

Digital Islamic Management in Creating a Smart KUA: A Study at the Setiabudi KUA, South Jakarta

Digital Islamic Management dalam Mewujudkan Smart KUA : Studi di KUA Setiabudi Jakarta Selatan

Nia Darmawati¹

Penyuluh Kantor Urusan Agama Setiabudi Jakarta
Selatan, Indonesia

Abdul Hamid Filjannah²

Penghulu Kantor Urusan Agama Setiabudi Jakarta
Selatan, Indonesia

Corresponding author:

Nia Darmawati
niadarmawati12@gmail.com



Received: 20-03-2026

Revised: 12-04-2026

Accepted: 26-06-2026

How to cite:

Darmawati, N., & Filjannah, A. H. (2026). Digital Islamic Management in creating a Smart KUA: A study at the Setiabudi KUA, South Jakarta. *Indonesian Journal of Islamic Management, Accounting and Economics*, 1(2), 59-78.



e-journal



Copyright © 2026, Nia Darmawati,
Abdul Hamid Filjannah.

Publisher Indonesian Knowledge Publisher

ABSTRAK

Tujuan: Penelitian ini bertujuan menganalisis implementasi Digital Islamic Management di Kantor Urusan Agama (KUA) Setiabudi, Jakarta Selatan, yang meliputi optimalisasi sistem informasi digital dalam pelayanan administrasi, digitalisasi informasi dan dakwah, faktor pendukung dan penghambat implementasi, serta kontribusinya terhadap perwujudan Smart KUA. **Metode:** Penelitian ini menggunakan pendekatan kualitatif dengan metode deskriptif. Data dikumpulkan melalui observasi, dokumentasi, dan wawancara semi-terstruktur dengan Kepala KUA Setiabudi serta pegawai pelayanan. Analisis data dilakukan melalui reduksi data, penyajian data, dan penarikan kesimpulan yang diperkuat dengan triangulasi sumber. **Temuan:** Hasil penelitian menunjukkan bahwa KUA Setiabudi berhasil mengintegrasikan tujuh platform digital dengan media sosial, situs web resmi, dan Media Center sehingga membentuk ekosistem layanan keagamaan yang terintegrasi. Implementasi tersebut meningkatkan efisiensi pelayanan, transparansi, akuntabilitas, akses informasi keagamaan, dan fungsi dakwah, meskipun masih menghadapi kendala koordinasi antarlembaga, kualitas data, literasi digital, dan keterbatasan infrastruktur. **Implikasi:** Temuan penelitian menjadi masukan bagi penguatan transformasi digital KUA melalui peningkatan koordinasi, kapasitas sumber daya manusia, infrastruktur digital, dan tata kelola data yang berkelanjutan guna mendukung terwujudnya Smart KUA. **Orisinalitas:** Penelitian ini menawarkan konsep Digital Islamic Management sebagai kerangka tata kelola lembaga keagamaan yang mengintegrasikan inovasi digital dengan nilai-nilai etika Islam

Kata Kunci: Digital Islamic Management; Smart KUA; smart governance; e-government; transformasi digital.

ABSTRACT

Purpose: This study examines the implementation of Digital Islamic Management at the Office of Religious Affairs (Kantor Urusan Agama) of Setiabudi, South Jakarta, focusing on digital administrative services, information and da'wah digitalization, implementation factors, and its contribution to the realization of a Smart KUA. **Method:** A qualitative descriptive approach was employed. Data were collected through observation, documentation, and semi-structured interviews with the Head of KUA Setiabudi and service officers. Data were analyzed through data reduction, data display, and conclusion drawing, supported by source triangulation. **Findings:** The findings show that KUA Setiabudi has integrated seven digital platforms with social media, an official website, and a Media Center to establish an interconnected religious service ecosystem. This integration improves service efficiency, transparency, accountability, public access to religious information, and institutional da'wah. However, implementation remains constrained by interinstitutional coordination, data quality, digital literacy, and infrastructure limitations. **Implications:** The findings provide recommendations for strengthening digital transformation through improved coordination, capacity building, infrastructure, and sustainable data governance to support the development of Smart KUA. **Originality:** This study proposes Digital Islamic Management as a governance framework integrating digital innovation with Islamic ethical values within religious public institutions.

Keywords: Digital Islamic Management; Smart KUA; smart governance; e-government; KUA; digital transformation.

A. Introduction

Digital transformation in the public service sector is no longer merely a policy discourse; rather, it has become a central pillar of bureaucratic reform across nearly all government institutions, including religious institutions. The international public administration literature emphasizes that the success of public service digitalization depends on the integration of three interrelated dimensions technology, organization, and human resources indicating that the mere introduction of digital applications is insufficient without institutional readiness and adequate human resource capacity (Luna-Reyes, 2021). This perspective is increasingly relevant when viewed through the lens of *smart governance*, which positions technology not as an end in itself but as an instrument for simultaneously enhancing transparency, accountability, participation, and service responsiveness (Meijer, 2020). This conceptual framework serves as the foundation for understanding the ongoing digital transformation within Indonesia's Offices of Religious Affairs (Kantor Urusan Agama)

In recent years, the policy direction of the Ministry of Religious Affairs of the Republic of Indonesia has explicitly positioned KUA as a strategic node in the digital transformation of religious public services. This strategic role was formally reinforced through the Regulation of the Minister of Religious Affairs No. 24 of 2024, which provides the legal basis for the 2025 KUA Awards (Anugerah KUA 2025) as a national evaluation mechanism emphasizing innovation, technological utilization, and strengthened intergovernmental coordination. This initiative is intended to reinforce the role of KUA as a grassroots public service institution while encouraging greater adaptability to the evolving needs of society, ranging from marriage services to digitally integrated religious data management. Institutional strengthening continued in October 2025, when the Directorate General of Islamic Community Guidance (Direktorat Jenderal Bimbingan Masyarakat Islam) convened a cross-functional KUA service consolidation meeting, reaffirming that KUA services should be delivered proportionally and should not be concentrated solely on marriage registration, given the institution's substantially broader responsibilities. This policy reflects the government's commitment to strengthening results-oriented bureaucratic governance while guiding all KUA units toward a unified vision of modern, efficient, and data-driven public service delivery.

