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Religiously Intelligent, Technologically Skilled: Instilling Islamic Values Through Technological Creativity in Gen-Z Muslim 4.0

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Abstract

Digital technology increasingly shapes how Muslim adolescents learn, communicate, and interpret religious values. This study examines how religious intelligence and technological proficiency are integrated through technological creativity among Gen-Z Muslim students in senior high schools. Using a qualitative field-study design, data were collected through semi-structured interviews, observation of technology-mediated religious learning and digital activities, and documentation of student-created digital content. Data were analyzed thematically through coding, categorization, cross-source comparison, and interpretive synthesis. The findings identify four interconnected dimensions: critical religious literacy, ethical and productive technological proficiency, technological creativity as a medium for Islamic value learning, and the internalization of Islamic values through everyday digital practices. Students' digital creativity was most educationally meaningful when accompanied by source verification, reflective guidance, and ethical awareness. The study argues that digital competence should not be assumed merely because students belong to Generation Z. Islamic education should integrate religious literacy, digital citizenship, AI and media literacy, and creative production to support responsible, adaptive, and value-oriented Muslim learners.

Keywords: Generation Z; Islamic Education; Religious Intelligence; Technological Creativity; Technological Proficiency

Introduction

Digital technology has transformed how adolescents learn, communicate, construct identity, and encounter religion. Social media, mobile platforms, artificial intelligence, and participatory media are no longer external tools used occasionally in education; they are part of the everyday environment in which young people interpret information and negotiate meaning. Digital-religion scholarship similarly shows that online and offline religious practices increasingly overlap, so digital media function as environments for religious learning, authority, community, and self-expression (Campbell, 2010, 2013; Campbell & Evolvi, 2020; Hjarvard, 2011; Indriyani & Khadiq, 2023). For Islamic education, this development creates an important pedagogical question: how can students become technologically capable without separating digital competence from Islamic moral and spiritual values?

The widespread label 'digital native' should be used carefully. Belonging to Generation Z does

not automatically make students critically digitally literate. Research has repeatedly shown substantial variation in young people's ability to evaluate information, use unfamiliar technologies, manage online risks, and employ digital tools for learning (Bennett et al., 2008; Helsper & Eynon, 2010; Jones et al., 2010; Kirschner & De Bruyckere, 2017; Ng, 2012). Evans and Robertson (2020) likewise describe the digital-native debate as evolving from simple generational claims toward a more differentiated understanding of competence. Consequently, Islamic education should not assume proficiency merely because students are intensive users of social media.

The scale of digital engagement in Indonesia makes this issue particularly relevant. APJII reported that national internet penetration reached 79.5% in 2024, with Generation Z accounting for the largest share of users (Asosiasi Penyelenggara Jasa Internet Indonesia [APJII], 2024). DataReportal's Digital 2024 report also indicated that Indonesian internet users aged 16-64 spent an average of 7 hours and 38 minutes online each day (We Are Social & Meltwater, 2024). These figures do not by themselves indicate the quality of students' digital practices, but they demonstrate that online environments have become major spaces for learning, interaction, entertainment, and value formation.

For Muslim youth, social media also affects religious authority and religious learning. Studies in Indonesia show that digital platforms facilitate Qur'anic movements, online piety, visual da'wah, religious discussion communities, and new forms of religious authority, while also creating uncertainty regarding credibility, polarization, and the circulation of simplified religious messages (Bunt, 2009, 2018; Hew, 2018; Husein & Slama, 2018; Kholili et al., 2024; Nisa, 2018; Saputra et al., 2021; Slama, 2018). Thus, the educational challenge is not to separate students from digital religion, but to equip them to navigate it critically, ethically, and contextually.

Islamic education has begun to respond to this challenge by integrating social media, digital learning, religious moderation, and teacher digital literacy into learning practices. Indonesian studies show that digital media can support Islamic learning and student engagement when it is accompanied by pedagogical guidance and value orientation (Minarti et al., 2023; Mulyadi, 2025; Reksiana et al., 2024). Research on digital religious moderation also emphasizes the importance of strengthening tolerant and reflective religious narratives in online spaces (Hefni, 2020; Rohman & Waskito, 2025). At the level of youth identity, Islamic educational messages on Instagram and TikTok can contribute to the negotiation of Muslim identity, although students still need critical guidance in interpreting platform-based religious discourse (Soedjiwo et al., 2025).

