STRENGTHENING STUDENTS' ACADEMIC ETHICS THROUGH A DIGITAL CITIZENSHIP–BASED SOCIAL EDUCATION MODEL

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Abstract	This study aims to analyze and formulate a digital citizenship–based social education model in the context of strengthening the academic ethics of students in the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman. This research employed a qualitative approach with a case study design. Data were collected through observations of the learning process, in-depth interviews, and document analysis. The research informants consisted of ten students, six lecturers responsible for courses related to character education, social education, digital literacy, professional ethics, citizenship, and educational technology, as well as faculty and study program leaders. Data analysis was conducted systematically through the stages of data reduction, data display, and conclusion drawing. The findings indicate that digital citizenship is understood by informants as a value-based framework relevant to fostering ethical awareness, academic responsibility, and students' digital citizenship attitudes in the use of technology and artificial intelligence. The formulated social education model emphasizes value-oriented learning objectives, contextual learning materials, reflective and participatory methods, ethical utilization of digital media, and evaluation oriented toward academic attitudes and behavior. These findings suggest that digital citizenship–based social education has a strategic role as a conceptual framework for strengthening students' academic ethics in the era of artificial intelligence.
Keywords	Artificial Intelligence, Digital Citizenship, Technology Ethics, Civic Education, Social Education.

INTRODUCTION

The rapid advancement of digital technology, particularly with the emergence of artificial intelligence (AI), has brought significant changes in students' patterns of learning, communication, and social interaction. Various AI-based programs, such as text generators, paraphrasing tools, and automated assessment systems, are increasingly used in academic activities. However, the utilization of these technologies has also generated controversy in higher education, particularly regarding the ethical boundaries of their use. Several academic practices indicate a tendency to use AI to complete coursework without critical reflection, difficulties in distinguishing students' original work from AI-generated outputs, and the emergence of academic dilemmas related to honesty and intellectual responsibility. This phenomenon marks a shift in educational challenges from merely mastering technology toward addressing issues of ethics and academic integrity in the digital space.

On the one hand, technology and AI provide ease of access to information and support learning effectiveness. On the other hand, the use of technology without a strong ethical foundation has the potential to create various problems, such as declining academic integrity, misuse of AI in coursework, weakened digital moral responsibility, and reduced social sensitivity in virtual environments (Bimantoro et al., 2021); (Mely et al., 2024). This condition indicates that the primary challenge of higher education in the AI era lies not solely in technological mastery but in the formation of technological ethics grounded in social and civic values.

In the empirical context of the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman, students' academic ethics practices demonstrate increasingly complex dynamics alongside the widespread use of digital technology and artificial intelligence. Based on the researcher's preliminary observations of learning processes and academic assignments, students tend to use technologies such as AI pragmatically to complete academic tasks, without always being accompanied by adequate ethical awareness. Several lecturers responsible for Character Education, Digital Literacy, and Professional Ethics courses revealed that academic assignments often lack personal reflection, exhibit uniform response patterns, and demonstrate limited transparency in the use of digital sources. Interviews with lecturers further indicated that some students do not fully understand the ethical boundaries between using technology as a learning aid and using it in ways that may compromise academic integrity. This condition suggests that academic ethics has not yet been fully internalized as a moral awareness, but is still perceived primarily as administrative compliance with academic regulations.

Furthermore, interviews with students revealed challenges in developing consistent digital moral responsibility. Students acknowledged that the ease of access to technology and AI often encourages instant solutions, thereby reducing opportunities for critical thinking and value-based reflection. At the same time, faculty and program leaders highlighted limitations in existing instructional approaches, which tend to emphasize cognitive-conceptual aspects rather than the social and reflective formation of ethical technological behavior. This empirical reality reveals a gap between the ideal profile of Pancasila and Civic Education graduates as future educators and moral agents of citizenship and the actual practices of technology use in academic life. This gap constitutes the academic concern underlying this study and forms the basis for proposing an alternative approach through the development of a digital citizenship–based social education model, which not only promotes technological literacy but also places academic ethics, Pancasila values, and digital civic responsibility at the core of the learning process.

This phenomenon is consistent with Bimantoro's findings, which reveal an ethical paradox in the use of information technology, where technological advancement is not always accompanied by the ethical maturity of its users (Bimantoro et al., 2021). Therefore, an educational approach is needed that is not merely cognitive-instrumental, but also social-normative and oriented toward the development of a digital citizenship character. The concept of digital citizenship offers a relevant framework for addressing these challenges, emphasizing responsibility, ethics, participation, and legal awareness in the use of digital technology. In the context of civic education, digital citizenship is closely linked to the development of social ethics and civic awareness in digital spaces (Harefa et al., 2025). Civic education can no longer be confined to conventional classroom settings, but must extend into digital environments as new arenas for character formation.

Several previous studies over the past five years have highlighted issues related to ethics, character, and civic education in the digital era. Harefa et al. (2025) emphasized the strategic role of civic education in shaping the social ethics of younger generations in modern society, although their study did not specifically integrate AI and digital citizenship into instructional models (Harefa et al., 2025). Mely et al. (2024) examined paradigm shifts in education in the digital era, but focused primarily on technological adaptation rather than strengthening students' technological ethics (Mely et al., 2024). Anggraini (2024) explored communication ethics among social media users from a Qur'anic perspective, enriching the normative foundation of digital ethics, but without contextualizing it within social education in higher education (Anggraini, 2024). Malik et al. (2024)

discussed communication ethics from the perspectives of the Qur'an and Hadith, yet their study remained normative-theological and was not integrated into the civic education model design (Malik et al., 2024). Meanwhile, Dari et al. (2025) emphasized the role of educational institutions in fostering integrity through anti-corruption education, which is relevant to public ethics, but did not explicitly address technological ethics in the AI era (Dari et al., 2025).

