

## **VALIDITY AND RELIABILITY TEST FOR INDEPENDENCE STUDENT SCHOOL BASE CLASS 6**

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### ***Abstract***

*Every research project needs a tool to gather data using. The validity and reliability criteria must be followed while preparing test and non-test data. It is feasible to confirm the data's consistency and correctness using SPSS software. This research project will outline the phases of learning evaluation courses in the validity and reliability test. Data on student independence surveys were taken at several primary schools, including SDN Srandol Kulon 03 and SDN Srandol Kulon 02. The instrument's preparation findings were used for this purpose. If the count of  $r$  is more than the table of  $r$ , then the validity test is valid. This means that out of a total of ten things, six are valid, seven are comments about food parenting, eight are statements about psychosocial parenting, and seven are statements about hygiene parenting. Additionally, with relation to healthcare, three out of the six assertions are applicable to parents. If the reliability test has a Cronbach's alpha better than 0.6 or the  $r$ -table, then it is considered reliable. Every single statement question in this survey that passed the reliability test yielded reliable data.*

**Keywords:** *validity and reliability test, non-test instrument, SPSS, elementary school, Cronbach alpha.*

### **Abstracts**

Tools are required for every research project to collect data. Validity and reliability requirements must be followed when preparing test and non-test data. The validity and reliability of the data can be evaluated using SPSS software. This research seeks to provide a broad overview of the learning process for validity and reliability testing courses. Based on the information obtained during the creation of this instrument, student independence survey data was obtained from several elementary schools, including SDN Srandol Kulon 03 and SDN Srandol Kulon 02. If  $r$  count  $>$   $r$  table then the validity test is considered valid. Eight out of ten valid statements in the psychosocial stimulation category, seven out of nine valid statements in the feeding category, six out of ten valid statement items in the independence category, and seven out of ten valid statements in the psychosocial stimulation category were found in the research results. hygienic behavior category . and three of the six statements about the relationship of childcare practices to health services were accurate. If Cronbach's alpha is greater than 0.6 or greater than the  $r$  table then a reliability test is considered reliable. Reliability test results are provided for each question statement in this questionnaire which is considered valid.

**Say Key:** *test validity And reliability, instrument non test, SPSS, Elementary School,alpha cronbach.*

## **INTRODUCTION**

There is no freedom without freedom. Chaplin's Desmita (2017) defines independence as a person's right to decide for themselves how to take control, organize and make choices in their life. Asrori (2015) continued, independence is a person's inner strength which is achieved through self-actualization and efforts to achieve achievement.

According to Gea and Suid (2017), mastery of special abilities, self-confidence, independence, and a sense of time and responsibility are the five elements of autonomous learning. It is clear from the statement above that autonomous learning is defined as learning carried out on one's own initiative without the help of others.

When children work independently, take initiative, are confident and responsible, and value their time, they become independent. Therefore, researchers use tools to collect data to measure the degree of student learning independence. Better equipment for data collection could improve study results.

Evidence of validity and reliability is a prerequisite for a competent research instrument (Widoyoko, 2017, p.141). According to Sugiyono (2014), a measuring instrument is said to be acceptable if it can measure the target variable accurately.

Test and non-test equipment are the two broad categories into which equipment is divided. Each musical instrument has a unique shape and type. If the test and non-test tools are able to measure how successful a measuring tool is in collecting data, then the tool is said to be superior.

In addition, the equipment must be able to determine the meter's efficiency level accurately. Therefore, to determine whether an instrument can measure the level of validity and reliability, the instrument must be tested for both test and non-test purposes.

Researchers examined the non-test tools used by sixth grade students for independent learning in this research. The validity and reliability of this non-audit instrument is being tested. A checklist-style questionnaire with a Likert scale was used as a non-test tool.

## **METHOD**

As mixed methods research, this research combines qualitative and quantitative techniques. Complementary strategies that consider both process and outcomes.

### **Method Qualitative**

This research identifies fresh digital media , articles, journals and paper materials using qualitative methods, observation and literature review. 40 sixth grade elementary school students were used as research participants and samples for this research. The researcher's direct participation in collecting and analyzing data in the field serves as a data

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collection tool. Next, the data collection method is used by searching for related keywords in full text sources, catalogs, indexes and search engines to focus the search on certain relevant topic titles. In addition, the speaker sorts the data by publication date and most recent scientific papers.