This need is closely related to digital literacy and digital citizenship. Digital literacy includes more than operational skills; it involves evaluating information, constructing knowledge, communicating responsibly, and understanding the social and ethical rules of digital environments (Eshet-Alkalai, 2004). Digital citizenship research similarly emphasizes ethics, media and information literacy, participation, critical resistance, and respectful online behavior (Choi, 2016; Jones & Mitchell, 2016; Ribble, 2015). Indonesian digital-literacy research also shows that schools and young people are central targets for literacy initiatives, especially in relation to hoaxes, privacy, harmful content, and creative participation (Kurnia & Astuti, 2017). Differences in access, experience, and expertise further mean that digital inclusion should be understood as a continuum rather than a simple generational characteristic (Livingstone & Helsper, 2007).

Technological proficiency is becoming even more complex with the spread of generative artificial intelligence. AI literacy requires users not only to operate AI tools but also to understand basic concepts, evaluate outputs, create responsibly, and consider ethical consequences (Long & Magerko, 2020; Ng et al., 2021). In an Islamic educational context, technological competence therefore needs to be connected with source verification, responsibility, honesty, privacy, and

awareness of the consequences of digital action. This position is consistent with the argument that technology is not value-neutral and that technological development should be guided by an ethical worldview (Zarkasyi, 2016).

In this article, 'religious intelligence' is used as an operational concept referring to students' capacity to understand Islamic teachings contextually, evaluate religious information, exercise ethical judgement, and translate religious values into digital behavior. It is therefore closer to contextual religious literacy and reflective religious judgement than to a standardized psychometric intelligence construct. Identity is understood as socially and relationally formed (Jenkins, 2014), while digital religious practice is understood as a networked process in which religious meaning is negotiated across media, communities, and everyday life (Campbell & Garner, 2016). This framing allows religious intelligence and technological proficiency to be analyzed as mutually reinforcing dimensions rather than as separate competencies.

Based on this background, the study examines how religious intelligence and technological proficiency are integrated through technological creativity in the process of instilling Islamic values among Gen-Z Muslim students in senior high schools. The study focuses on four questions: how students evaluate religious information in digital spaces, how they understand responsible technological proficiency, how technological creativity functions as a medium for Islamic value learning, and how Islamic values are internalized through everyday digital activities. The novelty of the study lies in positioning technological creativity not merely as a delivery tool for religious content but as a reflective learning process through which students research, create, verify, communicate, and evaluate Islamic messages.

Method

This study employed a qualitative field-study design supported by document analysis. The design was selected because the research sought to understand how Gen-Z Muslim students interpret religious intelligence, technological proficiency, and Islamic values within their everyday digital practices. Qualitative inquiry is appropriate for examining meaning, experience, and context in depth (Creswell & Poth, 2018). The field evidence reported in the article comes from student interviews, observation of technology-mediated learning and religious activities, and documentation of digital materials; scholarly literature was used to contextualize and triangulate the field findings rather than to replace direct field data.

Participants were purposively selected from Gen-Z Muslim students in senior high schools who were involved in the observed digital learning and religious activities. Data were collected in 2025 through semi-structured interviews, observation, and documentation. Interviews explored students' experiences of accessing religious content, evaluating sources, using technology for learning and *da'wah*, and applying Islamic ethics online. Observation focused on technology-mediated learning, digital-content creation, and patterns of interaction. Documentation included examples of digital religious content, student-created media, and learning materials relevant to the research focus. To protect confidentiality, interview evidence is reported collectively rather than through personally identifying student information.

Data were analyzed through thematic content analysis. The researchers first familiarized themselves with the interview, observation, and documentation material; generated initial codes; compared codes across data sources; grouped related codes into categories; and developed four overarching themes: religious intelligence, technological proficiency, technological creativity, and the internalization of Islamic values. The process followed established qualitative-analysis principles of iterative coding, comparison, categorization, and interpretation (Braun & Clarke,

2021; Miles et al., 2020).

Credibility was strengthened through source and method triangulation by comparing interview accounts with observation records, documentation, and relevant scholarly literature. The analysis also distinguished between participants' reported experiences and the researchers' conceptual interpretation. Because the study is qualitative, terms such as 'effective' or 'influence' are interpreted as perceived educational meaning and observed patterns rather than as causal effects. This distinction is important when translating the findings into implications for Islamic education.

