



Mosques in the Digital Era: Contesting Sacred Space, Culture, and the Identity of Generation Z Muslims

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A B S T R A C T

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The digital era has transformed mosques from purely sacred spaces into hybrid spaces that integrate both physical and digital dimensions. This study aims to analyze the dynamics of contestation over values, culture, and the identities of Generation Z Muslims during this transformation. Using a critical qualitative literature review, the study explores how negotiations over the meaning of sacredness emerge as worship practices, preaching, and community life in mosques become infused with digital technologies. The findings reveal that digitalization does not necessarily erode sacredness; rather, it becomes a medium for its redefinition, shaped by tensions between traditional authority, local cultural values, and the logic of digital efficiency. Generation Z emerges as a key actor shaping a hybrid Islamic identity by blending ritual piety with digital participation, such as through social media da'wah content and sharia-based financial applications. However, this transformation faces concrete challenges, including gaps in digital infrastructure and literacy among mosque administrators and congregants. The significance of

this study lies in its contribution to enriching the discourse in the sociology of religion by positioning technology not merely as a tool, but as part of broader processes of cultural adaptation and identity formation. The study underscores the need for a holistic mosque management approach that balances technological integration with the preservation of the community's spiritual and cultural values.

Introduction

The development of digital technology over the past few decades has accelerated at an extraordinary pace. The digital revolution, although promising greater efficiency and boundless connectivity, has not always progressed linearly with the ideals of humanization and spiritual deepening (Louw, 2024; Park et al., 2024; Sharma & Shanmugaboopathi, 2022). Instead, it has produced a complex paradox in religious life, particularly evident in sacred spaces such as mosques. The mosque's role as an epicenter of spirituality, education, and Muslim community networks has undergone a significant transformation into a hybrid space. This arena not only accommodates rituals and traditions but is also infused with digital activities such as social media da'wah, live-streamed sermons, and various application-based services (Al-Krenawi, 2016; Imamuddin & Isnaniah, 2024; Samwil et al., 2024; Van Tubergen et al., 2021). The presence of such technologies often creates tension with traditional expressions of religiosity that have long been the cultural lifeblood and identity of Muslim communities (Ichsan et al., 2020; Lindgren, 2018). Mosques, which have traditionally served as centers of spirituality, education, and Muslim community life, now transform into hybrid spaces that also facilitate digital activities through social media, da'wah applications, and live-streamed worship (Aunul & Handoko, 2022; Campbell, 2005; Lomachinska & Hryshyna, 2024).

In general, society still perceives digital technology as a carrier of global values that sometimes conflict with the norms of Islamic culture, and its introduction is often not accompanied by adequate digital literacy, both among mosque administrators and congregants (Hudia et al., 2023; Mansir, 2022; Pabbajah, 2024). At the same time, the community's social, spiritual, and psychological readiness to accept and

integrate technology into religious practices remains suboptimal (Ben-Lulu, 2021; DiGregorio et al., 2021). This creates the impression that although technology has the potential to expand access to da'wah and religious education, its presence is not entirely aligned with the spiritual, social, and cultural characteristics of Muslim communities, particularly among the younger generation (Moewashi Idharoel Haq, 2024; Zainuddin et al., 2024). Among Generation Z, who have grown up with easy access to digital technologies, the encounter between traditional mosque values and the logic of digital efficiency presents unique challenges in interpreting the sacredness of worship spaces and in constructing an Islamic identity that balances spiritual values with digital culture (Architecture Department et al., 2023; Nuriyah & Fakhri, 2022). Therefore, understanding the relationship between digital technology and mosques becomes crucial in examining how cultural and spiritual values can be preserved in the digital era.

So far, research on mosques and digitalization has tended to view technology linearly, merely as an effort to modernize community services or as a tool for da'wah. At least three main clusters can be identified in the existing literature. First, studies that emphasize the implications of digital technology use in religious activities, such as how digitalization facilitates access to worship, the dissemination of da'wah, and mosque administration (Rahman & Aziz, 2022; Sikumbang et al., 2023). Second, studies that highlight the negative impacts of digitalization on spirituality, including the potential decline of religious scholars' authority, the commodification of worship, and shifts in how communities interpret the sacredness of mosques (Ibnu Waseu, 2025; Rachman et al., 2025; Wibowo, 2025). Third, research that focuses more on the digital literacy of Muslim communities but does not examine how cultural, social, and religious characteristics influence perceptions and the adoption of technology (Achmad, 2022; Darajat et al., 2022; Umar et al., 2023). However, these studies tend to treat technology as an external entity applied to mosques, thereby overlooking the internal negotiation processes among sacred values, local culture, and youth identity that emerge in response to such technology. In other words, fundamental issues related to the socio-cultural character and identity of Generation Z in the face of mosque digitalization have not been deeply explored. As a result, understanding remains limited regarding how younger generations balance traditional religious practices with digital expression.