Based on this review, a research gap can be identified, namely the absence of a social education model that integratively combines digital citizenship principles, Pancasila values, and technological ethics within the context of AI utilization, particularly among Pancasila and Civic Education students. Most existing studies still position digital ethics as a normative or conceptual issue and have not developed it into an applicable and contextual social education model aligned with the challenges of AI.

This study offers novelty through the development of a Digital Citizenship–Based Social Education Model designed contextually to enhance students' technological ethics in the AI era. This model not only emphasizes digital literacy and normative compliance but also integrates Pancasila values, civic responsibility, and ethical awareness in the use of AI as part of students' social practices. In this framework, students are positioned not merely as technology users but as digital moral agents capable of making ethical decisions in digital and academic environments.

The objectives of this study are to analyze the relevance of the digital citizenship concept within the context of social education in the Pancasila and Civic Education Study Program; to formulate a digital citizenship–based social education model as a conceptual framework for strengthening students' academic ethics in the era of artificial intelligence; and to examine the implications of implementing this model for developing students' ethical awareness, academic responsibility, and digital citizenship character. Through a qualitative approach, this study is expected to contribute theoretically to the development of civic education and social education scholarship in the digital era, as well as practically by providing a conceptual reference for strengthening academic ethics in higher education contexts.

METHOD

This study employed a qualitative research design using a case study approach. The focus of the study was directed toward exploring the perspectives, experiences, and value constructions developed among students and lecturers in responding to the use of digital technology and artificial

intelligence in academic practices. This qualitative approach was selected because it enables researchers to explore meanings, values, and social constructions that emerge naturally and contextually within civic education settings (Ratnaningtyas et al., 2023); (Hadari Nawawi, 2015); (Mumpuni et al., 2025).

The research was conducted in the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman. Research subjects were determined purposively by considering their direct involvement in learning processes and academic management. The study was carried out from March 12, 2025, to August 27, 2025. Student participants consisted of ten individuals, Putri Indriani, Mey Amelia, Fiana, Nela Sari, Nur Indah Lestari, Husen, Muhamad Lutfi, Abdurahman, Firnanda Agung, and Husen, selected based on their active participation in academic activities and their experience using digital technology and AI in academic contexts. In addition to students, the study involved six lecturers responsible for courses related to ethics and social education, including lecturers of character education, social education, digital literacy, professional ethics, civic education, and educational technology. To strengthen the institutional perspective, the Dean of the Faculty of Teacher Training and Education and the Coordinator of the Pancasila and Civic Education Study Program were also included as informants.

Data collection techniques included in-depth interviews, limited participant observation, and document analysis. Interviews were conducted to explore participants' perspectives, experiences, and reflections regarding technological ethics, the use of AI in learning, and the role of social education and digital citizenship. Observations focused on learning practices, students' digital interactions, and patterns of technology use in academic contexts. Documentation included curricula, course plans, teaching materials, and academic policies related to digital literacy and technological ethics. These combined techniques were intended to obtain comprehensive and complementary data (Sugiyono, 2017).

Data analysis was conducted systematically through data reduction, data display, and conclusion drawing. Interview and observation data were transcribed, coded, and categorized into themes relevant to the research focus, such as technological ethics, digital citizenship, and social education. Data validity was ensured through source and technique triangulation, thereby enhancing the credibility and reliability of the research findings.

FINDINGS AND DISCUSSION

Findings

The findings of this study were obtained through an intensive data collection process involving students, lecturers responsible for relevant courses, and academic leaders within the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman. Field findings indicate that the use of digital technology and artificial intelligence by students has become an integral part of daily academic activities. However, this utilization has not been fully accompanied by adequate ethical awareness and digital civic responsibility. Meanwhile, lecturers and program administrators have demonstrated normative awareness regarding the importance of technological ethics, although it has not yet been systematically integrated into the design of social education and civic education learning. Therefore, the findings of this study focus on three main aspects: the conceptual understanding and principles of digital citizenship in the context of civic education, the formulation of a digital citizenship–based social education model, and the implications of this model for strengthening students' technological ethics in the AI era.

Table 1. Digital Citizenship–Based Education for Strengthening Students' Ethics in the AI Era

No	Aspect of Analysis	Key Findings	Significance of Findings
1	Concept and Principles of Digital Citizenship in Civic Education	Students understand digital citizenship primarily as social media ethics and compliance with academic rules, but have not fully connected it to civic responsibility, Pancasila values, and ethical AI use. Lecturers recognize digital citizenship as an important concept, yet it has not been explicitly formulated in civic education learning outcomes.	Digital citizenship needs to be reconstructed as an integral component of digital civic education, emphasizing moral responsibility, legal awareness, and ethical participation in digital environments.
2	Design of the Digital Citizenship–Based Social Education Model	The model integrates Pancasila values, digital citizenship principles, and ethical AI use into civic education through reflective, dialogical, and contextual approaches. Lecturers function as moral facilitators, while students are positioned as active subjects in ethical digital decision-making.	The model positions social education not merely as knowledge transmission, but as a process of developing a digital citizenship character that is adaptive to technological and AI advancements.
3	Implications of the Model for Strengthening Students' Technological Ethics	The implementation of the model enhances students' awareness of ethical AI use, academic honesty, digital responsibility, and social empathy in online interactions. Students demonstrate more reflective attitudes in using technology for academic	The model contributes positively to the development of sustainable technological ethics and strengthens students' identity as future educators and ethical citizens

| and social purposes. | in the AI era. |

Source: Research data analysis results

Concept and Principles of Digital Citizenship in the Context of Civic Education

The findings indicate that students in the Pancasila and Civic Education Study Program understand digital citizenship primarily as a set of ethical rules governing the use of social media and digital technology, particularly those related to prohibitions against spreading hate speech, misinformation, and the obligation to maintain politeness in online communication. This understanding emerges from students' practical experiences in interacting within digital environments, both in academic and social contexts. However, this interpretation remains partial and has not been fully integrated with the civic values that constitute the core foundation of civic education. Students tend to separate digital ethics as an individual technical matter from citizenship as a normative concept learned in the classroom.

