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Article

The Role of Civic Education in Cultivating Responsible Digital Communication among Elementary School Students

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Abstract: The exponential growth of digital technology has fundamentally transformed communication patterns among children, particularly elementary school students increasingly exposed to digital environments without adequate ethical guidance. This phenomenon has resulted in Indonesia's alarmingly low digital civility score of 76%, ranking 29th among 32 surveyed nations, highlighting urgent need for systematic interventions to cultivate responsible digital communication behaviors. This study explores how Civic Education (PKn) integration serves as an effective pedagogical instrument for enhancing digital communication ethics awareness among elementary school students. Employing a sequential explanatory mixed methods design, this research conducted structured surveys with 50 students from grades 4-6 across four elementary schools in Bandung, followed by in-depth interviews with 15 PKn teachers and 20 parents, complemented by participatory classroom observations. The investigation utilized purposive sampling and thematic coding analysis to examine implementation processes, challenges, and successes in shaping children's digital character. The findings reveal that PKn significantly contributes to students' digital ethics awareness, with value-based learning models integrating cognitive, affective, and psychomotor dimensions proving effective in internalizing digital citizenship values. Contextual learning strategies and simulation-based approaches demonstrated substantial success in developing data privacy awareness and online communication ethics, while collaborative supervision between schools and families created a holistic digital education ecosystem. However, critical gaps emerged in cybersecurity literacy and teachers' pedagogical competence. This study recommends comprehensive curriculum reformulation, enhanced teacher training programs, and adaptive teaching materials development to optimize civic education's potential in preparing ethically grounded future generations.

Keywords: Civic education; digital citizenship; netiquette; elementary school students; responsible digital communication.

Introduction

The exponential development of digital technology in an increasingly globalized world has fundamentally transformed the landscape of human communication, dissolving geographical boundaries and cultural barriers that once defined distinct ethical frameworks in traditional media. Contemporary digital interactions transcend conventional social structures, enabling unprecedented information exchange across genders, social groups, and cultural communities without inherent limitations or regulatory constraints. This rapid digital transformation has fundamentally altered the nature of technological engagement, particularly evident in how

screen-based devices have evolved from sophisticated communication tools exclusively utilized by adults into pervasive windows to the world for elementary school children. This phenomenon, conceptualized as the *digital native* generation, illustrates how contemporary children develop and mature within technology-saturated environments from their earliest developmental stages. However, beneath the apparent convenience of ubiquitous access to information and entertainment platforms lies a complex web of risks that frequently evade adequate parental and institutional supervision. Young learners navigate the digital realm without sufficient foundational knowledge or critical awareness, rendering them particularly vulnerable to multifaceted ethical dilemmas and cybersecurity challenges that characterize modern online environments (Jalal Deen Careemdeen, 2025).

Fahrimal (2018) conceptualizes Internet communication ethics, commonly termed *netiquette*, as the comprehensive conventions and normative rules governing the appropriate utilization of Internet media as interactive communication tools that inherently accompany users throughout their digital engagement. Although *netiquette* principles remain largely uncodified in formal legislation, their observance becomes essential for Internet users seeking to maintain ethical and moral standards that preserve comfort, harmony, and peaceful coexistence within social media ecosystems. Contemporary observations of communication ethics on social media platforms reveal widespread public concern that negative consequences of technological advancement have become predominant, with such detrimental impacts potentially threatening the fundamental politeness and civility of digital communication practices (Ahyati et al., 2024). Consequently, these erosive effects generate significant negative ramifications for social media users, with particular concern for the millennial generation and subsequent cohorts. Within this context of rapid technological progression, users become increasingly susceptible to adopting questionable moral values, resulting not only in deteriorating linguistic civility in communication practices but also fostering counter-communicative behaviors that potentially culminate in violations of legal and social norms (Meilian Jiang, 2024).

The ostensibly simple challenges that millennial and post-millennial youth encounter in their daily online activities are frequently overlooked or minimized, despite their capacity to generate profoundly serious consequences. These challenges encompass sharing photographs or videos without obtaining appropriate consent, thereby violating personal privacy rights and the privacy of others; engaging in interactions with unverified strangers, which creates potential pathways for cyberbullying or more severe cybercrimes; and experiencing exposure to inappropriate content or messages that can significantly interfere with their psychological development and emotional well-being. This concerning situation illuminates a substantial gap between children's technical proficiency in operating digital devices and their fundamental lack of ethical understanding regarding appropriate conduct in cyberspace (Faiz & Kurniawaty, 2022a).