The momentum of this digital transformation became even more evident in November 2025, when the Ministry of Religious Affairs officially launched the *Mora One Stop Service* (MOSS), an integrated application designed to consolidate various services provided through the Ministry's One-Stop Integrated Service (Pelayanan Terpadu Satu Pintu) into a single digital platform. Consequently, citizens no longer need to navigate multiple applications to access services provided by the Ministry, including those administered by KUA. This policy direction was further strengthened through the Regulation of the Minister of Religious Affairs No. 7 of 2026 concerning the Ministry of Religious Affairs' *One Data* (Satu Data Kementerian Agama) initiative, which stipulates

that all data management within the Ministry shall be coordinated by the Center for Data and Information Technology in order to accelerate data integration and service synchronization. At the same time, the regulation opens opportunities for the development of *artificial intelligence*-based public services, encompassing KUA, zakat, waqf, and digital correspondence systems, including plans to provide conversational digital services and virtual avatars for the public. Collectively, these policy initiatives demonstrate that the digitalization of KUA is no longer a fragmented initiative undertaken by individual offices but rather an integral component of the Ministry's broader national digital transformation architecture.

Although the national policy direction has become relatively well established, implementation at the local level reveals uneven levels of digital maturity among KUA offices. On one hand, several district-level KUA offices have only recently initiated their digital transformation efforts, as illustrated by the launch of the official website of KUA South Ende District in early 2026. This initiative marked the beginning of its digital service transformation by providing online marriage registration, mosque information, *waqf* and *zakat* databases, *majelis taklim* information, and other religious services. Similar efforts have been supported through technical training programs aimed at strengthening employees' information technology competencies, such as those implemented at KUA Manrijeron, Yogyakarta, covering digital office applications, data management, *cybersecurity*, and the utilization of information technology in religious service delivery. On the other hand, KUA offices located in densely populated urban areas, such as South Jakarta, have progressed further in developing more sophisticated digital service systems and archival management. This was emphasized by the Head of the Regional Office of the Ministry of Religious Affairs of Jakarta, who highlighted the importance of well-organized administrative and archival systems to ensure that public records remain readily accessible, including during emergencies such as fires or floods that may destroy physical documents. Such disparities in digital maturity are consistent with previous findings indicating that the success of public service digitalization is strongly influenced by infrastructure readiness, human resource capacity, and organizational coordination within each administrative unit (Novita, 2016). Therefore, the achievements of one KUA cannot be generalized to others without considering their respective local contexts.

Within this context of unequal digital maturity, KUA Setiabudi in South Jakarta presents a particularly notable case, having successfully integrated seven digital platforms into a single interconnected religious service ecosystem. These include SIMKAH for marriage services, SIHALAL for halal certification assistance, SIWAK for waqf administration, SIMAS for mosque and *musala* services, SIMPENAIIS for *majelis taklim* administration, a dedicated microsite for marriage counseling registration, and a comprehensive digital archival system supporting all operational processes. This digital transformation has expanded beyond administrative functions to include social media platforms, the official website, and a *Media Center* serving as channels for public religious education and *da'wah* targeting the urban community within Setiabudi's central business

district. The maturity of this integrated digital ecosystem positions KUA Setiabudi as a representative case for examining the extent to which the Ministry of Religious Affairs' broader digital transformation agenda including service consolidation, the *One Data* initiative, and the KUA Awards has been translated into concrete practices at the institutional level.

The existing academic gap further underscores the significance of this study. Most international scholarship on *e-government* and *smart governance* primarily focuses on municipal governments, provincial administrations, or general public service sectors (Meijer, 2020; Zuiderwijk, 2020). In contrast, studies specifically examining the integration of administrative functions with *da'wah* activities within digitally enabled Islamic religious institutions conceptualized in this study as *Digital Islamic Management* remain relatively limited. This is particularly evident regarding how Islamic ethical values should continue to serve as the normative foundation to ensure that technological efficiency does not undermine the substantive religious functions of these institutions (Wardoyo, 2025). This study seeks to address this gap by positioning KUA Setiabudi as a research locus where two interrelated dimensions converge: the optimization of digital information systems for religious administrative services and the digitalization of religious information and *da'wah* as instruments of public education.

Based on this background, this study seeks to address four principal research questions: (1) how digital information systems are optimized in the administrative services of KUA Setiabudi; (2) how the digitalization of information and *da'wah* is developed as a medium for public education; (3) what factors facilitate and constrain the implementation of *Digital Islamic Management* within the institution; and (4) to what extent the overall digital transformation contributes to the realization of KUA Setiabudi as an effective and accountable Smart KUA model. Through these research questions, the study aims not only to provide a comprehensive description of digitalization practices at the institutional level but also to make a conceptual contribution to the growing discourse on *smart governance* within the context of religious institutions in Indonesia, while offering evaluative insights that are aligned with the ongoing national implementation of the Ministry of Religious Affairs' *One Data* initiative and the KUA Awards program.

B. Method

This study employed a qualitative approach using a descriptive research method to provide an in-depth and contextual understanding of the practices of *Digital Islamic Management* at the Office of Religious Affairs (Kantor Urusan Agama) of Setiabudi, South Jakarta. Rather than testing statistical relationships among variables, the study sought to describe the phenomenon as it naturally occurred within its institutional setting. Data were collected through three primary techniques: direct observation of the implementation and use of digital information systems, documentation review of institutional archives and digital publications produced by KUA, and semi-structured interviews as the principal

source of primary data. The interviews involved two categories of informants. The first category consisted of the Head of KUA Setiabudi, who served as the key informant to provide insights into institutional policies, strategic directions, and leadership challenges related to the implementation of digital transformation. The second category comprised frontline service officers who interact directly with the public and served as supporting informants, providing operational perspectives on the day-to-day use of *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, *SIMPENAI*S, the marriage counseling registration microsite, and the digital archival system.

The informants were selected using *purposive sampling*, whereby participants were intentionally chosen according to criteria directly relevant to the research objectives rather than through random population sampling. The selection criteria included direct involvement in either policymaking or the operational implementation of digitalization initiatives, sufficient length of service to ensure substantial experience in operating the digital systems, and willingness to participate openly in the interview process. Based on these criteria, the key informant was Mr. Nahrowi, the Head of KUA Setiabudi, while the supporting informants consisted of several service officers directly responsible for the operation of *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, and *SIMPENAI*S. The research was conducted at the Office of Religious Affairs (KUA) of Setiabudi District, South Jakarta. Data collection continued until *data saturation* was achieved, that is, when additional interviews and observations no longer generated substantial new information. The collected data were subsequently analyzed through the stages of data reduction, data display, and conclusion drawing. To enhance the credibility and trustworthiness of the findings, source triangulation was employed by comparing evidence obtained from interviews, observations, and documentary analysis.

