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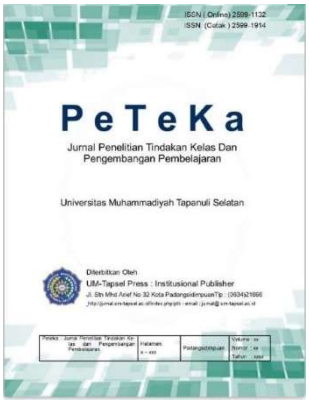

BUILDING DIGITAL CIVIC COMPETENCE IN INDONESIAN PRIMARY EDUCATION: A QUALITATIVE ANALYSIS OF SUSTAINABLE DEVELOPMENT GOAL INTEGRATION

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Abstrak. Penelitian kualitatif ini mengkaji bagaimana sekolah dasar di Indonesia mengintegrasikan kompetensi kewargaan digital sebagai sarana untuk memajukan Tujuan Pembangunan Berkelanjutan 4 (Pendidikan Berkualitas), 10 (Mengurangi Kesenjangan), dan 16 (Perdamaian, Keadilan, dan Kelembagaan yang Kuat). Dengan menggunakan pendekatan kualitatif deskriptif dengan metodologi analisis tematik, penelitian ini menganalisis kerangka pendidikan nasional, wacana akademis, dan praktik kelembagaan dalam konteks Kurikulum Merdeka, Profil Pelajar Pancasila, dan inisiatif Adiwiyata (Sekolah Hijau). Hasil penelitian menunjukkan adanya peningkatan integrasi pendidikan kewargaan digital melalui pembelajaran berbasis proyek, pendekatan narasi digital, dan partisipasi daring yang bertanggung jawab yang menumbuhkan kemampuan analitis dan kesadaran kewargaan peserta didik. Penelitian ini menawarkan kerangka teoretis baru dengan mensintesiskan nilai-nilai Pancasila dengan pendidikan kewargaan digital dan prinsip keberlanjutan, memposisikan literasi moral, kewargaan, dan teknologi sebagai elemen yang saling terkait dalam praktik pedagogis transformatif. Perspektif terintegrasi ini menekankan perlunya pelaksanaan kebijakan sistematis, pembelajaran profesional berkelanjutan bagi pendidik, dan pendekatan instruksional yang responsif budaya untuk membina ekosistem pendidikan digital yang inklusif, beretika, dan berkelanjutan yang sejalan dengan target SDGs.

Kata Kunci: Pendidikan Kewargaan Digital, Penelitian Kualitatif Deskriptif, Kerangka Etika Dan Nilai, Pendidikan Dasar, Pembangunan Berkelanjutan.

Abstract. *This qualitative investigation examines how Indonesian primary schools incorporate digital civic competence as a means of advancing Sustainable Development Goals 4 (Quality Education), 10 (Reduced Inequalities), and 16 (Peace, Justice, and Strong Institutions). Employing a descriptive qualitative approach with thematic analysis methodology, the research analyzes national educational frameworks, scholarly discourse, and institutional practices within the contexts of Kurikulum Merdeka, Profil Pelajar Pancasila, and Adiwiyata (Green School) initiatives. Results indicate growing integration of digital civic education through project-based learning, digital narrative approaches, and responsible online participation that cultivate learners' analytical capabilities and civic consciousness. The research offers a novel theoretical framework by synthesizing Pancasila values with digital civic education and sustainability principles, positioning moral, civic, and technological literacy as interconnected elements within transformative pedagogical practice. This integrated perspective highlights the necessity for systematic policy execution, continuous professional learning for educators, and culturally responsive instructional approaches to foster inclusive, ethically grounded, and sustainable digital educational ecosystems consistent with SDG targets.*

Keywords: *Digital Civic Education, Descriptive Qualitative Research, Ethics And Values Framework, Primary Education, Sustainable Development.*