In fact, the digitalization of mosques is not merely a technical issue, but

also an arena of contestation between sacredness, cultural values, and the identity expressions of Muslim youth. Therefore, the novelty of this study lies in its effort to build a bridge between digital religion studies and the sociology of youth by positioning Generation Z as the main actors who actively negotiate the meaning of sacred space amid the pressures of digital efficiency logic and local cultural values. This approach differs from previous studies, which have largely focused on managerial aspects or the linear impacts of technology. This gap highlights the need for research that views mosque digitalization as a phenomenon involving the interaction between technology, culture, and youth identity, as well as how Muslim communities interpret spaces of worship in a digital context. Such research is important for opening new insights into socio-cultural strategies that can support the integration of digital technology without compromising spiritual values and local cultural traditions.

The purpose of this study is to fill the gap in previous research by examining how the social, cultural, and identity characteristics of young Muslims influence the adoption of digital technology in mosques. The ability of Muslim communities, especially Generation Z, to integrate digital technology is shaped by their cultural and religious values, including their perception of the mosque as a sacred space. Within this context, the study focuses on three main questions. First, how prepared is the mosque's digital infrastructure and organizational structures in adopting technology, from technical facilities to the capacity of human resources that support them? Second, how do the socio-cultural characteristics of congregants, particularly Generation Z, shape their forms of participation in the mosque's digital activities and their interpretation of sacred space amidst digitalization? Third, how do processes of meaning-making unfold in mosques as sacred spaces when worship practices and social activities are mediated by digital technology, thereby shaping identity dynamics among young Muslims who balance traditional piety with digital culture?

The answers to these questions are expected to provide an in-depth understanding of contestations involving values, sacred space, and identity within the context of mosque digitalization. The findings are also expected to serve as a foundation for policy strategies and social practices that enable mosques to continue functioning as centers of spirituality, community, and identity, while also responding to the digital needs of younger generations living in an increasingly connected world. This approach positions technology not as a threat or merely a

tool, but as part of a broader process of cultural adaptation and the development of Islamic identity that remains relevant to contemporary contexts.

This study argues that the tension between the mosque as a sacred space and digital technology cannot be separated from the fundamental differences between the spiritual values of Muslim communities and the logic of efficiency and visibility embedded in digital technologies. Mosques have traditionally been built on principles of communality, piety, and modesty, whereas digital technology emphasizes connectivity, performativity, and public accessibility. These differences create dilemmas when integrating worship practices, da'wah, and community activities with digital media. Digital technology requires infrastructural readiness, egalitarian social structures, and literacy to ensure equitable access, but in the context of mosques, religious authority, norms of propriety, and local traditions also play crucial roles in mediating technology adoption.

Mosque digitalization can challenge the concept of sacredness through new practices such as livestreaming sermons, producing da'wah content for social media, and creating mosque branding on digital platforms. These phenomena indicate that the mosque is not only a place of worship but also an arena for negotiating values, culture, and youth identity. Therefore, the integration of digital technology cannot rely solely on technical approaches; it requires socio-cultural engineering that respects spiritual values, communal character, and the generational dynamics of contemporary Muslim communities. The success of mosque digitalization depends on balancing technological efficiency with the preservation of cultural and spiritual values, so that sacred spaces remain relevant as centers of community and Muslim identity while still responding to the digital needs of Generation Z. With such an approach, mosques can become examples of harmony between tradition and modernity, spirituality and technology, community and youth identity.

Research Methods and Theory Approach

This study employs a traditional literature review method to examine the transformation of mosques in the digital era and the dynamics of Muslim Generation Z identity. This approach is chosen for its ability to provide an in-depth analysis of complex socio-cultural phenomena through a critical synthesis of existing theories and research findings (Snyder, 2019; Xiao & Watson, 2019). Data collection was conducted by reviewing journal articles, books, and conference proceedings from

databases such as Google Scholar and Scopus using keywords including “digital mosque,” “hybrid sacred space,” “Generation Z Muslim identity,” and “digital literacy mosque.” The publication period was limited to 2015–2025, considering that 2015 marked the beginning of significant discussions on digital transformation following the establishment of the Sustainable Development Goals (SDGs). This period also includes the COVID-19 pandemic (2020–2022), which significantly accelerated the digitalization of religious activities in mosques. The literature selection process was carried out systematically through four stages: initial identification based on keywords, screening based on publication year and peer-review status, abstract screening based on thematic relevance, and full-text reading, resulting in 52 articles selected as the main corpus for analysis. All sources used were peer-reviewed publications to ensure academic credibility (Boote & Beile, 2005).

