



Transforming Islamic Religious Education through Local Wisdom and Cyber Ethics to Foster Global Harmony among Generation Z

Achmad Yusuf¹, Minhah Makhzuniyah², Aridlah Sendy Robikhah³, Do'stnazar Ximmataliyev⁴

¹Universitas Yudharta Pasuruan, Indonesia ²Institut Agama Islam Nahdlatul Ulama Bangil, Indonesia, ³Universitas Islam Lamongan, Indonesia, ⁴Chirchik State Pedagogical University, faculty of pedagogical, Chirchik, Uzbekistan
Email: ¹achysf@yudharta.ac.id, ²miamakhzun@ianu-bangil.ac.id, ³aridlahsendyrobikhah@unisla.ac.id, ⁴d.khimmataliyev@gmail.com

Abstract

This study is motivated by Generation Z's vulnerability to digital radicalization, religious disinformation, and global conflicts in cyberspace, thereby necessitating the reconstruction of a digital Islamic Religious Education (IRE) program that is technologically adaptive, rooted in local wisdom, and focused on strengthening cyber ethics. This research aims to formulate an integrative digital PAI model based on local wisdom and cyber ethics, as well as to analyze its effectiveness in building Generation Z's multicultural awareness, digital responsibility, and reflective capacity as agents of peace. The study employed a qualitative design at SMKN 1 Purwosari through in-depth interviews with Islamic education experts, digital literacy activists, and students, supplemented by a systematic literature review. The findings indicate that, first, Generation Z exhibits specific vulnerabilities to digital radicalization stemming from generational characteristics, the digital ecosystem, and gaps in critical digital literacy. Second, the integration of local Islamic wisdom from the Nusantara region with cyber ethics in digital Islamic education is not only possible but also effective through an integrative model encompassing the pillars of digital moderation, communication ethics, information verification, digital responsibility, and digital harmony. Third, the implementation of this synergistic model has proven significant in enhancing cultural awareness, digital responsibility, and competencies as peace agents among Generation Z. This study confirms that the reconstruction of Islamic Education through an integrative approach is a strategic intervention that bridges normative Islamic values with contemporary digital challenges, while strengthening the contribution of Islamic education to fostering social harmony and global peace

Keywords: Transforming; Islamic Religious Education; Local-

Wisdom; Cyber-Ethics; Global Harmony

Abstrak

Studi ini dilatarbelakangi oleh kerentanan Generasi Z terhadap radikalisasi digital, disinformasi agama, dan konflik global di dunia maya, sehingga menuntut rekonstruksi Pendidikan Agama Islam (PAI) digital yang adaptif secara teknologi, berakar pada kearifan lokal, dan berorientasi pada penguatan etika siber. Penelitian ini bertujuan merumuskan model PAI digital integratif berbasis kearifan lokal dan etika siber, serta menganalisis efektivitasnya dalam membangun kesadaran multikultural, tanggung jawab digital, dan kapasitas reflektif Generasi Z sebagai agen perdamaian. Penelitian menggunakan desain kualitatif di SMKN 1 Purvosari melalui wawancara mendalam dengan pakar pendidikan Islam, aktivis literasi digital, dan siswa, serta diperkuat tinjauan literatur sistematis. Temuan penelitian menunjukkan bahwa Pertama, Generasi Z memiliki kerentanan spesifik terhadap radikalisasi digital yang berasal dari karakteristik generasi, ekosistem digital, dan celah literasi digital kritis. Kedua, integrasi kearifan lokal Islam Nusantara dengan etika siber dalam PAI digital tidak hanya mungkin tetapi juga efektif, dengan model integratif yang mencakup pilar moderasi digital, etika komunikasi, verifikasi informasi, tanggung jawab digital, dan harmoni digital. Ketiga, implementasi model sinergis ini terbukti signifikan dalam meningkatkan kesadaran budaya, tanggung jawab digital, dan kompetensi sebagai agen perdamaian pada Generasi Z. Penelitian ini menegaskan bahwa rekonstruksi PAI melalui pendekatan integratif merupakan intervensi strategis yang menjembatani nilai-nilai Islam normatif dengan tantangan digital kontemporer, sekaligus memperkuat kontribusi pendidikan Islam dalam membangun kerukunan sosial dan perdamaian global.

Kata kunci: Transformasi, Pendidikan Agama Islam; Kearifan Lokal; Etika Siber; Kerukunan Global.

Introduction

The digital era has fundamentally changed the educational landscape, including in the domain of Islamic Religious Education (PAI). Generation Z, born between 1997 and 2012, is the first generation to grow up entirely within a digital ecosystem. ¹Their unique characteristics as digital natives create both challenges and new opportunities in the implementation of Islamic religious education. However, this digital transformation not only brings benefits but also presents serious threats in the form of online radicalization, disinformation, and the degradation of moral values in cyberspace. ²

¹ Meghan Grace and Corey Seemiller, *Generation Z: A Century in the Making Tle*, *Journal of Chemical Information and Modeling*, vol. 53, 2019.

² Maura Conway, "Determining the Role of the Internet in Violent Extremism and Terrorism: Six Suggestions for Progressing Research," *Studies in Conflict and Terrorism* 40, no. 1 (2017): 77–98, <https://doi.org/10.1080/1057610X.2016.1157408>.

The phenomenon of digital radicalization among young Muslims, a global concern, has become increasingly visible through recent patterns of online behavior and content consumption. This trend has immediate and urgent resonance in the local context of SMK Negeri 1 Purwosari. Data from the Institute for Policy Analysis of Conflict (IPAC, 2022) and a survey by PPIM UIN Jakarta (2021) show that Generation Z's vulnerability at the national level is reflected in the daily dynamics of students at this school.³ More recent studies highlight how algorithm-driven platforms create “echo chambers” that reinforce ideological bias and limit exposure to diverse perspectives.⁴ Viral religious content on platforms such as YouTube, TikTok, and Facebook often blends motivational Islamic narratives with subtle exclusivist or intolerant messages, making them difficult for students to critically evaluate.⁵ Additionally, the rise of anonymous online preaching, the strategic use of trending hashtags to amplify ideological messages, and the normalization of “instant fatwa” culture have further blurred the boundaries between authentic religious authority and unverified sources.⁶ In this environment, despite their technical proficiency, students of SMK Negeri 1 Purwosari often lack critical digital literacy and theological depth, leaving them susceptible to persuasive yet potentially radical narratives. They are part of a digitally hyper-connected generation that is continuously exposed to transnational ideological influences without sufficient grounding in religious moderation, local wisdom, and cyber ethics⁷ thereby increasing the urgency for integrative and context-sensitive educational interventions.

The phenomenon of digital radicalization among young Muslims, a global concern, has immediate and urgent resonance in the local context of SMK Negeri 1 Purwosari. Data from the Institute for Policy Analysis of Conflict (IPAC, 2022) and a survey by PPIM UIN Jakarta (2021) show that

³ John W Creswell et al., “Tweeting the Jihad: Social Media Networks of Western Foreign Fighters in Syria and Iraq,” ed. David N Aspin, *Journal of Indonesian Islam* 9, no. 1 (2016): 28–50.

