E-ISSN : 2774-8472
P-ISSN: 2774-8480
Jurnal Hurriah: Jurnal Evaluasi Pendidikan dan Penelitian
Vol. 4, No. 2, June 2023, PP 257-265

VALIDITY AND RELIABILITY TEST ON NON-TEST INSTRUMENTS OF LEARNING MOTIVATION OF GRADE IV STUDENTS

Fitri Alfarisa[1] , Mutiara Hidayah[1], Nisa Anikoh[1] , Syifa Tadzkia[1]

PGSD Study Program, Serang Campus, Universitas Pendidikan Indonesia
Email alfarisa@upi.edu

Abstract

Learning motivation is an encouragement that can influence students to make changes in behavior in achieving learning goals. The purpose of this research is to describe the results of measuring student motivation obtained through a non-test instrument in the form of a questionnaire. The subjects of this study were fourth grade students at SDN Batok Bali and SDN Leuwiranji 01. The research method used in this article was a sequential exploratory research design (mixed research) with qualitative research, followed by quantitative research. The qualitative method uses literature studies to find additional sources of information from various media. While the quantitative method collects data through measurement using objective and standardized tools, such as SPSS used in this article to test validity and reliability. Instrument requirements that can be said to be valid if the KMO value is > 0.5 and significant < 0.05. After the third test, the anti- image part has no value <0.5. So of the 20 items in the student learning motivation questionnaire, 14 items are said to be valid. While the reliability requirements are using Cronbach's Alpha, that is, when the value is > 0.7.

Keywords: Learning Motivation, Non Test Instruments, Test Validity and Reliability

Abstrak

Motivasi belajar merupakan suatu dorongan yang dapat mempengaruhi siswa untuk mengadakan perubahan tingkah laku dalam mencapai tujuan belajar. Tujuan dari penelitian ini adalah untuk mendeskripsikan hasil pengukuran motivasi belajar siswa yang diperoleh melalui instrumen non-tes berupa angket. Subjek penelitian ini adalah siswa kelas IV di SDN Batok Bali dan SDN Leuwiranji 01. Metode penelitian yang digunakan dalam artikel ini adalah desain penelitian eksploratori sekuensial (penelitian campuran) dengan penelitian kualitatif, dilanjutkan dengan penelitian kuantitatif. Metode kualitatif menggunakan studi literatur untuk mencari sumber informasi tambahan dari berbagai media. Sedangkan metode kuantitatif mengumpulkan data melalui pengukuran dengan menggunakan alat yang obyektif dan terstandarisasi, seperti SPSS yang digunakan dalam artikel ini untuk menguji validitas dan reliabilitas. Syarat instrumen yang dapat dikatakan valid apabila nilai KMO > 0.5 dan signifikan < 0.05. Setelah dilakukan pengujian ketiga, bagian anti image tidak ada yang memiliki nilai < 0,5. Jadi dari 20 butir pertanyaan pada kuesioner motivasi belajar siswa, 14 butir pertanyaan dikatakan valid. Sedangkan syarat reliabilitas menggunakan Cronbach's Alpha, yaitu apabila nilainya > 0,7.

Kata Kunci: Motivasi Belajar, Instrumen Non-Tes, Validitas dan Reliabilitas Tes

INTRODUCTION

Student success in learning is influenced by motivation. According to Clayton Alderfer (Hasana, 2020) learning motivation is the tendency of students to carry out all learning activities driven by the desire to achieve the best possible achievement or learning results. According to Hamzah B, Uno (Kahar, 2018) suggests that learning motivation is an internal and external drive in students who are learning to make changes in behavior (M Syauqi. 2023).

From the opinions of some experts above, it can be concluded that learning motivation is an encouragement that can influence students to make changes in behavior in achieving learning goals. Someone will get the desired results in learning if there is a desire to learn. As a teacher, you must provide motivation to students, especially for students who are lagging behind in their learning. Sometimes teachers

do not provide motivation and attention to students because they only focus on the subject matter. Therefore, this study was conducted to describe student learning motivation through non- test instruments in the form of questionnaires for grade IV students of SDN Batok Bali and SDN Leuwiranji 01.

