

## Digital citizenship for sustainable development goals: A character-based approach in civic education

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### Abstract

This paper explores the transformative role of character-based digital citizenship in redefining civic education in the digital era. Amid the rapid flow of information and the growing negative impact of technology on national values, civic education must be adaptive and relevant. The study highlights the strategic contribution of digital citizenship to achieving the Sustainable Development Goals, in particular Target 4.7, which emphasises education for sustainable development and global citizenship, and Target 16, which supports peaceful and inclusive societies and access to justice. This research applies a descriptive qualitative approach, using a systematic literature review strategy combined with thematic analysis, to critically and in-depth explore relevant scientific literature. These findings suggest that integrating character education into digital citizenship fosters ethical awareness, responsible digital behaviour, and democratic participation. This synergy strengthens civic competence and promotes inclusive, peaceful, and sustainable educational settings. The study provides strategic insights for educators, curriculum developers, and policymakers, proposing new conceptual models that align digital citizenship with global citizenship goals and advance 21st-century citizenship learning.

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## Introduction

At the local level, social dynamics among Indonesian students pose serious challenges to the development of an active and responsible civic consciousness. Phenomena such as cyberbullying, the spread of hoaxes, and low digital literacy reflect the crisis of character and citizenship in the digital space. A study by Fajri et al. (2022) revealed that students' understanding of digital citizenship practices remains low, with only 37.1% understanding the concept. This shows the need to integrate character values and digital skills in Civic Education. Nationally, Indonesia faces a major challenge in preparing the young generation to fulfil civic roles in the digital era. Although the government has promoted digital literacy programs and strengthened character education through various policies, the integration of these two aspects



into the Civic Education curriculum is still fragmented. Research by Alрахman et al. (2024) showed that the increase in digital citizenship significantly affected the quality of civic education learning. This emphasises the role of universities in shaping individuals to use technology responsibly (Komalasari & Rahmat, 2019; Tsoraya et al., 2023).

From a global perspective, social and technological changes are also shaping the direction of education worldwide. The UNESCO and OECD reports affirm the importance of building global competence, digital literacy, and social engagement as part of 21<sup>st</sup>-century learning. One of the main focuses of the Sustainable Development Agenda (SDGs) is SDG 4.7, which aims to promote education to foster sustainable development, global citizenship, and appreciation for cultural diversity (Tang, 2015). While Edwards et al. (2020) emphasise that meaningful global citizenship education must not only teach norms of social participation, but also holistically integrate character values and digital skills as the foundation for the formation of ethical, critical, and responsible global citizens. This approach is particularly relevant amid the complexity of global challenges and the increasing penetration of technology into people's lives. The integration of ethical dimensions and digital competencies is key in preparing students to carry out the role of active, reflective, and socially conscious global citizens (Ardiansyah et al, 2024; Ramlan et al.,2023)

Although the concept of digital citizenship has been widely studied, as developed by Prasetyo et al. (2022) and Ribble (2015) through nine main elements, and expanded upon by Choi et al. (2017), in the context of technology-based education, the literature has not fully linked it to character education systematically. Similarly, the foundation of character education has been formulated by Lickona (2019) and enriched by Berkowitz et al. (2020), while making a major contribution to the moral shaping of individuals, it is often positioned separately from the discourse of digital literacy and global citizenship. Therefore, there is an urgent need to develop an interdisciplinary approach that can synergise character principles with digital skills within the framework of civic education (Komalasari & Sapriya, 2016). This synthesis is believed to not only broaden pedagogical horizons but also strengthen educational institutions' capacity to produce a generation that is resilient, inclusive, and adaptive to the challenges of the 21st century.

Rahayu et al. (2022) emphasise that social and technological transformations have shaped the new direction of 21st-century education. From UNESCO's perspective, digital literacy and global skills are crucial elements of a holistic approach to modern learning (Chandir & Gorur, 2021; UNESCO, 2015). This aligns with the OECD (Organization for Economic Co-operation and Development) report, which finds that increased internet connectivity and digital content production are driving the need for critical literacy to address the challenges of disinformation and digital divides. One of the focuses of the 2030 Agenda is the SDG Target 4.7, which emphasises global citizenship education and the appreciation of cultural diversity (Ardiansyah et al., 2024; Monzó-Martínez et al., 2024). Edwards et al. (2020) demonstrate that digital character and competence are core elements in shaping ethical and responsible global citizens. However, in Southeast Asia, especially Indonesia, the explicit integration of these two fields into civic education remains limited, even though it has the potential to strengthen the transformative direction of education. Thematic analysis reveals that integrating character education into digital literacy increases students' moral awareness, digital responsibility, and participatory engagement (Karakatsani & Fragkoulidou, 2023). The findings of this study align with UNESCO's agenda, which positions literacy as a strategic foundation for learning to achieve the Sustainable Development Goals (SDGs) and as an instrument to address the digital divide through a transformative educational approach. The conceptual framework offered strengthens civic education in the digital context and emphasises the urgency of a curriculum that is holistic, inclusive, and responsive to the dynamics of the times (Bawole & Sutanto, 2025).