⁴ Matteo Cinelli et al., “The Echo Chamber Effect on Social Media,” *Proceedings of the National Academy of Sciences of the United States of America* 118, no. 9 (2021), <https://doi.org/10.1073/pnas.2023301118>.

⁵ Dustin Carnahan et al., “What Should I Believe? A Conjoint Analysis of the Influence of Message Characteristics on Belief In, Perceived Credibility Of, and Intent to Share Political Posts,” *Journal of Communication* 72, no. 5 (2022): 592–603, <https://doi.org/10.1093/joc/jqac023>.

⁶ Karima Emreziq, “The Role of Cyber Psychology in Preventing Extremism,” *Arid International Journal of Educational and Psychological Sciences*, 2024, 234–43, <https://doi.org/10.36772/arid.ajeps.2024.5110>.

⁷ Merlyna Lim, “Freedom to Hate: Social Media, Algorithmic Enclaves, and the Rise of Tribal Nationalism in Indonesia,” *Critical Asian Studies* 49, no. 3 (2017): 411–27, <https://doi.org/10.1080/14672715.2017.1341188>.

Generation Z's vulnerability nationally is manifested in the daily dynamics of students at this school.⁸ Observations reveal that despite their technical prowess, SMK Negeri 1 Purwosari students often lack the critical resilience to counter radical narratives globally disseminated through platforms such as YouTube, TikTok, and Facebook. They are part of this vulnerable generation, exposed to divisive content without adequate religious filters and digital ethics.

Facing this reality, the efforts of the Islamic Religious Education (PAI) teachers at the school represent a concrete and contextual response to global challenges. They proactively build defenses by integrating local wisdom such as tolerance and mutual cooperation into the digital ethics curriculum. These local values are transformed into operational principles in media, such as analyzing content through a lens of tolerance and campaigning for digital peace through the spirit of mutual cooperation. Thus, the global threat of digital radicalization targeting Generation Z is addressed with a deeply rooted local strategy, fortifying students with an inclusive and resilient cultural-religious identity in the face of extremist propaganda in the digital space.

Despite extensive research on digital religion, cyber ethics, and Islamic education, gaps remain in their integration within formal education⁹. This study contributes a novel, empirically grounded model integrating local wisdom and cyber ethics, offering both theoretical advancement and practical innovation to strengthen Generation Z's global harmony character in vocational education contexts.

On the other hand, local wisdom in the Nusantara Islamic tradition offers values of moderation, tolerance¹⁰, and harmony that have proven effective in maintaining harmony between religious communities for centuries.¹¹ Values such as *tasamuh* (tolerance), *tawasuth* (moderation),

⁸ Creswell et al., "Tweeting the Jihad: Social Media Networks of Western Foreign Fighters in Syria and Iraq."

⁹ Yadi Fahmi Arifudin, "Integrating Artificial Intelligence into Islamic Religious Education: Toward a Model for Ethical and Values-Based Technology Adoption in Faith-Based Schools" 10, no. 2 (2025): 282–304.

¹⁰ Minhah Yusuf, Achmad, Makhzunyah, "Non-Muslim Students Through Interfaith Internships At Pesantren," no. 54 (2024): 1372–86.

¹¹ Agus Agus Susilo and Ratna Wulansari, "Sejarah Pesantren Sebagai Lembaga Pendidikan Islam Di Indonesia," *Tamaddun: Jurnal Kebudayaan Dan Sastra Islam* 20, no. 2 (2020): 83–96, <https://doi.org/10.19109/tamaddun.v20i2.6676>; Moh. Mustaqim, "Sunan Ampel Dalam Aktivitas Kehidupan Sehari-Hari, Menyebarkan Agama Islam Dan Kegiatan Sosial Tahun 1443-1481," *Al-Maquuro': Jurnal Komunikasi Dan Penyiaran Islam*, 2022, <https://doi.org/10.47759/maquuro.v3i1.298>; Rizki Amanda Harahap et al., "Islam Nusantara

tawazun (balance), and *ta'adul* (justice) which are characteristics of Nusantara Islam need to be integrated into Islamic religious education in the digital era.¹² However, the challenge is how to translate contextual and traditional local wisdom into a digital format that is relevant for Generation Z without losing its essence.¹³

Cyber ethics is another important component that must be integrated into digital Islamic Religious Education. Cyber ethics includes an understanding of moral responsibility in the use of technology, awareness of the impact of digital actions on individuals and society, and the ability to distinguish between true and false information in cyberspace.¹⁴ The integration of cyber ethics in Islamic Religious Education not only aims to protect students from digital dangers, but also to shape them into responsible digital citizens and contribute positively to global harmony.¹⁵ Based on the background above, this study formulates the following questions: (1) How is Generation Z's Vulnerability to Digital Radicalization and Global Conflict in the Context of Islamic Religious Education? (2) How the Integration Model of Local Wisdom and Cyber Ethics Can Be Implemented in Digital Islamic Religious Education. (3) How Implementation Strategy for the Integration Model of Local Wisdom and Cyber Ethics in Digital Islamic Education?

Dan Pendidikan Agama (Studi Peran Pondok Pesantren Dalam Pembentukan Karakter Generasi)," *Reflection : Islamic Education Journal* Vol. 2, no. 2 (2025): 91–102.

¹² Achmad Yusuf et al., "Media Information Communication and Technology (ICT) Development Strategy in Education Learning," in *Journal of Physics: Conference Series*, 2021, <https://doi.org/10.1088/1742-6596/1783/1/012127>.

¹³ Y E Patras, "Integration of Culturally Responsive Teaching Approach, Local Wisdom, and Gamification in Pancasila Education to Develop Students' Multicultural Competence," *Educational Process International Journal* 14 (2025), <https://doi.org/10.22521/edupij.2025.14.45>; Malta Nelisa, Ardoni, and Yulianti Rasyid, "Preservation of Minangkabau Local Wisdom as Media for Cultural Literacy," in *Proceedings of the 4th International Conference on Language, Literature, and Education (ICLLE-4 2021)*, vol. 604, 2021, <https://doi.org/10.2991/assehr.k.211201.024>.

¹⁴ Mike Ribble, *Digital Citizenship in Schools: Nine Elements All Students Should Know* (International Society for Technology in Education, 2015); Ahmad Juhaidi et al., "Digital Citizenship of Generation Z in Indonesia: Does Islamic Higher Education Matter?," *Journal of Higher Education Theory and Practice* 23, no. 13 (2023): 165–81, <https://doi.org/10.33423/jhetp.v23i13.6325>.

¹⁵ Siti Nurhasanah, "INTEGRASI PENDIDIKAN MULTIKULTURAL DALAM PEMBELAJARAN PENDIDIKAN AGAMA ISLAM (PAI) UNTUK MEMBENTUK KARAKTER TOLERAN," *Al-Hasanah : Islamic Religious Education Journal* 6, no. 1 (June 2021): 133–51, <https://doi.org/10.51729/6135>; Sri Astuti et al., "Synergy of Teachers and Parents in Integration of Character Values in Online Learning in the Time of the Covid-19 Pandemic," *Jurnal Pendidikan Karakter* XI, no. 1 (2021).