Data analysis was conducted using thematic analysis, following the framework proposed by Braun and Clarke (2006). The analysis process consisted of three systematic stages. First, data reduction was achieved by coding all findings from the 52 articles using Mendeley software to identify key concepts such as hybrid space, negotiation of sacredness, digital literacy, and generational identity. Second, theme development by grouping codes into main themes aligned with the research objectives, namely the transformation of mosque functions, the construction of Generation Z identity, and the readiness of infrastructure and digital literacy. Third, conclusion drawing was carried out iteratively by comparing findings across the literature to ensure comprehensive and in-depth interpretation (Webster & Watson, 2002). To enhance the credibility of the findings, the synthesis process was conducted reflectively by comparing results from diverse sources to minimize bias. As a non-empirical study, this research is limited by the absence of direct field data collection; however, this literature review approach provides a strong theoretical foundation for understanding the complexity of digitalizing religious spaces and can serve as a basis for future research using mixed-methods or ethnographic approaches (Cooper, 2016).

Transformation of the Mosque: From Sacred Space to Digital Hybrid Space

The development of information and communication technology has brought significant impacts to various sectors of life, including religious institutions. One

such institution experiencing substantial transformation is the mosque. As a center of worship and social activities for Muslims, the mosque today no longer functions solely as a spiritual space but also as a center for education, social interaction, and community-based economic activities. The adaptation of mosques to digital technology has become an important phenomenon to examine, as this transformation not only influences the mosque's internal operations but also expands its social, educational, and economic functions within modern society (Kirom et al., 2024; Zamroni & Fahana, 2021). This phenomenon demonstrates that mosques are no longer merely physical places of worship but have evolved into multifunctional institutions that utilize technology to meet the broader needs of the community.

One of the main aspects of the mosque's digital transformation is the implementation of digital-based management systems. The digitalization of mosque management enhances administrative efficiency by enabling transparent, accountable management of financial data, inventory, and community services. Various studies indicate that digital systems have replaced traditional paper-based manual methods, resulting in more organized operations that can be monitored in real time (Zamroni & Fahana, 2021; Pratiwi et al., 2022). For example, digital financial reporting systems facilitate the management of funds, such as zakat, infaq, and sadaqah, while simultaneously increasing financial transparency for the congregation. Through digital systems, mosques can optimize resource allocation for various social and educational activities while minimizing the potential for errors or misuse of funds.

In addition, the digital transformation of mosque management includes enhancing human resource competencies. Training programs and the development of digital skills for mosque administrators are crucial to ensuring that technology is used effectively. Such training encompasses the use of management software, digital communication platforms, and social media to disseminate information to the congregation (Suslina et al., 2025). These initiatives enable mosque administrators not only to manage administration more efficiently but also to conduct strategic planning for more structured social and educational programs. Improving the digital capacity of mosque administrators is a crucial foundation for ensuring the sustainability of technological adaptation in mosques, making the transformation not merely technical but also managerial and strategic (Hidayat et al., 2024).

Systematically, mosque digital transformation can be mapped into four interrelated main dimensions: managerial, educational, social, and economic. Table 1 summarizes the characteristics, forms of digitalization, and sociocultural implications of each dimension, along with supporting example studies.

Table 1: Dimensions of Digital Mosque Transformation: Forms, Implications, and Empirical Example

Dimension of Transformation	Forms of Digitalization	Sociocultural Implications	Example Studies
Management & Administration	Digital financial systems, management applications	Transparency, accountability	Zamroni & Fahana (2021); Pratiwi et al. (2022)
Education & Da'wah	Online platforms, augmented reality	Wider access, interactive learning	Putro & Setyowati (2022); Alidia et al. (2024)
Community Interaction	Social media, livestreaming	Digital community cohesion	Dani & Mukti (2023); Rahman & Aziz (2022)
Economy & Social Finance	Digital ZIS, QRIS, Islamic fintech	Economic inclusion, empowerment	Nuriyah & Fakhri (2022); Arifin et al. (2024)

Source: author's elaboration (2025)

As shown in Table 1, digitalization not only enhances the operational efficiency of mosques but also expands their socio-religious roles. This multidimensional transformation demonstrates that mosques now function as active nodes within the digital ecosystem of Muslim communities, while simultaneously serving as arenas for negotiating between tradition and modernity.

Beyond managerial aspects, the digital transformation of mosques is evident in their prayer spaces and educational activities. Modern mosques now function not only as prayer halls but also as centers for social interaction and community

education. The use of digital technology in educational activities represents a significant innovation. Several mosques have implemented technology-based learning strategies, including augmented reality (AR), online platforms, and interactive media, that help congregants learn religious materials, Islamic history, and social values more easily. This approach not only improves the quality of learning but also broadens access for individuals who cannot attend the mosque physically (Putro & Setyowati, 2022; Alidia et al., 2024).

