

THE GRITARA MODEL: A COMMUNITY-BASED PROTOTYPE FOR MOSQUE ZAKAT DIGITALIZATION

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Abstract

Purpose: Zakat fitrah is largely collected through residential mosques that sit outside official digital record-keeping, yet zakat-technology research concentrates on national agencies and fintech platforms. This study examines how digitalization unfolds at a residential mosque and whether institutional trust and platform trust move together or separately. **Design/methodology/approach:** A single, holistic qualitative case study of Masjid Gritara (Kabupaten Bandung, Indonesia) drew on nine semi-structured interviews, four observation episodes, and document analysis of 2021–2024 records, collected between February and April 2026 after informal field entry in January 2026. Two independent coders scored a five-dimension, case-derived rubric (DIGIT-MASJID; Cohen's Kappa = 0.79). **Findings:** Zakat fitrah collection rose 47.0%, 34 new out-of-area muzakki were reached, and data-entry time fell 55%, gains attributable to training and pre-existing community trust rather than technology alone. The composite score rose from 2.4 to 3.4, with the largest gains in digital infrastructure and public accountability, while congregational trust plateaued: platform trust lagged institutional trust, a decoupling that adoption models seldom anticipate. **Research limitations/implications:** The findings rest on one purposively selected case and self-reported acceptance data; the Gritara Model is therefore a candidate framework pending multi-case validation. **Practical implications:** A low-cost, training-embedded, incremental pathway, complemented by intergenerational digital mentoring, can be piloted by other residential mosques and by the Ministry of Religious Affairs. **Originality/value:** The study shows that institutional and platform trust can move at different speeds, a distinction most zakat-adoption studies treat as one construct, and supplies the first quantitative assessment of digitalization at the residential-mosque level, addressing an undertheorized grassroots dimension of Islamic social finance.

Keywords: Zakat Digitalization, Mosque Management, Islamic Social Finance, Technology Adoption, Gritara Model

PUBLIC INTEREST STATEMENT

More than 70% of zakat fitrah in Indonesia passes through mosques that sit outside official record-keeping, a blind spot in national zakat policy. This study follows one residential mosque, Masjid Gritara, over three years as it moved from paper records to a QRIS-, WhatsApp-, and Google Sheets-based system. Collections rose 47%, 34 new donors joined from outside the neighborhood, and data-entry time fell by half, gains from pairing technology

with hands-on training and pre-existing trust, not technology alone. The resulting Gritara Model offers other mosques and the Ministry of Religious Affairs a low-cost, replicable path toward transparent zakat management.

INTRODUCTION

Zakat holds a place among the five pillars of Islam that is at once devotional and profoundly economic: as a mechanism for redistributing wealth within the Muslim community, it is meant to raise the standing of the *mustahiq*, the eight categories of recipients named in QS. al-Taubah/9:60. With a Muslim population that had already surpassed 240 million by 2024, Indonesia sits on an enormous reservoir of zakat potential. BAZNAS put the 2023 national potential at IDR 327 trillion, yet what was actually collected came to roughly IDR 26.5 trillion, approximately eight percent of that potential (Makarim & Hamzah, 2024). City-level mapping shows that this potential is unevenly distributed and highest in Jakarta, East Java, and West Java (Zaenal et al., 2022), the province in which the present case is located. Digitalization is widely expected to narrow the gap: a long-run analysis of Indonesian data for 1991–2024 reports a favorable effect of digitalization on zakat collection in both the short and the long run (Suprayitno et al., 2025), and a bibliometric analysis of 194 Scopus-indexed publications shows that scholarship on digital zakat and Islamic fintech has grown since 2017, led by Malaysia, Indonesia, and Nigeria (Dupi & Adzimatinur, 2025). At a broader level, digital finance widens financial inclusion by cutting transaction costs and geographic barriers (Ozili, 2018), a pattern that Indonesia's 185 million active internet users and climbing smartphone penetration appear to mirror (Kemp, 2024).

Mosques have long served as multifunctional institutions whose reach extends well beyond ritual worship. In the Indonesian setting, Prayoga et al. (2021) show that mosques administered zakat collection and distribution long before formalization, yet the architecture set up under Law No. 23/2011, centered on BAZNAS and the LAZ (Zakat Collection Agencies), never explicitly incorporated them. As a result, more than 70% of zakat *fitriah* in Indonesia is still managed through mosques outside the formal recording apparatus, a pattern Hadi et al. (2024) have labeled a shadow zakat economy. Research on zakat digitalization has nevertheless expanded quickly while remaining concentrated on BAZNAS, national LAZ, or fintech platforms (Mutamimah et al., 2021; Widiastuti et al., 2021), and a comparative review of Muslim countries observes that community mosques, the first point of contact between *muzakki* and the zakat system, remain largely unexamined (Moniruzzaman, 2025). The adoption literature has converged on a recognizable set of drivers. Extended TAM and UTAUT models identify performance expectancy, effort expectancy, social influence, and zakat literacy as predictors of digital zakat intention (Ahimsa et al., 2023), show that perceived usefulness shapes attitude toward e-payment zakat (Rahim et al., 2024), find that performance expectancy, religiosity, and trust predict intention to adopt blockchain-based zakat platforms (Selimović-Fijuljanin et al., 2026), and report effort expectancy, institutional trust, and facilitating conditions as the strongest drivers in a recontextualized UTAUT2 (Andini et al., 2026); context-specific extension is, indeed, the most common use of UTAUT2 (Tamilmani et al., 2021). On the supply side, most BAZNAS and LAZNAS institutions in South Kalimantan were judged ready to digitalize, with management as the priority problem and human resources as the priority solution (Maulida et al., 2022), and Malaysian zakat institutions' adoption of social media was shaped by perceived benefits, training, and management push (Abdullah et al., 2023). Bibliometric mapping likewise identifies trust and technology adoption as a core cluster of the field while flagging digital literacy and infrastructure as persistent challenges (Dupi &

Baloch, 2025). What remains unsettled is whether trust is a single construct. Research in other digital settings suggests otherwise: in internet voting, institutional trust predicts trust in, and use of, the system far more strongly than technological trust does (Romanov et al., 2025), and mobile-payment research treats trust as multidimensional (Lian & Li, 2021). Zakat studies, by contrast, typically fold the two into one undifferentiated predictor (Danila et al., 2024; Ghofar et al., 2024).

Three gaps follow from this review. First, community mosque-level digitalization studies remain exceedingly rare; the evidence base is dominated by formal institutions and national platforms. Second, accountability research has likewise concentrated on formal bodies: scholarship on accountability in waqf institutions remains limited relative to the wider waqf literature (Ainol-Basirah & Siti-Nabiha, 2022), and the few mosque-level studies, such as a survey showing that accountability, transparency, and managerial attitude raise muzakki trust at the Jogokariyan Mosque zakat amil institution (Shafiyah & Fithria, 2023), do not follow a digitalization trajectory over time. More broadly, the digital transformation of non-profit organizations remains conceptually unsettled (Cipriano & Za, 2025), and digital tools appear to amplify existing trends in resource-constrained NGOs rather than transform them (Cordery et al., 2023). Third, the literature lacks an integrative evaluation framework for community mosques and, to the authors' knowledge, any quantitative assessment of digitalization's effect at the residential-mosque level. Masjid Jami' Al Mu'minuun Griya Utama (Masjid Gritara), on Jl. Palem Raya, Rancaekek Wetan, Kabupaten Bandung, offers a concrete illustration of this underexamined domain. Before digitalization, zakat administrators kept muzakki records on paper and then re-entered them into a zakat management website, a dual-entry process that produced significant inefficiency, left data prone to error, and confined the mosque's reach to muzakki within its immediate vicinity, an operational reality that formal-institution-centered literature has not captured. The study treats as worth examining, rather than as an established causal mechanism, the proposition that digital technology can narrow the gap between zakat's potential and what mosques actually realize.

The study pursues four aims: first, to document the initial condition of manual zakat management and the systemic problems it produced; second, to document how a mobile-application training program was designed, implemented, and received; third, to evaluate the quantitative and qualitative impact of digitalization; and fourth, to build a model that could inform digitalization efforts at residential-area mosques across Indonesia, pending validation beyond the present case. These aims translate into two research questions. RQ1: How did zakat management at a community mosque move from a manual system to an integrated digital ecosystem, and what training and adoption mechanisms account for that trajectory? RQ2: What measurable financial, operational, and accountability effects did this digitalization produce, and what model can be derived to guide similar mosques?

To the authors' knowledge, no prior study has traced the full trajectory of zakat digitalization at the community mosque level, within Indonesia or the broader Islamic social finance literature, while also measuring its quantitative impact and building a replicable, integrative evaluation model. The study contributes on three fronts. Theoretically, it proposes the Gritara Model and its DIGIT-MASJID instrument as a candidate reference point for community mosque contexts across Muslim-majority countries, pending validation beyond the present single case, and it argues that institutional and platform trust can move at different speeds. Empirically, it supplies, to the authors' knowledge, the first quantitative assessment of digitalization's measurable effect at this level of analysis, adding a grassroots case to a field that has examined Islamic social finance mainly through poverty-reduction outcomes

(Herianingrum et al., 2024), integrative reviews (Maulina et al., 2023), multipartner fundraising governance (Mustari et al., 2024), and national institutionalization (Yerrou et al., 2023). Methodologically, it applies a qualitative case-study design with multi-source triangulation and inter-rater reliability that other researchers can replicate.