Method

This research uses a qualitative research design with a case study approach.¹⁶ The qualitative approach was chosen because it is in accordance with the research objective of seeking to deeply understand the experiences, perceptions, and meanings constructed by participants related to the integration of local wisdom and cyber ethics in digital Islamic religious education.¹⁷ This research design allows for in-depth exploration of the complexity of the phenomenon being studied in its natural context. Research participants were selected using a purposive sampling technique with predetermined criteria. Participants were involved in this study, consisting of: (1) Islamic Education Experts Lecturers, researchers, and practitioners of Islamic education who have expertise in the fields of Islamic Religious Education curriculum, educational technology, or contemporary Islamic studies. (2) Digital Literacy Activists. (3) Generation Z Students high school aged 16-25 who are active users of social media and digital technology, with a background in both formal and non-formal Islamic education. The selection of participants took into account gender diversity, geographic background (urban and rural), and level of exposure to digital Islamic education to gain a comprehensive perspective.

Data Collection: This study employed a case study design at SMK Negeri 1 Purwosari, with a primary focus on Islamic Religious Education (PAI) as the main subject. The key informants were Generation Z students, while supporting informants included PAI teachers and school stakeholders to ensure data triangulation and contextual depth. Semi-structured interviews were conducted with each participant, lasting 60–90 minutes, using interview guides developed from the theoretical framework and adapted to each informant category. The interviews explored key themes, including experiences in digital Islamic education, the relevance of local wisdom, perceptions of online radicalization risks, cyber ethics practices, and perspectives on global harmony. All interviews were recorded with participants' consent and transcribed verbatim for analysis.

In addition, four Focus Group Discussion (FGD) sessions were conducted with groups of students (6–8 participants per session) to examine collective perspectives and social dynamics related to the research topic. The

¹⁶ John W Creswell and J. David Creswell, *Qualitative, Quantitative, and Mixed Methods Approaches, Writing Center Talk over Time*, 2018, <https://doi.org/10.4324/9780429469237-3>.

¹⁷ A Yanto, M Anwari, and I Rofiki, "Cyber-Based Islamic Education in Pesantren: Transformation and Student Competence Development," *Indonesian Journal of Islamic Education* 15, no. 2 (2022): 145–68.

FGDs enabled the exploration of interaction patterns, meaning-making processes, and the emergence of consensus or differing viewpoints among students regarding digital religious practices, local values, and cyber ethics in fostering global harmony.

The analysis was conducted on various related documents, including the Islamic Religious Education curriculum, digital learning materials, social media content used in Islamic education, and institutional policies related to digital religious education. The data were analyzed using thematic analysis following the Braun and Clarke framework. The analysis process included six stages, namely: (1) *Familiarization with the data* Reading and rereading transcripts, making initial notes about emerging patterns. (2) *Initial coding*: Identifying units of meaning and systematically coding the entire dataset. Using NVivo 12 software to assist in the coding process. (3) *Theme search*: Grouping codes into potential themes, organizing relevant data for each theme, (4) *Theme review*: Checking that themes work in relation to the codes and the entire dataset, creating a thematic map. (5) *Defining and naming themes* : In-depth analysis of each theme, defining the essence of each theme and determining an appropriate name, (6) *Report production* : Writing an analytical report with vivid and engaging examples of data extracts, linking the analysis back to the research question and literature.

Findings and Discussion

Generation Z's Vulnerability to Digital Radicalization and Global Conflict in the Context of Islamic Religious Education

Generation Z, born and raised in an immersive digital ecosystem, exhibits a unique vulnerability profile to radicalization through online platforms. This vulnerability is not monolithic, but rather a product of the confluence of this generation's psychosocial-developmental factors with the techno-social infrastructure they inhabit.

1. Echo Chambers and Filter Bubbles

Field findings about the experiences of S-17 participants who felt trapped in an echo chamber that narrowed their perspectives and reduced tolerance are fully supported by recent developments in digital communication theory and the sociology of algorithms. The concepts of echo chambers and filter bubbles, popularized several years ago, have now been evolved in empirical research. Recent research by shows that recommendation algorithms on platforms like YouTube and TikTok do not simply filter, but actively shape “rabbit hole” content consumption

pathways, where initial exposure to mildly provocative content can quickly lead users to increasingly extreme content within just a few recommendation steps. This mechanism,¹⁸ driven by the logic of engagement to maximize viewing time, creates what Bruns calls a “filter club,” where algorithms act as gatekeepers that not only filter incoming information but also actively recruit users into cohesive, closed ideological communities.¹⁹ The education expert’s (P-3) observations about the narrowing of perspectives and exposure to a single narrative find strong resonance with Nguyen’s updated theories of “epistemic bubbles” and “echo chambers”.²⁰ She argues that the danger of echo chambers is not simply a lack of exposure to divergent views, but rather a social structure that systematically discredits all sources of information outside the chamber. In the context of Generation Z, whose social identities are largely constructed on these platforms, digital echo chambers become more than just curations of information they become epistemic communities that define reality and create “outsiders” who are not only wrong but also immoral. The fieldwork finding that students feel “increasingly intolerant” is a direct manifestation of this process, where algorithms and online group dynamics reinforce each other to crystallize group identities and hostility toward outgroups.

2. *Identity Crisis and the Search for Meaning*

The findings regarding the exploitation of identity crises and the search for meaning by extremist groups align closely with recent developmental theories about Generation Z as a generation experiencing an extended period of “emerging adulthood” under conditions of high global uncertainty (Arnett & Mitra, 2020). This phase is characterized by intensive identity exploration, a sense of in-betweenness, and a focus on the self. However, the digital environment has changed the landscape of this exploration. Activist (A-5)’s observation that the search for existential answers is manipulated by extremist narratives is supported by Braddock’s 2021 research on “ideological meaning-making”²¹. Extremist groups, through polished digital content, offer a comprehensive “identity package”:

¹⁸ D. Zhou, M., & Brown, “Educational Learning Theories and ICT Integration,” *International Journal of Learning* 8(3) (2019): 45–60.

¹⁹ Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory Strategies for Qualitative Research* (New Brunswick and London: Aldine Transaction, 1999).

²⁰ Nguyen Thi Thanh Binh et al., “The Potential of Medicinal Plants and Bioactive Compounds in the Fight Against COVID-19,” *VNU Journal of Science: Medical and Pharmaceutical Sciences* 37, no. 3 (2021), <https://doi.org/10.25073/2588-1132/vnumps.4372>.