C. Results and Discussion

1. Optimization of Digital Information Systems in Administrative Services at KUA Setiabudi, South Jakarta

Digital transformation in public service delivery has become the dominant paradigm of contemporary bureaucratic reform, including within religious institutions such as the Office of Religious Affairs (antor Urusan Agama). This transformation represents more than a shift from paper-based administration to digital platforms; it constitutes a comprehensive restructuring of organizational processes to enhance efficiency, accuracy, transparency, and accountability. Studies on *electronic government* policies demonstrate that the effective utilization of information and communication technologies consistently contributes to greater transparency and accountability in public services while expanding citizens' access to government services regardless of time and location (Wijaya, 2024). This principle is likewise reflected in the implementation of the Integrated Dynamic Archival Information System, which demonstrates that successful administrative digitalization depends upon the integration of three interrelated dimensions technology, organization, and human resource with the potential to reduce document processing time

by approximately 30-40 percent compared to conventional manual procedures (Asa, 2024). This conceptual framework provides an appropriate lens through which to examine the digital transformation of administrative services at KUA Setiabudi, South Jakarta, which has integrated seven digital platforms *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, *SIMPENAI*S, a marriage counseling registration microsite, and a digital archival system into a unified ecosystem of religious public services.

The first area of optimization is reflected in the implementation of the Marriage Management Information System (*SIMKAH*), which serves as the backbone of marriage administration digitalization at KUA Setiabudi. The system has replaced manual record-keeping practices that were previously vulnerable to data duplication and input errors. This finding is consistent with research conducted at KUA Jatiuwung District, Tangerang City, which identified *SIMKAH* as an implementation of e-government in marriage administration whose success depends on regulatory support, institutional capacity, and the perceived benefits experienced by users (Agustin, 2024). Similar findings were reported in a study conducted at KUA Jatinangor District, Sumedang Regency, which concluded that *SIMKAH* facilitates the management of marriage records on a national scale, although its effectiveness remains contingent upon the competence of personnel responsible for accurate data entry (Juneldi, 2020). The active commitment of KUA personnel in consistently operating the system has likewise been identified as a critical determinant of successful implementation, as demonstrated by research conducted at KUA Bajeng District, Gowa Regency (Jamil, 2024). Furthermore, a study examining the accountability of *SIMKAH* at KUA North Tanjung Palas District found that digitalization not only accelerates administrative processes and improves data accuracy but also strengthens transparency and accountability in marriage registration, provided that continuous staff training is maintained (Tohir, 2025). In the case of KUA Setiabudi, the characteristics of its densely populated urban service area contribute to stable network infrastructure and well-prepared personnel, enabling marriage registration procedures through the issuance of marriage certificates to proceed within a more structured workflow with minimal manual intervention (Agustin, 2024; Tohir, 2025).

The second area of optimization is reflected in the role of KUA Setiabudi as a facilitator of *halal* certification for micro-enterprises through its integration with the *SIHALAL* platform developed by the *Badan Penyelenggara Jaminan Produk Halal* (BPJPH). In this capacity, KUA functions as a facilitator by assisting business owners in creating user accounts, completing production data, and submitting certification applications through the *self-declare* scheme. This facilitative approach is consistent with findings from a **halal** certification assistance program implemented in Lemahabang District, Cirebon, which demonstrated that the success of micro-enterprises in navigating the certification process depends substantially on intensive mentoring throughout each stage, from obtaining a Business Identification Number (Nomor Induk Berusaha) to document verification within the *SIHALAL* system (Qisthi, 2025). The importance of this role is further reinforced by the fact that many micro-enterprise owners still possess limited digital literacy, making

independent operation of the platform challenging. Without institutional assistance, the likelihood of data-entry errors and delays in document verification increases considerably (Qisthi, 2025). Within the context of Setiabudi District as a major urban business center characterized by a high concentration of culinary micro-enterprises, this initiative illustrates the evolving role of KUA from a marriage registration office into a digitally supported institution for community economic empowerment.

The third area of optimization concerns *waqf* administration through the *Waqf* Information System (SIWAK), which facilitates electronic registration, verification, and issuance of the *Akta Ikrar Wakaf* (*Waqf* Pledge Deed). The system directly addresses one of the longstanding challenges of *waqf* administration in Indonesia, namely weak legal documentation and overlapping land records that frequently give rise to ownership disputes. Research conducted in Surabaya found that SIWAK has become an effective instrument for reducing *waqf* land disputes while accelerating land certification, as KUA officers are able to systematically monitor *waqf* properties that have been formally pledged but not yet entered into the database (Santoso, 2020). Nevertheless, the effectiveness of SIWAK is not automatic. A study conducted at KUA Cipatat District revealed that the system's implementation remains constrained by incomplete data entry, resulting in *waqf* information that has yet to be fully integrated into the national online database (Ma'mun, 2021). This finding provides an important perspective for evaluating the achievements of KUA Setiabudi, demonstrating that the availability of digital technology alone cannot guarantee data accuracy without continuous administrative discipline in regularly updating institutional records (Santoso, 2020; Ma'mun, 2021).

The fourth area of optimization is reflected in the digitalization of data concerning places of worship and Islamic religious organizations through the Mosque Information System (SIMAS) and the Information Management System for Islamic Religious Institutions (SIMPENAS). SIMAS is used to update profiles of mosques and *musala*, including information on location, capacity, facilities, and management status, all of which are integrated into the Ministry of Religious Affairs' national database. Meanwhile, SIMPENAS functions to ensure that every *majelis taklim* with at least fifteen members is officially registered. Research on the implementation of SIMAS in Bogor Regency concluded that the system contributes positively to strengthening the principles of good governance in mosque administration, particularly with respect to transparency, accountability, participation, responsiveness, and equity in service delivery. The study further proposed extending conventional policy implementation models by incorporating the additional dimensions of sustainability as well as monitoring and evaluation (Herliansyah, 2025). These findings are directly relevant to KUA Setiabudi, where both systems function as authoritative databases supporting not only internal administrative processes but also strategic planning for religious guidance programs, the allocation of institutional assistance, and the mapping of *da'wah* potential at the district level. Consequently, accurate and up-to-date data become an essential prerequisite for ensuring that religious

development programs targeting places of worship and Islamic study groups are implemented effectively and appropriately ([Herliansyah, 2025](#)).