Once the concepts of national identity and digital literacy are intertraced, citizenship education is often caught up in a dualism between traditional approaches—which emphasise

national identity and values—and contemporary approaches—which focus on media literacy and digital participation (Zahra et al., 2024). Few studies have managed to unite these two aspects within the framework of character education as the moral basis of citizens in the digital age. This article bridges this gap by presenting an integrated conceptual model that combines character education and digital citizenship to support the achievement of SDGs.

Conceptually, this article presents innovation by positioning character as a crucial soft skill that supports responsible and ethical digital citizen participation (Kim & Choi, 2021). Meanwhile, through direct linkages to SDGs 4.7 (quality global citizenship education) and 16 (peace and strong institutions), this study expands the realm of citizenship education towards a more transformative and sustainable global perspective (Dejaeghere et al., 2020). Strategies for educators and policymakers to develop citizenship curricula adaptable to technological challenges while remaining grounded in values (Rahman et al., 2023). Thus, this article contributes to a paradigm shift in civic education from a static approach to a dynamic, ethical, and contextual educational model that considers the global challenges of the 21st century.

## Theoretical Framework

### *Citizenship Education in the Digital Era*

In an era of abundant information and increasingly complex digital interactions, students in the 21st century must master digital literacy, critical thinking, and participatory skills in online public spaces. Therefore, the civic education paradigm must transform from a passive, normative model to a reflective, participatory model that can evaluate content, recognise social inequalities, and contribute to digital democracy. Choi and Cristo (2021) emphasise the importance of forming democratically active digital citizens with an intersectional approach and fostering engagement in public discourse. Zhang et al. (2022) emphasise that social media serves as a deliberative space that enriches public participation and awareness of diverse perspectives.

In Indonesia, these challenges are increasingly complex as information technology penetrates deeper into people's socio-political lives. The study by Alrahman et al. (2024), indicates that the Civic Education curriculum in higher education remains trapped in a normative paradigm that is less adaptable to the digital reality. There is a substantial discrepancy between the ideal goals of civic learning such as strengthening national identity, understanding the constitution, and respect for diversity with the concrete dynamics faced by students in the digital space, such as the rapid flow of disinformation, polarization of public discourse, and the escalation of identity-based hate speech (Pike et al., 2020; Siregar & Manurung, 2023) This phenomenon shows that a pedagogical approach that is only cognitive is no longer sufficient to form critical, ethical, and responsible digital citizens. Mahendra et al. (2024) highlight that digital literacy must encompass critical, ethical, and social components to foster students' civic virtues in the technological era. Therefore, the urgency to redesign Civic Education is growing to address the challenges of the times.

Citizenship Education needs to be reconceptualised as a learning vehicle that not only transmits national norms but also empowers students to be critical digital citizens capable of ethical navigation in the complexity of the digital ecosystem (UNESCO, 2021). This approach includes integrating digital literacy, reflective thinking, sensitivity to social justice, and the development of technology-based forms of civic engagement. Mohino et al. (2023) show that the effective use of digital tools can strengthen critical thinking and encourage active citizen participation in public life. In addition, the digital civics model proposed by Reddy et al. (2023) emphasises the urgency of forming a technology-wise attitude as an integral part of modern digital citizenship education. With this approach, Civic Education can be repositioned as a catalyst for strengthening civic agency within an inclusive, deliberative, and sustainable digital democracy ecosystem for social transformation. Therefore, digital challenges are not only

obstacles but also opportunities to foster a generation of resilient, progressive, and globally competitive citizens.

### *Digital Citizenship: Definitions and Pillars*

The concept of digital citizenship is now the normative foundation for life in an increasingly complex and ambiguous digital reality. The term refers to a set of norms and behaviours oriented towards ethics, responsibility, and active participation in the use of digital technologies. In response to this challenge, Prasetyo et al. (2021) developed the "Nine Elements of Digital Citizenship" framework, which includes access, communication, literacy, etiquette, law, rights and responsibilities, health, trade, and digital security. This model provides a comprehensive ethical framework for interactions in cyberspace and serves as an important reference in civic education curricula at various levels. Furthermore, Putra & Irwansyah et al. (2024) affirm that digital citizenship is not merely a technical skill but also a social, moral, and cultural practice inherent to individuals' digital identities in the online ecosystem.

Digital citizenship includes the ability to think critically about the information consumed, empathy for the diversity of opinion in the digital public space, and commitment to the principles of democracy and social justice. In this context, technological mastery must be combined with reflective and ethical dimensions, so that individuals are not only passive consumers but also producers of discourse, aware of the social impact of their digital participation (Jones et al., 2023). Recent research also emphasises the importance of a contextual approach in digital citizenship education, especially in a multicultural society like Indonesia. Kim and Choi (2021) emphasise that effective digital citizenship learning must consider social backgrounds, local values, and the community's cultural dynamics. Thus, digital citizenship education is not universalistic and homogeneous, but must be adapted to local needs to be relevant and grounded (Grzywacz et al., 2019). This is where the urgency lies to design a learning model that is not only based on digital competence but also strengthens national character, Pancasila ethics, and awareness of social plurality as the main prerequisites for the success of digital democracy.