PENDAHULUAN

The proliferation of digital technologies in contemporary education has fundamentally reshaped pedagogical practices and learning interactions. Educational institutions now face the imperative of nurturing not merely technically skilled learners, but morally grounded, critically reflective citizens capable of meaningful engagement within digital ecosystems. Digital civic education (DCE) provides learners with essential competencies, including knowledge, skills, and ethical values, required for safe, productive, and principled navigation of virtual environments (Ribble, 2015; Shi, Chan, & Lin, 2023). This educational domain encompasses interconnected components: digital competence, online moral reasoning, information security awareness, and active civic engagement through technological platforms (Lozano-Díaz & Fernández-Prados, 2020; Lo, 2024). Given contemporary challenges including artificial intelligence proliferation and rampant digital misinformation, such capabilities prove fundamental for developing critically conscious, ethically responsible, and empathetic digital participants (Aderibigbe et al., 2023).

Digital civic education directly advances core objectives within the United Nations' 2030 Sustainable Development Agenda. It strengthens SDG 4 (Quality Education) through promoting equitable, inclusive educational access. Furthermore, it contributes to SDG 10 (Reduced Inequalities) by addressing disparities in digital engagement opportunities, while supporting SDG 16 (Peace, Justice, and Strong Institutions) through cultivating principled, socially conscious online participation (Kioupi & Voulvoulis, 2019; Makinde, Sulyman, & Ibrahim, 2024; Hajj-Hassan, Makki, & Dbaibo, 2024). International organizations including UNESCO (2018) and OECD (2023) emphasize that embedding ethical principles and sustainability concepts within civic education reinforces democratic institutions and societal cohesion.

Within the Indonesian context, accelerated internet expansion presents simultaneously promising opportunities and substantial obstacles for educational transformation. Despite increasing connectivity rates, regional disparities persist markedly. National statistics reveal approximately 41 percent of rural populations remain inadequately connected digitally, with the country's collective digital competence averaging 3.54 on a five-point scale (Kominfo, 2021). These inequities threaten to constrain DCE's transformative capacity and impede progress toward equity-focused SDG targets. Addressing such challenges, Indonesian educational authorities implemented Kurikulum Merdeka (Independent Curriculum), emphasizing pedagogical flexibility, learner agency, and analytical reasoning development (Damanik et al., 2025; Kumari, 2024). This curricular reform parallels global initiatives connecting educator competence with learner achievement and civic development (Sinaga & Damanik, 2025; Castro, Glewwe, & Montero, 2019). Nevertheless, effective implementation requires teachers possess both pedagogical sophistication and ethical capacity to translate theoretical digital citizenship principles into meaningful instructional practice (Davis, Petish, & Smithey, 2006).

Indonesia's educational foundation centers upon Pancasila, comprising five philosophical principles encompassing monotheistic belief, humanistic civilization, national solidarity, deliberative democracy, and universal social justice. These tenets

function as moral anchors for digital conduct and civic engagement (Aeni et al., 2024; Yorman & Sadam, 2025). The Profil Pelajar Pancasila (Pancasila Student Profile) translates these values through six developmental dimensions: spiritual commitment, intercultural appreciation, collaborative spirit, autonomous capability, analytical thought, and innovative capacity (Damanik et al, 2025). Situating DCE within this indigenous framework enables students to cultivate ethical reasoning and digital compassion grounded in national cultural and spiritual traditions (Triyani et al., 2021; Musa & Wulan, 2024). Augmenting this moral architecture, the Adiwiyata (Green School) initiative systematizes environmental responsibility through institutional policy, pedagogical integration, and participatory engagement (Suprapto & Hartini, 2023; Kodir et al., 2022). Positioning digital citizenship within this ecological framework advances "digital sustainability" as a conceptual bridge between environmental consciousness and responsible technology utilization (Junaidah, Aeni Mahardika, & Ma'arif, 2025).