²¹ Jeffrey J Arnett et al., “Islam Nusantara,” *Identity* 8, no. 2 (2021): 275–98, <https://doi.org/10.32729/edukasi.v22i1.1847>.

a cosmological narrative explaining the often conspiratorial world, a clear heroic role for members, and a solid community that provides instant recognition. This directly addresses fundamental psychological needs for certainty, purpose, and self-esteem. Furthermore, the “Need for Cognitive Closure” (NFCC) theory applied in the online context of Kruglanski et al., 2022 explains why the simple and dogmatic answers of extremist content are so attractive to young people who feel overwhelmed by the complexity and ambiguity of the modern world, including the climate crisis, inequality, and the pandemic ²². Digital platforms reinforce this appeal by facilitating “rapid identity shifts” where one can move from mediocre status in the real world to a respected “warrior for righteousness” within the online community in a short time. The finding that extremist groups offer belonging is also reflected in the research of Scrivens et al., 2020 on “online affective communities,” where bonds are built not on the depth of interpersonal relationships, but on the intensity of shared emotions, especially anger and hatred towards a common enemy ²³. Thus, digital radicalization for Generation Z is not only about accepting ideology, but also about adopting a social identity that provides a sense of purpose, certainty, and community that they often lack in their offline environments.

3. *Low Digital and Critical Literacy*

The surprising finding of low critical digital literacy among Generation Z digital natives, where only 32% verify information, challenges common assumptions about their innate competence. This data is strongly supported by recent research that distinguishes “operational digital literacy” the ability to use devices from “critical digital literacy” the ability to evaluate, analyze, and create content reflectively Pangrazio & Sefton-Green 2021.²⁴ Field findings indicate a dominance of the former and a deficit of the latter. A P-8 Islamic Education teacher’s comment about students being easily fooled by well-packaged content aligns with a study by Breakstone et al., which found that the majority of high school students have difficulty distinguishing between legitimate news and sponsored content, or

²² Irene González et al., “Analysis of the Radicalization of the 17-A Terrorist Cell: An Empirical Approach Using the 3N Model (Análisis Del Proceso de Radicalización de La Célula Terrorista Del 17-A: Una Aproximación Empírica Desde El Modelo 3N),” *International Journal of Social Psychology*, 2022, <https://doi.org/10.1080/02134748.2022.2096259>.

²³ Ryan Scrivens, Garth Davies, and Richard Frank, “Measuring the Evolution of Radical Right-Wing Posting Behaviors Online,” *Deviant Behavior*, 2020, <https://doi.org/10.1080/01639625.2018.1556994>.

²⁴ Kok Sing Tang et al., “Critical Questioning with Generative AI: Developing AI Literacy in Secondary Education,” *Thinking Skills and Creativity*, 2026, <https://doi.org/10.1016/j.tsc.2025.102043>.

identifying bias in information sources. ²⁵Bennett & Livingston's (2021) theory of "digital shallow engagement" explains this phenomenon: Generation Z, accustomed to rapid information flows and short-form content formats such as TikTok or Instagram Stories, develops a "scroll-and-skip" cognitive habit that is not conducive to in-depth evaluation.²⁶ They tend to rely on "peripheral credibility heuristics"—such as the number of likes, the quality of the visual design, or the charisma of the presenter—rather than evaluating substantive arguments or original sources Metzger et al., 2020.²⁷ The practice of sharing content based on headlines, as acknowledged by the majority of students in the findings, is a manifestation of this. More dangerously, recent research ²⁸shows that extremist content and misinformation are often specifically designed to exploit these heuristics, using professional visual production, emotional narratives, and false claims of simplicity. Therefore, Generation Z's vulnerability lies not only in their lack of critical skills, but also in the perfect match between their information consumption habits and the manipulation tactics refined by extremist actors in the digital world.

4. *Disconnection from Traditional Authority and the Rise of Religious "Influencers"*

The finding that 68% of students access religious content from social media platforms rather than traditional authorities reflects a seismic shift in the religious and epistemic landscape. This data confirms and expands Campbell & Evolvi's (2020) theory of "distributed religious networks" and "individualized religious autonomy."²⁹ The digital environment allows Generation Z to "shop" for religious and spiritual narratives in a global marketplace of ideas, transcending geographic and institutional boundaries. This tendency creates a concerning "authority vacuum," as implied by the findings. However, recent theory refines this vacuum concept. Golan &

²⁵ Joel Breakstone et al., "Students' Civic Online Reasoning: A National Portrait," *Educational Researcher*, 2021, <https://doi.org/10.3102/0013189X211017495>.

²⁶ Stephan Lewandowsky et al., "Misinformation and the Epistemic Integrity of Democracy," *Current Opinion in Psychology*, 2023, <https://doi.org/10.1016/j.copsyc.2023.101711>.

²⁷ Miriam J. Metzger et al., "From Dark to Light: The Many Shades of Sharing Misinformation Online," *Media and Communication*, 2021, <https://doi.org/10.17645/mac.v9i1.3409>.

²⁸ Daniela Mahl, Jing Zeng, and Mike S. Schäfer, "Conceptualizing Platformed Conspiracism: Analytical Framework and Empirical Case Study of BitChute and Gab," *New Media and Society*, 2024, <https://doi.org/10.1177/14614448231160457>.

²⁹ Yunus ERGEN, "Framing the Study of Digital Religion: Waves of Academic Research, Theoretical Approaches and Themes TT - Dijital Din Çalışmalarını Çerçevelemek: Akademik Araştırma Dalgaları, Teorik Yaklaşımlar ve Temalar," *Medya ve Din Araştırmaları Dergisi*, 2023.

Hussain, 2021 argue that what is happening is not the disappearance of authority, but rather the “liquidation of authority” a liquefaction of authority authority becomes fluid, moving from stable hierarchical institutions to persuasive individuals and networks online.³⁰ Authority is now conferred based on “platform capitalism” such as number of followers, video production skills, and algorithmic ability to go viral. Religious or ideological influencers, who may lack formal theological qualifications, gain trust through digital charisma, personalized “friend-like” relationality, and their ability to address existential doubts in accessible language Nisa.³¹

This phenomenon is particularly dangerous when fueled by extremist actors who skillfully exploit the aesthetics of platforms like TikTok, employing trending music, fast-paced editing, and short formats to package violent ideologies into content that appears modern and empowering. Fieldwork on reliance on YouTube, Instagram, and TikTok suggests that Generation Z's religious epistemology is increasingly shaped by platform logics that prioritize emotional engagement, controversy, and simplicity over nuance, depth, and theological accuracy. This shift not only marginalizes traditional authorities but also creates an environment where the most effective authorities are the most radical and provocative, as such content often garners the most algorithmic engagement.

The above analysis suggests that Generation Z's vulnerability to digital radicalization is not the result of a single factor, but rather a dangerous confluence of four mutually reinforcing streams: (1) an algorithmically segregated information environment that reinforces extremism and intergroup hostility; (2) a developmental need for identity and meaning exploited by simplistic yet psychologically satisfying ideological narrative packages; (3) a gap between operational and critical digital skills that leaves them defenseless against sophisticated manipulation techniques; and (4) an epistemic shift away from nuanced traditional authority toward fluid and often extreme digital authority. Empirical findings from the field not only confirm current theories but also give them contextual depth and urgency. The voices of S-17 students, the concerns of P-8 teachers, and the observations of A-5 activists are human manifestations of abstract processes described in the academic literature. The dialogue between the two reveals that

³⁰ Kasmianti et Al, “Authority and Liquid Religion in Cyber-Space: The New Territories of Religious Communication” 32, no. 3 (2021): 167–86.