Gülcan Öztürk (2021)defines social media as Internet-based platforms utilized by individuals to interact, share content, collaborate, and establish connections with fellow users, thereby constructing virtual communities bonded through digital interactions. The prevalence of digital device usage among Indonesian users is substantiated by survey data conducted by Hootsuite and We Are Social in 2022, revealing that Indonesia's total population reached 277.7 million in 2022, representing a 1% increase from 274.9 million in 2021. Demographic analysis indicates that 210.3 million individuals exceeded 13 years of age, 187.1 million were 18 years or older, and 179.7 million fell within the 16-64 age bracket. Furthermore, the survey documented 370.1 million connected mobile devices, 204.7 million Internet users, and 191.4 million active social media users, with the average daily Internet usage time reaching 8 hours and 36 minutes. Given the continuing population growth trajectory, the number of gadget users and individuals accessing online Internet services will inexorably increase, encompassing children aged 9-12 years who represent a particularly vulnerable demographic (Wulandah, 2023b).

The prevalence of online activities within Indonesian communities frequently involves violations of digital ethics perpetrated by Internet users across the archipelago. These transgressive behaviors have substantially impacted Indonesia's digital civility score, which reached 76% according to data derived from Microsoft's 2020 "Digital Civility Index" survey (Ahyati et al., 2024). This comprehensive report, based on responses from 16,000 participants across 32 countries during April-May 2020, revealed that Indonesian netizens demonstrated an alarmingly low civility level, ranking 29th among the 32 surveyed nations (Khori

Suci Maifianti, 2021). This troubling statistic demands immediate scholarly attention to systematically examine the underlying problems and develop appropriate interventions to reduce this 76% incivility score, particularly among younger generations who constitute the nation's future leadership. Data from We Are Social 2024 corroborates that Indonesia's digital politeness index remains positioned at the lower spectrum with a 76% score, while children aged 9-12 years demonstrate active social media engagement with an average daily access duration of approximately 8 hours. Concurrently, reports from the Ministry of Communication and Information indicate that digital literacy levels remain in the moderate-low category. These empirical findings underscore the critical urgency for research grounded in the Civic Education (*Pendidikan Kewarganegaraan* or PKn) curriculum to cultivate responsible digital communication behaviors, extending beyond mere technological literacy enhancement.

Previous scholarly investigations have emphasized the fundamental importance of values-based education in addressing technology's negative ramifications (Faiz & Kurniawaty, 2022a), alongside documenting the effectiveness of digital education programs such as *The Internet Is Awesome* initiative (Jones et al., 2024). Nevertheless, these interventions have demonstrated limited success in substantially transforming digital communication behaviors related to privacy protection, interpersonal politeness, and ethical digital discourse practices. Conversely, Febriani et al. (2025) propose a digital citizenship approach grounded in democratic principles and Responsible Research and Innovation (RRI) frameworks, providing valuable conceptual direction that has not yet been systematically implemented within the Indonesian educational context, particularly through PKn learning in elementary schools. Elementary school students represent a strategically significant demographic positioned within critical character formation phases while simultaneously experiencing intense exposure to digital environments. This research introduces methodological innovation by integrating PKn learning as a fundamental instrument for internalizing civic values within the digital domain, thereby generating an approach that encompasses not merely cognitive dimensions but also affective and contextual elements aligned with Indonesian cultural characteristics.

Social ethics within cyberspace, commonly designated as *netiquette*, constitutes a comprehensive set of normative rules governing communication and interaction through Internet platforms, fundamentally paralleling ethical principles operative in physical reality (Ahyati et al., 2024). Dawitri and Amara (2023) emphasize that digital literacy, particularly regarding social media utilization, represents an essential competency that individuals must master to engage wisely and responsibly in cyberspace interactions. Formal education, especially Civic Education (PKn), occupies a strategic position in addressing this competency deficit. PKn instruction extends beyond merely teaching citizens' rights and obligations, fundamentally instilling core values including courtesy, honesty, responsibility, and respect for others. These values constitute the crucial foundation for shaping children's character development in both physical and digital environments. Contextually relevant PKn learning can effectively bridge the divide between tangible and cyber worlds by educating students to embody characteristics of "good digital citizens" who demonstrate ethical judgment, wise decision-making, and responsible behavior in online contexts.

The primary objective of this investigation is to comprehensively explore how PKn learning integration can serve as an effective pedagogical instrument for enhancing awareness of digital communication ethics among elementary school students. Employing qualitative case study methodology, researchers examine this phenomenon from an interpretive perspective, seeking to illuminate the processes, challenges, and successes inherent in shaping children's digital character from early developmental stages. The findings from this investigation are anticipated to provide valuable reference frameworks for educators, parents, and policymakers in designing adaptive, contextually relevant, and sustainable curricula. *Netiquette* or cyber-ethics represents a critically important domain requiring extensive scholarly investigation. Ethics in cyberspace (*netiquette*) differs substantively from alternative ethical frameworks and necessitates specialized study because the communication processes involved utilize technological mediation, even as these cyber-mediated communication patterns replicate communicative forms present in physical reality. This understanding becomes essential for preparing future generations who possess both capability and ethical grounding to navigate the complexities of the digital era responsibly and effectively.

