

CHAPTER IV

DATA PRESENTATION AND ITS FINDING

A. Data Presentation and Research Finding Related to the Research Problems

This chapter discusses about Data Presentation and Research Finding Related to the Research Problem (Consist of Validity, Reliability, Index Difficulty, Effectiveness Distracter, Quality of Multiple Choice item, and Result of Interview), and discussion.

1. Validity of Test Item

a. Face Validity

The test is to have face validity if the instruction of the test is understood by the students. The writer has found that the instruction used on summative test at the tenth grade of SMK Borneo Bhakti Husada in second semester has fulfilled the face validity as seen in table 4.1 as follows.

Table 4.1
The Face Validity

| No | Instruction of the Item | Number of Item | Criteria |
|----|--|----------------|----------|
| 1 | Questions 1-8. Choose the correct answer A, B, C, or D for each number. | 1 – 8 | Valid |
| 2 | Questions 9 – 15 are error recognition. Choose the underlined word or phrase that is incorrect. | 9 – 15 | Valid |
| 3 | Question 16 – 20 are based on the following text | 16 – 20 | Valid |

| | | | |
|---|--|---------|-------|
| 4 | Question 21 – 24 are based on the following text | 21 – 24 | Valid |
| 5 | Question 25 – 27 are based on the following text | 25 – 27 | Valid |
| 6 | Question 28 – 30 are based on the following text | 28 – 30 | Valid |

Based on the table above, it can be concluded that all the instructions of the test are valid. It is known all the instructions can be understood by the students.

b. Content validity

Content Validity is also called curricular validity. The test is said has content validity if the content is proper with the scope and content of curriculum in school. Content test has suitable or represent the sample of learning result that should be achieved according to curriculum.

Look at the table below to see the appropriate the test and curriculum by seeing the curriculum and the handbook of English teacher.

Table 4.2

**The Appropriateness Items with Curriculum and Handbook Material
at the Tenth Grade of SMK Kesehatan Borneo Bhakti Husada
Palangka Raya**

| NO | Material | Number of item | Item | SMT | Appropriate | |
|----|---|------------------------|--|-----|-------------|----|
| | | | | | Yes | No |
| 1 | Adjective showing colours, quality, size, shape, age, origin, material. | - | | 1 | | ✓ |
| 2 | Profession nationality | 28 29 30 | <p>Text</p> <p>28.What is Microsoft Corporation based on the above text?</p> <p>A. A computer software company in United States.</p> <p>B. A Microsoft Corporation company in United States.</p> <p>C. A Microsoft Windows and Microsoft Office in United States.</p> <p>D. A computer hardware company in United States.</p> <p>29.What are the products of Microsoft Corporation?</p> <p>A. Microsoft and computer.</p> <p>B. Computer and Microsoft Windows.</p> <p>C. Microsoft Windows and Microsoft Office.</p> <p>D. Computer and Microsoft Office.</p> <p>30.Is bill Gates poor?</p> <p>A. No, he is.</p> <p>B. No, he is not.</p> <p>C. Yes, he is.</p> | 1 | ✓ | |

| | | | | | | |
|----|---|---|--------------------|---|--|---|
| | | | D. Yes, he is not. | | | |
| 3 | Adjective showing physical, non physical. | - | | 1 | | ✓ |
| 4 | Nouns showing time, date month, and year. | - | | 1 | | ✓ |
| 5 | Grammar review: Singular-plural nouns | - | | 1 | | ✓ |
| 6 | Cardinal and ordinal numbers | - | | 1 | | ✓ |
| 7 | Adjectives of quality: good, beautiful, etc | - | | 1 | | ✓ |
| 8 | Adjectives of size: big, small, etc | - | | 1 | | ✓ |
| 9 | Adjective of shape: round, straight, etc | - | | 1 | | ✓ |
| 10 | Adjectives of age: old, new, etc | - | | 1 | | ✓ |
| 11 | Adjective of color: blue, red, etc | - | | 1 | | ✓ |
| 12 | Nationality, profession | - | | 1 | | ✓ |
| 13 | Adjective in series | - | | 1 | | ✓ |

| | | | | | | |
|----|--|----------------------------|---|---|---|---|
| 14 | Description of events: the accident happened at nine PM..... | 16 17 18 19 20 | <p>Text</p> <p>16.What is the writer doing based on the text?</p> <p>A. Playing video games. B. Playing with her older sister. C. Playing with the pet cat. D. Playing by herself.</p> <p>17.Who is helping the writer's mother to prepare the food?</p> <p>A. The writer's father. B. The cat. C. The writer's older sister. D. The writer.</p> <p>18.What is NOT TRUE according to the text?</p> <p>A. Today is different from any other Sunday. B. They enjoy their meals together. C. The writer's father is humorous. D. Today is just like any other Sunday.</p> <p>19.The word 'our' in the phrase 'our room' refers to ...</p> <p>A. The writer's family. B. The writer and her youngest sister. C. The writer's parents. D. The writer and her older sister.</p> <p>20.How many siblings does the writer have?</p> <p>A. Two sisters B. Two sisters and a brother. C. Two brothers. D. None.</p> | 1 | ✓ | |
| 15 | Antonym/synonym | - | | 1 | | ✓ |
| 16 | Words and expressions used to show regrets and apologies | - | | 1 | | ✓ |