Non-test instruments are a type of assessment that does not use tests. Sigit Pramono (Hutapea, 2022) explains non-test instruments, namely assessments made through systematic observations, such as: observation, interviews, questionnaires, and conducting document research. From the opinions of several experts regarding the definition of non-test instruments, it can be concluded that this type of assessment of students does not use written tests, but rather observation, interviews, questionnaires, and conducting document research (B.A Majid, et.al 2023)

According to (Sudijono, 2017) The role of non-test instruments in learning is very important to measure and assess affective and psychomotor aspects. Before conducting research, the type of data used must be reconsidered in order to get good and correct data. If the data obtained is wrong, the information obtained is also wrong. The requirements for an instrument to get good and correct data are objective, representative, sampling error is not too large, timely, and relevant.

METHODS

This research uses a type of mixed research between qualitative research and quantitative research which is commonly referred to as sequential exploratory design. In the exploratory qualitative sequential design, qualitative research is carried out first, namely before making a questionnaire sheet. Non-test instruments are reviewed in accordance with the themes taken through literature studies to find additional sources of information from various media. While the quantitative method is carried out after the implementation of distributing questionnaires during observation

The research subjects used as samples in this study were 30 fourth grade students at SDN Batok Bali and 10 students at SDN Leuwiranji 01. The instrument used was a questionnaire with a Likert scale which has 5 categories, namely SL (Always), S (Often), KK (Sometimes), J (Rarely), and TP (Never). The analysis was conducted after the filled questionnaires were checked and scored according to the criteria between positive and negative items.

Jurnal Hurriah: Jurnal Evaluasi Pendidikan dan Penelitian
Vol. 4, No. 2, June 2023, PP 257-266

RESULTS

An instrument can be said to be good if it is valid and reliable. To find out which instruments are valid and reliable, testing is necessary. Before testing, we collected data from questionnaires that had been filled in by fourth grade students of SDN Batok Bali and SDN Leuwiranji 01. Then, the data was entered into IBM SPSS 20. The data obtained from the two elementary schools, namely:

Table 1 Results of the Learning Motivation Questionnaire

No	Nama Siswa	No Butir Pernyataan																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	M. Arsyil A.	5	3	5	5	5	5	1	1	1	5	5	3	5	5	5	2	5	5	5	1
2.	Azila Nayada A.	3	4	5	5	5	5	5	2	5	1	5	5	3	5	5	4	5	5	5	1
3.	Aqilah Syakira	1	3	5	5	5	5	5	2	5	1	5	5	3	4	5	1	5	5	4	5
4.	Mikhmah Kamilah	4	4	5	5	4	5	3	3	4	5	5	4	4	3	4	4	5	4	5	2
5.	Ahmad Nival	5	3	5	5	5	5	3	3	1	5	5	5	5	1	5	4	5	5	5	5
6.	M. Fatin Yusuf I.	2	4	5	5	5	5	2	3	3	5	5	3	5	3	3	3	5	3	3	3
7.	Fajar A.	2	5	5	4	5	5	4	4	2	4	5	5	4	4	4	2	1	2	4	4
8.	Lintang Wulandari	4	5	5	5	5	5	2	2	4	2	5	4	1	5	5	4	2	5	5	5
9.	Azam	5	5	5	5	5	4	4	3	5	5	5	5	5	5	5	5	3	5	5	1
10.	Doni	2	5	1	3	4	5	1	3	4	2	1	2	2	3	5	2	4	3	1	1
11.	Lutfia Rasyid	3	1	4	4	1	1	3	1	4	4	3	4	3	3	3	2	2	1	5	4
12.	Zaki Allansyah	4	5	4	4	5	5	3	2	4	4	3	5	5	5	4	4	4	4	5	1
13	M. Silvester	5	5	5	5	5	5	4	1	2	5	5	5	5	5	4	4	3	3	5	1
14	Amanda Berliana	3	5	5	5	5	5	4	1	5	4	5	4	3	5	5	5	4	4	3	5
15	Queensya Arindra	4	5	5	5	5	5	5	2	2	5	5	5	5	5	5	5	5	3	5	5
16	Muhammad Yuhi	5	2	5	5	4	5	5	1	4	5	1	2	2	4	5	2	3	5	3	4
17	Refalina M.S	4	5	5	5	5	5	4	1	5	4	5	4	4	5	4	4	4	4	5	5
18	Siti Isma A	5	5	5	5	5	5	5	5	4	1	5	5	3	5	5	4	5	5	5	5
19	Said Iskandar	5	5	5	5	5	5	4	3	5	5	5	5	4	4	4	1	4	4	5	1
20	Ahmad Mugni L	5	5	4	4	4	5	4	2	4	4	5	4	4	5	4	4	2	2	5	3
21	Khoirunnisa	4	5	5	5	5	5	5	5	5	1	5	4	4	5	5	5	4	4	5	5
22	Putri Syaqina	5	5	5	5	5	5	3	5	5	1	5	5	5	2	5	5	5	5	5	5
23	Ahmad Fazriansya	5	5	5	5	5	5	5	2	1	5	5	5	4	3	4	3	4	4	5	4
24	Putri	2	5	5	4	5	5	5	2	5	5	5	5	4	4	5	4	4	4	3	1
25	Refa Al-Isni	3	5	5	5	4	5	5	1	3	4	5	4	4	5	4	5	5	3	5	1
26	Mutiara Putri J	5	5	5	5	5	5	4	1	5	5	5	4	4	5	4	5	5	5	4	5
27	Agung Riski P.	3	3	5	3	2	4	1	3	1	4	1	4	5	5	5	5	4	1	4	2
28	Ahza Danish N.	2	3	5	3	5	3	2	2	1	5	3	5	1	1	5	1	5	5	1	1
29	Natasya Oktaviani S	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
30	Rainapika Almaira	5	5	5	5	5	5	3	3	3	5	3	3	3	3	5	1	5	3	4	5
31	Ina Febriana	5	5	5	5	5	5	4	2	5	5	5	5	5	5	5	5	5	5	5	5
32	Jihan Fadillah O.	3	5	5	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	1
33	Rizki Al-Amin	5	1	5	5	1	1	5	1	3	5	1	5	3	3	4	3	2	3	2	3
34	Agam	5	3	5	5	1	1	5	1	3	5	1	5	3	3	4	4	2	3	2	1
35	Maulana Malik I.	2	3	5	4	5	5	3	2	2	1	5	5	1	1	5	1	5	5	1	5
36	Nabil Galih R.	4	5	4	4	5	5	3	2	4	4	3	5	5	5	4	4	4	4	5	1
37	Zheetara Mutiara D	4	5	5	5	5	5	5	5	1	5	5	5	5	4	4	5	5	5	5	2
38	M. Arip Ramhan	2	5	5	5	3	1	2	2	1	4	1	5	2	1	2	5	1	5	1	2
39	Laila Maulida	5	5	5	5	5	5	2	5	5	5	1	5	4	5	4	5	5	5	4	5
40	Hanif	4	2	5	5	5	5	5	1	1	5	5	5	5	2	4	5	2	3	4	2

Validity Test

The data in table 1 is entered into the SPSS data view for analysis. To find out whether it is valid or not, it can be seen from the KMO value> 0.5 and significant <0.05. The KMO and significant of the data that has been analyzed are as follows.

Table 2 KMO and Significant of the First Test Results in SPSS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,572
Bartlett's Test of Sphericity	Approx. Chi-Square	387,319
	df	190
	Sig.	,000

In addition to KMO and significant in accordance with the requirements, it is necessary to check the anti-image of the items from the analysis results in SPSS. Anti image can be seen in the table below.

