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Internalizing Civic Values in the Digital Era: The Role of Artificial Intelligence in Civics Education (PPKn)

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ABSTRACT
Background: The growing presence of artificial intelligence (AI) in education is beginning to reshape how civic values are internalized in Pancasila and Civic Education (PPKn). This study examines the challenges and opportunities of internalizing civic values in the digital era, describes the role of AI in PPKn instruction, and identifies how AI can be used to strengthen students' civic character. *Method:* A descriptive qualitative case study was conducted at SMK Muhammadiyah 3 Yogyakarta, involving a PPKn teacher and tenth-grade students selected through purposive sampling. Data were collected through in-depth interviews, classroom observation, and documentation, and were analyzed using the interactive model of Miles and Huberman. *Result anda Discussions:* The findings show that internalizing civic values in the digital era involves several challenges, including a decline in students' social ethics, a growing dependence on AI, and the absence of clear institutional guidelines for classroom AI use. At the same time, digital technology creates opportunities for creativity, more interactive learning, and stronger digital literacy. Teachers and students use AI as a learning resource, a medium for discussion, and a support for project-based activities that help students understand and practice civic values such as honesty, responsibility, tolerance, mutual cooperation (*gotong royong),* and digital ethics. The results further indicate that AI use is most effective when combined with collaborative and contextual learning under consistent teacher guidance. *Conclusion:* The study concludes that AI can support the internalization of civic values when it is used purposefully, ethically, and in line with the goals of PPKn instruction.

Keywords: Artificial İntelligence, Value İnternalization, Civic Values, PPKn, Civic Character

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INTRODUCTION

The Fourth Industrial Revolution has brought sweeping change to nearly every area of life, education included. The rapid expansion of digital technology, wider internet access, the pervasiveness of social media, and the growing use of artificial intelligence (AI), has altered how people obtain information, interact with one another, and make everyday decisions (Dito & Pujiastuti, 2021). In education, these shifts affect not only the learning process itself but also how schools cultivate students' character and civic values. Pancasila and Civic Education (PPKn) is therefore under pressure to keep adapting so that it can continue instilling national values amid the continuing spread of digital technology. This challenge is especially pressing because young people, the heaviest users of digital technology, now spend a substantial share of their day online (Yunita et al., 2025). PPKn instruction accordingly needs to integrate digital literacy and use technology judiciously, so that it keeps building civic values, shaping students' character, and developing the kind of digital civic competence the twenty-first century demands (Yunita et al., 2025).

PPKn is not confined to teaching students about the constitution, state institutions, and national history. It also plays a central role in shaping learners who are principled, ethical, and democratically minded, in line with the national education goals set out in Law No. 20 of 2003 on the National Education System. PPKn is therefore a strategic vehicle for instilling values such as honesty, responsibility, tolerance, mutual cooperation (gotong royong), discipline, patriotism, and digital ethics (Armianti et al., 2024). Instilling these values is not simply a matter of delivering content; it also requires habituation and internalization so that students can apply them in daily life, both offline and online (Anugrah & Rahmat, 2024). UNESCO, for its part, has stressed that AI can improve the quality of learning, widen access to education, and support pedagogical innovation, provided its use is balanced with attention to ethics, digital literacy, and academic integrity (Defila Rusly Norsly Lumi et al., 2026).

The use of digital technology and AI in education continues to expand. A UNESCO report drawing on Digital Education Council data indicates that roughly 86% of students across various countries have already used AI in their studies, and more than half use it routinely to complete academic tasks (Al Zaidy, 2024). This suggests that AI has become embedded in how the younger generation learns. In Indonesia, the

Indonesian Internet Service Providers Association (APJII) reported internet penetration of 79.5% in 2024, with teenagers forming the largest user group; on average, adolescents spend six to eight hours a day on digital devices, mostly for social media and other digital content (Rahma Vania Eka Putri & Suyahman, 2026). Such intensive engagement with digital technology carries both benefits and risks for young people's everyday lives.

Even so, internalizing civic values in the digital era continues to face real obstacles. A preliminary study at SMK Muhammadiyah 3 Yogyakarta pointed to a shift in students' social behavior, marked by declining interaction quality and weaker communication ethics. The school's PPKn teacher observed that heavy use of gadgets and social media tends to reduce direct interaction among students, while family and environmental factors also shape character development (Ayubi Adim Isral et al., 2025). Students, for their part, see social media as making communication and information-seeking easier, but also as something that can erode communication ethics and reduce productivity when used excessively, a pattern consistent with earlier research linking uncontrolled social media use to cyberbullying, the spread of hoaxes, weak critical literacy, and poor digital ethics (Korompis, 2025).