LITERATURE REVIEW

Conceptual Framework

Historically, mosques functioned as more than devotional spaces: across classical Islamic civilization they operated as institutional hubs spanning the religious, political, educational, and economic spheres, including organized zakat collection and distribution (Prayoga et al., 2021). That administrative role persists but is unevenly realized. Mosque institutions sustain a significant economic function in Perak State, Malaysia, scale ZISWAF-funded programs, an internal Baitulmaal, and digital-marketing training into a 32-branch community-empowerment platform in Pontianak, and combine religious conviction with socio-economic need in southwest Nigerian faith-based organizations independent of state involvement (Razak et al., 2014; Wardi & Jansen, 2024; Shuaib & Sohail, 2022). Yet capacity is neither automatic nor evenly distributed: Indonesian zakat philanthropy remains caught between personal religiosity and state involvement, formalization meant to strengthen zakat governance has pushed mosques toward the margins of the official system, and poor cooperation between administrators and younger congregants has obstructed engagement at one Tangerang mosque (Rifani et al., 2023; Hadi et al., 2021; Listianti et al., 2024). Broader Islamic social finance scholarship asks how funds are deployed and governed, from directing Islamic social funds toward social enterprises (Islam et al., 2023) to reviews showing that governance reform and modern administrative frameworks are central to waqf's socioeconomic role (Zafar & Ali, 2026). Together, these studies suggest that a mosque's institutional and digital capacity is built deliberately rather than inherited, and that the generational fault line can run either way: younger congregants excluded, as Listianti et al. (2024) document, or, as the Gritara case illustrates, older congregants left behind while younger administrators drive adoption. Wardi and Jansen's (2024) 32-branch benchmark marks what a mature mosque-based amil body can reach; Masjid Gritara's DKM, still building capacity within the study's three-year window, offers an earlier-stage case of the same trajectory.

Zakat-specific technology-adoption research has largely extended TAM and UTAUT with trust and social constructs, converging on two findings. First, ease of use and religiosity operate as baseline drivers, identified as the dominant determinants of mobile muzakki service adoption and corroborated by institutional-image and fintech-specific studies (Muflih, 2023; Usman et al., 2022). Second, and more consequentially, trust outperforms ease of use once measured directly: initial trust and performance expectancy are the strongest predictors of intention to pay zakat digitally, social factors and peer influence determine ZakaTech acceptance, and trust together with facilitating conditions drives young Indonesian and Malaysian Muslims' adoption intention (Jaenudin et al., 2024; Bin-Nashwan et al., 2023; Ghofar et al., 2024), a pattern that holds on the distribution side among Malaysian asnaf (Ahmad & Yahaya, 2022). Wider mobile-payment research agrees that perceived benefit and trust are the strongest influences on adoption intent (Chin et al., 2022) and that trust has several dimensions that interact with UTAUT2 constructs through trust transfer (Lian & Li, 2021); recent reviews of FinTech trust ask directly what the object of trust is (Devlin et al., 2025). None of the zakat studies, however, distinguishes trust in the zakat-managing institution from trust in the digital platform as separable constructs, even though trust theory has long treated

institution-based trust and trust in a specific technology or vendor as empirically distinguishable, including within an integrated TAM-and-trust model of online shopping (McKnight et al., 2002; Gefen et al., 2003). Adoption research also converges on a barrier profile: online zakat payment intention sits at only 68–74%, with platform distrust and data-security concerns as chief obstacles, confirmed by a recent systematic review alongside uneven human-resource readiness, while zakat literacy further moderates intention (Kasri & Sosianti, 2023; Asni et al., 2024; Kasri & Yuniar, 2021). A complementary barrier appears institutionally: zakat institutions' own trust deficits, conservative organizational culture, and limited technical capacity slow fintech adoption independent of muzakki-side willingness (El Amri et al., 2025). At the mosque level, electronic ZISWAF management through sharia-compliant fintech can strengthen collection, but only where the mosque secures Baznas authorization and keeps float funds free of interest-bearing instruments, a safeguard this study's D4 dimension is built to track (Pati et al., 2021).

This study theorizes accountability in zakat institutions through DiMaggio and Powell's (1983) account of institutional isomorphism, which distinguishes coercive, mimetic, and normative pressures toward conformity. The framework extends readily across Islamic philanthropic governance: Malaysian waqf institutions adopt standardized accounting and reporting practices modeled on more established bodies even absent direct compulsion (Abu Talib et al., 2020), neo-institutional arguments have been used to explain executives' observance of zakat in Bahrain and Malaysia (Poon et al., 2021), and the three pressures have been shown to shape distinct forms of performance-information use in public organizations (Choi & Woo, 2022). Applied to zakat governance, this professionalization dynamic finds indirect support in Hotimah and Suprayogi's (2023) meta-analytic finding that transparency and accountability practices are positively associated with muzakki trust, and in survey evidence that digital transparency and financial reporting quality raise muzakki trust, partly through institutional credibility (Hidayah et al., 2026a) and that internal control and accounting standards do so with accountability strengthening these links (Hidayah et al., 2026b). The underlying accountability gap is well documented: only 40 percent of Malaysian zakat institutions publish financial reports, genuine accountability depends on effective technical and institutional mechanisms rather than intent alone, and governance paired with fraud prevention improves institutional performance in Indonesia (Haron et al., 2020; Nahar, 2018; Wahyuni-TD et al., 2021). Two recent Indonesian cases mirror the trade-off this study documents at Gritara: a real-time digital recording system at BAZNAS Pontianak City strengthened transparency and reporting speed but left elderly muzakki and mustahiq dependent on assisted, in-person channels, and a WhatsApp-integrated internal application at Baitul Mal Munzalan Indonesia improved efficiency and transparency while older, less digitally literate donors continued to need staff assistance (Oktaviani, 2025; Fadlu, 2025). Read with Gritara, these cases suggest an age-concentrated digital-literacy gap is a general feature of Indonesian zakat digitalization. At Gritara specifically, the e-payment-based digitalization program (Syahputra & Mukhtasar, 2021) applied coercive pressure that legitimized digitalization, while the visible success of larger mosques operated as a mimetic force.

A parallel strand treats trust not as a technology construct but as social capital that pre-exists any platform. In an Indonesian sample, social-media-based social capital, particularly interpersonal trust and community norms, is the strongest predictor of intention to channel zakat through a formal institution; good governance strengthens compliance through institutional-trust mechanisms; and perceived system ease and trust in the managing authority, rather than the technology per se, drive business zakat compliance intention (L. Hamdani, 2024; Sawmar

& Mohammed, 2021; Saad et al., 2020). Beyond zakat, social trust, bridging networks, and civic engagement raise donating and volunteering (Lin, 2021). Where this literature does examine platform-specific trust, it typically folds it into the same construct as institutional trust: one study incorporates trust and religiosity into UTAUT and confirms that platform trust determines acceptance of online zakat payment, but treats that trust as a single variable (Danila et al., 2024). Structural interventions can also substitute for organically built trust: integrating digital zakat with Malaysia's tax system widens compliance by embedding payment in an already-trusted government process, and administrative reform toward transparency lifts compliance and revenue independent of any platform's design (Wahid et al., 2021; Saad et al., 2023). Finally, the digital divide among older adults offers a parallel: initial trust in digital assistive technology among older people draws on personality-based, cognitive, calculative, and institutional bases (Weck & Afanassieva, 2023), while perceived usefulness, ease of use, and information and service quality shape trust in mobile payment among older users (Yang et al., 2023; Huang et al., 2024), with security and risk perceptions weighing heavily in older generations' mobile banking intention (Hanif & Lallie, 2021).

Table 1
Synthesis of the Four Literature Strands and the Gap Addressed

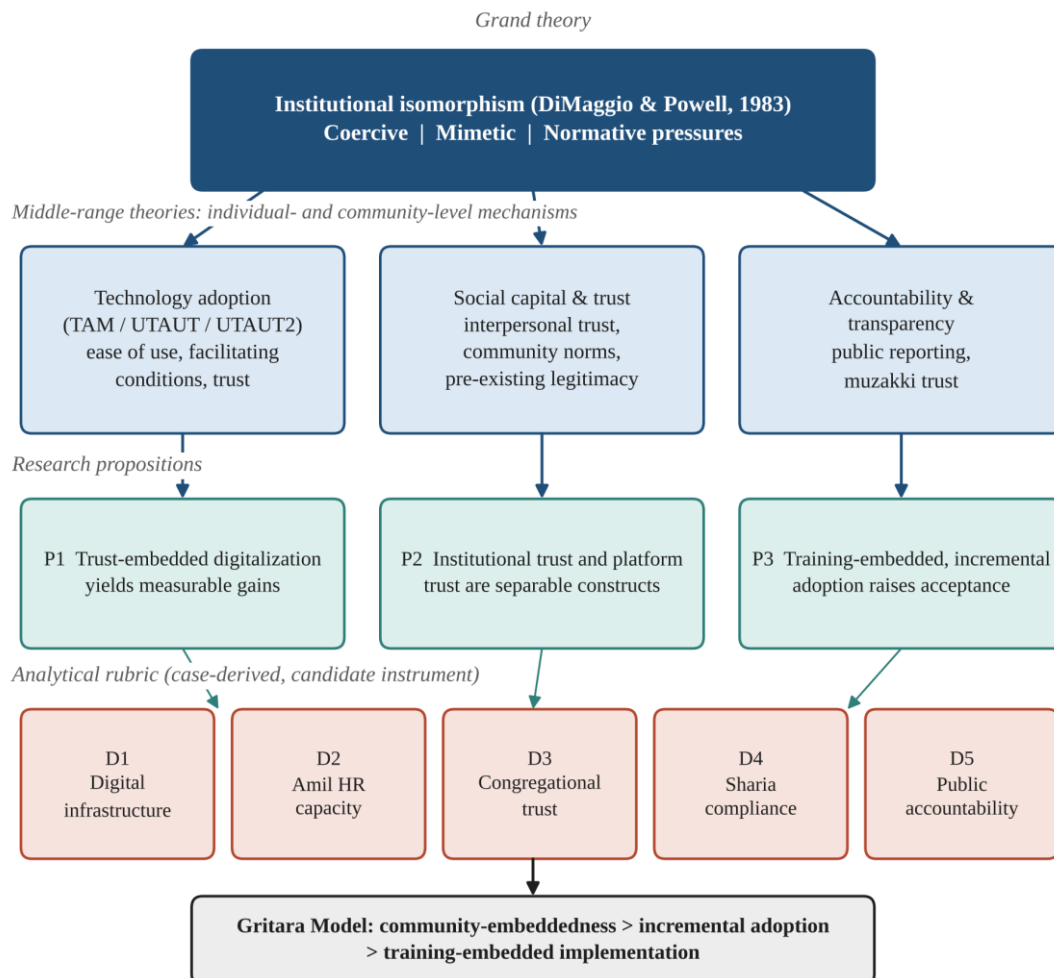
Strand	Representative studies	Treatment of trust	Gap addressed here
Technology adoption (TAM/UTAUT)	Muflih (2023); Jaenudin et al. (2024); Bin-Nashwan et al. (2023); Andini et al. (2026); Rahim et al. (2024)	Predictor of platform acceptance; usually one construct	Separability of institutional and platform trust
Accountability and transparency	Nahar (2018); Hotimah & Suprayogi (2023); Hidayah et al. (2026a); Shafiiyyah & Fithria (2023)	Outcome of transparent institutional practice	Trust payoff measured over a digitalization trajectory
Social capital and community trust	L. Hamdani (2024); Sawmar & Mohammed (2021); Lin (2021)	Pre-existing community resource	Whether it converts automatically into platform trust
Institutional isomorphism and non-profit digital transformation	DiMaggio & Powell (1983); Poon et al. (2021); Choi & Woo (2022); Cipriano & Za (2025)	Legitimacy-driven conformity	Mosque-scale evidence of coercive and mimetic pressure

