

E-CHARACTER ASSESSMENT BASED ON PROFIL PELAJAR PANCASILA FOR ELEMENTARY SCHOOL

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ABSTRACT

Implementing the character of education for elementary schools in Indonesia requires e-assessment using the dimensions of the Pancasila student profile to make it easier for teachers to use it. In contrast, e-assessment still needs to be created. This research aims to research and develop an electronic instrument for assessing student character in elementary schools based on the Pancasila Student Profile. The research method used is the 4-D model research and development method (Four-D Model) introduced by S. Thiagarajan. The research was conducted in elementary schools in five areas of DKI Jakarta, including Central Jakarta, East Jakarta, South Jakarta, North Jakarta, and West Jakarta, with 762 students as respondents. The instrument used was a questionnaire. This character e-assessment instrument based on the Pancasila Profile was validated with results obtained from validation scores from material experts of 76% and language experts of 91%, so this character e-assessment instrument is said to be scientifically feasible. The research produced a prototype model of the character e-assessment instrument that has been validated. This research indicates that using a character assessment based on the Pancasila Profile is feasible and easy for students and teachers.

Keywords: character; digital-based assessment; elementary school; *Profil Pelajar Pancasila*

INTRODUCTION

In line with preparing students to face the challenges of the Revolution 5.0 era, various abilities are needed to be ready to face life's challenges and the influence of globalization, which has positive or negative impacts. Therefore, the student's figure has academic intelligence, creativity, innovation, and character. The Partnership for 21st-Century Skills defined a framework for developing the skills, aptitudes, and attitudes to succeed in the workplace and 21st-century society. It lists three types of competencies: (1) learning skills (creativity and innovation, critical thinking, and problem-solving; communication and collaboration), (2) literacy skills (information literacy, media literacy, ICT literacy), and (3) life skills (flexibility and adaptability; initiative and self-direction; social and intercultural skills; productivity and accountability; leadership and responsibility).¹ The primary purpose of national education is to shape future generations'

¹ Laura Icela González-pérez and María Soledad Ramírez-montoya, "Competencies Types (Learning Skills, Literacy Skills, Life Skills) Components of Education 4.0 in 21st Century Skills Frameworks: Systematic Review," *Sustainability (Switzerland)* 14, no. 3 (2022): 1–31.



character. Moral values education is fundamental in building character in the future. When character education ideals are applied to daily conduct, they positively impact a person's character. Students' character enables them to distinguish between the good and the bad, reject negative influences, and maintain noble ideals. Honesty, faith, discipline, tolerance, independence, creativity, compassion, and patriotism are characteristics of character education intended to be taught to students. The components of excellent character extend beyond the skills, abilities, and information provided in most educational programs. While skills, abilities, and knowledge are not to be underestimated, individuals lacking good character may not have the motivation, courage, persistence, or will to do the right thing and act in morally and societally valued ways.²

Character education in elementary schools is important for creating quality human resources. Character education is one of the important things in creating quality human resources. Thus, it is important to implement character education in elementary schools.³ Over the last few decades, a variety of character education programs have been implemented in schools, some of which have shown promising results in terms of reducing risky behavior and increasing prosocial competencies, school-based outcomes (e.g., desirable behavior, positive attitudes, and academic achievement), and socioemotional functioning. These character education programs usually attempt to improve young people's intellectual, social, emotional, and ethical growth and assist them in becoming responsible, caring, and productive members of society.⁴

With character, students can differentiate between right and wrong, resist negative influences, and have noble morals. Education must develop creative values and habits of thinking, acting, and behaving as good members of society and citizens of good character.⁵ With their character, the student can behave well with the awareness of their conscience to form a noble that is always guarded against something that is not good. Character is a good objectivity of human quality, whether humans know it or not.

² Shiri Lavy, "A Review of Character Strengths Interventions in Twenty-First-Century Schools: Their Importance and How They Can Be Fostered," *Applied Research in Quality of Life* 15, no. 2 (2020): 573–96, <https://doi.org/10.1007/s11482-018-9700-6>.

³ Artita Marini, "Character Building Through Teaching-Learning Process: Lesson in Indonesia," *International Journal of Sciences and Research* 73, no. 5 (2017): 178–79.

⁴ Lavy, "A Review of Character Strengths Interventions in Twenty-First-Century Schools: Their Importance and How They Can Be Fostered."

⁵ Winda Irma Savitri, "Analysis of the Value of Character Education in Ana's Storybook 'The Fruit of Greed,'" *JPSD JOURNAL* 8, no. 1 (2021): 26, <https://doi.org/http://dx.doi.org/10.26555/jpsd>.