| | | | | | | |
|----|---|----------|---|---|---|---|
| 17 | Words and expression used to express sympathy | - | | 1 | | ✓ |
| 18 | Adjectives for expressing feeling. | - | | 1 | | ✓ |
| 19 | Adjectives '-ing' vs '-ed' | - | | 1 | | ✓ |
| 20 | Adjective set expression | - | | 1 | | ✓ |
| 21 | Subject – verb agreement: | 12 | 12. <u>The children</u> <u>is</u> crying <u>while</u> eating <u>a biscuit</u> on <u>the floor</u> . | | ✓ | |
| 22 | Words and expression used in asking for and giving permission. | - | | 1 | | ✓ |
| 23 | Grammar: modal + auxiliary | 11 | 13. The weather <u>may</u> be hot now, but I <u>should</u> keep my umbrella inside my bag. No one <u>can</u> predict the weather precisely. Perhaps it <u>will</u> raining today. | 1 | ✓ | |
| 24 | Expression and verb forms used in commands and request: | 1 | 1. Danny: Could you help me solve this Biology problem? Agus: You should do it by yourself. A. I'm afraid I can't. B. How terrible. C. That's awesome D. Pity me. | | ✓ | |
| | | | | | | ✓ |
| 1 | Words and Expressions used I the context of telling or describing event | - | - | 2 | | ✓ |
| 2 | Grammar: present continuous, future continuous | 14 15 | 14. <u>Are</u> Maya cutting <u>or</u> watering the <u>plants</u> in the <u>garden</u> ? 15. <u>What</u> <u>are</u> you <u>do</u> in here, | 2 | ✓ | |

| | | | | | | |
|---|---|--------|--|---|---|---|
| | | | <u>you</u> look so <u>serious</u> | | | |
| 3 | Sentences using 'there + be' | 10 | 10. <u>Mira's room</u> is a mess. <u>There is some shirts</u> on the floor and <u>socks on the table</u> . | 2 | ✓ | |
| 4 | Prepositions: in, on, at, under, etc | - | - | | - | ✓ |
| 5 | Questions about event: - how/when did it happen? | 5 7 | 5. Berry: What is happening there? Liza : ... A. People are protesting against the new policy. B. People protest against the new policy. C. People is protesting against the new policy. D. People doing protest against the new policy. 7. Rany: When will the plane arrive? Prisil : ... A. The plane will arrived at 9.00 a.m. B. It arrived at 9.00 a.m. C. The plane arrives at 9.00 a.m. D. It will arrive at 9.00 p.m. | 2 | ✓ | |
| 6 | Expression of feeling/opinions concerning an event. | 2 6 | 2. Prisky: It is very hot in here. I hate the weather today. Eglantine : ... A. Yes, the weather is depressed. B. Yeah, it is depressing. C. Hmm... It was exhausted. D. Indeed, it is boring. 6. Laura: What do you think about the restaurant? Kate : Well, it is not ... the previous restaurant. A. As expensive as B. As cheap than | 2 | ✓ | |

| | | | | | | |
|----|--|----------------|---|---|---|---|
| | | | C. More expensive D. Most expensive | | | |
| 7 | Samples of memo | 25 26 27 | TEXT 25. When did the guest receive this card? A. When he checked into the Hotel B. When he left the Hotel. C. When ordering meals at the restaurant. D. When making the reservation. 26. Who issued the card to the guest? A. Mr. Aditya Ismail. B. The Hotel Manager. C. The restaurant cashier. D. The desk clerk. 27. The facilities below are mentioned in the text, EXCEPT ... A. The restaurant B. The gym C. The meeting room D. The coffee shop | 2 | | |
| 8 | Samples of menu | - | - | 2 | | ✓ |
| 9 | Words and expressions to explain signs and symbols | - | - | 2 | | ✓ |
| 10 | Sample of time table and schedule | - | - | 2 | | ✓ |
| 11 | Degrees of comparison | 6 9 13 | 6. Laura: What do you think about the restaurant? Kate: Well, it is not ... the previous restaurant. A. As expensive as B. As cheap than C. More expensive D. Dost expensive 9. Mia is <u>the most tallest</u> girl in the class. <u>She is fit</u> to be a <u>model</u> . 13. His <u>last test</u> showed he | 2 | ✓ | |

| | | | | | | |
|----|---|---|--|---|--|---|
| | | | was <u>quickest</u> typist, yet he was the <u>less</u> accurate of all the | | | |
| 12 | Pronoun and reported speech | - | - | 2 | | ✓ |
| 13 | Words and expressions used in expressing preference | - | | 2 | | ✓ |
| 14 | Conditional sentence type | - | | 2 | | ✓ |
| 15 | Word and expressions used to talk about capabilities | - | | 2 | | ✓ |
| 16 | Words and expressions used in asking for and giving direction (location) | - | | 2 | | ✓ |
| 17 | Prepositions of place: in front of, behind, beside, etc | - | | 2 | | ✓ |
| 18 | Grammar review: "will", "could", "would", and preposition: in, on and at. | - | | 2 | | ✓ |
| 19 | Sample of invitation (personal invitation). | - | | 2 | | ✓ |
| 20 | Parts of personal invitations. | - | | 2 | | |
| 21 | Contents, style, spelling and punctuation. | - | | 2 | | ✓ |

Based on the table above, it can be known the content of curriculum and material in handbook is less distributed in the multiple choice test. It means every material that in curriculum less representatives in multiple choice tests. Based on the table above can be concluded that the English multiple choice test has less validity content.

c. Construct Validity

A test is said has construct validity if the item is arranged to be able to measure every aspect of thinking that is written in curriculum. In this case, the analysis of the construct validity test has done bay seeing the syllabus of English subject at SMK Kesehatan Borneo Bhakti Husada Palangka Raya which use competency based curriculum 2006. See the table below to know the appropriateness of the test with syllabus.