Source: Authors' synthesis (2026).

Across these strands, institutional trust and platform trust function as adjacent but conceptually distinct constructs: the adoption literature treats trust primarily as a predictor of platform acceptance (Jaenudin et al., 2024; Bin-Nashwan et al., 2023; Ghofar et al., 2024), the accountability literature treats it as an outcome of transparent institutional practice (Nahar, 2018; Haron et al., 2020; Hotimah & Suprayogi, 2023), and the social-capital literature treats it as a pre-existing community resource (L. Hamdani, 2024; Sawmar & Mohammed, 2021). None tests whether these are separable constructs that can move at different speeds within the same population, an omission this study addresses by tracking congregational trust in the DKM separately from trust in the platform across three years of the same case. Institutional isomorphism (DiMaggio & Powell, 1983) functions as the grand theory: it explains why a community mosque adopts practices visibly modeled on larger zakat institutions even absent direct compulsion, while TAM/UTAUT and social-capital theory supply the mechanisms (perceived ease of use, trust, and social capital) through which that pressure becomes adoption behavior (Figure 1). Taken together, the literature points to three gaps: research remains concentrated on BAZNAS, LAZ, and national fintech platforms, a pattern Moniruzzaman

(2025) finds repeated across Muslim-majority countries; an integrative evaluation framework combining technical, managerial, social, religious, and accountability dimensions for community mosques is missing; and quantitative evidence at the residential-mosque level is essentially absent.

Figure 1
Theoretical Framework of the Study



Source: Authors' conceptualization (2026), adapted from DiMaggio and Powell (1983) and the literature reviewed above.

Research Propositions

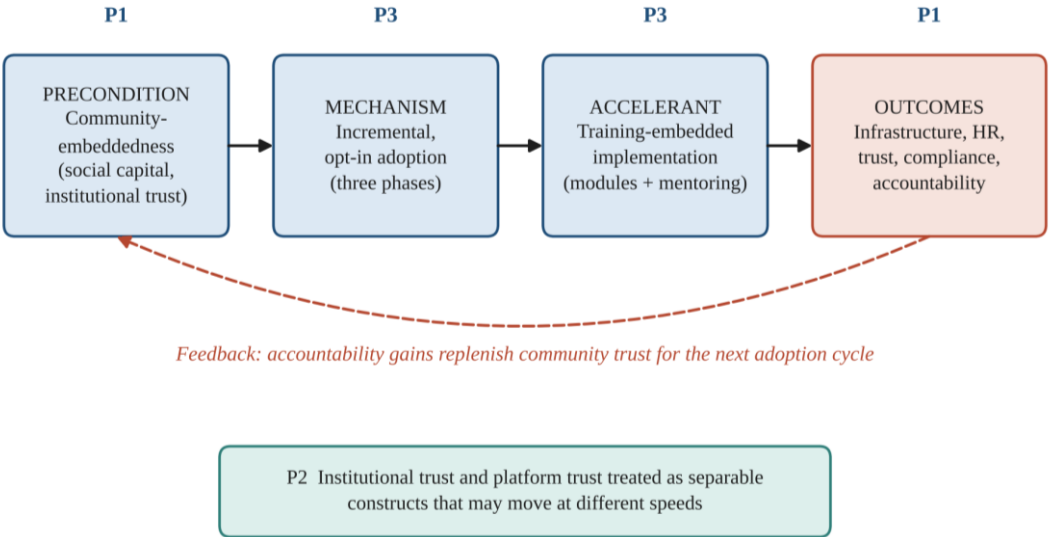
Because this is a single, holistic qualitative case study rather than a hypothesis-testing design, the study formulates research propositions rather than statistical hypotheses, following Yin's (2018) guidance that case-study propositions should direct attention to what the case's scope should examine. Grounded in the theoretical synthesis and empirical patterns above, three propositions guide the analysis. P1: community-mosque digitalization produces measurable gains in collection, operational efficiency, and public accountability when adoption is preceded by, and embedded within, pre-existing community and institutional trust, consistent with the social-capital literature's treatment of trust as an antecedent rather than an outcome of adoption (L. Hamdani, 2024; Sawmar & Mohammed, 2021). P2: institutional trust and platform trust are empirically separable constructs that can move at different speeds within the same community,

contrary to how existing TAM/UTAUT extensions typically treat trust as a single predictor of platform acceptance (Jaenudin et al., 2024; Danila et al., 2024), and consistent with evidence from other domains that institutional and technological trust carry different weight (Romanov et al., 2025). P3: a training-embedded, incremental (opt-in) implementation strategy increases technology acceptance and reduces resistance beyond what the platform’s technical sophistication alone would predict, consistent with Bin-Nashwan et al.’s (2023) finding that social facilitation and institutional support are prerequisites, not accessories, for ZakaTech adoption, and with the importance of training and management push for zakat institutions’ adoption of social media (Abdullah et al., 2023). These propositions are sensitizing rather than confirmatory: the Method is built to explore and refine them against the Gritara evidence, not to test them statistically.

Research Model

Synthesizing the three propositions into a preliminary conceptual model (Figure 2), the study enters the field expecting community-embeddedness (pre-existing social capital and institutional trust) to function as a precondition; incremental, opt-in adoption as the mechanism converting that precondition into sustained use; and training-embedded implementation as the accelerant turning incremental adoption into measurable gains across infrastructure, human-capacity, trust, compliance, and accountability dimensions, with accountability gains expected to feed back into community trust for the next adoption cycle. This preliminary model is deliberately general and literature-derived rather than case-specific. The Results report how the Gritara data refined it into the more detailed, empirically scored Gritara Model, including the finding that institutional and platform trust decoupled in a way the preliminary model, like the literature it draws on, did not anticipate.

Figure 2
Research Model: Preliminary Conceptual Model and Research Propositions



Source: Authors’ conceptualization (2026).

METHOD

Research Design

This study adopts a qualitative approach built around a single, holistic case design (Yin, 2018). The approach was chosen because the research questions are fundamentally “how” and

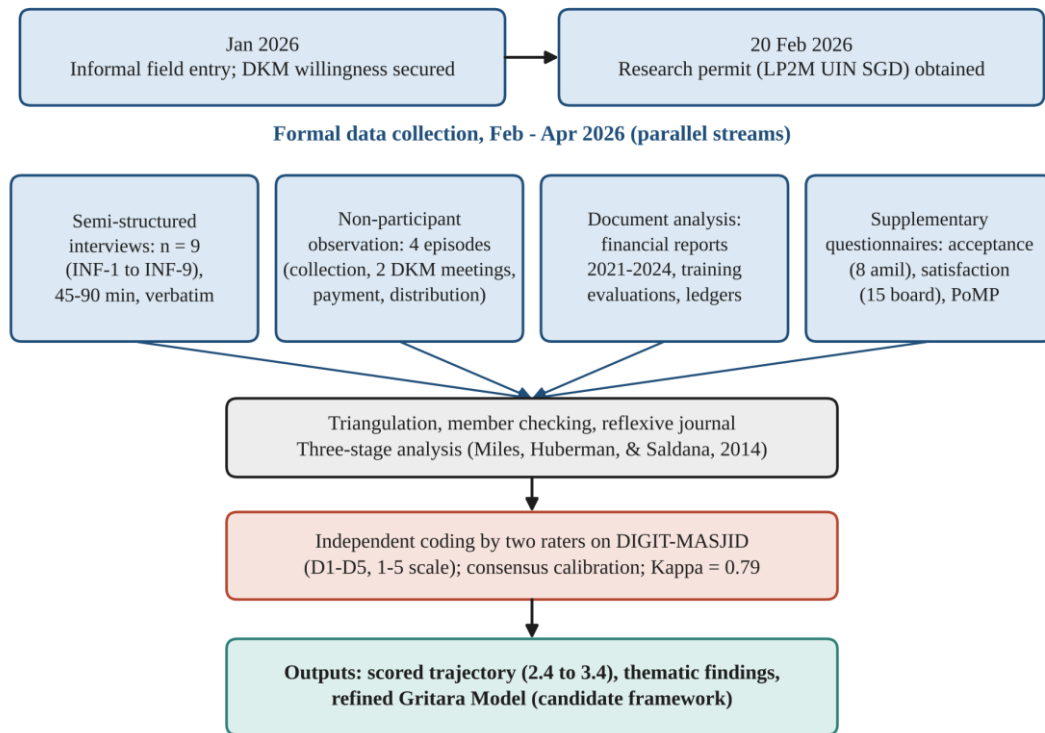
“why” questions about a phenomenon unfolding in a real-world setting, rather than questions calling for a statistical test of relationships between variables. The case-study design captures the full complexity of a technology-adoption process that draws together technical, social, institutional, and religious threads, and it aligns directly with the three research propositions, which are explored and refined rather than tested. Figure 3 summarizes the design, from field entry to the derivation of the Gritara Model.

