d. The test had clear directions,
- e. The test related to the course work
- f. A difficulty level that presents a reasonable challenge

2. Content validity

The content validity of the teacher-made English UKK test for Academic year 2012/2013 for seventh graders of Muhammadiyah 9 Surabaya was analyzed by using the tables of specification based on Standard of Graduated Competencies. The steps were as follows:

- a. Make the table of specification.
- b. Match the items in the test into the Standard of Graduated Competencies.
- c. Calculate the percentage of the item.
- d. Conclude the result.

3. Analyzing the reliability

- a. Deviding the question into two parts, the first is called variable X_1 and the second is called variable Y_1 .
- b. Then, Variable X_1 is being squared and also variable Y_1 .
- c. Then, variable X_1 and Variable Y_1 .
- d. Calculate the correlation coefficient of the full test with Spearman-Brown formula as follows:

$$r_{\frac{11}{12}} = \frac{N \sum Y_1 X_1 - (\sum X_1) (\sum Y_1)}{\sqrt{\{(N \sum X_1^2) - (\sum X_1)^2\} (N \sum Y_1^2) - (\sum Y_1)^2}}$$

- e. Having in mind the correlation coefficient of the full test, it followed by a test of significance table value of r product moment.

$$r_{11} = \frac{2 X \left(r_{\frac{11}{12}} \right)}{1 + \left(r_{\frac{11}{12}} \right)}$$

- f. Checking the result of the reliability with the criteria to determine whether or not the test was reliable.

4. Index of difficulty

Before analyzing the index of difficulty, the students' score of teacher made English UKK test was classified first.

1. The steps to classify the students' score were:
 - a. Arranged the students' score of seventh class..
 - b. Then, arranged the students' score from high to low.
 - c. Then, classified 50 % high score as upper group and 50 % low score as lower group became upper and lower group in each class.
2. The steps to analyze the index of difficulty were⁴¹ :
 - a. Make table analysis to ease in analyzing index of difficulty.
 - b. Then, compute the index of difficulty using the formula:

$$FV = \frac{R}{N}$$

⁴¹J. B. Heaton. *Writing English Language Tests*, p.181

FV = index of difficulty

R = number of students whose correct answer

N = number of students

- c. Match the result of index of difficulty with the criteria.

5. Index of discrimination

The steps to analyze the index of discrimination. The steps were:

- a. Make table analysis to ease in analyzing index of discrimination.
- b. Then, compute the index of discrimination using the formula :

$$D = \frac{\text{Correct } U - \text{Correct } L}{n}$$

D = index of discrimination

Correct U = the number of students in upper group who answer the item correctly

Correct L = the number of students in lower group who answer the item correctly

N = number of candidate of one group.

- c. Match the result of index of discrimination with the criteria.

6. Analysing of effectiveness of distractors

Analysing the distractors aimed not only to know which items that cannot work properly, but also to check why particular test taker

failed to answer certain items correctly. Distractors can function well if these are chosen by students from the lower level.

The last analyze was distractors. The steps were:

No item	Option	Upper	Lower	comment
1	A*			
	B			
	C			
	D			
	0			

Based on the table above, the first column is number item test. The second column is option of the test. The third column is upper students that choose the distractors. The fourth column is lower students that choose the distractors. The last column is comment.