Table 4.3
The Appropriateness Items with the Syllabus

| No | Basic Competency | No Item | SMT | Appropriate | |
|----|---|---------|-----|-------------|----|
| | | | | Yes | No |
| 1 | <p>Listening Responding the base expressions in social interaction for life necessity.</p> <ul style="list-style-type: none"> • Observing dialog about greeting, meeting and farewell, introducing and thanking and or apologizing. | - | 1 | | ✓ |
| | <p>Listening Mentioning the things , person, characteristic of time, day, month, and year.</p> <ul style="list-style-type: none"> • Observing, reminding, knowing expression of describing something, and showing number. | - | 1 | | ✓ |
| | <p>Listening Creating simple speech to fulfill base functions.</p> <ul style="list-style-type: none"> • Observing the various expression of sympathy. | | | | |
| | <p>Listening Explaining the simple activity that is going happen.</p> <ul style="list-style-type: none"> • Observing the various expression to describe an event that is happening. | - | 1 | | ✓ |
| | <p>Listening Responding memo and simple menu, travelling schedule of public transportation, and traffic sign.</p> <ul style="list-style-type: none"> • Observing the various expressions to explain proper sign and symbol. | - | 1 | | ✓ |
| | <p>Listening Responding words and foreign terms and simple sentence based on the pattern.</p> <ul style="list-style-type: none"> • Observing various expression to ask and give instruction or direction, stating choice and ability. | - | 2 | | ✓ |
| | Listening | - | 2 | | |

| | | | | | |
|---|--|--|---------------------|---------------------|---|
| | <p>Writing simple invitation.</p> <ul style="list-style-type: none"> Observing various expression to deliver the invitation properly. | - | 2 | | ✓ |
| 2 | <p>Speaking Responding base expressions in social interaction for life purpose.</p> <ul style="list-style-type: none"> Expressing, responding greeting, and farewell, introducing, thanking, and apologizing. <p>Speaking Mentioning things , person, the characteristic of time, day, month, and year.</p> <ul style="list-style-type: none"> Expressing and responding expression to describe something, and showing number eg. Telephone number. <p>Speaking Creating simple speech to fulfill base functions.</p> <ul style="list-style-type: none"> Observing the various expression of sympathy. <p>Speaking Explain the simple activity that is going happen.</p> <ul style="list-style-type: none"> Observing the various expressions to describe an event that is going happen. <p>Speaking Responding memo and simple menu, travelling schedule of public transportation, and traffic sign.</p> <ul style="list-style-type: none"> Observing the various expressions to explain proper sign and symbol. <p>Speaking Responding words and foreign terms and simple sentence based on the pattern.</p> <ul style="list-style-type: none"> Observing various expressions to ask and give instruction or direction, stating choice and ability. <p>Speaking Writing simple invitation.</p> <ul style="list-style-type: none"> Expressing, responding, and delivering invitation well and properly. | 1 7 3 – 4 - 5 - 6 | 1 1 1 | ✓ ✓ ✓ | |
| 3 | <p>Reading Responding base expressions in social</p> | | | | |

| | | | | | |
|--|---|--|----------------------------|----------------------------|--|
| | <p>interaction for life purpose.</p> <ul style="list-style-type: none"> • Reading paragraph, letter about greeting, farewell, thanking, and or apologizing; translating; answering questions connecting with the content of the text. <p>Reading Mention things , person, the characteristic of time, day, month, and year</p> <ul style="list-style-type: none"> • Reading paragraph, graph, table, menu, and schedule; translating; answering the questions connecting with the content of the text. <p>Reading Creating simple speech to fulfill base functions.</p> <ul style="list-style-type: none"> • Reading paragraph about expression of sympathy, translating; answering the questions connecting with the content of the text. <p>Reading Explaining the simple activity that is going happen.</p> <ul style="list-style-type: none"> • Reading paragraph, text that content of describing event that is going happen, translating; answering the questions connecting with the content of the text. <p>Reading Responding memo and simple menu, travelling schedule of public transportation, and traffic sign.</p> <ul style="list-style-type: none"> • Understanding schedule and list; translating; answering the questions connecting with the content of the text. <p>Reading Responding words and foreign terms and simple sentence based on the pattern.</p> <ul style="list-style-type: none"> • Reading paragraph, dialog about asking and giving instruction or direction, asking choice and ability; translating; answering the questions connecting with the content of the text. | <p>21 – 23 – 24 – 28 – 29 – 30.</p> <p>16 – 17 – 18 – 19 – 20.</p> <p>25 – 26 – 27</p> | <p>1</p> <p>2</p> <p>2</p> | <p>✓</p> <p>✓</p> <p>✓</p> | |
|--|---|--|----------------------------|----------------------------|--|

| | | | | | |
|---|--|-----------------|---|---|--|
| | <p>Reading Writing the simple invitation.</p> <ul style="list-style-type: none"> • Reading paragraph, e-mail/ the letter about expression of delivering invitation; translating; answering the questions connecting with the content of the text. | | | | |
| 4 | <p>Writing Responding base expressions in social interaction for life purpose..</p> <ul style="list-style-type: none"> • Arranging and completing the dialog about greeting farewell, introducing, thanking, and apologizing. <p>Writing Mentioning things , person, the characteristic of time, day, month, and year</p> <ul style="list-style-type: none"> • Arranging and completing the dialog, table, size or writing things connected to expression to describe something and number. <p>Writing Creating simple speech to fulfill base functions</p> <ul style="list-style-type: none"> • Arranging, and completing the dialog about expression sympathy. <p>Writing Explaining the simple activity that is going happen</p> <ul style="list-style-type: none"> • Arranging, and completing the dialog about describing event that is happening. <p>Writing Responding memo and simple menu, travelling schedule of public transportation, and traffic sign.</p> <ul style="list-style-type: none"> • Arranging, and completing the dialog about schedule and memo. <p>Writing Responding words and foreign terms and simple sentence based on the pattern</p> <ul style="list-style-type: none"> • Arranging, and completing the dialog about asking and giving instruction or direction, stating choice and ability. <p>Writing Writing the simple invitation.</p> <ul style="list-style-type: none"> • Arranging, and completing the dialog about delivery invitation; writing | 8 – 9 – 10 - 13 | 1 | ✓ | |
| | | 12 – 14 – 15 | 1 | ✓ | |

| | | | | | |
|--|--------------------|--|--|--|--|
| | simple invitation. | | | | |
|--|--------------------|--|--|--|--|

Based on the table above, it can be seen that the item is not distributed entirely based on syllabus. Listening skill is a standard competence that not included in English multiple choice test at the tenth grade of SMK Kesehatan Borneo Bhakti Husada Palangka Raya. Based on the table above we can see there are 7 item for speaking (1, 2, 3, 4, 5, 6, 7), 15 for reading (16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30), and 8 for writing (8, 9, 10, 11, 12, 13, 14, 15). So it can be concluded that the multiple choice test at the tenth grade of SMK Kesehatan Borneo Bhakti Husada Palangka Raya is effective enough to represent all kinds of performance of students.

d. Validity Test

The validity of English multiple choice test items that is made by the English teacher can be determine by using formula namely Point Biserial.