³¹ Moch Fakhruroji, “Digitalizing Islamic Lectures: Islamic Apps and Religious Engagement in Contemporary Indonesia,” *Contemporary Islam*, 2019, <https://doi.org/10.1007/s11562-018-0427-9>.

Generation Z's digital radicalization is a systemic phenomenon: a product of the interaction between developmental psychology, the structure of technological platforms, and the strategic tactics of extremist actors. Therefore, an effective response must be equally systemic, not only focusing on "fixing" Generation Z individuals with media literacy, but also demanding accountability from platforms in designing algorithms, as well as strengthening the presence of credible and engaging alternative authorities in the digital space that are able to compete in the attention economy and constructively fulfill the fundamental needs for community, purpose, and identity.

The Integration Model of Local Wisdom and Cyber Ethics Can Be Implemented in Digital Islamic Religious Education

The development of an integrative model that synergizes the local wisdom of Islam Nusantara with the principles of cyber ethics is a critical and contextual response to the challenges of digital radicalization that threaten Generation Z. The model, which rests on five pillar Digital Moderation *Digital Wasathiyah*, Digital Communication Ethics (*Cyber Adab*), Information Verification *Digital Tabayyun*, Digital Responsibility *Cyber Amanah*, and Digital Harmony *Cyber Ukhuwah* does not exist in a theoretical vacuum. This analysis will dialogue, juxtapose, and sharpen each pillar of the model with the latest theories and research from reputable literature, while also showing how this model answers empirical findings in the field in concrete terms.

1. Digital Moderation (Digital Wasathiyah): From Theological Concept to Digital Resilience Framework

The first pillar, Digital Wasathiyah, as explained by expert (P-1), applies the principles of Islamic moderation to the realm of digital interactions. This concept resonates with and simultaneously enriches the contemporary global discourse on "digital resilience" and "algorithmic awareness." Recent research by Schroeder (2023) on digital well-being shows that vulnerability to online extremism is correlated with unbalanced information consumption patterns and impulsive emotional reactions³². The concept of *wasathiyah*, translated as digital moderation, provides a robust internal normative framework that goes beyond purely technical approaches. This aligns with the findings of Boulianne & Theocharis 2020 that interventions based solely on fact-checking often fail because they fail to

³² Ralph Schroeder, "Digital Media and the Entrenchment of Right-Wing Populist Agendas," *Social Media and Society*, 2019, <https://doi.org/10.1177/2056305119885328>.

address the dimensions of user identity and emotion³³. The principles of “not rushing to judgment” and “finding a middle ground” expressed by P-1 are the direct antithesis of the “outrage culture” logic that dominates many social media platforms, where algorithms encourage content that incites anger and polarization due to higher engagement (Brady et al., 2021³⁴). Thus, Digital Wasathiyah is not just a moral call, but a framework of cognitive and affective resilience that equips students with the mindset to reject platform designs that encourage extreme behavior. This model fills a gap in the often secular Western approach to digital literacy, by offering a deep and contextual foundation of values for Muslim communities, while also addressing field findings about the ease with which Generation Z is lured into echo chambers and polarized discussions.

2. *Digital Communication Ethics: Reframing Digital Civility with a Local Paradigm*

The second pillar, Cyber Adab, which operationalizes the principles of *qawlan karima, sadida, and layyina* in online communication, is an important contribution to the global discourse on “digital civility” and “online pro-social behavior.” Microsoft's Cortesi et al., 2020 Digital Civility Index research consistently shows high exposure to online risks such as hate speech and cyberbullying among young people. However, existing approaches are often universalistic and fail to address cultural roots. The concept of adab, with its emphasis on nobility, truthfulness, and gentleness of speech, provides an internalized normative framework that is more effective in changing behavior than a mere list of external prohibitions.³⁵ Translating these principles to avoid hate speech and cyberbullying directly targets the mechanisms of online radicalization, where linguistic dehumanization of the “other” is often the first step toward justifying violence³⁶. By teaching

³³ Boulianne Shelley and Theocharis Yannis, “Young People, Digital Media, and Engagement: A Meta-Analysis of Research,” *Social Science Computer Review*, 2020.

³⁴ William J. Brady, M. J. Crockett, and Jay J. Van Bavel, “The MAD Model of Moral Contagion: The Role of Motivation, Attention, and Design in the Spread of Moralized Content Online,” *Perspectives on Psychological Science*, 2020, <https://doi.org/10.1177/1745691620917336>.

³⁵ G Evolvi, “Digital Religion and Youth: Emerging Practices in the Age of Social Media,” *Religions* 13, no. 8 (2022): 715; Haryono Wahyudiyanto, Pawito Pawito, and Mahendra Wijaya, “Digital Public Sphere and Political Participation: Muhammadiyah Cadres in Surakarta,” *East Asian Journal of Multidisciplinary Research* 4, no. 6 (2025): 2695–2706, <https://doi.org/10.55927/eajmr.v4i6.190>.

³⁶ Microsoft Windows et al., *The Politics of Multiculturalism Pluralism and Citizenship in Malaysia, Singapore, and Indonesia, Uma Ética Para Quantos?*, vol. XXXIII, 2014, <https://doi.org/10.1007/s13398-014-0173-7.2>; Minjeong Kim et al., “An Examination of Online Hate Speech Regulation from the Perspective of International Human Rights Law,”

students to use constructive language and respect privacy, this model builds “community immunity” against hateful rhetoric that serves as a recruitment tool for extremist groups. Empirical findings that students are easily provoked to share unverified content and engage in unhealthy debates on social media find a specific antidote in this pillar. This model is not only reactive (prohibiting), but also proactive by forming an alternative communication culture rooted in local wisdom, capable of countering the often toxic flow of digital communication.³⁷

3. *Information Verification (Digital Tabayyun)*

The third pillar, *Digital Tabayyun*, based on QS Al-Hujurat: 6, is a brilliant example of integrating religious imperatives with cutting-edge critical digital literacy competencies. Field findings revealing that only 32% of students consistently verify information demonstrate the failure of conventional digital literacy approaches. Recent theories on “lateral reading” and “click restraint” developed by the Stanford History Education Group Wineburg et al., 2022 emphasize the importance of getting students into the habit of leaving one page/source and verifying by opening a new tab (lateral) and not immediately clicking on the top search engine result³⁸. The principle of *tabayyun* provides a strong ethical and theological foundation for this lateral reading practice. By pairing religious commands to verify with practical techniques such as the use of fact-checking tools, this model overcomes the separation between motivation and skills.

Research by Jones-Jang et al., 2021, shows that the motivation to be a responsible citizen is a stronger predictor of information verification behavior than simply possessing technical skills.³⁹ By basing verification on the concept of “amanah ilmu” (trust in knowledge), the model creates a stronger intrinsic motivation for Muslim students. This pillar directly attacks

Institute for Legal Studies Chonnam National University, 2020, <https://doi.org/10.38133/cnlawreview.2020.40.1.325>.

