THE IMPLEMENTATION DIGITAL-BASED BASIC EDUCATION OF PANCASILA STUDENT PROFILE PROGRAM: AN EFFORT TO STRENGTHEN STUDENTS' CRITICAL AND CREATIVE THINKING

Noptario¹, Nelva Ade Tinofa², Ani Khoirotun Nisa³, Faisal Abdullah⁴, Ts. Saiful Nazri bin Nordin⁵

UIN Sunan Kalijaga Yogyakarta, Indonesia^{1,2,3}, UIN Raden Fatah Palembang, Indonesia⁴, University of Malaya, Malaysia⁵ E-mail : noptario7@gmail.com¹, nelvatinofa@gmail.com², anikhoirunnisa22@gmail.com³, Faisal_uin@radenfatah.ac.id⁴, epulard77@gmail.com⁵

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ABSTRACT

In the digital era, basic education needs to be revitalized to be renewable and in line with the times. One of the efforts that can be made is to utilize digital technology in learning. The Pancasila student profile program is project-based and can stimulate students to think critically and creatively. However, conventional learning is still found, so it is important to revitalize learning to provide novelty and improve learning. This study aims to reveal revitalization in basic education from conventional to digital-based learning to increase students' critical and creative thinking. This research uses a qualitative research approach with a Field Research research method. Data collection techniques in this study used interviews. Interviews were conducted with the principal, class teachers, and students. Research sources were selected through a purposive sampling technique. The data analysis technique used in this study uses thematic analysis theory to understand the data, compile codes, and look for themes. The location of this research is SDN Wijilan Kulonprogo Yogyakarta. Revitalization of digital-based learning is carried out by providing training to teachers, preparing supporting facilities and infrastructure and controlling and evaluating. Conventional learning needs to be revitalized because it only focuses on the teacher and makes students less active in learning, so the term digitization in learning emerged. Digitalization in learning can positively impact and make students think critically and creatively because it has advantages such as learning being more varied, students being more active in participating in learning, helping students improve their technological skills, and diverse learning resources. Teachers in the Pancasila student profile program strongly feel these advantages, as they can make students think critically and creatively.

Keywords: critical and creative thinking; digitalization; madrasah ibtidaiyah; pancasila learner profile; revitalization

INTRODUCTION

Education is the foundation for building competent future generations who contribute positively to society. Primary education prepares students to face global challenges in a rapidly changing world.¹ One of the main goals of education is to develop

¹ Ali Miftakhu Rosyad and Muhammad Anas Maarif, "Paradigma Pendidikan Demokrasi Dan Pendidikan Islam Dalam Menghadapi Tantangan Globalisasi Di Indonesia," *Nazhruna: Jurnal Pendidikan Islam* 3, no. 1 (February 7, 2020): 75–99, https://doi.org/10.31538/nzh.v3i1.491.



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critical and creative thinking skills in students, skills that are not only needed in the academic world but also in everyday life.²

The Ministry of Education, Culture, Research and Technology of the Republic of Indonesia issued an independent curriculum policy in 2022, including the Madrasah Ibtidaiyah level, implemented in the 2022/2023 school year.³ Madrasah Ibtidaiyah, a primary-level educational institution in Indonesia, plays an important role in shaping students' character and intellectual abilities. In this context, the Pancasila Student Profile Program is an interesting initiative to support the development of students' critical and creative thinking skills. Pancasila, as the foundation of Indonesia, carries universal values that cover various aspects of life, and this program aims to introduce these values to students from an early age.⁴

In the 21st century, the world has entered the digital era. This is characterized by the rapid development of technology and its increasingly massive use in everyday life.⁵ These changes also have an impact on the world of education. Primary education must adapt to the times and prepare students to face future challenges. Primary education is the initial stage in forming students' character and thinking skills. Therefore, it is important for primary education to provide quality and adequate learning experiences for students.⁶

However, in this digital age, the challenges in education are increasingly complex. Various digital technologies have changed the educational landscape, providing excellent opportunities to improve student interaction with subject matter.⁷ Where technology can be utilized to improve the quality of learning and assist students in developing critical and

² T. Dieguez, "Digital Transformation and Organizational Challenges. An Exploratory Study," *Lecture Notes in Mechanical Engineering*, 2024, 629–36, https://doi.org/10.1007/978-3-031-38165-2_73.

³ Helda Kusuma Wardani et al., "Analysis of the Impact of the Merdeka Curriculum Policy on Stakeholders at Primary School," *Jurnal Ilmiah Peuradeun* 11, no. 2 (May 30, 2023): 513–30, https://doi.org/10.26811/peuradeun.v11i2.801.

⁴ I.W. Widana, I.W. Sumandya, and I.W. Citrawan, "The Special Education Teachers' Ability to Develop an Integrated Learning Evaluation of Pancasila Student Profiles Based on Local Wisdom for Special Needs Students in Indonesia," *Kasetsart Journal of Social Sciences* 44, no. 2 (2023): 527–36, https://doi.org/10.34044/j.kjss.2023.44.2.23.

