



Original Article

Digital Transformation of Civic Education Learning to Strengthen National Values and Character

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Abstract:

This study analyzes the implementation of digital transformation in Civic Education (PPKn) to strengthen national values and character. Using a literature review and conceptual analysis approach, the study reveals that the integration of digital media such as Wordwall and Canva, along with the application of blended learning and flipped classroom methods, significantly enhances students' understanding of Pancasila values. The main findings of the study indicate that technology-based approaches not only increase student engagement but also facilitate the internalization of national values. However, the study also identifies challenges such as the spread of misinformation and digital distraction issues, which require strengthening digital literacy and more critical pedagogical approaches.

Keywords: digital transformation, Civic Education learning, national character, digital literacy, Pancasila education

Introduction

Ideal education in the 21st century requires comprehensive changes in the way we learn, teach, and evaluate the learning process. The development of information and communication technology has led to the emergence of learning spaces that are no longer limited to physical classrooms. The learning environment has now expanded to digital spaces that are flexible, interactive, and provide open access to various sources of information. These changes indicate that the digitalization of education is a crucial foundation for building an adaptive learning system that responds to the needs of learners and aligns with the times. The development of the Indonesian Digital Society Index (IMDI) shows fluctuating trends: in 2022, the IMDI stood at 37.80, then surged dramatically to 43.18 in 2023 thanks to government and industry initiatives to strengthen digital infrastructure, literacy, and new work systems, particularly the digital infrastructure and ecosystem pillar, which rose from 40.24 (2022) to 57.09 (2023). However, in 2024, growth only reached 43.34 with a significant decline in the digital infrastructure and ecosystem



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pillar to 52.70, indicating a slowdown due to challenges in maintaining infrastructure quality and the need for more sustainable user empowerment. This data confirms that the initial acceleration phase has reached a saturation point, necessitating new strategies to enhance the depth of technology utilization rather than merely expanding access. This highlights the gap between the availability of digital infrastructure and users' competencies in leveraging technology optimally for educational purposes.

Digital transformation brings challenges that are not easy in character and values education. Pancasila and Citizenship Education (PPKn) as subjects that play a role in instilling the basic values of life in a nation and state are faced with issues of relevance and depth of meaning in the midst of a digital culture that tends to be fast-paced and instant. Noble values such as tolerance, responsibility, justice, and diversity require reflective and contextual learning processes to be instilled in students. The digital space, however, poses new challenges such as uncontrolled information flows, the spread of misinformation, and interaction patterns lacking empathy and ethics. An empirical study conducted by the Center for Research and Development [of Civic Education \(Safitri et al., 2023\)](#) revealed that intensive online learning during the pandemic created obstacles in the internalization of Pancasila values, particularly due to limitations in interactive media and weak critical literacy among students.

These issues indicate that the use of technology in learning is not merely a matter of tools, but also concerns the way of thinking and pedagogical approaches that underlie the learning process. The digital transformation referred to in this context is not simply a replacement of learning media from print to digital, but rather a fundamental change in interaction patterns, the role of teachers, and how students construct meaning from the material presented. Civic education requires strategies that can integrate national values with learning media that are contextual, creative, and relevant to the digital world faced by students. Teachers play the role of facilitators who not only master digital devices but also have pedagogical awareness to convey values in a meaningful and not superficial manner.

Although many studies on the digitization of education have been conducted, most of the existing research focuses more on the technical aspects of media use or the evaluation of the effectiveness of digital tools. Studies that specifically examine the relationship between digital transformation in learning and the strengthening of national values and character, particularly in the context of PPKn, are still limited. There is still little research that has examined in depth how digital learning can be directed to shape citizens who are not only digitally literate but also strongly rooted in Pancasila values. This limitation opens up space to explore further the strategies, approaches, and implications of digital transformation in Civic Education learning that aims to shape the national character of students in a holistic manner.

