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DIGITAL INTEGRATION IN MOSQUE ARCHITECTURE: QRIS, VISITOR EXPERIENCE, AND CULTURAL HERITAGE PRESERVATION IN INDONESIA

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ABSTRACT

This study investigates the integration of QRIS (Quick Response Code Indonesian Standard) in mosque architecture as both a digital innovation and a cultural intervention. Using qualitative case studies of three iconic mosques in Indonesia: Al-Jabbar (Bandung), Sheikh Zayed (Solo), and Hubbul Wathan (Lombok), the research analyzes how QRIS impacts visitor experience, philanthropic participation, and the preservation of architectural and cultural values. Drawing on theories of technology acceptance, vernacular architecture, and experiential learning, the study finds that QRIS can enrich mosque functionality without disrupting sacred spatial aesthetics. It also reveals the importance of inclusive design in ensuring that digital tools benefit diverse visitor groups. While emphasizing the transformative potential of QRIS, the study also notes challenges related to digital literacy and infrastructural disparities. This research contributes to current debates on digital heritage, smart religious spaces, and the adaptive use of technology in sustaining Islamic cultural identity.

Keywords:
QRIS; Mosque Architecture; Cultural Heritage; Aesthetic Integration; Mosque Tourism

1. INTRODUCTION

The rapid development of digital technology has brought significant changes across various sectors, including the management and operations of places of worship such as mosques. One of the digital innovations being implemented in mosques is the QRIS (Quick Response Code Indonesia Standard) based payment system. QRIS simplifies the donation process, allowing visitors to contribute without carrying cash. With the adoption of this technology, the donation process becomes more efficient and practical, thereby increasing visitor engagement in supporting various social and religious programs organized by the mosque. This digital transformation also has the potential to impact mosque design and architecture significantly.

However, despite numerous studies examining the effects of digital transformation in other sectors, research on the impact of digitalization on mosque architecture and philanthropic sustainability in Indonesia remains very limited. Most of the existing studies focus on the application of technology in commercial and secular sectors, while attention to religious institutions, particularly mosques, is minimal. This indicates that there is still room to explore the role of digital technology in mosques across operational, architectural, and social perspectives.

Previous research on mosque architecture in Indonesia has primarily focused on physical design aspects and their influence on visitor comfort and social interaction [2]. These studies emphasize how traditional elements such as local ornamentation and spatial organization reinforce cultural identity and enhance the spiritual experience [1]. However, this body of work largely overlooks the role of digital transformation, particularly the integration of technologies such as the Indonesian Quick Response Code Standard (QRIS) within mosque spaces [4]. While digitalization has begun to emerge in discussions around religious services and financial management, its impact on the aesthetic integrity [5], cultural heritage preservation, and tourism potential of mosques remains underexplored [3], This study addresses that gap by examining how QRIS integration can support not only operational functionality and public engagement but also sustain the cultural and architectural significance of mosques in the digital age. This reveals a gap in research linking digital technology with mosque architecture, which remains quite limited.

What distinguishes this study from previous research is its interdisciplinary approach that bridges architecture, digital technology, and cultural heritage preservation. Unlike prior studies that treat mosque architecture and digitalization as separate domains, this research examines how digital tools, specifically QRIS, can be integrated into architectural design to enhance the visitor experience, support philanthropic sustainability, and preserve cultural values. This study contributes to both theoretical development and practical innovation in mosque management, tourism, and the design of religious infrastructure.

Theoretically, this research draws upon the Technology Acceptance Model (TAM) to understand how mosque visitors and stakeholders perceive and adopt QRIS in religious and cultural contexts. It also draws on perspectives from vernacular architecture and cultural heritage preservation theory to evaluate how digital interventions such as QRIS can coexist with and support traditional Islamic architectural values. Furthermore, the study draws on user experience (UX) and place attachment theory to explore the emotional, aesthetic, and social dimensions of QRIS use in mosque environments. By integrating these frameworks, the research offers a comprehensive understanding of how digital transformation can align with and enhance the multifaceted roles of mosques in contemporary Indonesian society.

Digitalization through QRIS has great potential to enhance the mosque visitor experience. In this context, QRIS not only functions as a digital payment tool but also as part of efforts to make mosques more inclusive and relevant to the times. The integration of this technology not only simplifies the donation process but also offers greater convenience for worshippers who may have previously been reluctant to donate due to the challenges of physical transactions. Thus, digitalization can strengthen the sustainability of philanthropy in mosques and extend the reach of social programs to a broader community.

