Randwick International of Education and Linguistics Science (RIELS) Journal
Vol. 4, No. 3, September 2023 | Page 739-751 |
https://www.randwickresearch.com/index.php/rielsj

Development of Instrument Assessment of Pancasila Student Profile Assisted by Google Form on Material Quadrangle in Grade IV SD Negeri 104607 Sei Rotan

DOI: https://doi.org/10.47175/rielsj.v4i3.804

| Nur Habibah[1,*] | Dian Armanto[2] | Kms. M. Amin Fauzi[3] |

[1]Pendidikan Dasar Pascasarjana, Universitas Negeri Medan, Medan, Indonesia

habibahn76@gmail.com
dianarmanto@unimed.ac.id
aminkms1964@gmail.com

ABSTRACT
Instruments in learning have an important role in obtaining information about achieving student competencies objectively. This study aims to describe the validity of the Pancasila student profile instrument developed. This research is development research conducted using the preparation of test and non-test instruments by Mardapi. The subjects in this study were grade IV students of SD Negeri 104607 Sei Rattan totaling 44 students. From the results of the trial obtained: 1) the validity of the developed instrument is valid in terms of the results of advance validation and content validation. As well as the results of trials with students are declared valid and have high reliability.

KEYWORDS
Instrument Development; Pancasila Student Profile, validation

INTRODUCTION

The success of education with the main goal of improving human resources, is influenced by various factors (Sudjana, Nana, 2016). One of the influencing factors is the teacher's ability to conduct and utilize assessments (Umar & Sulo, 2017 & Arikunto et al, 2003). According to Hariono et al, (2021) stated that in the process of learning assessment is very important from the learning process, because an assessment can be used in making decisions based on measurement. Learning forms the basis of people's behaviours and they become familiar with the environment through learning, learn how to emit emotions and develop their rationality (Bakhtiarvand, M, 2020).

The quality of assessment of a learning instrument is needed, if the instrument used has good quality, in the sense that the instrument should meet several requirements, including valid, reliable, objective, practical and easy to use and norms (Rosidin, 2017; Dimyati & Mudjiono, 2015; and Kompri, 2017). So, if you meet these requirements, the data obtained will be in accordance with the actual situation in the field, because the instrument that will be used to reveal the information that becomes data. If an instrument has low validity, it will produce irrelevant data (Zaenal &; Heri, 2017).

The profile of Pancasila students is in accordance with the vision and mission of the Ministry of Education and Culture (Kemendikbud, Culture, Research, and Technology) as stated in the Regulation of the Minister of Education and Culture Number 22 of 2020 concerning the Strategic Plan of the Ministry of Education and Culture for 2020-2024, that "Pancasila students are the embodiment of Indonesian students as lifelong learners who have global competence and behavior in accordance with the values of Pancasila, with six main characteristics: faith, piety, fear of True Source, and noble character, global diversity, mutual assistance, independence, critical reasoning, and creativity.

According to Kementerian Pendidikan dan Kebudyaan (2020) or the Ministry of Education and Culture, immoral student profiles are classified by phase, where in that phase is determined by the age of the student. This research is in class IV, then in grade IV students enter phase B. The following dimensions and elements of the Pancasila student profile in phase B can be seen in table.1 as follows:

Table 1. Dimensional with Elements of Pancasila Student Profile no Phase B

Dimension	Element	Details
Self-sufficient	Self-understanding and the situation at hand	Recognize the qualities and interests of yourself and the situation at hand. Recognize his abilities, achievements, and interests as well as the challenges he faces based on the events he experiences in everyday life.
		Develop self-reflection. Reflect to identify his strengths, weaknesses, and achievements, as well as situations that can support and hinder his learning and development.
	Self-regulation	Emotion regulation. Know the influence of other people, situations, and events that occur on the emotions they feel, and try to express emotions appropriately taking into account the feelings and needs of others around them.
		Setting learning, achievement and self-development goals as well as strategic plans to achieve them. Explain the importance of having goals and committing to achieving them and explore the appropriate steps to achieve them.
		Show initiative and work independently
		Develop self-control and discipline
		Confident, resilient, and adaptive.
Critical reasoning	Acquire and process information and ideas	Ask a question
		Identify, clarify, and manage information and ideas
	Analyze and evaluate reasoning and its procedures	Analyze and evaluate reasoning and its procedures
	Reflection of thoughts and thought processes	Reflect and evaluate his own thoughts
Creative	Generate original ideas	Come up with new, meaningful imaginative ideas from various ideas as an expression of his thoughts and/or feelings.
	Produce original works and actions	Explore and express their thoughts and/or feelings in accordance with their interests and preferences in the form of works and/or actions by appreciating the works and actions produced