Societies and religions around the world affirm these virtues. Students are expected to have character throughout the learning process. As Aristotle explains in books II-IV of the *Nicomachean Ethics*, a person's character comprises her disposition to act, think, and feel in various ways.⁶ As Seider stated, the character is a behavior set in certain types of prosocial behavior, including sharing or helping. Meanwhile, according to Berkowitz, the character is a set of psychological characteristics that motivate and enable individuals to function as competent moral agents.⁷ With his character, participants Students can behave well with an awareness of their conscience to form a noble character that is always protected from anything that is not good.

Berkowitz and Bier have defined character as the complex set of psychological characteristics that motivate and enable an individual to act as a moral agent, the subset of psychological characteristics that lead one to want to and be able to do the right thing. Such characteristics include empathy, compassion, conscience, moral reasoning, moral values, moral identity, perspective-taking, moral indignation, moral sensitivity, etc.⁸ Character is a habit of being – a set of observable behaviors – anchored in virtues, personality traits, and values.⁹ Education is considered a preventive alternative because education builds a better young generation. Character-building education implicitly means building behavioral traits based on or relating to a particular moral dimension. Education is crucial as it forms the foundation for human development. Without proper education, progress becomes difficult and may even stagnate.¹⁰

Moral values and education play an important role in forming character. Character education values are good values that influence students' personalities in everyday behavior. Character education is a general term for all education that prioritizes goodness,

⁶ Jason Baehr, "The Varieties of Character and Some Implications for Character Education," *Journal of Youth and Adolescence* 46, no. 6 (2017): 1153–61, <https://doi.org/10.1007/s10964-017-0654-z>.

⁷ Sampson Kwadwo Boateng et al., "The Perception of Highschool Teachers' about Developing Moral Character through the Curriculum and the Schools' Culture in South Africa," *International Online Journal of Educational Sciences* 9, no. 1 (2017): 120 <https://doi.org/http://dx.doi.org/10.15345/iojes.2017.01.009>.

⁸ Marvin W Berkowitz, *Integrating Science Education And Character Education*, 2006, https://doi.org/DOI: 10.1007/1-4020-4996-X_7.

⁹ Gerard Seijts, Jose A. Espinoza, and Julie Carswell, "Utility Analysis of Character Assessment in Employee Placement," *Leadership and Organization Development Journal* 41, no. 5 (June 25, 2020): 703–20, <https://doi.org/10.1108/LODJ-07-2019-0314>.

¹⁰ Ani Widyawati et al., "E-Comic Based on SETS: A Digital Learning Media to Improve Student's Character and Critical Thinking Skills," *International Journal of Religion* 5, no. 2 (2024): 47–56, <https://doi.org/10.61707/mwpgtt04>.

respects universal values, and aims for people to internalize good character and behave by good character. Character education is nothing new; it starts from moral and value education.¹¹ Lickona emphasized that education has two main goals: enabling people to become smart and good. Education has included character education throughout history as one of two main goals.¹²

However, based on the results of the researcher's review, when character education is applied in classroom learning, teachers only report, evaluate, and give symbolic assessments, which will cause problems. Teachers only evaluate and give attitude assessments in quantity to students, such as giving a number or letter score. For example, if the discipline score is 90% or a letter grade scheme is used, the discipline score is A without considering what is behind the number or letter. For example, what is the difference between a student with a discipline score of A and a student with a discipline score of?¹³

The next challenge is that elementary school teachers need help assessing character's affective aspects. The Ministry of Education and Culture has provided instruments in observation sheets, but this has not made it easier for teachers and is not supported by technology.¹⁴ Currently, many teachers still use conventional assessment systems. Assessment with conventional systems could be more effective in its use.¹⁵ Then, the indicators of attitude assessment that are carried out do not reflect aspects of student character holistically. In addition, there are also elementary schools that give descriptive character assessments of their students. For example, Andi is a good student; he always asks the teacher and speaks politely if he needs help understanding something. This is appropriate if the description is only shown to Andi. But most of the time, teachers copy and paste this description to be given to several students, which can reduce the quality of the measurement.

¹¹ Temiz Nida, "A Lesson Plan Model for Character Education in Primary Education," *Educational Research and Reviews* 14, no. 4 (February 23, 2019): 130–39, <https://doi.org/10.5897/err2018.3616>.

¹² Nida.

¹³ I Wayan et al., "Pengembangkan Alat Ukur Pendidikan Karakter Dan Kepekaan Moral Para Mahasiswa Stkip Citra Bakti Ngada" 1, no. 1 (2013): 1–8.

¹⁴ Akif Khilmiyah and Giri Wiyono, "Emotional and Social Intelligence Assessment Model for Student Character Reinforcement," *International Journal of Educational Management* 35, no. 4 (2021): 789–802, <https://doi.org/10.1108/IJEM-02-2020-0046>.