### *Character Education as the Foundation of Digital Ethics*

Character education aims to instil universal values such as honesty, responsibility, empathy, and justice. Lickona (2019) states that characters must be taught, instilled, and contextualised in real life. In the digital context, these values serve as moral guidelines for ethical use of technology. Research by Berkowitz et al. (2020) shows that a consistent character education approach has a positive impact on student behaviour, including in the online realm. Values such as digital integrity, moral courage, and social responsibility are becoming essential components of digital citizenship education.

Character education in the digital era is no longer enough to focus solely on internalising moral values, but must also actualise them in ethical and responsible digital behaviour. In an anonymous and limitless digital space, students face a variety of moral dilemmas, from the spread of false information to cyberbullying and invasions of privacy. Therefore, digital citizenship education should be positioned as a transformative space to cultivate digital citizens who are not only technologically savvy but also morally upright and of strong character. As stated by Abidin et al. (2023), a fundamental aspect of community life in the digital era is maintaining ethics, integrity, and responsibility in every online interaction.

Strengthening character education in digital citizenship requires a relevant pedagogical approach and encourages critical reflection, where teachers play the role of facilitators through ethical discussions, case studies, and personal reflection to foster students' moral sensitivity (Ardiansyah & Nashar, 2022). Effective character learning must be participatory and rooted in real experience and deep moral discourse (Jean-Tron et al., 2022). In the digital ecosystem, character education is very important to strengthen the role of citizens in maintaining social

cohesion and the quality of democracy. Amid polarisation and algorithmic effects, values such as empathy, justice, and moral courage are becoming vital foundations for inclusive and responsible citizen engagement. Therefore, character-based digital citizenship education serves as a shaping of individual ethics and cultural strategies to build a civilised, resilient, and common good-oriented digital society (Ardiansyah et al., 2024; Berkowitz et al., 2020).

*Linkages to the Sustainable Development Goals (SDGs)*

SDG 4.7 emphasises the importance of education to promote global citizenship, sustainable development, and respect for diversity. On the other hand, SDG 16 aims to build a peaceful, inclusive, and just society. UNESCO (2021) encourages integrating digital literacy and character education into transformative education. In this context, digital-based and character-based civic education is an important strategy in supporting the achievement of the SDGs (Díaz & Prados, 2020).

Transformative education grounded in sustainability and social justice is crucial in the era of digital disruption. SDG 4.7 is not just a numerical target, but a holistic vision for creating global citizens who are aware of global responsibility and able to coexist with a plurality of values and identities. Within this framework, character-based digital citizenship education serves as a critical learning space that not only transmits knowledge but also shapes a global civic ethic that respects human rights, gender equality, and ecological sustainability (UNESCO, 2021). Mastery of technology needs to be balanced with moral capacity so that digital citizens are not just passive users, but responsible agents of change.

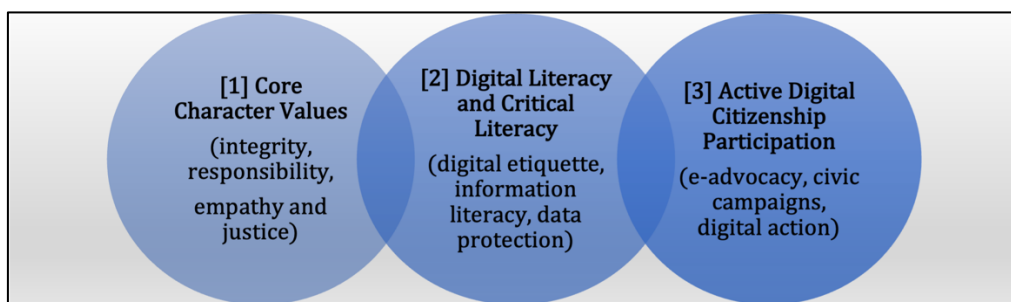
Civic education that integrates digital literacy and character is essential to achieve SDG 16, which is to build a peaceful, inclusive, and just society. This approach combats digital radicalism, hate speech, and online identity segregation, making character values a meeting point for digital skills and humanity (Díaz & Prados, 2020).. Education that instils critical awareness, social reflection, and digital empathy is vital for a civilised social structure. Thus, character-based digital citizenship education is systemic and cultural. It is a key strategy in the education ecosystem, aligned with the global agenda for sustainable development, producing competent graduates and global citizens who care and are empowered, while realising SDGs 4.7 and 16.

**Conceptual Framework**

Based on a comprehensive synthesis of the literature, an integrative approach between character education and digital citizenship in the context of civic education can be constructed into a three-layered conceptual framework illustrated in the following Figure. This model represents the synergy between ethical dimensions, digital literacy, and active participation as the foundation for strengthening civic identity that is adaptive to the dynamics of the digital era. This model was developed by adapting the theories of Ribble (2015), Lickona (2019), and Eggart and Flowers (2019).

