**INTEGRATION OF PANCASILA VALUES AND CHARACTER BUILDING IN THE UTILIZATION OF ARTIFICIAL INTELLIGENCE FOR THE FORMATION OF DIGITAL CITIZENS WITH CHARACTER IN THE EDUCATION ENVIRONMENT**

**ABSTRACT**

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| The development of artificial intelligence (AI) in the digital era brings significant changes to education, both in terms of learning methods and interaction patterns between educators and students. In this context, the use of AI must be balanced with a conscious effort to integrate the values of Pancasila and character education (character building) to create digital citizens who are not only technologically intelligent but also have noble character. Pancasila values such as divinity, humanity, unity, democracy, and social justice must be internalized in any technology-based learning process so that learners are able to use AI ethically, responsibly, and beneficially for society. Character education plays an important role in instilling critical attitudes, tolerance, empathy, and awareness of rights and responsibilities in the digital space. Through this holistic approach, education becomes a space for character formation that is not uprooted from the cultural roots of the nation, despite being in the midst of technological globalization. Therefore, the collaboration between technology, national values and character education is the key to creating an educational ecosystem focused on developing digital citizens with integrity, adaptability and national insight. |

Keyword:

Pancasila, character education, artificial intelligence, digital citizen, digital ethics

1. **INTRODUCTION**

**1.1 Background**

The development of digital technology, particularly artificial intelligence (AI), has brought about significant changes in the world of education. AI is now being used in various forms, ranging from adaptive learning systems to learning chatbots to analyzing students' learning behavior. However, what is happening in the field shows that the use of AI has not been fully accompanied by the formation of strong character and moral values.

Many students are technologically literate, but weak in digital ethics, social empathy, and digital citizenship. Phenomena such as cyberbullying, the spread of hoaxes, and the misuse of information are clear evidence of the weak integration between technological and moral intelligence.(Islami, 2022)

Instead, education should focus not only on mastering technology, but also on strengthening the nation's noble values of Pancasila and character education. Ideally, AI will be used as a tool to instill values such as honesty, responsibility, tolerance and mutual cooperation in the learning process. Education should create digital citizens who are not only academically and technologically competent, but also have integrity, ethics, and national awareness in their digital activities.(. Famella, S., Susardi, S., Sitohang, R. Z., Budiarti, I. A., Haris, M., Yusmita, Y., ... & Ginting, 2024)

* 1. **Problem Statement**

The use of artificial intelligence (AI) in education has shown various advances, but its application is still often focused only on technical aspects and learning efficiency. On the other hand, moral and social challenges in the digital space are increasing, signaling the need to build character and strengthen national values.

In this context, a fundamental question arises: what is the right strategy to integrate Pancasila values and character education in the use of artificial intelligence in the educational environment to create digital citizens with character?

**1.3 Research Objective**

This research aims, first, to identify and analyze the extent to which Pancasila values and character education principles have been integrated into the use of artificial intelligence (AI) in the educational environment, especially in shaping students' digital behavior and awareness. This understanding is important to know the actual conditions and gaps that still need to be improved in technology-based learning practices.

Second, this research aims to formulate an effective strategy or implementation model in integrating Pancasila values and character building into AI-based learning systems to produce digital citizens who are not only technologically proficient, but also have moral integrity, digital ethics, and national consciousness.

**1.4 Benefits of Research**

This research provides important benefits for various parties involved in education. First, for educators and educational institutions, this research provides insight into the importance of integrating Pancasila values and character education in the use of artificial intelligence (AI), and can help create a learning environment that not only prioritizes academic achievement, but also builds strong character in students. This will make the educational process more holistic and balanced, and will have a long-term impact on creating responsible digital citizens.

Second, for education policy makers, this research provides a basis for developing policies that integrate technology and moral values into the education system. This research can be a reference in formulating curriculum or training programs that integrate artificial intelligence with character education to create a generation that is not only competent in the digital world, but also has ethics in line with national values.

Third, for students, this research is useful in encouraging them to better understand the importance of using technology wisely and responsibly. The integration of character and Pancasila values in AI-based learning can foster critical attitudes, empathy, and awareness of social responsibility in cyberspace, which are needed to face digital challenges in the future.

* 1. **Problem Limitations**

This research uses a descriptive qualitative approach to explore in depth the integration of Pancasila values and character education applied in the use of artificial intelligence (AI) in the educational environment. This approach was chosen because it allows researchers to understand social realities and values that develop in the context of digital education contextually and holistically.