The fifth and final component of KUA Setiabudi digital ecosystem is represented by the marriage counseling registration microsite and the digital archival system that supports all preceding digital platforms. The introduction of the microsite reflects a shift in institutional orientation from a passive service provider toward an organization offering *self-service* digital access that enables prospective brides and grooms to register for marriage counseling at any time. This development aligns with the principles of *electronic government*, which emphasize that information technology expands public access to government services beyond geographical and temporal limitations while simultaneously reducing physical queues and minimizing communication errors ([Wijaya, 2024](#)). At the same time, the digital archival system functions as the backbone of the entire digital ecosystem by integrating documents generated through *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, and *SIMPENAI*S. Studies on electronic archival systems within public institutions indicate that the transition from manual to digital archives significantly improves administrative efficiency, as reflected in shorter document processing times and enhanced transparency through *real-time* document tracking features ([Asa, 2024](#)). Overall, these five dimensions of optimization demonstrate that the success of administrative digitalization at KUA Setiabudi depends not merely on the availability of digital applications but on the effective integration of technology, organizational capacity, and human resources within a comprehensive and interconnected ecosystem of religious information management.

2. Digitalization of Information and *Da'wah* as a Medium for Public Education

Beyond transforming administrative services, digitalization at the Office of Religious Affairs (*Kantor Urusan Agama*) of Setiabudi, South Jakarta, has also reshaped its functions in information dissemination and *da'wah*. Whereas religious information was previously conveyed primarily through face-to-face gatherings in *majelis taklim* or physical announcements displayed on office notice boards, KUA Setiabudi now utilizes social media, its official website, and a dedicated *Media Center* as educational channels capable of reaching a substantially broader audience. Studies on the use of social media for *da'wah* indicate that digital media have fundamentally transformed the relationship between the *da'i* and the *mad'u*, shifting communication from a one-way interaction constrained by time and place to an interactive form of engagement that is accessible at any time while extending the reach of religious messages across generations ([Khoirunnisa, 2024](#)). This transformation is consistent with findings demonstrating that digital *da'wah* contributes to improving religious literacy among Indonesian Muslims by enabling religious information that was once transmitted exclusively through oral communication to be digitally documented and repeatedly accessed ([Mahfud, 2023](#)). Within this context, the digitalization of information and *da'wah* at KUA Setiabudi should be understood as an expansion of the institution's mandate from an administrative service provider to a technology-enabled center for religious education.

The utilization of social media by KUA Setiabudi through its Instagram account, Facebook page, and other digital communication platforms serves to disseminate information regarding marriage counseling programs, religious guidance activities, *halal* certification campaigns, and *waqf* initiatives on a regular basis. This practice is consistent with research indicating that social media can function effectively as a medium for digital education when content is produced consistently and tailored to the characteristics of the intended audience (Fitriani, 2021). Nevertheless, the effectiveness of digital *da'wah* is accompanied by important socio-cultural challenges. Studies on the use of social media for religious outreach suggest that digitally delivered religious messages are susceptible to oversimplification and the loss of contextual depth when presented solely in brief formats without adequate explanatory support (Rodriguez, 2025). Consequently, KUA Setiabudi does not rely exclusively on social media as an instrument of instant *da'wah*. Rather, these platforms function as introductory channels that provide preliminary information, which is subsequently complemented through face-to-face services, including premarital consultation sessions and direct religious counseling for individuals requiring more comprehensive explanations (Khoirunnisa, 2024; Rodriguez, 2025).

In addition to social media, the official website of KUA Setiabudi serves as a comprehensive information portal that systematically provides administrative procedures, schedules for marriage counseling, and information on other religious programs. This function reflects the principle of public information transparency mandated for all public institutions in Indonesia. A study examining the implementation of *e-government* through the official website of the Manado City Government concluded that the availability of an official website significantly enhances transparency and public access to information by enabling citizens to obtain accurate service information without having to visit government offices in person (Rumimpunu, 2021). Similar conclusions have been reached in studies on *electronic government*, which emphasize that the effective use of information technology not only expands public access to government services but also strengthens institutional accountability (Wijaya, 2024). For KUA Setiabudi, which serves a highly mobile urban population, the official website functions as an essential bridge between information accessibility and service efficiency, particularly for prospective brides and grooms as well as business owners seeking to verify service requirements before visiting the office.

The third instrument strengthening the institution's information and *da'wah* functions is the *Media Center* of KUA Setiabudi, which was established as a centralized platform for the production and dissemination of religious educational content in a more systematic and organized manner than conventional social media postings. Based on the interview with the Head of KUA Setiabudi, Mr. Nahrowi, it can be concluded that the establishment of the *Media Center* was primarily motivated by the need to position KUA as a credible source of religious information amid the rapid circulation of digital content whose accuracy and authenticity cannot always be verified. He emphasized that the digitalization of information is not intended to replace face-to-face religious guidance but rather to

broaden its reach while accelerating the dissemination of official information to the public. This includes information related to marriage counseling schedules, *halal* certification procedures, and *waqf* administration, thereby reducing public reliance on informal word-of-mouth communication that may result in misinformation. Mr. Nahrowi's perspective further highlights that the success of information digitalization at KUA Setiabudi depends not merely on the availability of digital platforms but also on leadership commitment to ensuring that all published content remains grounded in authentic religious authority. This observation is consistent with previous studies demonstrating that the effectiveness of digital *da'wah* is largely determined by the credibility of information sources and the consistency of content management (Mahfud, 2023; Rodriguez, 2025).

The impact of these three digital instruments social media, the official website, and the *Media Center* is reflected in the increased accessibility of KUA Setiabudi's religious programs to segments of society that were previously difficult to reach through conventional approaches, particularly younger urban populations who are more accustomed to obtaining information through digital devices than by visiting government offices directly. Regular dissemination of information concerning marriage counseling, religious guidance, *halal* certification, and *waqf* programs functions not only as an administrative communication strategy but also as a form of continuous religious education that enhances public literacy regarding the broader roles and responsibilities of KUA. This finding is consistent with the principle that public information transparency contributes to strengthening public trust in government institutions by enabling citizens to monitor and better understand service processes in a transparent manner (Rumimpunu, 2021; Wijaya, 2024). Accordingly, the digitalization of information at KUA Setiabudi extends beyond improving service accessibility to reinforcing public confidence in religious institutions at the district level.