**Figure 1.**

*Model of a three-layer conceptual framework*



*Source: Adopted from Ribble (2015), Lickona (2019), and Eggart and Flowers (2019).*

Based on a synthesis of recent literature from global and national studies, an integrative approach to character education and digital citizenship in civic education can be outlined in a three-layered conceptual model that is mutually sustainable. This model represents a dynamic, interdependent relationship among basic values, individual capacities, and active participation as the main foundation for shaping adaptive and resilient citizen profiles in the digital age. This conceptual structure can be described as follows:

#### *Layer of Value (Character Foundation Layer)*

The first layer serves as a moral foundation that shapes students' identities and ethical orientations in interacting in digital and non-digital spaces. In this context, core values such as responsibility, integrity, empathy, tolerance, and honesty are instilled through character education. These values are important not only as social norms, but also as a guide in dealing with moral dilemmas in the information age, such as fake news (*fake news*), hate speech (*hate speech*), and digital privacy violations. Character education is an ethical buffer, ensuring that students are not only technologically literate but also have a moral compass for using technology responsibly. As affirmed by Lickona (2019) and Pike et al. (2020), solid character education is an essential foundation in building a democratic society order that upholds justice and incarnates in a civilised attitude of life.

#### *Digital Literacy and Competency Layer*

The second layer emphasises mastering digital skills and understanding that students need to participate effectively and safely in the digital world. It includes elements such as media literacy, cybersecurity, digital ethics, awareness of digital footprints (*digital footprint*), and the ability to think critically about online information. The integration of this concept refers to nine digital components of citizenship, as formulated by Prasetyo et al. (2022), including access, communication, literacy, ethics, law, security, and responsibility in the digital space. Within the framework of civic education, digital literacy must be understood not only as a technical skill but also as cognitive and affective abilities that enable individuals to interact critically and reflectively within a complex and uncertain digital ecosystem. Therefore, students need the capacity not only to be passive users of technology but also to be active subjects who can create a digital space that is inclusive, healthy, and supports democratic principles.

#### *Layers of Digital Citizenship Participation*

The third layer is the culmination of the previous two layers, where character values and digital literacy synergise to encourage active, ethical, and transformative participation in digital citizenship life. This is where learners are directed to internalise their role as digital citizens who not only enjoy rights but also fulfil civic responsibilities in cyberspace. This participation can take many forms: speaking out ethically on social media, contributing to digital social campaigns, conducting online advocacy for human rights and environmental issues, and promoting a peaceful and inclusive narrative (UNESCO, 2024).

This layer is oriented towards the great goal of 21st century citizenship education, which is to form global citizens who are critically thoughtful, socially minded, and able to make a positive impact on their communities both locally and globally in line with the goals of the SDGs, especially SDG 4.7 which emphasizes the importance of education for sustainable development and global citizenship, as well as SDG 16 which targets the creation of a peaceful, just society, and inclusive. These three layers are not linear stages; rather, they support each other in a continuous cycle of education. Character values serve as the moral foundation, which is then strengthened by digital literacy as an instrument for thinking and acting, and ultimately encourages meaningful digital civic participation (Allaste & Waechter, 2025).

The three components form a pedagogical unit designed to foster technological skills, strong character and integrity, and sensitivity and involvement in socio-political life. Through this conceptual framework, civic education is no longer limited to the delivery of formal state

teachings but rather develops into a dialogical forum that integrates ethical values, the use of technology, and social responsibility in the midst of the dynamics of global digital transformation (Schulz et al., 2022).

## Method

This study adopts a descriptive qualitative approach that combines Systematic Literature Review (SLR) and reflective thematic analysis to explore the issue in depth (Fajri et al., 2022; Hamayel & Hawamdeh, 2022). SLR data collection is strictly conducted, covering scientific articles, policy documents, and conceptual publications from 2015 to 2025. The literature was selected based on methodological suitability, relevance to the themes of digital citizenship and character education, and contribution to sustainable development, following the guidelines of Hamayel and Hawamdeh (2022). The data analysis follows the principles of reflective thematic analysis outlined by Braun and Clarke (2021), emphasising the active involvement of researchers in interpretation and thematic consistency. This process ensures the systematic identification, organisation, and interpretation of key themes through a recursive and flexible approach.

This approach consists of six main stages that run cyclically and are not rigid, allowing the researcher to return to a previous stage as needed for the analysis. The first stage is familiarisation with the data, where the researcher repeatedly reads and analyses the data to understand the context and record initial impressions that can lead to patterns of meaning that emerge (Braun et al., 2019). This process is not only technical but also reflective, requiring researchers to develop an interpretive sensitivity to the research material.

The process of Reflective Thematic Analysis (RTA) begins with the initial code, identifying important features in the data as dynamically evolving interpretive units (Braun & Clarke, 2021). Furthermore, theme development groups the code into patterns of conceptual and theoretical meaning, which can be revised as research progresses. The fourth stage is a theme review to assess data consistency and suitability, and to revise or eliminate weak themes. Then, the definition and naming of themes sharpens the meaning and scope of the analysis (Nowell et al., 2017). Finally, the report preparation presents interpretive narrative findings, data citations, and reflections on the role of researchers (Terry et al., 2017). These six stages complement each other, ensuring that thematic analysis is not only descriptive but also makes a theoretical contribution.