Existing scholarship has investigated digital competence, environmental education, and character formation independently, yet limited research synthesizes these dimensions within Indonesia's integrated moral-pedagogical landscape. Comprehensive reviews (Edwards et al., 2020; Shi et al., 2023) indicate prevailing research remains compartmentalized, lacking contextual models connecting global citizenship discourse, digital ethics, and indigenous value frameworks. Scholarly attention to operationalizing digital citizenship through Indonesia's distinctive ethical-educational structures, specifically Pancasila and Adiwiyata, remains insufficient. This investigation addresses that scholarly void by positioning DCE within national initiatives promoting values-driven, sustainable education.

This study's conceptual architecture integrates three complementary theoretical perspectives. Digital citizenship theory establishes behavioral and ethical parameters for responsible virtual participation (Ribble, 2015). Education for sustainable development (ESD) connects pedagogical outcomes to ecological and social accountability (Kioupi & Voulvoulis, 2019). Pancasila contributes an indigenous philosophical framework synthesizing ethical principles, collaborative values, and social justice within educational contexts (Aeni et al., 2024). Collectively, these perspectives constitute an integrated analytical model positioning ethics, sustainability awareness, and digital competence as foundational elements of transformative pedagogy.

This research adopts a qualitative descriptive design through systematic examination of policy documents, curriculum guidelines, and school-based programs related to digital civic education across Indonesian primary schools. Two primary research aims guide this inquiry: (1) exploring how DCE operates within Kurikulum Merdeka, Profil Pelajar Pancasila, and Adiwiyata initiatives, and (2) constructing a culturally grounded framework for embedding digital citizenship within values-oriented educational structures consistent with SDGs 4, 10, and 16. This scholarly contribution advances international discourse on global citizenship education through integrating Southeast Asian philosophical traditions into models supporting ethical, sustainable digital learning ecosystems.

METODE

This research utilized a qualitative descriptive methodology through systematic document examination to investigate how digital civic education operates within Indonesian primary educational frameworks. This methodological approach proves particularly appropriate for policy-oriented inquiry, as it generates detailed, contextually grounded interpretations without imposing predetermined theoretical constructs (Colorafi & Evans, 2016). Data sources comprised three categories: national educational policy documents issued by the Ministry of Education, Culture, Research, and Technology; peer-reviewed scholarly publications indexed in Scopus, Web of Science, or SINTA databases; and institutional reports concerning character development and environmental education programs. Document selection followed explicit criteria, including publication timeframe (2015-2025), linguistic accessibility (English or Bahasa Indonesia), and substantive engagement with DCE, SDGs, or Pancasila-oriented pedagogy. Non-academic materials lacking institutional verification were systematically excluded. This sampling strategy yielded comprehensive insight into how governmental policies and school-level initiatives conceptualize ethical digital participation and sustainability within Indonesia's educational landscape.

Data analysis proceeded through iterative thematic coding adapted from Braun and Clarke (2006), involving six sequential stages: textual familiarization, initial code generation, preliminary theme construction, theme refinement, conceptual definition, and theoretical synthesis. Documents were organized using an analytical matrix (Appendix A) enabling systematic comparison across policy intentions, pedagogical applications, and ethical orientations. The coding process followed a PRISMA-informed protocol, beginning with 320 identified sources, removing 80 duplicates, screening 240 documents, assessing 40 full texts, and ultimately including 20 sources meeting quality standards. Trustworthiness mechanisms included peer consultation with two specialists in educational policy and civic ethics, cross-validation against international frameworks from UNESCO (2023) and OECD (2024), and comprehensive audit documentation tracking analytical decisions throughout the research process. These procedures collectively enhanced interpretive rigor while mitigating individual researcher bias.

HASIL DAN PEMBAHASAN

A. National Framework Integration And Classroom Implementation

Analysis of policy documents reveals systematic governmental efforts to operationalize digital civic education through interconnected national initiatives. The Kurikulum Merdeka establishes foundational structures emphasizing twenty-first century competencies and ethical digital participation, treating technological literacy not as isolated skill development but as cross-curricular competence aligned with UNESCO's Global Citizenship Education principles (Aeni et al., 2024; Damanik et al., 2025; Kioupi & Voulvoulis, 2019). The Pancasila Student Profile (P5) translates these policy intentions into experiential learning contexts through thematic projects addressing democratic participation, intercultural unity, and collaborative citizenship, enabling students to operationalize digital

competencies within morally grounded frameworks reflecting Pancasila philosophy (Yorman & Sadam, 2025; Lozano-Díaz & Fernández-Prados, 2020).

