Validity and Reliability Content of Assessment Instrument of Writing on Descriptive Paragraph Material Based on Picture

Elia Santi[1], Abdurrachman Faridi[2], Muhammad Khumaedi[3]
{eliasanti93@gmail.com[1], abdurrachmanfaridi@yahoo.co.id[2], mkhumaedi19@yahoo.co.id[3]}
Graduate School, Universitas Negeri Semarang, Indonesia[1,2,3]

Abstract, This study aims to analyze the results of content validity and reliability instrument of writing an assessment on descriptive paragraph material based on picture class VIII Semarang city. This analysis used the "Quantitative Descriptive" method. Data were analyzed through validation and reliability content. The content validity was analysed by using Aiken formula 'V and reliability was analysed by using Ebel's formula assisted by the SPSS 16.0 program. The indicators of writing divide into five there are the namely main idea, organizations, vocabulary, grammar, and mechanics. The results of the Expert Judgment validity show are ≥ 0.3 it's all of the items are valid, whole the result of reliability shows a result is 0.89. It means that an instrument of writing assessment instrument on descriptive paragraph material based on the picture was valid and reliable.

Keyword: *Writing, Validation, Reliability, Development of Instrument*

1 Introduction

Assessment is an important component in the teaching and learning process. The function of the assessment how to know the achievement of the goals or objectives of the learning activities, so that the teachers' can be decided a good teaching strategy to improve the quality of education through a rating system. Assessment of learning outcomes can be in the form of tests and non-tests, in learning descriptive text writing skills, assessments that are often using by teachers to assess student learning evaluation do not look at the learning process undertaken by students such as performance assessment. One of the characteristics of student performance assessment can be used to see students' abilities during the learning process without having to wait until the process ends. The development of an instrument psychomotor assessment on the subjects of English language skills descriptive writing text be expected can help the teachers to evaluate especially writing skills. Assessment is an important component in education providers. Efforts to improve the quality on education can be pursued through improving the quality of learning and the quality of the assessment system.

The development of an instrument psychomotor assessment on the subjects of English language skills descriptive writing text be expected can help the teachers to evaluate especially writing skills. Instrument psychomotor assessment in the activities on writing having the importance of the skill, because can be used as a reference observation and criteria of value and students ability[1]

Anggarkusuma & Khumaedi [2] say that the development of assessment instruments is an activity to develop an existing assessment instrument to become more qualified. This study aims

to analyze the results of the content validity and reliability instrument of writing an assessment on descriptive paragraph material based on picture class VIII Semarang city. The instrument used must produce accurate data so that decisions are made accurate and high quality. The quality of the instrument is seen from two main things, namely validity and reliability. The type of validity that is important for character education instruments is constructed validity and content validity [3].

The validity of the contents (content validity) is a validity of the estimated through testing for eligibility or relevance the contents of the test through rational analysis by the competent panel or expert judgment. According to Rusilowati (2014, p.23) said that the validity of the content is estimated through testing on the content of tests with the analysis of rational or passing. Contents of the instrument for keeping to measure constructs or not. Reliability is the extent of the results of a process of measuring trustworthy. The higher a correlation coefficient then consistency between the measurement result both tests are getting better and the results of the more reliable measure and reliability analyzed using formula's Ebel [4]. Based on explanation above, we can concluded that content of validity related with rational analysed toward domain to measure to see representation of an instrument with the ability to measured, and between ratter consistency reliability so, validation and reliability content are important thing to analysis in writing assessment on material descriptive paragraph based on picture [5]. Based on the descriptions above, validity and reliability contents result of the assessment instrument writing on material descriptive paragraph based on picture needs to be analyzed using Quantitative Descriptive Method [6]

2 Methods

This's article used a "Quantitative Descriptive" method. Quantitative descriptive is a method that describes or gives phenomena of the object under study through data or samples that have been collected as they are, without doing analysis and making general conclusions. Conducting the data was collected through validation with one lecturer and two English teachers. The validation sheet consists of 10 aspects. Reliability is obtained from the results given by a validator. The validation results from the 3 experts analyzed using the Aiken formula, whole reliability is analyzed through Ebel's formula, so that value of the content validity of instrument of assessment writing on material descriptive paragraph based on the picture.[7]

3 Result and Discussion

The validation sheet prepared by the researcher consisted of material aspects, aspects of language which were translated into 10 items. Experts (Experts) are asked to do an analysis each item of description questions to assess descriptive paragraph writing skills based on picture. There were four choice a category in an instrument that is validation , an instrument it is said in accordance (sesuai) when any of those material side , language and the instrument very good , and meet all indicators .An instrument measuring system (cukup sesuai) enough when from the side of matter and language only three indicators are being fulfilled .An instrument it is said to be inconsistent (Kurang Sesuai) when from the side of construction , matter and

languages are very good , only 2 indicators are being fulfilled. Instrument are said to be inappropriate (tidak sesuai) if there are no indicators fulfilled in terms of material and language.

Experts are required to give a check mark ($\sqrt{}$) in each item that has been examined in the table prepared by the researcher. The results of expert analysis by looking at scoring guidelines based on three aspects assessed, namely material aspects, writing aspects and aspects of language. Value reliability consists of a scale of 1 to 4.

In the validation category, there are 4 categories, namely according (s) which have a value of 4, cukup sesuai (CS) which has a value of 3, sesuai (S) which 2 kurang sesuai (KS) and tidak sesuai (TS) 1. Results of validation analysis for each item then calculated using the Aiken's formula (1985):

$$V = \frac{\sum s}{[n(c-1)]} \tag{8}$$

Description:
s   : r-lo
lo   : the lowest validity score
c   : the high validity score
r   : number get by validator

The V value ranges from 0 - 1 and the criteria used to declare an item are said to be valid content on the number of rater (assessor) as many as 7 people based on the validity coefficient of ≥ 0.3.