Methods

This research employs a conceptual and literature review approach to examine the implementation of digital transformation in Civics Education (PPKn)

with a focus on strengthening national values and character. The methodology begins with a comprehensive review of existing literature related to digital transformation in education, particularly in Civics Education, where the use of digital tools like Wordwall and Canva, as well as methods such as blended learning and flipped classrooms, is explored. This review helps assess how these technologies contribute to enhancing student engagement and understanding of national values, especially Pancasila. A conceptual analysis is also conducted to understand the theoretical framework behind digital transformation in education, considering how digital tools and online platforms facilitate active learning and the internalization of national values. The research further incorporates case studies and empirical data to identify the opportunities and challenges in applying these tools, with specific attention to the issues of digital misinformation, distraction, and the necessity for stronger digital literacy. Data from various regions or countries are synthesized to propose practical strategies for integrating digital transformation in PPKn education, balancing technological advancement with a pedagogical approach that upholds the core values of Pancasila. Ultimately, the study offers insights and recommendations for educators, policymakers, and institutions on how to effectively leverage digital tools to enhance the understanding of Pancasila values, while addressing the challenges of digital distractions and misinformation, ensuring the development of responsible and value-driven digital citizens.

Results

The transformation of education in the 21st century is driving fundamental changes in all aspects of the teaching and learning process. The use of digital technology is not only related to the adoption of electronic devices as replacements for conventional tools, but also includes systemic paradigm shifts. Digital transformation in education refers to the comprehensive integration of technology that results in fundamental changes to the structure, strategies, and culture of learning. This process includes a shift in the role of educators from being the primary source of information to facilitators who guide students in constructing knowledge through active and contextual learning experiences ([Phuong et al., 2023](#)). The use of technology in the context of digital transformation reflects efforts to restructure the learning system as a whole.

The implementation of digital transformation presents both challenges and opportunities in the context of Pancasila and Citizenship Education (PPKn). As a subject with the mandate to instill the basic values of national and state life, PPKn plays a role in shaping the character and national identity of students. Values such as social justice, tolerance, responsibility, and cooperation require a reflective, in-depth, and dialogic pedagogical approach. Therefore, PPKn learning is not sufficient if it only focuses on mastering content; it must also encourage students to experience, understand, and internalize these values critically and contextually. Digital transformation becomes relevant when technology is used to strengthen the meaningful learning process of values. The concept of digital citizenship in this context can serve as a foundation for designing learning strategies that encourage active participation, critical thinking, and social responsibility (Öztürk, 2021).

The implementation of digital transformation in Civic Education must consider the challenges arising from changes in the information ecosystem. The unfiltered flow of information in the digital space has driven the spread of content containing misinformation, disinformation, and value polarization. Research conducted by [\(Carmi et al., 2020\)](#) shows that low digital literacy among adolescents makes it difficult to distinguish between valid and invalid information, especially when the information is emotionally charged and viral. This phenomenon has the potential to weaken the character-building process because students become vulnerable to biased, superficial, or even contradictory information that goes against national values. A similar study by [\(Goodman & Ord, 2024\)](#) emphasizes that improving critical thinking skills regarding digital information is an important component of modern citizenship education. Therefore, educators need to equip students with media literacy, information literacy, and source verification skills so that they can become digitally literate citizens who are also socially responsible.

Digital transformation in civic education must be directed toward developing students' capacity to use technology as a means of learning values and becoming technologically proficient. The technology used in learning must be able to support the development of reflective, collaborative, and communicative competencies based on Pancasila values. Interactive media such as online quizzes, social simulations, digital forum discussions, and community-based projects can be utilized to create learning experiences that encourage a deeper understanding of values. Teachers have a strategic role as designers of contextual learning experiences, as well as guardians of the substance of values so that they are not reduced by technological sophistication. The use of technology without a strong pedagogical foundation can actually divert students' attention from the substance of values to abstract technical aspects.