The main data sources were obtained through in-depth interviews with educators, AI-based learning content developers, and students in several universities that have implemented AI technology in the teaching and learning process. In addition, data was collected through participatory observation and documentation of digital learning materials, university policies, and technology platforms used.

1. **Literature Review**

**2.1 Values of Pancasila in Education**

In education in the digital age, the values of Pancasila remain the most important foundation in building the character of students. Pancasila, as the ideology and worldview of the Indonesian nation, contains universal values that are relevant to be applied in every aspect of life, including the learning process that is now beginning to be supported by artificial intelligence (AI) technology. The integration of Pancasila values in education is very important to ensure that technological advances do not erode the national identity and morality of the younger generation.(Hardiyanto, L., Irawatie, A., & Saryono, 2025)

Each of the precepts in Pancasila plays an important role in digital character education. The first commandment, belief in one God, instills spiritual awareness and ethical responsibility in the use of technology. The second precept, Just and Civilized Humanity, encourages the use of AI that upholds the values of empathy, justice, and respect for the human rights of each individual in the digital space. The third precept, Indonesian Unity, strengthens the sense of nationhood and solidarity in a digital ecosystem prone to division and polarization. The fourth precept, Democracy guided by wisdom in deliberation/representation, emphasizes the importance of active participation and ethical discussion on digital platforms. Finally, the fifth precept, Social justice for all Indonesians, calls for inclusive and fair use of technology without digital discrimination.(Nabila, A. A., Yusuf, M. F., Rafi, M., Rahmawan, W. F., & Antoni, 2024).

By integrating these values into AI-based learning, education not only facilitates technological mastery, but also becomes a tool for shaping digital citizens who are smart, responsible, and rooted in the nation's noble values.(Iskandar, I., Putra, D. D., Yasin, A. I., & Khairan, 2025)

**2.2 Character Building Concept in the Digital Era**

In the midst of rapid technological progress, education is faced not only with the challenge of imparting knowledge, but also with the moral responsibility of forming students' character in accordance with the noble values of the nation. Character building is a crucial aspect in the digital age, where students interact with diverse information, cultures and global values that are widely disseminated in cyberspace. In this context, character education is not only related to behavior in the real world, but also includes ethics and responsibility in the digital space as part of the digital citizen identity. Character education in the digital age must be able to inculcate values such as honesty in the media, responsibility for the information disseminated, empathy for fellow Internet users, and awareness of rights and responsibilities as technology users.(Maryam, 2023)

Artificial intelligence (AI), which is beginning to be used in learning systems, can be an effective tool to support this process, provided it is designed and used with a values-based approach. Character is formed not only through normative instruction, but also through interactive, reflective, and meaningful learning experiences.(Setiawan, Z., Hariyono, R. C. S., Fitriyanto, R., Phan, I. K., & Suprayitno, 2024)

Therefore, character education must be actively integrated into the curriculum, learning materials, and technology used. In this case, AI-based education should be designed not only to stimulate cognitive intelligence, but also to instill ethical and social values in line with the nation's culture and the spirit of Pancasila. In this way, learners can grow into individuals who are not only digitally proficient, but also wise and responsible in social life in the digital age.(Tarumasely, Y., Halamury, M., Sipahelut, J., & Labobar, 2024)

**2.3 Development and Utilization of Artificial Intelligence (AI) in Education**

The development of Artificial Intelligence (AI) has brought about a major transformation in various sectors, including education. This technology allows the learning process to be more personalized, adaptive, and efficient. In the context of education, AI is being used to develop intelligent learning systems that are able to customize materials and approaches based on the needs and abilities of individual learners. Examples include adaptive learning platforms, virtual tutors, automated assessment systems, and learning data analytics that help educators design appropriate interventions. (Ulimaz, A., Cahyono, D., Dhaniswara, E., Arifudin, O., & Rukiyanto, 2024)

Beyond its great benefits, however, the use of AI also poses new challenges, especially with regard to the values, ethics, and character of students. Excessive use of AI without moral guidance may change the role of education as a means of forming a whole person. Therefore, it is important to integrate Pancasila values and character education approaches in the use of this technology.(Ikhwan, S., & Aan, 2024)

AI should be interpreted not only as a technological tool, but also as a tool to strengthen human values, social responsibility, and national consciousness. In this case, education using AI must be designed to focus not only on academic achievement, but also on developing values such as honesty, discipline, empathy, and mutual cooperation. In this way, AI can be part of a holistic education system that supports the formation of digital citizens with character, intelligence, and the spirit of Pancasila.(Mustari, M., & Darmayanti, 2024)