⁵ L.F. Santos-Meneses and E.A. Drugova, "Trends in Critical Thinking Instruction in 21st-Century Research and Practice: Upgrading Instruction in Digital Environments," *Thinking Skills and Creativity* 49 (2023), https://doi.org/10.1016/j.tsc.2023.101383.

⁶ Y. Su et al., "Global and Local Neural Cognitive Modeling for Student Performance Prediction [Formula Presented]," *Expert Systems with Applications* 237 (2024), https://doi.org/10.1016/j.eswa.2023.121637.

⁷ A. Noptario & Prastowo, "Penggunaan Media Pembelajaran Berbasis Audio Visual Pada Mata Pelajaran Matematika Berdasarkan Prinsip Kreatif Dan Menarik di Sekolah Dasar," *Jurnal Ilmiah Pendidikan Pendas*, 2022.

creative thinking skills, one program that adopts this approach is the Pancasila Learner Profile Program in Madrasah Ibtidaiyah.⁸

Technological advancement has been a researcher's concern in realizing the educational process. Today's students have abandoned old learning methods by switching to digital-based learning.⁹. It is important to dig deeper into how Madrasah Ibtidaiyah implements digital technology in primary education, how these technologies contribute to developing students' critical and creative thinking, and their impact on Pancasila education in Indonesia.¹⁰

One of the efforts to address these challenges is revitalizing digital-based primary education. This revitalization aims to improve the quality of primary education by utilizing digital technology.¹¹ One aspect that is the focus of this revitalization is strengthening students' critical and creative thinking¹². Critical and creative thinking are two important skills students need to face future challenges. Students with critical and creative thinking skills can solve problems, make decisions, and innovate.¹³ Revitalizing digital-based primary education can be one way to strengthen students' critical and creative thinking. Digital technologies can provide various resources and learning opportunities to help students develop these skills.¹⁴

In addition, this article will discuss new concepts or frameworks that are more in line with recent developments in digital and critical-creative education, such as covering

⁸ Ary Kurniawan and Fitri Nur Mahmudah, "Pelaksanaan Pembelajaran Berbasis Teknologi Informasi Dan Komunikasi di Sekolah Menengah Kejuruan," *AL-TANZIM: Jurnal Manajemen Pendidikan Islam* 4, no. 2 (September 28, 2020): 66–78, https://doi.org/10.33650/al-tanzim.v4i2.1156.

⁹ A. Anggrawan, C.S.D. Syafitri, and C. Satria, "Developing Augmented Reality Learning and Measuring Its Effect on Independent Learning Compared to Traditional Learning," *TEM Journal* 12, no. 2 (2023): 975–87, https://doi.org/10.18421/TEM122-44.

¹⁰ P. Paul et al., "Infrastructure-Technology, Socio-Economical Issues and Challenges in ICT-Based Education and Digital Education with Possible Solutions-A Scientific Observation," SSRN Scholarly Paper (Rochester, NY, May 20, 2023), https://doi.org/10.2139/ssrn.4491058.

¹¹ M. Orkodashvili, "Pandemic Challenges of Higher Education: Reconsidering Core Values," in *Challenges and Reforms in Gulf Higher Education: Confronting the COVID-19 Pandemic and Assessing Future Implications*, 2023, 60–73, https://doi.org/10.4324/9781003457299-6.

¹² Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. (2022). Revitalisasi Pendidikan Dasar Berbasis Digital. Jakarta: Kemendikbudristek.

¹³ Laili Rahmawati, Dadang Juandi, and Elah Nurlaelah, "Implementasi Stem Dalam Meningkatkan Kemampuan Berpikir Kritis Dan Kreatif Matematis," *AKSIOMA: Jurnal Program Studi Pendidikan Matematika* 11, no. 3 (September 20, 2022): 2002–14, https://doi.org/10.24127/ajpm.v11i3.5490.

¹⁴ Hasyatul Arina Arina et al., "Peningkatan Keterampilan Berpikir Kritis Siswa Melalui Pendekatan Pembelajaran Berbasis Riset," *Natural Science Education Research (NSER)* 2, no. 1 (July 9, 2019): 17–24, https://doi.org/10.21107/nser.v2i1.4280.

the challenges and potential solutions in designing and implementing digital education programs, adaptive learning, virtual reality, or game-based learning to enhance the effectiveness of digital education programs and the development of critical and creative thinking skills.¹⁵ This will ensure that the article remains relevant and current in the context of digital education in achieving the objectives outlined. Thus, researchers are interested in taking the title "Revitalizing Digital-Based Basic Education to Strengthen Students' Critical and Creative Thinking in The Pancasila Student Profile Program at Madrasah Ibtidaiyah."