Literature Review

1. Civic Education

Squirt (Winataputra & Budimansyah, 2007) interpret *Civic education* as "*.....The foundational course work in school designed to prepare young citizens for an active role in their communities in their edult lives*". Or a basic subject in school that is designed to prepare young citizens, so that later after adulthood they can play an active role in their society. Citizenship education is broadly formulated to include the process of preparing the younger generation to take on the role and responsibility of citizens, and in particular, the role of education includes schooling, teaching and learning in the preparation of the citizen. Thus, civic education encompasses learning experiences at school and outside of school, as it happens in the family environment, in religious organizations, in community organizations, and in the media (Retnasari, 2022). This civic education includes four parts: civic knowledge (knowledge of citizenship and democratic governance), cognitive civic skills (*Cognitive Civic Skills*), participatory citizenship skills (*participatory civic skills*), and the character of citizenship (*virtues and attitudes that characterize democratic citizen*) (Hassan et al., 2023).

2. Digital Citizenship

In this digital era, Civic Education is required to develop: 1) responsible character in the use of digital media and understanding rights and obligations in cyberspace; 2) Think critically about the information circulating, so that it is not easily provoked by fake news; 3) Understand democratic principles, such as freedom of opinion that still respects the rights of others in the digital space; 4) and Using technology for social and national interests, e.g. in public policy advocacy or positive social campaigns (Hassan et al., 2023). Digital Citizenship Theory (Jones & Mitchell, Ribble): indicators of digital ethical awareness include security, privacy, and responsibility for information sharing. Formulate*Digital Citizenship*as a set of behaviors and attitudes that demonstrate the ethical, responsible, and safe use of information technology. Within this framework, digital citizenship indicators include the ability to communicate politely, maintain digital privacy, think critically about online information, and not engage in bullying practices or spreading hoaxes (Gülcan Öztürk, 2021). These indicators are an important basis in formulating observation and interview instruments in this study, because they are in line with the values of PKn that want to be instilled in the digital context. Digital citizenship is related to individual behavior when communicating online, especially on social media, by acting responsibly and in accordance with accepted moral and ethical standards (digitalcitizenship.net). to become a healthy and respectable digital citizen. Students should be taught how to use social networks politely and how to get diverse information on the internet in the classroom (Gülcan Öztürk, 2021).

3. The Importance of Social Ethics in Elementary Schools

Ethics are rules used by humans in life that help to determine what is right and wrong (Magnis-Suseno, 2016). *Netiquette* is an obligation that is present to be complied with by *Stuttgar* acting when connected to the internet According to (Magnis-Suseno, 2016) Ethics can be divided into several forms, namely, (1) general ethics that question the basic principles that apply to all human actions; (2) special ethics that address these principles in relation to human obligations in various spheres of life; (3) individual ethics that question man's obligations as an individual, especially to himself and through conscience towards the Divine; and (4) social ethics that govern human obligations coupled with the fact that he is a social being.

The formation of social ethics in cyberspace in elementary school students is very crucial. Because of their age they are still in character development and are still early users of digital technology. According to (Maifianti et al., 2021) Students who are taught social ethics from an early age usually have a higher sense of empathy for others in cyberspace. Students understand the importance of maintaining privacy, respecting their views and even respecting the opinions of others, they also tend to be able to avoid actions that can hurt others emotionally. Digital ethics will form the personality of students who know the limits in surfing the internet and social media. This process is called *Netiquette*, where netiquette is important in building healthy and positive interactions, especially for elementary school students who are still in the cognitive and social development stages. The basic principles when practicing social ethics in cyberspace are as follows:

Respect for Privacy
This principle includes a prohibition on disseminating personal information without permission or accessing the data of others without authorization. In addition to avoiding the dissemination of personal information, students need to be taught to maintain their own privacy boundaries, for example by not sharing too much personal information on social media.

Responsibilities in Sharing Information
This principle is important to do because of the rampant spread of hoaxes and unverified information on social media. It is hoped that before sharing information, it can check the truth of information, avoid the spread of hate speech, and try to support a positive digital environment.

Courtesy and Respect
When interacting socially in cyberspace, it is expected to be able to use the language that Okay, avoid Cyberbullying, and respect dissent. In addition to avoiding cyberbullying, Students also need to understand how to convey opinions in a way that does not offend others such as by using Emoticon or polite words.

Digital Security Awareness
This principle addresses the prohibition against sharing sensitive data that could be misused (Khori Suci Maifianti, 2021). Netiquette stands for "Internet etiquette" and refers to digital etiquette or a code of good conduct on the internet, including several aspects such as email, social media, online chat, web forums, website comments, multiplayer games, and other types of online communication (Christensen et al., 2017). Both terms, netiquette and digital ethics, are used interchangeably in the literature, so for the purposes of this study, I will use both terms to refer to the same meaning, although I argue that digital ethics encompasses netiquette in many aspects. As discussed earlier, the nine elements of digital citizenship are included in the S3 framework: (security, intelligence, and social).