### Method Quantitative

In quantitative research, the reliability of the results is highly dependent on the accuracy and precision of the measuring instruments and methods used. Of course, the purpose for which a research instrument is used must be considered when evaluating its validity and reliability. Information about the people analyzed comes from various sources, including observational data, data collection instruments, and previously developed methods. Measuring using standard and objective instruments is the way data is collected. involves data quantification or numerical calculations.

### Analysis Data

A thorough examination of the substance of the written material was carried out through research using a content analysis approach, namely the data analysis method used. According to Yusuf (2016), analyzing messages or data from different textual notes or documents using content analysis requires systematic and impartial actions. Included in the field of connection analysis, which seeks to understand the relationship between concepts in a particular text. The first stage in this process is to find out what types of concepts can be looked at and examined further. This debate is relevant because this is one of the authors' six attempts to use SPSS software to analyze data and demonstrate its correctness and validity before using it as a research reference.

## RESULTS

### 1. Test validity instrument non-test independence Study

Validate the target ideation tool. A valid instrument has a KMO > 0.5 and significant results < 0.05. One of the six tools available to evaluate the validity of an instrument is SPSS. In this article the non-independence test instrument is tested using SPSS software. Entering items on the variable display page that correspond to the data quantity, followed by test result data on the data display page, is done by using SPSS software to assess the validity of an instrument. We learned through field testing:

*Table 1*  
*Results test try field*

No	Student's name	No. Statement Item										
		1	2	3	4	5	6	7	8	9	10	Total
1	Aditiya Dwi Saputra	1	1	1	0	1	0	1	1	1	1	8
2	Aditria Az-Zahra Putri	1	0	1	1	1	1	1	1	1	1	9

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3	Aditya Diki Saputra	1	0	0	1	1	0	1	1	1	1	7
4	Adlan Nawira Wafa	1	0	0	1	1	1	0	1	1	1	7
5	Afrina Meilissa Putri	1	1	1	1	1	0	1	1	1	1	9
6	Alvaro Bagasditya Caesario Triputra	1	1	1	1	1	0	1	0	0	0	6
7	Alzahra Mega Irenesya	1	1	0	1	1	0	1	1	1	1	8
8	Asnan Yazida Wafa	1	1	1	1	1	0	1	1	1	1	9
9	Avrilina Nur Suci	1	1	1	1	1	1	1	1	1	1	10
10	Faza Fatkul Lutfaka	1	1	1	1	1	1	1	1	1	1	10
11	Hesty Puspitasari	1	0	1	1	1	0	0	1	1	1	7
12	Inspiration for the Grace of Ramadhan	1	1	1	1	1	0	0	0	1	1	7
13	M Kenzie Wika Pratama	0	0	1	1	1	0	0	0	1	1	5
14	Marcel Bian Arrafi	1	1	0	1	1	0	0	0	1	1	6
15	Mifta Apriliani	0	1	0	1	1	0	0	1	1	1	6
16	Muamar Wijaya Amukti	0	0	0	1	0	0	0	0	1	1	3
17	Muhammad Ramdhani	1	0	1	0	0	0	0	1	0	0	3
18	Muhammad Reihan Anuuha	0	1	0	0	1	0	0	1	1	1	5
19	Nava Fadilla	1	1	1	1	1	1	0	0	1	1	8
20	Nidia Nazla Nurroiniya	1	1	0	1	1	0	0	1	1	1	7
21	Novia Syifa Pusparini	1	1	1	1	1	0	1	1	0	1	8
22	Pratama Ardi Saputra	0	0	1	1	1	0	0	1	0	1	5
23	Raditya	1	1	1	1	1	1	1	0	1	1	9
24	Raffelino Maulana Yanstin	1	1	1	1	1	1	0	1	1	1	9
25	Rajendra Gavin Utama	1	1	1	1	1	1	1	1	1	1	10
26	Santa Chaterina Ayu Paramita Mulyadi	1	1	1	1	1	1	1	1	1	1	10
27	Vika Dea Amanda	1	1	1	1	1	1	1	1	0	1	9
28	Zanuar David Pratama	1	1	1	1	1	0	0	0	1	1	7
29	Muhammad Riza	1	1	1	1	1	0	0	0	1	1	7
30	Niko Andrean	0	1	1	1	1	0	0	1	0	1	6
31	Ana Zakia R	1	1	1	1	1	1	1	1	1	1	10
32	Dewi Kartika	0	1	1	1	1	0	1	1	1	1	8
33	Ayu Rahayu	1	1	1	1	1	1	0	1	1	1	9
34	Niko Bastian Putra	1	1	1	1	1	1	0	1	1	1	9
35	Alif Aminudin	1	1	1	1	1	1	0	1	1	1	9
36	Muhammad Rasya	1	1	1	1	1	1	1	1	1	1	10
37	Dicky Pratama	1	1	1	1	1	1	1	0	1	1	9
38	Iqbal Ramadhan	1	1	1	0	1	0	0	1	0	1	6
39	Octavia	1	1	1	1	1	1	1	1	1	1	10
40	Zahra Aina Ulfa	1	1	1	1	1	1	1	1	1	1	10