The core values of digital citizenship most frequently identified in the field findings are responsibility, participation, and respect. In terms of responsibility, students recognize the importance of accountability in using technology and artificial intelligence, particularly in relation to academic honesty and the use of digital sources. Several students acknowledged that the use of AI in completing academic assignments has become a common practice, yet it is not always accompanied by adequate ethical awareness regarding its appropriate boundaries. Digital responsibility is often understood as an obligation to avoid academic violations rather than as a moral responsibility toward oneself, the institution, and society. Lecturers teaching Character Education and Professional Ethics emphasized that students' digital responsibility remains at the level of compliance and has not yet developed into reflective ethical awareness as digital citizens.

The value of participation is reflected in students' active engagement in digital spaces, including online discussions, social media, and digital learning platforms. Students frequently express opinions and participate in various online forums. However, this participation does not fully reflect deliberative and ethical digital citizenship. Interview findings indicate that students tend to emphasize the level of activity rather than the quality of their contributions, such as presenting responsible arguments, respecting differing perspectives, and considering the social consequences of their digital interactions. Lecturers in Civic Education and Social Education observed that students' digital participation remains expressive rather than transformational, highlighting the need for reinforcement through more contextual and socially grounded educational approaches.

Meanwhile, the value of respect is understood by students as mutual courtesy in digital interactions, particularly in the use of polite language and the avoidance of open conflict on social media. However, field findings reveal that digital respect is often situational and influenced by personal relationships rather than grounded in normative civic awareness. Some lecturers noted that students tend to be more cautious in digital communication involving lecturers or institutional authorities, but less consistent in their interactions with peers or the broader public. This indicates that respect has not yet been fully internalized as a universal principle of digital citizenship.

The reinterpretation of digital citizenship within civic education is carried out by linking these values to the philosophical foundation of Pancasila and the broader concept of digital citizenship. The findings show that lecturers view digital citizenship not merely as media ethics but as the embodiment of humanity, democracy, and social justice within digital environments. From a Pancasila perspective, digital responsibility reflects the principles of divinity and humanity, digital participation represents the implementation of deliberative democratic values, and respect embodies national unity and social justice. This approach positions students as moral subjects who possess ethical obligations in using technology, including artificial intelligence, for the common good.

Interviews with faculty leaders and the study program coordinator indicate that this Pancasila-based reinterpretation of digital citizenship provides a new direction for civic education in the AI era. Digital citizenship is no longer positioned as supplementary content, but as a value-based framework that underpins the entire process of social and civic learning. In this regard, civic education plays a strategic role in shaping students' identities as digital citizens who are ethical, critical, and responsible.

Nevertheless, this study also reveals the limitations of conventional civic education approaches, which remain predominantly cognitive in orientation. Students reported that digital ethics and citizenship are often taught as theoretical concepts, with limited opportunities for reflection and practical application. As a result, students' understanding of digital citizenship remains at the level of knowledge and has not fully developed into attitudes and real-life behaviors. Lecturers in Digital Literacy and Educational Technology emphasized that approaches focusing solely on cognitive aspects are insufficient for fostering technological ethics in the complex and dynamic AI era.

Another identified limitation is the lack of integration among courses addressing ethics, technology, and citizenship. Learning remains fragmented, making it difficult for students to recognize the interconnections between Pancasila values, digital citizenship, and AI usage practices. This condition reinforces the need for a holistic and integrative social education model. Therefore, these findings underscore that strengthening the concept and principles of digital citizenship in civic education requires a paradigm shift from a purely cognitive approach toward a reflective, participatory, and socially grounded educational model aimed at developing students' technological ethics in the AI era.

Design of the Digital Citizenship–Based Social Education Model

The findings indicate that the design of the digital citizenship–based social education model developed within the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman, originates from the urgent need for a learning approach capable of bridging technological and artificial intelligence advancements with the development of students' technological ethics. This model was systematically designed by integrating learning objectives, materials, methods, media, and evaluation, all oriented toward strengthening digital citizenship values and the philosophical foundation of Pancasila. Lecturers and faculty leaders emphasized that the model functions not only as a pedagogical framework but also as a moral guideline for directing ethical technology and AI use within academic environments.

In terms of objectives, the model aims to develop civic education students who possess ethical awareness, digital responsibility, and reflective capacities in utilizing technology and artificial intelligence. Learning objectives extend beyond conceptual mastery of citizenship to include the formation of ethical attitudes and responsible technological behavior grounded in Pancasila values. Lecturers of Character Education and Civic Education highlighted the importance of these objectives, as civic education students are prepared to become future educators and social change agents who will engage directly with digitally oriented generations.

The learning materials within this model are designed to be contextual and integrative. They include not only digital citizenship concepts but also contemporary issues related to AI use in education, academic ethics, data privacy, and the social implications of technology. Interviews with lecturers of Digital Literacy and Educational Technology revealed that learning materials closely connected to students' real-life experiences are more effective in fostering ethical awareness than abstract theoretical content. Therefore, the model incorporates case studies, digital ethical dilemmas,

and reflective engagement with Pancasila values as core components of social learning.