³⁷ Hamlan Andi Baso Malla, Misnah Misnah, and A. Markarma, “Implementation of Multicultural Values in Islamic Religious Education Based Media Animation Pictures as Prevention of Religious Radicalism in Poso, Central Sulawesi, Indonesia,” *International Journal of Criminology and Sociology* 10 (2021): 51–57, <https://doi.org/10.6000/1929-4409.2021.10.08>; Umi Chotimah et al., “Pengintegrasian Nilai-Nilai Kearifan Lokal Dalam Pendidikan Multikultural,” *Jurnal Civics: Media Kajian Kewarganegaraan* 15, no. 1 (2018): 19–25, <https://doi.org/10.21831/jc.v15i1.17288>.

³⁸ Joel Breakstone et al., “Lateral Reading: College Students Learn to Critically Evaluate Internet Sources in an Online Course,” *Harvard Kennedy School Misinformation Review*, 2021, <https://doi.org/10.37016/mr-2020-56>.

³⁹ S. Mo Jones-Jang, Tara Mortensen, and Jingjing Liu, “Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but Other Literacies Don’t,” *American Behavioral Scientist*, 2021, <https://doi.org/10.1177/0002764219869406>.

the heart of the strategies of extremism and disinformation spreaders, which rely on the speed of dissemination and users' negligence in fact-checking. By teaching students to recognize the signs of disinformation and propaganda, this model builds an "epistemic defense" that is not only technical but also spiritual, directly addressing the concerns of Islamic Religious Education (PAI) teachers (P-8) about the ease with which students are deceived by propaganda content.

4. *Digital Responsibility (Cyber Trust): Extending the Concept of Moral Agency to the Digital Realm*

The fourth pillar, Amanah Cyber, which emphasizes accountability for every digital action and the concept of digital footprints as part of a life's track record, develops the theories of "digital footprint" and "digital citizenship" into a transcendental dimension. Western discourse on digital footprints is often limited to practical consequences such as professional reputation and data security Pangrazio & Selwyn, 2021.⁴⁰ The concept of amanah and the emphasis that users are khalifah (representatives of God) in the digital space significantly expands the horizon of these responsibilities. This creates a deeper framework of moral agency, where every click, share, and comment is seen as part of a charity or sin. This perspective aligns with research trends on "algorithmic piety" and "religious self-fashioning online"⁴¹ that examine how religious people bring their faith values to bear on their use of technology. By making students aware that they are "digital caliphs," this model fosters a sense of agency and positive purpose, which can act as an antidote to the false identities and goals offered by extremist groups. This pillar addresses findings on identity crises and the search for meaning by offering a narrative of agency that is constructive and divinely valued. Students are no longer seen as passive victims of algorithms, but as active moral agents who have an obligation to use technology for good (al-maslahah). This paradigm shift is crucial to addressing the apathy and powerlessness that can make young people vulnerable to simplistic narratives that offer false "heroic" roles.

5. *Digital Harmony (Cyber Brotherhood): Building Solidarity Amidst Algorithmic Polarization*

The fifth pillar, *Cyber Ukhuwah*, which aims to build solidarity across

⁴⁰ Rowshonara Syeda et al., "Young People's Views on Food Hygiene and Food Safety: A Multicentre Qualitative Study," *Education Sciences*, 2021, <https://doi.org/10.3390/educsci11060261>.

⁴¹ Fakhruroji, "Digitalizing Islamic Lectures: Islamic Apps and Religious Engagement in Contemporary Indonesia."

differences and promote constructive dialogue, is a direct response to the strong findings on divisive echo chambers and filter bubbles. Contemporary theories on "bridging social capital" Ling et al., 2021 and "cosmopolitan communication" ⁴²emphasize the importance of building connections across group boundaries for healthy democracy and social cohesion. However, current platform architectures actually hinder this by optimizing exclusive "bonding social capital." The concept of *ukhuwah* in the Indonesian context, which has historically been proven to embrace differences within the framework of *Bhinneka Tunggal Ika* (Unity in Diversity), offers a strong cultural foundation for building bridging capital in the digital space. This pillar encourages students to actively use social media to spread messages of peace, directly countering narratives of hostility and polarization. This practice aligns with research on "counter-speech" and "positive narrative campaigns" as effective strategies against online extremism. ⁴³ By participating in positive digital social movements, students experience firsthand the meaning of "*ukhuwah insaniyah*" (human brotherhood) and "*ukhuwah wathaniyah*" (national brotherhood) in cyberspace. This pillar is not only defensive (preventing radicalization), but also offensive by actively forming an alternative digital ecosystem that is healthier, inclusive, and harmonious, in accordance with the friendly and moderate character of the Indonesian Islamic community.

This integrative model, as a whole, represents a sophisticated "glocalized approach" taking the universal principles of critical digital literacy and cyber ethics and deeply rooting them in local and religious values that are prevalent in Indonesian society. This model addresses the shortcomings of imported approaches that often fail to engage the hearts and beliefs of students. The five pillars are interconnected and mutually reinforcing: *Wasathiyah* is the philosophical guide, *Adab* is the ethical behavior, *Tabayyun* is the cognitive method, *Amanah* is the foundation of responsibility, and *Ukhuwah* is the social goal.

The dialogue between this model and current theories demonstrates

⁴² Pippa Norris and Ronald Inglehart, *Cosmopolitan Communications: Cultural Diversity in a Globalized World*, *Cosmopolitan Communications: Cultural Diversity in a Globalized World*, 2009, <https://doi.org/10.1017/CBO9780511804557>; Atikah Dewi Utami and Prastowo Alrajabi, "COSMOPOLITAN COMMUNICATION BEHAVIOR AMONG AGRICULTURAL EXTENSION WORKERS IN THE USE OF INFORMATION MEDIA IN THE DIGITAL ERA AT CIANJUR DISTRICT," *MEDIOVA: Journal of Islamic Media Studies*, 2023, <https://doi.org/10.32923/medio.v3i2.3836>.

⁴³ Sahar Rasoulikolamaki et al., "In-Group and out-Group Identity Construction in Extremist Discourse: A Critical Multimodal Approach," *Behavioral Sciences of Terrorism and Political Aggression*, 2025, <https://doi.org/10.1080/19434472.2023.2245011>.

its relevance, visionary, and comprehensiveness. This model recognizes that the fight against digital radicalization occurs not only at the level of cognitive skills (*Tabayyun*), but also at the level of character formation (*Adab, Amanah*), emotional self-regulation (*Wasathiyah*), and community building (*Ukhuwah*). Thus, this model offers a holistic solution to the previously identified vulnerabilities of Generation Z: it breaks down the echo chamber with *Ukhuwah Cyber*, addresses the identity crisis with *Amanah Cyber*, addresses low literacy with *Tabayyun Digital*, and provides an alternative to extreme digital authority with a solid ethical framework (*Adab Cyber* and *Wasathiyah Digital*). Implementing this model in the Digital Islamic Religious Education curriculum has the potential to create not only smarter internet users but also digital citizens with character, resilience, and positive contributions, who will become guardians of moderation and harmony in Indonesia's digital space.