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

Where:

r_{pbi} = coefficient validity of each item

M_p = mean of the right answer

M_t = Mean of the total score

SD_t = standard deviation from the total score

p = proportion of the students' correct answer for each item

q = proportion of the students' wrong answer for each item (1-p).

The interpretation of correlation of coefficient is:

| | | |
|-----------|-------------|-----------------------|
| r between | 0,00 – 0,20 | : no correlation |
| | 0,20 – 0,40 | : low |
| | 0,41 – 0,70 | : fair |
| | 0,71 – 0,90 | : high |
| | 0,91 – 1,00 | : very high (perfect) |

Determining the validity of the test items, first make a score table that has been achieved by the students from item no 1 until 30 from 23 students. To be more clearly look at the following table:

TABLE 4.4

The Item Analysis Test Consist 30 Items

Using the formula:

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

$$r_{pbs} = \frac{23.312 - 21,617}{5.288} \sqrt{\frac{0,695}{0,305}}$$

$$= 0,320 \sqrt{2,278}$$

$$= 0,320 \times 1,509$$

$$= 0,482$$

Based on the criteria that have been established above, the coefficient correlation of r_{pbi} number 2 (two) is fair and valid to be used for research instrument.

Next, the validity item is calculated in the following table and match with the criteria that have been established above.

Table 4.5
The Calculation of Validity Items

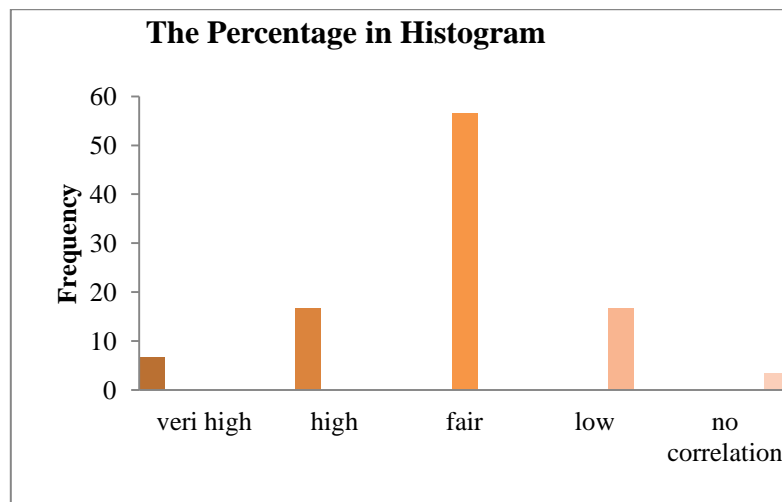
| No | Mp | Mt | SDt | p | Q | r_{pbi} | Criteria |
|----|--------|--------|-------|-------|-------|-----------|-----------|
| 1 | 21,617 | 21,617 | 5,288 | 1 | 0 | 1 | Very High |
| 2 | 23,312 | 21,617 | 5,288 | 0,695 | 0,305 | 0,48 | Fair |
| 3 | 22,944 | 21,617 | 5,288 | 0,782 | 0,218 | 0,47 | Fair |
| 4 | 21,1 | 21,617 | 5,288 | 0,869 | 0,131 | 0,47 | Fair |

| | | | | | | | |
|----|--------|--------|-------|-------|-------|-------|-------------------|
| 5 | 24,187 | 21,617 | 5,288 | 0,695 | 0,305 | 0,73 | High |
| 6 | 24 | 21,617 | 5,288 | 0,739 | 0,261 | 0,76 | High |
| 7 | 22,684 | 21,617 | 5,288 | 0,826 | 0,174 | 0,44 | Fair |
| 8 | 23 | 21,617 | 5,288 | 0,782 | 0,218 | 0,49 | Fair |
| 9 | 23,105 | 21,617 | 5,288 | 0,826 | 0,174 | 0,61 | Fair |
| 10 | 22,5 | 21,617 | 5,288 | 0,608 | 0,392 | 0,23 | Low |
| 11 | 25,273 | 21,617 | 5,288 | 0,478 | 0,522 | 0,66 | Fair |
| 12 | 24,125 | 21,617 | 5,288 | 0,695 | 0,305 | 0,72 | High |
| 13 | 23 | 21,617 | 5,288 | 0,695 | 0,305 | 0,48 | Fair |
| 14 | 23,166 | 21,617 | 5,288 | 0,782 | 0,218 | 0,55 | Fair |
| 15 | 22,619 | 21,617 | 5,288 | 0,913 | 0,087 | 0,61 | Fair |
| 16 | 23,05 | 21,617 | 5,288 | 0,869 | 0,131 | 0,79 | High |
| 17 | 22,523 | 21,617 | 5,288 | 0,913 | 0,087 | 0,55 | Fair |
| 18 | 23,6 | 21,617 | 5,288 | 0,652 | 0,384 | 0,58 | Fair |
| 19 | 22,529 | 21,617 | 5,288 | 0,739 | 0,261 | 0,39 | Low |
| 20 | 23,278 | 21,617 | 5,288 | 0,782 | 0,218 | 0,68 | Fair |
| 21 | 15 | 21,617 | 5,288 | 0,082 | 0,914 | -0,37 | No Correlation |
| 22 | 21,671 | 21,617 | 5,288 | 0,913 | 0,087 | 0,80 | High |
| 23 | 23,417 | 21,617 | 5,288 | 0,521 | 0,479 | 0,35 | Low |
| 24 | 22,125 | 21,617 | 5,288 | 0,695 | 0,305 | 0,37 | Low |
| 25 | 21,617 | 21,617 | 5,288 | 1 | 0 | 1 | Very High |
| 26 | 23,692 | 21,617 | 5,288 | 0,347 | 0,653 | 0,35 | Low |
| 27 | 23,846 | 21,617 | 5,288 | 0,565 | 0,435 | 0,57 | Fair |
| 28 | 23,642 | 21,617 | 5,288 | 0,608 | 0,392 | 0,68 | Fair |
| 29 | 23,333 | 21,617 | 5,288 | 0,782 | 0,218 | 0,61 | Fair |
| 30 | 22,823 | 21,617 | 5,288 | 0,739 | 0,261 | 0,47 | Fair |