Research Setting and Sample

Masjid Gritara was selected purposively against four criteria: (1) at least two digital zakat payment mechanisms already in place and empirically documentable; (2) location within a modern residential area whose congregation varies in digital literacy; (3) an active, ongoing da’wah program; and (4) full willingness to participate, including access to internal financial records. Within this single site, the nine interview informants (the DKM chairperson, treasurer, zakat coordinator, two field amil, three representative muzakki, and a mosque youth committee member) were likewise selected through purposive, non-probability sampling, since the goal was information-rich coverage of every distinct role in the zakat-management chain rather than statistical representativeness. Nine informants were judged sufficient for this single-case design in light of empirical reviews of how saturation depends on study scope and population homogeneity (Hennink & Kaiser, 2022); because the site and sample were selected for information richness, the findings are offered for analytic transferability to structurally similar residential mosques rather than statistical generalization to Indonesian mosques at large.

As of the study period, the mosque’s zakat collection and distribution operated under a defined digital system (Figure 4). QRIS and bank transfer had been available since early in the digitalization process, alongside cash and payment in rice, collected in person by field officers. Account and role access was structured around a super-admin account and admin accounts assigned one per RT (Rukun Tetangga, the smallest neighborhood administrative unit), each held by a single officer who visited households directly; when a muzakki was less comfortable managing payment directly, the RT-level admin entered it on their behalf. From 2024, the system was extended into a mosque-wide zakat management information system (Sistem Informasi Manajemen Zakat, SIMZAT), accessible through a dedicated DKM Al Mu’minuun website with separate login access for staff/amil and for individual muzakki families; every participating family held an individual payment account, while amil/DKM administrators used the same system to record transactions and manage distribution to mustahiq in the surrounding area. Each completed payment triggered a billing/confirmation message through the mosque’s WhatsApp Business account.

Figure 3
Research Design and Analytical Procedure



Source: Authors' design (2026).

Data Collection

Following an initial period of informal field entry in January 2026, during which the DKM's preliminary willingness to participate was secured, the authors requested institutional research authorization (see Institutional Review Board Statement); once obtained on February 20, 2026, formal data collection proceeded in parallel across three sources through April 2026. First, semi-structured, in-depth interviews were conducted with the nine key informants; each lasted 45 to 90 minutes and was audio-recorded and transcribed verbatim. The interview guide covered three clusters: (a) the condition of, and problems within, the pre-digitalization manual system; (b) the adoption process, including how training was implemented and the barriers encountered; and (c) perceptions of digitalization's effect on efficiency, muzakki reach, and congregational trust. Second, direct, non-participant observation took place across four episodes: the 2026 Ramadhan zakat fitrah collection, two DKM meetings, a live digital-payment processing session, and a mustahiq distribution session. Third, document analysis covered the DKM's 2021–2024 financial reports, training-evaluation questionnaires, and zakat distribution reports; figures were cross-checked against the treasurer's cash-book entries and, where available, bank/QRIS settlement statements, and discrepancies were resolved through follow-up questions to the treasurer and zakat coordinator. Because all four years of collection data come from the same annual zakat fitrah period, the year-on-year comparison already holds Ramadhan seasonality constant, although it cannot rule out other coinciding changes such as congregational growth. Saturation was assessed against the five DIGIT-MASJID dimensions themselves: codes for all five had emerged from the first six informants (board members, coordinator, and field amil), and the remaining three interviews, with the representative

muzakki and the youth committee member, added texture to existing D3 (Congregational Trust) and D5 (Public Accountability) codes without introducing a sixth dimension or contradicting existing coding.

Measurement

Constructs were operationalized through DIGIT-MASJID, a case-derived analytical rubric coined for this study rather than a validated psychometric scale, built by synthesizing the four literature strands reviewed above (Table 2). Each dimension was scored on a 1–5 scale: 1 (no evidence of practice), 2 (partial, unsystematic initiative), 3 (practice underway but not yet optimal), 4 (systematic practice with documentation), and 5 (standardized, measurable, sustainable practice). Dimension scores were set through consensus discussion following independent assessment, and discrepancies exceeding one point were resolved through joint calibration against the transcript data. Because the rubric rates practice states rather than latent respondent attributes, the dimensions are treated as analytic categories, not reflective or formative indicators of a psychometric scale. The five-dimension structure has not been validated outside the present case and should be treated as a candidate instrument. Two supplementary instruments were administered after the training program: a five-point Likert technology-acceptance questionnaire completed by the eight field amil (score ≥ 4 classed as “accepting”) and a training-satisfaction questionnaire completed by the 15 active DKM board members. Aggregate percentages were computed with the Percent of Maximum Possible (PoMP) method (Cohen et al., 1999): summed item scores divided by the maximum possible sum (respondents $\times$ items $\times$ 5), expressed as a percentage.

Table 2
Operationalization of the DIGIT-MASJID Rubric

Dimension	Operational focus	Literature anchor	Principal evidence
D1 Digital Infrastructure	Payment channels, shared records, integration of QRIS, WhatsApp Business, Google Sheets, SIMZAT	Muflih (2023); Jaenudin et al. (2024); Bin-Nashwan et al. (2023)	Documents; observation of live payment session
D2 Amil HR Capacity	Amil competence, independence in using the system, training and mentoring	Bin-Nashwan et al. (2023); Abdullah et al. (2023)	Interviews; training evaluations
D3 Congregational Trust	Trust in the DKM and in the digital tools; intergenerational acceptance	L. Hamdani (2024); Danila et al. (2024)	Interviews with muzakki and amil
D4 Sharia Compliance	Absence of interest-bearing intermediation; religious acceptability of digital channels	Purwanto (2021); Hendra (2020); Rosele et al. (2025); Pati et al. (2021)	Interviews; payment-rail documents
D5 Public Accountability	Publication and accessibility of receipts and distribution data	Nahar (2018); Haron et al. (2020); Hotimah & Suprayogi (2023)	Distribution reports; interviews

Source: Authors’ development (2026). The rubric is a candidate instrument and has not been validated outside the present case.

Data Analysis Technique

Data analysis followed the three-stage procedure of Miles, Huberman, and Saldaña (2014): data condensation, data display, and conclusion drawing and verification. Thematic coding was carried out by two independent coders using DIGIT-MASJID. Agreement was computed across the ten dimension-level ratings the coders assigned independently (five dimensions, each rated pre- and post-digitalization), using unweighted rather than weighted

Kappa because the five anchor points are qualitatively distinct practice states, not equal-interval steps, a conservative choice that likely understates agreement. The resulting Cohen’s Kappa of 0.79 indicates substantial agreement (Landis & Koch, 1977), though a coefficient drawn from so few ratings should be read with caution and is reported alongside the consensus procedure, in line with guidance to treat intercoder reliability in qualitative work as part of a transparent, process-based account rather than a stand-alone statistic (Cofie et al., 2022). A weighted Kappa may be reported in future validation with a larger sample. Trustworthiness was maintained through source triangulation, member checking, thick description, and a reflexive research journal. The research team observed the training and mentoring program purely as external evaluators, not as trainers or DKM staff, and the reflexive journal was used after each interview and observation session to record the team’s assumptions before the scores were finalized.

The three data sources overlap, which matters for interpreting the figures. Masjid Gritara has exactly eight field amil, so the acceptance questionnaire’s respondent pool is the same group from which INF-4 and INF-5 were drawn; three of the nine informants (INF-1, INF-2, INF-3) sit on the 15-member DKM board and are also counted among the satisfaction respondents; the three muzakki informants (INF-6 to INF-8) and the youth committee member (INF-9) fall outside both questionnaires. The 99.8% and 89.98% figures are therefore complementary readings, self-report and interview, of overlapping staff and board groups, not independent confirmations from separate populations. Because both questionnaires were self-administered by the staff whose program was evaluated, social-desirability bias cannot be ruled out; the main safeguard was triangulating them against independent interview and observation data, a partial rather than complete check. The 62% data-error-reduction estimate comes from document analysis, not a formal audited error log: it compares the discrepancy rate between muzakki payment records and the treasurer’s cash-book/bank-QRIS reconciliation under the 2021 paper-based system with the same reconciliation under the 2024 digital system, and is reported as an estimate.

RESULT

Informant Profile and Research Context

Masjid Jami’ Al Mu’minuun Griya Utama sits on Jl. Palem Raya, Rancaekek Wetan, Rancaekek Subdistrict, Kabupaten Bandung. It accommodates 800–1,000 worshippers across two floors and includes an air-conditioned women’s prayer hall, a children’s library, a nursing room, and a children’s play area. High congregational satisfaction and strong social capital show in the mosque’s positive standing within the Griya Utama residential area. The Gritara DKM comprises 15 active board members whose professional backgrounds span information technology, finance, and education. The nine informants, summarized in Table 3, span every position in the zakat-management chain, from board leadership through frontline collection and payment.