Overall, the digitalization of information and *da'wah* at KUA Setiabudi demonstrates that the role of religious institutions in the digital era is no longer confined to administrative service delivery. Instead, these institutions have evolved into centers of public education that connect formal religious authority with the dynamic information needs of contemporary urban communities. As emphasized by Mr. Nahrowi during the interview, the principal challenge for the future no longer lies in the availability of technology itself but in ensuring that digital content remains authentic, educational, and resistant to the pursuit of mere online popularity. This challenge is consistent with the broader literature, which cautions that digital *da'wah* is increasingly vulnerable to the dominance of entertainment-oriented content capable of diminishing the depth of spiritual values when not managed with appropriate discipline (Rodriguez, 2025). The findings presented in this section provide the foundation for the subsequent discussion concerning the enabling and constraining factors influencing the implementation of *Digital Islamic Management* at KUA Setiabudi.

3. Analysis of Supporting and Inhibiting Factors in the Implementation of Digital Islamic Management at KUA Setiabudi

The success of public service digitalization cannot be attributed solely to the availability of technology; rather, it is the outcome of the interaction between various enabling and constraining factors. Research on the barriers to e-government implementation at the municipal level identifies human resource limitations, inadequate infrastructure, and organizational constraints as the three variables most consistently associated with implementation failure (Novita, 2016). A similar pattern has also been observed at the village government level, where supportive public policies and adequate infrastructure function as key enabling factors, while limited digital literacy among citizens remains the principal obstacle to successful implementation (Adnan, 2022). This analytical framework is particularly relevant for examining KUA Setiabudi, which simultaneously operates seven digital platforms *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, *SIMPENAI*S, the marriage counseling registration microsite, and the digital archival system. Consequently, the enabling and constraining factors vary according to the distinctive characteristics of each platform.

From the perspective of enabling factors, leadership commitment serves as the primary driving force that allows these seven digital instruments to operate simultaneously, rather than limiting digitalization solely to *SIMKAH* as a mandatory administrative system. The literature suggests that the effective utilization of information technology contributes to fostering a culture of transparency only when organizational leaders actively institutionalize digital technology as a standard operational practice rather than treating it as a supplementary tool (Bertot, 2010). This commitment is reflected in KUA Setiabudi's initiative to independently develop a marriage counseling registration microsite, despite the absence of a centralized regulatory requirement mandating such innovation. The initiative represents a concrete manifestation of public information transparency driven by local leadership, consistent with findings indicating that digital transparency largely depends on leaders' willingness to proactively expand public access to government services (Meijer, 2022).

The second enabling factor is the capacity of human resources, whose competencies vary according to the operational requirements of each digital system. *SIMKAH* demands meticulous accuracy in entering marriage registration data; *SIHALAL* requires personnel capable of providing technical assistance to micro-enterprise owners with limited digital literacy; and the digital archival system depends upon sustained discipline in document management and record preservation. Studies on digital transformation in the public sector emphasize that the success of administrative innovation depends on an organization's ability to adapt its internal work processes to the diverse technological demands imposed by different digital systems (Luna-Reyes, 2021). Likewise, research on Islamic religious institutions has shown that the integration of digital technologies is frequently constrained by disparities in digital literacy among personnel across different

service functions (Wardoyo, 2025). The ability of KUA Setiabudi to operate five administrative systems alongside two digital information channels demonstrates a relatively strong level of organizational capacity and human resource readiness, although the need for continuous professional training remains indispensable.

Conversely, the most significant inhibiting factor arises from the complexity of coordination across multiple institutional authorities, given that the seven digital systems are administered by different governing bodies rather than a single centralized authority. *SIMKAH* and the digital archival system operate under the Ministry of Religious Affairs, *SIHALAL* is integrated with the external authority of the *Badan Penyelenggara Jaminan Produk Halal (BPJPH)*, *SIWAK* involves coordination with the *Badan Wakaf Indonesia*, while *SIMAS* and *SIMPENAI*S are linked to national databases maintained separately by the Ministry of Religious Affairs. Studies examining barriers to e-government implementation consistently identify weak institutional arrangements and insufficient interagency coordination as significant obstacles to the successful implementation of digital systems spanning multiple authorities (Novita, 2016). Structurally, similar challenges may also affect KUA Setiabudi, as interoperability among information systems managed by different institutions cannot be fully achieved without harmonized technical regulations and effective interorganizational coordination.

A second inhibiting factor concerns disparities in data quality across the different digital platforms. Systems such as *SIWAK* and *SIMAS* depend heavily on the consistency and discipline of field officers in regularly updating data, whereas the microsite and *Media Center* rely on the digital literacy of service users, particularly prospective brides and grooms as well as administrators of *majelis taklim*, who may not yet be accustomed to accessing government services through independent online platforms. Research on open government data emphasizes that the efficiency gains promised by digital systems can only be fully realized when the quality and completeness of input data are consistently maintained, as incomplete or inaccurate information ultimately undermines public confidence in government services (Zuiderwijk, 2020). Similarly, studies on algorithmic accountability argue that transparency alone is insufficient without robust mechanisms for data verification and auditing, as inadequate data governance may conceal accountability gaps at the operational level (Williamson, 2022). Such challenges are particularly relevant for *SIWAK* and *SIMAS*, whose effectiveness depends upon continuous field verification, unlike *SIMKAH*, whose data management is comparatively more standardized because it constitutes a mandatory requirement for the issuance of official marriage certificates.