Based on the distribution validity items above can be seen the percentage below:

Table 4.6
The Percentage of Validity Test Items

| Criteria | Percentage (%) |
|----------------|----------------|
| Very High | 6,6 |
| High | 16,6 |
| Fair | 56,6 |
| Low | 16,6 |
| No Correlation | 3,3 |



2. Reliability of the Test

The formula that is used to know the reliability of multiple choice test for English subject at SMK Kesehatan Borneo Bhakti Husada Palangka Raya is using Kuder Richardson method, which is known KR₂₀ and KR₂₁. In this study, the writer is used KR₂₀ formula to know the reliability of the test item.

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

Where:

r_{11} = coefficient reliability test

S^2 = total variant

n = total of test item

p = proportion of the students' correct answer for each item

q = proportion of the students' wrong answer, or $q = 1 - p$

$\sum pq$ = total result math of p and q .

To determines the (S^2) as bellow

$$S^2 = \frac{\sum X - \frac{(\sum X)^2}{N}}{N}$$

To know the level of test validity and reliability can be seen on the value bellow:

| | | |
|-------------|-------------|------------------|
| r between | 0,00 – 0,20 | : no correlation |
| | 0,20 – 0,40 | : low |
| | 0,41 – 0,70 | : fair |
| | 0,71 – 0,90 | : high |

0,91 – 1,00 : very high (perfect)

Based data on table 4.5 in validity test; it can define the variants as below:

$$\begin{aligned} \text{Known: } \quad \Sigma p.q &= 4,96 \\ \Sigma X_t &= 497 \\ \Sigma X^2 &= 11.391 \end{aligned}$$

$$S^2 = \frac{\Sigma X - \frac{(\Sigma X)^2}{N}}{N}$$

$$S^2 = \frac{11391 - \frac{(\Sigma X 497)^2}{23}}{23}$$

$$S^2 = \frac{11391 - \frac{247009}{23}}{23}$$

$$S^2 = \frac{11391 - 10739,521}{23}$$

$$S^2 = 28,325$$

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

$$r_{11} = \left(\frac{30}{30-1} \right) \left(\frac{28,325 - 4,96}{28,325} \right)$$

$$= (1,034) \left(\frac{23,365}{28,325} \right)$$

$$= 1,034 \times 0,824$$

$$= 0,852$$

Based on the criteria that have been established above, it is known that instrument reliability is 0,85. So, the reliability of the test is high.

3. Index Difficulty of the Test

The formulation as follows to determine the index difficulty:

$$TK = \frac{U+L}{T}$$

Where:

TK = index difficulty

U = numbers of the correct answer from upper group

L = numbers of the correct answer from lower group

T = number of upper and lower group.¹

Then it classifies the result from the application of the calculation above as follows:

- 1) If the item difficulty 0,00 – 0,30 it says the difficulty test.
- 2) If the item difficulty 0,30 – 0,70 it says the middle item.
- 3) If the item difficulty 0,70 – 1,00 it says easy test.

So, based on the index item of difficulty of English multiple choice items test for the second semester at the tenth grade students of SMK Kesehatan Borneo Bhakti Husada Palangka Raya can be seen on the table below.

Table 4.7
Index Item Difficulty

| No | Number Right | Number Right | Number all | U + L | U – L | TK | Category |
|----|-----------------|-----------------|---------------|----------|-------|----|----------|
| | | | | | | | |

¹ M. Ngalim Purwanto, *Prinsip-Prinsip dan Teknik Evaluasi Pengajaran*. Cet. 9. Bandung: Remaja Rosdakarya, 2000, p. 119

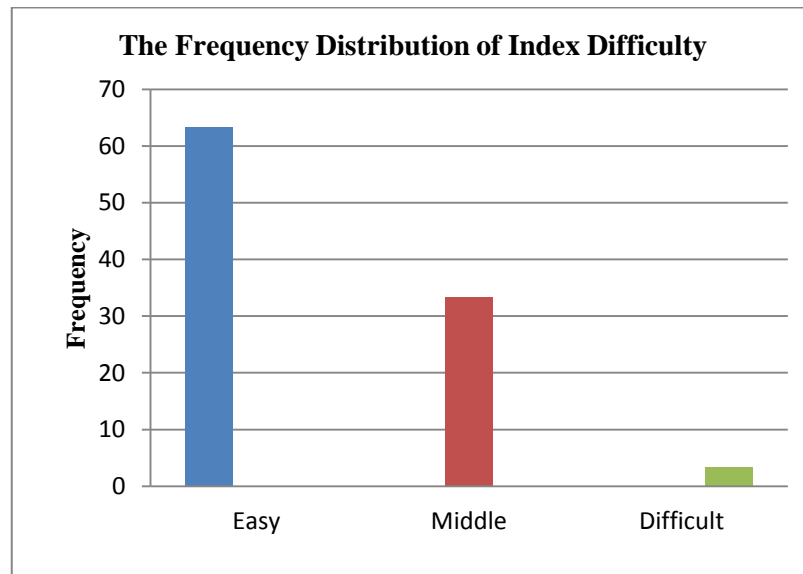
| | Answer (UP) | Answer (L) | students | | | | |
|----|-------------|------------|----------|----|----|------|-----------|
| 1 | 11 | 11 | 22 | 22 | 0 | 1 | Easy |
| 2 | 9 | 5 | 22 | 14 | 5 | 0,64 | Middle |
| 3 | 11 | 6 | 22 | 17 | 5 | 0,77 | Easy |
| 4 | 11 | 7 | 22 | 18 | 4 | 0,82 | Easy |
| 5 | 10 | 4 | 22 | 14 | 6 | 0,64 | Middle |
| 6 | 11 | 6 | 22 | 17 | 5 | 0,77 | Easy |
| 7 | 10 | 7 | 22 | 17 | 3 | 0,77 | Easy |
| 8 | 10 | 7 | 22 | 17 | 3 | 0,77 | Easy |
| 9 | 10 | 7 | 22 | 17 | 3 | 0,77 | Easy |
| 10 | 8 | 6 | 22 | 14 | 2 | 0,64 | Middle |
| 11 | 8 | 3 | 22 | 11 | 5 | 0,50 | Middle |
| 12 | 10 | 6 | 22 | 16 | 4 | 0,73 | Easy |
| 13 | 10 | 6 | 22 | 16 | 4 | 0,73 | Easy |
| 14 | 11 | 7 | 22 | 18 | 4 | 0,82 | Easy |
| 15 | 11 | 9 | 22 | 20 | 2 | 0,91 | Easy |
| 16 | 11 | 8 | 22 | 19 | 3 | 0,86 | Easy |
| 17 | 11 | 9 | 22 | 20 | 2 | 0,91 | Easy |
| 18 | 11 | 4 | 22 | 15 | 7 | 0,68 | Middle |
| 19 | 9 | 7 | 22 | 16 | 2 | 0,73 | Easy |
| 20 | 11 | 6 | 22 | 17 | 5 | 0,77 | Easy |
| 21 | 0 | 2 | 22 | 2 | -2 | 0,18 | Difficult |

