



STRENGTHENING DIGITAL-BASED CIVICS EDUCATION IN PREVENTING CYBERBULLYING AMONG VOCATIONAL HIGH SCHOOL STUDENTS AT SMK PRAMA ARTHA SERBELAWAN

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Article Info

Article history:

Received : 10 May 2025

Revised : 20 May 2025

Accepted : 30 June 2025

Available online

<http://jurnal.uinsu.ac.id/index.php/analytica>

E-ISSN: 2541-5263

P-ISSN: 1411-4380



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ABSTRACT

The increasing prevalence of cyberbullying among vocational high school students poses a serious challenge in the field of education. This study aims to analyze strategies for strengthening digital-based Civics Education (PPKn) as an effort to prevent cyberbullying. Using a descriptive qualitative approach with a case study method, data were collected through participatory observation, in-depth interviews, and document analysis at SMK Prama Artha Serbelawan. The results show that the integration of problem-based learning and experiential learning models in PPKn effectively enhances students' digital literacy, media ethics, and awareness of digital responsibility. The study concludes that digital-based Civics Education plays a significant role in shaping students' character as active and responsible digital citizens.

Keywords: Cyberbullying Prevention; Digital Civics Education; Digital Literacy of Vocational Students

1. INTRODUCTION

The phenomenon of cyberbullying among Indonesian students has been increasing at an alarming rate, in line with the widespread use of social media in school environments. Among vocational high school (SMK) students, this deviant behavior not only affects peer relationships but also directly impacts the psychological condition of victims, such as anxiety, depression, and even suicidal ideation (Haryanto et al., 2024; Jamaluddin et al., 2025; Wiratama, 2024). This situation is exacerbated by the anonymous and difficult-to-monitor nature of digital interactions, allowing perpetrators greater freedom to launch verbal or visual attacks against fellow students (Prodyantasari & Vantie, 2024; Suhendar & Halimi, 2023). At SMK Prama Artha Serbelawan, observations show that while

students are highly active in digital spaces, they lack adequate understanding of digital ethics, especially in preventing harmful behavior online. The unpreparedness of educational institutions to address this issue reveals a significant gap in the process of character education and digital literacy development. Therefore, cyberbullying among SMK students is not merely an individual behavioral issue but also a systemic failure in the learning process that has yet to equip students with ethical awareness as digital citizens.

Recent literature shows that cyberbullying is strongly linked to weak digital literacy and the absence of structured digital ethics education in formal curricula, particularly within the context of civic education (Azizah, 2023; Susanti & Darmansyah, 2024). In fact, Civics Education (PPKn) is mandated to instill moral, legal, and social responsibility values, which can be expanded into the context of digital citizenship. Unfortunately, PPKn learning still predominantly relies on lecture-based methods and memorization of normative values, without involving students in reflective and participatory digital practices (Dahliyana et al., 2022; Yasa et al., 2025). The lack of technology-based pedagogical approaches and the failure to integrate digital world issues into learning processes make students vulnerable to social media misuse. Thus, there is both a theoretical and practical gap that needs to be bridged through the strengthening of PPKn learning strategies that integrate digital technologies and contextual approaches based on real-world issues such as cyberbullying.

This study aims to examine strategies for strengthening digital-based Civics Education (PPKn) in preventing cyberbullying practices among vocational high school students. The research also focuses on how the integration of technology in PPKn can shape students' character as ethical and responsible digital citizens. Therefore, this study contributes not only to solving empirical problems but also to enriching pedagogical practices in digital civic education. Technology-based learning reinforcement is expected to offer participatory and contextual learning experiences and serve as an alternative to conventional teaching that fails to meet the demands of the current digital era (Alakrash & Abdul Razak, 2021; Suhendar & Rambe, 2023; Yuniawati et al., 2024).

The urgency of this research is based on the reality that SMK students are increasingly exposed to the dynamics of digital media without adequate digital character education, making them vulnerable to becoming both perpetrators and victims of cyberbullying (Alismaiel, 2023; Huang et al., 2025). Meanwhile, PPKn, which should serve as a means of character formation, has not fully addressed this challenge due to its normative approach and limited use of technology. Based on field findings and relevant literature, there is a need for innovation in PPKn learning methods that not only deliver civic values but also engage students to actively participate as critical and ethical digital citizens (Bombardelli, 2021; Davis, 2021). Therefore, this study is crucial in strengthening both the theoretical and

practical foundations for designing a digital PPKn learning model that responds effectively to the issue of cyberbullying.