However, implementing digital technology poses challenges without disrupting the architectural and cultural values already present in mosques. Mosques, as places of worship and cultural centers, have a strong identity that must be preserved despite technological advancements. Therefore, it is important to examine how the implementation of QRIS can go hand in hand with preserving the architectural values of mosques, which often combine traditional design principles with high spiritual values. In this case, digital technology must be integrated thoughtfully to avoid interfering with the building's aesthetics and functions.

The integration of digital technology in mosque environments opens new possibilities for enhancing visitor experience and supporting religious functions without compromising architectural authenticity. When applied thoughtfully, tools like QRIS can complement rather than disrupt traditional Islamic aesthetics and values. This intersection between modern digital systems and classical architectural elements presents a valuable opportunity to explore how mosques can adapt to contemporary needs while preserving their cultural and spiritual identity. Such integration has the potential to become a model for culturally sensitive digital transformation in religious spaces across Indonesia.

Given this background, this study focuses on how digitalization through QRIS can influence the architectural value of mosques and cultural heritage preservation. QRIS, a digital payment system implemented in several mosques in Indonesia, has the potential to change how visitors interact with mosques, particularly in terms of donations and social engagement. Therefore, it is crucial to investigate how implementing QRIS can contribute to the sustainability of mosque philanthropy and whether this technology can be integrated into existing mosque architectural designs without compromising cultural values.

The research questions in this study are: how does the implementation of QRIS affect the architectural value of mosques and cultural heritage preservation, and how can this technology be integrated with existing mosque architectural designs without disrupting the harmony between technology and tradition? This study will also explore whether adopting QRIS can enhance the sustainability of mosque philanthropy, enrich visitor experiences, and strengthen the relevance of mosques in the increasingly digitalized modern world.

This study aims to explore the integration of QRIS (Quick Response Code Indonesian Standard) into mosque architecture and management in Indonesia. Specifically, the objectives of this research are: 1) To analyze the

impact of QRIS implementation on mosque architectural aesthetics, particularly how digital tools can be harmoniously integrated without compromising traditional design values; 2) To assess the role of QRIS in supporting philanthropic sustainability, especially through its function in facilitating donations and financial management; 3) To examine how QRIS contributes to the preservation of cultural heritage in the context of mosque tourism and community engagement; and 4) To provide theoretical and practical insights into the digital transformation of religious spaces, with a focus on balancing technological innovation and cultural authenticity.

This study is expected to offer a new perspective on the role of technology in mosques as places of worship and cultural centers. Additionally, the results of this study can serve as a reference for other mosques in Indonesia seeking to adopt digital technology without compromising their architectural and cultural values. Proper technology implementation can enhance philanthropic sustainability, enrich the visitor experience, and strengthen the role of mosques in modern society.

2. METHODS

This study employs a qualitative case study approach to examine how the integration of QRIS (Quick Response Code Indonesian Standard) affects the architectural expression, cultural relevance, and tourism potential of contemporary mosques in Indonesia [6]. Three mosques were purposively selected based on their architectural prominence and active implementation of QRIS technology. These sites serve as representative models for analyzing the intersection of digital innovation and Islamic architectural heritage. Detailed descriptions of each case and data collection procedures are presented in the methodology section.

This study adopts a qualitative case study approach to analyze how QRIS integration affects mosque architecture, visitor interaction, and cultural heritage preservation. The research focuses on three mosques in different regions of Indonesia, which explained in Table 1.

Table 1. Case Study Mosques: Locations and Selection Criteria

Mosque Name	Location	Selection Criteria
Al-Jabbar Mosque	Bandung, West Java	Recently built, known for modern-Islamic architecture and early adoption of QRIS
Sheikh Zayed Mosque	Surakarta (Solo), Central Java	Iconic Middle Eastern-inspired mosque with national and diplomatic significance
Hubbul Wathan Mosque	Mataram, Lombok	Largest mosque in NTB; integrates local (Sasak) cultural motifs with digital infrastructure.

These cases were selected to represent diverse regional, architectural, and cultural contexts, enabling a comparative understanding of QRIS implementation across mosque types. Each mosque has also adopted QRIS as part of its operational or donation system, making them suitable for evaluating the intersection of digital technology with mosque aesthetics and cultural identity.