Each items is analysed using the same method. Scoring guidelines to make it easier for the ratter (assessor) to fill out the content validity sheet. So, experts just have to give a check mark ($\sqrt{}$) to the available criteria. While reliability is analysed using the Ebel's formula. The Ebel's formula is follows:

$$R_{xx} = MKs - \frac{M\,int}{MKs} \tag{9}$$

Description:
MKs= Ratter
MKint = interaction
MKs= Ratter

Indicators of skill in writing descriptive paragraphs that use researchers include main ideas, organization, vocabulary, grammar and mechanic. The validation sheet that has been filled by 3 experts is then tabulated and calculated using the Aiken formula with the help of the Microsoft Excel program. Each item gets a validation score from 3 experts. Reliability consists of 1 to 4 rating scales. The results of the validation of 3 experts, it can be seen in the following table 1. The V value table in table 2 is obtained from the validity coefficient of ≥ 0.3 (Azwar, 2014, p. 143). Item questions that are validated by 3 raters with 4 validation categories (good, very good, enough, less)will be valid if the calculation results of the validation are at least 0.3. To see the value of reliability, it can be seen in table 3.

Table 1. Result of Validation From Expert Judgme

No	Rater 1	Rater 2	Rater 3
1	4	4	3
2	4	4	4
3	4	4	3
4	4	4	4
5	4	4	4
6	4	4	3
7	4	4	3
8	4	4	4
9	4	4	4
10	4	4	3

Table 2. Result Of Validation by Aiken V's Formula

No items	V Indeks	V Tabel	Ket.
1	0.9	0.3	valid
2	0.889	0.3	valid
3	0.889	0.3	valid
4	0.889	0.3	valid
5	0.889	0.3	valid
6	0.889	0.3	valid
7	0.889	0.3	valid
8	0.889	0.3	valid
9	0.889	0.3	valid
10	0.889	0.3	valid

Table 3. The Result of Reliability by Using Ebel's Formula

Source	Type III Sum Of Square	Df	Mean Square
Corrected Model	4.167^a	29	.144
Intercept	440.833	1	440.833
R	1.667	2	.833
I	.833	9	.093
R*I	1.667	18	.093
Error	.000	0	
Total	445.000	30	
Corrected Total	4.167	29	

Based on the table, it can be seen, the results of the reliability showed Mean Square of 0.0833, while the error variance was stated by Mean Square of 0.093. then recalculated using the Ebelt formula with an average of three ratters, there are:

$$R_{xx} = MKs - \frac{M\,int}{MKs} = 0.833 - \frac{0.093}{0.833}$$

The results calculated using the Ebelt formula produce a reliability coefficient value of 0.89. the meaning between the rater assesses agreement on suitability of the content and also indicates that the score given by each rater is consistent. If the value is 0.5, then the Writing assessment instrument on descriptive material based on the picture is valid and reliable.

4 Conclusion

The result of Validity and Reliability Content of Assessment Instrument of Writing on Descriptive Paragraph Material Based on Picture showed that all is good. It means that validity and reliability has already been known by all researcher. Source of learning descriptive materials based on picture is only from their teacher and the text books and through the teacher. In try out the result of validity showed that all is valid with coefficient value according to Azwar > 0,5 and the reliability is 0.97.Therefore, the developed of instrument writing on descriptive paragraph based on picture is good for to apply on teaching and learning process especially in writing skills. The revisions are based on the input of the experts, teachers, and supervisors; this contributes to making the assessment instrument valid and reliable. The instrument can be used to assess the performance of Junior school students. This study suggests the future research to develop instruments for other aspects in the course of physics. This instrument should be further applicable in other schools to see whether teachers have already met the assessment standards or they still use an outdated assessment. For school and teachers to continually learn about English Language especially in writing will be better. For teachers, they must also continue to improve their understanding of descriptive based on picture. Students should also maintain their achievements even better.

References

[1] Sigit Sulistiyanto, Abdurrachman Faridi & Mursid Saleh.: Developing an Interactive Multimedia Based on Local Culture for Teaching Writing Narrative Texts for the Eighth Graders. 412 (2018)

[2] Anggarkusuma & Khumaedi.: Development of Assessment Instruments for Tennis Aptitude Tests Using Tonnis Game Methods for Elementary School Students. Journal of Educational Research and Evaluation JERE 7 (2) 174 – 180 (2018).

[3] Adriane Baylis, Kathy Chapman & Tara L. Whitehill.: Validity and Reliability of Visual Analog Scaling for Assessment of Hypernasality and Audible Nasal Emission in Children With Repaired Cleft Palate. (2015)

[4] Aiken, Lewis (1985). *Three Coefficient For Analysing The Reliability and Validity of Rating* . Educational and Psychological Measurement. 132

[5] Djemari Mardapi, Ph.D.: Pengukuran Penilaian dan Evaluasi Pendidikan. Yogyakarta: Nuha Medika (2015).

[6] Lutasari, S., & Kartowagiran, B.: Developing Instrument For Students Performance Assessments In Physical Practicum: A Case Study Of State Senior High School Of Magelang (2019)

[7] Aprilia, Saifuddin at. all.: Development of Instrument Psychomotor assessment at SMA Pada Praktikum Materi Protista

[8] Aiken, Lewis R.: Three Coefficient for Analyzing the Reliability and Validity of Rating. (1985).

[9] Allen, M. J. & Yen, W. M.: *Introduction to measurement theory*. Monterey, CA: Brooks/Cole Publishing Company. (1979).

[10] Azwar, S. (2012). Reliabiltas dan Validitas. Edisi 4. Yogyakarta : Pustaka Pelajar.