The Concept of Digital Civics Education

Digital-based Civics Education (PPKn) represents a transformation in civic learning that integrates digital tools and online platforms to deliver content on Pancasila values, democracy, human rights, and citizen responsibilities. This concept emphasizes an interactive approach that leverages information technology to create collaborative and reflective learning spaces within the context of digital citizenship (Lo et al., 2024; Zamiri & Esmaeili, 2024). Digital PPKn learning does not solely aim to convey cognitive content but also to internalize values through digital simulations, educational social media, and participatory learning applications. Through this approach, students do not merely understand norms and laws, but also develop critical and empathetic skills in navigating the digital world as part of national civic life (Maydani et al., 2025).

The implementation of digital-based Civics Education takes various forms in practice across educational levels. One prominent manifestation is the use of social media as an interactive learning platform to discuss current civic topics such as tolerance, law, and cyber ethics (Morales, 2023; Niklová & Hanesová, 2024). Additionally, the use of Learning Management Systems (LMS) enables Civics teachers to organize digital modules, discussion forums, and technology-based assessments accessible to students at any time. Learning can also be realized through educational games, online debate simulations, and national-themed vlogs that enhance students' understanding of civic issues through contextual and contemporary approaches. These various forms show that digital PPKn is not merely a tool adaptation, but a paradigm shift in civic education.

The Concept of Cyberbullying Prevention

Cyberbullying prevention refers to a series of educational and preventive actions designed to reduce the risks and impacts of online aggressive behavior, such as insults, intimidation, harassment, or the dissemination of harmful content via digital platforms. In the educational context, cyberbullying prevention is viewed as part of shaping students' digital character through the enhancement of digital literacy, media ethics, and social-emotional learning in cyberspace (Chen et al., 2024). Prevention is not limited to regulations or sanctions but also includes pedagogical approaches that emphasize empathy, non-confrontational communication, and the reinforcement of students' positive identity within online communities (Scarantino, 2024).

The manifestation of cyberbullying prevention in school settings can be seen through three main approaches: digital values education, school policies based on digital safety, and collaboration among teachers, students, and parents. Digital values education is carried out through the integration of cyberbullying topics into

the curriculum, such as in Civics Education (PPKn), which teaches digital responsibility and the legal consequences of harmful online behavior (Althibyani & Al-Zahrani, 2023). School policies, such as digital codes of conduct and reporting mechanisms through special applications, also serve as concrete forms of prevention. Additionally, community-based approaches such as social media campaigns, peer support groups, and digital literacy training for students help reinforce a safe and inclusive digital environment (Buchan et al., 2024; Yillah et al., 2025).

The Concept of Digital Literacy in Vocational Schools

Digital literacy in vocational schools (SMK) refers to students' ability to access, evaluate, produce, and interact with digital information ethically and responsibly. This literacy encompasses technical dimensions (device and application use), cognitive aspects (information analysis), and socio-affective elements (digital ethics and empathy), all of which are essential for fulfilling the role of an active and intelligent digital citizen (Aguayo et al., 2023). At the SMK level, digital literacy is not merely about technical skills in operating devices, but also about the readiness to face social and ethical challenges in a complex and rapidly evolving digital environment.

The manifestation of digital literacy in the SMK environment can be observed through students' ability to use digital tools for learning, filter misinformation or hoaxes, and engage respectfully on online platforms. Students with high digital literacy tend to display selective behavior in media consumption, understand the importance of protecting personal data, and participate in productive digital activities such as creating educational content or joining online academic forums (Marweny et al., 2025). Furthermore, digital literacy practices are reflected in students' awareness to report harmful content, support cyberbullying victims, and engage in digital literacy campaigns within their schools or communities (Tao et al., 2022).