¹⁵ Asrial et al., "E-Assessment: Character of Students in Elementary School," *International Journal of Interactive Mobile Technologies* 17, no. 5 (2023): 117–42, <https://doi.org/10.3991/ijim.v17i05.34205>.

Thus, based on the description of the problem above, it is necessary to have a character assessment that can be used as a guide for teachers in evaluating student character. Research conducted by Koyan, 2013 shows that the development of character education assessment is very important to improving students' moral sensitivity.¹⁶ In addition, research conducted by Setyawan, 2017 and Veny Iswantiningtyas1, 2018 shows that the measurement and assessment of character education need to have the results of observation and meaning by the teacher.¹⁷

Thus, researchers are interested in developing an assessment of the character of elementary school students so that it can be used as a teacher's guide in measuring student character. In this case, the instrument is developed digitally and refers to the character values in the Pancasila student profile. Based on these thoughts, the researcher seeks to develop a digital assessment of the character of elementary school students based on the dimensional indicators of the Pancasila learner profile.

Assessment is inseparable in the education process, including character education. Assessment is the measurement and non-measurement process of obtaining data on learner characteristics with certain rules. Talango states that assessment is collecting information qualitatively and quantitatively through various tests, observations, and other techniques to assess the performance of individuals or groups. Furthermore, Talango states that qualitative data or information usually describes the extent of children's developmental achievements in detail and detail. Information or data in quantitative form describes the percentage of the final results of children's achievements by referring to several indicators of child development.¹⁸ An assessment can be done in electronic form, often called e-assessment.¹⁹ E-assessment has been described as an assessment that uses information communication technology (ICT), which encompasses the entire assessment process, including designing assignments and storing the results with the help of ICT. The Qualifications and Curriculum Authority (QCA) defines e-assessment as ‘any

¹⁶ Wayan et al., “Pengembangkan Alat Ukur Pendidikan Karakter Dan Kepekaan Moral Para Mahasiswa Stkip Citra Bakti Ngada.”

¹⁷ Veny; Widi Wulansari Iswantiningtyas, “Pengembangan Model Penilaian Pendidikan Karakter Anak Usia Dini Jurnal Pendidikan Usia Dini Volume 12 Edisi 2 , November 2018 70.

¹⁸ Ahmad Sanusi and Laela Safitri, “Asessmen Dalam Pembelajaran Anak Usia Dini Pada Kurikulum 2013,” *Journal of Islamic Early Childhood Education* 1, no. 1 (2021): 1–8.

¹⁹ Asrial et al., “E-Assessment for Characters Independence,” *International Journal of Interactive Mobile Technologies* 14, no. 15 (2020): 125–41, <https://doi.org/10.3991/IJIM.V14I15.12995>.

assessment that has an electronic component and incorporates one or more of e-testing, e-portfolios, and e-marking.²⁰

With the development of technology and information, formative and summative assessments using tests and notes can be done using information technology. This is called e-assessment. Thus, e-assessment is the use of information technology to implement an assessment.²¹ E-assessment has the same procedures as e-learning, and most e-assessments are supplements to e-learning. The difference is in the content processing. Because of the obvious similarities to e-learning, e-assessment is often considered part of e-learning. Still, e-assessment clearly describes using computers in the student assessment process. E-assessment can be used to assess cognitive, attitudinal, and practical skills. An e-assessment system consists of the assessment engine and the question bank. An assessment engine comprises the hardware and software required to create and deliver scores. Most assessment engines operate on standard hardware only; the software matters. There are various software packages, such as PHP, Javascript, etc. The software is not part of the item itself; it is stored in the item bank file.²²

E-assessment is widely used, as it has many advantages over traditional assessment (pencil and paper tests). Advantages include lower long-term costs, immediate feedback to students, greater flexibility concerning test location and timing, increased reliability (machines are more reliable than humans), impartiality (machines do not 'know' which students are taking the test, so no student is at an advantage), greater storage efficiency - tens of thousands of question papers and answers can be stored on a server compared to the room space required for question papers, question styles can be refined so that there is interactivity²³. Another recent study by Alruwais, Wills, and Wald (2017) researched academics' views of e-assessment use. They found that attitude, subjective norms, and perceived behavioral control had an influence on academics' intention to use e-assessment.²⁴ According to the European Commission (2012),

²⁰ Mustafa Bahar and Mustafa Asil, "Attitude towards E-Assessment: Influence of Gender, Computer Usage and Level of Education," *Open Learning* 33, no. 3 (September 2, 2018): 221–37, <https://doi.org/10.1080/02680513.2018.1503529>.