RESEARCH METHODS

This study uses a qualitative research approach to describe the revitalization of digital-based primary education to strengthen students' critical and creative thinking in the Pancasila student profile program at Madrasah Ibtidaiyah. The research method that researchers use is field research. Field studies are conducted to observe the school activities in the research location deeply and directly explore information. The research location was one of the schools in Yogyakarta. The research time was carried out in the even semester of the 2023/2024 school year. The subjects in this study were teachers (R1 and R5), principals (R2), and students (R3 and R4). The sampling technique that researchers use is Purposive sampling. Purposive sampling is done by deliberately selecting individuals or groups most representative of the population studied. Research subjects can also be seen in the following table:

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No.	Name of Informant	Status
1	R1	Class teacher
2	R2	Principal
3	R3	Student
4	R4	Student
5	R5	Class teacher

Table 1 Participants

Source: Personal Document

¹⁵ Hulkin Noptario, "Transitioning from National Examinations to Computer-Based National Assessments: Teachers'-Students' Perceptions and the Impact on Islamic Education," *HEUTAGOGIA: Journal of Islamic Education* 3, no. 1 (n.d.): 2023–31.

Data was collected through interviews. Interviews examined the revitalization of digital-based primary education to strengthen students' critical and creative thinking. Observations are made at school to see learning activities directly. The following is an interview grid used in extracting information from informants:

No.	Indicators	In Grid
1	Digitized Learning	Implementation of digitalized learning in the classroom
2	Impact of digital learning	The impact of digital learning on students
3	Critical and creative thinking	Implications of digital learning in students' critical and creative thinking.
4	The role of teachers and schools in digital learning	Steps of digital learning

Table 2 Interview Grid

Source: Personal Document

The data analysis technique used in this research uses thematic analysis. The stages of using thematic analysis are understanding the data, compiling codes, and looking for themes. At the stage of understanding the data, researchers understand, reread, and make personal notes from the interview results carefully; the goal is that researchers begin to understand the contents of the data. The researcher then analyzed the data and found something related to the research questions. Furthermore, by compiling codes or coding, researchers write codes based on the meaning contained in the interview data; here, researchers interpret the words of participants. Then, at the stage of looking for themes, researchers reviewed all codes and groups that had been formed from transcripts of interview results and found two similarities from the results of coding, namely, digital-based learning can support students' critical and creative thinking and digital use is needed when implementing the Pancasila student profile. The researcher decided to include the two codes in one group, and then the researcher found and decided on the theme of the results obtained through the data analysis process. More simply can be seen in the following thematic analysis technique drawings:



Figure 1 Thematic analysis techniques Source: ¹⁶

RESULT AND DISCUSSION

Reforms in education are always needed so that education can create quality human beings.¹⁷ Conventional education, which teachers in the regions commonly use, has several weaknesses that need to be revitalized to create a quality education pattern. One indicator of student quality is the ability to think critically and creatively.¹⁸ In the 21st century, students must possess the ability to think critically and creatively to have global and local competitiveness. Efforts to improve students' critical and creative thinking can be made through digital-based learning.¹⁹

According to R2, revitalizing conventional education towards technology-based education begins with developing facilities and infrastructure that support technologybased learning. The concrete step is to prepare computer laboratories, projectors, audio media, and others. In addition, providing training to teachers is also important so that

¹⁶ Yuli Asmi Rozali, "Penggunaan Analisis Konten Dan Analisis Tematik" Vol 11 No 1 (January 2022).

¹⁷ M. Gulhane et al., "Development of a Temporal Analysis Model Augmented for Disease Progression Identification through Multiparametric Analysis," *International Journal of Intelligent Systems and Applications in Engineering* 12, no. 2 (2024).

¹⁸ A.R. Rahimi and Z. Mosalli, "The Role of Twenty-First Century Digital Competence in Shaping Pre-Service Teacher Language Teachers' Twenty-First Century Digital Skills: The Partial Least Square Modeling Approach (PLS-SEM)," *Journal of* Computers *in Education*, 2024, https://doi.org/10.1007/s40692-023-00307-6.

¹⁹ I.M. Parsa et al., "Assessing the Participants of UNDANA Teacher Pro Profiles with Digital-Based Learning Model; Cat. 1, 2022," *Information Sciences Letters* 12, no. 8 (2023): 2521–32, https://doi.org/10.18576/isl/120809.

teachers can develop skills and proficiency in utilizing technology in learning. After teachers understand the online learning platform, technology-based learning content development, and all aspects of digital-based learning, the next step is monitoring and evaluation to correct deficiencies and improve learning in the classroom.²⁰

The Pancasila learner profile is one of the independent curriculum programs oriented towards student activeness in the learning process. Of the six dimensions contained in the Pancasila student profile, one of them talks about the ability to think critically and creatively that students must have after participating in the Pancasila student profile strengthening program.²¹ Each theme chosen by the school in the Pancasila student profile strengthening project is oriented towards students' critical and creative thinking skills so that students can answer questions and solve existing problems with critical thinking skills. In addition, the ability to think creatively is also instilled in students so they can think outside the box, meaning that students can innovate in any case to find newness.²²

²⁰ Masduki Ahmad, "Management Of Facilities And Infrastructure In Schools," *Akademika : Jurnal Teknologi Pendidikan* 10, no. 01 (May 30, 2021): 93–112, https://doi.org/10.34005/akademika.v10i01.1348.