Digital transformation in civic education presents challenges that include limitations in facilities and infrastructure, the readiness of educators' pedagogical competencies, and students' ability to critically and responsibly navigate the flow of information. Educators are required to possess digital competencies that encompass pedagogical understanding and ethical skills in managing technology-based and technical learning. [\(Røkenes & Krumsvik, 2014\)](#) explains that teachers' digital competencies include reflective dimensions and humanistic values, enabling teachers to create a learning environment that supports the development of students' character through the meaningful use of technology. Research by [\(Yulin & Danso, 2025\)](#) reveals that there is still a gap between technological mastery and institutional readiness in providing support for digital pedagogy training, particularly in the field of civic education. The learning model used needs to be designed to effectively connect technological advancements with the substantive needs of values-based education. Therefore, strengthening teachers' capacity to design values-based digital learning, integrating digital literacy into the PPKn curriculum, and implementing educational policies that support character development through technology are strategic steps that need to be immediately implemented.

Digital transformation in Pancasila and Civic Education (PPKn) holds great potential to strengthen the process of values education if implemented appropriately,

purposefully, and based on a strong pedagogical approach. This process should not be understood merely as an effort to introduce technology into the classroom, as what is more essential is a shift in orientation toward shaping character and strengthening the national identity of students. The application of reflective, contextual, and participatory approaches is crucial to ensure that the values of Pancasila are brought to life in students' digital experiences. The findings of [\(CHOI & CRISTOL, 2021\)](#) emphasize that digital citizenship education should promote the creation of participatory democracy and critical awareness of various social issues, while positioning students as active participants in the learning process. This perspective aligns with the findings of [\(Allouche, 2024\)](#) which underscore the importance of a systemic approach in digital education transformation, grounded in critical reflection, digital humanities studies, and open collaborative research. Therefore, the integration of technology in PPKn education should be directed toward strengthening national values and encouraging active participation of students as responsible digital citizens who embody the principles of Pancasila.

Digital transformation in Civic Education requires the development of innovative strategies based on digital media. Technologies such as Wordwall, Canva, interactive videos, online quizzes, and *Learning Management Systems* (LMS) provide tools for teachers to design more engaging and reflective learning experiences. A study [\(Aziz & Ahmad, 2022\)](#) indicates that the use of Wordwall, an interactive gamification platform, has been proven to enhance PPKn learning outcomes among elementary school students, with a significant effect ($t = 5.809$, $p < 0.05$). These findings reinforce the role of contextually designed digital media in supporting the understanding of civic values and national character. The integration of Canva enables teachers to present visually appealing and interactive content, thereby enhancing the appeal of Civic Education materials. Interactive videos can be utilized to simulate social conflicts, value discussions, or interviews with prominent figures, allowing students to analyze issues from a Pancasila perspective.

Blended learning and *flipped classrooms* are methods that synergize with digital media. [\(Hava & Gelibolu, 2018\)](#) reported that *flipped classrooms* had a significant impact on improving learning performance in terms of *digital citizenship*, although the impact on information literacy and self-regulation still requires further development. This learning model shifts the phase of delivering material outside the classroom, so that face-to-face time can be used for activities that emphasize value reflection, critical discussion, and character building. The practice of *flipped classroom* in the context of Civic Education provides space for teachers to guide students in reflecting together on Pancasila values, discussing digital ethics, and practicing hoax information verification. This model makes students active in constructing their understanding of values, rather than just passive users of digital content. The *blended learning* model offers high flexibility by combining online and offline activities. LMS such as Moodle, Google Classroom, or Edmodo can be used as digital learning resource centers that include value modules, reflective quizzes, and discussion forums. Teachers can monitor the learning process, provide immediate feedback, and design learning scenarios that integrate Pancasila values into every digital activity. Value-based PjBL (*Project-Based Learning*) is a highly potential innovative method. Students can design digital social-civic projects, such as online

tolerance campaigns that require them to apply Pancasila values in real social contexts. This approach combines elements of *active learning*, collaboration, and the direct application of national values.