	Have flexibility of thinking in finding alternative solutions to problems	Compare creative ideas to deal with situations and problems

Mathematics as a conceptual tool for constructing and reconstructing matter, honing, and practicing the thinking skills needed to solve problems in life. The subject of mathematics equips students on critical thinking, reasoning and logic through certain mental activities that form a continuous stream of thinking and lead to the formation of a stream of understanding. Mathematics subjects have moral values including freedom, skill, interpretation, accuracy, systematism, rationality, patience, independence, discipline, perseverance, toughness, confidence, openness and creativity. Thus, its relevance to the student profile of Pancasila, mathematics subjects are aimed at developing students' independence, critical reasoning skills, and creativity.

Based on the results of observations in the field and information from teachers that have been carried out at SD Negeri 104607 Sei Rotan, it was found that grade IV teachers still have difficulty designing instruments to measure the dimensions of student profiles on quadrilateral material so that teachers with Pancasila education have not developed a Pancasila Student Profile assessment instrument that emphasizes the implementation of the Independent Curriculum. To overcome this, it is necessary to develop a Pancasila student profile assessment instrument, especially in the dimensions of independence, critical reasoning, and creativity in extracurricular activities in quadrilateral mathematics subjects in grade IV.

RESEARCH METHODS

This research uses a research development model or *Research and Development* (R&D) (Husnunidah, Neni., 2017). The development of test and non-test instruments used in this study was proposed by Djemari Mardapi. The development of test instruments has 9 steps, namely (1) compiling test specifications, (2) writing test questions, (3) reviewing test questions, (4) conducting trials, (5) analyzing question items, (6) improving tests, (7) assembling tests, (8) conducting tests, (9) interpreting tests. While non-test development has 10 steps, namely (1) determining instrument specifications, (2) writing instruments, (3) determining instrument scales, (4) determining rating scales, (5) reviewing instruments, (6) conducting trials, (7) analyzing instruments, (8) assembling instruments, (9) taking measurements , (10) interpreting measurement results.

The subjects in this study were grade IV students of SD N 104607 Sei rotan. Male learners are 20 people and female learners are 24 people. The trial consisted of 23 learners. Data collection techniques using questionnaires, content validation questionnaires for tests. Data analysis is carried out using Likert scale, validity test, reliability test, question item analysis. Validity tests are used to determine the validity of questions and questionnaires developed, reliability tests are used to determine the reliability of questions and questionnaires developed.

RESULTS AND DISCUSSION

Drawing Up Test Specifications

The first step in the development of test instruments is to compile test specifications. The preparation of test specifications consists of several activities
Including; (1) determine the purpose of the test, (2) determine the test grid, (3) choose the form of the test, and (4) determine the length of the test.

Determining Test Objectives

The test developed aims to measure the profile of Pancasila students in grade IV on quadrilateral material on the dimensions of critical reasoning and creative thinking. Before the test is used, the test must be valid and reliable to measure critical reasoning and creative thinking in students

Arranging the test grid

After determining the purpose of the test, the next step is to arrange the test grid. In the test grid, there are four steps, namely (1) writing the general purpose of the lesson, (2) making a list of subjects and sub-subjects to be tested. (3) determine indicators, (4) determine the number of questions for each subject and sub-subject. The grid of questions can be seen in the table as follows:

Table 2. Question Grid Table

Learning Competencies	Dimensions of Pancasila Student Profile	Element	Subject matter	Question number
1.3 Determine the circumference and area of a flat build	Critical reasoning	Analyze	Square	1,7, and 8
		Evaluate	Square	4
				2
		Conclude	Square	5
	Creative	Thinking orisinal	Square	6
		Flexible thinking	Square	3

Choosing a Test Form

The question form chosen in the test development is the description form. The description test was chosen because it is suitable for use in subjects such as mathematics, because mathematics has a definite answer and only one correct answer.