²¹ N. Nevrita and Sujoko, "Analysis of Maritime Content in the Project for Strengthening the Profile of Pancasila Students (P-5) as an Educational Media in Getting to Know the Culture of Coastal Communities at SMP Negeri 19 Bintan (Activist School Batch 2)," vol. 79, 2023, https://doi.org/10.1051/bioconf/20237905003.

²² M.J. Sargent and B.G. Winton, "Cognitive Ability and Performance in Accounting Students: The Importance of Data Analytics Assignments," *Journal of Accounting Education* 65 (2023), https://doi.org/10.1016/j.jaccedu.2023.100870.



Figure 2 Framework For Revitalizing Digital-Based Education Source: Personal Document

The picture begins by explaining a phenomenon still very common in elementary schools, namely conventional education. According to research by Kevin Alexander and friends, many elementary school teachers still use conventional learning.²³ In this digitalization era, conventional learning should be replaced with digital learning so that students can understand technology, keep up with the times, and so on. Learning that only focuses on the teacher, using the lecture method and assignments will only make students not think critically and creatively, so a revitalization of conventional learning to digital-based learning is needed so that students get varied learning, diverse learning resources, student involvement in learning, have technology skills and others. Based on the results of interviews and observations that we conducted, the following results were obtained research as follows:

²³ Kevin Alexander Johannes Pangkerego, Luckie Sojow, and Hiskia Kamang Manggopa, "Pengaruh Model Blended Learning Terhadap Hasil Belajar Simulasi Dan Komunikasi Digital Siswa Kelas X Smk Negeri 1 Tomohon," *Edutik : Jurnal Pendidikan Teknologi Informasi Dan Komunikasi* 1, no. 1 (December 13, 2021): 55–68, https://doi.org/10.53682/edutik.v1i1.1004.

No.	Indicators	Interview Results	
1	Digitized Learning	Use audio-visual media, E-learning assessments, and learning resources from the internet.	
2	Impact of digital learning	Varied learning, student involvement, improved technology skills, and diverse learning resources.	
3	Critical and creative thinking	Digital learning can stimulate students and become a stepping stone for students to think critically and creatively.	
4	The role of teachers and schools in digital learning	Teachers participate in training to gain insight into learning technology, provide education about technology to students, and control and evaluate learning in the classroom.	

Table 3 Interview Result

Source: Personal Document

The importance of transitioning conventional learning to digital learning is teacher-centered learning; conventional learning is much more oriented towards teacher activeness, where the teacher plays an active role in controlling learning in the classroom.²⁴ Conventional learning, according to Mrs. R1, is learning that has long been used in providing material in class, but seeing the accelerating development of the times makes the education sector update and upgrade so that it is not outdated. A wise teacher will always try to provide the best for their students so that the desired goals can be achieved maximally.²⁵

Conventional learning has many areas for improvement, so it needs to be updated so students can get quality learning. This is reinforced by previous research conducted by Alia El Nagar, which explains the importance of transitioning from conventional to digital learning. ²⁶According to Mrs. R2, conventional learning does not involve students in learning, so students are not active and tend only to receive information provided by the teacher. Besides that, conventional learning is also less varied because it focuses on the material taught by the teacher through the lecture method, thus making students bored in

²⁴ M.S.M. Shafieek, A. Ismail, and S.S. Razali, "Impact of Digitalization on Automotive Technology Curriculum Concerning Student Psychomotor Achievement," *Journal of Advanced* Research *in Applied Sciences and Engineering Technology* 37, no. 2 (2024): 141–55, https://doi.org/10.37934/araset.37.2.141155.

²⁵ X. Liang et al., "Trained Teacher: Who Is Good at Teaching," *Displays* 80 (2023), https://doi.org/10.1016/j.displa.2023.102543.

²⁶ A. El Naggar, E. Gaad, and S.A.M. Inocencio, "Enhancing Inclusive Education in the UAE: Integrating AI for Diverse Learning Needs," *Research in Developmental Disabilities* 147 (2024), https://doi.org/10.1016/j.ridd.2024.104685.

participating in learning. The negative impact of the lack of student involvement in the learning process is that students need help thinking critically and creatively because they only wait for the learning provided by the teacher and do not have high curiosity.²⁷ So, it is necessary to change the learning pattern so that teachers can stimulate students to think critically and creatively.