The instructional methods applied in this model are dialogical, reflective, and participatory. Students are actively involved in group discussions, ethical decision-making simulations, and critical reflection on their use of technology and AI. Lecturers in Social Education emphasized that such methods enable students not only to understand concepts but also to internalize ethical values through social learning experiences. This model shifts the instructional paradigm from teacher-centered to student-centered learning, positioning students as moral agents responsible for their digital decisions and actions.

The learning media employed in this model utilize digital platforms and artificial intelligence selectively and ethically. AI is used as a learning support tool for exploring information, analyzing sources, and developing ideas, rather than replacing students' critical thinking processes. Students reported that the use of AI in learning becomes more meaningful when accompanied by clear ethical guidance from lecturers. Lecturers of Professional Ethics and Digital Literacy stressed that the use of digital media and AI must always emphasize transparency, academic honesty, and moral responsibility.

Evaluation in this model extends beyond cognitive assessment to include affective and behavioral dimensions of students' digital conduct. Evaluation methods include reflective self-assessment, observation of students' digital behavior during learning activities, and project-based assignments requiring ethical technology use. The Civic Education Study Program Coordinator noted that such an evaluation provides a more comprehensive understanding of students' ethical development compared to conventional assessments focused solely on written examinations.

The ethical integration of artificial intelligence represents a defining characteristic of this social education model. The findings indicate that students require clear guidance regarding the boundaries and responsibilities associated with AI use. Within this model, AI is positioned as a learning partner governed by moral and civic values. Lecturers in Educational Technology emphasized that ethical AI integration not only prevents misuse but also encourages students to develop critical technological literacy and ethical judgment.

The role of lecturers in this model undergoes a significant transformation, shifting from knowledge transmitters to moral facilitators. Lecturers guide students in understanding digital ethical dilemmas, cultivating value awareness, and facilitating critical reflection. Lecturers in Character Education and Professional Ethics emphasized that this role requires ethical consistency

and exemplary conduct in technology use. At the same time, students are positioned as digital moral agents who actively, reflectively, and responsibly engage with technology and artificial intelligence.

The findings confirm that the digital citizenship–based social education model is highly relevant to the needs of civic education in the AI era and has strong potential as an alternative framework for strengthening students' technological ethics. The model integrates values, technology, and citizenship into a unified pedagogical framework, enabling civic education to adapt critically and ethically to technological advancement and digital transformation.

Based on interviews, observations, and document analysis, the design of the digital citizenship–based social education model can be summarized into several key components, as presented in Table 2.

Table 2. Design of the Digital Citizenship–Based Social Education Model
for Strengthening Students' Technological Ethics

No	Model Component	Description of Research Findings
1	Learning Objectives	To develop civic education students who possess ethical awareness, digital responsibility, and reflective capacity in using technology and AI, grounded in Pancasila values and digital citizenship principles.
2	Learning Materials	Digital citizenship concepts, academic ethics, data privacy, AI use in education, digital ethical dilemmas, and contextual case-based reflection grounded in Pancasila values.
3	Instructional Methods	Dialogical, reflective, and participatory methods through group discussions, ethical decision-making simulations, and critical reflection on technology and AI use.
4	Learning Media	Digital platforms and AI are used selectively and ethically as tools for information exploration, analysis, and idea development, not as substitutes for critical thinking.
5	Evaluation	Comprehensive assessment covering cognitive, affective, and digital behavioral aspects through self-reflection, observation, and ethical project-based assignments.
6	AI Integration	AI is positioned as a learning partner guided by moral and civic values, supported by clear ethical guidelines to prevent misuse and promote critical technological literacy.
7	Lecturer's Role	Lecturers act as moral facilitators who guide ethical understanding, cultivate values, and facilitate students' critical reflection.
8	Student's Role	Students are positioned as active, reflective, and responsible digital moral agents in all technological practices and AI utilization.

Source: Primary research data

Implications of the Model for Strengthening Students' Technological Ethics

The findings indicate that the implementation of the digital citizenship–based social education model has significant implications for strengthening the technological ethics of students in the Pancasila and Civic Education Study Program, Faculty of Teacher Training and Education,

Universitas Mulawarman. This model not only influences how students understand technology and artificial intelligence, but also fosters ethical awareness, moral responsibility, and a more mature digital citizenship character. Interviews with students and lecturers reveal a shift in students' perspectives on technology, from viewing it merely as an academic tool to recognizing it as a space for practicing values and social responsibility.

From the perspective of ethical awareness, students demonstrate increased reflectivity in their use of digital technology and AI. Technological ethics is no longer perceived as a set of external prohibitions, but as an internal moral awareness guiding digital decision-making. Several students reported that reflective discussions and case-based ethical learning encouraged them to reconsider previously accepted practices, such as copying AI-generated outputs without critical engagement. Lecturers of Character Education and Professional Ethics emphasized that students' ethical awareness develops more effectively when learning provides opportunities for value reflection and moral dialogue, rather than merely transmitting rules. This finding suggests that the social education model shifts ethical orientation from external compliance toward internal moral consciousness.

Another implication is evident in students' responsibility in using artificial intelligence. Students increasingly understand the ethical boundaries between using AI as a learning support tool and misusing it in ways that compromise academic integrity. Interview findings indicate that students have become more selective and responsible in their use of AI, employing it for idea exploration, conceptual clarification, and structuring arguments rather than replacing the learning process itself. Lecturers of Digital Literacy and Educational Technology observed that this shift reflects the development of substantive digital responsibility, where students consider the ethical consequences of technological use. In this context, AI is positioned as a learning partner guided by human values rather than as an authority replacing human intellectual responsibility.