**2.4 The Concept of Digital Citizenship and Its Challenges**

In today's digital era, the concept of citizenship is no longer limited to physical space, but has expanded into cyberspace. A digital citizen is a person who not only actively uses technology and the Internet, but also understands the rights, responsibilities, and ethics of interacting in digital space. In the context of education, digital citizenship is an important part of preparing a generation that is not only technologically literate, but also capable of acting wisely, responsibly, and in accordance with national values.(. Nasoha, A. M. M., Atqiya, A. N., Ramadani, T. N., Hidayah, W. N., & Nasicha, 2025)

However, the formation of digital citizens in Indonesia faces a number of significant challenges. These include a lack of comprehensive digital literacy, a lack of ethical awareness in the use of social media, and weak value filters in the face of free and fast global information flows. Phenomena such as the spread of hoaxes, hate speech, cyberbullying, and gadget addiction reflect the need for strong character education in the digital age.(Silvana, 2024)

In this situation, the integration of Pancasila values becomes very relevant. Pancasila can be a moral and ideological foundation to shape the behavior of digital citizens who are tolerant, fair, moral, and national-conscious. These values need to be inculcated early through the education system, including through the use of artificial intelligence (AI). AI should be used not only to accelerate the learning process, but also as a medium to instill character and national values through ethical content, simulations, and digital interactions.(Ashari, F. A., Najicha, F. U., & SH, 2023)

By building digital awareness based on Pancasila and character education, students can grow into digital citizens who are not only technologically proficient, but also have integrity, think critically, and act responsibly in the virtual and real world.(Dewi, A. C., Ramadhan, B., Fadhil, A. A., Fadhil, F., Idris, A. M., Hidayat, M. R., & Yusrin, 2023)

**2.5 Integration of Values and Technology in the Context of Education**

In the midst of digital transformation, the world of education is challenged not only to keep pace with technological developments, but also to ensure that noble values remain at the core of every learning process. The integration of values and technology is an urgent need for education to remain both digitally relevant and morally meaningful. In this context, the use of Artificial Intelligence (AI) should not only be seen as a technical tool, but also as a strategic medium to instill Pancasila values and build students' character.(Suhendi, 2023)

This integration can be achieved by designing AI-based learning systems that deliberately include educational content that emphasizes digital ethics, tolerance, responsibility, honesty, and national spirit. AI can be used to present simulations of real-life cases, problem-based learning, and personalized feedback that assesses not only cognitive aspects but also attitudes and behaviors. Educators have an important role to play in guiding the use of this technology so that it reinforces, rather than displaces, the role of values.

By aligning technology with the values of Pancasila and the character-building approach, education can create a learning environment that is not only innovative and adaptive, but also rooted in national identity. Through this synergy, learners will become digital citizens who not only master technology, but also have integrity, empathy and social responsibility in both the virtual and real world.(Gusty, S., Hidayat, A., Tandungan, E. S., Tikupadang, W. K., Ahmad, S. N., Tumbo, A., ... & Gustang, 2023)

**3. Result and Discusion**

**3.1 Strategies for Integrating Pancasila and Character Building through AI**

To create digital citizens who are not only technologically proficient, but also have character and Pancasila values, an integrated strategy is needed that combines artificial intelligence (AI) technology with values and character education. This strategy must be systematically designed so that AI is not only a learning tool, but also plays an active role in shaping students' mindset, attitude and behavior.

The first strategy is value-based content development. Digital learning content developed using AI must include narratives, case studies, and simulations that reflect Pancasila values and character-building principles such as honesty, empathy, responsibility, and mutual cooperation. For example, AI can be used to present interactive scenarios that require learners to make decisions based on moral and social considerations.

The second strategy is value-based personalized feedback. AI systems used in learning can be designed not only to provide cognitive assessment, but also to provide feedback that guides students in forming attitudes consistent with noble values, such as respecting the opinions of others or resolving conflicts peacefully

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The final strategy is collaboration between educational technology developers and educational institutions. The development of AI systems must incorporate national values and digital ethics from the design stage. This collaboration is important so that AI is not developed in a neutral or value-free manner, but is consciously designed to support national educational goals that produce intelligent and characterful people.