| | | | | | | | |
|----|----|----|----|----|---|------|--------|
| 22 | 11 | 8 | 22 | 19 | 3 | 0,86 | Easy |
| 23 | 8 | 4 | 22 | 12 | 4 | 0,54 | Middle |
| 24 | 8 | 8 | 22 | 16 | 0 | 0,73 | Easy |
| 25 | 11 | 11 | 22 | 22 | 0 | 1 | Easy |
| 26 | 5 | 3 | 22 | 8 | 2 | 0,36 | Middle |
| 27 | 7 | 4 | 22 | 11 | 3 | 0,50 | Middle |
| 28 | 9 | 3 | 22 | 12 | 6 | 0,54 | Middle |
| 29 | 11 | 7 | 22 | 18 | 4 | 0,82 | Easy |
| 30 | 9 | 6 | 22 | 15 | 3 | 0,68 | Middle |

Based on the table above, it can be seen the distribution of easy item, difficult item and middle item by percentage whether the English multiple choice test in the tenth grade of SMK Kesehatan Borneo Bhakti Husada Palangka Raya at second semester has fix the rule or not. The percentage can be seen in the following table.

Table 4.8
Percentage of Item Difficulty

| Item Difficulty | Percentage (%) |
|-----------------|----------------|
| EASY | 63,3 % |
| MIDDLE | 33,3 % |
| DIFFICULT | 3,3 % |



Based on the table of item difficulty, it is known that percentage of easy item is 63.3%, middle is 33.3%, and difficult is 3.3%. It can be concluded that the difficulties of the test is less suitable with the percentage comparison that it should be 30% for easy, 40% for middle, and 30% for difficult item.

4. Effectiveness Distracter

One further step in the analysis of multiple choice items is to inspect the way each item distracters functioned. Determining effectiveness distracters is by comparing the students' numbers in upper and lower group who choose the wrong alternative distracters. If an item contains distracters which attracted no one, not even the poorest examinees, it is a nonfunctioning choice which will increase the chances that some examinees will get the item right by guessing between or among the remaining two or three possibilities.

The effectiveness distracter is defining based on the students answer pattern which is divided in two groups, upper and lower group as bellow:

TABLE 4.9
UPPER GROUP

TABLE 4.10
LOWER GROUP

Based on the table above, it can be analyzed the students answer pattern to find out the effectiveness distracters.

Table 4.11
Student's Answer Patterns

| Item | Group | Options | | | | Numbers | Explanation |
|------|-------|-----------|-----------|-----------|-----------|---------|-------------------------------------|
| | | A | B | C | D | | |
| 1 | Upper | 11 | 0 | 0 | 0 | 11 | Option B, C and D doesn't function. |
| | Lower | 11 | 0 | 0 | 0 | 11 | |
| 2 | Upper | 1 | 10 | 0 | 0 | 11 | Option C and D doesn't function |
| | Lower | 6 | 5 | 0 | 0 | 11 | |
| 3 | Upper | 11 | 0 | 0 | 0 | 11 | Option B is less effective |
| | Lower | 6 | 1 | 2 | 2 | 11 | |
| 4 | Upper | 11 | 0 | 0 | 0 | 11 | Option B and D doesn't function |
| | Lower | 9 | 0 | 2 | 0 | 11 | |
| 5 | Upper | 11 | 0 | 0 | 0 | 11 | Option B doesn't function |
| | Lower | 3 | 0 | 6 | 2 | 11 | |
| 6 | Upper | 11 | 0 | 0 | 0 | 11 | Option B and C are less effective |
| | Lower | 5 | 1 | 1 | 4 | 11 | |
| 7 | Upper | 0 | 0 | 0 | 11 | 11 | Option B doesn't function |
| | Lower | 3 | 0 | 1 | 7 | 11 | |
| 8 | Upper | 0 | 1 | 10 | 0 | 11 | Option A and D doesn't |