Determining Test Length

Determination of test length relates to the length of time given to students to answer questions. The written test takes 90 minutes to 150 minutes. Students are given time to answer questions for 35 minutes.

Writing Test Questions

After compiling the specifics of the test, the next step is to write the test questions. Question writing is describing learning competency indicators on the material taught into questions. So, this study discusses quadrilateral material with learning competencies to determine the circumference and area of flat buildings. The question indicators can be seen in 3 as follows:

Table 3. Question Indicator Table

Learning Competencies	Question indicators
Determining the circumference and area of a flat build	Comparing 2 square areas.
	Given the contextual problem, make a plan to determine the size of the one build you want to create.
	With contextual problems, evaluate how long the land is, and the money you get after the sale.
	Given the contextual problem, determine the most important and relevant parts of the quadrilateral.

	Given the contextual problem, determine the length of the sides of the quadrilateral.
	Contextual problems are presented, solving quadrilateral area problems and change.
	Determining the area of the shaded area

The acquisition of critical and creative reasoning data is carried out scoring on students' answers to each question item. The criteria for scoring critical and creative reasoning using analytical scoring according to Mardapi (2008). As presented in the following table:

Table 4. Test Question Scoring Table

Student Response to Questions	Shoes
Write formulas correctly	1
Write formulas and enter numbers in formulas correctly	2
Writing formulas, entering numbers in formulas and calculating processes are wrong so that the results are wrong	3
Write down the formula, enter numbers on the formula and process the calculation and the result is correct	4

Studying Test Questions

After writing the question, the next step is to study the problem. Questions that have been made are first tested for validity. Then a revision is carried out based on input and suggestions from validators, and then the questions are tested to students.

The validation phase includes advance validation and content validation. Content validation was carried out by 5 (five) mathematics education lecturers with S3 backgrounds, including lecturers with the initials of Mr. M, Mr. W, Mr. E, Mr. G, and Mrs. U. The five validators provide several points and input on the developed problems. Then revisions were made in accordance with suggestions from the weigher and consulted with the supervisor. The results of the weighing of the content validity and face validity of several validator experts were analyzed using *Q-Cochran* statistics.

The purpose of this analysis is to find out whether the weighers consider the test questions uniformly and creatively or not. In the following section, the researcher presents the results of face validity, which is about the clarity of the appearance of the question in terms of language. The results of the weighers as presented in the following table:

Table 5. Advance Validation

Question Number	Validator				
	1	2	3	4	5
1	1	1	1	1	1
2	0	1	1	1	1
3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	1	1	1	1	1
7	0	1	1	1	1
8	1	1	0	1	1

Remarks 1: valid and 0: invalid.

The results of the validator experts presented in the table above, are further analyzed with *Q-Cochran* statistics. The results of the statistical test are used to find out whether the validators weigh the instrument equally or not. The results of these statistical tests are presented in table 6 below:

Table 6. Q-Cochran Statistical Results

N	5
Cochran's Q	5,526^a
Df	7
Asymp.Sig	0,596

The table above shows that the asymptic significance of 0.597 is greater than the significance level of α = 0.05. The calculated statistical price Q is 4.308 and the price χ^2 (0.05; 7) = 14.067. Since the value of Q turns out to be smaller than the χ^2_{tabel} price at the level of significance of 5%, it can be concluded that experts have weighed the face validation of each point of critical reasoning questions and creative equally or uniformly. Furthermore, researchers also validate the contents whose results are contained in the table as follows:

Table 7. Content Validation Results

Question number	**Validator**				
	1	2	3	4	5
1	1	1	1	1	1
2	0	1	1	0	1
3	1	0	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	1	1	1	1	1
7	0	1	1	1	1
8	1	1	0	1	1

Remarks 1: valid and 0: invalid

The results of the validator experts presented in table 4.6 are further analyzed with *Q-Cochran* statistics. The results of the statistical test are used to find out whether the validators weigh the instrument equally or not. The results of the statistical test are presented in table 8 below:

Table 8. Q-Cochran Statistical Results Table

N	5
Cochran's Q	6,576^a
Df	7
Asymp.Sig	0,474

The table above shows that the symbiotic significance of 0.474 is greater than the significance level α = 0.05. The calculated statistical price Q is 6.576 and the price χ^2 (0.05; 7) = 14.067. Since the value of Q turns out to be less than the priceχ^2_{tabel} at the level of significance of 5%, it can be concluded that experts have weighed the validation of the content of each item of critical and creative reasoning questions equally or uniformly.