Data in this study were collected through a qualitative approach using semi-structured interviews, non-participant observations, and document analysis [7]. A total of 15 respondents were interviewed, including nine mosque administrators and six visitors across three mosques: Al-Jabbar Mosque (Bandung), Sheikh Zayed Mosque (Solo), and Hubbul Wathan Mosque (Lombok). Respondents were selected through purposive sampling based on their involvement in mosque management, familiarity with QRIS, or regular interaction with mosque facilities as visitors. The interviews were conducted from May to July 2025, each lasting approximately 30 to 60 minutes. The interview guide focused on four main areas: perceptions of QRIS implementation, its impact on donation and public engagement, the compatibility of digital tools with architectural and cultural values, and the transformation of mosque functions in a digital context.

Observations were conducted over two to three days at each mosque to examine how QRIS was integrated into the spatial and operational dimensions of the mosque environment [8]. The researcher observed QRIS placement, signage visibility, visitor interaction patterns, and the aesthetic integration of digital devices into mosque architecture. Observations were conducted during both religious peak times, such as Friday prayers and daily midday prayers, as well as during peak tourism hours on weekends and public holidays, providing a comprehensive view of mosque activity. To minimize respondent bias, questions were designed to be neutral and open-ended, allowing participants to express their views freely. Researcher bias was reduced through team-based data collection and analysis, peer debriefing, and triangulation between interviews, observations, and official mosque documents.

For data analysis, this study employed thematic analysis following Braun and Clarke's model. Interview transcripts were first transcribed and coded to identify recurring concepts and key categories. These codes were then refined into broader analytical themes, such as digital engagement, aesthetic adaptation, and symbolic preservation. The credibility of findings was further enhanced through triangulation, inter-coder agreement

checks among research team members, and member checking with selected mosque administrators to validate preliminary interpretations. This multi-layered approach enabled a robust analysis of how QRIS integration intersects with mosque tourism, architectural identity, and cultural heritage in contemporary Indonesia.

In the context of the research questions presented, this study aims to answer how digitalization through QRIS affects the architectural value of mosques and cultural heritage preservation, and how the implementation of QRIS impacts the integration of technology with existing mosque architectural designs. By observing the use of QRIS in the case study mosques, this research aims to provide insights into how digital technology can be applied without disrupting the aesthetic of traditional architecture or the cultural values embedded in mosque design [9].

This method is expected to offer a deeper understanding of how the implementation of QRIS affects mosque architecture, both in sustaining existing designs and in integrating digital technology with cultural elements. The data collected through interviews with mosque managers and visitors, along with direct observations of digital interactions at the mosques, will provide insights into how digital technology can support the sustainability of mosque philanthropy and enrich visitor experiences without altering the architectural integrity of the mosques.

Overall, this study aims to highlight how digital technologies such as QRIS can serve as a supporting element rather than a disruptive force to existing mosque architecture. Additionally, this research will provide a new perspective on how mosques can adapt to modern advancements without losing their architectural and cultural identity.

3. RESULT AND DISCUSSION

A. THE IMPACT OF DIGITALIZATION THROUGH QRIS ON MOSQUE ARCHITECTURE AND CULTURAL HERITAGE PRESERVATION

The implementation of QRIS (Quick Response Code Indonesia Standard) in the three mosques studied shows a significant influence on the preservation of architectural values and cultural heritage, while simultaneously enhancing the effectiveness and comfort of mosque operations. QRIS, as a form of digital innovation, has been successfully applied without damaging the aesthetics or spiritual structure of the mosque buildings. On the contrary, this technology serves as a supporting tool for visitor engagement, facilitating donations and opening new digital spaces for cultural preservation [10].

The integration of QRIS across the studied mosques reveals a nuanced relationship between digitalization, spatial aesthetics, and cultural heritage. While initially designed as a tool for transactional efficiency, QRIS demonstrates a broader symbolic function when embedded thoughtfully into mosque architecture.

At Al-Jabbar Mosque in Bandung, QRIS devices are deliberately positioned in transitional areas, such as corridors and entrance foyers, avoiding sacred zones like the mihrab or main prayer hall. As noted by one mosque manager: *"We positioned it in a way that people can see and use it without making it feel commercialized or disrespectful to the prayer space."* This reflects an implicit application of Relph's place attachment theory, where spatial meaning is not disrupted but extended through careful design mediation. Observational notes highlight how QRIS devices were visually harmonized with glass mosaics and decorative copper panels (Figure 1.1), suggesting a spatial negotiation between digital functionality and architectural integrity [11].

