BRIDGING TRADITION AND INNOVATION; NAVIGATING DIGITAL-BASED CHARACTER EDUCATION IN ISLAMIC JUNIOR HIGH SCHOOLS

Muhammad Mahbubi [1*]; Amala Bilqis Ahmad [1]; Faiz Faiz [1]; Nadira Rusdiah [1]
[1] Nurul Jadid University, East Java, Indonesia
Correpondence Author: nadirarusdiahmakki@gmail.com

Abstract : *The integration of digital technologies into character education presents both opportunities and challenges, particularly in Islamic educational institutions where moral and religious values must be preserved alongside technological advancement. This qualitative comparative case study investigates how SMP Khadijah and SMP Muhammadiyah 4 Pucang implement digital-based character education. Data were collected through interviews, observations, and document analysis involving school leaders, teachers, and students. The findings reveal that SMP Khadijah adopts a structured approach through its 4S Program by utilizing multimedia tools to promote values such as politeness, discipline, and respect. In contrast, SMP Muhammadiyah 4 applies a project-based learning model via its proprietary E-Learning Muhammadiyah (ELMO) platform, encouraging students to produce digital content that reflects values like honesty and tolerance. Both schools face shared challenges, including inconsistent teacher proficiency with digital tools, distractions from non-educational content, and digital literacy gaps among students. Thus, the hybrid model, such as combining teacher-guided structure with student-centered projects it can may offer an effective strategy for embedding character education in digital environments.*

Keywords : *Tradition; Innovation; Digital-Based; Character Education.*

Abstrak : *Integrasi teknologi digital ke dalam pendidikan karakter menghadirkan peluang sekaligus tantangan, terutama di lembaga pendidikan Islam yang harus menjaga nilai-nilai moral dan religius seiring dengan kemajuan teknologi. Studi kasus komparatif kualitatif ini menyelidiki bagaimana SMP Khadijah dan SMP Muhammadiyah 4 Pucang mengimplementasikan pendidikan karakter berbasis digital. Data dikumpulkan melalui wawancara, observasi, dan analisis dokumen yang melibatkan pimpinan sekolah, guru, dan siswa. Temuan menunjukkan bahwa SMP Khadijah menerapkan pendekatan terstruktur melalui Program 4S dengan memanfaatkan alat multimedia untuk menanamkan nilai-nilai seperti kesopanan, kedisiplinan, dan rasa hormat. SMP Muhammadiyah 4 menggunakan model pembelajaran berbasis proyek melalui platform E-Learning Muhammadiyah (ELMO) miliknya yang mendorong siswa untuk menghasilkan konten digital yang mencerminkan nilai-nilai seperti kejujuran dan toleransi. Kedua sekolah menghadapi tantangan yang serupa, termasuk ketidakmerataan keterampilan guru dalam penggunaan teknologi digital, gangguan dari konten non-edukatif, dan kesenjangan literasi digital di kalangan siswa. Dengan demikian, model hibrida seperti menggabungkan struktur yang dipandu guru dengan proyek yang berpusat pada siswa, dapat menjadi strategi efektif untuk mengintegrasikan pendidikan karakter dalam lingkungan digital.*

Kata Kunci : *Tradisi; Inovasi; Berbasis Digital; Pendidikan Karakter.*

Muhammad Mahbubi, Amala Bilqis Ahmad, Faiz Faiz, Nadira Rusdiah

INTRODUCTION

Character education has long been a key pillar of education systems around the world, including Indonesia. Its goal is to develop individuals who are not only intellectually intelligent but also possess moral integrity, strong ethical values, and social responsibility (Baharun, 2016; Munif et al., 2021; Umar, 2023). However, entering the digital era, traditional approaches to character education face serious challenges (Mulyono & Nuhe, 2022; Munif et al., 2022). The rapid development of information technology has transformed patterns of social interaction, ways of obtaining information, and even learning methods (Hayati et al., 2023; Mtebe & Raphael, 2013; Mundiri et al., 2021). This digital era brings both opportunities and threats to character education. On the one hand, digital technology opens up new opportunities for conveying values in an interactive and engaging manner (Lesiak et al., 2024; Multazamy Rohmatulloh et al., 2022). However, on the other hand, the presence of social media, unfiltered digital content, and reduced direct interaction between students and between students and teachers have the potential to erode the moral values intended to be instilled (Isa et al., 2020; Priawasana & Wijaya, 2024). In this context, Islamic schools face a more complex challenge (Baharun, 2012). Islamic education emphasizes the development of noble morals derived from the Quran and Hadith. Therefore, the integration of technology into character education in Islamic schools is not only about the effectiveness of learning media, but also concerns the alignment of the values transmitted with Islamic principles (Multazamy Rohmatulloh et al., 2022). Efforts to combine technological advancements with religious values represent a new area that has not been widely explored in research, particularly in Indonesia.