Trial

The instrument that has been declared to meet the content and validity of the face, then the test was tested on 23 grade IV students at SD Negeri 104607 Sei Rotan. The results of obtaining scores in trials are used to obtain validity and reliability, level of difficulty and differentiating power of questions.

Analyzing Question Points

Question point analysis can be known by the results of obtaining student scores on trials. Question point analysis includes validity and reliability, difficulty and discriminating power.

Test Question Item Validity and Reliability

The data obtained by the test questions and the calculation of the validity and reliability of the test using the help of *Excel* and SPSS-24 *for windows* programs. The validity of the question item is used with the *Product moment* correlation. As for the reliability of the test, *Crocbach Alpha* Analysis is used. The calculation results obtained test validity and test reliability are presented in the following table:

Table 9. Question Validity and Reliability Table

Question Number	Validity		Reliability	
	r_{xy}	Criterion	r_{11}	Interpretation
1	0,603	Valid	0,853	Tall
2	0,761	Valid		
3	0,780	Valid		
4	0,560	Valid		
5	0,769	Valid		
6	0,828	Valid		
7	0,767	Valid		
8	0,545	Valid		

Based on the table above 0.3515 was obtained r_{tabel} from the defree of freedom (df) table of 21 out of 8 questions in the trial. From the overall calculation, all questions are declared valid. The question is valid from the value of $\boldsymbol{r_{hitung} > r_{tabel}}$. so that all questions can be used to measure the dimension of critical reasoning and the dimension of creative thinking in the profile of Pancasila students. The reliability of the questions in table 4.8 with an acquisition of 0.853 with a high interpretation according to the classification of reliability degrees.

The difficulty level of the question items

Based on the trial data is then followed by determining the differentiating power of the test. The results of the test instrument trial were obtained by students from 23 respondents to determine the level of difficulty of the question. The difficulty level of the question can be seen as follows in the following table.

Table 10. Question Difficulty Table

Question Number	Difficulty Level	Classification
1	0,63	Keep
2	0,565	Keep
3	0,56	Keep
4	0,27	Difficult

5	0,60	Keep
6	0,62	Keep
7	0,623	Keep
8	0,69	Keep

Based on table 4.10, 7 questions have a medium classification, 1 question has a difficult classification. In the other 7 questions with medium classification.

Differentiating Power

Based on the results of the trial test, the results of 23 respondents were used to determine the distinguishing power of the test. The differentiating power of the test can be seen in the following table:

Table 11. Problem Differentiating Power Table

Question Number	Differentiating Power	Classification
1	0,439	Good
2	0,669	Good
3	0,679	Good
4	0,454	Good
5	0,665	Good
6	0,752	Good
7	0,684	Good
8	0,451	Good

Based on the table above, it can be seen that the discriminating power in all questions in the range of 0.40-0.70 according to the differentiating power guidelines has a good classification. This is based on the classification of differentiating power.

Development of Questionnaire Instruments

Determining the Specifics of the Questionnaire

Specifications on the instrument consists of the purpose and lattice of the instrument. As for this study, the purpose of the instrument is to measure student learning independence. The instrument grille is shown in the table below.