## Result and Discussion

### Integrating Political Citizenship and Civic Knowledge

Digital citizenship education is a strategic instrument in building citizens' political awareness in the era of digital democracy. He not only teaches technological skills, but also internalises the values of participation, social responsibility, and political awareness in the digital public space. The integration of digital literacy and civic knowledge enables students to critically understand the structures and processes of governance, constitutional rights, and civic responsibility in the era of global connectivity. In line with Kim and Choi's (2021) idea, digital citizenship education demands reflective skills to participate ethically and responsibly in both online and offline communities, which ultimately strengthens the legitimacy of democracy. Thus, digital activities such as social campaigns, public policy discussions, and advocacy for socio-political issues become concrete vehicles for civic learning that foster the political awareness of the younger generation (Fajri et al., 2022).

Furthermore, digital participation is positively correlated with political engagement and civic responsibility. Oser (2022) emphasised that citizenship norms and the use of digital media can strengthen non-electoral forms of political participation, such as advocacy, policy discussions, and involvement in social movements. In the Indonesian context, Prasetyo et al. (2022) demonstrate that digital literacy and digital citizenship can empirically increase student civic engagement and foster concern for local democratic issues. In other words, digital

citizenship education serves as a bridge between the cyber world and the real world, forming citizens who are not only digitally capable but also politically knowledgeable, morally sensitive, and democratically aware. This synergy between technology and citizenship is an important foundation in preparing the younger generation to actively participate in good and inclusive governance in the future (Purta et al., 2019).

In its application, digital citizenship education must be designed not only to form skilled technology users but to produce active, critical, and reflective citizens in the face of the dynamics of the digital public space. This kind of learning orientation requires curriculum transformation, pedagogical strategies, and learning media that place democratic participation at the core of the learning experience. Digital public policy simulations, online advocacy projects, and policy debates on digital platforms are relevant vehicles for instilling civic disposition and political awareness among students (Fajri et al., 2022; Stuart et al., 2022). Through these participatory experiences, students learn that the digital space is not a single entity, separate from state life, but rather an expansion of democratic spaces where political rights and civic responsibilities are expressed ethically and constructively (Oser, 2022).

In depth, the participatory practice of digital citizenship education also fosters the ability to think critically about national issues and public policies circulating on social media. It is within this framework that integrating digital literacy, civic knowledge, and political awareness lays an important foundation for the formation of digital citizens with character. The findings of Brahmi et al. (2022) show that participation-based digital citizenship education can increase students' socio-political involvement while strengthening their reflective abilities in making ethical public decisions. Thus, digital citizenship education serves not only as a means of knowledge transfer but also as a tool for social transformation, preparing the younger generation to become democratic citizens who are aware of their rights, responsibilities, and political roles in the digital age (Kim & Choi, 2021; Kurdi, 2023).

### **The Role of Character Education in Building Digital Ethics and Strengthening the Ethical Dimension of Citizenship**

Amid the rapid development of digital technology, character education plays a strategic role in building a strong ethical foundation for the younger generation. The digital world offers a wide space for expression and interaction, but it also poses risks such as the misuse of information, online intimidation, and the manipulation of public opinion. In this context, an ethical framework rooted in character values is essential to shaping the behaviour of responsible, empathetic, and aware digital citizens. Character values such as responsibility, integrity, fairness, and empathy must be contextually internalised into students' digital life practices. The cultivation of these values cannot be done solely verbally or theoretically, but must be framed in a reflective, actionable learning experience. The digital world, which tends to be infinite, demands that students have not only technical abilities but also a moral compass to guide them in making ethical decisions in complex, often ambiguous situations.

Lickona (2019) emphasises that effective character education includes knowing, wanting, and doing good, which is especially important in the digital age for overcoming moral dilemmas. Mahendra et al. (2024) support the integration of character and digital literacy to strengthen students' digital ethics, although its implementation faces challenges such as limited teacher understanding and a lack of contextual modules. The formation of digital ethics requires a dialogical and reflective approach that encourages students to discuss and reflect on digital phenomena from a moral-social perspective, thereby strengthening critical thinking and moral empathy. Character education and digital literacy are central to 21st century education, complementing each other to form tech-savvy citizens with a strong moral compass. Hobbs (2021) emphasises that digital literacy goes beyond technical proficiency, encompassing ethical awareness, critical thinking, and active participation.

The formation of ethical digital citizens depends on the synergistic integration of the internalisation of character values and the mastery of comprehensive digital literacy. Effective character education must go beyond moral knowledge to touch on the feelings and moral actions of individuals (Lickona, 2019), which complements digital literacy including critical evaluation skills and ethical awareness (Fitroh et al., 2024) to fortify students from disinformation and hate speech (Mardiana, 2024). However, these integration efforts face significant challenges, especially related to the teacher competency deficit in digital ethics and the absence of learning modules and contextual evaluation indicators (Mahendra et al., 2024). To overcome these obstacles, a holistic educational paradigm is needed that is no longer stuck in subjects, but is interwoven into the entire learning ecosystem to produce reflective and participatory citizens in the digital space (Westheimer & Kahne, 2015). Therefore, visionary curriculum design, supported by sustainable teacher capacity building and affirmative policies, is an important prerequisite for building a generation capable of realizing a just, inclusive, and civilized digital society.