Academic studies specifically addressing the implementation of digital-based character education in Islamic schools remain very limited. Existing studies generally focus solely on the use of technology to improve academic achievement, rather than on the moral and ethical dimensions of students (Abulibdeh et al., 2024). Even in a global context, the discourse on digital character education still largely ignores the specifics of local cultures and religious values, such as those developing in Indonesia (Haryanti et al., 2022). This gap has become increasingly relevant with the emergence of the concepts of Society 5.0 and Industrial Revolution 4.0, which emphasize the role of technology in improving the quality of human life, including in education (Parhan et al., 2024; Radjak et al., 2024). However, amidst the euphoria of digitalization, a critical question arises: to what extent can technology be utilized without sacrificing the ethical and moral values that underpin education, particularly in the Islamic education system?

SMP Khadijah and SMP Muhammadiyah 4 Pucang, serve as important representatives in answering this question. Both schools have begun integrating digital tools

into their character education programs. SMP Khadijah, through the 4S Program and the use of digital media, instills the values of courtesy, responsibility, and discipline; while SMP Muhammadiyah 4 uses the project-based Muhammadiyah E-Learning (ELMO) platform, emphasizing values such as honesty and tolerance (Albet, 2024). Despite showing positive initiatives, challenges remain ranging from teacher competence in using technology, the potential for misuse of digital media, to the digital literacy gap among students (Abdullah & Wafa, 2022; Mahbubi, 2013).

Although the literature on digital character education has grown significantly in recent years, research specifically addressing its application in Islamic educational contexts, particularly in Indonesia, remains limited. Existing studies often focus on general education or the application of technology to enhance academic learning, overlooking the unique religious and cultural dimensions central to Islamic education . Furthermore, while digital transformation in education is frequently examined in global contexts, the challenges and opportunities specific to local settings, such as Indonesia, have not received sufficient attention. One notable gap in the literature is the lack of research on how digital tools are integrated specifically into character education within Islamic schools in Indonesia, and how these schools manage to preserve the moral and ethical teachings of Islam while embracing technological advancements. While studies on the general integration of technology in Islamic schools exist, little attention has been given to how Islamic values are maintained in character education in a digital context, particularly in Indonesia's diverse educational environment. This gap in the literature highlights a critical opportunity for research into how Islamic schools can leverage digital tools not only to enhance academic learning but also to strengthen character education in line with Islamic principles. By focusing on SMP Khadijah and SMP Muhammadiyah 4, this research seeks to explore how Islamic schools in Surabaya navigate these complexities and provide insights into their strategies for aligning technology with the teaching of moral and ethical values.

This study aims to investigate the implementation of digital-based character education in SMP Khadijah and SMP Muhammadiyah 4 Surabaya. Specifically, it examines how these schools utilize digital platforms to instill core character values, such as discipline, respect, and responsibility, while addressing challenges related to technology integration. By exploring their approaches, strategies, and experiences, this research provides valuable insights into the opportunities and limitations of digital character education in Islamic contexts. Furthermore, it contributes to the growing body of literature on digital education by offering a nuanced understanding of how religious and cultural values can shape the use of technology in moral development.

Ultimately, this study highlights the critical role of Islamic schools in navigating the intersection of tradition and innovation, particularly in the context of Surabaya, a dynamic and diverse urban area with a rich educational landscape. The uniqueness of this research

Muhammad Mahbubi, Amala Bilqis Ahmad, Faiz Faiz, Nadira Rusdiah

lies in its focus on SMP Khadijah and SMP Muhammadiyah 4 Pucang, two Islamic junior high schools in Surabaya that are actively integrating digital tools into their character education programs. These schools offer a distinct context for studying the integration of technology into Islamic education, as they face the dual challenge of preserving religious and moral values while embracing modern educational practices. By examining how these institutions manage this balance, the study seeks to bridge the gap between digital education and religious moral development. It offers practical recommendations for educators, policymakers, and researchers working to enhance character education in the digital era, specifically in Indonesian Islamic schools. The findings are expected to provide a framework for other schools facing similar challenges in maintaining ethical principles and cultural values while incorporating technological advancements into their curricula.

METHOD

This research uses a qualitative approach with a case study approach to explore in-depth how digital-based character education is implemented in two Islamic educational institutions: Khadijah Middle School and Muhammadiyah 4 Pucang Middle School, Surabaya. This approach is considered appropriate because it allows researchers to understand the context, dynamics, and implementation strategies of character education from the perspective of participants and institutional documents. The research focused on analyzing the 4S program at Khadijah Middle School and the ELMO platform at Muhammadiyah 4 Pucang Middle School. The researcher served as the primary instrument for data collection and analysis. Data collection techniques included in-depth interviews with the principal, teachers, and students; direct observation of the digital learning process and character-oriented extracurricular activities; and documentation from various written sources such as the school curriculum, digital modules, and school activity reports. Data validity was maintained using source and method triangulation techniques.