²¹ Tracey Trottier and Malinda Mansfield, "An Integral Process in Online Learning," no. September (2020): 2–20.

²² Trottier and Mansfield.

²³ Trottier and Mansfield.

²⁴ Bahar and Asil, "Attitude towards E-Assessment: Influence of Gender, Computer Usage and Level of Education."

assessment matters when assessing core competencies or knowledge, skills, and attitudes through ICT. Technology-mediated assessment methods that measure different types and ways of learning are still at a rudimentary stage.

As Seider stated, the character is a behavior set in certain types of prosocial behavior, including sharing or helping. Meanwhile, according to Berkowitz, the character is a set of psychological characteristics that motivate and enable individuals to function as competent moral agents.²⁵ Character is the possession or improvement of certain qualities such as patience, humility, or respect, a set of behaviors found in certain types of prosocial behavior, including sharing or helping.²⁶ Character is something consistent and predictable that is demonstrated by behavioral tendencies. Behavior is integrated with attitudes and values.²⁷ Character development starts from forming attitudes based on certain values, such as religious values, culture, and state ideology. Meanwhile, according to Hunter, the character is an amalgamation of three elements: moral discipline, attachment, and autonomy.

In line with this direction, Berkowitz & Bier define character as a complex set of psychological characteristics, partly shaped by the growth of cognition that enables a person to act as a moral agent.²⁸ This is supported by Lickona and Park, who suggest that character in a comprehensive mode includes thoughts, feelings, and behaviors, and the strength of character should be accepted as a family of positive traits reflected in these thoughts, feelings, and behaviors. The character can be seen in two aspects: personal and social. Personal aspects include honesty, trustworthiness, responsibility, independence, self-discipline, courage, and integrity. Social aspects include friendly and sociable, benevolence, generosity, courtesy, and trustworthiness.²⁹ The character referred to in this study is the character based on the dimensions of the Pancasila student profile as found in the following figure:

²⁵ Sampson Kwadwo Boateng et al., "The Perception Of Teachers' About Developing Moral Character Through The Curriculum And The Schools' Culture," *International Online Journal of Educational Sciences* 9, no. 1 (2017), <https://doi.org/10.15345/iojes.2017.01.009>.

²⁶ Thomas Lickona, *Character Matters Persoalan Karakter*, ed. Uyu Wahyudin & Dasim Budimansyah (Jakarta: PT Bumi Aksara, 2012).

²⁷ Darcia Narvaez and Daniel K Lapsley, "Teaching for Moral Character 1 n.d.

²⁸ Berkowitz, *Integrating Science Education And Character Education*.

²⁹ Baehr, "The Varieties of Character and Some Implications for Character Education."

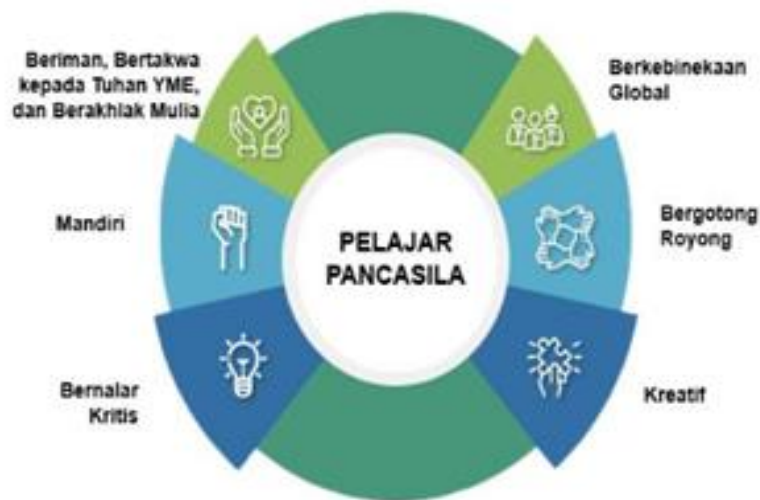


Figure 1
Profile of Pancasila Students
Source: Zuchron, 2021

Indeed, the moral engagement items used in this study are similar to the moral and performance character constructs described by Davidson et al. Moral engagement reflected a combination of moral thought and feeling (i.e., concern for others, compassion), initiative (e.g., encouraging others to get along), and a pattern of engagement.³⁰

RESEARCH METHODS

The research method used is Research and Development with the 4-D model (Four-D Model) developed by S. Thiagarajan et al. The 4-D research and development model has four stages: the define stage, design stage, develop stage, and disseminate stage.³¹ The define stage involves conducting theoretical studies on the variables of E-assessment, character, and the Pancasila Student Profile and reviewing various existing reference sources in the form of books and journal articles to get a definition of these variables. Conceptual definitions and grids used in making research data collection instruments are obtained by making precise and correct definitions. The design (planning) stage carried out various planning activities related to the product made in the form of

³⁰ Leslie K. Grier, "Character, Social-Emotional, and Academic Outcomes Among Underachieving Elementary School Students," *Journal of Education for Students Placed at Risk* 17, no. 3 (July 2012): 201–16, <https://doi.org/10.1080/10824669.2012.672834>.