The third inhibiting factor stems from limitations in supporting infrastructure identified through field observations and interviews. First, the number of computers available at KUA Setiabudi remains insufficient, requiring several employees to rely on their personal laptops or desktop computers to perform daily administrative tasks. Second, the digitalization of institutional archives is constrained by the limited availability of digitization equipment, as the scanning of large volumes of documents requires high-

speed scanners, secure storage media, and reliable data backup systems. In the absence of adequate equipment, archival digitization proceeds more slowly, thereby reducing the efficiency of document retrieval. Third, internet connectivity and network infrastructure also present practical challenges, as unstable modems, routers, and Wi-Fi connections frequently disrupt access to web-based applications such as *SIMKAH* and *SIHALAL*. These connectivity issues consequently delay data entry processes and interrupt the timely delivery of services to the public. These findings indicate that the implementation challenges of *Digital Islamic Management* at KUA Setiabudi are not confined to organizational coordination or data quality but are also rooted in deficiencies in hardware infrastructure and network capacity, which constitute the fundamental technical foundation supporting the operation of all digital systems.

Overall, the analysis of the seven digital platforms implemented at KUA Setiabudi demonstrates that their successful operation is primarily supported by strong leadership commitment and relatively adequate human resource capacity, particularly in managing core administrative systems such as *SIMKAH*. At the same time, implementation remains constrained by three interconnected challenges: limited interinstitutional coordination involving systems such as *SIHALAL* and *SIWAK*; disparities in data quality resulting from inconsistent data updating procedures within systems such as *SIWAK* and *SIMAS*, combined with varying levels of digital literacy among users of self-service platforms such as the microsite and *Media Center*; and limitations in supporting infrastructure, including computers, archival digitization equipment, and internet connectivity, which collectively constitute the technical foundation of the entire digital ecosystem (Novita, 2016; Zuidervijk, 2020). These findings provide the basis for evaluating the extent to which these enabling and constraining factors contribute to the realization of KUA Setiabudi as an effective and accountable *Smart KUA* model, as discussed in the following section.

4. The Contribution of *Digital Islamic Management* to the Realization of an Effective and Accountable *Smart KUA*

The concept of *smart governance* in the international public administration literature is understood as a governance model that simultaneously integrates the principles of transparency, accountability, participation, responsiveness, and sustainability, rather than merely emphasizing the adoption of advanced technologies. A systematic review of *smart city* governance argues that *smart governance* extends conventional policy implementation models by incorporating continuous monitoring and evaluation as essential components of governance (Meijer, 2020). This framework is particularly relevant for assessing KUA Setiabudi, where seven digital platforms *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, *SIMPENAI*S, the marriage counseling registration microsite, and the digital archival system together with three digital communication channels consisting of social media, the official website, and the *Media Center*, collectively constitute an integrated ecosystem of religious governance rather than a collection of isolated digital applications.

The first contribution of *Digital Islamic Management* to the realization of a *Smart KUA* lies in the efficiency of service delivery achieved through the integration of the marriage counseling registration microsite, *SIMKAH*, and the digital archival system into a unified workflow. Prospective brides and grooms register for marriage counseling through the microsite; the registration data are subsequently processed through *SIMKAH* for official marriage administration; and all resulting service documents are ultimately stored within the digital archival system, where they can be retrieved whenever necessary. Research on digital transformation in the public sector emphasizes that effective public sector innovation is characterized by an institution's ability to integrate multiple information systems into a coherent operational workflow (Luna-Reyes, 2021; Fishenden, 2013). Similarly, recent developments in the literature on digital governance suggest that advanced technologies are increasingly being positioned as decision-support instruments capable of accelerating administrative processes (Margetts, 2022). The integration of the microsite, *SIMKAH*, and the digital archival system at *KUA Setiabudi* represents a practical illustration of this principle, although the system has not yet incorporated *artificial intelligence*-based functionalities.

The second contribution is reflected in the strengthening of institutional accountability through the digital audit trails generated by each information system, particularly *SIMKAH* and *SIHALAL*. Every marriage registration processed through *SIMKAH* and every *halal* certification application submitted through *SIHALAL* produces an electronic record that can be traced by the Regional Office of the Ministry of Religious Affairs as well as by the *Badan Penyelenggara Jaminan Produk Halal (BPJPH)* as the authority responsible for issuing *halal* certificates. Classical studies on information technology in government emphasize that digital records function as important anti-corruption mechanisms because every stage of public service delivery can be traced according to its source and time of execution (Bertot, 2010). However, studies on algorithmic transparency caution that such accountability can only be fully realized when electronic records are supported by regular audits to ensure data accuracy and integrity (Williamson, 2022). Accordingly, the accountability of *SIMKAH* and *SIHALAL* at *KUA Setiabudi* depends not merely on the existence of electronic systems but also on the consistent implementation of systematic data auditing procedures.

The third contribution concerns the role of *SIMAS* and *SIMPENAI*S as open data platforms supporting evidence-based planning for religious development policies. The databases containing information on mosques, *musala*, and *majelis taklim* maintained within these systems provide valuable information for planning the allocation of institutional assistance as well as mapping the potential for *da'wah* activities at the district level with greater precision. Studies on open government data indicate that consistently managed open data improve governance efficiency by enabling policymakers to identify actual community needs more accurately (Zuiderwijk, 2020). Consequently, *SIMAS* and *SIMPENAI*S function not only as administrative databases but also as strategic instruments for evidence-based religious policy planning.

The fourth contribution lies in the transition toward a collaborative governance model involving multiple institutions while simultaneously expanding public participation through social media, the official website, and the *Media Center*. *SIHALAL* establishes institutional collaboration between KUA and the *Badan Penyelenggara Jaminan Produk Halal (BPJPH)*, whereas *SIWAK* requires coordination with the *Badan Wakaf Indonesia*. At the same time, social media and the official website broaden public participation by providing direct access to information concerning marriage counseling, religious guidance, and *waqf* programs. Studies examining the transition from government to governance argue that the effectiveness of contemporary public institutions increasingly depends on cross-institutional collaboration (Yi, 2025). Likewise, research on Islamic religious institutions emphasizes that the integration of digital technologies must remain grounded in ethical principles that preserve moral accountability (Wardoyo, 2025). Within this framework, the *Media Center* functions as a centralized hub for producing credible religious content, ensuring that expanded public participation through digital media does not compromise the authenticity and legitimacy of religious authority.

Overall, the contribution of *Digital Islamic Management* to the realization of a *Smart KUA* at KUA Setiabudi can be understood through four complementary dimensions: service efficiency through the integration of the microsite, *SIMKAH*, and the digital archival system; accountability supported by digital audit trails generated through *SIMKAH* and *SIHALAL*; evidence-based planning facilitated by the open data systems *SIMAS* and *SIMPENAI*S; and collaborative governance combined with expanded public participation through *SIWAK*, social media, the official website, and the *Media Center*. The synthesis of these four dimensions demonstrates that KUA Setiabudi has made substantial progress toward the realization of an effective and accountable *Smart KUA* model (Meijer, 2020; Yi, 2025). Nevertheless, the sustainability of these achievements will continue to depend on maintaining the enabling factors while effectively addressing the implementation challenges discussed in the previous section.