The data obtained were analyzed using the interactive model by Miles and Huberman, which consists of three main steps: data reduction, data presentation, and conclusion drawing/verification. Data reduction was carried out by filtering, selecting, and summarizing data according to the research focus, such as the digital strategies implemented and the character values developed. The data was presented in the form of a thematic narrative to facilitate interpretation and to compare each school's approach. The final stage, drawing conclusions inductively based on patterns emerging from the field data, was conducted while verifying them through member checks and discussions with key informants. The entire process took place simultaneously and iteratively, paralleling the data collection process, to ensure the analysis remained contextual and accurate. Thus, this method supported the research objective of identifying patterns, meanings, and best

practices in the implementation of digital-based character education in secondary Islamic educational settings.

RESULT AND DISCUSSION

The findings of this study reveal how SMP Khadijah and SMP Muhammadiyah 4 Pucang Surabaya have adopted distinct strategies to integrate digital tools into their character education programs, reflecting their institutional goals and cultural-religious contexts. These findings are based on qualitative data collected through interviews, observations, and document analysis, offering a comprehensive view of how digital transformation is shaping character education in these schools.

1. A Structured Approach to Implementing Digital-Based Character Education

Khadijah Middle School implements a structured approach to digital-based character education through the 4S Program (Smile, Greet, Say Hello, and Be Polite) combined with multimedia technology. This program is not only implemented in person when students arrive at school but is also integrated into online learning through internal learning platforms and Google Classroom. According to the school's 2024 activity plan document, the 4S Program is part of the daily habits systematically developed within the character curriculum. In an interview, the Vice Principal for Student Affairs stated, "We don't want character education to stop at mere words. So we package it with a digital approach so that children continue to receive reinforcement even through screens." (WKS Student Affairs, interview, May 17, 2025). These findings indicate that a sustainable, structured approach is the school's primary strategy for maintaining the continuity of character values amidst the digital transformation of education.

Researchers' observations of the learning process in several online classes indicate that teachers use a variety of digital media, such as animated videos, interactive quizzes on Kahoot, and student-designed digital posters, as part of character learning activities. In Indonesian language lessons, for example, teachers include short videos illustrating polite and impolite behavior online. This encourages active discussion in the digital space about the importance of ethical communication. In an interview with an 8th-grade teacher, she stated, "We utilize short student-made videos, for example, about how to greet teachers politely in Zoom. The students are more enthusiastic because they are the content creators." (Indonesian Language Teacher, May 18, 2025). This approach emphasizes that the use of multimedia technology is not merely a tool but has become a pedagogical strategy to facilitate the understanding of character values in a contextual and applicable manner.

The practice of the 4S Program is also evident in the school's digital ecosystem through initiatives such as "Online Manners Week" and the "Virtual Smile Challenge." According to documentation of these activities uploaded to the school portal, students are encouraged to upload videos or digital messages demonstrating polite behavior in online interactions. Teachers provide feedback in the form of digital character badges, such as "Most Polite Student of the Week," which are announced through the school's social media accounts. In an interview with a student affairs officer, he stated, "We want to foster a positive culture that is also felt in the digital world, not just in the physical school environment." (Student Affairs Officer, interview, May 17, 2025). Observations of students' digital interactions indicate increased participation and enthusiasm for positive behavior in online forums. This suggests that a well-prepared digital environment can strengthen character internalization more broadly and comprehensively.

These findings demonstrate that the structured approach through the 4S Program directly addresses the research objective, which was to explore digital strategies for shaping student character. By integrating the values of courtesy, discipline, and respect for others into the digital ecosystem, the school not only creates routines but also fosters a consistent culture across spaces. The success of this implementation is reinforced by teachers' consistency in incorporating character values into various learning activities, as well as students' active participation in producing and disseminating educational content. Although technical challenges such as device and network limitations persist, the 4S Program strategy has proven capable of adapting to digital developments without diminishing the substance of character education. Thus, Khadijah Middle School has successfully bridged traditional values with technological innovation through a structured and practice-oriented pedagogical approach.

2. **Project-Based Learning Model and Character Content Production Through ELMO**

SMP Muhammadiyah 4 Pucang implements a project-based learning approach as the primary strategy in digital-based character education. Through the ELMO (Muhammadiyah Online E-Learning) platform, teachers design project-based assignments that allow students to express their understanding of character values in the form of digital works. In an interview, a PPKn teacher explained, "We encourage students to create digital projects, such as videos or infographics, that highlight the themes of honesty and tolerance in everyday life." (PPKn teacher, interview, May 18, 2025). The goal of these projects is not simply to test cognitive understanding but also to foster reflective awareness and positive attitudes in students. Observations of the learning implementation indicate that this model creates a collaborative, creative, and experience-based learning space. This approach addresses the research objectives regarding digital

learning strategies for instilling character values actively, independently, and contextually.