In the context of digital citizenship education, the ethical dimension is an inseparable foundation for mastering technological literacy. Digital literacy without a moral foundation will produce digital citizens who are technically proficient but ethically fragile. Therefore, civic education must foster virtue values such as integrity, empathy, social responsibility, and concern for others, both in online interactions and in real social life. In line with Choi and Cristol's (2020) view, ethical digital citizenship entails weighing the moral implications of every action in cyberspace and maintaining human dignity in digital communication. These values serve as a moral compass that guides individuals to be able to make fair decisions, respect differences, and behave responsibly in an increasingly complex digital ecosystem (Ribble, 2021).

Digital ethics-based civic education also demands a pedagogical approach that integrates moral reflection and empathic practice in the learning process. Teachers act as facilitators of moral reasoning, helping students interpret digital ethical issues such as the misuse of information, hate speech, or data privacy from a civic perspective. The findings of Alrakhman et al. (2024) confirm that instilling character values such as honesty, responsibility, and social care through case-based learning can strengthen students' moral behaviour in the digital and real world. Thus, digital citizenship education not only equips students with the ability to think critically about digital content, but also internalises moral virtues that support social cohesion and public civility (Hidayat et al., 2022).

Furthermore, the foundation of digital ethics plays an important role in fostering civic virtue, a moral virtue at the core of deliberative democracy. Kahne and Bowyer (2017) affirm that modern democracy requires citizens who are not only politically active but also capable of ethical reflection in their public participation. In this context, digital citizenship education is expected to foster ethical citizenship, which balances freedom of expression with social responsibility and places humanity at the centre of every digital action. In this way, digital citizenship education becomes a vehicle to produce citizens with integrity, empathy, and civility in facing the moral challenges of the 21st century.

### **Deepening the Connection between Global Citizenship and Character Education**

Global citizenship education not only prepares students to understand cross-border issues but also fosters the moral and emotional capacity to empathise and act in the service of universal humanity. In the 21st century, character education is the foundation for strengthening global consciousness, as it shapes values such as justice, cross-cultural empathy, and planetary responsibility (Örtegren, 2024; Oxley & Morris, 2013). Digital citizenship education, when integrated with character education, allows students to internalise universal human values and ethics in interacting in the digital space. This approach aligns with the SDG 4.7 goals, which emphasise the importance of education for sustainable development and inclusive global citizenship.

Furthermore, citizenship learning based on a global character helps students understand the connections between local actions and global impacts, for example, through digital participation in humanitarian issues, climate action, or human rights advocacy (Brahmi et al., 2022; Purta et al., 2019). By leveraging digital platforms, students can collaborate across cultures and build global solidarity based on the values of empathy and moral responsibility. In line with Kurdi' (2023) research, effective global citizenship must be built on an appreciation of ethical values that foster active and reflective participation in a diverse global society.

In addition, character education plays a strategic role in integrating global perspectives into civic awareness. Values such as tolerance, empathy, and social justice are prerequisites for the formation of inclusive and responsible global citizens (UNESCO, 2021). In practice, teachers need to develop learning experiences that stimulate intercultural sensitivity and global responsibility, for example, through cross-border online collaborative projects or global ethical discussions contextualised with local issues. Thus, character-based digital citizenship education not only strengthens national identity but also expands humanity's horizon, rooted in the values of Pancasila as the universal ethics of the Indonesian nation in the global arena.

Finally, the integrative approach between character education and global citizenship makes a significant contribution to the formation of 21st-century citizens who are aware of their rights and responsibilities as part of the world community. Digital literacy, when accompanied by moral literacy and global empathy, can be a bridge to transformative citizenship that fosters ecological, social, and humanitarian awareness (Putra & Irwansyah, 2024; Sriprakash et al., 2020). Thus, digital citizenship education is not only a means of adaptation to globalisation, but also a forum for internalising global character values that lead to sustainable and socially just actions.

Character-based citizenship education and digital citizenship contribute strategically to achieving the Sustainable Development Goals, especially SDG 4.7 and SDG 16. SDG 4.7 emphasises the importance of education that promotes sustainable development, global citizenship, and appreciation of cultural diversity, while SDG 16 focuses on the development of peaceful, inclusive, and just societies. In this case, integrating character values and digital proficiency is expected to produce citizens who are not only tech-savvy but also socially sensitive, morally courageous, and committed to social justice. A systematic study by Dejaeghere et al. (2020) shows that transformative citizenship education grounded in ethical values and global competencies can shape students' collective awareness of cross-border social issues, such as climate change, the digital divide, and human rights violations. Therefore, civic education can no longer be limited to classrooms and textbooks; it must be developed as a living, contextual social practice through digital media, global collaborative projects, and online advocacy campaigns. This effort not only increases the relevance of education but also strengthens schools' role as agents of social change in advancing the global agenda. The conceptual model proposed in this article integrates character education and digital citizenship within the framework of sustainable development-based civic education.

Based on Table 1, this integrative conceptual model describes a multi-level approach in combining character education with digital citizenship to strengthen civic education that is relevant in the technological age and oriented towards achieving the Sustainable Development Goals (SDGs). This approach is structured in three main aspects: Moral Foundation, Digital Literacy Competency, and Active Digital Citizenship, which systematically establishes a framework to strengthen the values of citizenship, skills, and participation (Eichberg & Charles, 2024).