2. RESEARCH METHOD

The phenomenon investigated in this study is the growing incidence of cyberbullying among students at vocational high schools (SMK), particularly at SMK Prama Artha Serbelawan, which reflects a rising trend of negative behaviors in students' digital interactions. This form of cyberbullying not only affects social relationships among students but also disrupts the emotional well-being and academic performance of the victims, signaling weak digital literacy and a lack of digital character development in schools (Tao et al., 2022). This phenomenon highlights the urgent need to develop relevant and technology-based learning approaches within Civics Education (PPKn), enabling students to actively confront and prevent acts of cyberbullying. In this context, digital-based PPKn learning is

positioned as a pedagogical solution that reinforces digital citizenship values and ethical awareness in online spaces (Yuniawati et al., 2024).

This study employed a qualitative approach with a descriptive research design, aiming to explore in depth the process of strengthening digital-based PPKn learning to prevent cyberbullying. This approach was chosen for its ability to capture social realities holistically through direct interaction with research subjects and contexts (Lim, 2025). The types of data used in this study consist of primary and secondary data. Primary data were obtained through classroom observations, in-depth interviews with students and PPKn teachers, and documentation of digital practices within the school. Meanwhile, secondary data included teaching documents, school curricula, anti-cyberbullying policies, and relevant references from journals or literature aligned with the research topic. The use of both types of qualitative data enabled the researcher to portray the phenomenon in detail and contextually.

The main data sources in this study were students of SMK Prama Artha Serbelawan, PPKn subject teachers, and other educational personnel involved in teaching and digital policy-making within the school. Information from students provided insights into their perceptions, experiences, and understanding of cyberbullying and the digital learning applied. On the other hand, PPKn teachers served as key informants, offering explanations on strategies, media, and pedagogical approaches used in digital-based PPKn classes. Educational personnel such as the principal or curriculum staff were also crucial sources, as they hold authority over policies related to technology use and anti-cyberbullying programs within the school (Khairunnisa et al., 2024). The involvement of diverse informants strengthened data validity through a source triangulation approach.

The research process was conducted in three main stages: preparation, implementation, and data evaluation. In the preparation stage, the researcher identified the location and informants, developed interview guidelines and observation sheets, and conducted a preliminary study to understand the school's digital context. The implementation stage involved participatory observation of the digital PPKn learning process, in-depth interviews with students and teachers, and the collection of documents related to school policies and digital teaching materials. Observation techniques were used to directly witness digital interactions in class and students' use of technology media. In-depth interviews were employed to gather comprehensive views and personal experiences of informants. Documentation complemented these methods by providing insight into school policies and instructional planning (Abedi, 2024). All processes were carried out systematically to maintain data validity and support the achievement of the research objectives.

Data analysis in this study used the interactive model from Miles and Huberman (1994), which consists of three main stages: data reduction, data display, and conclusion drawing (Miles, M. B., Huberman, A. M., & Saldaña, 2014). Data

reduction was conducted by sorting, categorizing, and simplifying raw observation and interview data to focus on cyberbullying issues and digital PPKn learning strategies. Data display was presented through matrices, descriptive narratives, and thematic tables that illustrated patterns of findings from each informant. Conclusion drawing was done gradually by analyzing inter-category relationships and interpreting the emerging meanings from the data. The validity of results was ensured through triangulation of techniques (observation, interviews, documentation) and triangulation of sources (teachers, students, educational personnel). This method was chosen to allow the researcher to deeply and contextually understand the dynamics and complexity of digital learning and cyberbullying prevention.

3. RESULT AND ANALYSIS

The integration of technology into Civics Education (PPKn) at SMK Prama Artha Serbelawan demonstrates that the use of digital media such as interactive presentations, educational videos, and online forums has encouraged active student engagement in understanding contemporary civic issues. This transformation has shifted the teacher's role from the central source of information to a facilitator of digital discussions, enabling students to express opinions and solve problems collaboratively (Mansour, 2024).

Digital-based activities, such as online discussions and analysis of social case videos, have fostered student responses to issues like intolerance and human rights violations on social media. This process not only enhances students' cognitive understanding of legal norms but also nurtures affective awareness of their responsibilities as digital citizens (Zhong & Zheng, 2023). When students actively engage in digital classroom forums or produce campaign content about online ethics, it becomes a concrete representation of how digital literacy and civic values integrate. Learning thus becomes transformative rather than merely theoretical, as it immerses students in the digital social spaces they encounter daily (Mhlanga, 2022).