At the same time, AI platforms such as ChatGPT, Gemini, and Gamma are opening new possibilities for learning (Muhammad Ikhlas et al., 2025). Teachers interviewed for this study reported that AI helps them prepare materials, design learning media, build quizzes, and develop teaching tools more efficiently. Yet AI use brings its own set of problems. Teachers noticed that some students lean on AI to finish assignments without engaging in adequate analysis, and several students voiced concern about becoming dependent on AI as well as about the privacy of their personal data. This mirrors earlier findings that excessive AI use can weaken critical thinking, creativity, and independent learning, while raising the risk of plagiarism (Tasya & Dwinta, 2025; Mayuning Candra Negara & Hastining Rahayu Negara, 2025). Gunagraha et al. (2025) likewise found that some students use AI to obtain instant answers without genuine analysis or reflection. AI use in the classroom therefore needs to be steered toward deepening students' understanding rather than merely easing task completion, so that their thinking skills and character continue to develop in tandem (Dedek Helida Pitra et al., 2025).

The urgency of this study is underscored by how widespread AI and internet use already are among adolescents. UNESCO data put AI use among students at 86% (Al Zaidy, 2024), while APJII (2024) reports 79.5% internet penetration among Indonesian teenagers. At the same time, various studies point to a rise in problems related to digital ethics and academic integrity. Indonesia's Ministry of Education, Culture, Research, and Technology (2023) recorded that a number of teachers have observed more academic cheating linked to digital technology, and a 2023 survey by the Indonesian Commission for Child Protection (KPAI) found persistently high rates of cyberbullying alongside a limited ability among adolescents to distinguish accurate information from hoaxes. These conditions underline the need to strengthen digital literacy and civic values through classroom instruction (Indra Vitaharsa, 2026).

If left unmanaged, AI use risks weakening critical thinking, deepening technological dependence, and eroding students' academic integrity (Tasya & Dwinta, 2025), outcomes that would work against the national education goal of building character, competence, and civic responsibility (Nurhalisyah et al., 2024). What is needed, then, is a pedagogical approach that harnesses AI productively without losing sight of character formation.

This study also speaks to the Sustainable Development Goals (SDGs), in particular SDG 4 on quality education, SDG 8 on building a competent workforce, and SDG 16 on strengthening justice, responsibility, and peaceful coexistence. It further aligns with national development priorities that emphasize educational transformation, character building, and stronger digital literacy amid technological change. While AI in education has already attracted considerable research attention, most existing work centers on the technical dimensions of AI use, digital literacy, or ethical issues in general terms. Studies by Al Zaidy (2024), Labobar et al. (2024), Raharjo and Rohmadi (2025), and Tasya and Dwinta (2025) have examined the opportunities and challenges AI poses for education without specifically addressing how AI can serve as a vehicle for internalizing civic values within PPKn instruction. Research on academic integrity and digital literacy has likewise tended not to connect AI use with PPKn strategies aimed at character formation.

Prior studies have explored AI in education chiefly in terms of learning effectiveness, digital literacy, and the ethical challenges AI use presents. Research that specifically examines AI as a vehicle for internalizing civic values within PPKn instruction, particularly at the secondary-school level, remains scarce, and few studies have explained how AI might be used pedagogically to strengthen civic character without undermining students' independent thinking. Building on this gap, the present study sets out to analyze the challenges and opportunities of internalizing civic values in the digital era, to examine the role of AI in PPKn instruction, and to describe strategies for using AI that support the strengthening of students' civic character.

METHOD

Reseacrh Design

This study used a qualitative approach with a single-case study design (Yin, 2014) to examine how artificial intelligence (AI) is used in PPKn instruction and how that use contributes to strengthening students' civic character at SMK Muhammadiyah 3 Yogyakarta. A case study design was chosen because the phenomenon under investigation, the

internalization of civic values through AI-supported learning, is context-bound and best understood through an in-depth, real-setting inquiry rather than through decontextualized measurement. The case boundary was defined as PPKn instruction for the tenth-grade cohort at the research site during one semester, encompassing classroom teaching, AI-assisted assignments, and related project-based activities.