Varied Learning

Digital-based learning is carried out so that learning in the classroom is varied and not monotonous. Mrs. R2 explained that her class used the E-Learning platform to provide assignments and learning materials.²⁸ Students whose parents supervise them can access material about the Pancasila student profile, which is loaded in the form of material so that students can access it anywhere. It is hoped that digital-based learning can add to the variety of existing learning so that students are enthusiastic about participating in classroom learning.

In addition, Mrs. R2 explained that:

"We are very active in learning digitization efforts. Moreover, our school is very supportive by providing training to teachers so that we can learn and update on the development of the world of education. A few weeks ago, we learned a learning evaluation application called Quiziz. We were very enthusiastic about the training, and thank God some of us can already use the Quiziz application."

From this explanation, it can be concluded that digitalization in education can have positive implications for teachers and students; this can be seen from the responses from teachers and students who are enthusiastic about implementing digital-based learning. With a good response from teachers and students, it is hoped that students can think critically and creatively by utilizing digital-based learning to strengthen 21st-century skills.²⁹ This opinion is corroborated by research conducted by Shi Rui in 2024, which

²⁷ H. Luginbuehl et al., "Transforming Traditional Physiotherapy Hands-on Skills Teaching into Video-Based Learning," *BMC Medical Education* 23, no. 1 (2023), https://doi.org/10.1186/s12909-023-04556-y.

⁰⁴⁵⁵⁶⁻y. ²⁸ A.C. Merkle et al., "Evaluating E-Book Effectiveness and the Impact on Student Engagement," *Journal of Marketing Education* 44, no. 1 (2022): 54–71, https://doi.org/10.1177/02734753211035162.

²⁹ P.N. Elizza, E.S. Bahriah, and S. Agung, "A Study on Chemistry Teachers' Implementation of 21st Century Skills in Learning in Schools," vol. 2595, 2023, https://doi.org/10.1063/5.0124566.

reveals that digital-based learning can ensure continuous development in education to place education in line with the times.³⁰

Student Engagement in Learning

Merdeka's curriculum focuses on student activeness in the learning process because student involvement can stimulate students to be enthusiastic and serious in participating in learning.³¹ The Pancasila learner profile contains six dimensions that students must apply in everyday life, one of which is critical and creative thinking. With digital-based learning, students can access materials and questions independently, which is expected to have implications for improving skills in using technology.

According to Mrs. R5, Yogyakarta Elementary School focuses heavily on student skills to prepare students for the Industrial Revolution 5.0. Student involvement in the Pancasila learner profile enhancement program is also carried out through co-curricular and project-based learning. On the theme of entrepreneurship, the teacher provides introductory material using audio-visual media by showing people who successfully recycle waste and can use it as a business and source of income. By using audio-visual media, students are expected to understand better and feel the benefits of recycling plastic waste to make money from waste and positively impact the surrounding environment. After being given an introduction, students are tasked with creating a project to recycle waste so that students can be more active in the learning process. R3 explained that she was enthusiastic about participating in learning using audio-visual media because she could see and hear the learning the teacher provided.

Improved Technology Skills

Using technology is one of the skills that should be taught to students. Skills in using technology skills can stimulate students to think creatively and innovatively.³² According to Mrs. R2, she is very serious about teaching students about technology skills. So, students' knowledge is not only to operate devices to play games or social media but

³⁰ R. Shi and X. Wan, "A Bibliometric Analysis of Knowledge Mapping in Chinese Education Digitalization Research from 2012 to 2022," Humanities *and Social Sciences Communications* 11, no. 1 (2024), https://doi.org/10.1057/s41599-024-03010-8.

³¹ Amiruddin et al., "May Student-Centered Principles Affect Active Learning and Its Counterpart? An Empirical Study of Indonesian Curriculum Implementation," *SAGE Open* 13, no. 4 (2023), https://doi.org/10.1177/21582440231214375.

³² M. Mun, S. Choi, and K. Woo, "Investigating Perceptions and Attitude toward Telenursing among Undergraduate Nursing Students for the Future of Nursing Education: A Cross-Sectional Study," *BMC Nursing* 23, no. 1 (2024), https://doi.org/10.1186/s12912-024-01903-2.

also to access learning and knowledge sources related to the material taught in class.³³ Technology skills can also stimulate students to think critically; according to Mrs. R1, in the learning process, she often gets questions from students about the material and ways to operate the device; this is a positive implication of digital-based learning, which is expected to stimulate students to think critically, according to the dimensions in the Pancasila student profile.

When operating the device, students often need help accessing learning materials. With these problems, students will think critically to find a way out so that learning can run smoothly. Based on the results of research conducted by Feng Hua Tang in 2024, digital-based learning is very influential in strengthening students' critical thinking; this is because digital learning can lead students to independent learning by utilizing digital learning facilities with a wider range of material.³⁴ However, according to Mrs. R1, the use of digitalization in the learning process must be supervised wisely; when at school, the use of digitalization is supervised by the teacher, and when at home, it is supervised by parents and family.