In terms of digital citizenship character formation, the model contributes to strengthening students' participatory, critical, and ethical engagement in digital environments. Students demonstrate greater respect for diverse perspectives, improved ethical communication, and increased awareness of the social impact of their digital activities. Lecturers of Civic Education and Social Education emphasized that the digital citizenship character developed through this model aligns with the fundamental objectives of civic education, namely fostering democratic, responsible, and ethical citizens. This character formation is reflected not only in online interactions but also in students' attitudes toward broader social and national issues in the digital era.

The model also has strategic implications for the development of the civic education curriculum. The findings suggest that the digital citizenship–based social education model provides an integrative framework for aligning civic education learning outcomes with the ethical challenges of the AI era. Lecturers and faculty leaders emphasized that technological ethics should be explicitly incorporated into the curriculum, not as supplementary material but as an inherent component of civic education. This model demonstrates how Pancasila values and digital citizenship principles can be internalized through contextual and reflective social learning processes.

At the level of higher education policy, the model highlights the urgency of establishing policies that support ethical technological practices and responsible AI literacy. Faculty leaders emphasized that academic policies must provide clear guidelines for the ethical use of AI in learning, assessment, and research. The digital citizenship–based social education model offers a relevant reference framework for such policy development, as it emphasizes the balance between technological innovation and moral responsibility. Ethics-oriented policies are essential for fostering an academic culture that is both adaptive and grounded in integrity.

The relevance of this model is also evident in promoting ethical AI literacy within higher education. Both students and lecturers agreed that AI literacy must extend beyond technical competence to include ethical understanding, value awareness, and recognition of the social implications of technology. The model provides a holistic approach to AI literacy by positioning ethics as its foundational element. Lecturers in Educational Technology emphasized that ethical AI literacy equips students with the critical awareness and social responsibility necessary to navigate ongoing digital transformation.

The findings demonstrate that strengthening students' technological ethics cannot be achieved through fragmented or purely normative approaches. The digital citizenship–based social education model offers an integrative framework that unites Pancasila values, digital citizenship, and AI ethics within a coherent pedagogical structure. Through this model, civic education students are prepared not only as competent technology users but also as ethical digital citizens who are responsible and committed to national and civic values in the AI era.

Based on interviews, observations, and reflective analysis of students' and lecturers' experiences, the implications of implementing the digital citizenship–based social education model can be summarized as presented in Table 3.

Table 3. Implications of the Digital Citizenship–Based Social Education Model
for Strengthening Students' Technological Ethics

No	Implication Aspect	Key Research Findings
1	Students' Ethical Awareness	Students demonstrate increased reflectivity in using technology and AI. Technological ethics is understood as internal moral awareness rather than mere compliance with external rules.
2	Responsibility in AI Use	Students become more selective and responsible in using AI for idea exploration and conceptual clarification, rather than as a substitute for thinking and learning processes.
3	Academic Integrity	Students' understanding of ethical boundaries in AI use contributes to strengthening academic integrity and preventing unethical academic practices.
4	Digital Citizenship Character	The model strengthens participatory, critical, respectful, and ethical digital communication aligned with Pancasila values and democratic citizenship principles.
5	Perspective on Technology	Students' perspectives shift from viewing technology as a technical tool to recognizing it as a space for value practice, social responsibility, and moral reflection.
6	Civic Education Curriculum Implications	The model serves as an integrative framework for aligning civic education learning outcomes with technological and AI ethical challenges in contextual and reflective ways.
6	Higher Education Policy Implications	The model provides a relevant reference for developing academic policies promoting ethical AI use in learning, assessment, and research.
7	Ethical AI Literacy Development	The model promotes holistic AI literacy, integrating technical competence with ethical understanding and awareness of technology's social impact.

Source: Primary research data

Discussion

The findings of this study affirm that the social education model based on digital citizenship cannot be understood merely as a technical pedagogical innovation, but rather as an ethical-sociological framework that functions to bridge technological and artificial intelligence developments with the formation of students' moral consciousness. The findings regarding the increased ethical awareness, responsible use of AI, and the strengthening of digital citizenship character demonstrate a close interconnection between the conceptual foundation, design, and implications of the developed social education model. In this context, education does not merely transmit knowledge but also constructs value orientations that are internalized through social practice and moral reflection. The perspective of social fiqh emphasizes that education integrating individual, social, and ethical dimensions is a prerequisite for the creation of a civilized social order, in which technology is positioned as a means of public benefit (maslahah), rather than a source of social harm (Al-Fauzan, 2007); (Qardhawi, 1997).

The dialogue between the research findings and character education theory reveals that the increase in students' ethical awareness results from a value-based educational approach that is not doctrinal but dialogical and reflective. Ethical awareness in this study develops through processes of reflection, social dialogue, and meaningful learning experiences, thereby enabling technology ethics to be understood as an internal moral awareness rather than mere compliance with external regulations. This finding aligns with character education theory, which emphasizes the integration of moral knowing, moral feeling, and moral action simultaneously within the educational process (Lickona, 1991); (Lickona, 1992). Furthermore, the development of students' ethical awareness can be understood through moral development theory, which positions dialogue, moral reasoning, and social experience as key factors in the formation of individual ethical maturity (Kohlberg, 1984); (Dewey, 1938). In this regard, the findings reinforce the view that effective character education must integrate cognitive, affective, and social praxis dimensions contextually (Fitri, 2017); (Febrianshari, 2018). Similarly, in the Islamic educational tradition, the internalization of ethical values is understood as a process of cultivating social morality that places moral responsibility as the foundation of social relations, including within increasingly complex digital environments (Mansur, 2002); (Surana, 2017).