| | | | | | | | |
|----|-------|-----------|-----------|-----------|-----------|----|--------------------------------------|
| | Lower | 0 | 4 | 7 | 0 | 11 | function |
| 9 | Upper | 11 | 0 | 0 | 0 | 11 | Option B, C and D are less effective |
| | Lower | 8 | 1 | 1 | 1 | 11 | |
| 10 | Upper | 1 | 8 | 2 | 0 | 11 | Option D is less effective |
| | Lower | 6 | 4 | 0 | 1 | 11 | |
| 11 | Upper | 2 | 1 | 0 | 8 | 11 | Good |
| | Lower | 5 | 2 | 2 | 2 | 11 | |
| 12 | Upper | 10 | 1 | 0 | 0 | 11 | Option D doesn't function |
| | Lower | 5 | 3 | 3 | 0 | 11 | |
| 13 | Upper | 2 | 0 | 9 | 0 | 11 | Option D is less effective e |
| | Lower | 0 | 2 | 8 | 1 | 11 | |
| 14 | Upper | 11 | 0 | 0 | 0 | 11 | Option D doesn't function |
| | Lower | 7 | 3 | 1 | 0 | 11 | |
| 15 | Upper | 0 | 11 | 0 | 0 | 11 | Option C doesn't function |
| | Lower | 1 | 9 | 0 | 1 | 11 | |
| 16 | Upper | 11 | 0 | 0 | 0 | 11 | Option C and D doesn't function |
| | Lower | 8 | 3 | 0 | 0 | 11 | |
| 17 | Upper | 0 | 0 | 11 | 0 | 11 | Option A doesn't function |
| | Lower | 0 | 1 | 9 | 1 | 11 | |
| 18 | Upper | 0 | 0 | 1 | 10 | 11 | Good |
| | Lower | 5 | 2 | 1 | 3 | 11 | |
| 19 | Upper | 1 | 9 | 0 | 1 | 11 | Option C doesn't function |

| | | | | | | | |
|----|-------|-----------|-----------|-----------|-----------|----|---|
| | Lower | 1 | 8 | 0 | 2 | 11 | |
| 20 | Upper | 10 | 1 | 0 | 0 | 11 | Option C is less effective |
| | Lower | 7 | 1 | 1 | 2 | 11 | |
| 21 | Upper | 0 | 0 | 11 | 0 | 11 | Option A and D doesn't function |
| | Lower | 0 | 2 | 9 | 0 | 11 | |
| 22 | Upper | 0 | 0 | 0 | 11 | 11 | Option B doesn't function, A and C are less effective |
| | Lower | 1 | 0 | 1 | 9 | 11 | |
| 23 | Upper | 2 | 0 | 6 | 3 | 11 | Option B is less effective |
| | Lower | 4 | 1 | 4 | 2 | 11 | |
| 24 | Upper | 3 | 7 | 0 | 1 | 11 | Option C is less effective |
| | Lower | 0 | 8 | 1 | 2 | 11 | |
| 25 | Upper | 11 | 0 | 0 | 0 | 11 | Option B, C, and D doesn't function |
| | Lower | 11 | 0 | 0 | 0 | 11 | |
| 26 | Upper | 5 | 2 | 0 | 4 | 11 | Option C doesn't function |
| | Lower | 7 | 0 | 0 | 4 | 11 | |
| 27 | Upper | 1 | 2 | 7 | 1 | 11 | Good |
| | Lower | 2 | 0 | 5 | 4 | 11 | |
| 28 | Upper | 10 | 0 | 1 | 0 | 11 | Option D doesn't function |
| | Lower | 3 | 5 | 3 | 0 | 11 | |
| 29 | Upper | 0 | 0 | 11 | 0 | 11 | Option B doesn't function |
| | Lower | 3 | 0 | 6 | 2 | 11 | |
| 30 | Upper | 0 | 10 | 0 | 1 | 11 | Good |

| | | | | | | | |
|--|-------|---|----------|---|---|----|--|
| | Lower | 2 | 6 | 2 | 1 | 11 | |
|--|-------|---|----------|---|---|----|--|

Based on the table above, it can be seen there are four items that all distracters function well, the item number are 11, 18, 27, and 30. The others so many distracters that are not effective enough and even do not work at all. The distracter is not effective enough there are 9 items, like option D in item number 10 and 13, while item number 6, the distracters B and C is not effective enough because it interest more students in lower group than upper group. While there 18 items that the distracter does not effective at all because there are the distracters that no interest any students in each group. Such as item number 2 where the distracter C and D does not interest any students.

5. Quality of Multiple Choice Items

To determine of the quality of multiple choice items used in the SMK Kesehatan Borneo Bhakti Husada Palangka Raya is based on the following criteria:

1. The problem should be clearly formulated.
2. The alternative should be arranged in logical order.
3. The information should be more in stems; the alternative should be as brier as possible.
4. The use of blanks should be avoided in multiple choice stems.
5. The consistent multiple choice items structure should be used

6. The multiple choice alternative approximately equal in length should be made.
7. The format for multiple choice alternatives should be consistent.

The fulfillment of all good criterions of multiple choice tests, it is shown the calculation of the proportion below:

Table 4.12
The Proportion Quality of Multiple Choice Test Based on Good Criteria.

| No | Characteristics | Proportion | | | percentage |
|----|---|------------|------|-------|------------|
| | | Good | Poor | Total | |
| 1 | The problem should be clearly formulated | 30 | - | 30 | 100 % |
| 2 | The alternative should be arranged in logical order. | 30 | - | 30 | 100 % |
| 3 | The information should be more in stems; the alternative should be as brier as possible | 29 | 1 | 30 | 96.6 % |
| 4 | The use of blanks should be avoided in multiple choice stems. | 30 | - | 30 | 100 % |
| 5 | The consistent multiple choice items structure should be used | 30 | - | 30 | 100 % |
| 6 | The multiple choice alternative approximately equal in length should be made. | 30 | - | 30 | 100 % |
| 7 | The format for multiple choice alternatives should be consistent. | 30 | - | 30 | 100 % |

Based on the table above concluded that almost all of the test items used in SMK Kesehatan Borneo Bhakti Husada at the tenth grade for the second semester showed good criterion and it was only found 1 (one) item from 30 items that was less of fulfillment the criterion, it was the item number 17.

1. Who is helping the writer's mother to prepare the food?

| | |
|-------------------------|-------------------------------|
| A. The writer's father. | C. The writer's older sister. |
| B. The cat. | D. The writer. |

The option of the test item on part B above, it will be better to change into "young sister". In this case is to balance with the other options.