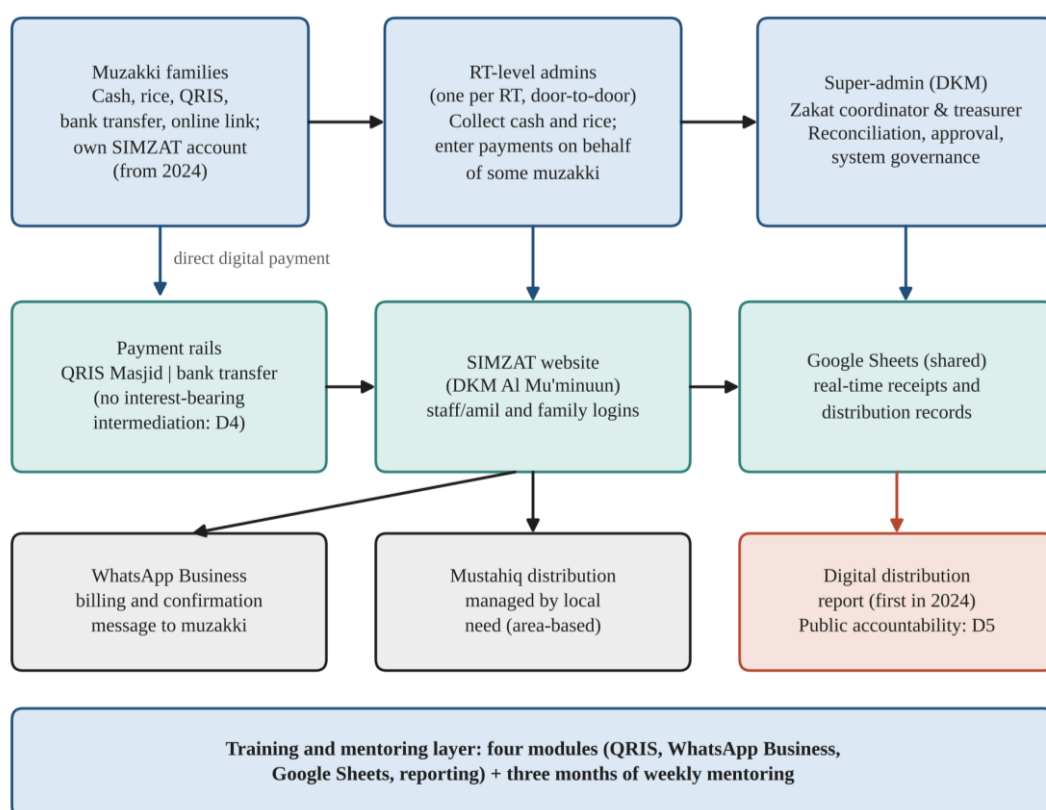
Table 3
Profile of Key Informants

Code	Role	Age	Professional background
INF-1	DKM Chairperson	47	Holds a doctoral degree in Religious Studies
INF-2	DKM Treasurer	58	Bachelor’s degree in Finance; private-sector employee
INF-3	Zakat Coordinator	55	Bachelor’s degree in Administration; private-sector employee
INF-4	Field Amil	66	Zakat collector

Code	Role	Age	Professional background
INF-5	Field Amil	50	Zakat collector
INF-6	Muzakki (representative)	58	Congregation member
INF-7	Muzakki (representative)	52	Congregation member
INF-8	Muzakki (representative)	65	Congregation member
INF-9	Youth Committee Member	29	Congregation member

Source: Field interviews, February 20 to April 2026, following informal field entry in January 2026. INF-1 to INF-3 are three of the 15 active DKM board members and are counted among the satisfaction-questionnaire respondents (Table 5); INF-4 and INF-5 are two of the eight field amil and are counted among the acceptance-questionnaire respondents; INF-6 to INF-9 were not administered either questionnaire. The exact tenure of each informant's engagement with the mosque was not systematically recorded and is noted as a limitation.

Figure 4
Governance and Data Flow of the Gritara Digital Zakat Ecosystem



Source: Authors' synthesis of interviews, observation, and DKM documents (2026).

Initial Condition: The Manual System and Its Systemic Problems

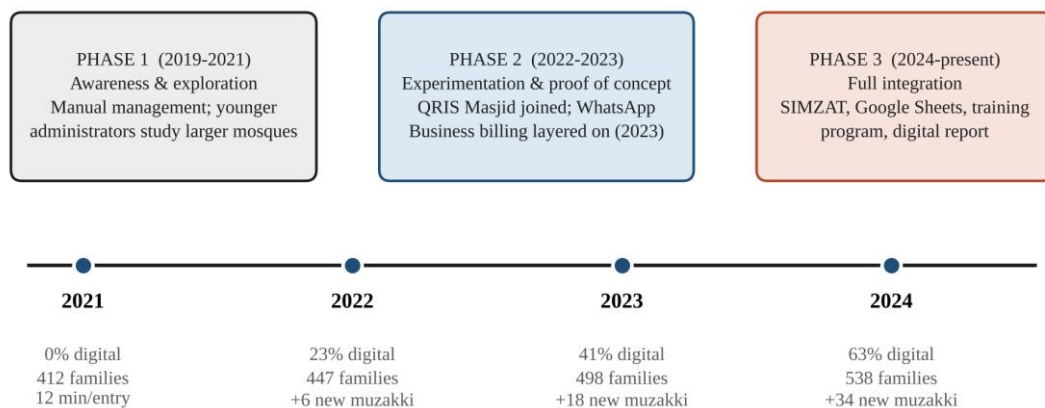
Before digitalization, zakat management ran entirely by hand, in two sequential stages: the amil first recorded muzakki data in a notebook at the point of payment, then a different officer re-entered those records into a website. Four systemic problems emerged: (1) time inefficiency, averaging 12 minutes per muzakki; (2) a structural risk of data error; (3) limited geographic reach; and (4) the absence of real-time monitoring. As the zakat coordinator put it:

“Before the digital application, we recorded all muzakki data in a notebook, then re-entered it into the website. One person could take 10–15 minutes, not counting the long queues during Ramadhan.” (INF-3, 55, Zakat Coordinator)

The Three-Phase Digitalization Trajectory

An informal precursor is worth noting: a DKM member had built an Excel-based zakat calculator in 2012 to help compute amounts owed, but it was a stand-alone calculation aid, not a payment or record-keeping channel, and did not change the manual collection process. The systematic effort unfolded across three phases (Figure 5). Phase One (2019–2021), Awareness and Exploration: management stayed manual, but younger administrators had begun discussing the successes of larger mosques. Phase Two (2022–2023), Experimentation and Proof of Concept: the DKM enrolled Masjid Gritara in the QRIS Masjid program (Syahputra & Mukhtasar, 2021); by Ramadhan 2022, QRIS accounted for 23% of payments, well above the projected 10%. By 2023, a dedicated zakat fitrah transaction application and a WhatsApp Business-based communication and billing channel were layered on top of QRIS, lifting the digital share to 41%. Phase Three (2024–present), Full Integration: the DKM ran a mobile-application training program and built a digital ecosystem combining QRIS, WhatsApp Business, online donation links, a shared Google Sheets system, and, from 2024, SIMZAT. Since digital channels became a meaningful part of collection in 2023, the mosque had operated this approach for roughly three years by the time of fieldwork in 2026.

Figure 5
Three-Phase Digitalization Trajectory of Masjid Gritara, 2019–2024



Note: a 2012 Excel zakat calculator was a stand-alone aid, not a payment or record-keeping channel.

Source: Gritara DKM financial reports 2021–2024 and field interviews, processed by the authors (2026).

The zakat coordinator described how the current system operates:

“We have a super-admin account and admin accounts, one for each RT officer. That officer goes directly to every household rather than waiting for people to come to us. QRIS and transfers have been options since we started going digital, and cash and rice are still accepted too; the officers just carry those back themselves for the super-admin to process. Since 2024, every family already has their own account on the DKM Al Mu’minuun website, so payment does not have to go through the officer anymore. However, the admin

still records every transaction there and uses it to manage distribution based on which mustahiq are around us. That is basically our SIMZAT now; it is not just for collecting, it is for distributing too.” (INF-3, 55, Zakat Coordinator)

The early phases were not universally welcomed. Several informants recalled hesitance among older congregants and administrators during the shift from Phase One to Phase Two, a resistance the DKM addressed through repeated, in-person reassurance rather than through the technology itself:

“At that time I was... hesitant. We were used to putting the money directly into the box. Then they said we could use a phone, scan something like that. I wondered whether the money really went to the mosque, and how we would even get proof for the administrators, especially since not all of us older people are used to that kind of thing. The administrators kept talking with me about it, not just once; after prayers they would explain it again; whenever they saw me, they would explain it again. They said cash was still fine; QRIS was just an addition. They explained the money went into the mosque’s own account. Eventually I came to trust it, because it was explained to me directly, not just announced.” (INF-8, 65)