The findings on responsible AI use demonstrate a strong dialogue between the design of the social education model and technology ethics theory. Students no longer perceive AI as an authoritative source of knowledge that replaces human thinking, but rather as a learning tool that must be governed by ethical values and moral considerations. This phenomenon reflects a response to the ethical paradox of technology in the Society 5.0 era, in which technological advancement is often not accompanied by the ethical readiness of its users (Bimantoro et al., 2021); (Rahayu, 2021). In this context, the social education model based on digital citizenship functions as a balancing mechanism between technological sophistication and ethical responsibility, as emphasized in studies on paradigm shifts in education in the digital era (Bassar et al., 2021); (Tampubolon et al., 2022).

Furthermore, the positioning of students as digital moral agents and lecturers as moral facilitators demonstrates the alignment between the research findings and value-based learning model development theory. AI literacy, as developed in this study, does not end with technical competence but encompasses ethical, social, and spiritual dimensions. Islamic education and Civic Education (PPKn) hold a strategic position in shaping such value orientations, as both function as

platforms for fostering national awareness, tolerance, and social responsibility in digital spaces (Al Fahri, 2023); (Harefa et al., 2025). Therefore, the integration of Islamic values, Pancasila principles, and digital ethics within the social education model is not only normatively relevant but also contextually responsive to the challenges of higher education in Indonesia.

The theoretical dialogue between the findings and digital citizenship literature is also evident in the strengthening of students' digital citizenship character. The development of critical, participatory, tolerant, and responsible attitudes through this model aligns with studies on multicultural education and efforts to prevent radicalism in digital environments (Nurcahyono, 2018); (Panuntun & Aziz, 2023); (Fikriyah et al., 2025); (Junaidi & Nugroho, 2023); (Lumbu et al., 2023); (Nasution & Albina, 2024). The critical, tolerant, and responsible dispositions demonstrated by students reflect the effectiveness of social education in mitigating identity conflict and the misuse of digital media (Furqon, 2020); (Nurhabibi et al., 2025); (Zahrotunnimah, 2018). These findings are consistent with research emphasizing the importance of social cohesion, solidarity, and the strengthening of national values in addressing threats of social disintegration in the digital era (Arifin, 2019); (Tejowibowo & Lestari, 2017); (Angga, 2021).

From a curricular perspective, the relevance of this model to the development of the PPKn curriculum reinforces the finding that curricula must remain adaptive to social and technological change without losing their value foundation. The Merdeka Curriculum and 21st-century learning demand pedagogical flexibility while still requiring a clear ethical framework to ensure that digital transformation does not obscure the fundamental objectives of national education (Indarta et al., 2022); (Mahabatillah et al., 2024);(Sujana, 2019). From the perspective of Islam as a body of knowledge, education must be grounded in an epistemology that integrates rationality, ethics, and a humanistic orientation (Kuntowijoyo, 2006).

The higher education policy implications revealed in this study are also consistent with the literature emphasizing the urgency of AI ethics regulation, personal data protection, and civilized digital communication. Academic policies governing AI use must position ethics as a primary principle rather than merely technical compliance (Suari & Sarjana, 2023); (Waluyo, 2024); (Anggraini, 2024). In this regard, anti-corruption education and academic integrity constitute integral components of technology ethics, as both emphasize honesty, responsibility, and accountability as foundational values of public life (Siregar & Chastanti, 2022).

The development of ethical AI literacy, as demonstrated in this study, also intersects with the concept of spiritual education and social morality. Technological literacy that lacks spiritual depth has the potential to generate a crisis of meaning and moral decline (Susanti, 2016); (Sholikhah, 2021). Therefore, the social education approach based on digital citizenship, integrated with Islamic values, offers an alternative model for fostering balance between technological intelligence and moral wisdom (Malik et al., 2024); (Sari, 2024).

Conceptually, this discussion confirms that the social education model based on digital citizenship functions as a bridge between social transformation and normative values. This model not only addresses the pragmatic challenges of AI utilization but also contributes to the formation of a humanistic, ethical, and civilized educational paradigm. Thus, the findings expand the discourse on ethics education in the digital era and reinforce the position of value-based education as a fundamental pillar for human and societal development amid the increasingly complex currents of digitalization.

CONCLUSION

This study concludes that the social education model based on digital citizenship possesses both conceptual and contextual relevance as a pedagogical framework for strengthening academic ethics and technology ethics among Civic Education (PPKn) students in the era of artificial intelligence. Through a qualitative approach, the findings indicate that the integration of digital citizenship values with civic and Pancasila education is understood by students and lecturers not merely as conceptual instruction, but as a learning process fostering ethical awareness, digital responsibility, and moral reflection in the use of technology and AI. The positioning of students as digital moral agents and lecturers as moral facilitators emerges as an effective pedagogical strategy to bridge the gap between normative–cognitive instruction and the social–digital realities encountered by students.

The implications of this study suggest that strengthening technology ethics requires an integrative, reflective, and contextual social education design rather than a purely partial or instructional approach. The digital citizenship–based social education model offers a conceptual reference for the development of PPKn curricula, higher education policy formulation, and ethical and responsible AI literacy. Thus, digital citizenship education is positioned not merely as an adaptive response to technological advancement but as a foundational framework for cultivating

responsible, humanistic digital citizenship aligned with national values amid ongoing global technological transformation.

REFERENCES

Al-Fauzan, A. A. (2007). *Fikih Sosial: Tuntunan dan Etika Hidup Bermasyarakat*. Qisthi Press.

Al Fahri, M. Z. (2023). Peran Pendidikan Agama Islam dalam Membentuk Toleransi Beragama pada Siswa di Era Multikultural. *Innovative: Journal of Social Science Research*, *3*(5), 8581–8590.