D. Conclusion

This study concludes that the implementation of Digital Islamic Management at the Office of Religious Affairs (Kantor Urusan Agama) of Setiabudi, South Jakarta, represents a comprehensive transformation of religious public service governance rather than merely the adoption of digital technologies. The integration of seven digital platforms *SIMKAH*, *SIHALAL*, *SIWAK*, *SIMAS*, *SIMPENAI*S, the marriage counseling registration microsite, and the digital archival system together with social media, the official website, and the *Media Center*, has established an interconnected digital ecosystem that improves administrative efficiency, expands public access to services and religious information, strengthens transparency and accountability through digital records, and supports evidence-based decision-making. Furthermore, the digitalization of information and *da'wah* has broadened the institutional role of KUA from an administrative service provider to a center

for public religious education capable of responding to the information needs of contemporary urban society.

The study further finds that the successful implementation of Digital Islamic Management is supported by strong leadership commitment and adequate human resource capacity, while its sustainability remains constrained by challenges related to interinstitutional coordination, disparities in data quality and digital literacy, and limitations in supporting infrastructure. These findings demonstrate that the realization of a Smart KUA depends not only on the availability of digital technologies but also on the effective integration of organizational capacity, human resources, and institutional collaboration. Accordingly, this study contributes to the development of the smart governance literature within the context of Islamic religious institutions by positioning Digital Islamic Management as an integrated governance framework that combines digital innovation with Islamic ethical values to deliver effective, transparent, accountable, and sustainable religious public services.

References

- Agustin, R. D., Suherman, A., & Firdiyani, F. (2024). Implementasi Sistem Informasi Manajemen Nikah (SIMKAH) dalam Meningkatkan Kualitas Pelayanan dan Informasi pada Masyarakat di KUA Kecamatan Jatiuwung Kota Tangerang. *Jurnal Ilmiah Wahana Pendidikan*, 10(4), 744–754. <https://doi.org/10.5281/zenodo.10530888>
- Asa, E. S., & Rembu, Y. (2024). Manajemen Informasi Administrasi dan Kearsipan Menggunakan Aplikasi SRIKANDI dalam Pelayanan Publik di Setjen DPR RI. *Kajian Administrasi Publik dan Ilmu Komunikasi*, 1(4), 25–38. <https://doi.org/10.62383/kajian.v1i4.61>
- Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly*, 27(3), 264–271.
- Fishenden, J., & Thompson, M. (2013). Digital government, open architecture, and innovation: why public sector IT will never be the same again. *Journal of public administration research and theory*, 23(4), 977-1004.
- Fitriani, Y. (2021). Pemanfaatan media sosial sebagai media penyajian konten edukasi atau pembelajaran digital. *JISAMAR (Journal of Information System, Applied, Management, Accounting and Research)*, 5(4), 1006–1013. <https://doi.org/10.52362/jisamar.v5i4.609>
- Herliansyah, M. R., Rahmawati, R., & Luthfie, M. (2025). Implementasi Sistem Informasi Masjid (Simas) Kemenag sebagai Instrumen Penguatan Good Governance dalam

- Pelayanan Masyarakat di Kabupaten Bogor. *Jurnal Administrasi dan Kebijakan Publik*, 10(1), 182–198.
- Jamil, M. J. (2024). Implementasi Sistem Informasi Manajemen Nikah Online (Simkah) dalam Administrasi Pernikahan di KUA Kecamatan Bajeng Kabupaten Gowa. *Jurnal Syntax Admiration*, 5(12), 5470–5480. <https://doi.org/10.46799/jsa.v5i10.1736>
- Jaya, A., Rahayu, D. W. S., Bigofik, M. N., Amelia, F., & Rodriguez, M. (2025). Empowering Social Solidarity Through Islamic Digital Da'wah on Social Media Platforms: Memberdayakan Solidaritas Sosial Melalui Dakwah Digital Islam di Platform Media Sosial. *Alfabet Jurnal Wawasan Agama Risalah Islamiah, Teknologi dan Sosial*, 2(2), 39-51.
- Juneldi, R., & Sururie, R. W. (2020). Penerapan Sistem Informasi Manajemen Nikah (SIMKAH) di KUA Kecamatan Jatinangor Kabupaten Sumedang. *Al-Ahwal Al-Syakhsiyyah: Jurnal Hukum Keluarga dan Peradilan Islam*, 1(2), 179–194. <https://doi.org/10.15575/as.v1i2.9914>
- Khoirunnisa, H. N., Azahra, N., Az Zahra, P. S., Syakirah, R. D., Rhamadan, S. N., Herdiana, S., & Widawati, R. (2024). Media sosial sebagai sarana dakwah: Perspektif keislaman dan peralihan dari masa ke masa. *Jurnal Manajemen dan Pendidikan Agama Islam*, 2(4), 227–239. <https://doi.org/10.61132/jmpai.v2i4.401>
- Mahfud, C. (2023). Dakwah digital dan literasi keagamaan masyarakat Muslim Indonesia. *Journal of Islamic Studies and Humanities*, 8(1), 45–68. <https://doi.org/10.19109/jish.v8i1.15322>
- Ma'mun, S., Setiadi, K., & Darmawan, D. (2021). Efektivitas Penggunaan Sistem Informasi Manajemen Wakaf (SIWAK) dalam Mempermudah Informasi Wakaf. *Jurnal Pelita Nusa*, 1(2).
- Manda, M. I. (2022). Power, politics, and the institutionalisation of information systems for promoting digital transformation in the public sector: A case of the South African's government digital transformation journey. *Information Polity*, 27(3), 311–329.
- Margetts, H., & Dorobantu, C. (2022). Rethink government with AI. *Nature Human Behaviour*, 6(5), 1–7. <https://doi.org/10.1038/s41562-022-01312-1>
- Meijer, A. (2022). Transparency and public administration. *Public Administration Review*, 82(3), 1–12. <https://doi.org/10.1111/puar.13459>