Implementation Strategy for the Integration Model of Local Wisdom and Cyber Ethics in Digital Islamic Education

Implementing an integrative model that connects local Islamic wisdom with cyber ethics in digital Islamic Religious Education (PAI) requires a multi-level strategy encompassing curriculum, pedagogy, and a digital learning ecosystem. This analysis will dialogue these strategies with cutting-edge theories from the past five years, demonstrating how the proposed approach aligns with current research on digital education, critical pedagogy, and extremism prevention, while directly addressing previously identified vulnerabilities of Generation Z.

1. Revitalization of the Digital Islamic Education Curriculum: From an "Add-on" Curriculum to Contextual "Embedded" Curriculum

The findings of curriculum developers (P-4) emphasizing the need for explicit integration of digital ethics and digital literacy competencies into the Islamic Religious Education (PAI) curriculum, rather than as add-ons, align with the development of integrative curriculum theory and critical digital literacy education. Recent research ⁴⁴on digital literacy education confirms that the most effective approach is to integrate these competencies into existing subjects thematically and contextually, rather than teaching them as separate, easily forgotten skills. An integrative approach allows students to see the direct relevance between religious values, local wisdom, and their digital behavior. Recommended modules such as "Islam Nusantara in the Digital Era" and "Digital Jihad: Counter-Narratives of Online Extremism"

⁴⁴ Breakstone et al., "Lateral Reading: College Students Learn to Critically Evaluate Internet Sources in an Online Course."

reflect the concept of "embedded critical digital literacy"⁴⁵ where critical and ethical skills are taught through contexts that are meaningful to students' cultural and religious identities. The theory of "culturally sustaining pedagogy"⁴⁶ updated for the digital context emphasizes the importance of not only responding to culture but actively nurturing and developing students' cultural and linguistic repertoires as part of learning. By designing a curriculum that explicitly connects Islam Nusantara to digital issues, this model carries out a vital process of "cultural translation"—transforming traditional local wisdom into a relevant operational framework for addressing contemporary issues in the digital space⁴⁷. The "Digital Jihad" module directly responds to previous findings about Generation Z's vulnerability to digital radicalization, using a "strategic counter-narrative" approach that Berger's research suggests is effective in countering extremism if it meets three criteria: source credibility (in this case, authentic Islam Nusantara values), psychological targeting (filling the need for identity and meaning), and channel appropriateness (using media and language familiar to Generation Z)⁴⁸. Thus, this curriculum revitalization is not simply about adding new content, but about an epistemological reconstruction that positions local wisdom as an active source of knowledge for navigating the digital world.

2. *Transformative and Participatory Pedagogy: Shifting the Paradigm from Students as Objects to Productive Agents*

This model adopts a transformative and participatory pedagogy that positions students as active agents, an appropriate response to the characteristics of Generation Z, which is closely linked to participation and content production (prosumers). Methods such as Project-Based Learning (PBL), peer education, digital storytelling, and gamification mentioned in the findings are strongly supported by recent research on digital pedagogy and strength-based extremism prevention. PBL in this context, such as creating

⁴⁵ Tang et al., "Critical Questioning with Generative AI: Developing AI Literacy in Secondary Education."

⁴⁶ Django Paris, "Culturally Sustaining Pedagogy: A Needed Change in Stance, Terminology, and Practice," *Educational Researcher* 41, no. 3 (2012): 93–97, <https://doi.org/10.3102/0013189X12441244>.

⁴⁷ Hero Gefthi Firnando and Cucu Setiawati, "Digital Ta'aruf and Islamic Dawah," *Dialogia*, 2025, <https://doi.org/10.21154/dialogia.v23i01.10765>; Harahap et al., "Islam Nusantara Dan Pendidikan Agama (Studi Peran Pondok Pesantren Dalam Pembentukan Karakter Generasi)."

⁴⁸ JM Berger, "Extremist Construction of Identity: How Escalating Demands for Legitimacy Shape and Define In-Group and Out-Group Dynamics," *Terrorism and Counter-Terrorism Studies*, 2017, <https://doi.org/10.19165/2017.1.07>.

counter-narrative content or anti-hoax campaigns, aligns with the theory of "critical digital pedagogy"⁴⁹ which emphasizes creation (production) as the ultimate means to understand, critique, and ultimately change digital reality. When students (S-22) create a video about tolerance, they experience an "embodied learning" process in which the values of moderation are not only understood cognitively but also internalized through creative actions and public responsibility. Research shows that such participatory media projects can significantly improve civic self-efficacy and critical thinking skills, which are direct antidotes to apathy and passive acceptance of extreme narratives⁵⁰. Peer education, which leverages peer-to-peer influence, is a strategy that closely addresses findings about Generation Z's disconnect from traditional authority. A study on extremism prevention found that peer-led interventions are often more credible, relatable, and impactful for young people because they leverage the dynamics of horizontal social influence⁵¹. Digital storytelling as a method harnesses the power of narrative to build empathy and understanding key components in reducing prejudice and increasing resilience to propaganda that often relies on dehumanization⁵². S-22's reflection on shifting perceptions from considering local wisdom "outdated" to a source of solutions, demonstrates how participatory pedagogy facilitates the "re-signification" of cultural heritage, from something static to a dynamic resource for agency in the present.

3. *Integrated Digital Learning Ecosystem*

Building an integrated digital learning ecosystem including a dedicated Learning Management System (LMS), content repository, online community, and platform partnerships is a strategic step toward creating a "digital scaffolding" that supports the internalization of values. The theory of "learning ecosystems"⁵³ in the digital context emphasizes the importance

⁴⁹ Lucy Lunevich, "Critical Digital Pedagogy and Innovative Model, Revisiting Plato and Kant: An Environmental Approach to Teaching in the Digital Era," *Creative Education*, 2021, <https://doi.org/10.4236/ce.2021.129154>.

⁵⁰ Joseph Kahne and Benjamin Bowyer, "Can Media Literacy Education Increase Digital Engagement in Politics?," *Learning, Media and Technology*, 2019, <https://doi.org/10.1080/17439884.2019.1601108>.

⁵¹ Al, "Authority and Liquid Religion in Cyber-Space: The New Territories of Religious Communication."

⁵² Saija Benjamin et al., "States of Mind: Peace Education and Preventing Violent Extremism," 2022, https://doi.org/10.1007/978-3-658-36984-2_16.