The use of digital technology in mosque-based education offers several key benefits. First, technology enables more engaging, interactive learning, increasing congregants' motivation, especially younger generations, to participate in religious education programs. Second, mosques can reach a wider audience, including participants from various regions who may have limited access to mosque facilities. Third, digital platforms support the delivery of online classes and lectures that can be accessed anytime and anywhere, maximizing the efficiency of time and resources. Accordingly, mosques are transforming into educational centers that adapt to technological advances while strengthening their role as community learning institutions.

In addition to its managerial and educational dimensions, the mosque's role as a center of communication and community interaction has undergone a significant transformation. Social media platforms have become essential tools for mosques to connect with congregants and the broader public. Platforms such as Facebook, Instagram, and WhatsApp are used to disseminate information about activities, announce worship schedules, and build an inclusive and cohesive community identity (Hidayat et al., 2024; Dani & Mukti, 2023). The role of social media became increasingly crucial during periods of limited physical gatherings, such as during the COVID-19 pandemic, when many mosques relied on digital platforms to stay connected with their congregants and ensure the continuity of religious and social activities (Rahman & Aziz, 2022).

This shift not only affects how mosques communicate with their congregations but also expands their capacity as responsive social institutions. Digital communication enables mosques to gather feedback directly from congregants, measure participation levels, and foster a more interactive community. In this way, the mosque functions not only as a place of worship but also as a medium for community development that responds to public needs.

Beyond social aspects, mosques also utilize digital technology to strengthen their economic and socio-economic functions. The digitalization of financial management, including the collection of zakat, infaq, sadaqah, and other social funds, allows for more transparent and efficient administration (Nuriyah & Fakhri, 2022; Ramis et al., 2025). This digital socio-financial model supports various community empowerment programs, such as social assistance, skills training, and mosque-based entrepreneurship initiatives. Through digital systems, congregants can monitor fund use in real time, enhancing public trust in mosque management.

These initiatives carry broad implications for community socio-economic development. Mosques no longer function solely as facilitators of ritual worship but also as institutions that manage welfare distribution, strengthen economic inclusion, and support community capacity-building. This transformation aligns with the needs of modern society, in which religious institutions must adapt to dynamic socio-economic realities. Digital transformation in this economic dimension solidifies the mosque's position as an effective, adaptive, and accountable agent of community development (Murdowo et al., 2025).

Overall, the adaptation of mosques to digital technology signals a fundamental shift across multiple dimensions: operational, educational, social, and economic. Digital technology integration not only improves administrative efficiency but also expands the mosque's capacity to deliver education, strengthen community relations, and manage socio-economic programs effectively. This transformation demonstrates that modern mosques can function as multifunctional institutions that balance religious traditions with contemporary life demands. Hence, studies on the digital adaptation of mosques are essential for understanding the evolving dynamics of religious institutions in the modern era.

This research not only highlights technical advancements but also examines the social, educational, and economic implications of mosque digitalization. The findings are expected to serve as a reference for mosque administrators, scholars, and policymakers in developing more effective, transparent, and responsive strategies for mosque management that meet community needs in the digital age. This evolution reinforces the notion that mosques continue to uphold their spiritual functions while expanding their roles as centers of social interaction, education, and economic empowerment, adapting to changing times.

Identity of Generation Z Muslims in the Digital Era: Contestation of Values and Culture

Generation Z, often called digital natives, is a demographic born roughly between the mid-1990s and early 2010s. This group grew up amid the rapid development of digital technology, the internet, and social media, giving them unprecedented access to a wide range of information. These characteristics fundamentally shape how they understand and practice Islamic teachings, as they use technology to explore and negotiate their Islamic identity (Salsabila & Qodri, 2022; Rofidah & Muhid, 2022). In this context, the Islamic identity of Generation Z is no longer static but dynamic, shaped by interactions among religious traditions, local practices, and global influences encountered through various digital media.

One significant aspect of this identity negotiation is the role of social media in disseminating Islamic teachings or digital da'wah. Research shows that social media has become an effective tool for conveying religious messages because it increases engagement and captures the attention of Generation Z (Salsabila & Qodri, 2022). This generation often seeks spiritual guidance online, which subsequently influences their beliefs and religious practices. This phenomenon demonstrates how social media creates a hybridized Islamic identity, in which youth engage with diverse interpretations and representations of Islam (Rofidah & Muhid, 2022). The integration of modern worship practices through digital platforms enables Generation Z to participate in religious rituals in new ways, combining traditional values with contemporary sensibilities. For example, many young people attend online Islamic study sessions, watch sermons on YouTube, or use prayer reminder apps, making their worship more flexible while remaining aligned with religious principles.