Table 12. Instrument content k-grid

Dimensions of Pancasila Student Profile	Element	Statement indicators
Self-sufficient	Goal setting, achievement, and self-development as well as strategy plans	Prepare all the needs needed
		Learning the material before teaching
		If you don't understand the material, ask the teacher
		Always get up early to attend school lessons
		Make a list of lessons to study at home
	Initiative	Looking for literature sources about material that is poorly understood
		Repeat lessons at home
		Record important things in the book to make it easier to remember lessons
		Learn without parents telling you to

		Always thought you'd get good grades
		When having difficulty understanding the material, ask others
	Work independently	Work on individual tasks
	Discipline	Study regularly
		Collect tasks on time
		Listen well to the teacher when explaining the material
		Serious in solving problems
	Self-confidence	believe in one's abilities
		Dare to give opinions during group discussions
		Able to complete tasks on their own
		Not sure you can do the exercises given by the teacher yourself

Writing a Questionnaire

The next step is the writing of the instrument, in this step the indicator is translated into statements. The description of indicators into statements can be seen in the table as follows:

Table 13. Instrument Grid Table

Dimensions of Pancasila Student Profile	Element	Statement indicators	Statement number
Self-sufficient	Goal setting, achievement, and self-development as well as strategy plans	Prepare all the needs needed	1
		Learning the material before teaching	2
		If you don't understand the material, ask the teacher	3
		Always get up early to attend school lessons	15
		Make a list of lessons to study at home	16
	Initiative	Looking for literature sources about material that is poorly understood	4
		Repeat lessons at home	5
		Record important things in the book to make it easier to remember lessons	17
		Learn without parents telling you to	11
		Always thought you'd get good grades	18
		When having difficulty understanding the material, ask others	14
	Work independently	Work on individual tasks	6
	Discipline	Study regularly	7

		Collect tasks on time	8
		Listen well to the teacher when explaining the material	12
		Serious in solving problems	13
	Self-confidence	believe in one's abilities	9
		Dare to give opinions during group discussions	10
		Able to complete tasks on their own	19
		Not sure you can do the exercises given by the teacher yourself	20

Determining Scale

The next step is to determine the scale. The scale used is the Likert scale. On the Liken scale there are strongly agree (SS), agree (S), disagree (TS), and strongly disagree (STS) categories.

Determining the Questionnaire Scoring System

The next step is to determine the scoring system. The scoring system used is Likert scale. On the Likert scale the highest score is 4 and the lowest is 1. The scoring on the likert Scala can be seen in the table below:

Table 14. Likert Scale Scoring Table

Category	Shoes
Strongly Agree (SS)	4
Agree (S)	3
Disagree (TS)	2
Highly Disagree (STS)	1

The next step after writing the instrument, the next step is to study the instrument. The instruments that have been made are first tested for validity by validators as many as 2 lecturers. Then revisions are made based on input and suggestions from validators, and then the questions are tested to students.

The validation phase includes content validation. Content validation is carried out by mathematics education experts with S3 backgrounds. Then revisions were made in accordance with suggestions from the weigher and consulted with the supervisor. The results of validation by validators can be seen in the following table:

Table 15. Validation Results

Assessed aspects	Indicator	Validator Score	
		1	2
Content Aspect	Conformity of statements to the purpose to be measured	3	4

	Conformity of statements to measured indicators	3	3
Language Aspect	The language used is good and correct	4	4
Total Score		10	11
Percentage		**84%**	**92%**
Average		**88%**	

Based on the average percentage on the tabe l above, 88% was obtained, which means that the questionnaire was declared valid. Indicates that the developed questionnaire can be used at the trial stage.Based on validation by validators, it can be concluded that the percentage obtained is 88% which means that the questionnaire is declared valid. And it is concluded that the statement is categorized as good and does not need to be revised. This shows that the statements of the independence questionnaire can be tested on students.

The next step after validation by validators is to conduct a trial. The trial was conducted on grade IV students of SD Negeri 104607 Sei Rotan. A total of 23 learners. In trials using students outside the research subjects. Trials were conducted to analyze questionnaire instruments and analyze instrument reliability. Based on the results of obtaining student scores in trials, the instrument analysis includes validity and reliability, the validity of the instrument can be seen in the table as follows:

Table 16. Instrument Validity

Element	Statement Number	Validity		Category
		r_{xy}	r_{tabel}	
goal setting, achievement, and self-development as well as a strategy plan	1	0,783	0,3515	Valid
	2	0,533	0,3515	Valid
	3	0,734	0,3515	Valid
	15	0,766	0,3515	Valid
	16	0,770	0,3515	Valid
Initiative	4	0,785	0,3515	Valid
	5	0,813	0,3515	Valid
	11	0,636	0,3515	Valid
	14	0,779	0,3515	Valid
	17	0,810	0,3515	Valid
	18	0,651	0,3515	Valid
Work independently	6	0,877	0,3515	Valid
	7	0,836	0,3515	Valid
Discipline	8	0,908	0,3515	Valid
	12	0,801	0,3515	Valid
	13	0,842	0,3515	Valid
Confidence	9	0,687	0,3515	Valid
	10	0,565	0,3515	Valid
	19	0,707	0,3515	Valid
	20	0,662	0,3515	Valid