One of the featured activities in character learning at SMP Muhammadiyah 4 is student digital content production, such as short videos, podcasts, digital posters, and character blogs. In documentation accessed by researchers through the ELMO platform, several student projects stood out, such as a video titled "Honesty Is Cool" and an infographic titled "Tolerance in My School." Students presented real-life scenarios reflecting the values of honesty, mutual respect, and cooperation. An eighth-grade student stated during a classroom observation, "I feel I understand the importance of honesty better because I had to explain it through a self-made video, not just reading theory." Teachers provided assessment rubrics that included affective aspects and digital skills, so students learned not only character but also 21st-century skills. These findings demonstrate that content production encourages students to deeply experience and internalize character values through a reflective, creative process.

Teachers play a crucial role as facilitators, guiding the content production process and guiding the character values they want to convey. In an interview, one guidance counselor stated, "We don't just give assignments, but also accompany students throughout the creation process. Sometimes we discuss what values they want to adopt from their personal experiences." (Guidance Counselor, interview, May 19, 2025). The ELMO platform facilitates these activities by providing discussion forums, content uploads, and interactive feedback features. Observations of interactions in the ELMO forum indicate that students provide positive and constructive feedback on each other's work, reinforcing the values of appreciation and empathy. Furthermore, teachers can monitor students' work processes from start to finish. These findings demonstrate that the success of a project-based learning strategy lies not only in the final outcome but also in the ongoing character-building process throughout the project.

Data analysis indicates that the project-based learning model through ELMO at SMP Muhammadiyah 4 effectively addresses the research objective, which was to identify digital strategies capable of fostering student character through active and participatory learning. Content production activities not only enhance students' understanding of values such as honesty and tolerance but also strengthen critical thinking, communication, and digital literacy skills. Challenges remain, such as time constraints and varying technological capabilities among students, but the support of an inclusive platform and a mentoring teacher approach can gradually overcome these challenges. Overall, this approach creates a learning ecosystem that integrates cognitive,

affective, and technological aspects, so that students' character is not only learned but also practiced and experienced in their digital lives. Thus, SMP Muhammadiyah 4 has succeeded in making character education a creative, relevant process that has a direct impact on student development.

3. Challenges in Implementing Digital-Based Character Education

One of the main challenges in implementing digital-based character education at both schools is the disparity in teacher competency in educational technology. An interview with an ICT teacher at Khadijah Middle School stated, "There are still teachers who can only open PowerPoint and are not yet accustomed to using interactive learning platforms like Kahoot or Canva." (ICT teacher, interview, May 19, 2025). Classroom observations revealed that some teachers rely on PDF materials or online lectures without integrating interactive media, resulting in minimal student engagement in reinforcing character values. This finding is supported by internal school documentation, which indicates that the digital training conducted is still technical in nature and does not address aspects of digital pedagogy in depth. Teachers' digital unpreparedness is a structural obstacle that hinders the optimization of character education approaches, particularly in terms of creative delivery of values and the use of technology-based media.

In the context of digital-based learning, distractions from non-educational content pose a particular challenge, particularly at Muhammadiyah 4 Middle School. The Civics teacher expressed concern, "Sometimes students appear active online, but in fact, they are browsing YouTube, which is filled with entertainment, not material." (Civics and Citizenship Education teacher, interview, May 18, 2025). Observations of online activities show that students tend to open new tabs or switch to social media during character education, especially if the material presented is not visually engaging or interactive enough. This results in low internalization of the values intended to be instilled. Teacher reports revealed several incidents where students uploaded content outside the topic of the assignment, such as funny memes irrelevant to character values. This challenge underscores the importance of supervision, creating engaging content, and integrating a control system that allows teachers to monitor students' digital interactions in real time.

The digital literacy gap among students also poses a serious obstacle to implementing technology-based character education. An interview with a 7th-grade teacher at Khadijah Middle School stated, "Many students who have just entered middle school don't know how to make videos or interactive presentations, so they feel insecure and ultimately passive." (7th-grade teacher, interview, May 17, 2025). Observations of digital assignments revealed disparities in the quality of student-produced projects, with

only a small proportion demonstrating technical mastery and effective character message processing. Meanwhile, documentation of assignment results on the Google Classroom platform indicates that students with limited access and digital skills tend to submit only written assignments without multimedia elements. This disparity hinders students' active involvement in the character content production process and has the potential to create inequities in learning. Therefore, basic digital literacy support is a crucial prerequisite for the successful implementation of technology-based character education programs.