The study was conducted at SMK Muhammadiyah 3 Yogyakarta. Participants were selected through purposive sampling based on two explicit criteria: (1) direct involvement in PPKn instruction that incorporates digital technology, and (2) demonstrable experience using AI platforms in a teaching or learning capacity. On this basis, the primary informants comprised one PPKn teacher with more than 20 years of teaching experience and an established practice of integrating digital technology into instruction, and a group of tenth-grade students with hands-on experience using AI platforms such as ChatGPT, Gemini, and Gamma for schoolwork (Patton, 2015). The teacher was treated as the key informant given her extended experience mediating technology use in the PPKn classroom, while student informants provided the learner's perspective on how AI is actually used and experienced in day-to-day learning.

Three techniques were used in combination to allow methodological triangulation:

1. Semi-structured interviews. Interviews were guided by a protocol covering four thematic areas: (1) the current state of civic values among students in the digital era, (2) the challenges and opportunities of value internalization, (3) how AI is used in PPKn learning, and (4) models of AI application that support the strengthening of student character. The semi-structured format allowed follow-up probes while keeping the discussion anchored to these themes.
2. Classroom observation. Non-participant observation was carried out during PPKn lessons to record how teachers and students actually interacted with digital tools in real time, including which platforms were used, how tasks were structured, and how students responded during discussion and project work, rather than relying solely on self-reported accounts.
3. Documentation review. Supporting documents were collected and analyzed, including lesson plans, digital teaching materials, samples of student work produced with AI assistance, and other records relevant to the research questions (Bowen, 2009).

Data were analyzed using the interactive model of Miles and Huberman (1994), comprising three concurrent stages: (1) data reduction, in which interview transcripts, field notes, and documents were coded and organized around the study's three focus areas, challenges and opportunities, the role of AI, and strategies for strengthening civic character; (2) data display, in which coded data were organized into matrices and summary tables (presented as Tables 1-3) to make patterns and relationships across informants and data sources easier to identify; and (3) conclusion drawing and verification, in which preliminary interpretations were continuously checked against the raw data and revised as new data emerged, until stable patterns could be confidently reported.

Data credibility was established through source and technique triangulation, comparing accounts from the teacher and students and cross-checking interview data against observation and documentation, together with member checking, in which preliminary interpretations were shared back with key informants to confirm accuracy, and thick, detailed description of the research context to support transferability (Lincoln & Guba, 1985). This combination of strategies followed established criteria for rigor in qualitative inquiry (Creswell & Poth, 2018).

The study proceeded through four stages: (1) preparation, including refining the research focus and instruments based on the preliminary study; (2) data collection, carried out iteratively so that emerging themes from early interviews could inform subsequent observation and documentation; (3) data analysis, following the interactive model described above; and (4) reporting, in which findings were organized thematically and cross-checked against the study's three research questions.

The study observed standard ethical principles for qualitative research (Creswell & Poth, 2018), including obtaining informed consent from all informants, protecting participant confidentiality through the use of non-identifying descriptions, and ensuring that the research process posed no harm to participants.

RESULTS AND DISCUSSION

Reseach Findings

This study set out to analyze: (1) the challenges and opportunities of internalizing civic values in the digital era; (2) the role of AI in supporting civic-value-based PPKn instruction; and (3) strategies for using AI that strengthen students' civic character. The findings below are drawn from in-depth interviews, participatory observation, and documentation.

1. Challenges and Opportunities in Internalizing Civic Values in the Digital Era

The findings show that internalizing civic values in the digital era involves both challenges and opportunities at once. According to the PPKn teacher, one recurring challenge is a shift in students' social behavior marked by declining interactional ethics: heavy use of gadgets and social media appears to reduce direct social interaction, while family and environmental factors also weigh heavily on character formation. A further challenge concerns AI use in learning itself. The teacher observed that some students lean on AI to complete assignments without engaging in deeper analysis, an observation echoed by students who admitted that AI makes it easy to obtain quick answers, which can erode the habit of independent thinking. Several students also raised concerns

about the privacy of their personal data when using digital tools.

At the same time, the digital era opens real opportunities for strengthening civic values. Both the teacher and students saw digital technology as a resource for creativity, collaboration, and more interactive learning. The teacher noted that students showed greater enthusiasm for digital projects such as videos, posters, podcasts, and digital campaigns built around Pancasila and civic themes, while students themselves said technology made group work easier. Observation confirmed that platforms such as Kahoot, Canva, YouTube, and the school's social media accounts helped raise student participation, and student work samples showed that they were able to package information creatively while connecting it to national values. Taken together, these findings suggest that digital technology can support the internalization of civic values when it is used appropriately in the learning process.