Results

Religious Intelligence in the Digital Era

Religious intelligence emerged from the field data as the ability to understand, internalize, and practice Islamic values reflectively in digital settings. Students described this capacity in terms of evaluating religious information, considering context, maintaining moderation, and connecting online behavior with moral responsibility (Interview and observation data, 2025). This interpretation is consistent with scholarship on digital religious moderation and Muslim youth identity, which emphasizes the need for critical religious judgement when religious messages circulate through algorithmic and highly participatory media environments (Hefni, 2020; Soedjiwo et al., 2025).

Field findings show that students actively access religious content through Instagram, TikTok, YouTube, and other digital platforms. Short, visual, and communicative content was often perceived as easier to engage with than conventional religious instruction (Observation data, 2025). At the same time, interview participants described difficulty distinguishing authoritative religious knowledge from personal opinion, persuasive influencer content, and provocative claims (Interview data, 2025). This pattern reflects a broader shift in religious authority among Indonesian Muslim youth, where social media expands access to religious knowledge while also fragmenting the sources through which authority is constructed (Husein & Slama, 2018; Saputra et al., 2021).

The findings also indicate differences between students who receive sustained religious guidance from school and family and those who depend primarily on digital media for religious learning. Students with stronger guidance appeared more likely to verify information, recognize context, and question extreme or decontextualized narratives, whereas limited guidance was associated with more literal acceptance of online religious claims (Interview and observation data, 2025). These findings support the educational importance of strengthening religious moderation and critical digital literacy rather than treating online religious information as self-validating (Hefni, 2020; Rohman & Waskito, 2025).

Religious education teachers were described as important mediators in this process. When teachers connected Islamic material to students' digital experiences, students had more opportunities to discuss source credibility, online etiquette, differing interpretations, and the consequences of sharing religious content (Observation data, 2025). This finding aligns with research showing that the digital competence of Islamic Religious Education teachers is increasingly important for guiding students through technology-rich learning environments (Reksiana et al., 2024).

Based on interviews, the concept of "Religious Intelligence" from the perspective of the research subjects encompasses three main interrelated aspects:

Tabel 1. Three Main Interrelated Aspects Research Subjects

Components	Key Findings
Information Validation	The ability to distinguish between the personal opinions of influencers and authoritative religious teachings.
Digital Ethics	Awareness that piety is not only measured by ritual worship, but also by how people comment and share content.
Algorithmic Resilience	Students' ability to consciously seek out differing perspectives to avoid being trapped in narrow-minded fanaticism

Through data triangulation, this study formulated a "Digital Religious Literacy" model consisting of: First, a cognitive filter, which uses logic to filter out provocative content. Second, an emotional filter, which manages digital anger (not being easily triggered by content that insults religion). Third, a spiritual filter, which uses social media as a self-reminder, not a tool for judging others.

Thus, religious literacy for Gen Z high school students does not mean avoiding technology, but rather the ability to navigate critically. The research data shows that despite high access to information, guidance from religious teachers remains crucial as a "compass" for validating the information students acquire independently.

Technological Proficiency for High-School Students

Technological proficiency was understood by participants as more than the technical ability to operate devices. It included information evaluation, media ethics, critical thinking, privacy awareness, productive technology use, and responsibility for digital actions (Interview data, 2025). This multidimensional view is consistent with digital-literacy and digital-citizenship scholarship, which emphasizes critical, ethical, social, and creative competencies alongside operational skill (Choi, 2016; Eshet-Alkalai, 2004; Ng, 2012). In Islamic Religious Education, teacher digital-literacy development has likewise been framed as a necessary condition for meaningful digital learning (Reksiana et al., 2024).

Interview participants recognized that technology use involves moral responsibility. Students referred to the importance of filtering content, maintaining respectful communication, protecting personal information, and avoiding the circulation of material that conflicts with Islamic values (Interview data, 2025). These responses suggest that technological proficiency is most educationally useful when it combines technical skill with ethical judgement and responsible participation, dimensions also emphasized in digital-citizenship research (Jones & Mitchell, 2016; Ribble, 2015).