In addition, the digital environment also shapes Generation Z's perception of Islamic values. Several studies show a decline in the internalization of Islamic morals from Generation Y to Generation Z, influenced by family factors, social environments, and peer groups (Pertiwi et al., 2022). The widespread availability of information on the internet allows Generation Z to access a wider range of Islamic perspectives, making their spiritual practices more individualistic and sometimes divergent from traditional practices. This condition indicates a process of critical selection of religious norms, in which individuals attempt to align personal beliefs

with the modern social and cultural contexts they encounter.

Another dimension of this identity negotiation relates to financial literacy and economic behavior grounded in Islamic principles. Recent studies show that Generation Z is beginning to consider aligning their financial decisions with Islamic values, including using Islamic banking services and managing digital zakat (Sari et al., 2023). This suggests that Islamic identity also encompasses practical dimensions of daily life, in which economic aspects become part of religious expression. Islamic cultural education efforts in universities, such as curricula integrating sharia financial values and digital literacy, help Generation Z navigate the challenges of globalization and maintain consistency in their religious identity amid the flow of modern values (Al-Dosari & Alzitawi, 2023).

The negotiation of religious identity among Muslim Gen Z is manifested in a range of everyday practices and challenges. Table 2 outlines four main aspects of this identity: spiritual, educational, economic, and cultural, along with the accompanying digital dynamics.

Table 2: Construction of Religious Identity Among Generation Z Muslims in the Digital Ecosystem: Aspects, Practices, and Dynamics

Identity Aspect	Digital Practices	Sources of Influence	Challenges
Spirituality & Worship	Prayer reminder apps, digital Quran	Social media, religious influencers	Individualization vs. community
Religious Education	Online classes, webinars, YouTube content	Global platforms, digital scholars	Critical filtering vs. misinformation
Islamic Economy	Sharia e-wallets, Islamic crowdfunding	Fintech, digital campaigns	Sharia financial literacy
Cultural Expression	Creative da'wah content, Islamic podcasts	Pop culture, digital trends	Hybridization of local & global cultures

Source: author's elaboration (2025)

Table 2 confirms that Muslim Gen Z identity is fluid and contextual, shaped through constant interaction between religious values, digital influences, and social realities. This hybridity is not a sign of an identity crisis but an adaptive strategy to remain relevant in the digital era.

Furthermore, the concept of hybridity emerges as an important characteristic in shaping the Islamic identity of Generation Z. This generation encounters both local

cultural influences and global Islamic practices, which often compete or interact in their daily lives. In Indonesia, for instance, there is ongoing contestation between traditional Islamic practices, often emphasizing local rituals and community etiquette, and modern Islamic practices that are more universal and digital (Wahyudi et al., 2022). This interaction creates a flexible, context-specific form of Islamic identity, enabling young people to integrate local customs with global Islamic teachings to cultivate a sense of belonging that aligns with their unique experiences. This hybridity serves as an adaptive strategy, allowing Generation Z to maintain core religious values while adjusting to the demands of modern life and technology.

It is also important to note that Generation Z's interaction with digital technology shapes not only individual identities but also collective social practices. Through social media, educational apps, and digital communication platforms, they build online communities that share information, spiritual experiences, and religious practices. These online communities often transcend geographical and cultural boundaries, creating new spaces for youth to discuss and interpret Islamic teachings within their own contexts (Salsabila & Qodri, 2022; Rofidah & Muhid, 2022). This process shows that Islamic identity formation in the digital era is interactive, collaborative, and continually evolving alongside emerging technologies and rapidly changing social dynamics.

Furthermore, digitalization allows Generation Z to access more inclusive and adaptive Islamic education. Interactive learning applications, online classes, and religious webinars offer learning experiences distinct from traditional face-to-face instruction, enabling participants to adjust their time, methods, and materials to their needs (Putro & Setyowati, 2022). This strategy strengthens Generation Z's ability to critically select and filter religious information, enhancing their digital literacy and building a more contextual understanding of Islam. Thus, digital religious education functions not only as a medium for delivering knowledge but also as a platform for identity formation that accommodates interactions between tradition, modernity, and globalization.

Overall, Generation Z's interaction with digital technology creates a dynamic process of Islamic identity formation, in which individual beliefs and collective social realities intersect. This generation develops a unique identity that blends traditional and modern elements, local and global influences, and spiritual and practical considerations. This hybrid character enables them to maintain core

religious values while navigating the challenges of modernization and globalization. This phenomenon is essential to understand, as it reflects how technology shapes religious practices, morality, and cross-cultural social interactions in the contemporary era (Al-Dosari & Alzitawi, 2023; Wahyudi et al., 2022).