The three-layered model integrates core character values as the moral foundation for civic identity, including responsibility, empathy, justice, integrity, and respect (Lickona, 2019), which are essential for ethical decision-making and constructive behaviour in both real and digital spaces and align with transformative citizenship education (Mahendra et al., 2023). Furthermore, the model develops comprehensive digital literacy competencies, not only

technical mastery, but also digital ethics including critical information filtering, understanding digital footprints, and responsible behaviour online (Kim & Choi, 2021), to avoid disinformation, hate speech, and deviant behaviour (Komalasari & Saripudin, 2017). The culmination is the formation of an active and participatory digital citizenship, encouraging students to become agents of social change through the use of technology to support collective goals such as social justice, environmental sustainability, gender equality, and tolerance, in line with SDG 4.7 (Dejaeghere et al., 2020). Thus, civic education is transformed into a praxis that connects ethical values with the use of technology, giving birth to digital citizens who are able to actively participate in e-advocacy, online petitions, and the initiation of technology-based social movements.

**Table.1.**

*Integrative conceptual model of character education and digital citizenship*

Aspects	Key Components	Description	Learning Objectives
1. Moral Foundations	Core Character Values	Instilling values such as integrity, responsibility, empathy, and social justice as the moral basis of students.	Build ethical awareness and attitudes of personal and social responsibility.
2. Digital Literacy Competencies	Digital Literacy & Ethics	Mastery of digital technical skills is accompanied by critical reflection on the ethical and wise use of digital media.	Develop digital competence, media literacy, and critical thinking capacity in a digital context.
3. Participatory Summit	Active Digital Citizenship	Encourage students to become active participants in digital communities, contributing to public discourse and constructive social action.	Facilitate the involvement of digital citizens in efforts to achieve the Sustainable Development Goals (SDGs).

*Source: Research Data, 2025.*

This integrative model of civic education is fully aligned with UNESCO's SDG 4.7, which emphasises education as a driver of empowerment and social transformation through a value-based, participatory, and contextual approach. In this context, civic education goes beyond the transmission of cognitive knowledge, becoming a strategic medium to shape students' character, ethical awareness, and capacity as agents of social change who can utilise digital literacy. By integrating human values, schools act as laboratories of democracy that encourage dialogue, empathy, and collective action between cultures. This model that integrates character values, digital literacy, and active participation offers an adaptive and globally relevant strategic framework, resulting in graduates who are not only digitally competitive but also highly morally aware, upholding democracy, social justice, and environmental responsibility, in line with the challenges of 21st-century curriculum reform.

### **Expanding from Technical Digital Literacy to Civic Competencies**

In the context of 21st century education, digital literacy is no longer understood as just a technical ability to operate devices or access information, but rather as a more complex and multidimensional civic competence. Citizenship-oriented digital literacy requires the ability to think critically, assess the credibility of information, and understand the social, political, and ethical implications of digital interactions (Ribble, 2015; Wan, 2012). This competence connects digital knowledge with reflective and participatory civic awareness, making the digital space a new arena for strengthening democratic values. Thus, the transformation from technical literacy to civic literacy reflects a shift from simply "using technology to interpreting technology critically and responsibly (UNESCO, 2021). In essence, digital citizenship education

needs to place digital literacy as a means of developing civic competencies such as critical thinking, deliberative dialogue, and digital advocacy that allows students to actively and ethically participate in online public spaces (Kim & Choi, 2021; Purwatiningsih et al., 2022). Through these skills, students learn to filter out false information, discuss public issues deliberatively, and use social media to responsibly voice political and social aspirations. Thus, learning focuses not only on digital fluency but also on the formation of political and social awareness that affirms the role of citizens in digital democracy (Allaste & Waechter, 2025).

In practice, a digital-based citizenship education curriculum can be designed to develop critical digital citizenship competencies that emphasise active participation and ethical responsibility in community life. Approaches such as project-based learning and digital civic simulations have been shown to be effective in improving students' ability to debate, negotiate, and collaborate in the context of complex social issues (Kahne et al., 2024 ; Mihailidis & Thevenin, 2014). Integrating this kind of learning not only fosters digital skills but also deepens students' understanding of the meaning of civil rights, obligations, and responsibilities in the era of information disruption. Ultimately, the development of digital literacy linked to civic competence is a strategic step toward producing a generation of citizens who can think critically, empathise, and actively participate in digital democracy. As emphasised by Siregar and Manurung (2023, digital competence accompanied by ethical and political awareness is the key to transformative digital citizenship that supports more transparent, participatory, and inclusive democratic governance. Thus, competency-based digital citizenship education not only builds technological expertise but also shapes citizens' moral and intellectual capacities to face the challenges of the global information age.