³¹ Lika Apreasta, "The Development of Learning Materials-Based Guided Narrative Writing Skills Writing in Elementary School," *International Journal of Educational Dynamics* 1, no. 1 (2019): 155–61, <https://doi.org/10.24036/ijeds.v1i1.48>.

character E-assessment. Researchers conducted the design at this stage by compiling a character instrument framework.

The initial planning stage is planning the right form of e-assessment for elementary school students, which is then determined using Google Forms. After that, the e-assessment design was made according to its use and users' suitability. They planned for the respondents to complete the e-assessment in a Google form. Respondents who filled in were elementary school students from Central Jakarta, East Jakarta, West Jakarta, South Jakarta, and North Jakarta in the DKI Jakarta Province area. The third stage is development. The process included in this stage is developing a Google form containing statements that elementary school students will fill in. The statements are based on the objectives and planning time using character values based on the Pancasila Student Profile.

After theoretical studies to determine the dimensions of the Pancasila Profile as the basis for making e-assessment, then develop the instrument by making statements that are by the values of the Pancasila Student Profile dimensions and also by language that is easily understood by elementary school students and in line with the instrument base, namely the character values of the Pancasila Student Profile. After revision by evaluation experts (members of the research team), the draft e-assessment was validated by experts. In this study, the draft character e-assessment was validated by a material expert, Prof. Dr Arifin Maksum, and a language expert, Dr Gusti Yarmi. After the draft character e-assessment based on the Pancasila Student Profile was validated with several statement items revised and then analyzed, it turned out that the validation results showed that the instrument was rated very well. The instrument was distributed for field testing, with a one-to-one, small group, and field test process.

The research was conducted at elementary schools located in five regions of DKI Jakarta Province of Indonesia (Central Jakarta, North Jakarta, West Jakarta, East Jakarta, South Jakarta). The research was conducted from February to November 2023. The research subjects were students in grades IV, V, and VI of elementary schools in DKI Jakarta with areas of East Jakarta, West Jakarta, South Jakarta, Central Jakarta, and West Jakarta. Respondents who filled out the questionnaire were 762 students. The following is data from field test respondents.

Table 1
Field Test Respondents

No.	Region	School name	Quantity	Total
1	East Jakarta	SDN Rawamangun 02 Pagi	9	30
		SDN Jati 01 Pagi	21	
2	North Jakarta	SDN Pejagalan 09 Petang	82	161
		SDN Marunda 05	79	
3	Central Jakarta	SDN Kenari 08 Petang	14	243
		SDN Serdang 05 Pagi	158	
		SDN Gunung Sahari Selatan 01	71	
4	South Jakarta	SDN Cipulir 11 Petang	23	272
		SDN Karet 01 Pagi	60	
		SDN Pasar Manggis 03 Pagi	189	
5	West Jakarta	SDN Tegalalur 21 Petang	56	56
Total				762

Source: Personal Document

Questionnaires in this study were given to students in grades IV, V, and VI to determine the character of students. There was a total of 64 questions using a Likert scale. The Likert scale measures the attitudes, opinions, and perceptions of a person or group of people about social phenomena consisting of 4 alternative answers (SA=Strongly Agree, A=Agree, DA=Disagree, SD=Strongly Disagree). With a Likert scale, the variables to be measured are translated into sub-variables. Then, the sub-variables are translated into components. Components are used as a starting point for compiling instrument items in the form of questions or statements, which respondents then answer. Questionnaire analysis in this study uses indicators of the percentage of students' character understanding, as follows:

Table 2
Questionnaire Instrument Grids for Character-Based Pancasila Learner Profiles

Characteristics	Indicators	Assessment criteria			
		SA	A	DA	SD
Devoted to God Almighty, and of Honourable Character	Religious morality (Knowing the attributes of God and appreciating that the essence of His attributes is love and compassion, carrying out His commands, and avoiding His prohibitions)				