Studies on Generation Z and Islamic identity in the digital era carry significant implications for academics, educators, and policymakers. By understanding how youth negotiate their identities through digital media, educational institutions and religious organizations can design more relevant and effective communication, learning, and religious development strategies. Additionally, this research opens opportunities to develop Islamic value-based digital literacy programs, enhance sharia financial literacy, and foster online communities that support inclusive and adaptive religious practices.

Thus, Generation Z is not merely a group of technology users but active agents shaping the landscape of Islamic life in the digital era. Their identity formation reflects a balance between tradition and modernity, between the local and the global, and between ritual practices and practical everyday needs. This study underscores the importance of understanding the dynamic interaction between technology and religion in the contemporary context, as part of broader efforts to strengthen education, guidance, and community development for young Muslims worldwide.

Digital Infrastructure and Literacy Readiness in Mosques: Opportunities and Challenges

The readiness of mosque infrastructure and the level of digital literacy among administrators and congregants are crucial factors determining the effectiveness of technology adoption within religious community spaces. In this context, mosques function not only as places of worship but also as centers of social communication, education, and community empowerment. This transformation requires a comprehensive understanding of the opportunities and challenges associated with technical readiness and digital literacy for mosque administrators and their congregants (Hidayat et al., 2024; Murdowo et al., 2025).

First, the technical infrastructure of mosques has undergone significant development, particularly in urban areas. Many mosques now serve as hubs for social

communication, utilizing digital platforms to disseminate information effectively. Hidayat et al. (2024) highlight the strategic role of mosques in disseminating religious, social, and cultural information, especially through social media, thereby increasing engagement and outreach across diverse community demographics. However, mosques in rural areas often face technological limitations, which hinder their ability to integrate digital solutions effectively. These disparities indicate the need for systematic efforts to strengthen the technical capacity of mosques in diverse locations, which are often constrained by limited budgets and varying levels of administrative support (Channa et al., 2024).

The successful adoption of technology in mosques heavily depends on infrastructure readiness and digital literacy. Table 3 compares the ideal conditions, field realities, and strategic recommendations for four critical aspects: infrastructure, management literacy, congregation literacy, and content/services.

Table 3: Analysis of Digital Infrastructure and Literacy Readiness in Mosques: Ideal Conditions, Realities, and Strategic Recommendations

Aspect	Ideal Condition	Field Reality	Recommendations
Technology Infrastructure	Stable network, adequate devices	Urban-rural gap, budget limitations	Infrastructure support programs
Management Literacy	Ability to manage digital platforms	Varied skills, resistance to change	Tiered training programs
Congregation Literacy	Use of mosque digital services	Low among older generations, varied among youth	Gradual socialization
Content & Services	Educational content, inclusive services	Limited creativity, underrepresentation	Collaboration with content creators

Source: author's elaboration (2025)

Table 3 clearly shows that the main challenges are not merely technical but sociocultural. Therefore, a holistic approach that combines infrastructure enhancement, human resource capacity building, and continuous support is necessary to ensure inclusive and sustainable digitalization.

Beyond infrastructure readiness, successful technology adoption greatly depends on the digital literacy levels of mosque administrators and congregants. Murdowo et al. (2025) emphasize that initial training initiatives aimed at increasing administrators' digital literacy can significantly enhance the use and effectiveness of digital tools within mosque institutions. Research by Yaakub et al. (2025) further shows that mobile application-based systems can reduce administrative burdens and improve financial transparency, demonstrating the positive relationship between digital application use and improved mosque governance. Nevertheless, digital literacy among congregants remains a major challenge. For example, although QRIS (Quick Response Code Indonesian Standard) technology has great potential to facilitate mosque donations, low digital literacy among young members continues to hinder adoption. This highlights the need for educational interventions to improve understanding and encourage participation in technology use (Arifin et al., 2024).

One effective strategy to improve digital literacy is through community-focused training initiatives. Irbathy et al. (2025) describe a community service project designed to enhance the digital literacy of Muslim community leaders, focusing on effective communication and information dissemination through digital platforms. Training programs tailored to community needs not only improve the technical competence of mosque administrators but also empower them to use these skills in religious outreach and social engagement. These findings align with Channa et al. (2024), who argue that addressing digital literacy challenges can create more inclusive and responsive religious spaces while facilitating meaningful community interaction. In addition to training, the development of digital libraries also serves as an important resource for enhancing digital literacy in mosques. Maslamah (2023) highlights the role of digital libraries in supporting Islamic education by providing essential resources to expand knowledge and prevent radicalization. Such initiatives promote continuous learning and congregant engagement while fostering an informed and digitally competent community. Maslamah and Anawarudin (2023) also emphasize that mosques can become strategic centers for literacy movements, where spiritual growth and education occur in parallel through the use of digital technology.