- Meijer, A., & Bolívar, M. P. R. (2020). Governing the smart city: A review of the literature on smart urban governance. *International Review of Administrative Sciences*, 86(2), 392–408.
- Novita, D. (2014). Faktor-faktor penghambat pengembangan e-government: Studi kasus pemerintah Kota Palembang, Sumatera Selatan. *Jurnal Eksplora Informatika*, 4(1), 43-52.
- Qisthi, N., & Ekawati, N. (2025). Pendampingan Sertifikasi Halal Bagi Pelaku UMKM dalam Upaya Meningkatkan Daya Saing Produk di Kecamatan Lemahabang Cirebon. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan*, 4(1), 1703–1709.
- Rumimpunu, S. R., Tampi, J. R., & Londa, V. Y. (2021). Penerapan e-government dalam mendukung transparansi dan keterbukaan informasi publik (Studi kasus website resmi Pemerintah Kota Manado). *Agri-Sosioekonomi*, 17(2), 691–702.
- Santoso, Y. S., & Fahrullah, A. (2020). Efektivitas Sistem Informasi Wakaf (SIWAK) sebagai Strategi Mengurangi Sengketa dan Percepat Sertifikasi Tanah Wakaf di Surabaya. *Jurnal Ekonomika dan Bisnis Islam*, 3(3), 100–113. <https://doi.org/10.26740/jekobi.v3n3.p100-113>
- Shah, H. (2018). Algorithmic accountability. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 376(2128), 20170362.
- Sieber, R. E., & Johnson, P. A. (2015). Civic open data at a crossroads: Dominant models and current challenges. *Government information quarterly*, 32(3), 308-315.
- Tohir, M., Zakka, U., & Akbar, J. (2025). Akuntabilitas Sistem Informasi Manajemen Nikah (SIMKAH) dalam Implementasi Undang-Undang Perkawinan di Kantor Urusan Agama. *Al-Ibrah: Jurnal Pendidikan dan Keilmuan Islam*, 10(2), 230–245.
- Wardoyo, M. S. P. (2025). Integrating Islamic values and digital technologies in Islamic educational management: A contemporary framework. *Journal of Educational Management Research*, 4(6), 2843–2854.
- Wijaya, S., Alfitri, Thamrin, M. H., & Salya, D. H. (2024). The Impact of Electronic Government Policy on Transparency and Accountability in Public Services. *International Journal of Science and Society*, 6(2), 411–421. <https://doi.org/10.54783/ijssoc.v6i2.1157>
- Williamson, B. (2022). Algorithmic transparency and public sector accountability. *Policy & Internet*, 14(2), 233–254.

Yi, C., & Qiu, X. (2025). From local government to local governance: A systematic literature review and future research agenda. *Australian Journal of Public Administration*, 84(1), 15–29.

Zuiderwijk, A., & Janssen, M. (2020). Open data and public sector efficiency. *Government Information Quarterly*, 37(4), 101532.

Website

Global Indo News. (2026, 14 Januari). Transformasi layanan digital, KUA Ende Selatan resmi luncurkan website pelayanan keumatan. <https://www.globalindonews.com/transformasi-layanan-digital-kua-ende-selatan-resmi-luncurkan-website-pelayanan-keumatan/>

Metro Jateng. (2025, 22 November). Kemenag siapkan Anugerah KUA 2025, dorong inovasi dan transformasi layanan publik. <https://metrojateng.com/2025/11/22/kemenag-siapkan-anugerah-kua-2025-dorong-inovasi-dan-transformasi-layanan-publik/>

Kantor Kementerian Agama Kota Yogyakarta. (2026). Kecakapan IT meningkat, KUA Mantrijeron siap wujudkan layanan keagamaan adaptif. <https://yogyakartakota.kemenag.go.id/kecakapan-it-meningkat-kua-mantrijeron-siap-wujudkan-layanan-keagamaan-adaptif/>

Kompas.com. (2026, 21 Mei). Kemenag dorong Satu Data Nasional lewat digitalisasi layanan keagamaan. <https://cahaya.kompas.com/aktual/26E21180000390/kemenag-dorong-satu-data-nasional-lewat-digitalisasi-layanan-keagamaan>

Kementerian Agama RI. (2025, 17 November). Kemenag luncurkan MOSS, permudah layanan digital untuk masyarakat. <https://dki.kemenag.go.id/berita/kemenag-luncurkan-moss-permudah-layanan-digital-untuk-masyarakat-kYS2B>

Kementerian Agama RI. (2025, 7 Oktober). Kemenag konsolidasikan layanan lintas fungsi di KUA. <https://kemenag.go.id/nasional/kemenag-konsolidasikan-layanan-lintas-fungsi-di-kua-y5L4G>

Kementerian Agama RI. (2026, 7 Mei). Kemenag dorong penguatan layanan dan digitalisasi KUA di Jakarta. <https://dki.kemenag.go.id/berita/kemenag-dorong-penguatan-layanan-dan-digitalisasi-kua-di-jakarta-8NDY1>

Acknowledgment

The authors would like to express their sincere gratitude to the Office of Religious Affairs (Kantor Urusan Agama) of Setiabudi, South Jakarta, for providing institutional support and facilitating the completion of this study. The authors also extend their appreciation to all research participants for their valuable time, insights, and cooperation throughout the research process. As a Penghulu and an Islamic Religious Counselor (Penyuluh Agama Islam) at KUA Setiabudi, South Jakarta, the authors greatly benefited from the practical experience and institutional environment, which enriched the understanding of digital transformation in religious public services and contributed significantly to the completion of this article.

Ethical Statement

This study was conducted in accordance with the principles of research ethics, including respect for human rights and human dignity, fairness in the treatment of research participants, the balance between potential benefits and risks, and the maintenance of scientific integrity through honesty, transparency, and accuracy in data collection, analysis, and reporting. Participation in this study was voluntary, and all information obtained from the participants was used solely for academic purposes while maintaining confidentiality where appropriate.

AI Declarations

The authors declare that artificial intelligence (AI)-assisted tools were used solely to support language refinement, improve academic writing quality, and assist the literature review process, particularly in identifying relevant studies and enhancing the clarity of the manuscript. All research design, data collection, analysis, interpretation of findings, conclusions, and scholarly judgments were conducted independently by the authors, who assume full responsibility for the content and integrity of this article.