Diverse Learning Resources

The implementation of the Pancasila learner profile requires quality ideas so that the implementation of the Pancasila learner profile can run well and have a positive impact on students. According to Mrs. R1 as the teacher class, she explained that her school uses the independent learning platform as a reference in implementing the Pancasila learner profile in her school. Ideas from outside are needed so that applying the Pancasila learner profile is not just a formality but can be implemented maximally in the classroom.³⁵

In addition, according to Mrs. R2, technology is very helpful for teachers in developing ideas for learning. On the theme of entrepreneurship, Mrs. R2 got the idea to

³³ F. Tang, "Understanding the Role of Digital Immersive Technology in Educating the Students of English Language: Does It Promote Critical Thinking and Self-Directed Learning for Achieving Sustainability in Education with the Help of Teamwork?," *BMC Psychology* 12, no. 1 (2024), https://doi.org/10.1186/s40359-024-01636-6.

³⁴ F. Tang, "Understanding the Role of Digital Immersive Technology in Educating the Students of English Language: Does It Promote Critical Thinking and Self-Directed Learning for Achieving Sustainability in Education with the Help of Teamwork?," *BMC Psychology* 12, no. 1 (2024), https://doi.org/10.1186/s40359-024-01636-6.

³⁵ A. Monge Roffarello and L. De Russis, "Teaching and Learning 'Digital Wellbeing," *Future Generation Computer Systems* 149 (2023): 494–508, https://doi.org/10.1016/j.future.2023.08.003.

turn used bottles into money by selling them and making crafts. These ideas are obtained through technology on the internet. Various learning resources are expected to make learning in class more enjoyable and can have implications for improved student learning outcomes. R4 also explained that learning using digital devices can contain diverse and exciting learning materials. This opinion is reinforced by Arango Grandos' theory, which explains that diverse digital learning resources can help accelerate students' understanding of specific materials because of the ease of access and comprehensive material coverage.³⁶

CONCLUSION

Revitalization of education is significant so that learning in the classroom can be carried out optimally. Updates such as the entry of digitalization in the world of education must be appropriately utilized by teachers so that they can have a positive impact on students. Digital-based education has many benefits that can support learning, ranging from learning to being more varied, students are more active in participating in learning, helping students to improve technology skills, and diverse learning resources. These advantages can be applied in the Pancasila student profile program and are expected to make students think critically and creatively per the dimensions in the Pancasila student profile. This research is limited to digital-based learning using E-learning and audio-visual media in elementary schools, so researchers recommend that future researchers develop artificial intelligence-based digital learning to foster students' critical and creative thinking.

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The authors declared no potential conflicts of interest concerning the research, authorship, and publication.

³⁶ M.C. Arango-Granados et al., "New Generations, New Challenges: Innovating Emergency Medicine Education through Technology," *Educacion Medica* 25, no. 4 (2024), https://doi.org/10.1016/j.edumed.2024.100921.

ORCID iD

Noptario	ÍD	https://orcid.org/0009-0001-9542-1857
Nelva Ade Tinofa	ÍD	https://orcid.org/0009-0006-6667-9548
Ani Khoirotun Nisa	ÍD	-
Faisal Abdullah	iD	-
Ts. Saiful Nazri bin Nordin	ÍD	-

REFERENCES

- Ahmad, Masduki. "Management Of Facilities And Infrastructure In Schools." *Akademika : Jurnal Teknologi Pendidikan* 10, no. 01 (May 30, 2021): 93–112. https://doi.org/10.34005/akademika.v10i01.1348.
- Amiruddin, F.R. Baharuddin, Takbir, and W. Setialaksana. "May Student-Centered Principles Affect Active Learning and Its Counterpart? An Empirical Study of Indonesian Curriculum Implementation." SAGE Open 13, no. 4 (2023). https://doi.org/10.1177/21582440231214375.
- Anggrawan, A., C.S.D. Syafitri, and C. Satria. "Developing Augmented Reality Learning and Measuring Its Effect on Independent Learning Compared to Traditional Learning." *TEM Journal* 12, no. 2 (2023): 975–87. https://doi.org/10.18421/TEM122-44.
- Arango-Granados, M.C., V. Muñoz Patiño, Á.M. Guzmán, J.G. Barrios Diez, M.I. González, and H.A. Táquez. "New Generations, New Challenges: Innovating Emergency Medicine Education through Technology." *Educacion Medica* 25, no. 4 (2024). https://doi.org/10.1016/j.edumed.2024.100921.
- Arina, Hasyatul Arina, Fatimatul Munawaroh, Irsad Rosidi, and Yunin Hidayati.
 "Peningkatan Keterampilan Berpikir Kritis Siswa Melalui Pendekatan Pembelajaran Berbasis Riset." *Natural Science Education Research (NSER)* 2, no. 1 (July 9, 2019): 17–24. https://doi.org/10.21107/nser.v2i1.4280.
- Dieguez, T. "Digital Transformation and Organizational Challenges. An Exploratory Study." *Lecture Notes in Mechanical Engineering*, 2024, 629–36. https://doi.org/10.1007/978-3-031-38165-2_73.
- El Naggar, A., E. Gaad, and S.A.M. Inocencio. "Enhancing Inclusive Education in the UAE: Integrating AI for Diverse Learning Needs." *Research in Developmental Disabilities* 147 (2024). https://doi.org/10.1016/j.ridd.2024.104685.
- Elizza, P.N., E.S. Bahriah, and S. Agung. "A Study on Chemistry Teachers' Implementation of 21st Century Skills in Learning in Schools," Vol. 2595, 2023. https://doi.org/10.1063/5.0124566.
- Gulhane, M., T. Sajana, N. Shelke, and S. Maurya. "Development of a Temporal Analysis Model Augmented for Disease Progression Identification through Multiparametric Analysis." *International Journal of Intelligent Systems and Applications in Engineering* 12, no. 2 (2024): 620–34.