Digital etiquette as an essential element of digital citizenship is classified under the principle of savvy related to self-education and interacting with others (Al-Khatib, 2023). Digital etiquette should be part of the classroom rules or academic goals in any educational setting; It should also be described in online activities as a standard guideline for good behavior, awareness, and concern for others. However, production in the field of netiquette as a separate field of study is still very limited, as it is still in the early stages of research (Anjani, 2018). In the literature, few works have examined netiquette and attempted to establish a standard theoretical framework of netiquette rules that can be applied in online activities. One such effort was made in 1994 through the ten core rules of netiquette put forth by Shea in his book, (Anjani, 2018). In the following sections, I will explore the ten rules of Shea. Shea lays out the ten core rules of netiquette as follows:

i. Rule 1. Remember that you are interacting with humans.
ii. Rule 2. Adhere to the same standards of behavior online as you would in real life.
iii. Rule 3. Know where you are in cyberspace.
iv. Rule 4. Respect other people's time and bandwidth.
v. Rule 5. Keep your image online.
vi. Rule 6. Share expert knowledge.
vii. Rule 7. Help control the war of words.
viii. Rule 8. Respect the privacy of others.
ix. Rule 9. Don't abuse your power.
x. Rule 10. Be tolerant of the mistakes of others

4. Value-Based Learning strategies and learning
Increasing understanding of digital citizenship is an important step to shape their social ethics in interacting in cyberspace. Strategies that can be used in schools through a systematic study approach by (Wulandah, 2023a) shows that despite the recognition of the importance of digital citizenship education in primary schools, most national curricula in various countries including Indonesia have not explicitly and systematically

integrated aspects of digital ethics into the learning structure. On the other hand, teachers are often not equipped with sufficient pedagogical competence to teach online netiquette or ethics in a contextual manner. This condition results in a gap between students' increasingly complex technological practices and the limitations of formal education interventions value-based learning, Value learning theory (Lickona): affective, cognitive, and psychomotor approaches in ethical learning. In the net-based value education process, as stated by the APEID Committee (*Asia and the Pacific Programme of Educational Innovation for Development*), value education is specifically aimed at:

i. Applying value formation to children.
ii. Produce attitudes that reflect desired values and,
iii. Guiding behavior consistent with those values. So that the purpose of value education includes educational actions that take place starting from value awareness efforts to the realization of valuable behaviors (UNESCO, 1994).

Value education sharpens us to think critically, analytically and selectively about something that has value in philosophy and science. These foundations were developed for man to be able to discover the essence of the whole human being. The position of this value has a position among other disciplines, including; (a) Meta-analysis, which is to criticize the truth achieved through the consideration of religious and cultural values. It boils down to understanding the nature of human beings from the perspective of the nation's philosophy and beliefs. And (b) *Par excellence,* Namely an effort to utilize superior values in the discipline for the development of value-sharing actions, related to designing the development of children's interest and concern for values. According to Egan, the development of children's interest and concern for values takes place in four stages, namely: mythical, romantic, and ironic stages. The four stages of development take place in tandem with the physical growth of children who are getting older and older. In elementary school students in grades 4-6 the age range of 8-15 years is a romantic stage, where in this age range, children hope that there is a lot of information that can provide descriptions about humans, the spirit of life, adventure, technological developments, sports to the area of individuals who are foreign to them.

Cyberculture theory emphasizes the relationship between communication and one's self-control. Cyberculture is a message that introduces an action or reaction from a person's self-control regarding a response arising from certain events encountered. There is a principle of the process of control or self-control and communication in the theory of Cyberculture (Widiyastuti et al., 2023), among others: First, feedback in it has several ways, namely: there is a positive or negative response from the existence of a pristiwa encountered. Second, restrictions on actions to prevent positive responses and maximize negative responses. For example, there is a response to the actions of the perpetrator who alluded to the SARA issue will get a response that tends to be negative as well. There was no positive response in support of the act of denouncing through social media. Third, information variesinverselyasnoise, which is a variety of information becomes crowded in interaction. If there are individuals who offend the egalitarian element, then other users will respond negatively and attack the perpetrator who uploads something negative on social media (Widiyastuti et al., 2023).

5. Digital Literacy for the Formation of Social Ethics in the Virtual World

Responsible digital communication focuses on ethical principles and responsibility in interactions and the dissemination of information in digital media. Digital communication ethics also includes the obligation of users to maintain courtesy in communication, respect privacy, and consider the social impact of the messages disseminated (Hamama, 2024). Digital literacy is considered crucial so that individuals can distinguish between true and false information and play an active role as digital citizens who can promote ethical behavior, empathy, and respect for diversity in online interactions.