Table I. Summary of Challenges and Opportunities in Internalizing Civic Values in the Digital Era

Aspect	Challenges	Opportunities
Social Ethics	Declining courtesy, less social interaction, weaker communication ethics	Interactive learning through digital platforms increases student engagement
Independent Thinking	Dependence on instant AI answers, reduced critical thinking, weak independent analysis	Digital project-based tasks encourage creativity and reflective thinking
Family and Environment	Family background is highly influential; school time is limited	Schools act as a bridge for character-building through teacher role-modeling
Regulation and Policy	Few formal school policies on AI use	Flexibility for teachers to innovate creatively with AI
Digital Literacy	Low awareness of digital ethics, misuse of social media	Digital literacy grows through technology-based learning experiences
Academic Integrity	Risk of cheating, plagiarism, dishonesty in assignments	AI can serve as a tool for moral reflection when properly guided

2. The Role of Artificial Intelligence in Supporting Civic Value Based PPKn Instruction

AI was found to play a substantial role in supporting PPKn instruction. According to interview data, students use platforms such as ChatGPT and Gemini to obtain information, understand course material, and complete assignments, and they generally find that AI delivers explanations faster and in a more accessible form. AI also gives students room to search for information and pose questions independently, in line with their own learning needs.

Beyond serving as an information source, AI supports students' engagement with civic values themselves. Teachers use AI in a range of project-based activities, video production, presentations, and case analysis, connected to Pancasila values and community life. Through these activities, students have the opportunity to understand and reflect on values such as honesty, responsibility, tolerance, cooperation, patriotism, and digital ethics. AI, in other words, functions not merely as a source of information but also as a medium that supports the strengthening of civic values.

Observation confirmed that AI and other digital media raise student engagement more broadly. Teachers use platforms such as ChatGPT, Kahoot, Canva, and YouTube to support discussion, quizzes, case studies, and problem-solving, and this appears to make students more willing to ask questions, join discussions, and search for information on their own. Documentation of student work likewise showed a range of digital outputs reflecting genuine understanding of both the subject matter and its civic dimensions.

The findings also point to real challenges in AI use. Teachers and students alike described a tendency among some students to accept AI-generated answers without further analysis, a pattern that risks weakening independent learning and critical thinking. Concerns about data privacy and irresponsible technology use also surfaced. AI use in PPKn instruction therefore requires ongoing teacher guidance and oversight, so that the technology is used wisely and continues to support the strengthening of character, digital ethics, and civic values.

Table II. The Role of Artificial Intelligence in Civic Value Based PPKn Intruction

Dimension of AI's Role	Forms of Use	Impact on Civic Values
Information Source	ChatGPT and Gemini for searching information, answering questions, and explaining material	Speeds up concept understanding and improves access to learning
Moral Reflection Tool	Case simulations, discussion of digital issues, videos on Pancasila values	Raises awareness of digital ethics, honesty, and responsibility
Medium for Value Reinforcement	Posters, digital campaigns, podcasts, educational videos	Strengthens mutual cooperation, tolerance, nationalism, and democratic values
Teaching Aid	Slide decks, quiz items, modules, interactive quizzes (Gamma, ChatGPT, Kahoot)	Improves teachers' time efficiency, freeing capacity for character mentoring
Creativity Facilitator	Digital project-based tasks, creative content, interviews, observation	Fosters creativity, independence, and digital literacy skills

3. Strategies for Using Artificial Intelligence to Strengthen Students' Civic Character

The findings indicate that AI use in PPKn instruction is more effective when it is combined with interactive, collaborative activities oriented toward civic values. Students reported that AI becomes more engaging when paired with interactive quizzes, discussion, simulation, and question-and-answer sessions, a combination they felt improved both understanding and engagement.

This aligns with teacher accounts describing AI use across a range of project-based activities, including field observation, interviews, information gathering, and the production of digital content such as videos, podcasts, and educational campaign media. Through these activities, students gain not only civic knowledge but also opportunities to apply that knowledge in everyday contexts. Teachers observed that character strengthening becomes visible through students' participation in discussion, presentation, group work, and the quality of the work they produce.

Observation and documentation showed that digital platforms such as ChatGPT, Kahoot, Canva, and YouTube help raise student engagement, with activities such as quizzes, case studies, simulations, presentations, and digital projects encouraging more active discussion, cooperation, critical thinking, and digital literacy. These activities also give students room to reflect on civic values in situations close to their own lives. Crucially, the success of AI use depends heavily on the teacher's role: teachers act as facilitators who steer AI use toward the aims of instruction and character strengthening, emphasizing honesty, responsibility, and digital ethics so that technology is not turned into a means of academic dishonesty. Students, for their part, recognized that AI should function as a learning aid rather than a substitute for independent thinking and learning.