Based on, the table above, 0.3515 was obtained from the defree of freedom (df) table of 21 out of 20 r_{tabel} statements in the trial. From the calculation as a whole, all statements

are declared valid. The question is valid from the value of $r_{count} > r_{table}$. so that all statements can be used to measure the independent dimensions of the Pancasila student profile.

The reliability of the instrument was analyzed using the *Cronbach Alpha* coefficient for the independence instrument questionnaire. The reliability value is calculated based on valid statements, on the elements of goal setting, achievement and self-development and the strategy plan consists of 5 valid statements, the element of initiative consists of 6 valid statements, the element of working independently consists of 2 valid statements, the discipline element consists of 3 valid statements, and the element of confidence consists of 4 valid statements. The reliability of each element of independence can be seen in the following table:

Table 17. Questionnaire Reliability

No	Element	Coefficient *Cronbach Alpha*
1	goal setting, achievement, and self-development as well as a strategy plan	0,679
2	Initiative	0,788
3	Work Independently	0,869
4	Discipline	0,846
5	Self-confidence	0,751

Based on table it can be seen that each element has a *Cronbach Alpha* value ranging from 0.60-0.803. In the element of goal setting, achievement, and self-development and strategy plan the coefficient is 0.679, the initiative element the coefficient is 0.803, the element works independently the coefficient is 0.706, the element the discipline coefficient is 0.696, and the confident element coefficient is 0.682. So based on the classification of the degree of reliability of each element is declared reliable. This means that the instruments developed can measure what should be measured and can be used to measure the independence of learners.

CONCLUSION

The validity of the developed Pancasila student profile instrument is categorized on valid criteria. The test instrument is declared valid which is reviewed from the results of advance validation and content validation. As well as the results of trials with students are declared valid and have high reliability. The questionnaire instrument was declared valid in review of the validation results by experts with a percentage of 89.5%. And at the trial stage with students declared valid and have moderate reliability.

ACKNOWLEDGMENT

All acknowledgments (if any) should be included at the very end of the paper before the references. This section is the place to acknowledge people (dedications), places, and financing (you may state grants and sponsors here).

REFERENCES

Arifin, Zaenal, and Heri Retnawati. (2017). Pengembangan instrumen pengukur higher order thinking skills matematika siswa SMA kelas X. *Pythagoras: Jurnal Pendidikan Matematika*, 12(1), 98.

Arikunto, et al. (2003). *Pendidikan matematika I.* Jakarta: Penerbit Universitas Terbuka (UT)

Bakhtiarvand, M. (2020). The Impact of Using Online Educational Tools on Science Learning among Students. *Randwick International of Education and Linguistics Science Journal*, *1*(2), 107-113.

Dimyati & Mudjiono. (2015). *Belajar dan Pembelajaran*. Jakarta: PT. Rineka Cipta

Husnunidah, Neni. (2017). *Metodologi Penelitian Pendidikan*. Yogyakarta: Media Akademi

Kementerian Pendidikan dan Kebudyaan. (2020). *Sekolah penggerak dan Profil Pelajar Pancasila.*

Kompri. (2017). *Belajar,Faktor-faktor yang Mempengaruhi Belajar.* Yogyakarta: Media Akademi

Mardapi. (2008). *Teknik Penyusunan Instrumen Tes dan Nontes*. Jogjakarta. Mitra Cendikia.

Rosidin, Undang. (2017). *Evaluasi dan Asesmen Pembelajaran*. Yogyakarta: media Akademi

Sudjana, Nana. (2016). *Penilaian Hasil Proses Belajar Mengajar.* Bandung: PT. Remaja Rosdakarya

Umar & Sulo. (2017). *Pengantar Pendidikan.* Jakarta: PT. Rineka Cipta.