Selecting the dimension reduction factor option and moving each item to a variable column are the following steps once the data is entered into the data view. After each item is shifted, select the descriptive option and review the anti-image, Bartlett's KMO Test of Sphericity, and

initial solution selection. The KMO values and significance of the tested data are listed below.

**Table 2**  
*Mark KMO And significant Which has tested try*

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.574
Approx. Chi-Square	82.132
Bartlett's Test of Sphericity Df	45
Sig.	.001

Based on available data, the instrument tested meets one of the six validity standards, namely a KMO value of >0.5 with a value of 0.574. Apart from that, the instrument tested has a significance value of 0.001, meaning it meets the validity criteria, namely having a significant value of less than 0.05 . The instrument test results for each question item are:

**Table 3**  
*Anti-image matrices*

	btr1	btr2	btr3	btr4	btr5	btr6	btr7	btr8	btr9	btr10	
Anti-image Covariance	btr1	.675	-.071	-.048	.055	-.101	-.195	-.112	.022	-.106	.168
	btr2	-.071	.707	-.048	.132	-.236	-.044	-.106	.110	.002	-.025
	btr3	-.048	-.048	.697	.042	-.083	-.216	-.100	.122	.213	.021
	btr4	.055	.132	.042	.689	-.152	-.172	-.131	.245	-.019	-.078
	btr5	-.101	-.236	-.083	-.152	.544	.078	-.034	-.088	.029	-.208
	btr6	-.195	-.044	-.216	-.172	.078	.579	-.025	-.172	-.138	-.051
	btr7	-.112	-.106	-.100	-.131	-.034	-.025	.741	-.205	-.059	.089
	btr8	.022	.110	.122	.245	-.088	-.172	-.205	.729	.168	-.126
	btr9	-.106	.002	.213	-.019	.029	-.138	-.059	.168	.574	-.239
	btr10	.168	-.025	.021	-.078	-.208	-.051	.089	-.126	-.239	.500
Anti-image Correlation	btr1	.634 <sup>a</sup>	-.103	-.070	.081	-.166	-.311	-.158	.031	-.171	.290
	btr2	-.103	.657 <sup>a</sup>	-.068	.188	-.380	-.069	-.146	.154	.003	-.042
	btr3	-.070	-.068	.552 <sup>a</sup>	.060	-.135	-.340	-.140	.171	.338	.036
	btr4	.081	.188	.060	.550 <sup>a</sup>	-.248	-.273	-.183	.345	-.031	-.133
	btr5	-.166	-.380	-.135	-.248	.622 <sup>a</sup>	.138	-.054	-.140	.051	-.398
	btr6	-.311	-.069	-.340	-.273	.138	.609 <sup>a</sup>	-.039	-.265	-.240	-.095
	btr7	-.158	-.146	-.140	-.183	-.054	-.039	.687 <sup>a</sup>	-.278	-.091	.146
	btr8	.031	.154	.171	.345	-.140	-.265	-.278	.274 <sup>b</sup>	.260	-.209
btr9	-.171	.003	.338	-.031	.051	-.240	-.091	.260	.533 <sup>a</sup>	-.446	
btr10	.290	-.042	.036	-.133	-.398	-.095	.146	-.209	-.446	.560 <sup>a</sup>	

Because item 8 on the instrument being tested has a value of 0.27 or less than 0.5, the data above shows that item 8 does not meet the validity criteria for an instrument. Meanwhile, other objects are valid because their value meets the validity requirements of an instrument. A table of the total explained variance is shown below.