Through these strategies, the use of AI in the educational environment will be an effective means of combining technological innovation with the strength of national values and character to create digital citizens with integrity, responsibility, and the spirit of Pancasila.

**3.2 The Role of Educators and Universities**

In the era of digital transformation, the role of educators and universities becomes very strategic in bridging the use of artificial intelligence (AI) technology with the strengthening of Pancasila values and character building of students. Educators act not only as knowledge carriers, but also as value agents and moral role models in the digital education ecosystem. They have the responsibility to ensure that the learning process is not only focused on academic outcomes, but also on the formation of students' attitudes, ethics, and integrity as digital citizens.

Educators must be able to guide the use of AI wisely by embedding the basic principles of Pancasila in learning materials, methods, and interactions. They must also improve their digital literacy and technological ethics to be able to integrate character building into the AI-based educational process, both directly through teaching and indirectly through role modeling.

Meanwhile, universities have a broader role as centers of innovation and policy development. Universities must develop a curriculum that not only teaches mastery of technology, but also strengthens students' social skills, national values, and ethical awareness. Through research, community service, and partnerships with the technology industry, universities can foster the creation of AI platforms that promote humanitarian and national values.

In addition, universities also play a role in shaping future educators and leaders, so the integration of values and technology must be part of teacher training and all interdisciplinary programs of study. Thus, educators and universities have a direct role in creating a generation that is not only digitally literate, but also has a noble personality and a strong national spirit to face the challenges of cyberspace.

**3.3 Case Study/University Implementation Example**

An example of integrating Pancasila values and character education through the use of artificial intelligence (AI) is a university in Indonesia that has developed an AI-based adaptive digital learning platform with a national values approach. This platform is used in Pancasila and citizenship education courses, where learning materials are delivered not only through text or video, but also through interactive simulations and digital case studies that emphasize ethical decision-making.

The platform exposes students to various digital scenarios - such as how to respond to hate speech on social media, how to deal with fake news, or how to maintain netiquette in online discussions. The AI in the system is designed to provide value-based automated feedback, for example, assessing whether the students' stance reflects humanitarian values, social justice or the spirit of unity. In this way, students are not only assessed on the basis of cognitively correct answers, but also on the moral and character aspects of their answers.

The college has also developed a digital character monitoring dashboard for students that tracks their interaction patterns in online discussion forums, participation in digital social activities, and adherence to online academic ethics. This data is used by tutors to provide more personalised and targeted character guidance.

This activity does not stand alone, but is part of the Merdeka Belajar Kampus Merdeka (MBKM) curriculum, where students are also given space to engage in AI-based educational content development projects that reflect the values of Pancasila, such as creating a digital ethics learning chatbot or an interactive module on responsibility as a digital citizen.

Through this approach, the college has successfully demonstrated that technology, if designed and used wisely, can be a very effective tool in supporting the mission of national education: to create a young generation with knowledge, character and the spirit of Pancasila amidst the challenges of the digital era.

**3.4 Digital ethics and social responsibility in AI-based learning**

In an increasingly digitised education ecosystem, the presence of artificial intelligence (AI) has brought convenience, efficiency and innovation to the learning process. However, behind these advances, there is also an urgent need to strengthen digital ethics and social responsibility as an integral part of the learner's character. Digital ethics involves moral awareness when interacting, communicating and accessing information through digital media, while social responsibility requires an awareness that every action in the digital space has an impact on others and society at large.

In AI-based learning, learners need to be guided to use technology not only technically, but also ethically and wisely, in line with the values of Pancasila. For example, the second and fifth commandments of Pancasila can be the basis for teaching digital empathy, fairness in access to information, and respect for the digital rights of others. AI implemented in the education system should be designed with algorithms that support the filtering of harmful content, reinforce digital norms of civility, and encourage active engagement in constructive discussions.

In addition, AI can be used to detect and moderate deviant digital behaviour, such as plagiarism, hate speech or the spreading of hoaxes, while providing character education to offenders with a coaching approach rather than just punishment. In this way, AI becomes not only a tool of control, but also a tool of character building.

Universities and educators also have an important role to play in raising awareness that the use of technology cannot be separated from social responsibility. Through problem-based learning projects, digital ethics discussions and values reflections, learners are invited to understand that every click, post or comment is part of their identity and integrity as digital citizens.

By integrating digital ethics and social responsibility into AI-based learning, education not only produces a generation that is technologically proficient, but also one that is able to uphold human values, justice and nationality in the midst of digital progress, in line with the spirit of Pancasila and the national character.