- Kurniawan, Ary, and Fitri Nur Mahmudah. "Pelaksanaan Pembelajaran Berbasis Teknologi Informasi Dan Komunikasi di Sekolah Menengah Kejuruan." AL-TANZIM: Jurnal Manajemen Pendidikan Islam 4, no. 2 (September 28, 2020): 66– 78. https://doi.org/10.33650/al-tanzim.v4i2.1156.
- Liang, X., F. Bi, W. Liu, X. Yan, C. Zhang, and C. Xia. "Trained Teacher: Who Is Good at Teaching." *Displays* 80 (2023). https://doi.org/10.1016/j.displa.2023.102543.
- Liu, Z., J. Li, Z. Shen, G. Huang, S. Yan, and C. Zhang. "Learning Efficient Convolutional Networks through Network Slimming," 2017-October:2755–63, 2017. https://doi.org/10.1109/ICCV.2017.298.
- Luginbuehl, H., S. Nabecker, R. Greif, S. Zuber, I. Koenig, and S. Rogan. "Transforming Traditional Physiotherapy Hands-on Skills Teaching into Video-Based Learning." *BMC Medical Education* 23, no. 1 (2023). https://doi.org/10.1186/s12909-023-04556-y.
- Merkle, A.C., L.K. Ferrell, O.C. Ferrell, and J.F. Hair Jr. "Evaluating E-Book Effectiveness and the Impact on Student Engagement." *Journal of Marketing Education* 44, no. 1 (2022): 54–71. https://doi.org/10.1177/02734753211035162.
- Monge Roffarello, A., and L. De Russis. "Teaching and Learning 'Digital Wellbeing."" *Future Generation Computer Systems* 149 (2023): 494–508. https://doi.org/10.1016/j.future.2023.08.003.
- Mun, M., S. Choi, and K. Woo. "Investigating Perceptions and Attitude toward Telenursing among Undergraduate Nursing Students for the Future of Nursing Education: A Cross-Sectional Study." *BMC Nursing* 23, no. 1 (2024). https://doi.org/10.1186/s12912-024-01903-2.
- Nevrita, N. and Sujoko. "Analysis of Maritime Content in the Project for Strengthening the Profile of Pancasila Students (P-5) as an Educational Media in Getting to Know the Culture of Coastal Communities at SMP Negeri 19 Bintan (Activist School Batch 2)," Vol. 79, 2023. https://doi.org/10.1051/bioconf/20237905003.
- Noptario & Prastowo, A. "Penggunaan Media Pembelajaran Berbasis Audio Visual Pada Mata Pelajaran Matematika Berdasarkan Prinsip Kreatif Dan Menarik Di Sekolah Dasar." *Jurnal Ilmiah Pendidikan Pendas*, 2022.
- Noptario, Hulkin. "Transitioning from National Examinations to Computer-Based National Assessments: Teachers'-Students' Perceptions and the Impact on Islamic Education." *HEUTAGOGIA: Journal of Islamic Education* 3, no. 1 (n.d.): 2023– 31.
- Orkodashvili, M. "Pandemic Challenges of Higher Education: Reconsidering Core Values." In Challenges and Reforms in Gulf Higher Education: Confronting the COVID-19 Pandemic and Assessing Future Implications, 60–73, 2023. https://doi.org/10.4324/9781003457299-6.
- Pangkerego, Kevin Alexander Johannes, Luckie Sojow, and Hiskia Kamang Manggopa. "Pengaruh Model Blended Learning Terhadap Hasil Belajar Simulasi Dan Komunikasi Digital Siswa Kelas X Smk Negeri 1 Tomohon." *Edutik : Jurnal Pendidikan Teknologi Informasi Dan Komunikasi* 1, no. 1 (December 13, 2021): 55–68. https://doi.org/10.53682/edutik.v1i1.1004.