At the instructional level, educators increasingly adopt interactive methodologies including digital narrative construction, inquiry-based collaborative projects, and simulation-based assessments to cultivate responsible virtual conduct (Triyani et al., 2021; Damanik et al., 2024). These learner-centered approaches facilitate meaningful engagement with cyber safety protocols, personal data protection, and online communication ethics, strengthening students' capacity to identify misinformation and navigate digital risks (Shi, Chan, & Lin, 2023; Helmiatin, Hidayat, & Kahar, 2024). Pancasila and Civic Education (PPKn) curricula have evolved to incorporate digital rights discourse and ethical online behavior through virtual deliberative forums and issue-based simulations, promoting democratic competencies applicable to digital environments (Musa & Wulan, 2024; Yorman & Sadam, 2025). Qualitative evidence indicates students participating in collaborative digital initiatives demonstrate enhanced empathetic reasoning, self-reflective capacity, and accountability in virtual interactions. However, Indonesia's cultural emphasis on communal harmony (rukun) occasionally constrains critical examination of contested issues, suggesting the need for pedagogical approaches balancing analytical inquiry with collective value orientations (Lozano-Díaz & Fernández-Prados, 2020).

B. Structural Impediments And Implementation Disparities

Despite coherent policy architecture, substantial structural obstacles constrain equitable implementation. Technological infrastructure disparities, variable educator competency, and insufficient culturally contextualized instructional resources generate uneven progress across geographical and socioeconomic contexts. Persistent inequalities in device availability and network connectivity perpetuate regional digital exclusion, with approximately 60 percent of rural educational institutions reporting inadequate technological infrastructure and inconsistent pedagogical readiness (Castro, Glewwe, & Montero, 2019; Helmiatin, Hidayat, & Kahar, 2024; Tan, Wong, & Chen, 2024). Teacher preparation initiatives remain predominantly reactive rather than systematically embedded, limiting sustained capacity development for integrating critical digital literacy within instructional practice.

Many educators continue conceptualizing digital education narrowly as basic information and communication technology operation rather than comprehensive ethical engagement and analytical reasoning (Davis, Petish, & Smithey, 2006). Furthermore, pedagogical materials synthesizing Pancasila ethical principles with contemporary digital citizenship remain underdeveloped. Localized resources integrating indigenous wisdom traditions and community-specific moral frameworks prove scarce, constraining teachers' ability to contextualize global digital citizenship concepts within Indonesia's sociocultural landscape. Enhanced professional learning communities, strengthened school-family-community partnerships following Adiwiyata

collaborative models (Suprapto & Hartini, 2023; Kodir et al., 2022), and systematic mentorship networks could support contextually grounded, sustainable implementation addressing these persistent gaps.

C. SDG Alignment And Integrated Framework Development

Digital civic education implementation directly advances multiple Sustainable Development Goals through distinct yet interconnected pathways. Concerning SDG 4 (Quality Education), embedding digital citizenship within Kurikulum Merdeka fosters analytical reasoning, ethical deliberation, and inclusive technological competence essential for contemporary learning (Kioupi & Voulvoulis, 2019). Nevertheless, without equitable professional development investments and universal digital access, current initiatives risk amplifying rather than ameliorating educational disparities (Helmiatin, Hidayat, & Kahar, 2024; Aderibigbe et al., 2023). Sustained commitment to educator capacity-building and technological infrastructure expansion remains fundamental for inclusive, quality learning environments (Damanik et al., 2025).