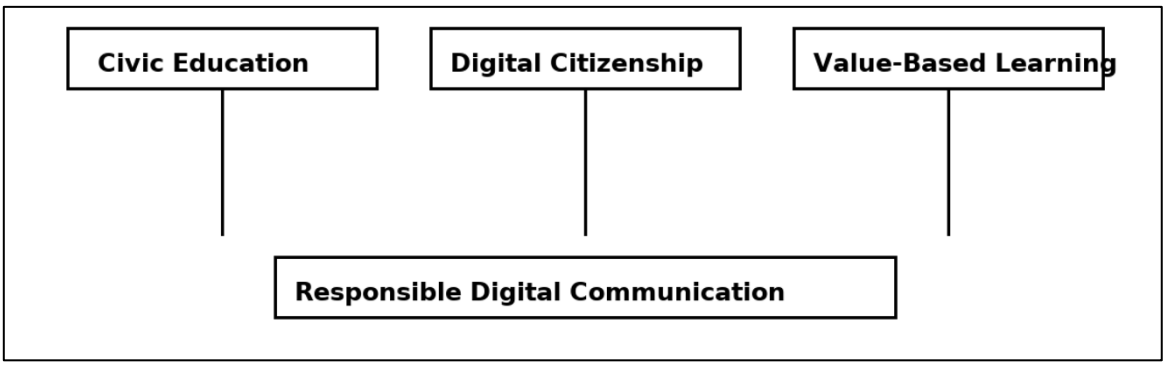

Figure 1. Responsible Digital Communication Framework
Source: Processed Researcher, 2025

Responsible digital communication integrates aspects of communication ethics, digital literacy, and responsible digital citizenship to create a digital space that is safe, informative, and inclusive for all users. (Ulfatun Nadifa, 2025).

Methodology

This study uses the *mixed methods* With design *Sequential Explanatory* which integrates quantitative and qualitative data to provide a comprehensive understanding of the role of PKn in building responsible digital communication in elementary school students. The quantitative phase was carried out first through a structured survey of 50 students in grades 4-6 from four elementary schools in Bandung (SDN Parakan Waas, MI As-Syifa, MI Alam Gaharu, and SD Assalam) using a questionnaire instrument with a 5-point Likert scale that measures indicators of digital ethical awareness based on Digital Citizenship Theory (Jones et al., 2024).

Quantitative data were analyzed using descriptive statistics to identify students' patterns of understanding of digital ethics, including data privacy awareness indicators with the highest scores (M=4.5) on "maintaining the privacy of accounts and personal information", online communication ethics with a moderate score (M=3.7) on "using polite language on social media", cybersecurity with a low score (M=3.2) on "recognizing malicious links and hoaxes", and positive digital participation with a moderate score (M=3.8) on "positively participating in online forums". Sampling technique using *purposive sampling* with the criteria of students who have used digital devices for at least 6 months and participated in PKn learning consistently.

The sampling technique used was purposive sampling, with criteria including students who (1) had used digital devices for at least six months, (2) actively participated in PKn learning, and (3) represented both public and private elementary schools to capture variations in digital literacy exposure. The schools were selected based on accessibility and representativeness of urban school typologies in Bandung. In addition, maximum variation sampling was applied to ensure diversity in gender, grade level, and socio-economic background of participants. The qualitative phase is carried out as a *Explanatory follow-up* through in-depth interviews with 15 PKn teachers, 20 parents, and participatory observation of PKn learning.

Qualitative data was analyzed using *Thematic Coding* with three stages: *Open Coding* to identify the initial theme from the perspective of stakeholders, *axial coding* to categorize themes based on learning strategies, implementation challenges, and evaluation of the role of PKn, and *Selective Coding* to interpret the convergence and divergence of findings between respondents. Qualitative interpretation resulted in the finding that teachers integrated digital ethics through contextual and simulated discussions, parents applied time and content-based supervision, while students demonstrated an understanding of civic values in a digital context through the application of manners and *Critical Thinking* to information. Data integration showed that low scores of cybersecurity (M=3.2) were confirmed through teacher interviews about the limitations of specific materials, while the highest scores of privacy awareness (M=4.5) were supported by teacher learning strategies and parental supervision. Methodological triangulation through *cross-case analysis* between schools and *member checking* ensuring the credibility of interpretation in the context of the implementation of PKn for digital citizenship in Indonesian primary schools (Braun & Clarke, 2021; Creswell, 2018).

The Findings

This research produced comprehensive findings regarding the role of Civic Education in building responsible digital communication in elementary school students. The results of the study show that PKn has a significant contribution in increasing students' digital ethics awareness, although there are variations in the level of understanding in certain aspects.

1. Student Digital Ethics Awareness Profile

Based on the analysis of quantitative data on 50 students in grades 4-6 from four elementary schools in Bandung, an interesting pattern was found in the distribution of digital ethical awareness. Data privacy awareness showed the highest score (M=4.5) on the indicator "maintaining account privacy and personal information", indicating that students already have a good understanding of the importance of protecting their personal data. These findings are in line with the theory *Digital Citizenship* submitted by (Jones et al., 2024) which emphasizes privacy as the main foundation of responsible digital citizenship. Communication ethics *Online* showed a moderate score (M=3.7) on the indicator "using polite language on social media", illustrating that students have a fairly good awareness but still need reinforcement in daily digital communication practices. Cybersecurity recorded the lowest score (M=3.2) on the indicator "recognizing malicious links and *Hoaxes*", revealing a critical gap in students' digital security literacy. Positive digital participation obtained a moderate score (M=3.8) on the indicator "participate positively in the forum *Online*", showing the potential that can be further developed.