Observation data indicate that the integration of digital media into religious learning can encourage participation, reflection, and critical discussion when activities are pedagogically guided. Educational videos, digital da'wah, collaborative content production, and online discussion enabled students to connect religious themes with everyday digital practices (Observation data, 2025). Previous research similarly reports that social media can strengthen Islamic learning when it is used within a structured educational context (Minarti et al., 2023).

This study also found that the school environment plays a strategic role in aligning the concepts of religious intelligence and technological proficiency. Schools that encourage the use of values-based technology are able to shape students' character that adapts to digital developments without losing their religious identity (Observation, 2025). Thus, the concepts of religious intelligence and technological proficiency among Gen Z high school students in the digital era are a mutually reinforcing unity in shaping a generation with character, critical thinking, and competitiveness.

Based on the research results, high school students' technological skills are categorized into four main domains, namely,

Tabel 2. Four Main Domains High School Students' Technological Skills

Domain	Competency Indicators
AI & Data Literacy	Able to use Prompt Engineering for learning and understand the fundamentals of data security.
Creative Content Production	Proficient in using design tools (Canva/Adobe) and video editing for presentations.
Computational Thinking	Ability to solve problems systematically (algorithmically) even without a coding background.
Digital Citizenship	Understanding of cyber ethics, digital footprints, and the ability to verify information (anti-hoax)

Based on the research findings above, technological proficiency for high school students is a combination of technical skills (hard skills) and digital wisdom. The results show that students equipped with computational thinking skills have a higher adaptability to new applications than those who only memorize the technical steps for a single application.

Technological Creativity as a Medium for Islamic Value Learning

Technological creativity appeared in the form of educational social media, digital da'wah content, interactive presentations, visual design, short videos, and technology-based projects (Observation data, 2025). Students did not experience these activities only as technical production; they also had to select messages, verify information, consider audiences, and decide how Islamic values should be represented. This participatory dimension is consistent with studies showing that digital platforms have become important spaces for visual persuasion, da'wah, and the production of Muslim publics in Indonesia (Hew, 2018; Nisa, 2018).

Interview analysis indicates that content-creation activities encouraged students to think about the accuracy, language, tone, and social consequences of the messages they produced (Interview data, 2025). The creative process therefore functioned as a form of reflection: students had to move from receiving religious information to interpreting and communicating it. This shift from consumption to production is educationally important because it makes values visible in decisions about sources, wording, design, and audience interaction.

Learning observations also show that technology-based creative approaches strengthen students' digital religious literacy. Students become more selective about information sources, are less easily exposed to extreme religious narratives, and demonstrate tolerance in digital interactions (Observation, 2025). These findings confirm that technological proficiency framed by Islamic values not only improves digital skills but also shapes religious character that is adaptive to social change.

The research results show a significant shift in how students absorb religious values. The instillation of Islamic values through technology is divided into three main forms of creativity:

Tabel 3. Three Main Forms Of Creativity

Forms of Creativity	Islamic Values Instilled	Impact on Students
Microblogging & Infographics	Understanding of Tawhid and Islamic History	Improving the ability to research valid religious literature
Short Videos (Reels/TikTok)	Social Ethics (<i>Akhlakul Karimah</i>) and Digital Etiquette	Cultivating courage to preach through real-life actions (roleplay)
Simple Apps/Games	Discipline in Worship (prayer schedule/ <i>mutaba'ah</i>)	Building independence in carrying out religious obligations

Thus, technological creativity is not merely a tool, but rather an emotional and cognitive bridge for Gen Z to deepen their religious understanding. Instilling Islamic values through creative media in high schools has proven effective in developing moderate, innovative, and broad-minded student character. Students are no longer objects of preaching, but rather active subjects spreading good values in the digital space.

Overall, this study confirms that technological creativity is a key element in bridging religious values and digital skills among Gen Z high school students. This integration reinforces the paradigm of contemporary Islamic education, which does not dichotomize religion and technology, but rather positions them as mutually reinforcing entities.

Internalization of Islamic Values through Digital Activities

The field data suggest that digital activities can become contexts for practicing honesty, responsibility, etiquette, tolerance, tabayyun, and respectful communication when students are guided to connect Islamic values with concrete online behavior (Observation and interview data, 2025). These dimensions overlap with established conceptions of digital citizenship that emphasize online respect, ethical participation, critical evaluation, and responsible communication (Choi, 2016; Jones & Mitchell, 2016).