Despite these advancements, significant challenges remain. Many mosques face resistance to change, both from congregants and administrators, as well as

general distrust of digital technologies. For instance, low understanding of new digital tools, whether for financial transactions or educational resources, can impede technology adoption (Arifin et al., 2024). Lubis et al. (2025) add that users' prior knowledge and perceptions of digital technologies strongly influence acceptance levels, underscoring the importance of fostering supportive educational environments and trust to maximize technological benefits.

In addressing these challenges, strengthening digital literacy not only enhances the technical capabilities of mosque administrators but also encourages congregants' active participation. Training programs designed with participatory approaches enable congregants to understand the benefits of technology in daily life, including digital donations and administrative management, as well as access to Islamic educational materials. Thus, digital literacy becomes not merely a technical skill but a strategy for social transformation that strengthens community cohesion and enhances the effectiveness of mosque functions in society (Irbathy et al., 2025; Channa et al., 2024). Furthermore, integrating technology into mosques can help develop more inclusive educational ecosystems. Digital platforms provide access to online Islamic lectures, interactive modules, and webinars that can be followed without geographic or temporal constraints. This approach expands learning opportunities, allowing both administrators and congregants to tailor their educational experiences to their needs while fostering critical and adaptive digital literacy (Maslamah, 2023; Maslamah & Anawarudin, 2023). Accordingly, the modern mosque becomes not only a place of worship but also a center for learning and digital literacy that empowers its community.

In conclusion, the effectiveness of technology adoption in mosques depends heavily on two main aspects: infrastructure readiness and digital literacy among administrators and congregants. Strengthening technical capabilities, implementing community-based digital literacy training, and developing digital resources such as online libraries are strategic steps that can expand the mosque's social impact. Mosques that integrate technology inclusively and adaptively will transform into community centers oriented toward education, empowerment, and effective social communication. Through strategic interventions, resource provision, and a commitment to inclusivity, mosques can become technology-based community centers that support spiritual, educational, and social growth for all congregants (Hidayat et al., 2024; Murdowo et al., 2025; Lubis et al., 2025).

Negotiating Sacred Meaning: The Interplay of Spirituality, Culture, and Technology

The mosque, as a symbol and center of Islamic religious life, has undergone significant evolution amid digitalization. Traditionally, the mosque is understood as a physical space that functions as a hub of worship, social interaction, and religious learning. However, the development of digital technologies has introduced virtual representations of the mosque through online media such as livestreamed congregational prayers, digital da'wah content, and social media presence. This transformation raises important questions about how the sacredness of the mosque is preserved and even redefined in digital contexts without diminishing its essence as a spiritual and communal center (Ghafournia, 2020; Zohdi et al., 2024).

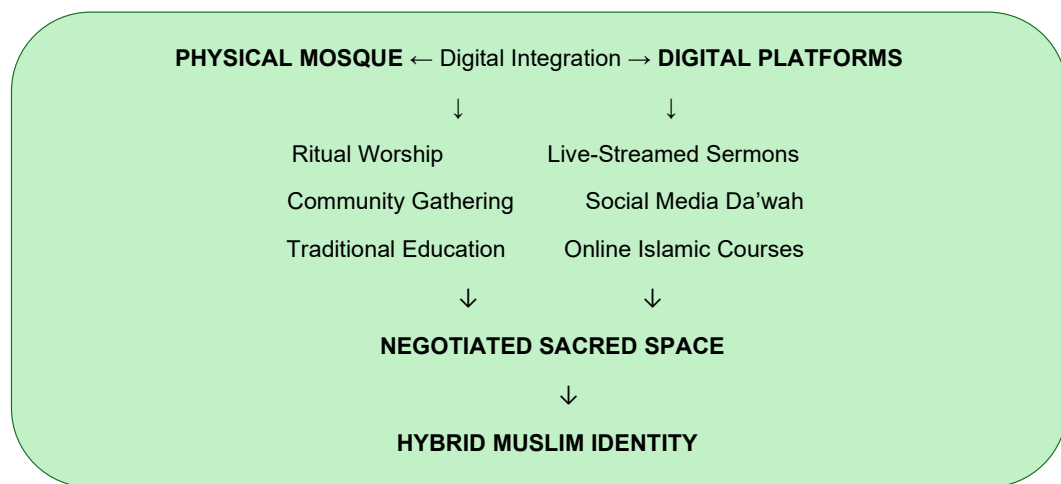
The function of the mosque has now expanded through the use of digital platforms that provide broader access to religious content and community interaction. Ghafournia (2020) emphasizes that the mosque is a complex social construct that is crucial for shaping community identity and religious practice. Through digitalization, more individuals can engage in mosque activities even without being physically present. For example, Qur'anic learning platforms used by major mosques, including the Prophet's Mosque, have enhanced congregants' educational experiences. This digitalization not only broadens access but also creates an inclusive learning environment that integrates traditional religious education with modern technology, thereby increasing community participation (Kirom et al., 2024; Zohdi et al., 2024).