Table 1. Integration of quantitative and qualitative data in PKn learning

Digital Ethics Indicators	Quantitative Findings	Qualitative Findings	Combined Interpretations
Data Privacy Awareness	Highest average score (M=4.5) on the indicator "Maintaining account privacy and personal information"	Teachers integrate discussions about password safety and real-world examples of data misuse	There is consistency between students' privacy awareness (quantitative data) and teachers' strategies (qualitative data). PKn plays a role in strengthening this attitude
Online Communication Ethics	Moderate score (M=3.7) on the indicator "Use polite language on social media"	Observations show that teachers use online discussion simulation methods to practice manners	It is necessary to strengthen simulation-based learning so that students practice politeness in real life
Cybersecurity	Low score (M=3.2) on the indicator "Recognizing malicious links and hoaxes"	Teacher interview: "Students are rarely given specific material on digital security"	There is a gap between student knowledge and the learning provided. Need for a more contextual curriculum
Positive Digital Participation	Medium score (M=3.8) on the indicator "Participate positively in online forums"	Parents emphasize the need for supervision because children are often passive in digital discussions at home	Teacher-parent collaboration is important to encourage active and responsible students in the digital space

2. Implementation of the PKn Learning Strategy

Based on Table 2, the analysis of digital ethics learning strategies in Civics Education reveals diverse pedagogical approaches employed by teachers. The contextual approach is most prevalent (80%, n=12), grounding digital ethics in real-life scenarios consistent with Vygotsky's constructivist theory. Simulations and case studies rank second (67%, n=10), engaging students in practical situations such as analyzing cyberbullying responses, operationalizing Lickona's psychomotor dimension of value learning. Interactive discussions are utilized by 60% of teachers (n=9) to explore digital social norms, reflecting Freire's dialogical learning principles. Digital rulemaking activities, employed by 53% of teachers (n=8), involve students in establishing protocols for device usage, aligning with Ribble's Digital Citizenship framework. Finally, collaborative supervision (47%, n=7) encourages parental involvement in internet usage, embodying Cyberculture theory's digital ecosystem concept. This multifaceted approach demonstrates teachers' recognition that effective digital ethics education requires integrating theoretical foundations with practical, participatory learning experiences.

Table 2. Analysis of digital ethics learning strategies in PKn

Learning Strategies	**Teacher Frequency (n=15)**	**Implementation Examples**	**Theoretical Interpretation**
Contextual Approach	12 (80%)	"Setting an example related to everyday life"	As per Vygotsky's constructivist theory of meaningful learning
Simulations and Case Studies	10 (67%)	"Taking the theme of speaking rudely, making videos of other friends, discussing how to respond to it"	Implementation of Lickona's theory of psychomotor dimensions in value learning
Interactive Discussion	9 (60%)	"Discussing, discussing social norms in social media interactions"	Application of Freire's dialogical learning theory in a digital context
Digital Rulemaking	8 (53%)	"Making rules regarding cellphone use"	Reflections on Digital Citizenship Ribble's theory of ethics and responsibility
Collaborative Supervision	7 (47%)	"Reminded to be accompanied by parents when using the internet"	According to the concept of digital ecosystem in the theory of Cyberculture

Qualitative data analysis from interviews with 15 PKn teachers revealed the dominance of contextual approaches (80%) in integrating digital ethics into learning. Theoretical interpretations suggest that this strategy is in line with Vygotsky's constructivist theory of learning regarding the importance of associating learning with student experiences (Faiz & Kurniawaty, 2022b). Teachers develop *scaffolding* Learning through "examples related to daily life" and "displaying several examples that exist in the school environment and outside the environment". The implementation of simulations and case studies (67%) reflected the application of Lickona's value learning theory which integrates cognitive, affective, and psychomotor dimensions (Anjani, 2018). This strategy allows students not only to understand the concept of digital ethics theoretically, but also to practice it through real-life scenarios such as "taking the theme of speaking rudely, his friend videos another friend speaking rudely, then spreading it, discussing how to respond to it." This approach is in accordance with UNESCO's (1994) value learning principles on value formation, attitude creation, and consistent behavior guidance.