A comprehensive analysis of the challenges above indicates that human resource readiness, content control, and student digital competence are crucial for the successful implementation of digital-based character education. Both schools have a strong commitment to integrating character values, but limitations in teacher and student capacity hinder the optimal internalization of these values. The following challenge matrix summarizes the key differences;

Table 1: Analysis of Challenges and Implications of Strengthening Implementation Strategy

Aspect of Challenge	SMP Khadijah	SMP Muhammadiyah 4
Teachers' Digital Competence	Not evenly distributed	Currently being improved
Distractions from Non-Educational Content	Minimal	Occurs frequently
Students' Digital Literacy	Uneven (Grades 7–8)	Varies across all grade levels

The implications of these findings point to the need for policy design to increase teacher capacity in digital pedagogy, develop online content control systems, and strengthen students' digital literacy from an early age. Thus, these challenges can be transformed into learning opportunities to strengthen a technology-based character ecosystem in a sustainable and inclusive manner.

This study explores the integration of digital tools into character education at two Islamic schools in Surabaya, SMP Khadijah and SMP Muhammadiyah 4 Pucang, highlighting their distinct strategies and shared challenges in fostering moral and ethical development. At SMP Khadijah, the "4S Program" (Smile, Greet, Salute, Shake Hands) serves as the foundation of character education, focusing on cultivating politeness, discipline, and respect. The program leverages multimedia tools, including educational videos and interactive modules, to provide students with visual and contextual learning experiences. These tools facilitate discussions around moral dilemmas and ethical decision-

making, making abstract values more relatable and accessible. Additionally, the school emphasizes digital responsibility through dedicated computer lab sessions, where students learn about appropriate online behavior and the ethical use of digital platforms. Classroom observations revealed that students actively engaged with these tools, demonstrating improved comprehension of Islamic values. However, teachers noted inconsistencies in the program's implementation due to varying levels of digital literacy among educators.

SMP Muhammadiyah 4 Pucang adopts a project-based approach to character education through its "Character Friday" initiative. This program encourages students to create digital projects, such as vlogs and posters, promoting values like tolerance, honesty, and respect. The initiative is supported by the proprietary E-Learning Muhammadiyah (ELMO) platform, which integrates character education into various academic subjects. Observations indicated that students collaborated effectively in groups, demonstrating creativity and enthusiasm in their projects. Teachers reported that these activities helped students internalize moral principles by connecting classroom learning to real-world applications. Despite its successes, the school faced challenges related to time constraints in balancing project-based learning with academic assessments, as well as disparities in students' digital literacy.

Both schools also encountered shared challenges in their efforts to integrate digital tools into character education. A common issue was the potential for distractions during digital activities, with students sometimes veering off-task due to non-educational online content. Additionally, a lack of sufficient teacher training on advanced digital tools and pedagogy hindered the consistent and effective use of technology in both schools. Teachers expressed a need for professional development programs to improve their digital competencies and align teaching practices with the goals of character education. Another challenge was ensuring that digital activities remained aligned with the schools' Islamic values and educational objectives, which required ongoing effort and monitoring.

The integration of digital tools into character education at SMP Khadijah and SMP Muhammadiyah 4 highlights both the opportunities and complexities of digital transformation in Islamic schools. While the findings provide insights into the schools' practices, the discussion delves deeper into their implications, drawing on theoretical frameworks such as the Technological Pedagogical Content Knowledge (TPACK) model and Kohlberg's stages of moral development, as well as the influence of cultural and religious contexts. The use of multimedia tools at SMP Khadijah illustrates the potential of digital resources to enhance moral education by making abstract concepts more accessible and engaging for students. This approach aligns with the TPACK framework, which emphasizes the interplay between technology, pedagogy, and content knowledge in effective teaching. Teachers at SMP Khadijah demonstrated pedagogical content knowledge by integrating Islamic moral principles into multimedia content, such as videos depicting ethical dilemmas. However, their technological knowledge varied, which occasionally

resulted in inconsistent implementation. This finding underscores the importance of professional development programs tailored to improve teachers' competencies in using digital tools for moral education.

At SMP Muhammadiyah 4, the project-based learning approach reflects a student-centered pedagogy that encourages active participation and real-world application of moral values. This method aligns with Kohlberg's stages of moral development, particularly the post-conventional stage, where individuals internalize ethical principles and apply them autonomously (Abdullah & Wafa, 2022; Zhang & Zhao, 2017). By engaging students in the creation of digital projects that promote values like tolerance and honesty, the school fosters deeper moral reasoning and critical engagement. However, the reliance on student initiative raises concerns about equity, as disparities in digital literacy levels may disadvantage certain students. This highlights the need for structured guidance and equitable access to digital resources to ensure inclusivity in project-based learning (Fathoni et al., 2024; Mahbubi & Sa'diyah, 2025).