Additionally, livestreams of prayers and sermons have become an important strategy for maintaining communal cohesion, especially during periods of physical restrictions such as the COVID-19 pandemic. Pfeifer (2022) and Rehmani et al. (2023) highlight that such initiatives enable congregants to continue participating in communal worship from home. This demonstrates that despite changing media, the mosque's core function as a center of community and spiritual connection remains intact. Thus, digitalization is not merely a substitute but also strengthens the sacred dimension of the mosque in contemporary contexts. Beyond livestreams, online da'wah content disseminated through social media and video platforms has become a modern approach to religious education and Muslim interaction across the globe. Husni (2024) notes that digital da'wah not only conveys religious teachings but also cultivates a sense of belonging by replicating the communal

aspects of physical mosques. The use of contemporary media enhances the accessibility and relevance of Islamic teachings, facilitating diverse interpretations across various cultural contexts (Zohdi et al., 2024).

The interaction among physical and digital spaces and the actors within them generates a complex process of negotiating sacred meaning. Figure 1 visualizes a conceptual model illustrating how hybrid mosques serve as meeting arenas between tradition and technology, and how Gen Z shapes religious identity within them.

Figure 1: *Conceptual Model of Sacredness Negotiation in Hybrid Mosque Space: Interaction Between Physicality, Digitality, and Generation Z Identity*



Source: author's elaboration (2025)

Figure 1 shows that sacredness in the digital context is not lost but rather transformed through a continuous process of negotiation. This model reinforces the thesis that mosque digitalization is fundamentally a cultural process, not merely a technocratic one, involving the reinterpretation of values, space, and identity.

Interactions with digital religious content also spark discussions about representation and identity, particularly for groups whose voices have been less prominent in physical mosque contexts. For instance, women's experiences of the mosque, reflected through online discussions, reveal the complexities of their participation and their efforts to reclaim space within both physical and digital mosques (Ghafournia, 2020). Thus, digital practices not only maintain the mosque's sacredness but also reformulate it by providing space for voices that may be absent in traditional settings. The digital representation of mosques

also plays an important role in shaping public perceptions of Islam and its sacred spaces. Soliman et al. (2021) and Ibrahim (2020) show that media coverage and representation, particularly after significant events such as the Christchurch mosque attack, profoundly influence public understanding of mosques. These representations can reinforce or diminish perceptions of sacredness, thereby affecting social attitudes toward Muslim communities. The portrayals of mosques, whether as places of refuge or sites of controversy, reveal how public perception can construct narratives of sacredness that differ from traditional meanings.

Digital transformation enables a duality in the representation of mosques: as physical and virtual spaces that both convey sacredness. The presence of mosques in digital spaces provides opportunities for greater inclusivity and representation while maintaining traditional functions as centers of worship and learning. This indicates that digitalization is not a threat to sacredness but rather a new medium that strengthens and expands the mosque's influence within contemporary society (Husni, 2024; Kirom et al., 2024).

The sacredness of the mosque is preserved and redefined through digital practices today. Livestreamed worship and online religious education maintain spiritual and communal connectedness, while the dissemination of digital da'wah expands religious outreach globally. Digital representations of mosques shape new narratives, offering inclusive and adaptive dimensions of sacredness in response to technological developments. In this way, digitalization reinforces the mosque's role as a center of community, education, and worship, while presenting opportunities for broader participation and inclusivity. Both in physical and digital forms, the mosque remains a dynamic, relevant, and adaptive spiritual symbol in a rapidly changing world.

Conclusions

The conclusion of this study affirms that the transformation of mosques in the digital era is fundamentally a complex process of negotiating values, in which sacred space is no longer confined to its physical dimension but has evolved into a hybrid sphere that integrates traditional piety with digital logic. The study's key finding is that the mosque's resilience lies in its ability to serve as a dynamic arena for Generation Z to construct a hybrid Islamic identity without sacrificing its spiritual essence. The significance of this research rests on its

scholarly contribution to enriching discourse in religious studies and digitalization through a sociocultural perspective that has often been overlooked, while also offering a conceptual framework that connects critical pedagogy, sacred space, and hybrid identity. However, as a literature-based study, it is limited by the lack of empirical verification of practitioners' actual experiences. Therefore, further research is needed to explore strategic topics such as mosque governance models that mediate between traditional authority and the digital participation of younger generations, the economic impact of mosque digitalization on social inclusion, and the dynamics of gender representation within digital religious spaces, using more comprehensive mixed-methods approaches.

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