The cyberbullying prevention strategies implemented through digital PPKn include delivering content on digital ethics, the role of law, and empathy in online interactions. Students are engaged in analyzing case studies, reflecting on personal experiences, and creating digital posters as part of anti-cyberbullying campaigns (Prodyanasari & Vantie, 2024). The strengthening of cyberbullying prevention through these learning activities contributes to the development of digital empathy, critical thinking toward media content, and the increased confidence of students in expressing their voices and reporting ethical violations online. This indicates that reflective learning has a more lasting impact on shaping students' digital character than one-way, normative approaches (Gavin et al., 2024). From a reflective perspective, it is evident that combining PPKn with project-based digital

activities helps students not only understand the dangers of cyberbullying but also generate cultural solutions from their standpoint as a digital generation. The collective awareness to create a safe digital space grows organically through such activities.

Compared to other studies that focus solely on legal interventions or disciplinary sanctions for cyberbullying perpetrators, this research stands out for emphasizing the strengthening of digital values and character through participatory pedagogical approaches. Its strength lies in the integration of problem-based learning and experiential learning models into the real-life digital experiences of students, a direction not yet widely explored in cyberbullying prevention research in Indonesia (Azizah, 2023). Field data also reveal that while vocational students possess strong digital device skills, they lack ethical awareness and information discernment. Therefore, PPKn plays a critical role in expanding the definition of digital literacy from merely technical skills to value-based awareness in digital interactions (Park et al., 2023).

Educational activities based on social media, digital reflection forums, and ethical content creation assignments have shown improvements in students' behavior, including online courtesy, appreciation for diversity, and avoidance of harmful content dissemination. Digital literacy enhancement within the PPKn context delivers a dual impact: it equips students functionally for the digital workforce and morally to navigate complex online social interactions. Digital literacy thus becomes a key indicator of successful Civics Education in the digital era (Yuniawati et al., 2024).

The implications of these findings highlight the need for more flexible and adaptive learning policies that align with technological advancements and students' character development needs. PPKn modules should not only be based on basic cognitive competencies but also aim for affective and digital social competencies. The positive results of this research are closely tied to its contextual and experience-focused learning approach. When students learn from their own realities, their understanding of digital norms and values becomes more internalized and meaningful. This pattern suggests that character education must involve participatory and reflective approaches.

If Civics Education continues to rely on conventional methods, moral challenges such as cyberbullying will persist without a systemic educational solution. Therefore, there is a need to reformulate curricula and provide teacher training to effectively integrate technology-based approaches into civic education. As a practical outcome of this research, it is recommended that schools establish digital facilitator teams to assist students, develop digital ethics guidelines, and design contextual learning modules. Cross-sector collaboration between teachers, students, parents, and digital communities is essential to building a healthy digital culture in school environments.

4. CONCLUSION

The most striking finding of this study is that vocational high school (SMK) students, long considered passive users of digital technology, are in fact capable of actively internalizing civic values through technology-based Civics Education (PPKn). Learning that combines experiential learning and problem-based learning approaches not only increases student engagement but also transforms their perspectives on digital ethics. Even through simple activities such as digital campaigns and online discussions, students were able to position themselves as agents of change in efforts to prevent cyberbullying in the school environment. This fact proves that the classroom is no longer the sole arena for character education; instead, the digital world has emerged as a new ethical laboratory for the younger generation.

This research makes a significant contribution both theoretically and practically to the development of digital civic education. Theoretically, it expands the scope of pedagogical approaches in PPKn by emphasizing the importance of integrating digital citizenship values into the curriculum. Practically, the findings provide a roadmap that can be adopted by other schools to design education-based cyberbullying prevention strategies through contextual, reflective, and participatory learning methods. In other words, this study affirms that the integration of technology into PPKn learning is not only feasible but a strategic necessity in addressing today's digital social challenges.

Although this study has revealed various dynamics of digital learning and cyberbullying prevention efforts, its scope remains limited to a single school with specific social characteristics. Therefore, the results are not intended to be broadly generalized but rather serve as a starting point for further exploration. Future research can expand by comparing similar strategy implementations across different regions or educational levels, and by more deeply exploring students' psychological dimensions in understanding the construction of digital ethics. With a broader and more diverse approach, the development of digital citizenship theory can become more refined and applicable within national education practices.

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