The integration of these media and methods is effective when designed with a reflective pedagogical approach. Wordwall offers value-based quiz mechanisms, Canva facilitates the presentation of value-based infographics, and interactive videos enable scenario-based analysis of national issues in a digital context. The combination of *flipped classrooms* and PjBL provides space for students to internalize values through contextual problem-solving processes. This combination gives greater meaning and relevance to Civic Education material, considering that students can respond to current social issues through Pancasila values in the digital space. Challenges arise if the implementation of these innovations is only focused on technical aspects. True digital transformation requires a change in the mindset of teachers from information providers to leaders of value-based learning experiences. Teachers must possess *digital pedagogy competence*: the ability to design value-based digital activities, evaluate the impact of character values, and ensure the integrity of the PPKn substance is maintained. Curriculum commitment and policy support are also necessary to ensure the implementation of digital methods and media is carried out systematically, measurably, and sustainably. This synergistic strategy reflects a new paradigm of PPKn learning in the digital age. Innovative media such as Wordwall and Canva, when combined with reflective methods like flipped classrooms and PjBL, transform digital spaces into authentic environments for character development and the instillation of national values. Active student participation in the value-based learning process, project-based learning, and the wise use of technology are key elements in supporting meaningful digital transformation in PPKn education.

Digital transformation in Civic Education learning opens significant opportunities for enhancing student engagement, developing critical thinking skills, and fostering digital literacy integrated with civic awareness. The use of digital media enables students to actively participate in the learning process. For example, collaborative projects on online platforms encourage students to discuss, analyze current issues, and develop solutions based on Pancasila values. A study by [\(Tahir, 2025\)](#) concludes that digital citizenship education improves academic performance, thinking skills, and overall learning outcomes. This research shows that digital citizenship education brings positive changes to students' ethical awareness in using technology, including aspects of data security and online social ethics. This mechanism is capable of creating a more reflective and meaningful learning culture.

These opportunities must be balanced with caution regarding the potential for superficial learning, instant consumption, and the habit of copying without deep understanding. Studies on *digital distractions* indicate that easy access to information actually leads to a decline in focus and deep thinking skills [\(Pérez-Juárez et al., 2024\)](#). This has the potential to weaken the internalization of values because students become trapped in a mode of consuming information quickly without understanding the context and meaning of values. This condition indicates the need to design learning experiences that can train value reflection intensively, away from

the surface of technology. The role of educators in this context becomes very strategic. Teachers need to take the position of learning experience designers who are able to incorporate national values into every digital activity. This requires the ability to develop value literacy and digital literacy in parallel. Value literacy helps students understand the moral values behind every digital content presented, while digital literacy provides the skills to navigate information critically. The concept of *metaliteracy* provides a framework for value learning through technology because it emphasizes the ability to evaluate biases, take perspectives, and create meaningful and responsible content ([Ashuri, 2023](#)).

The curriculum must support this process through the systematic integration of *digital citizenship* and *civic literacy* competencies in Civic Education (PPKn) learning. Character education needs to feature learning strategies that require students to apply Pancasila values in real-life scenarios, both offline and online. Learning modules that challenge students to analyze online media articles, identify biases, connect them to principles of justice and tolerance, and then write reflections can help deepen the internalization of values. This model aligns with recommendations [from \(Tahir, 2025\)](#), which emphasize that pedagogical approaches must include the ethical context of technology use and active student participation.

Protection against potential negative impacts and the creation of such profound opportunities require educational policies that promote the fulfillment of three elements simultaneously: (1) enrichment of digital literacy and values through reflective learning, (2) enhancement of technology literacy and citizenship for educators, (3) provision of digital tools that support interactivity and value-based collaboration. The combination of these strategies enables the digital space to become an arena for value construction, not merely a channel for information. The implementation of these strategies has consequences for strengthening the culture and national identity of students. Students equipped with digital literacy and values will have the critical thinking skills to address the challenges of disinformation and appreciate diversity of values. Moreover, digital media managed with a reflective approach enables students to construct personal narratives aligned with the character of Pancasila. Therefore, digital transformation can serve as a catalyst for strengthening national character provided it is accompanied by the active role of educators and a curriculum that prioritizes value reinforcement.