Beyond the teacher's role, digital infrastructure also matters for successful AI implementation. Adequate internet access, available devices, and school support are all important enabling conditions, alongside continued efforts to build teacher competence and strengthen digital literacy and ethics so that AI use remains effective and sustainable over time.

Table III. An Effective Model for Using AI to Strengthen Civic Character

Model Component	Description	Success Indicators
Interactive Learning	Interactive quizzes (Kahoot), discussion, mock trials, role-play on social media cases	Increased active engagement, conceptual understanding, and value reflection
Contextual Projects	Interviews, observation, digital campaigns (podcasts, videos), poster-making	Applying values in real life; developing creativity
Teacher as Facilitator	Mentoring, modeling, and monitoring AI use	Ensuring ethical AI use; safeguarding character integrity
Reinforcing Ethics	Emphasis on honesty, responsibility, and independent thinking	Preventing dependence, plagiarism, and academic dishonesty
Infrastructure Support	Wi-Fi, devices, digital applications, teacher training	Supporting the smooth and sustainable implementation of AI
Hybrid Approach	Combining digital technology with character education, collaboration, and moral simulation	Balancing cognitive, affective, and psychomotor development

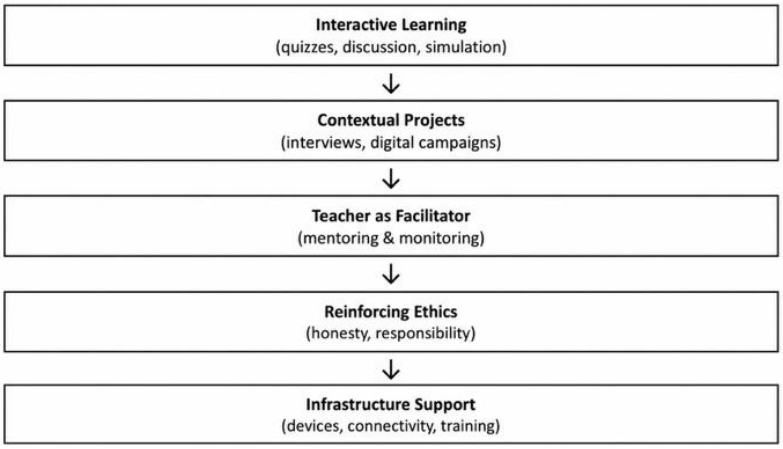

Figure 1. Effective Model for Using AI to Strengthen Civic Character

Discussion

1. Challenges and Opportunities in Internalizing Civic Values

The findings show that internalizing civic values in the digital era involves both challenges and opportunities simultaneously. The challenges identified include declining social ethics among students, a growing tendency to depend on AI, and the still-limited direction given to technology use in the classroom. At the same time, digital technology creates opportunities to build creativity, support more interactive learning, and strengthen students' digital literacy (Nur Fajrin Aslam et al., 2026). These findings suggest that technology's effect on civic character depends heavily on how it is used, both in daily life and in the classroom (Rahmi Gustifal et al., 2024).

This pattern can be understood through the lens of technological determinism, which holds that technological change shapes how people think, communicate, and behave (McLuhan, 1964). In an educational setting, social media and AI use visibly shift students' patterns of interaction toward digital spaces. Toffler's (1970) theory of social change adds a complementary lens, explaining how technological development reshapes multiple dimensions of life, including how people learn and interact within educational settings. These findings align with Insani and Hamidah (2023) and Korompis (2025), both of which found that digital technology shapes students' civic character and behavior. Even so, this study also found that AI's effect on student character is not uniformly negative; the outcome depends heavily on the purpose and manner in which the technology is used, both in learning and in daily life (Zesmita & Suryadi, 2025).

This pattern is understandable given how intensively today's students engage with digital technology. As direct social interaction declines, access to information and AI-based services becomes correspondingly easier to obtain (Salsabila & Anshori, 2025). Consistent guidance and oversight are therefore needed to ensure that digital technology and AI use reinforce, rather than undermine, civic values.