Both schools grapple with the dual-edged nature of digital tools, where opportunities for innovation coexist with risks such as distractions and misuse. The challenges reported by teachers, including students' off-task behavior during digital activities, reflect broader concerns about the potential downsides of technology in education. The integration of digital citizenship education into character education programs is crucial to address these issues. As Kallio note, teaching students to navigate digital environments responsibly, critically evaluate online content, and engage ethically is essential for maximizing the benefits of digital tools (Kallio et al., 2016).

The cultural and religious contexts of these schools play a significant role in shaping their approaches to digital character education. At SMP Khadijah, the emphasis on digital responsibility complements Islamic teachings on self-discipline and accountability, reinforcing the values of ethical behavior in both digital and physical spaces. Similarly, SMP Muhammadiyah 4's integration of character education into multiple subjects reflects a cross-curricular strategy that aligns with the Islamic principle of holistic education (tarbiyah). These practices extend Ribble et al.'s findings by demonstrating how cultural and religious values can inform the integration of digital tools in moral education (Ribble, 2015). The systemic challenges faced by both schools, including insufficient teacher training and limited resources, reflect broader issues within Indonesia's education system. Rahman emphasize the need for targeted investments in professional development to bridge the gap between technology and pedagogy (Rahman, 2018). Policymakers must address these challenges by providing adequate funding and support to create a conducive environment for digital character education. Additionally, implementing monitoring systems to manage distractions and ensure alignment with educational objectives can enhance the effectiveness of digital tools.

The integration of digital tools at both schools has demonstrated significant potential to enhance character education. SMP Khadijah's structured, teacher-led approach has ensured a consistent reinforcement of values, while SMP Muhammadiyah 4's student-centered, project-based model has fostered creativity, collaboration, and deeper moral engagement among students. These findings highlight the adaptability of Islamic schools in leveraging technology to address the moral and ethical needs of students in the digital age. The implications of this study are significant for the integration of digital tools in character education within Islamic schools. The findings indicate that the digital transformation of education presents both opportunities and challenges. While digital tools enhance engagement and make moral lessons more accessible, they also pose risks such as distractions and the need for effective teacher training.

When compared to existing theories, this study contributes to the theoretical discourse on digital character education by providing insights into the cultural and religious contexts that shape how Islamic schools integrate digital tools. The integration of digital tools in moral education aligns with the Technological Pedagogical Content Knowledge (TPACK) model (Mishra & Koehler, 2006), which emphasizes the importance of combining technology, pedagogy, and content knowledge for effective teaching. In the case of SMP Khadijah, the use of multimedia tools to simplify complex moral concepts reflects the TPACK model's emphasis on effective technology integration in education. Similarly, the project-based learning approach at SMP Muhammadiyah 4 aligns with Kohlberg's stages of moral development, particularly the post-conventional stage, where students internalize and autonomously apply ethical principles (Abdullah & Wafa, 2022).

However, the findings also point to the limitations in digital tool integration, especially in the inconsistent technological knowledge of teachers and the digital literacy disparities among students, which hinder equitable participation in digital character education. This underscores the need for professional development and equitable access to digital resources, which is not fully addressed in current literature but emerges as a crucial factor for the success of digital-based character education.

CONCLUSION

This study underscores the significant role of digital tools in advancing character education in Islamic schools, particularly at SMP Khadijah Surabaya and SMP Muhammadiyah 4 Pucang Surabaya. Both schools have successfully integrated technology into their educational frameworks, demonstrating innovative approaches to instilling moral and ethical values in students. However, the strategies they employ differ significantly, reflecting their institutional goals, teaching methodologies, and cultural-religious contexts. SMP Khadijah adopts a structured, teacher-led approach, centered on the "4S Program" (Smile, Greet, Salute, Shake Hands). The school utilizes multimedia tools such as videos and interactive modules to simplify abstract moral concepts and engage students in moral

dilemma discussions. This approach emphasizes digital responsibility, focusing on ethical online behavior, digital footprints, and appropriate social media use, which aligns with the growing need for digital citizenship education. In contrast, SMP Muhammadiyah 4 employs a student-centered, project-based approach through its "Character Friday" initiative. This program encourages students to create digital projects such as vlogs and posters that promote values like tolerance, honesty, and respect. The initiative supports creativity and collaboration, allowing students to internalize moral values by creating real-world applications using the E-Learning Muhammadiyah (ELMO) platform.

The findings of this study contribute to the growing discourse on digital character education by illustrating how Islamic schools can adapt traditional moral teachings to the demands of the digital era. The distinct strategies employed by SMP Khadijah and SMP Muhammadiyah 4 provide valuable insights for other educational institutions aiming to integrate technology into character education. SMP Khadijah's approach, which focuses on structured teacher-led instruction, is ideal for schools prioritizing consistency and alignment with institutional values. On the other hand, SMP Muhammadiyah 4's project-based approach could inspire schools that aim to foster creativity, student agency, and collaboration. Educational institutions may benefit from adopting hybrid models, combining structured guidance with opportunities for active participation and creativity, thus balancing technological innovation with the preservation of core values.