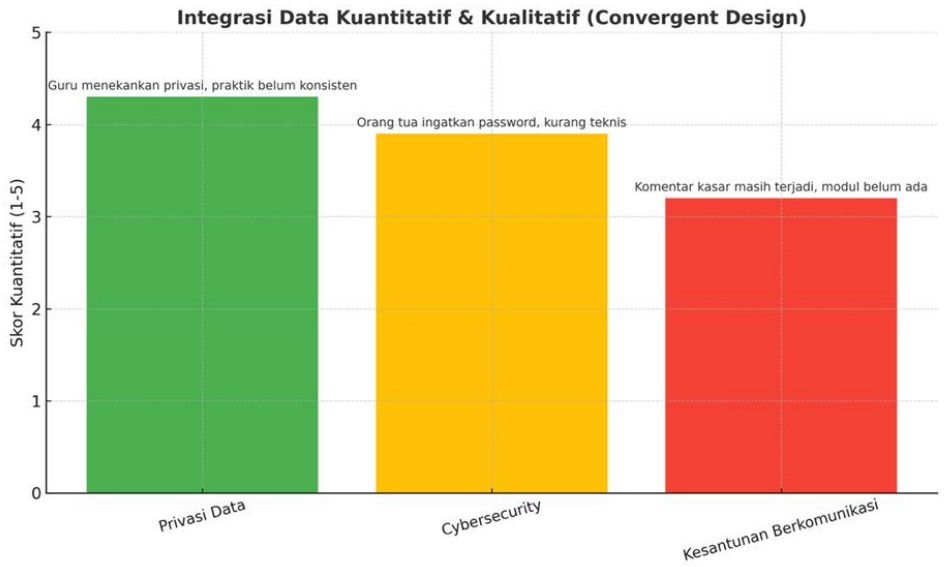

Figure 2. *Value-Based Learning* Model in the Context of Digital Ethics

The diagram shows the integration of three components: 1) Cognitive Dimension (knowledge of digital ethics, cyber regulation, and legal consequences), 2) Affective Dimension (digital empathy, social responsibility, and moral awareness), 3) Psychomotor Dimension (digital communication practices, simulation of ethical situations, and the application of values in online interactions).

Table 3. Analysis of parental supervision patterns and theoretical interpretation

Surveillance Strategy	Parental Frequency (n=20)	Implementation Examples	Theoretical Interpretation
Time Restrictions	18 (90%)	"The cellphone can only be used on Saturdays/Sundays 1-2 hours/day"	Implementation of Cyberculture theory of restriction mechanisms in self-control
Access Control	16 (80%)	"The password of the parent who made it, emphasized that the cellphone is not his"	Application of the concept of Digital Citizenship on digital responsibility and ownership
Content Monitoring	14 (70%)	"The child is connected to his parents' email"	According to the theory of digital ecosystems in the formation of communication behavior
Active Mentoring	12 (60%)	"Reminded to be accompanied by parents when using the internet"	Reflection on scaffolding theory in digital social learning
Value Education	10 (50%)	"Being given a directive to bully is not good, hurting the hearts of others"	Implementation of value learning theory in the context of the family

3. Digital Behavior Patterns and Qualitative Interpretation

Data from 20 parents revealed the dominance of time-restriction strategies (90%) in regulating the use of children's gadgets. Theoretical interpretation suggests that this approach is in line with the principle *restriction* in theory *Cyber Culture* (Dawitri & Amara, 2023) which emphasizes the importance of boundaries in preventing negative responses and maximizing self-control in digital communication. This monitoring pattern reflects parents' understanding of the risks of excessive digital exposure to the cognitive and social development of elementary school-age children. The implementation of access control (80%) through the "password of the parent who created" and the emphasis that "the cellphone does not belong to him" reflects the application of the concepts of ownership and responsibility in theory *Digital Citizenship*. This strategy helps children understand that access to technology is a privilege that comes with moral and ethical responsibility, not an absolute right that can be used without restrictions.

Table 4. Students' responses to PKn learning in a digital context

Response Aspect	Main Themes	Example Statement	Theoretical Interpretation
Internalization of Value	Honesty and Wisdom	"The value of PKN teaches to be honest, wise, polite on social media"	The success of the affective dimension in Lickona's theory of value learning
Critical Awareness	Anti-Hoax	"Not spreading hoax news and respecting other people's opinions"	Application of critical thinking in Digital Citizenship theory
Digital Empathy	Respecting Differences	"Mutual respect and empathy when you see friends mocking in group chats"	Implementation of the social dimension in the theory of digital citizenship
Social Responsibility	Positive Participation	"To be a citizen who is capable of communicating, utilizing positive technology"	According to the concept of civic engagement in the digital era

The students' responses show the internalization of significant PKn values in the digital context. Student statement "The PKN value teaches me to be honest, wise, and polite on social media and in the surrounding environment. For example, not spreading the news *Hoax* and respecting the opinions of others" reflects the success of the affective dimension in Lickona's theory of value learning. This interpretation shows that PKn has succeeded in forming a moral consciousness that can be transferred from the context of formal learning to the practice of daily digital communication. Anti-*Hoax* expressed by students reflects the application of *Critical Thinking* as a key component in theory *Digital Citizenship* (Jones et al., 2024). The ability of students to identify and reject the spread of false information shows the internalization of the critical values taught in PKn, especially related to the responsibility of citizens in maintaining the truth of public information