Table 3. Anti Image from the First SPSS Test Results

Anti-image Correlation	A1	,450[a]	-,208	,135	-,423	,243	-,094
	A2	-,208	,556[a]	,254	-,100	-,430	,074
	A3	,135	,254	,564[a]	-,313	,021	,045
	A4	-,423	-,100	-,313	,438[a]	-,073	,064
	A5	,243	-,430	,021	-,073	,599[a]	-,754
	A6	-,094	,074	,045	,064	-,754	,695[a]
	A7	-,039	,137	-,045	-,187	,181	-,195
	A8	,003	-,436	-,205	,363	,042	,004
	A9	,030	-,134	,225	,073	,121	,050
	B1	-,436	-,095	-,385	,390	-,222	,219
	B2	,251	-,150	-,251	,010	-,303	,072
	B3	-,005	-,175	-,309	,240	-,252	,439
	B4	-,081	,357	,178	-,180	-,145	-,089
	C1	,169	-,388	-,236	,050	,069	-,101
	C2	-,413	,312	-,035	,355	-,062	-,171
	D1	,067	-,449	-,108	,061	,367	-,127
	D2	,235	-,144	-,059	-,028	,265	-,281
	E1	-,319	,311	-,143	-,101	-,653	,375
	E2	-,500	,181	-,040	,080	,063	-,115
	E3	-,151	,175	-,195	-,276	-,148	-,005

Anti-image Correlation	A1	-,039	,003	,030	-,436	,251
	A2	,137	-,436	-,134	-,095	-,150
	A3	-,045	-,205	,225	-,385	-,251
	A4	-,187	,363	,073	,390	,010
	A5	,181	,042	,121	-,222	-,303
	A6	-,195	,004	,050	,219	,072
	A7	,598[a]	-,095	-,243	-,176	-,316
	A8	-,095	,502[a]	-,027	,325	,310
	A9	-,243	-,027	,648[a]	,118	-,076
	B1	-,176	,325	,118	,367[a]	,158
	B2	-,316	,310	-,076	,158	,702[a]
	B3	-,382	,056	,094	,298	,063
	B4	,107	-,354	-,060	-,437	-,098
	C1	-,146	,326	-,378	,000	,347
	C2	-,077	-,079	,041	,256	-,121
	D1	-,052	,127	,125	,120	,004
	D2	,131	-,032	-,033	-,084	-,032
	E1	,004	-,151	-,299	,090	,126
	E2	,138	-,171	,008	,225	-,495
	E3	,054	-,256	-,240	,074	-,021
	B3	,464[a]	-,270	,192	-,043	-,052
	B4	-,270	,563[a]	-,067	,132	-,523
	C1	,192	-,067	,596[a]	-,293	-,104
	C2	-,043	,132	-,293	,587[a]	-,027
	D1	-,052	-,523	-,104	-,027	,522[a]
	D2	,038	-,310	,100	-,287	,228
	E1	-,039	,393	,052	,003	-,417
	E2	-,115	-,259	-,490	,272	,083
	E3	,046	,300	,116	-,042	-,214
	D2		,676[a]	-,436	-,018	-,111
	E1		-,436	,433[a]	,051	,307
	E2		-,018	,051	,686[a]	-,018
	E3		-,111	,307	-,018	,514[a]

In table 2, there are 5 items that are invalid because they have anti-image <0.5. Therefore, items that do not meet the requirements must be removed before being re-analyzed. We tested 3 times, because in the second test there was still 1 item that was still <0.5 so it needed to be re-analyzed even though the KMO and significat values were in accordance with the requirements. Here are the KMO and significance of the third test.

Table 4 KMO and Significant of the Third Test Results in SPSS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,706
Bartlett's Test of Sphericity	Approx. Chi-Square	239,410
	df	91
	Sig.	,000

In the third test, KMO> 0.5 and significant <0.05 were obtained, besides that in the anti-image section there were no values <0.5. Of the 20 items in the student learning motivation questionnaire, 14 items are said to be valid.

Reliability Test

Reliability test is a measurement to see the test remains consistent after repeatedly performing on the subject and under the same conditions. The general agreement is that reliability is considered satisfactory if > 0.7. In this article we conduct reliability testing using the internal consistency approach, namely Cronbach's Alpha. The following is the *Cronbach's alpha* value of the data tested.