**Table 4**  
*Total variance explained*

Components	Initial			Extraction		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,689	29,876	29,876	2,689	29,876	29,876
2	1,761	19,569	49,446	1,761	19,569	49,446
3	1,087	12,082	61,527	1,087	12,082	61,527
4	,887	9,861	71,388			
5	,747	8,304	79,692			
6	,609	6,767	86,459			
7	,507	5,631	92,089			
8	,416	4,620	96,709			
9	,296	3,291	100,000			

Eigenvalues  
Loadings

From these figures it is clear that only nine out of 10 elements of the instrument are valid.

2. Test reliability instrument non-test independence Study

Reliability testing determines how consistent test results are after being given to participants and maintained under the same circumstances several times. Reliability meets the requirements if the value is more than 0.70 . By paying attention to which items may be discarded, Cronbach's Alpha can be improved, in particular, by examining the corrected item-total correlation column, whose value is less than 0 .3 . In this paper, we use SPSS to evaluate non-test tools that increase students' independence in their own learning.

Entering items on the variable display page that correspond to the data quantity, followed by test result data on the data display page, is done by using SPSS software to assess the reliability of an instrument. Selecting the analysis option scale reliability analysis (alpha model)-statistics (item check, breakdown, and deletion) is performed next. This is the Cronbach's alpha value of the data tested.

**Table 5**  
*Reability statistic*

Cronbach's Alpha	N of Items
.653	10

The Cronbach's alpha value of the instrument is 0.65 as depicted in the table above. The dependability requirements for this instrument are not met, because it does

not have a Cronbach's alpha value higher than 0.7 . The following item totals are the results of the reliability test of this data set.

**Table 6**  
*Item total statistic*

	Scale Mean if Item Deleted	Scale Varianceif Item Deleted	Corrected Item-Total Correlation	Cronbach'sAlpha if Item Deleted
btr1	6.9250	2.994	.403	.611
btr2	6.9500	3.023	.349	.622
btr3	6.9500	3.177	.234	.646
btr4	6.8500	3.310	.250	.641
btr5	6.8000	3.241	.490	.615
btr6	7.3000	2.523	.564	.562
btr7	7.2500	2.705	.431	.601
btr8	7.0000	3.333	.096	.678
btr9	6.9250	3.251	.202	.651
btr10	6.8000	3.395	.290	.639

In the data shown above, there are five items with adjusted item-total correlation values below 0.3 : items 3, 4, 8, 9, and 10. It is clear from this that these five items were not retained. To increase the Cronbach's alpha value to 0.67 , it is necessary to remove item 8 from the Cronbach's alpha column. The reliability criterion, which requires a value  $>0.7$  , is not met by the Crobach alpha value, even though this component is removed.

## CONCLUSION

Validity testing determines how well an instrument measures the target construct. One of the six tools available to evaluate the validity of an instrument is SPSS. Entering items on the variable display page that correspond to the data quantity, followed by test result data on the data display page, is done by using SPSS software to assess the validity of an instrument. The information we obtained from the results of the field test is as follows: It can be concluded that the non-test instrument for teaching independence for grade I elementary school children is valid because the KMO value is 0.57 and the significant value is 0.001, exceeding the KMO criteria requirements, namely  $>0.5$  and  $<0.05$ .

However, item 8 does not fit the bill because its value of the  $> 0.5$  criterion is 0.27. However, this non-test independent learning aid for grade 1 elementary school students does not meet the standard requirements for reliability criteria, namely  $>0.70$  because its reliability value is low, namely 0.65.

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So, it is important to put more thought and effort into developing non-test instruments if you want to create outstanding, innovative and reliable instruments.

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