Discussion

The findings of this study affirm the strategic role of Civic Education as a vehicle for internalizing civic values in a digital context, in line with Branson and Kerr's conceptualization of civic engagement as an instrument for the formation of active and responsible citizen character (Retnasari, 2022). The integration of digital ethics into civil society learning shows significant potential in shaping elementary school students' awareness of moral responsibility in cyberspace, although its implementation still faces structural and pedagogical challenges. The highest score on data privacy awareness (M=4.5) indicates the success of the contextual learning strategies applied by teachers in integrating discussions about the security of personal information. These findings are consistent with research (Retnasari, 2022) which emphasises the importance of a systematic approach in education *Digital Citizenship* in elementary school. The simulation strategies and case studies used by teachers have proven effective in internalizing digital privacy values, as reflected in students' ability to identify the risks of misuse of personal data and implement basic security practices such as password management.

In contrast, low scores on cybersecurity (M=3.2) reveal a critical gap between students' technical ability to operate digital devices and their understanding of online security risks. Qualitative findings from teacher interviews confirm that "students are rarely given specific material on digital security", indicating limitations in the formal curriculum. This is in line with the findings (Vallès-Peris & Domènech, 2024) Regarding the need for a more comprehensive integration of digital literacy in the formation of social ethics in cyberspace. This gap underscores the urgency of developing specialized learning modules that integrate the technical aspects of cybersecurity with the moral values taught in civil society. Dimensions of communication ethics *Online* with a moderate score (M=3.7) indicating that students have a basic understanding of digital politeness, but still need reinforcement in daily communication practices. Implementation of value-based approaches (*value-based learning*) that integrates Lickona's learning theory has proven to provide a strong foundation in the formation of empathetic attitudes and social responsibility in the digital space. Learning strategies that combine cognitive, affective, and psychomotor dimensions allow students not only to understand the concept of politeness theoretically, but also to put it into practice through simulations of real-life situations relevant to their life contexts.

The role of parents as partners in the formation of responsible digital behavior shows high significance in the findings of this study. Parent-implemented time-based and content-based supervision patterns, combined with contextual learning strategies in schools, create a holistic digital education ecosystem. These findings strengthen the (Vallès-Peris & Domènech, 2024) Regarding the importance of a collaborative approach between school and family in developing character *Digital Citizenship* who are responsible. Mechanism *Feedback* and *restriction* applied by parents in line with the principles of the theory *Cyber Culture* in the formation of self-control and ethical communication in the digital space. The integration of Pancasila values in the context of digital ethics learning shows high relevance to the needs of student character formation in the digital era. Students demonstrate the ability to apply values such as honesty, wisdom, and empathy in their online interactions, as reflected in their statement on the importance of "not spreading the word *Hoax* and respect the opinions of others". This confirms the effectiveness of the approach *Responsible Research and Innovation* (RRI) proposed by (Vallès-Peris & Domènech, 2024) in integrating democratic values and social responsibility in digital citizenship education.

The implementation challenges identified, particularly related to the limitations of teaching materials and teachers' pedagogical competence, indicate the need for structural reformulation in the PKn curriculum. These findings reinforce previous research recommendations regarding the need for comprehensive teacher training and dynamic teaching material development to optimize the role of PKn in shaping responsible digital communication among Indonesian primary school students.

Conclusion

This study identifies the fundamental role of Civic Education in the construction of responsible digital communication in elementary school students through a mixed methods approach that integrates quantitative and qualitative perspectives. The findings show that the implementation of PKn significantly increases students' digital ethics awareness, with the highest score on the data privacy indicator (M=4.5) but still facing

challenges in the cybersecurity aspect (M=3.2). Value-based learning models that integrate cognitive, affective, and psychomotor dimensions have proven to be effective in internalizing digital citizenship values, particularly through contextual and simulation strategies applied by 80% of respondent teachers. Collaboration between schools and families through time- and content-based supervision creates a holistic digital learning ecosystem. Nevertheless, the gap in the formal curriculum and the limitations of teachers' pedagogical competence indicate the urgency of developing more adaptive learning materials and comprehensive teacher training to optimize the potential of civil servants in shaping an ethical and responsible digital generation in Indonesia

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Informed Consent Statement: Informed consent was obtained from all participants involved in this study. Prior to data collection, school administrators, teachers, parents, and students were provided with comprehensive information about the research objectives, procedures, and their rights to withdraw. Parental consent was secured for all student participants, and verbal assent was obtained from students themselves, ensuring ethical compliance with research standards.

Conflicts of Interest: The authors declare no conflicts of interest in this research. This study was conducted independently without financial support or influence from external organizations that could potentially bias the research design, data collection, analysis, or interpretation of findings. The research was undertaken solely for academic purposes to advance understanding of civic education's role in digital citizenship development.

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