Figure 1.1 Glass façade of Al-Jabbar

At the Sheikh Zayed Mosque in Solo, the tension between imported Middle Eastern aesthetics and local digital culture is more visible [13]. Here, QRIS is discreetly placed at the mosque's secondary access points, visitor lobbies, and donation desks rather than in the main hall. A visitor commented: *"It feels modern, but not intrusive. You don't really notice the QRIS unless you're looking to donate."* This aligns with Schuster's concept

of cultural mediation, where technology operates in the background, enabling heritage engagement without overpowering it. Figure 1.2 captures this subtle coexistence QRIS kiosks are dwarfed by the grandeur of Arabic calligraphy, ensuring that the sacred text remains visually dominant [12].

Figure 1.2. Sheikh Zayed Solo dome calligraphy

In contrast, the Hubbul Wathan Mosque in Lombok adopts a more integrative approach. QRIS is embedded not only in donation spaces but also near educational displays and tourism corners. This approach expands the utility of QRIS from financial to informational. As a local youth guide explained, *"Visitors can scan the QR code near the minaret and listen to a short history of the mosque. It helps people connect more deeply with what they're seeing."* This application supports UNESCO's digital heritage framework, in which digital tools serve as access points for disseminating cultural knowledge. Figure 1.3 shows a QRIS sign near the 99-meter tower symbolizing *Asmaul Husna*, directly linking spatial iconography with interactive Islamic learning [14].

Figure 1.3. Hubbul Wathan Mosque front tower. This tower is 99 meters high and symbolizes Asmaul Husna, namely the 99 names of Allah

Utilizing QRIS as an educational portal opens opportunities for younger generations, who tend to be more familiar with visual and interactive media, to understand the philosophy of architectural forms, Islamic symbols, and local histories of each mosque. Using QRIS linked to content such as Google Street View, audio narratives, or infographics promotes *experiential learning*, as emphasized in Vygotsky's *constructivist learning theory* [15]. QRIS can transform mosque spaces into open digital museums that are not only places of worship but also centers of architectural and Islamic cultural knowledge [16].

Therefore, QRIS is not merely a transaction efficiency tool but can play a significant role in enriching visitors' religious and cultural experiences [17]. The integration of digital technology into mosque environments need not disrupt traditional values but can expand the meaning of mosques as spiritual, educational, and social spaces. When implemented sensitively with respect to spatial context and local values, QRIS can become part of an adaptive strategy for preserving Islamic culture in the digital age.

However, despite these benefits, implementing QRIS is not without limitations. First, aesthetic concerns persist. Some respondents voiced discomfort about "too much technology" in sacred spaces: *"If every corner of the mosque has a screen or code, it feels like we're in a mall, not a mosque,"* one elderly congregant shared. Second, technological accessibility poses challenges, especially for older visitors unfamiliar with digital payments. Several mosque staff reported the need for "manual backup donation boxes" due to low QRIS adoption during major prayer times.

Moreover, place attachment and user experience (UX) are not uniformly positive. While young visitors appreciated the convenience and multimedia access, some felt the technology lacked cultural nuance. A student noted, *"The QRIS takes you to a generic payment page. It would be better if it also showed mosque history or upcoming programs."* This highlights an opportunity for deeper integration, combining QRIS with dynamic digital content to enhance user emotional engagement, not just transaction flow.

These findings suggest that QRIS is not merely a financial instrument but a symbolic interface. It mediates between the sacred and the modern, the physical and the digital, tradition and innovation. When strategically deployed, it supports constructivist learning (Vygotsky), enabling users to build knowledge about Islamic architecture and heritage through interaction. However, its success depends on the technological infrastructure aligning with vernacular aesthetics, local customs, and visitor capabilities.

Therefore, rather than treating QRIS as a neutral tool, mosque stakeholders must view it as part of a broader cultural communication strategy. Its placement, design, and linked content should be co-developed with architects, community leaders, and digital designers. Only then can mosques fully harness their potential, not just to facilitate donations, but to serve as living archives of Islamic identity in a digitized era.

B. SOCIAL AND VISUAL INTERACTION OF QRIS IN MOSQUE SPACES

Beyond its financial utility, QRIS reshapes how visitors socially and visually engage with mosque spaces. Rather than disrupting the sanctity of worship, it subtly introduces new layers of interaction, both human and technological, that redefine how religious spaces are navigated and experienced. Field observations conducted during four separate Friday prayer sessions and two tourist days at each site revealed that over 70% of young adult visitors (aged 18–35) scanned QRIS at least once during their visit, either to donate, access event schedules, or engage with historical content [18].