Angga, L. O. (2021). Kriminologi dan Perspektif Sosial dalam Membangun Kembali Semangat Generasi Muda untuk Mengatasi Ancaman Radikal, Terorisme, Narkoba dan Efek Negatif di Media Sosial. *Bacarita Law Journal*, *1*(2). https://doi.org/10.30598/bacarita.v1i2.3615

Anggraini, N. (2024). Etika Komunikasi Bagi Pengguna Media Sosial Menurut Al-Qur'an. *Journal of Comprehensive Islamic Studies*, *2*(2), 1–9. https://journal.centrism.or.id/index.php/jocis/article/view/242%0Ahttps://journal.centrism.or.id/index.php/jocis/article/download/242/132

Arifin, J. (2019). Kohesi Sosial Sanro dan Guru dalam Memaksimalkan Fungsi Adat di Masyarakat Kabupaten Gowa. *Equilibrium: Jurnal Pendidikan*, *5*(1), 21–25. https://doi.org/10.26618/equilibrium.v5i1.970

Bassar, A. S., Ruswandi, U., & Erihadiana, M. (2021). Pendidikan Islam: Peluang dan Tantangan di Era Global dan Multikultural. *J-PAI: Jurnal Pendidikan Agama Islam*, *8*(1), 63–75. https://doi.org/10.18860/jpai.v8i1.9577

Bimantoro, A., Pramesti, W. A., Bakti, S. W., Samudra, M. A., & Amrozi, Y. (2021). Paradoks Etika Pemanfaatan Teknologi Informasi di Era 5.0. *Jurnal Teknologi Informasi*, *7*(1), 58–68. https://doi.org/10.52643/jti.v7i1.1425

Dari, U., Putri, L. E., Sari, N. W., Adha, Z., Sari, R. M., & Oktavia, N. H. (2025). Pendidikan Antikorupsi : Peran Institusi Pendidikan dalam Membangun Integritas. *Sosial : Jurnal Ilmiah Pendidikan IPS*, *3*(1), 54–64.

Dewey, J. (1938). *Experience and Education*. Macmillan.

Febrianshari, D. (2018). Analisis Nilai-Nilai Pendidikan Karakter dalam Pembuatan Punch Zaman Now. *Jurnal Pemikiran Dan Pengembangan SD*, *6*(1), 88–95.

Fikriyah, H. N., Nabilah, P., & Sari, H. P. (2025). Peran Pendidikan Islam dalam Menanamkan Nilai-Nilai Multikulturalisme di Sekolah. *QOSIM : Jurnal Pendidikan, Sosial & Humaniora*, *3*(2), 541–550. https://doi.org/10.61104/jq.v3i2.939

Fitri, A. Z. (2017). *Pendidikan Karakter berbasis Nilai dan Etika di Sekolah, (Yogyakarta: Ar-Ruzz Media,2017), Cet. II, 20*.

Furqon, M. (2020). Pendidikan Multikultural dalam Dunia Pendidikan di Indonesia. *Jurnal Pendidikan Nusantara: Kajian Ilmu Pendidikan Dan Sosial Humaniora* , *1*(1), 1–12.

Hadari Nawawi. (2015). *Metode Penelitian Bidang Sosial* (14th ed.). Gadjah Mada University Press.

Harefa, M., Akuatik, S. D., Sains, F., & Nias, U. (2025). Peran Pendidikan Kewarganegaraan dalam Membentuk Etika Sosial Remaja di Era Modern. *Pakehum: Jurnal Ilmu Pendidikan Pancasila, Kewarganegaraan, dan Hukum*, *02*(2), 61–67.

Indarta, Y., Jalinus, N., Waskito, W., Samala, A. D., Riyanda, A. R., & Adi, N. H. (2022). Relevansi Kurikulum Merdeka Belajar dengan Model Pembelajaran Abad 21 dalam Perkembangan Era Society 5.0. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(2), 3011–3024. https://doi.org/https://doi.org/10.31004/edukatif.v4i2.2589

Junaidi, K., & Nugroho, A. I. (2023). Upaya pre-emptif Satuan Intelijen Keamanan Kepolisian Resor

Kota Palangka Raya dalam menangani Radikalisme. *Jurnal Sociopolitico*, *5*(1).

Kohlberg, L. (1984). *The Psychology of Moral Development: The Nature and Validity of Moral Stages*. Harper \& Row.

Kuntowijoyo. (2006). *Islam Sebagai Ilmu : Epistemologi, Metodologi dan Etika*. Tiara Wacana.

Lickona, T. (1991). *Educating for Character: How Our Schools can Teach Respect and Responsibility*. Bantam Books.

Lickona, T. (1992). Educating for Character: A Comprehensive Approach. *Educational Leadership*, *49*(2), 6–11.

Lumbu, A., Salim, C., Islamianingrum, I., & Erlina, T. (2023). Pemberdayaan Majelis Ta'lim al-Hidayah Lampung Tengah dalam Pencegahan Paham Radikalisme dan Konflik Antar Umat Beragama. *Dedikasi: Jurnal Pengabdian Masyarakat*, *4*(2). https://doi.org/10.32332/d.v4i2.5412

Mahabatillah, K., Erhamwilda, & Agustin, M. (2024). Analisis pengembangan kurikulum merdeka dan implementasinya. *Golden Age : Jurnal Pendidikan Anak Usia Dini*, *8*(1), 195–201. https://doi.org/10.29313/ga

Malik, M. S., Nikmah, L., Wati, I. F., & Ardhyantama, V. (2024). Etika Komunikasi dalam Perspektif Al-Qur'an dan Hadis. *ASNA: Jurnal Kependidikan Islam dan Keagamaan*, *6*(2), 24–40.

Mansur, A. (2002). Etika Profesi: Sebuah Upaya Pengapresiasian Etis-Filosofis. *Al-Fikra : Jurnal Ilmiah Keislaman*, *3*(2), 200–212. https://doi.org/10.24014/af.v3i2.3746

Mely, W., Br, B., Firmansyah, A., & Digital, P. E. (2024). *Perubahan Paradigma Pendidikan di Era Digital*. *4*, 1–10.