Students described value internalization as an iterative process rather than an immediate outcome. Accessing religious content, joining online discussions, and producing reflective Islamic content required them to select information, consider context, and regulate how they responded publicly (Interview data, 2025). In this sense, digital participation became meaningful when it was accompanied by reflection and self-regulation rather than simple exposure to religious messages.

Learning observations show that pedagogically guided digital activities can simultaneously strengthen students' religious and digital literacy. Students who receive teacher guidance in utilizing technology tend to be more selective about religious content, are less easily influenced by extreme narratives, and are able to display a tolerant religious attitude in the digital space (Observation, 2025). This confirms that technological proficiency framed by Islamic values contributes directly to the formation of moderate religious character.

Based on field findings, internalization of Islamic values in high school students occurs through three main channels, namely:

Tabel 4. Three Main Channels on Internalization of Islamic Values in High School Students

Activity Paths	Internalization Mechanisms	Values Instilled
Content Consumption	Following self-reminder or visual da'wah accounts.	Patience, gratitude, and mental health.
Social Interaction	Getting involved in discussion groups or Islamic hobby communities.	Brotherhood and tolerance.
Active Participation	Re-sharing verses or wise advice.	Courage to preach and moral responsibility

Several participants described a form of 'digital self-correction': religious quotations or reminders encountered during ordinary social-media use sometimes prompted short moments of reflection about behavior, emotion, or worship (Interview data, 2025). The study treats this as an emergent qualitative theme rather than as evidence that algorithms themselves produce religiosity. Platform recommendations can expose users to religious material, but the educational value of that exposure still depends on interpretation, prior knowledge, and reflective guidance.

Internalization of Islamic values through digital activities among high school students occurs organically and informally. Digital media has become a "virtual mosque" where religious values are no longer taught theoretically but rather practiced through polite, critical, and reflective digital behavior. The success of this internalization depends heavily on students' ability to manage their algorithms to remain in a positive digital environment.

Overall, this study confirms that digital activities have strategic potential as a vehicle for internalizing Islamic values when integrated with the principles of religious intelligence and technological proficiency. This integration not only strengthens the religious understanding of Gen Z high school students but also fosters ethical awareness in the use of technology, enabling them to adapt religiously and critically to the challenges of the digital era.

Discussion

Religious Intelligence as Contextual Religious Literacy

The findings suggest that religious intelligence in digital contexts is best understood as contextual religious literacy: the capacity to interpret Islamic teachings, evaluate religious claims, exercise ethical judgement, and connect religious principles with concrete digital behavior. Digital religion research shows that religious authority and practice are increasingly negotiated through networked media rather than confined to formal institutions (Bunt, 2018; Campbell & Evolvi, 2020). In Indonesia, this shift creates both opportunities for accessible religious learning and anxieties about credibility, authority, and polarization (Husein & Slama, 2018; Saputra et al., 2021).

For Islamic education, the implication is that religious knowledge should be accompanied by interpretive and evaluative capacity. Moderation in digital space requires students to identify credible sources, understand context, avoid impulsive judgement, and recognize difference without abandoning normative commitments (Hefni, 2020; Rohman & Waskito, 2025). Recent analysis of Muslim youth identity on Instagram and TikTok similarly demonstrates that Islamic educational messages participate in identity formation within highly visual and algorithmic environments (Soedjiwo et al., 2025). Religious intelligence therefore functions as a moral-interpretive framework, not simply as the quantity of religious information a student possesses.

The study also reinforces the importance of institutional guidance. Online religious learning is increasingly personalized, but personalization does not guarantee depth or reliability. Islamic education teachers can provide the dialogical space needed to compare sources, examine context, and connect religious principles to contemporary digital dilemmas. This role is especially important because digital religious practice frequently crosses the boundaries between formal learning, peer interaction, entertainment, and everyday piety (Campbell, 2013; Campbell & Garner, 2016).

Accordingly, the three emergent dimensions—critical, moderate, and empathic religious judgement—should be interpreted as practical expressions of religious literacy. They support source verification, respectful engagement with difference, and the use of digital media to communicate benefit rather than hostility. This interpretation also reflects the broader Islamic argument that technology should be directed by an ethical worldview rather than treated as value-neutral (Zarkasyi, 2016).