Interview with the English Teacher

To know how the summative test is made, the interview was applied. It was directed to the English teacher at the tenth grade of SMK Kesehatan Borneo Bhakti Husada Palangka Raya. The presentation and the discussion data serves in a row as follow:

6. A: Bagaimana soal sumatif pilihan ganda dibuat?

B: ya kalo saya pertama-tama membuat kisi-kisi soalnya dulu berdasarkan materi yang sudah saya ajarkan dengan index difficulty atau tingkat kesulitan 25 % susah, 50% sedang dan 25% mudah dari jumlah soal yang diberikan ke siswa. Nah... tingkat kesusahan yang saya tentukan tersebut itu saya ambil dari analisis tes ulangan harian atau tes formative.
7. A: Sumber/referensi apa saja yang anda gunakan dalam membuat soal summative pilihan ganda?

B: oh.. saya membuat soal summative kemarin itu ngambil dari buku Be Long Sweet English for Vocational High School sama dari buku Look A Head.
8. A: Apa alasan anda menggunakan sumber tersebut?

B: ya.. karena berkaitan dengan materi yang sudah saya ajarkan dan sesuai dengan syllabus.²

B. DISCUSSION

Based on the analysis result of the research, shows that summative test at tenth grade of SMK Kesehatan Borneo Bhakti Husada Palangka Raya at the second semester has the validity. This explanation is supported by Soenardi Djiwandono in his book *Tes Bahasa* (chapter 5 page 164), “Language test which is valid as a measuring instrument of language ability focuses on its measurement on the language ability of its test participant.”³

The validity of summative test analyzed through face validity shows that whole of the test instructions are valid. It can be seen based on the table 4.1 that all the test instructions were clear and understandable. It is supported by Soenardi Djiwandono in his book of *Tes Bahasa* (chapter 5 page 166) “the validity proven only based on what can be seen from the face”.⁴

The validity proven of summative test based on content validity is less validity content, this is because the content of curriculum and material handbook is less distributed in the multiple choice test. This explanation is supported by Soenardi Djiwandono in his book *Tes Bahasa* (chapter 5, page 165) “Content validity can be proven by comparing the test with the content of curriculum”.⁵

² Mrs. Eka Sri Utami, *Personal Interview*, on October 16, 2013

³ Sonardi Djiwandono, *Tes Bahasa*, Jakarta: PT. Indeks, P. 164

⁴ *Ibid*, P.166

⁵ Soenardi Djiwandono, *Tes Bahasa*, P.165

The validity proven based on construct validity is shown on the table 4.3 there are 7 item for speaking (1, 2, 3, 4, 5, 6, 7), 15 for reading (16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30), and 8 for writing (8, 9, 10, 11, 12, 13, 14, 15). So it can be concluded that the multiple choice test at the tenth grade of SMK Kesehaan Borneo Bhakti Husada Palangka Raya is effective enough to represent all kinds of performance of students. It is supported by Heaton in his book *Language Testing* (chapter 9 page 154) “if a test has construct validity, it is capable of measuring certain specific characteristic in accordance with a theory of language behavior and learning”.⁶

Based on the analysis of the test reliability, the writer found the reliability of the test is 0,85. Therefore, the reliability of the test is high. It means the reliability of summative test items will be high consistently on its reliability when used retest. In this case, It is supported by Suharsimi Arikunto in her book *Dasar-Dasar Evaluasi Pendidikan* (chapter 4 page 60) “The test is said can be trusted if it gives the consistent result when it is tested repeatedly.”⁷

The result of index difficulty analysis is gotten easy 63,3%, middle 33,3%, and difficult 3,3%. It shows that most of the summative items of the test are easy. This case makes index of difficulty in the test items is not effective, based on Witherington in Anas Sudijono’s book *Pengantar Evaluasi Pendidikan*, “A very easy test will not stimulate students to enrich his effort to solve it. While a test

⁶ J.B. Heaton, *Language Testing*, London: New Jersey, 1987. P. 154

⁷ Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan*, Jakarta: Bumi Aksara, 1999, P

that too difficult will make students hopeless and there no passion to try again because it out of their rich.”⁸

Based on the analysis of effectiveness distracter, the writer found, there are 4 items that have distracter functioned well, 9 items are less effective enough, and 18 items that distracter did not effective at all. Related to the index of difficulty which has 63,3% of easy items, it caused the distracters are not functioned well. It is supported by Gito Supriadi in his book *Pengantar dan Teknik Evaluasi Pendidikan*, (chapter 11 page 165) “A distracter can be said function effectively if at least chosen by 5% of test participants.”⁹

The analysis of quality multiple choice test based on good criterion of the test, the writer found only 1 (one) item from 30 items that was less of fulfillment the criterion. It was number 17. In the test, one of the distracters was not balance with the options. It is supported by Rahmadi Nirwanto in his book *The Quality of Tests In The Textbook* (chapter 4 page 43) “the information should be more in stems; the alternative should be as brief as possible”.¹⁰

The result of interview about how the summative test is made, the teacher said that the English summative test was made based on latticework taught with the index difficulty 25% easy, 50% medium, 25% difficult. The references used by the English teacher were taken from books of Be Long Sweet English for Vocational High School and Look a Head. The references were used because the

⁸ Witherington in Anas Sudijono, *Pengantar Evaluasi Pendidikan*, Jakarta: PT. Raya Grafindo Persada, 2007, P. 371

⁹ Gito Supriadi, *Pengantar dan Teknik Evaluasi Pembelajaran*, Malang: Inti Media Press 2011, P. 165

¹⁰ Rahmadi Nirwanto, *The Quality of the Tests in the Textbook*, STAIN, Pusat Penelitian dan Pengabdian Masyarakat Sekolah Tinggi Agama Islam Negeri Palangka Raya, 2012. P. 43

material taken is connected to the material taught by the English teacher and appropriated with the syllabus.