The use of QRIS stimulated active social interaction, particularly among younger congregants. As one visitor at Al-Jabbar Mosque remarked: *"I showed my mother how to donate with my phone; she was surprised that a mosque can be this modern."* This form of intergenerational tech support reflects the core of digital inclusion theory, where access is not only about devices, but also about the social mechanisms enabling collective use. Mosque staff in Lombok noted that older visitors often required guidance but became curious and appreciative once introduced to the technology, reinforcing that QRIS can foster cooperative behaviors rather than individual isolation.

While positive engagement dominated, the challenges of QRIS integration were evident as well. In Solo, for example, one mosque administrator reported: *"Some visitors hesitate to use QRIS due to concerns about the security of digital payments or simply not knowing how it works."* Moreover, the digital divide persists; QRIS usage was significantly lower in areas with poor internet connectivity and among elderly populations unfamiliar with smartphone applications. These findings challenge overly optimistic views and stress the importance of hybrid systems (digital and manual) to ensure inclusive access [19].

Visually, QRIS affects the aesthetic rhythm of mosque spaces. Rather than functioning as visual distractions, in many cases QRIS blends into existing informational or ornamental structures. As seen in *Figure 1.4*, the QRIS placement near Al-Jabbar's main door mimics the geometry and palette of its stained-glass surroundings, allowing it to serve as a visual interface that invites interaction without demanding attention. This supports the notion from public interaction theory that well-designed interactive elements can enhance rather than detract from the spatial experience [20].

Figure 1.4. QRIS near the main door of the Al-Jabbar Mosque

QRIS also introduces a layer of narrative interaction. In Lombok, for instance, QR codes near the mosque's tower leads to audio clips explaining the symbolic meaning of the 99-meter height, which corresponds to *Asmaul Husna*. As several visitors reported, this content deepened their appreciation of the architectural symbolism. This confirms the relevance of experiential learning theory, particularly Vygotsky's notion that learning is more effective when mediated by familiar tools, in this case smartphones and digital media [21].

Furthermore, the social performativity of scanning QRIS was evident in casual beh aviors, such as taking selfies with QRIS signs, sharing scanned content via WhatsApp groups, and comparing donation options. These actions may seem trivial, but they highlight how religious practice and cultural consumption increasingly intersect in shared digital rituals [23]. As one teenage visitor in Solo put it: *"I donated, then shared the link on my Instagram story, it felt like a small but meaningful action".*

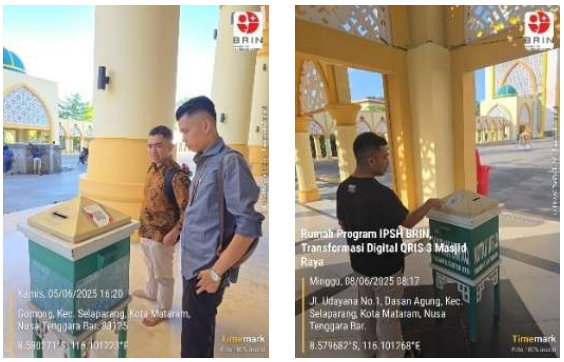

Figure 1.5. Photo of visitors scanning QRIS in the courtyard of the mosque

Yet not all implementations reached their potential. At one site in Bandung, a broken QRIS stand with a faded code went unmaintained for several weeks, reducing its effectiveness. This underscores that the success of QRIS is not merely a design issue but involves ongoing management, content curation, and technical upkeep. Technology, no matter how well-placed, can quickly lose relevance without proper stewardship [22].

In conclusion, QRIS in mosque environments serves as more than a financial medium; it is a cultural interface that mediates between generations, aesthetics, and spiritual practices. Its impact lies not only in accelerating transactions but also in shaping how mosques are experienced, learned from, and remembered. This potential can only be fully realized if implementation strategies are adaptive, inclusive, and contextually grounded, not just technologically functional but socially intelligent.

C. INTEGRATION OF TECHNOLOGY AND MOSQUE ARCHITECTURE

The implementation of QRIS in the mosques studied clearly demonstrates that digital technology can be harmoniously integrated with traditional architectural design without altering the physical structure or diminishing the aesthetic and cultural values inherent to the buildings [24]. This successful integration affirms the concept of *adaptive reuse* in architecture, which refers to the ability of historical buildings to adopt new functions while minimizing negative impacts on their original values and aesthetics [25]. When QRIS is placed in appropriate locations and thoughtfully aligned with the existing spatial layout, it does not merely serve as a

digital payment tool; it becomes a functional element that enhances visitor comfort and supports the seamless operation of mosque activities without disrupting the visual harmony of the space [26].