Given the limitations of this study, further research should explore the long-term impact of digital-based character education programs on students' moral development and ethical behavior. Future studies could also examine the effectiveness of hybrid models that combine teacher-led instruction with project-based learning, evaluating how such models affect student engagement, creativity, and moral reasoning. Additionally, research exploring the role of parental involvement and community partnerships in enhancing the success of digital character education could provide valuable insights into the broader support systems that contribute to effective implementation. Finally, future studies could investigate the challenges faced by schools in rural areas or regions with limited technological resources, providing a more comprehensive understanding of how digital tools can be integrated in diverse educational settings.

ACKNOWLEDGMENT

Muhammad Mahbubi, Amala Bilqis Ahmad, Faiz Faiz, Nadira Rusdiah

involved. May the findings of this research serve as a constructive input for the development of character-based digital education in Indonesian Islamic schools.

BIBLIOGRAPHY

Abdullah, & Wafa, M. A. (2022). Penerapan Pembelajaran Kooperatif Model Problem Based Learning pada Mata Pelajaran Pendidikan Agama Islam dalam Meningkatkan Motivasi Belajar Siswa di SMPN 5 Bangkalan. *Journal Of Early Childhood And Islamic Education, 1*(1), 12-32. https://doi.org/10.62005/joecie.v1i1.13

Abulibdeh, A., Zaidan, E., & Abulibdeh, R. (2024). Navigating the confluence of artificial intelligence and education for sustainable development in the era of industry 4.0: Challenges, opportunities, and ethical dimensions. *Journal of Cleaner Production*, *14*(05), 27-39.

Albet, M. S. (2024). Implementation And Challenges Of Discipline Character Education. *Jurnal Pendidikan Karakter, 15*(2), 99-109. https://doi.org/10.21831/jpka.v15i2.77799

Baharun, H. (2012). Desentralisasi Dan Implikasinya Terhadap Pengembangan Sistem Pendidikan Islam. *At-Tajdid : Jurnal Ilmu Tarbiyah*, *1*(2), 241–254.

Baharun, H. (2016). Pengembangan Media Pembelajaran Pai Berbasis Lingkungan Melalui Model ASSURE. *Cendekia: Journal of Education and Society*, *14*(2), 231. https://doi.org/10.21154/cendekia.v14i2.610

Braun, V., & Clarke, V. (2008). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brondz, I. (2012). Analytical Methods in Quality Control of Scientific Publications. *American Journal of Analytical Chemistry*, *03*(06), 443–447. https://doi.org/10.4236/ajac.2012.36058

Creswell, J. W., & Poth, C. N. (2017). Qualitative Inquiry and Research Design: Choosing Among Five Approaches. SAGE Publications.

Fathoni, A. M., Sulaeman, M., Azizah, E. A. N., Styawati, Y., & Ramadhan, M. U. C. (2024). The New Direction of Indonesian Character Education: Bullying, Moral Decadence, and Juvenile Delinquency. *Jurnal Pendidikan Agama Islam*, *21*(1), 77-89. https://doi.org/10.14421/jpai.v21i1.7759

Haryanti, A. S., Hufad, A., & Leksono, S. M. (2022). the Strengthening of Character Education Based on Local Wisdom Through Hikayat Nyimas Gamparan. *PEDAGOGIK: Jurnal Pendidikan*, *9*(1), 15–27. https://doi.org/10.33650/pjp.v9i1.3495

Hayati, A. N., Yanuartuti, S., & Suryandoko, W. (2023). Design Android Application Remo Putri Gaya Tawi Dance For Vocational Students. *Pedagogik: Jurnal Pendidikan*, *10*(2), 168–187. https://doi.org/10.33650/PJP.V10I2.5314

Isa, W. A. R. W. M., Suhaimi, A. I. H., Misron, M., Bohary, N. A. A., & Amin, I. M. (2020). Designing mobile-game based learning application for children on oral health education using Islamic culture. *International Journal of Advanced Science and Technology*, *29*(6), 1603–1611.

Kallio, H., Pietilä, A.-M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing, 72*(12), 2954–2965. https://doi.org/10.1111/jan.13031

Lesiak, A. J., Malik, N., & Griswold, and J. C. (2024). A Creative Communication Partnership to Promote Curricula Dissemination on Social Media. *The Journal of STEM Outreach*, *7*(1), 1-13. https://doi.org/10.15695/jstem/v7i1.02

Mahbubi, M. (2013). Pendidikan Karakter Implementasi Aswaja Sebagai Nilai Pendidikan Karakter. Pustaka Ilmu.