Based on the analysis, the concept of "Religious Intelligence" for Gen Z encompasses three main dimensions:

Tabel 5. Three Main Dimensions the Concept of "Religious Intelligence" for Gen Z

Dimensions	Explanation	Digital Implementation
Critical	Ability to verify the sanad	Cross-check fatwas or verse quotations

	(source) of information.	before sharing them.
Moderate	Respecting differences and avoiding radical content.	Do not engage in heated debates between religious groups in the comments section.
Empathic	Using religion as a tool to spread goodness	Use digital donation features or spread positive messages

Thus, religious literacy in the digital age is not just about religious knowledge, but also about literacy. Religiously intelligent high school students are those who are able to filter out hoax content, appreciate diversity in the digital public space, and use technology as a means of fostering inclusive spirituality.

Technological Proficiency, Digital Literacy, and AI Literacy

The findings challenge a narrow view of technological proficiency as device operation. Students' competence involved information evaluation, content creation, privacy awareness, online ethics, and adaptation to new tools. This is consistent with multidimensional models of digital literacy and citizenship (Choi, 2016; Eshet-Alkalai, 2004; Ribble, 2015). It is also important not to assume competence merely from age: research on the 'digital native' concept shows wide differences among young users in access, experience, learning strategies, and critical skill (Bennett et al., 2008; Helsper & Eynon, 2010; Kirschner & De Bruyckere, 2017).

The emergence of generative AI further expands what technological proficiency requires. AI literacy includes understanding the basic capabilities and limitations of AI, evaluating generated outputs, communicating effectively with AI systems, creating responsibly, and recognizing ethical issues (Long & Magerko, 2020; Ng et al., 2021). Therefore, the study's domains of AI and data literacy, creative production, computational thinking, and digital citizenship are better understood as interconnected competencies rather than isolated technical skills.

This broader interpretation has direct implications for Islamic education. A student may be technically skilled yet remain vulnerable to misinformation, manipulative content, privacy risks, or ethically problematic AI use. Schools should therefore connect technological instruction with *tabayyun*, honesty, accountability, respect, and awareness of digital consequences. Indonesian digital-literacy research likewise emphasizes that young people require critical and creative literacy support at school, family, and societal levels (Kurnia & Astuti, 2017).

Technological proficiency should consequently be assessed through what students can judge and create, not merely what applications they can operate. Responsible digital participation requires the ability to verify information, understand the persistence of digital footprints, recognize persuasive or algorithmically amplified content, and make ethically defensible choices. This combination of technical, cognitive, and ethical competence is more consistent with contemporary digital-citizenship frameworks than the assumption that frequent technology use equals mastery (Jones & Mitchell, 2016; Livingstone & Helsper, 2007).

Therefore, technological literacy for high school students is a multi-competency that combines technical skills, logical acumen, and ethical integrity. In the future, the most competitive students will not only be those who "know" how to use a device best, but also those who are "most adaptable" in learning the constantly emerging new devices.

Technological Creativity as Active Islamic Learning

Technological creativity becomes educationally important when students move from passive consumption to active production. Creating a video, infographic, podcast, or digital campaign requires students to select information, make interpretive decisions, organize ideas, and

communicate to an audience. Constructivist learning theory emphasizes that knowledge is developed through active engagement, social interaction, and mediated activity rather than simple transmission (Vygotsky, 1978). In this study, creative production served as a context in which Islamic values could be discussed, represented, and reconsidered through practical decisions.

The findings are also consistent with research on digital da'wah in Indonesia. Visual and social-media formats do not merely distribute existing messages; they reshape how religious ideas are presented, circulated, and received (Hew, 2018; Nisa, 2018). Islamic education can use this participatory logic pedagogically by asking students to become responsible producers of religious content while requiring source verification, contextual explanation, and ethical reflection. Social media then becomes a learning environment rather than only a channel for publication.

This approach can deepen learning because students must integrate cognitive, affective, and practical dimensions. Research on the use of social media in Islamic learning likewise indicates that technology can strengthen learning outcomes when it is embedded in purposeful educational design (Minarti et al., 2023). However, creative output should not be treated as inherently educational; teacher guidance remains necessary to ensure that attractive content is also accurate, contextual, respectful, and aligned with learning objectives.