Collection Trends and Operational Efficiency

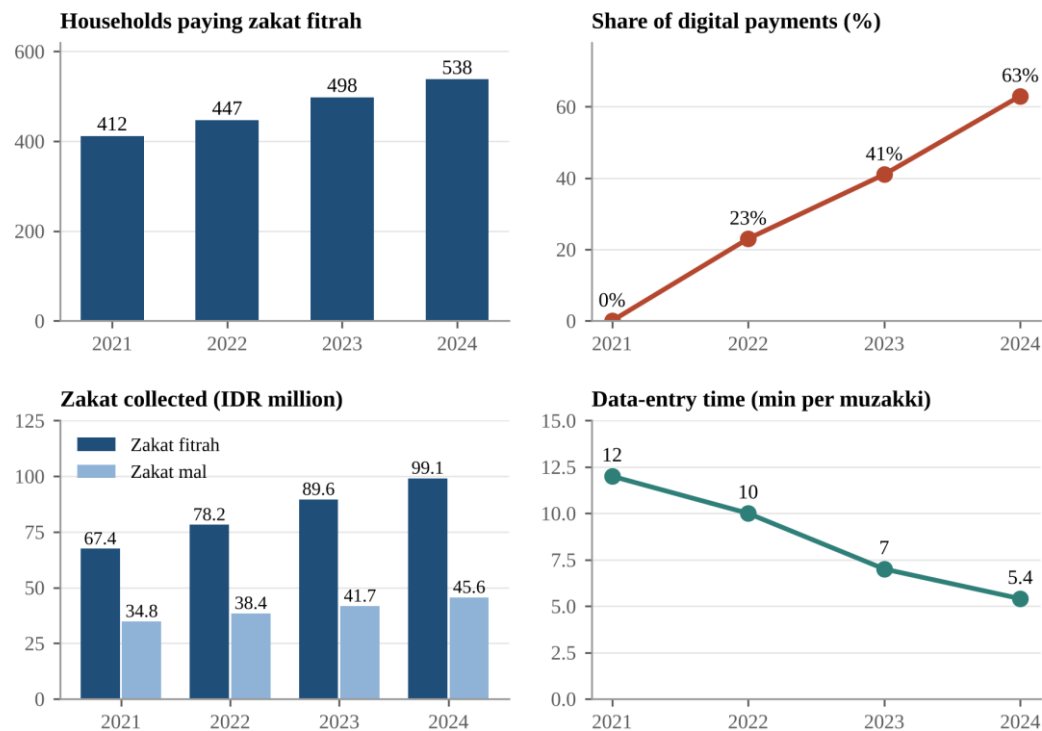
Table 4 and Figure 6 trace a substantial and consistent upward trend. Households paying zakat fitrah rose 30.6%, from 412 in 2021 to 538 in 2024; total zakat fitrah collected rose 47.0%, from IDR 67.4 million to IDR 99.1 million; and zakat mal rose 31.0%. Thirty-four new muzakki from outside the mosque’s physical vicinity had joined by 2024, cumulatively since 2022. Operational efficiency also improved: data-entry time per muzakki fell from 12 to 5.4 minutes, a 55% reduction, and the distribution report moved from unpublished (2021–2022) to partial (2023) to fully digital (2024). These gains coincide with the digitalization program but are not proven to result solely from it; broader congregational growth and rising smartphone adoption over the same period may also have contributed, a possibility the single-case design cannot rule out.

Table 4
Zakat Collection Trends at Masjid Gritara Before and After Digitalization

Indicator	2021 (pre-digital)	2022 (early QRIS)	2023 (transition)	2024 (integration)
Households paying zakat fitrah (families)	412	447	498	538
Share of digital payments	0%	23%	41%	63%
Total zakat fitrah (IDR million)	67.4	78.2	89.6	99.1
Total zakat mal (IDR million)	34.8	38.4	41.7	45.6
New muzakki from outside the area	—	6	18	34
Data-entry time (min/muzakki)	12	10	7	5.4
Distribution report published	No	No	Partial	Digital

Source: Gritara DKM financial reports 2021–2024, processed by the authors (2026).

Figure 6
Digitalization Indicators at Masjid Gritara, 2021–2024



Source: Gritara DKM financial reports 2021–2024, processed by the authors (2026). Data-entry time and share of digital payments are shown on separate panels because they are measured on different scales.

Mobile Application Training and Mentoring Program

The training program consisted of four core modules: Module 1, mastering the QRIS application; Module 2, managing muzakki communication via WhatsApp Business; Module 3, working with cloud-based Google Sheets; and Module 4, preparing and publishing transparent zakat distribution reports. Mentoring continued for three months after training through weekly face-to-face sessions supplemented by asynchronous support in a dedicated WhatsApp group. Participants’ accounts illustrate both the program’s reach and its limits, including a contrasting case in which adoption did not go smoothly:

“Before, I used to write down receipts and distributions in a notebook first, then hand it to the treasurer. Now, whenever there is a receipt or a distribution, I update it directly in [Google] Sheets, so colleagues with access can see it too. When it is time to put together a report, I am not starting from the notebook records anymore.” (INF-5)

“Some picked it up quickly, shown once or twice, and they were working on their own after that. However, some colleagues are still afraid of making a mistake when they open [Google] Sheets. Sometimes they’ll say, ‘Never mind, you enter it for me.’ So not all of the amil are really doing it themselves yet.” (INF-3, 55, Zakat Coordinator)

Table 5
Evaluation Results of the Mobile-Based Zakat Management Training Program

Evaluation indicator	Target	Achievement	Remarks
DKM board partner satisfaction	≥ 80%	89.98%	Exceeded target by 9.98 points

Evaluation indicator	Target	Achievement	Remarks
Application acceptance (amil)	≥ 85%	99.8%	Near-universal; self-reported by eight amil
Data-error reduction	≥ 40%	62%	Estimate from document analysis, not an audited log
New muzakki from outside the area	Increase	+34	Cumulative since 2022, accelerating after 2024 integration
Data-entry time efficiency	Reduction	−55%	12 to 5.4 min/muzakki
Digital distribution report	Available	Yes (2024)	First in DKM history

Source: Evaluation of the Masjid Gritara training and mentoring program (2024–2025).

Table 5 shows that the program’s results exceeded its targets. The 99.8% application-acceptance rate among the eight trained field amil, from a five-point Likert questionnaire completed after training, reflects post-training acceptance among internal staff rather than payment intention among the general muzakki population, and it is therefore not comparable with population-level figures such as the 68–74% digital zakat-usage intention reported in the literature (Kasri & Sosianti, 2023). The 89.98% satisfaction rate comes from the 15 active DKM board members.

Evaluation of the DIGIT-MASJID Dimensions

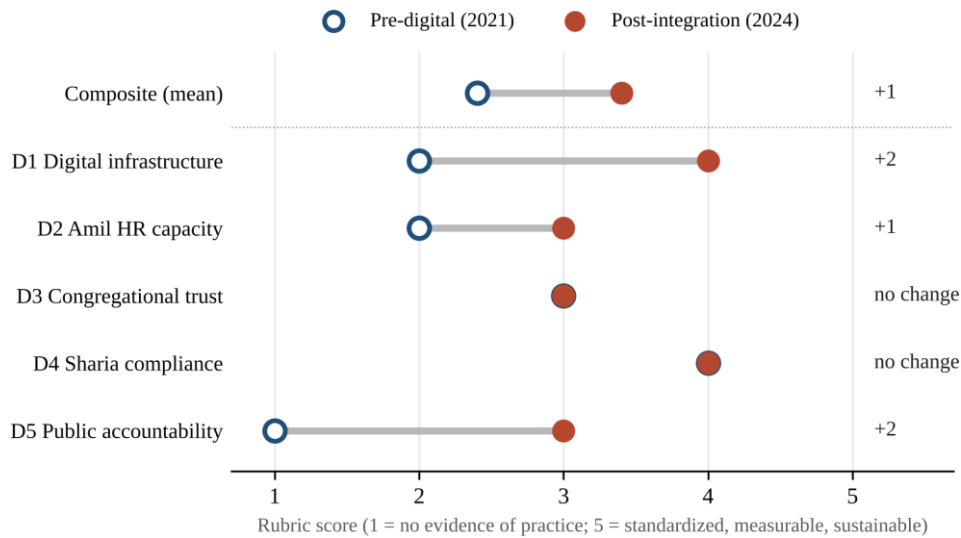
Table 6 and Figure 7 show a developmental profile marked by real but uneven progress. D1 (Digital Infrastructure) climbed two points, from 2 to 4, reflecting the integration of the QRIS–WhatsApp Business–Google Sheets ecosystem. D2 (Amil HR Capacity) rose from 2 to 3. D3 (Congregational Trust) held steady at the midpoint of 3, as the intergenerational gap in technology acceptance has not fully closed. D4 (Sharia Compliance) remained stable at a high level (4). D5 (Public Accountability) jumped two points, from 1 to 3, from no public reporting to the DKM’s first-ever digital distribution report. The composite score rose from 2.4 to 3.4.

Table 6
Evaluation of DIGIT-MASJID Model Dimensions at Masjid Gritara (2021 vs. 2024)

Dimension	Pre (2021)	Post (2024)	Trend	Key notes
D1: Digital Infrastructure	2	4	↑ Increase	Integrated QRIS + WhatsApp Business + Google Sheets
D2: Amil HR Capacity	2	3	↑ Increase	Improved post-training (89.98% satisfied)
D3: Congregational Trust	3	3	→ Unchanged	Institutional trust did not fully transfer to platform trust
D4: Sharia Compliance	4	4	→ Unchanged	Payment rails avoided interest-bearing intermediation
D5: Public Accountability	1	3	↑ Increase	Digital distribution report published
Overall average	2.4	3.4	+1.0	Substantial improvement over three years

Source: Analysis of interviews, observation, and documents (Feb 20–Apr 2026, following informal field entry in Jan 2026). Scale from 1 (very weak) to 5 (excellent). Cohen’s Kappa = 0.79.

Figure 7
DIGIT-MASJID Scores Before and After Digitalization



Source: Analysis of interviews, observation, and documents (2026). Open circles: 2021; filled circles: 2024.