**3.5 Challenges and Implementative Solutions**

 In the effort to integrate Pancasila values and character building through Artificial Intelligence (AI) in education, there are a number of challenges that need to be addressed. These challenges relate to technical, social and cultural aspects that require a careful approach and adaptive solutions. Below are some of the key challenges and solutions for their implementation:

1. Technology Access and Infrastructure Challenges

One of the biggest challenges in implementing AI in education is the technology access gap. Not all schools and colleges have the appropriate infrastructure to use AI to its full potential. Limited access to adequate hardware, stable internet connection and relevant software often hinders the implementation of technology in learning.

Solution: To address this gap, one possible solution is for the government, educational institutions and the private sector to work together to provide more equitable access to digital infrastructure. The government can provide hardware and software subsidies to underprivileged educational institutions, while the private sector can initiate CSR programmes to support the development of technology-based educational infrastructure.

1. Challenges in Developing a Relevant Curriculum

The integration of AI in education must be supported by a relevant and value-based curriculum. Many current educational curricula still focus on achieving cognitive competence, but provide less space for character development and the strengthening of Pancasila values. This results in an imbalance between the academic and character development of students.

Solution: The solution is to design a Pancasila value-based curriculum integrated with AI-based learning. This curriculum should combine academic aspects with activities that strengthen digital character and ethics, such as value-based discussions, simulation of moral decisions in a digital context, and cultivation of social values through AI-based interactive learning. The development of AI-based learning modules that focus on strengthening character and nationality can also be an effective alternative.

1. Challenges in Digital Literacy and Ethics

Despite the proliferation of technology, digital literacy and understanding of digital ethics among educators and learners remains low. Many educators lack the skills to use technology effectively to teach values and character. On the other hand, learners often lack sufficient awareness of social responsibility and ethics when interacting online.

Solution: Addressing this issue requires ongoing training efforts for educators in digital literacy and the ethical use of technology. Universities and educational institutions can provide training programmes and workshops for educators on the use of AI in character and values learning, and how to teach digital ethics to learners. In addition, the use of AI to provide personalised feedback on learners' digital behaviour can encourage them to be more aware of the social impact of their actions online.

1. Challenges in Maintaining the Balance between Technology and Value

One of the main challenges in implementing AI in education is the potential tendency to focus on technical efficiency, neglecting the moral and value aspects of learning. The use of AI without clear guidance can lead to violations of human values, such as the misuse of personal data or technology addiction.

Solution: To maintain this balance, it is important to integrate ethics and values into the development of AI itself. Educational technology developers should work closely with ethicists, educators and society at large to ensure that AI is designed with human values in mind, and not just for practical gain. In addition, the use of AI in education needs to be closely monitored to ensure that the technology truly supports the development of character and nationhood.

1. Challenges in Educator Paradigm Shift

For many educators, the use of advanced technology such as AI in learning may feel unfamiliar and challenging. They may feel that the characters and values of Pancasila cannot be taught through technology, but only through direct interaction and traditional learning.

Solution: To address this challenge, it is important to provide approaches that help educators make the transition to using technology effectively. Ongoing training programmes that focus on understanding how AI can support character and values development are needed. In addition, educators should be given the space to experiment with technology in the context of values-based learning so that they can experience the benefits first-hand.

**4. Conclusion**

The integration of Pancasila values and character building in the use of artificial intelligence (AI) in the educational environment is an important step in creating digital citizens with character. Pancasila, as the foundation of Indonesia, provides a strong foundation for building noble characters such as social justice, empathy, gotong royong, and love for country. Meanwhile, the development of technology, especially AI, provides various opportunities to optimise the learning process, but also poses great challenges in terms of digital ethics and social responsibility.

The application of AI in education not only strengthens the cognitive aspects, but also the moral and character dimensions that need to be continuously instilled in learners. If used wisely, AI can help create a more inclusive, interactive and value-based education system. However, to ensure that the use of AI is in line with the spirit of Pancasila, collaboration is needed between educators, technology developers, the government and society. Educators play an important role in guiding and integrating these values into any learning process that involves technology.

By integrating the values of Pancasila, character building and artificial intelligence, education will produce a generation that is not only intellectually intelligent, but also moral and responsible in their use of technology. This will produce digital citizens with character, ethics and integrity who are ready to face the challenges and opportunities of the digital age while upholding the humanitarian, national and social principles contained in Pancasila.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during writing or editing of manuscripts.

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