- Parsa, I.M., M. Taneo, J.J. Messakh, M.K. Tokan, W.S. Dominikus, and R.H. Modok. "Assessing the Participants of UNDANA Teacher Pro Profiles with Digital-Based Learning Model; Cat. 1, 2022." *Information Sciences Letters* 12, no. 8 (2023): 2521–32. https://doi.org/10.18576/isl/120809.
- Paul, P., P. S. Aithal, S. Sharma, and R. Saavedra. "Infrastructure-Technology, Socio-Economical Issues and Challenges in ICT-Based Education and Digital Education with Possible Solutions-A Scientific Observation." SSRN Scholarly Paper. Rochester, NY, May 20, 2023. https://doi.org/10.2139/ssrn.4491058.
- Rahimi, A.R., and Z. Mosalli. "The Role of Twenty-First Century Digital Competence in Shaping Pre-Service Teacher Language Teachers' Twenty-First Century Digital Skills: The Partial Least Square Modeling Approach (PLS-SEM)." *Journal of Computers in Education*, 2024. https://doi.org/10.1007/s40692-023-00307-6.
- Rahmawati, Laili, Dadang Juandi, and Elah Nurlaelah. "Implementasi Stem Dalam Meningkatkan Kemampuan Berpikir Kritis Dan Kreatif Matematis." AKSIOMA: Jurnal Program Studi Pendidikan Matematika 11, no. 3 (September 20, 2022): 2002–14. https://doi.org/10.24127/ajpm.v11i3.5490.
- Rosyad, Ali Miftakhu, and Muhammad Anas Maarif. "Paradigma Pendidikan Demokrasi Dan Pendidikan Islam Dalam Menghadapi Tantangan Globalisasi Di Indonesia." *Nazhruna: Jurnal Pendidikan Islam* 3, no. 1 (February 7, 2020): 75–99. https://doi.org/10.31538/nzh.v3i1.491.
- Rozali, Yuli Asmi. "Penggunaan Analisis Konten Dan Analisis Tematik" Vol 11 No 1 (January 2022).
- Santos-Meneses, L.F., and E.A. Drugova. "Trends in Critical Thinking Instruction in 21st-Century Research and Practice: Upgrading Instruction in Digital Environments." *Thinking Skills and Creativity* 49 (2023). https://doi.org/10.1016/j.tsc.2023.101383.
- Sargent, M.J., and B.G. Winton. "Cognitive Ability and Performance in Accounting Students: The Importance of Data Analytics Assignments." *Journal of Accounting Education* 65 (2023). https://doi.org/10.1016/j.jaccedu.2023.100870.
- Shafieek, M.S.M., A. Ismail, and S.S. Razali. "Impact of Digitalization on Automotive Technology Curriculum Concerning Student Psychomotor Achievement." *Journal* of Advanced Research in Applied Sciences and Engineering Technology 37, no. 2 (2024): 141–55. https://doi.org/10.37934/araset.37.2.141155.
- Shi, R., and X. Wan. "A Bibliometric Analysis of Knowledge Mapping in Chinese Education Digitalization Research from 2012 to 2022." *Humanities and Social Sciences Communications* 11, no. 1 (2024). https://doi.org/10.1057/s41599-024-03010-8.
- Su, Y., S. Shen, L. Zhu, L. Wu, Z. Huang, Z. Cheng, Q. Liu, and S. Wang. "Global and Local Neural Cognitive Modeling for Student Performance Prediction[Formula Presented]." *Expert Systems with Applications* 237 (2024). https://doi.org/10.1016/j.eswa.2023.121637.
- Tang, F. "Understanding the Role of Digital Immersive Technology in Educating the Students of English Language: Does It Promote Critical Thinking and Self-

Directed Learning for Achieving Sustainability in Education with the Help of Teamwork?" *BMC Psychology* 12, no. 1 (2024). https://doi.org/10.1186/s40359-024-01636-6.

- Tang, F. "Understanding the Role of Digital Immersive Technology in Educating the Students of English Language: Does It Promote Critical Thinking and Self-Directed Learning for Achieving Sustainability in Education with the Help of Teamwork?" *BMC Psychology* 12, no. 1 (2024). https://doi.org/10.1186/s40359-024-01636-6.
- Wardani, Helda Kusuma, Sujarwo Sujarwo, Yeni Rakhmawati, and Pramudya Cahyandaru. "Analysis of the Impact of the Merdeka Curriculum Policy on Stakeholders at Primary School." Jurnal Ilmiah Peuradeun 11, no. 2 (May 30, 2023): 513–30. https://doi.org/10.26811/peuradeun.v11i2.801.
- Widana, I.W., I.W. Sumandya, and I.W. Citrawan. "The Special Education Teachers' Ability to Develop an Integrated Learning Evaluation of Pancasila Student Profiles Based on Local Wisdom for Special Needs Students in Indonesia." *Kasetsart Journal of Social Sciences* 44, no. 2 (2023): 527–36. https://doi.org/10.34044/j.kjss.2023.44.2.23.

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