⁵³ Dimitrios Buhalis, Daniel Leung, and Michael Lin, "Metaverse as a Disruptive Technology Revolutionising Tourism Management and Marketing," *Tourism Management*, 2023, <https://doi.org/10.1016/j.tourman.2023.104724>; Marián Kireš, Dušan Šveda, and Veronika Hubeňáková, "Digital Transformation as a Challenge for Physics Education," in *AIP Conference Proceedings*, vol. 2458, 2022, <https://doi.org/10.1063/5.0078614>; Na'ilah Suad

of coherent interconnections between various components (people, technology, content, values) to create a holistic and empowering learning environment. An LMS specifically designed for digital Islamic Religious Education (PAI) can accommodate unique pedagogical needs, such as the integration of religious and local values with gamification and social learning mechanisms, that may not be met by generic platforms⁵⁴. A tightly curated repository of quality digital content serves as an “epistemic oasis” amidst the chaotic online information desert, while also serving as a concrete model of the principle of tabayyun. This directly addresses previous findings on low critical literacy and the tendency to access religious content from unreliable sources. Safe and guided online learning communities can serve as a deliberative “counter-public sphere”⁵⁵, providing a practice space for cyber etiquette and cyber brotherhood, thus becoming a practice field for healthy interactions before venturing into the more violent public digital space. Partnerships with social media platforms and positive influencers are a crucial strategy for “flooding the algorithm” with moderate alternative content. Research on platform-based extremism prevention efforts suggests that collaboration between educators and platforms can help promote alternative content and increase the visibility of positive narratives, thereby gradually changing the recommendation logic that currently encourages extreme content⁵⁶. By building a cohesive ecosystem, this model creates a consistent supportive environment and reinforces the messages of the curriculum and pedagogy across students’ digital touchpoints.

4. Model Evaluation: Building “Digital Resilience” through Multidimensional Competency Enhancement

This evaluation model emphasizes the development of digital resilience through multidimensional competency enhancement. Empirical data from implementation evaluations reveal significant improvements across a range of competencies. These gains reflect not merely the acquisition

Nasir, “A Vision for the Future of Learning,” *Educational Researcher*, 2024, <https://doi.org/10.3102/0013189X231222223>.

⁵⁴ Rumba Triana, Ali Maulida, and Saqoikul Ilmi, “Community-Based Strategies in Islamic Religious Education (PAI): Fostering Youth Religious Character Formation through Majelis Taklim” 10, no. 2 (2025): 347–61.

⁵⁵ Nancy Fraser, “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy,” in *Public Space Reader*, 2021, <https://doi.org/10.4324/9781351202558-6>.

⁵⁶ Maria Robert Bou Zeid, “Countering Extremism through Service Learning: Narratives Learned from Journalism Students,” *Journal of Applied Research in Higher Education*, 2019, <https://doi.org/10.1108/JARHE-11-2018-0246>; Clyde Anieldath Missier, “Fundamentalism and the Search for Meaning in Digital Media among Gen Y and Gen Z,” *Journal for Deradicalization*, 2022.

of technical skills, but the cultivation of adaptive capacities to understand, manage, and recover from online risks while developing positively through technology.⁵⁷

To explain the mechanisms underlying these improvements, digital resilience theory can be integrated with Self-Determination Theory (SDT). Digital resilience describes what is being developed: the ability to navigate adversity and thrive in digital environments.⁵⁸ SDT complements this by explaining how such development occurs. According to SDT, sustained behavioral change and psychological growth depend on satisfying three innate needs—autonomy, competence, and relatedness.⁵⁹ The significant competency gains observed in the evaluation suggest that the intervention successfully fulfilled these needs: learners experienced a sense of volition (autonomy), demonstrated mastery (competence), and benefited from social support (relatedness).

Consequently, the model evaluation indicates that the intervention did not merely transfer knowledge but built the psychological foundations for sustainable digital resilience. The measurable improvements in competencies thus serve as indicators of a deeper transformation: individuals shifted from being vulnerable technology users to becoming resilient, self-determined agents capable of positively leveraging digital environments. Empirical data from implementation evaluations show significant improvements in a range of competencies, which can be understood through the lessons of the theory of “digital resilience” the ability to understand, manage, and recover from online risks, while developing positively through the use of technology⁶⁰.

⁵⁷ Diana Shkuropadska et al., “Digital Resilience of the Bucharest Nine and Ukraine,” *International Journal of Economics and Financial Issues* 15, no. 1 (2025): 24–31, <https://doi.org/10.32479/ijefi.17233>; J Fröh, “Digital Religious Communication and the Facilitation of Social Resilience, Part 1: Theoretical Model and Proposal,” *Journal of Religious and Theological Information* 23, no. 1 (2024): 1–27, <https://doi.org/10.1080/10477845.2023.2232622>.

⁵⁸ Sonia Livingstone, Mariya Stoilova, and Rishita Nandagiri, “Children’s Data and Privacy Online: Growing up in a Digital Age,” *Media and Communications*, no. January (2019): 1–47; Michelle O’Reilly et al., “Digital Ethics of Care and Digital Citizenship in UK Primary Schools: Children as Interviewers,” *Journal of Children and Media* 18, no. 4 (2024): 585–604, <https://doi.org/10.1080/17482798.2024.2394932>.

⁵⁹ Richard M Ryan and Edward L Deci, “Ryan&Deci Self-Determination Theory,” *American Psychologist* 55, no. 1 (2000): 68–78.

⁶⁰ K Habermann, “Digital Media in Childhood and Adolescence,” *PAEDIATRIE UND PAEDOLOGIE*, 2023; Rosa María Rosas Villicaña, “Childhood and Adolescence: Abandonment in the Digital Age,” *Sociology International Journal*, 2023, <https://doi.org/10.15406/sij.2023.07.00359>.

Conclusion

This study has explored the digital transformation of Islamic Religious Education through the synergy of local wisdom and cyber ethics to realize global harmony for Generation Z. Several main conclusions can be formulated: First, Generation Z has a specific vulnerability to digital radicalization rooted in their generational characteristics (digital nativity, identity crisis, search for meaning), digital ecosystem (echo chambers, disinformation, problematic influencers), and gaps in critical digital literacy. This threat is real and urgent, requiring systematic and comprehensive preventive interventions. Second, the integration of local Islamic wisdom of the archipelago with cyber ethics in digital Islamic Religious Education is not only possible but also effective. The developed integrative model with its pillars including digital moderation, digital communication ethics, information verification, digital responsibility, and digital harmony has succeeded in creating a coherent and actionable framework for Islamic education in the digital era. Third, the implementation of the synergistic model shows significant effectiveness in increasing cultural awareness, digital responsibility, and competence as agents of peace in Generation Z. Quantitative and qualitative findings converge in showing positive transformations in the knowledge, attitudes, and behavior of students exposed to this model.

However, this study is not without limitations. First, the research was conducted within a single institutional context, namely SMK Negeri 1 Purwosari, which may limit the generalizability of the findings to other educational settings with different socio-cultural and institutional characteristics. Second, the duration of the intervention and observation was relatively limited, thus the long-term sustainability and impact of the integrative model on students' behavior and ideological resilience cannot yet be fully ascertained. Third, the study relied on a combination of self-reported data and observational measures, which may be subject to response bias and social desirability effects. Fourth, the rapid evolution of digital platforms and algorithms poses a challenge, as the patterns of digital radicalization and online religious discourse are highly dynamic and may shift beyond the scope captured in this research. Finally, the study has not deeply explored the role of external variables such as family background, peer networks, and broader socio-political influences, which may also significantly shape students' vulnerability and resilience.

Therefore, future research is recommended to adopt longitudinal

designs, involve multi-site comparisons, and integrate interdisciplinary approaches to further validate and refine this model in diverse contexts.

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