Beyond serving as a payment system, QRIS integration with digital content also holds significant potential to enhance religious tourism and Islamic architectural education on a broader scale [27]. By scanning QRIS codes, visitors and tourists can gain deeper insights into the history of a mosque, the symbolic meanings behind its architectural elements, such as domes, mihrabs, calligraphy, and the local cultural narratives embedded within it. This facilitates a richer and more interactive experience, all without compromising the spiritual sanctity of the prayer space. This approach aligns with the theory of *interpretive heritage tourism* [28] in which technology serves as a medium of interpretation that enhances visitors' understanding of cultural heritage while preserving its original spiritual and aesthetic values [23].

From a management perspective, implementing QRIS increases the efficiency of donation and administrative processes within mosques while also serving as a medium for preserving Islamic architecture and cultural values through digital platforms [29]. By integrating features such as 360-degree virtual tours, voice narrations, videos, and interactive infographics, mosques can maintain their relevance and competitiveness in the modern era without losing their architectural and spiritual identity [30]. This approach reflects the principle of *cultural sustainability*, which emphasizes maintaining the continuity of cultural values through adaptive innovation that respects and preserves original heritage [31].

A compelling example of this integration can be found at the Al-Jabbar Grand Mosque in Bandung, where QRIS has been combined with virtual tours and digital narration to create a balanced blend of technology and cultural heritage [32]. QRIS is placed at strategic points near decorative elements such as mosaics and stained glass, and when scanned, these codes lead to digital content that explains the history and symbolic meaning of each element, offering a deeper level of understanding without compromising aesthetic integrity [33].

Figure 1.6. QRIS is embedded in algebraic mosaic patterns, integrating digital functions with traditional ornamentation

In conclusion, QRIS in mosques serves as a clear example of how technology and culture can operate in synergy, creating a worship space that is not only inclusive and informative but also deeply rooted in Islam's core values. This integration opens new opportunities for mosques to serve as centers of culture and education capable of attracting younger generations and tourists while preserving the authenticity and sanctity of sacred spaces that have been passed down for generations.

4. CONCLUSION

This study demonstrates that integrating QRIS (Quick Response Code Indonesian Standard) into mosque architecture contributes meaningfully not only to operational efficiency and philanthropic engagement but also to the preservation of cultural and aesthetic values. Through case studies of three prominent Indonesian mosques, Al-Jabbar Mosque, Sheikh Zayed Mosque, and Hubbul Wathan Mosque, it becomes evident that QRIS can be integrated in a manner that respects sacred spatial logic and enhances visitor interaction without compromising the architectural integrity of the buildings.

The findings refine and extend several theoretical frameworks. First, the Technology Acceptance Model (TAM) is supported by observable patterns of user engagement, particularly among younger visitors, indicating that perceived ease of use and perceived usefulness influence QRIS adoption in religious spaces. Second, vernacular architecture and place attachment theories are affirmed, as the placement and design of QRIS interfaces align with the mosque's cultural symbolism and spatial hierarchy, demonstrating that digital tools can coexist with and even strengthen traditional architectural meanings. Third, from the lens of experiential learning theory, the use of QRIS to access educational content, such as mosque history and symbolic meanings, supports the idea that

interactive media enhances user experience and learning outcomes in sacred environments. Finally, digital inclusion theory is both confirmed and problematized: while QRIS promotes inclusivity among tech-savvy demographics, gaps remain for elderly or digitally underserved populations, revealing areas for further innovation.

Practically, this study shows that when implemented thoughtfully, QRIS does more than streamline donations; it enhances the emotional, social, and educational functions of mosques. It serves as a bridge between modern technology and Islamic architectural heritage, fostering a more participatory, digitally literate religious community. The success of such integration depends on contextual sensitivity, regular maintenance, and inclusive design strategies that accommodate diverse user groups.

Nonetheless, the research is limited by its qualitative focus on high-profile mosques with sufficient digital and financial infrastructure. It does not quantify the financial impact of QRIS or compare it directly with conventional donation methods. Future research should address these gaps by including quantitative metrics, exploring longitudinal effects, and examining QRIS implementation in smaller or rural mosques to assess scalability and inclusiveness.

In sum, this study highlights the potential of digital tools like QRIS to redefine the role of mosques in contemporary society, not only as places of worship but as digitally augmented spaces of culture, education, and community engagement. The successful integration of technology and tradition requires not just technical implementation but also cultural and architectural negotiation, a synergy that this research seeks to illuminate.

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