Table 5 First reliability test

Reliability Statistics

Cronbach's Alpha	N of Items
,807	20

In the table above, the *Cronbach's Alpha* value is in accordance with the requirements. The

Jurnal Hurriah: Jurnal Evaluasi Pendidikan dan Penelitian
Vol. 4, No. 2, June 2023, PP 257-265

value of 0.807 is 20 items, but we retested with items that had been deducted during the validity test. The retest value by reducing 6 invalid items.

Table 6 Second reliability test

Reliability Statistics

Cronbach's Alpha	N of Items
.819	14

The results of the second test also meet the requirements, just like the first test. The following question items are obtained from the reliability in table 6.

Table 7 Value results per item/grain

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00002	49.5250	91.333	.560	.800
VAR00005	49.3000	90.523	.618	.796
VAR00006	49.2500	88.090	.692	.790
VAR00007	50.0500	97.074	.270	.819
VAR00008	51.2500	93.526	.380	.812
VAR00009	50.3250	91.969	.382	.813
VAR00011	49.7000	86.215	.586	.796
VAR00013	49.9500	93.536	.442	.808
VAR00014	49.8500	90.541	.518	.802
VAR00015	49.3250	100.122	.358	.814
VAR00016	50.0750	94.276	.342	.815
VAR00017	49.8000	93.344	.435	.808
VAR00019	49.6750	87.558	.649	.792
VAR00020	50.6750	96.020	.192	.832

In table 7 the "Cronbach's Alpha if Item Deleted" section has met the reliable requirements because it is> 0.7. Unlike the "Corrected Item - Total Correlation" there are 2 items that do not meet the requirements because <0.3. The second test is good when compared to the first test which contained -0.90 on item 10 of the corrected item - total correlation section.

CONCLUSION

Researchers test the validity of an instrument to find out the extent to which the instrument can measure what should be measured. While reliability aims to find out how consistent the research results are when repeated. We tested the validity and reliability of the instrument using the SPSS program. The non-test instrument in the form of a questionnaire of learning motivation of class IV elementary school students that has been tested can be said to be valid because it has a KMO value of 0.7 and a significant value of 0.000 which is a requirement for KMO criteria> 0.5 and a significant value <0.05. Of the 20 items, 6 questions were eliminated which had an anti-image <0.5. In the final result, there is no more anti-image value <0.5. Of the 20 items in the student learning motivation questionnaire, 14 items are said to be valid. In addition to being valid, the questionnaire we made is also said to be reliable when tested twice the results are > 0.7.

REFERENCES

Abdul Majid, B., Achmad Andrian, & Khairan. (2023). IMPLEMENTATION OF THE ARIAS MODEL IN ICT SUBJECTS IN INCREASING THE QUALITY OF STUDENT LEARNING. *JURNAL HURRIAH: Jurnal Evaluasi Pendidikan Dan Penelitian*, *4*(1), 199-210. https://doi.org/10.5806/jh.v4i1.128

Hasana, L. (2020). The Influence of the Need to Ventilate on Learning Motivation. East Java: Yudharta University Pasuruan.

Hutapea, H. R. (2022). Non-Test Evaluation Instrument in the Assessment of Affective and Psychomotor Learning Outcomes. Journal of Theology and Contextual Christian Education, 2, 151-165.

Mohammad Syauqi. (2023). THE EFFECT OF ONLINE LEARNING ON STUDENTS' UNDERSTANDING IN VOCATIONAL HIGH SCHOOLS. *JURNAL HURRIAH: Jurnal Evaluasi Pendidikan Dan Penelitian*, *4*(1), 190-198. https://doi.org/10.5806/jh.v4i1.123

Kahar, I. (2018). The Effect of Motivation and Interest in Learning Class X Students on Learning Outcomes of Volleyball Top Service SMAN 18 Luwu. Makassar State University, 1-20.

Sudijono, A. (2017). Introduction to Education Evaluation. Jakarta: Raja Grafindo Persada.

Sappaile, B. I. (2007). The concept of educational research instruments. Journal of Education and culture, 13(66), 1-7.