Furthermore, the new direction of digital citizenship education needs to be understood as the process of forming a digital civic habitus, namely the internalisation of civic values, dispositions, and practices that are realised through reflective and collaborative participation in the digital space (Kahne & Bowyer, 2017; Putra & Irwansyah, 2024). In this context, digital competence is no longer understood as a set of instrumental skills, but as a social construct that shapes the relationship among individuals, technology, and power. Civic learning that integrates critical literacy perspectives allows learners to read the digital world ideologically, understand how algorithms, data, and platforms shape public opinion, and develop agency to challenge the structural biases and injustices that manifest in the digital ecosystem (Hamayel & Hawamdeh, 2022; Pangrazio & Sefton-Green, 2021). Therefore, the transformative digital citizenship paradigm not only seeks digital literacy that is adaptive to technological change, but also fosters critical awareness of ethics, social responsibility, and digital solidarity to strengthen democratic cohesion in the network era. This kind of digital liberation-oriented education emphasises that 21 st century citizenship literacy is an emancipatory practice that forms citizens who are not only digitally capable but also civilised and possess national personalities.

### **Emphasising Social Justice and Cultural Diversity**

In an increasingly complex digital society, digital citizenship education cannot stop at mastering online etiquette or protecting against risks such as cyberbullying and disinformation. A more fundamental issue is how digital literacy can serve as a means to realise social justice and to recognise cultural diversity. Critical digital literacy requires learners to understand how power relations, representation, and access to technology reflect the structure of social inequality in the real world (Couldry et al., 2019) Warschauer, 2020). In this context, digital citizenship education serves as a transformative instrument that invites citizens to learn to reassess how algorithms, data, and social media can reinforce social biases, discrimination, and marginalisation of certain groups. This kind of awareness not only shapes the ability to think critically about digital content but also fosters social sensitivity to the issues of digital equality and inclusion that are the foundation of democratic civilisation.

Furthermore, social justice digital citizenship education emphasises empathy, cross-cultural collaboration, and active participation in pluralistic digital public spaces. Students need to be facilitated in having deliberative dialogues with groups from different social, cultural, and ideological backgrounds to build cross-border understanding. Through a critical multicultural digital citizenship approach, digital learning spaces can function as a collective learning arena where differences are understood as a source of social innovation and humanitarian solidarity (Kim & Choi, 2021; Pangrazio & Sefton-Green, 2021). The integration of cultural diversity principles in digital education not only enriches learners' perspectives, but also equips them with the ethical skills to navigate global issues such as hate speech, xenophobia, and online intolerance. Thus, digital citizenship education plays a strategic role in instilling humanistic values that affirm human dignity amid technological disruption.

Ultimately, efforts to instil social justice and respect for cultural diversity through digital citizenship education must be understood as an integral part of civic responsibility in 21st-century democracy. Digital transformation requires citizens who are not only technologically literate but also have political and moral awareness to fight for inclusivity in the virtual and real world (Gonzalez-Mohino et al., 2023; Vorwerk & Engenhart-Cabillic, 2022). The digital divide that is still wide in various regions emphasises the urgency of developing education policies that favour vulnerable groups, so that the right to participate meaningfully in the digital society can be felt equally. Within this framework, digital citizenship education serves as both a liberating pedagogical practice and a social agenda to create a fair, inclusive, and civilised digital order.

Thus, the digital citizenship curriculum should be designed to reinforce the values of equality and diversity, facilitate the active participation of marginalised groups, and build digital solidarity as a form of social responsibility. A critical multicultural digital citizenship-based approach allows learners to interpret diversity not as a separating difference, but as a source of collective strength in creating a just and humane digital space (Jones & Mitchell, 2016; Pangrazio et al., 2022). This effort places digital citizenship education not just as a response to technological challenges, but as an emancipatory strategy to fight for social equality and strengthen democracy in the global information ecosystem.

## Conclusion

The transformation of civic education in the era of educational technology cannot be separated from the urgency of integrating character values and digital citizenship to address the dynamics of the digital society and the global challenges of the 21st century. This study shows that citizenship education that combines character approaches and digital proficiency has great potential in shaping citizens who are not only digitally savvy but also morally and socially responsible. Character values such as integrity, ethical awareness, responsibility, and empathy should be the foundation for building students' digital literacy and ethics, which, in turn, lead to active participation in the digital public space in a constructive and critical manner. This approach aligns with achieving the Sustainable Development Goals, in particular SDG 4.7 on quality global citizenship education and SDG 16 on a peaceful and inclusive society. Thus, civic education needs to be reconstructed not only as a normative subject but also as a lively and dynamic pedagogical space capable of bridging local values, national needs, and global aspirations.

Therefore, it is concluded that this research is very important and can be recommended to policymakers. *First*, governments and education stakeholders need to revise the citizenship education curriculum to explicitly and structurally include digital citizenship competencies, not only as additional material but as an integral part of learning. *Second*, teachers need continuous training to understand and implement learning approaches that integrate character education with digital literacy, including the use of critical and ethical educational technology. *Third*, colleges need to encourage advanced research exploring best practices for character-based digital citizenship across a variety of social and cultural contexts. *Fourth*, it is necessary to

develop assessment indicators that measure student achievement not only on the cognitive side but also on the affective and behavioural sides in the digital space. *Finally*, collaboration among schools, communities, digital media, and civil society organisations must be strengthened to create a sustainable, context-specific ecosystem for digital citizenship education.

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