Characteristics	Indicators	Assessment criteria
		SA A DA SD
	<p>Personal morals (Realising that taking care of oneself is important along with taking care of others and the environment, as well as maintaining one's honor)</p>	
	<p>Manners towards human beings: (Prioritising equality and humanity over differences and respecting the differences that exist with others, empathizing, caring, generous, and compassionate to others, especially those who are weak or oppressed)</p>	
	<p>Manners towards nature: (Realising the importance of taking care of the surrounding environment so that he does not damage or abuse the natural environment, so that nature remains suitable for all living things today and for future generations)</p>	
	<p>State morals: (Understand and fulfill their rights and obligations as good citizens and realize their role as citizens)</p>	
Global Diversity	<p>Recognizing and Appreciating Culture (recognize, identify, and describe various groups based on their behavior, communication methods, and culture, and describe the formation of personal</p>	

Characteristics	Indicators	Assessment criteria SA A DA SD
	and group identities, as well as analyze how to be a member of social groups at local, regional, national, and global levels).	
	<p>Intercultural communication skills in interacting with others: (Pay attention to, understand, accept the existence of, and appreciate the uniqueness of each culture as a rich perspective to build mutual understanding and empathy for others)</p>	
	<p>Reflection and responsibility for the experience of diversity: (reflectively utilize their awareness and experience of diversity to avoid prejudice and stereotypes towards different cultures, to harmonize cultural differences to create a harmonious life between people, and then actively participate in building a peaceful and inclusive society, social justice, and oriented towards sustainable development).</p>	
Working together	<p>Collaboration (working together with others with a sense of enjoyment when being with others and showing a positive attitude towards others).</p>	
	<p>Caring: (pay attention to and act proactively towards</p>	

Characteristics	Indicators	Assessment criteria SA A DA SD
	conditions or circumstances in the social and physical environment)	
	<p>Sharing: (giving and receiving what is important to one's personal and collective life, and being willing and able to live together that prioritizes the healthy sharing of community resources and spaces.</p>	
Independent	<p>Awareness of self and the situation at hand: (Reflecting on their condition and the situation, starting from understanding their emotions and strengths and the situation at hand. Limitations so that he will be able to recognize and realize his development needs through the changes and developments that occur)</p>	
	<p>Self-Regulation (able to regulate their thoughts, feelings, and behavior to achieve their learning goals)</p>	

Source: https://kurikulum.kemdikbud.go.id/wp-content/unduh/Dimensi_PPP.pdf

After completing the draft electronic assessment instrument, validate the material and language experts. The results were obtained from the material expert validation score of 76% and language experts of 91%, with an average validation result of 83.5 in the very good category. Based on the results of expert validation, the character e-assessment instrument is said to be very good, so the character measurement instrument based on the Pancasila Student Profile is valid. The research produced a prototype character e-assessment instrument model that was validated well.

Furthermore, user trials to students using One to One, Small Group, and Field Test. In the student trial process, the data was obtained from One to One with a score of 89.45%, Small Group with 86.36%, and Field Test trials with 86.66%. Based on the recapitulation results, the average feasibility value is 87.49%, which means it is included in the very good category. The product trial results show that the character e-assessment instrument based on the Pancasila student profile is considered feasible for measuring character by using the dimensions of the character values based on the Pancasila student profile.

The data analysis technique used was qualitative descriptive statistics. The instruments used were questionnaires, interviews for needs analysis, and questionnaires with indicators of the character dimensions based on the Pancasila student profile to obtain data for one-to-one, small group, and field tests. The following is the instrument lattice.

RESULT AND DISCUSSION

This research and development produced a prototype of character e-assessment based on the Pancasila learner profile. This assessment instrument is used to measure the character of students in elementary school grades 4,5 and 6 with indicators from the character dimensions in the Pancasila learner profile. The dimensions are devotion to God Almighty, noble character, global diversity, cooperation, and independence. The development product is a digital-based assessment (e-assessment) that can be used easily by teachers and students in elementary schools. This digital-based assessment instrument can be used more efficiently and effectively to assess character.

The research results are a prototype assessment instrument based on the Pancasila Student Profile for Elementary Schools, validated by material experts and language experts and tested in a one-on-one, small-group field test. The results obtained from the material expert score of 78% and the linguist score of 91% are feasible. Furthermore, user trials for students include one-to-one, small group, and field test trials. In the trial process, students acquired one-to-one trial scores of 89.45%, Small Group trials with 86.36%, and Field Test trials with 86.66%. Based on the recapitulation results, the average feasibility value is 87.49%, which means it is included in the very good category.

Table 3
Validation Results from Material Experts and Language Experts

Result	Material Expert Validation	Linguist Validation
Score	78	91

Source: Personal Document

Table 4
Field Trial Results

Field Trial Results	One to One	Small Group	Field Test
Score	89.45%	86.36%,	86.66%.