Strengthening values and national character are central elements in the implementation of digital transformation. Digital citizenship infrastructure has the potential to strengthen national identity if positioned strategically. Research in Indonesia indicates that the development of digital literacy awareness and digital forums in Civic Education has contributed to the internalization of national values, particularly at the junior high school and senior high school levels ([Candra et al., 2021](#)). Digital learning designed with a character-based approach provides students with the ability to reflect on themselves, respect local and national cultural identities, and understand social plurality. This is in line with research findings that emphasize that science, technology, and community-based civic education can strengthen character and digital literacy ([Widodo et al., 2021](#)). Strengthening national character through digital media can be translated into tasks such as writing narratives on

diversity, organizing online tolerance campaigns, or participating in democratic digital public spaces. Much of the material that previously had to be done face-to-face can now be presented through digital platforms, allowing students to reflect on their national identity amid the tide of digital globalization. The implementation of strategies such as *project-based digital learning* in the context of the independent curriculum policy allows students to actively explore, create meaningful content, and be open to cross-cultural dialogue. Based on this principle, digital transformation in Civic Education learning is essentially a vehicle for strengthening national identity, as long as technology is used consciously to reinforce values rather than replace them

Conclusion

Digital transformation in Pancasila and Civic Education (PPKn) learning represents a strategic opportunity to strengthen the values and character of students in the era of technological disruption. The use of digital technology cannot be understood merely as a replacement for conventional tools, but rather as a paradigm shift in learning that touches on pedagogical, social, and cultural aspects. Digitalization in this context creates a learning space that enables interactive, reflective, and contextual learning of values through the integration of digital media and participatory methods. Media-based learning models such as Wordwall, Canva, and interactive videos, when combined with flipped classroom, blended learning, and project-based learning methods, provide opportunities to create learning experiences that strengthen the meaning of Pancasila values. This approach encourages students to actively build a national narrative, develop digital social campaigns, and critique current issues from a values-based perspective. Teachers play a central role in designing and facilitating this process to ensure that the substance of values is not overshadowed by technical aspects alone.

The process of internalizing values in the digital space requires the integration of digital literacy, value literacy, and reflective competence as a whole. Challenges such as disinformation, value polarization, and digital distraction require educators to develop learning strategies that combine depth of content with technological skills. The curriculum needs to support digital context-based value learning by providing modules, forums, and assessments that require the application of values in real life. Digital transformation in Civic Education will be meaningful if it is directed at forming citizens who are not only digitally literate but also have a strong sense of values and social responsibility. This process requires a shift toward more participatory, critical, and reflective learning approaches, while reinforcing students' national identity in the globalized world. The combination of technological innovation and pedagogical acumen will determine the success of digitalization in PPKn education as a vehicle for character development and the strengthening of national identity.

Suggestion

Based on the research objectives, several steps need to be considered in the development of digital-based Civics Education (PPKn). First, educational institutions should integrate technology more deeply into PPKn learning by utilizing relevant digital media to strengthen students' understanding of Pancasila values. Additionally,

continuous development of digital competencies for teachers is necessary so they can design meaningful learning experiences that combine technology with the teaching of national values. Providing digital facilities that support collaboration among students is also crucial to facilitate project-based learning that connects Pancasila values with relevant social issues. Given the challenges such as misinformation and digital distractions, enhancing digital literacy among students should be prioritized to help them differentiate valid information and its relevance to the context of national values. Lastly, PPKn education should be directed toward a reflective and contextual approach, emphasizing the importance of applying Pancasila values in real-life situations, both offline and online.

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