The D3 plateau is best understood in participants' own words. Several informants distinguished trust in the DKM as an institution from trust in the digital tools themselves:

"I trust the mosque administrators; I know them, they have been managing things here a long time. However, trusting the administrators and trusting QRIS are different things for me. With QRIS I still check two or three times, wondering whether the money really went to the mosque or not." (INF-6, 58)

"For me the app is just a tool. What matters is knowing who is responsible behind it. Because I already trust the DKM, trusting the QRIS came quickly too." (INF-7, 52)

On the accountability dimension, informants linked the shift to digital reporting directly to a change in how they related to the DKM:

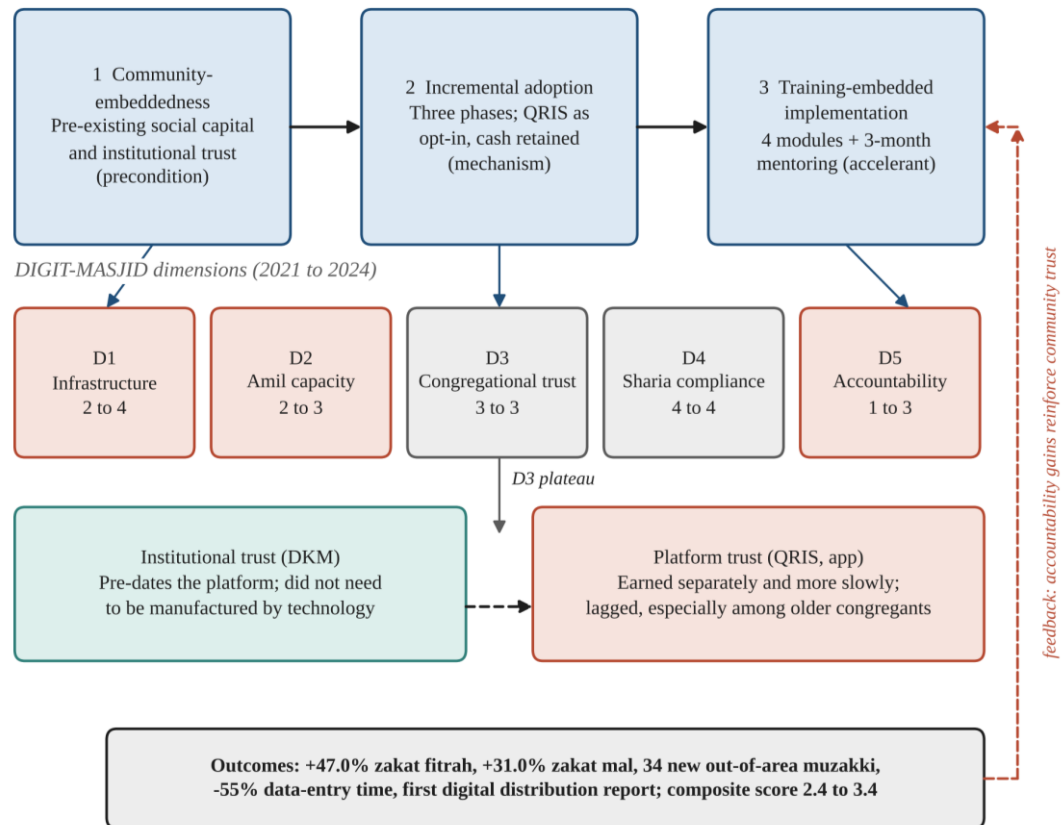
"Before, I only knew about it in general terms. The administrators would say the money had been distributed to mustahiq or used for some activity, but I rarely saw the actual figures myself. [...] Now it is much clearer. When that report was shared, we could see how much had come in, how much had already been distributed, and which categories it went to. So I feel like I am not just being asked to trust them anymore; I am actually being given the information." (INF-6, 58)

Conceptualizing the Gritara Model

Synthesizing the findings gives the Gritara Model its shape (Figure 8), defined by three distinguishing features. First, community-embeddedness: digitalization unfolded on an existing base of community social capital, with congregational trust in the DKM converting directly into technology-adoption capital. Second, incremental adoption: the three sequential phases let the congregation adapt organically, with QRIS introduced as an opt-in choice rather than an imposed obligation. Third, training-embedded implementation: the training program was built in as an inseparable part of the rollout, and the 99.8% acceptance rate reflects systematic training rather than technological sophistication alone. These features form a sequence rather than operating side by side: community trust is the precondition that makes incremental, opt-in adoption tolerable to a cautious congregation; incremental adoption creates the repeated, low-

stakes touchpoints at which training can be embedded rather than delivered as a single event; and training-embedded implementation converts D1 and D2 gains into the D5 gain that in turn reinforces congregational trust. The most notable pattern in Table 6 is the gap between D3, which plateaued at 3, and D1 and D5, which both climbed.

Figure 8
The Gritara Model: A Candidate Framework for Community-Based Zakat Digitalization



Source: Authors' synthesis of the Gritara case data (2026). The model is a candidate framework pending multi-case validation.

DISCUSSION

Interpretation of Key Findings

Three factors together explain why digitalization succeeded at the pace and scale observed: mature community social capital, a structured training program, and an adoption strategy that avoided imposing change all at once. This departs from how digital zakat platforms often succeed elsewhere, where adoption research tends to emphasize technical persuasion over pre-existing relationships. The gains in collection (47.0% for zakat fitrah, 31.0% for zakat mal), efficiency (a 55% cut in data-entry time), and reach (34 new out-of-area muzakki) are consistent with national-level evidence that digitalization is favorably associated with zakat collection (Suprayitno et al., 2025), with the effectiveness of digitalized collection at BAZNAS Tangerang City (Jamaludin & Aminah, 2021), and with the marked rise in muzakki reach reported after community mosques adopted a mobile application (A. Hamdani et al., 2024). The 34 new muzakki lend empirical support to Antonio et al.'s (2020) proposition that digitalization can shift the geographic boundary of zakat services from the physical to the digital, and the

efficiency gain echoes Hadi et al.'s (2024) conclusion that data transparency and accuracy are the principal payoffs of automating zakat management. The estimated 62% reduction in data errors aligns with the same study's finding that automated recording structurally eliminates duplicate data-entry errors. These gains are better attributed to the combined three-year package, the QRIS/WhatsApp/Google Sheets infrastructure, the training and mentoring program, and the pre-existing community trust the DKM drew on at each phase, than to the payment technology in isolation; the case data cannot separate each element's contribution.

Positioning Within the Existing Literature

The near-universal acceptance rate among trained field amil, while not comparable to population-level adoption figures, is consistent with Jaenudin et al.'s (2024) proposition that organically formed initial trust smooths the adoption curve, and with Muflih's (2023) TAM-based account in which ease of use and religiosity, both structurally present in the Gritara ecosystem before training began, drive mobile zakat adoption. The three-phase trajectory aligns with the incremental pattern Sukmawati et al. (2022) document in zakat technology adoption generally and echoes Bin-Nashwan's (2022) finding that trust and gradual familiarity, rather than technological sophistication alone, drove sustained e-Zakat adoption during and after the COVID-19 crisis. Positioned against this literature, the Gritara Model is best read as a contextual synthesis rather than a freestanding theory: staged adoption is a well-documented pattern in the broader digital-transformation and innovation-diffusion literature, and the present findings are a convergent instance of that pattern. The model's other two components apply established mechanisms in context-specific ways. Community-embeddedness operationalizes, within a mosque setting, the social-capital-based trust mechanism L. Hamdani (2024) identifies in Indonesian zakat contexts and mirrors Almarri and Meewella's (2015) finding that religious philanthropic institutions across the Gulf Cooperation Council draw on pre-existing community trust for organizational innovation; cross-country evidence from Syakir et al. (2021), who find social capital predicting zakat institution performance across 92 institutions in 42 countries, and evidence that social trust raises giving beyond the Muslim world (Lin, 2021) suggest the mechanism is transferable rather than idiosyncratic. Training-embedded implementation operationalizes the social-facilitation and institutional-support prerequisites that Bin-Nashwan et al. (2023) derive for ZakaTech acceptance, matches the weight that training and management push carry in zakat institutions' adoption of social media (Abdullah et al., 2023), and echoes Choudrie et al.'s (2022) finding that embedding instruction within an already-trusted community institution is what overcomes resistance among older users; evidence from an Indonesian micro-waqf bank, where mentoring had the strongest effect among program components on micro-business growth (Soemitra et al., 2022), points the same way. The case thus also illustrates, at mosque scale, the resource-constrained digital transformation that non-profit scholarship describes (Cipriano & Za, 2025; Cordery et al., 2023). Finally, the rise in D5 from 1 to 3 is consistent with Saad et al.'s (2023) finding that transparent administration positively affects muzakki trust, with survey evidence from a mosque-based zakat amil institution (Shafiiyyah & Fithria, 2023), and with the view that digital records comparable against physical ones can safeguard the integrity of endowment management (Sudrajat et al., 2023). The accountability gain, however, moved independently of, and faster than, platform trust itself.

Theoretical Contribution: Institutional Trust versus Platform Trust

The clearest theoretical claim this case supports is that institutional trust and platform trust are separable constructs that can move at different speeds within the same community, rather than a single trust variable that technology exposure activates. Most adoption models, including the TAM and UTAUT variants reviewed above, treat trust as an outcome of exposure to a working system. The Gritara trajectory runs the other way: congregational trust in the DKM predates the platform and was only partially extended to it, which is why D3 plateaued at 3 even as D1 and D5 climbed. Institutional trust did not need to be manufactured by the technology, but trust in the technology still had to be earned separately and, for at least some congregants, largely was not (INF-6 versus INF-7). This is a genuine empirical complication for the zakat-technology literature, since Ghofar et al. (2024) and Asni et al. (2024) identify trust as the dominant driver of digital zakat adoption without distinguishing institutional from platform trust. The distinction has begun to surface elsewhere: in mobile payment, institution-based trust and technology-embedded provider trust are empirically separable components of consumer trust (Nguyen et al., 2021); in internet voting, institutional trust predicts trust in and use of the system far more strongly than technological trust (Romanov et al., 2025); and recent zakat-adjacent work finds that institutional credibility mediates the effect of digital transparency on muzakki trust (Hidayah et al., 2026a), which is what a model that keeps the two objects of trust apart would predict. A parallel decoupling appears in the digital-divide literature on older adults: resistance to mobile-health technology stems less from lack of access than from a distinct, slower-forming trust in the platform shaped by privacy and risk concerns (Fox & Connolly, 2018); initial trust among older people rests on personality-based, cognitive, calculative, and institutional bases (Weck & Afanassieva, 2023); and trust in mobile payment among older users is built from perceived usefulness, ease of use, and information and service quality (Yang et al., 2023; Huang et al., 2024), with security and risk perceptions weighing heavily (Hanif & Lallie, 2021). Platform trust, in other words, has antecedents of its own that an institution's reputation cannot simply lend. The claim is deliberately bounded: it rests on a single case, on a D3 score that plateaued rather than declined, and on informant accounts rather than a validated trust scale, so it is best read as a testable proposition pending replication in cases where the two trust constructs are measured as distinct, validated variables from the outset. Table 7 assesses each proposition against the evidence.