Mahbubi, M., & Hasanah, H. (2024). Formation of Students' Religious Character Through Habituation of Religious Activities. *Edumaspul: Jurnal Pendidikan, 8*(2), 53-67. https://doi.org/10.33487/edumaspul.v8i2.8518

Mahbubi, M., & Husein, S. (2023). Sinergitas Guru dan Orangtua Dalam Membentuk Karakter Disiplin dan Rasa Hormat Peserta Didik. *Cendekia: Media Komunikasi Penelitian dan Pendidikan Agama Islam, 15*(02), 194–209. https://doi.org/10.37850/cendekia.v15i02.533

Mahbubi, M., & Makkiyah, D. (2024). The Role of Foster Guardians in the Formation of Students Ethics in the Digital Era: Case Study of PP Nurul Jadid Az-Zainiyah Region. *Edumaspul: Jurnal Pendidikan, 8*(1), 3490–3498

Mahbubi, M., Tohet, M., & Diadara, E. (2024). Analyzing the Impact of Audiovisual Media in Islamic Religious Education and Character Education to Enhance Students' Learning Interest. *Electronic Journal of Education, Social Economics and Technology, 5*(2), 125-139. https://doi.org/10.33122/ejeset.v5i2.283

Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record: The Voice of Scholarship in Education, 108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Mtebe, J. S., & Raphael, C. (2013). Students' experiences and challenges of blended learning. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT), 9*(3), 124–136. http://ijedict.dec.uwi.edu/viewarticle.php?id=1690

Multazamy Rohmatulloh, D., Sudrajat, D., Asnaeni Am, S., Kunci, K., Digital, I., Pesantren, K., & Kebangkitan Islam Dan Kajian Ilmiah, P. (2022). Digital Innovation in Pesantren Education: Prediction To Welcome Global Islam Awakening. *Jurnal Pendidikan Islam*, *5*(2), 20-32.

Mulyono, & Nuhe, A. (2022). Manajemen Pendidikan Madrasah Berkarakter melalui Program Gefa dalam Mewujudkan Generasi Berakhlakul Karimah. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(4), 6395–6403.

Mundiri, A., Eka Mahmud, M., Ubaidillah, M., Azizah, N., Zuhro, L., & Hasanah, F. (2021). Learning Agility during Pandemic; Outstanding Strategy in Language Learning by Using Zoom Application. *Journal of Physics: Conference Series*, *1779*(1), 2563-2570. https://doi.org/10.1088/1742-6596/1779/1/012066

Munif, M., Rozi, F., & Kulsum, U. (2022). Desain Video Vlog dalam Menumbuhkembangkan Karakter Anak Usia Dini. *Manazhim*, *4*(1), 78–93. https://doi.org/10.36088/manazhim.v4i1.1619

Munif, M., Rozi, F., & Yusrohlana, S. (2021). Strategi Guru dalam Membentuk Karakter Siswa melalui Nilai-nilai Kejujuran. *Fondatia*, *5*(2), 163–179. https://doi.org/10.36088/fondatia.v5i2.1409

Parhan, M., Budiyanti, N., & Kartiko, A. (2024). Transformative Pedagogy: Islamic Religious Education Model for Society 5.0 Amidst the Industrial Revolution. *Tafkir: Interdisciplinary Journal of Islamic Education, 5*(2), 32-47.

Muhammad Mahbubi, Amala Bilqis Ahmad, Faiz Faiz, Nadira Rusdiah

https://doi.org/10.31538/tijie.v5i2.732

Priawasana, E., & Wijaya, P. R. (2024). Transforming Teacher Performance: Optimizing Learning Through Information and Communication Technology. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, *9*(3), 704–714. https://doi.org/10.31538/NDHQ.V9I3.59

Radjak, D. S., Jusuf, S., & Bongkan, A. D. (2024). The Urgency of Digitizing Learning for Madrasah Aliyah Islamic Boarding School Students in The Era Of Society 5.0. *Journal of Learning and Technology, 3*(1), 87-97. https://doi.org/10.33830/jlt.v3i1.7896

Rahman, A. (2018). Konsep Dasar Pendidikan Politik bagi Pemilih Pemula melalui Pendidikan Kewarganegaraan. *JUPIIS: Jurnal Pendidikan Ilmu-Ilmu Sosial, 10*(1), 44–51.

Ulyawati, U., & Sugito, S. (2022). Digitization of Elementary School Science Learning In The Industrial Era 4.0. *AL-ISHLAH: Jurnal Pendidikan*, *14*(2), 201-213. https://doi.org/10.35445/alishlah.v14i2.746

Umar. (2023). Deepening Convictions; Leading for Religious Literacy Based on Pesantren. *Pedagogik*, *10*(2), 151–167.

Zhang, Q., & Zhao, H. (2017). An Analytical Overview of Kohlberg's Theory of Moral Development in College Moral Education in Mainland China. *Open Journal of Social Sciences, 5*(8), 59-70. https://doi.org/10.4236/jss.2017.58012