2. The Role of Artificial Intelligence in Supporting Civic Value Based PPKn Instruction

The findings show that AI supports PPKn instruction through information provision, deepened student understanding, and reinforcement of civic values. This indicates that AI functions not merely as a tool for accessing information but also as a support for more active, contextual learning. Through AI, students can access information more quickly, build understanding independently, and engage with social and civic issues relevant to their everyday lives (Pratiwi & Yunus, 2024).

This finding can be interpreted through Vygotsky's constructivist theory, which frames learning as an active process of knowledge-building through interaction with the environment and available learning resources. In this context, AI functions as a tool that helps students obtain information, explore multiple perspectives, and construct new understanding as they learn (Suryani & Iskandar, 2023). Mezirow's theory of transformative learning offers a complementary explanation, describing how learning can prompt shifts in perspective through reflection on lived experience. These findings are consistent with Labobar et al. (2024), who found that AI can be productively used in civic education, and with Sartika and Megasari (2025), who showed that digital technology use raises student engagement in learning. The present study further indicates that using AI within project-based tasks, discussion, and case analysis helps students understand and apply civic values in more concrete, real-world contexts.

The ease of access to information that AI provides helps students obtain learning resources quickly, particularly for understanding evolving social and national issues. AI-supported discussion and case analysis also give students room to weigh the social and ethical consequences of specific actions (Silitonga et al., 2026). Through digital project-based activities, students can express their understanding of civic values through creative work and learning activities (Carolin Sinaga et al., 2025).

3. Strategies for Using Artificial Intelligence to Strengthen Student's Civic Character

The findings show that AI use in PPKn instruction is most effective when combined with collaborative, contextual learning activities carried out under consistent teacher guidance. This model blends digital technology with discussion, simulation, case-based problem-solving, and projects connected to students' everyday lives. The success of AI use, in other words, is determined not only by the technology itself but also by the surrounding pedagogical strategy and the teacher's role in directing the learning process (Qusairi & Fawaid Zaini, 2026).

This finding is consistent with the concept of blended learning, which stresses the value of integrating face-to-face instruction with digital technology to create a more effective learning experience (Garrison & Kanuka, 2004). Within PPKn instruction, AI supports students in gathering information and exploring civic issues, while classroom interaction provides space for discussion, reflection, and character reinforcement. Technology and face-to-face instruction thus complement rather than replace one another.

These findings can also be explained through character education theory, which emphasizes the interplay of knowledge, attitude, and action in shaping student character (Furqon & Afifi, 2026). AI enriches the range and diversity of learning resources available to students, while the teacher guides them toward understanding and applying civic values in daily life.

These results support Asmara et al. (2025) and Robi'ah et al. (2025), both of which found that AI cannot replace the teacher's role in learning, particularly in character formation. Teachers remain central in directing technology use, modeling values, guiding student reflection, and ensuring that AI is used responsibly, a conclusion also echoed by Priyatna and Maseri (2025), who emphasized the importance of teacher competence and institutional support for effective technology use in the classroom.

Beyond the teacher's role, the availability of digital infrastructure is a further factor supporting the successful implementation of AI in PPKn instruction. Internet access, digital devices, and school support all help AI-based learning run more smoothly (Annawa UBM et al., 2026). Successful AI implementation in PPKn instruction therefore depends on a combination of technological readiness, teacher competence, and sustained character-value reinforcement, so that learning objectives can be achieved in a balanced way.

CONCLUSION

This study concludes that internalizing civic values in the digital era involves genuine challenges, including declining social ethics among students, a growing tendency toward AI dependence, and the still-limited regulation of classroom AI use. At the same time, digital technology creates real opportunities to build creativity, support more interactive learning, and strengthen students' digital literacy. The findings show that AI can support PPKn instruction by providing rapid access to information, deepening student understanding, and reinforcing civic values. Used within discussion, case analysis, and digital projects, AI gives students the opportunity to understand and apply values such as honesty, responsibility, tolerance, mutual cooperation, and digital ethics in everyday contexts.

The study further finds that AI use is most effective when combined with collaborative, contextual learning under consistent teacher guidance. Teachers play a central role in directing AI use so that it remains aligned with instructional goals and character-building aims, while the successful implementation of AI also depends on the availability of digital infrastructure, teacher competence, and continued reinforcement of digital literacy and ethics within the school environment. Based on these findings, teachers are encouraged to use AI purposefully as part of a broader strategy for strengthening character and civic values, while schools should support this effort through clear policy, adequate facilities, and ongoing teacher training. Future research should test AI-based learning models across broader contexts and larger samples to build a more comprehensive understanding of their effectiveness in PPKn instruction.

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