Source: Personal Document

Research results support this. There is a need to update the assessment system to utilize digital technology. A digital evaluation system will result in a more precise and efficient assessment procedure. The digital technology that instructors can use to perform assessments is e-assessment technology. E-assessment is a digital technology that describes the evaluation procedure. This e-assessment technology provides a venue for learning and assessment activities.³² However, traditional assessment approaches are only sometimes effective for evaluating abilities linked to real-world activities and higher-level skills such as problem-solving, creativity, and collaboration, all of which are critical. Researchers agree there is a need to redesign educational assessment practices based on modern learning theories.³³ Traditional load assessments include marking, organizing, and recording student scripts, printing examination papers or assessment costs, security issues, etc.³⁴ The function of e-assessment in the world of education is very useful. Thus, e-assessment enables low-cost personalized evaluation and allows students to participate in problem-solving that promotes deep learning. E-assessment collects student scores, allows educators to see an overview of their student's learning progress, and facilitates the management of immediately available data.³⁵

³² Asrial et al., "E-Assessment: Character of Students in Elementary School."

³³ Stavros A. Nikou and Anastasios A. Economides, "Mobile-Based Assessment: A Literature Review of Publications in Major Referred Journals from 2009 to 2018," *Computers and Education* 125 (2018): 101–19, <https://doi.org/10.1016/j.compedu.2018.06.006>.

³⁴ Martin Appiah and Fanus van Tonder, "E-Assessment in Higher Education: A Review," *International Journal of Business Management and Economic Research* 9, no. 6 (2018): 1454–60.

³⁵ Astalini et al., "Effectiveness of Using E-Module and e-Assessment," *International Journal of Interactive Mobile Technologies* 13, no. 9 (2019): 21–39, <https://doi.org/10.3991/ijim.v13i09.11016>.

This e-assessment is important for measuring student character in elementary schools. This e-assessment aims to evaluate students' character at school, which has been formed in students. Four character values are based on the Pancasila profile dimensions: Devotion to God Almighty, Honorable Character, Global Diversity, Working together, and independence. This is based on government policy regarding the Pancasila student profile.³⁶

Some empirical studies have been conducted related to research on the development of E-Assessment of the character of elementary school students, among others, by I Wayan, namely on Developing Character Education Measurement Tools and Moral Sensitivity of Stkip Citra Bakti Ngada Students. The results of the study are (1) the steps of developing a character education measuring instrument for the moral sensitivity component that has been validated and is ready to be used to collect data on student moral sensitivity, and (2) student moral sensitivity is classified in a very high category. From this research, it is clear that teachers need to develop character education measurement tools as a reference for authentic assessment of student character. The research findings strengthen the research conducted by researchers.³⁷

In addition, research from Iswantiningtyas & Wulansari states that character education assessment is intended to detect character. The research findings strengthen the research conducted by the researcher.³⁸ The results of the study state that character education assessment is very important to do early on to detect the character that is formed in students. Thus, a standardized assessment instrument is needed for the child's character so that teachers can use it in evaluating the students' character at school. This e-assessment aims to evaluate the character in schools that has been carried out to see the character that has been formed in students. However, new research has identified specific actions connected with character dimensions that may be practiced to improve character. Scholars have also begun to create tools for assessing character and connecting it to performance.

³⁶ Penguatan Pendidikan et al., "Konsep Dan Pedoman," n.d., <http://cerdasberkarakter.kemdikbud.go.id>.

³⁷ Iswantiningtyas, "Pengembangan Model Penilaian Pendidikan Karakter Anak Usia Dini Jurnal Pendidikan Usia Dini Volume 12 Edisi 2 , November 2018 Pembentukan Karakter Atau Akhlak Mulia Dalam Membangun Sebuah Masyarakat Yang Tertib , Aman , Dan Sejahtera Menjadi Pondasi Penti."

³⁸ Iswantiningtyas, "Pengembangan Model Penilaian Pendidikan Karakter Anak Usia Dini Jurnal Pendidikan Usia Dini Volume 12 Edisi 2 , November 2018 Pembentukan Karakter Atau Akhlak Mulia Dalam Membangun Sebuah Masyarakat Yang Tertib , Aman , Dan Sejahtera Menjadi Pondasi Penti."