Regarding SDG 10 (Reduced Inequalities), the digital participation gap constitutes a critical barrier requiring systematic intervention. Equitable access to technological devices, reliable connectivity, and critical digital competence proves essential for democratic engagement and socioeconomic mobility (Makinde, Sulyman, & Ibrahim, 2024; Tan, Wong, & Chen, 2024). Digital exclusion perpetuates marginalization across multiple domains, necessitating community-centered digital literacy initiatives and cross-sectoral partnerships empowering underserved populations (Castro, Glewwe, & Montero, 2019). For SDG 16 (Peace, Justice, and Strong Institutions), digital citizenship cultivates ethical governance and social cohesion by embedding empathy, respect, and moral integrity within virtual interactions (Lozano-Díaz & Fernández-Prados, 2020; Yorman & Sadam, 2025).

The Adiwiyata environmental education framework offers an instructive model for integrating ethical principles, ecological responsibility, and civic participation, suggesting potential for expanded application. A conceptual Digital Adiwiyata Framework could systematize digital ethics education by synthesizing policy coherence, curricular integration, and participatory community engagement, connecting Pancasila moral foundations with global digital citizenship imperatives (Suprapto & Hartini, 2023; Kodir et al., 2022; Makinde, Sulyman, & Ibrahim, 2024; Hajj-Hassan, Makki, & Dbaibo, 2024). This study's theoretical contribution resides in demonstrating how indigenous philosophical frameworks can enrich global digital citizenship discourse. Findings underscore dynamic interrelationships among policy alignment, pedagogical innovation, and sociocultural adaptation. While national initiatives demonstrate consistency with international frameworks, localized implementation strategies remain essential for bridging digital divides and embedding ethical consciousness within everyday educational practice. Developing integrated models institutionalizing critical digital literacy within Indonesia's Pancasila-oriented, sustainability-focused educational ecosystem represents a vital pathway toward equitable, ethically grounded, transformative digital learning aligned with SDG targets.

SIMPULAN

This investigation demonstrates that digital civic education in Indonesian primary schools operates through systematically interconnected national initiatives, specifically Kurikulum Merdeka, Profil Pelajar Pancasila, and Adiwiyata frameworks, establishing meaningful alignment with Sustainable Development Goals 4 (Quality Education), 10 (Reduced Inequalities), and 16 (Peace, Justice, and Strong Institutions). The study's principal theoretical contribution resides in synthesizing Pancasila ethical philosophy with digital citizenship and environmental sustainability education, generating an integrated conceptual architecture positioning moral deliberation, civic accountability, and technological engagement as mutually reinforcing dimensions of transformative pedagogy. However, empirical evidence reveals persistent structural impediments constraining equitable implementation, including variable educator competency, disparate technological infrastructure across geographical contexts, and insufficient development of culturally contextualized ethical frameworks. Addressing these obstacles requires comprehensive professional capacity-building initiatives supporting SDG 4 and SDG 10 objectives. Educational policymakers should coordinate systematic integration of digital ethics across curricular domains, supported by sustained professional learning programs such as "Digital Ethics and Citizenship for Sustainable Learning." Expanding technological infrastructure accessibility, particularly within rural educational settings, remains fundamental for achieving inclusive, equitable digital transformation advancing national educational priorities.

While this research provides significant conceptual insights into policy-practice interconnections, methodological limitations warrant acknowledgment. The document-based analytical approach, though rigorous for examining policy discourse and curricular frameworks, lacks direct classroom observations and educator experiential accounts. Future scholarly inquiry should extend this foundational work through comparative provincial analyses or longitudinal investigations examining how policy coherence and professional development interventions influence sustained digital citizenship implementation over time. Empirical studies incorporating teacher perspectives, student learning outcomes, and community engagement patterns would substantially enrich understanding of contextually effective pedagogical strategies for embedding ethical, sustainable digital education. Such continued research endeavors prove essential for constructing inclusive, morally grounded, forward-oriented educational ecosystems empowering educators and learners to participate responsibly, critically, and constructively within Indonesia's evolving digital landscape.

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