Table 7
Assessment of Research Propositions Against the Gritara Evidence

Prop.	Principal evidence	Assessment	Boundary of the claim
P1	Gains in collection (+47.0%), efficiency (−55% entry time), reach (+34) and reporting; trust pre-dated the platform (INF-7, INF-8)	Consistent with the proposition	Coinciding changes (congregational growth, smartphone uptake) cannot be excluded
P2	D3 plateau at 3 while D1 and D5 rose; INF-6 distinguishes trusting the DKM from trusting QRIS	Supported; strongest claim of the study	Single case; no validated trust scale; plateau, not decline
P3	Four-module training plus three-month mentoring; 99.8% acceptance; resistance eased by repeated in-person explanation (INF-8)	Consistent with the proposition	Self-reported by overlapping staff groups; contribution of training cannot be isolated

Source: Authors' analysis (2026).

Practical Implications

Because institutional trust and platform trust move at different speeds, the gap carries direct practical weight. Structured, intergenerational digital-mentoring programs are one candidate response, a design supported by Lee and Kim's (2019) finding that structured intergenerational mentoring improves eHealth literacy and reduces technophobia among older adults, and by evidence that societal and intergenerational feedback strongly shapes older adults' motivation and capability to use new digital products (Hong et al., 2025). The Gritara experience also suggests that the pathway is calibrated to resource-constrained, faith-based settings: mosques adopting the model should budget for a longer, more relationship-intensive engagement track for older congregants rather than expecting the DIGIT-MASJID score to rise evenly across all five dimensions. Table 8 sets out implications by stakeholder.

Table 8
Practical Implications by Stakeholder

Stakeholder	Recommendation	Evidence basis
Ministry of Religious Affairs and Zakat Forum (FOZ)	Run a national mobile zakat-application training program; pilot the Gritara pathway in other residential mosques	Training-embedded implementation (Table 5; Figure 8)
Regulators and policymakers	Standardize distribution-report formats built into mobile applications; give regulation-backed recognition to the mosque's role in the zakat ecosystem	D5 gain; shadow zakat economy (Hadi et al., 2024)
Mosque management boards (DKM)	Keep cash and rice as options; introduce digital channels as opt-in; verify that payment rails avoid interest-bearing intermediation	Incremental adoption; D4 stability; Pati et al. (2021)
Mosque youth and amil	Run structured intergenerational mentoring paired with zakat literacy to build platform trust among older congregants	D3 plateau; Lee & Kim (2019); Hong et al. (2025)

Source: Authors' synthesis (2026).

Boundary Conditions

These findings carry particular weight within Indonesia's religious and regulatory context. Unlike the national BAZNAS/LAZ architecture formalized by Law No. 23/2011, community mosques such as Gritara operate within the shadow zakat economy Hadi et al. (2024) describe, without dedicated digitalization funding, sharia-compliance oversight, or professional IT staff, so the low-cost pathway documented here is calibrated to a resource-constrained, faith-based setting rather than a well-funded national institution. The religious dimension also shapes what counts as success: D4 remaining stable mattered to informants independently of efficiency gains. That stability is not automatic: given Pati et al.'s (2021) finding that sharia-compliant fintech integration is conditional on formal Baznas authorization and a clean separation of float funds, D4 held at Gritara only because the DKM's payment rails avoided interest-bearing intermediation, a design choice other mosques would need to verify independently. Technology adoption here is thus evaluated against religious as well as operational criteria, a theme shared by research on the sharia treatment of digital zakat (Purwanto, 2021; Hendra, 2020; Rosele et al., 2025). Whether this configuration, community trust embedded in a religious institution, resource constraints, and a specific zakat-governance gap, transfers to other developing-country or Muslim-majority settings remains an open, testable question.

Limitations

Read against the limits of a single, three-year case, the implications above are conditional. Because Masjid Gritara was purposively selected for an active digitalization program, high congregational satisfaction, and information-technology capacity on its board, the case likely sits toward the favorable end of the national range, and the reported gains are better read as an upper bound than an expected outcome; the instrument's unvalidated status compounds this caution, since a differently weighted rubric could yield a different composite trajectory from the same data. The self-reported acceptance and satisfaction figures, collected from the same amil and board members whose program was evaluated, carry a social-desirability risk that triangulation only partly offsets, and the absence of mustahiq interviews means the accountability gains are documented from the payer and institution side without direct evidence of how recipients experienced the change. Consistent with Asni et al.'s (2024) observation that data-security concerns remain unresolved across the zakat-digitalization literature, this case cannot speak to how Gritara's data-protection practices would hold up under adversarial scrutiny. None of these limits overturn the direction of the findings; they mean that the Gritara Model is a candidate framework awaiting multi-case validation rather than a settled prescription.

CONCLUSION

This study traced how zakat management at Masjid Jami' Al Mu'minuun Gritara moved from an inefficient manual system to an integrated digital ecosystem. Three findings stand out. First, systematic training and mentoring proved essential: the 89.98% partner-satisfaction rate and 99.8% application-acceptance rate are the outcome of deliberate investment in amil capacity building. Second, substantial quantitative changes accompanied digitalization: zakat fitrah rose 47.0%, zakat mal rose 31.0%, 34 new muzakki were reached, data-entry time fell 55%, and a digital distribution report was published for the first time. Third, the DIGIT-MASJID score climbed from 2.4 to 3.4 over three years, with the largest gains in digital infrastructure and public accountability.

The study makes three contributions of differing theoretical weight. First, the clearest new claim is empirical rather than framework-level: institutional trust and platform trust can move at different speeds within the same community, documented here for the first time in the zakat-digitalization literature, though on a single case and pending replication. Second, the Gritara Model, defined by community-embeddedness, incremental adoption, and training-embedded implementation, is best understood as a contextual synthesis of established adoption and social-capital mechanisms; its value lies in the specific configuration documented, community trust preceding the technology and training folded into the rollout, with potential, not yet tested, to transfer to community mosques in other Muslim-majority countries. Third, the DIGIT-MASJID instrument responds to the absence of a holistic assessment framework for mosque-level zakat digitalization identified by Moniruzzaman (2025), though as an unvalidated candidate instrument. Together, the findings demonstrate that residential mosques, long treated as informal actors within the zakat ecosystem, have a documented capacity, in at least this case, to become measurable, accountable agents of Islamic social finance.

The study's limitations include its focus on a single case, which limits statistical generalization; a data-collection window of roughly two months preceded by informal field entry; the self-reported nature of the acceptance and satisfaction questionnaires; and the absence of formal mustahiq interviews, so the account is essentially payer- and institution-side. Future research might pursue comparative multi-case studies, three-to-five-year longitudinal designs,

studies that build in the mustahiq perspective, and designs that triangulate self-reported acceptance against behavioral measures; it could also test whether the transparency benefits that conceptual work attributes to emerging tools such as blockchain (Hasan, 2025) materialize at mosque scale. Because institutional trust and platform trust move at different speeds, four practical implications follow, the last aimed directly at closing that gap: (1) a national mobile zakat-application training program run jointly by the Ministry of Religious Affairs and the Zakat Forum (Forum Zakat, FOZ); (2) standardization of distribution-reporting formats built into mobile applications; (3) formal, regulation-backed recognition of the mosque's role in the national zakat ecosystem; and (4) structured, intergenerational digital-mentoring programs paired with zakat literacy, supported by Lee and Kim (2019). The Ministry of Religious Affairs and FOZ are encouraged to pilot the Gritara Model's training-embedded, incremental approach in other residential mosques as a low-cost route toward measurable, accountable, community-based zakat governance.

Author Contributions

Conceptualization, R.A. and A.I.S.; methodology, R.A.; software, H.S.; validation, R.A., A.I.S. and L.N.; formal analysis, R.A.; investigation, R.A. and H.S.; resources, L.N.; data curation, H.S.; writing—original draft preparation, R.A.; writing—review and editing, A.I.S.; visualization, H.S.; supervision, A.I.S.; project administration, L.N.; funding acquisition, A.I.S. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

Fieldwork was first authorized by a research permit (Surat Izin Penelitian) issued by the Institute for Research and Community Service (LP2M), UIN Sunan Gunung Djati Bandung, No. B-457/Un.02/V.2/PP.06/02/2026, dated February 20, 2026. The study subsequently received formal ethical approval from the Komisi Etik Penelitian LP2M UIN Sunan Gunung Djati Bandung (Research Ethics Committee), Certificate of Approval No. B-958/Un.05/V.2/TL/08/2026, issued August 20, 2026, given its routine, minimal-risk qualitative fieldwork (semi-structured interviews, direct observation, and review of the mosque's own administrative and financial documents) with adult institutional and community informants. No waiver of, or exemption from, ethics review was sought or granted; the study underwent full committee review given its use of the mosque's internal financial and administrative records. Financial figures from the DKM's cash-book and distribution records were reviewed with the DKM's explicit consent and used only in aggregated or de-identified form (Tables 4–6); no individual muzakki's payment amount is disclosed.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study; each informant was informed of the study's purpose and of the right to withdraw at any time before agreeing to participate. Confidentiality was protected through the INF-1 to INF-9 coding scheme (Table 3), and no information that could identify an individual informant by name is reported. No monetary compensation, transportation reimbursement, or other financial incentive was provided, and no participant's personal income or wealth was collected; the financial data examined pertain solely to the mosque's institutional zakat records.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used Claude (Anthropic), along with Grammarly and ChatGPT, to improve the manuscript's language, phrasing, and readability. The DIGIT-MASJID rubric's five dimensions, the argument presented in the Discussion, and all interpretations of the findings reflect the authors' own analytical judgment; these tools were not used to generate, fabricate, or substantively determine research data, findings, quotations, or analytical conclusions. After using these tools, the authors reviewed and edited the content as needed and take full responsibility for the publication.

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Conflicts of Interest

The authors declare no conflicts of interest. As this research received no external funding, funders had no role in the study design; data collection, analysis, or interpretation; manuscript writing; or the decision to publish the results.

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