Character is an important component of education, both scientifically and as a practitioner. Perhaps this is because people believe character is a highly subjective concept that is more difficult to define and analyze than particular skills or skill sets included in—and often dominate—formal job descriptions. However, new research has identified specific actions connected with character dimensions that may be practiced to improve character. Scholars have also begun constructing measures to assess character and correlate it with performance.³⁹

This is supported by the results of Muhsinin's research, which states that character education aims to shape student character. This research uses a literature study. This study shows that character education requires seriousness, habituation, and acculturation of values.⁴⁰ Thus, instilling character in children requires process, habituation, and acculturation about values, requiring a standardized standard to evaluate student character. Next, integrated research discusses the development of character assessment instruments. In this research, the instrument is integrated with character values to help instill character in students to become noble human beings. The integrated characters include responsibility, discipline, honesty, and other character values that can be fostered since elementary school.⁴¹

The character e-assessment developed is an authentic assessment instrument created to assess character based on indicators from the Pancasila learner profile, which consists of being devoted to God Almighty, noble character, global diversity, cooperation, and independence. With the value produced by this character e-assessment, a picture of the success of elementary school students in mastering knowledge is obtained, training students' skills to use their knowledge in the context of their lives. Furthermore, research supports e-assessment in developing authentic assessments of school learning content. Authentic assessment is an assessment carried out through presentation or performance by students in the form of working on certain tasks or activities that directly have educational meaning. This authentic assessment aims to make students learners who

³⁹ Seijts, Espinoza, and Carswell, "Utility Analysis of Character Assessment in Employee Placement."

⁴⁰ Muhsinin Muhsinin, "Model Pendidikan Karakter Berbasis Nilai-Nilai Islam Untuk Membentuk Karakter Siswa Yang Toleran," *Edukasia : Jurnal Penelitian Pendidikan Islam* 8, no. 2 (2013): 205–28, <https://doi.org/10.21043/edukasia.v8i2.751>.

⁴¹ Ismay Linda and Sukmawarti Sukmawarti, "Pengembangan Instrumen Penilaian Keterampilan Memuat Nilai-Nilai Karakter Pada Mata Pelajaran Matematika," *Pedagogi: Jurnal Ilmiah Pendidikan* 8, no. 1 (2021): 1–7, <https://doi.org/10.47662/pedagogi.v8i1.229>.

successfully master knowledge, train students' skills to use their knowledge in the context of their lives, and provide opportunities for students to solve real problems.⁴² Thus, this research also supports researchers' variables in developing authentic assessments that contain character values. This instrument can holistically measure students' character in elementary schools.

After developing the draft e-assessment instrument, it was validated by material experts and linguists. The assessment results from the material expert obtained a feasibility percentage score of 76% and from the material expert of 91%. Based on the product feasibility category for the material validation score and the linguist validation score with a very good classification. So, it can be concluded that the e-assessment instrument is scientifically feasible. This is supported by other relevant research, which discusses the development of character assessment instruments based on Strengthening Character Education using a Likert scale in integrated thematic learning for elementary school students⁴³. From the results of the limited test, the validity of the 40 statement items tested was obtained: 6 (15%) statement items had a very high level of validity, 25 (62.5%) high validity categories, 6 (15%) sufficient validity categories, 3 (7.5%) low validity categories, and had an average count of $0.667 \geq 0.20$, so the instrument was declared valid. In this study, the characteristics tested included independence and caring aspects. Thus, the assessment instrument is said to be valid.

CONCLUSION

The research produced a prototype of character e-assessment based on the Pancasila learner profile based on the dimensions of piety to God Almighty, and noble character, global diversity, cooperation, independence that has gone through a research process starting from needs analysis, then reviewing the literature relevant to the research variables to produce a draft character e-assessment for grade 4, 5, and 6 elementary school students. Material and language experts then validated the draft e-assessment according to the needs of scientific testing of the product. The results obtained from the material

⁴² Yuni Pantiwati, "Hakekat Asesmen Autentik Dan Penerapannya Dalam Pembelajaran Biologi," *Jurnal Edukasi Matematika Dan Sains* 1, no. 1 (2016): 18, <https://doi.org/10.25273/jems.v1i1.773>.

⁴³ Khanifatul Safitri and Nyoto Harjono, "Pengembangan Instrumen Penilaian Sikap Sosial Aspek Tanggung Jawab Pembelajaran Tematik Terpadu Siswa Kelas 4 SD," *Jurnal Pedagogi Dan Pembelajaran* 4, no. 1 (2021): 111, <https://doi.org/10.23887/jp2.v4i1.33352>.

expert score of 78% and the linguist score of 91% are feasible. Furthermore, user trials for students include one-to-one, small group, and field test trials. In the trial process, students acquired one-to-one trial scores of 89.45%, small group trials of 86.36%, and field test trials of 86.66% % .

Based on the recapitulation results, the average feasibility value is 87.49%, which means it is included in the very good category. The product trial results show that the character e-assessment instrument based on the Pancasila student profile is considered feasible for measuring character by using the dimensions of the character values based on the Pancasila student profile.

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DECLARATION OF CONFLICTING INTERESTS


The author declares no potential conflict of interest concerning the research, authorship, and publication.


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