The shift from 'listener' to 'creator' is therefore one of the study's central pedagogical contributions. When students create an infographic on Islamic social-media etiquette, for example, they must research relevant sources, decide how to explain the principle, consider the likely audience, and reflect on whether their own digital behavior is consistent with the message. The creative process becomes a form of value rehearsal in which students practice rather than merely memorize ethical principles.

Internalization, Digital Ethics, and Self-Regulation

The findings indicate that the internalization of Islamic values becomes visible in digital conduct: honesty in sharing information, responsibility for content, respectful language, tolerance, privacy awareness, and tabayyun before forwarding claims. These behaviors overlap with digital citizenship, which emphasizes respectful online participation and responsible engagement (Choi, 2016; Jones & Mitchell, 2016). For Islamic education, the distinctive contribution is to connect these practices with religious accountability and moral intention rather than presenting them only as generic internet-safety rules.

Self-regulation is an important mechanism in this process. Students must regulate attention, emotion, impulse, and action when they encounter provocative content or pressure to share quickly. Zimmerman (2002) describes self-regulated learners as active participants who monitor and control aspects of their learning and behavior. In digital religious life, this can be translated into pausing before sharing, checking sources, controlling emotional responses, and evaluating whether online behavior is consistent with Islamic ethics.

The study therefore supports a model in which religious intelligence provides moral and interpretive direction, technological proficiency provides critical and productive digital capability, and technological creativity provides an arena for practice. These dimensions are mutually reinforcing. Students are more likely to internalize values when they repeatedly apply them in meaningful digital decisions rather than encountering them only as abstract rules.

This integrated perspective also clarifies the role of teachers and schools. Islamic Religious Education should include guided discussion of platform algorithms, digital footprints, online disagreement, AI-generated content, source credibility, and the ethics of public communication. Teacher digital competence is therefore part of character education rather than a separate technical

agenda (Mulyadi, 2025; Reksiana et al., 2024).

The field evidence suggests that value formation in digital environments is fluid and experience-based. This does not mean that formal religious education becomes less important. On the contrary, the expansion of informal digital religion increases the need for structured spaces in which students can examine what they encounter online and relate it to credible Islamic knowledge. Studies of Indonesian online piety similarly show that digital religiosity remains intertwined with questions of authority, community, and moral evaluation (Husein & Slama, 2018; Slama, 2018).

The main contribution of the study is therefore a shift from viewing technology only as a delivery tool toward viewing technological creativity as a learning process for value formation. The proposed integration can be summarized as follows: religious intelligence guides judgement, technological proficiency enables critical and productive action, and technological creativity provides authentic tasks through which Islamic values are practiced. This model responds to the broader transformation of Islamic education in the digital age, which requires technological innovation to remain connected to spiritual, ethical, and character development (Mulyadi, 2025; Reksiana et al., 2024). Future research should test the model across different schools and regions, include more clearly specified participant samples, and examine how student-created digital artifacts change over time.

Conclusion

This study concludes that the integration of religious intelligence, technological proficiency, and technological creativity provides a useful framework for understanding the internalization of Islamic values among Gen-Z Muslim students in digital environments. Religious intelligence operates as contextual religious literacy and ethical judgement; technological proficiency provides critical, productive, and responsible digital capability; and technological creativity creates authentic opportunities for students to research, produce, communicate, and reflect on Islamic messages. The findings show that students' digital engagement becomes educationally meaningful when it is accompanied by source verification, teacher guidance, ethical awareness, and opportunities for reflective creation. The study also cautions against assuming that Generation Z students are automatically digitally literate simply because they use technology intensively. Islamic education should therefore integrate religious literacy, digital citizenship, media and AI literacy, and creative production within a coherent value-based pedagogy.

Practically, schools should support Islamic Religious Education teachers in designing digital projects that require students to verify sources, communicate respectfully, evaluate AI- or platform-generated information, and create beneficial religious content. Institutionally, a healthy digital ecosystem should combine technological access with ethical guidance and opportunities for dialogue. Because this qualitative study focuses on a bounded group of high-school students, the findings should be interpreted contextually rather than as causal or universally generalizable. Future research can strengthen the model by reporting larger and more diverse samples, comparing school contexts, analyzing student digital artifacts systematically, and examining how religious and digital competencies develop longitudinally.

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