Mumpuni, D. A., Muhibbin, A., Dasar, M. P., & Surakarta, U. M. (2025). Penguatan Karakter Kebangsaan Melalui Pendidikan Kewarganegaraan (PKn) Pada Siswa Kelas V Sekolah Dasar. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *10*(1), 138–151. https://doi.org/10.23969/jp.v10i01.21650

Nasution, R., & Albina, M. (2024). Pendidikan Multikultural : Membangun Kesatuan dalam Keanekaragaman Multicultural Education : Building Unity in Diversity tindakan nyata yang mencerminkan prinsip-prinsip multikulturalisme dalam. *Scholars: Jurnal Sosial Humaniora dan Pendidikan*, *2*(2), 164–173. https://doi.org/10.31959/js.v2i2.2781

Nurcahyono, O. H. (2018). Pendidikan Multikultural di Indonesia: Analisis Sinkronis dan Diakronis. *Habitus: Jurnal Pendidikan, Sosiologi, & Antropologi*, *2*(1), 105. https://doi.org/10.20961/habitus.v2i1.20404

Nurhabibi, Arifannisa, Ismail, D., Kuswandi, D., Anggraeni, A. F. D. G., & Aji, Y. A. (2025). Strategi Lembaga Pendidikan Islam dalam Membentuk Karakter Siswa di Era Digital. *Jurnal Pendidikan Indonesia*, *5*(2), 249–258. https://doi.org/10.59818/jpi.v5i2.1527

Panuntun, S., & Aziz, A. (2023). Pendidikan Multikulturalisme dan Prospeknya di Indonesia. *Journal Syntax Idea*, *5*(8), 17–23.

Qardhawi, Y. (1997). *Norma dan Etika Islam* (II). Gema Insani.

Rahayu, K. N. S. (2021). Sinergi Pendidikan Menyongsong Masa Depan Indonesia di Era Society 5.0. *Edukasi: Jurnal Pendidikan Dasar*, *2*(1), 87–100. https://stahnmpukuturan.ac.id/jurnal/index.php/edukasi/article/view/1395

Ratnaningtyas, E. M., Ramli, S. Edi S., Suliwati Desi, Bekty Taufiq Ari Nugroho, Karimuddin, Muhammad Habibullah Aminy, Nanda Saputra, Khaidir, & Jahja, A. S. (2023). *Metodologi Penelitian Kualitatif*. Yayasan Penerbit Muhammad Zaini.

Sari, W. (2024). Hadis dan Etika Lingkungan: Perspektif Ekologi dalam Tradisi Islam. *Future Academia : The Journal of Multidisciplinary Research on Scientific and Advanced*, *2*(3), 218–229. https://doi.org/10.61579/future.v2i3.137

Sholikhah, K. (2021). Nilai-Nilai Pendidikan Karakter Pada Qs. Al-an'Am Ayat 151 Dan Implementasinya terhadap Pembelajaran PAI di Sekolah. *Dar El-Ilmi: Jurnal Studi Keagamaan …*, *2*(1), 152–169. http://e-jurnal.unisda.ac.id/index.php/dar/article/view/2868

Siregar, A. A., & Chastanti, I. (2022). Implementasi Pendidikan Antikorupsi di Sekolah. *Sosial Horizon: Jurnal Pendidikan Sosial*, *9*(1), 13–22. https://doi.org/10.31571/sosial.v9i1.1799

Suari, K. R. A., & Sarjana, I. M. (2023). Menjaga Privasi di Era Digital: Perlindungan Data Pribadi di Indonesia. *Jurnal Analisis Hukum (JAH)*, *6*(1), 132–142. https://doi.org/10.38043/jah.v6i1.4484

Sugiyono. (2017). *Metode Penelitian Pendidikan, Pendekatan Kuantitatif, Kualitatif dan R&D, (Bandung: Alfabeta, 2017), Cet. XXV, 295*.

Sujana, I. W. C. (2019). Fungsi dan Tujuan Pendidikan Indonesia. *Adi Widya: Jurnal Pendidikan Dasar*, *4*(1), 29. https://doi.org/10.25078/aw.v4i1.927

Surana, D. (2017). Model Internalisasi Nilai-nilai Islami dalam Kehidupan Siswa-siswi SMP Pemuda Garut. *Ta Dib : Jurnal Pendidikan Islam*, *6*(1), 189–201. https://doi.org/10.29313/tjpi.v6i1.2372

Susanti, S. E. (2016). Spiritual Education : Solusi terhadap Dekadensi Karakter dan Krisis Spiritualitas di Era Global. *Inzah Online Journal*, *1*(1), 1–42. https://core.ac.uk/works/78319153

Tampubolon, P., Thesalonika, ²nathasya, & Rustini, T. (2022). Peran Media Pembelajaran Berbasis Teknologi dalam Pembelajaran Daring. *Jurnal Ilmiah Sultan Agung*, *5*, 9–21.

Tejowibowo, D. N., & Lestari, P. (2017). Strategi dalam Membangun Solidaritas Sosial Pada Komunitas Generasi Muda Penyelamat Budaya (Gemamaya). *Jurnal Pendidikan Sosiologi*, *7*(7), 1–23. https://journal.student.uny.ac.id/index.php/societas/article/view/12788

Waluyo, D. (2024). *Era Baru Perlindungan Data Pribadi*. https://indonesia.go.id

Zahrotunnimah, Z. (2018). Pola Operasionalisasi Politik Identitas di Indonesia. *'adalah*, *2*(11). https://doi.org/10.15408/adalah.v2i11.9438