

Gamifying waqf management: a conceptual framework for digital platforms to boost engagement and transparency

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ABSTRACT

The digitisation of Islamic philanthropy requires new approaches to highlight the long-standing concerns of Waqf management, specifically low levels of stakeholder involvement and a lack of transparency. This study proposes a theoretical model that combines gamification, advanced blockchain, and artificial intelligence to optimise digital Waqf services. The framework has been developed to address 50 related studies through a systematic review, which consists of four interconnected components: First, there is an Engagement Layer, which uses game mechanics, including badges, progress tracking, and challenges; Second, a Transparency Layer uses blockchain to maintain immutable records and AI to generate analytics and detect fraud; Third, there is a Cultural Adaptation Module, which will ensure Sharia compliance and demographic tailoring; Finally, a Governance Compliance Module that will settle the requirements of regulations and institutions. These components operate within an ecosystem of stakeholders, such as FinTech partners and regulators. The framework builds upon existing models of technology adoption by adding Islamic moral and cultural aspects and provides both theoretical and practical input. It provides a systemic direction for Waqf institutions to implement gamified, culturally sensitive digital solutions to increase the participation of donors, the level of trust, and the output efficiency of operations. This study highlights the transformative potential of gamification as a revolutionary application of Islamic social finance, reconciling traditional Islamic values of philanthropy with modern digital technology.

INTRODUCTION

The online transformation of Islamic charitable organisations has brought novel ways of improving Waqf management, which is an unlimited charity that forms the basis of socio-economic progress within Muslim communities (Ulhusna et al., 2024). Despite technological advancements, digital Waqf platforms still struggle with problems such as low user involvement, low transparency, and poor operational efficiency (Suffaruddin & Sabarudin, 2023; Wadi & Nurzaman, 2020). These shortcomings impede the actualisation of Waqf's potential in meeting the current social welfare needs and sustainable development objectives.

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Gamification has emerged as a strategic approach in the context of digital philanthropy, or the use of game design concepts in non-game contexts (Sharma & Mehta 2024). Recent studies have shown that with new technologies such as blockchain and artificial intelligence (AI), gamification can help increase stakeholder participation and responsibility in Waqf management (Andre et al., 2025; Haniff et al., 2025). Nevertheless, the current enactments are not usually theoretically based and culturally sensitive; as such, their adoption and effectiveness are not optimal.

The existing literature demonstrates a significant gap in the use of gamification in the context of Islamic philanthropy. Although technology acceptance models (TAM) and diffusion of innovation (DOI) theories have been redefined to investigate the adoption of fintech by Waqf, few studies suggest gamification-specific theories that are aligned with Sharia principles and localised user behaviours (Zakariyah et al., 2022; Wadi & Nurzaman, 2020). Moreover, the effectiveness of gamification in different charitable systems has not been compared, which restrains the development of strategies by evidence (Weerawarna et al., 2017). Cultural adaptation and demographic customisation in the current designs of gamification on Waqf platforms also receive inadequate consideration (Insawan et al., 2024).

The gaps in this study are filled by proposing a full conceptual framework for gamifying digital Waqf platforms. The framework will fulfil two major goals: first, to increase user interaction by means of culturally specific gamification mechanics, and second, to provide transparency by implementing blockchain and AI. This model provides a structure through which the involvement of donors, functional efficiency, and trust within digital ecosystems can be optimized by the systemic alignment of game design components with the Islamic values of philanthropy.

METHODOLOGY

The research design in this study used a conceptual research design based on a systematic literature review. The research methodology consists of three sequential steps, where literature selection, thematic analysis, and framework development offer sufficient rigour to the proposed model.

The selection phase of the literature used the synthesis proposed in the systematic review, which followed and evaluated 179 papers, of which 50 were determined to be extremely relevant. The inclusion criteria were articles published between 2015 and 2025, and the geographical location of the articles was Southeast Asia, since this area is the main innovator of digital Waqf. The articles included in this review addressed gamification, digital waqf management, technological integration, and cultural adaptation in Islamic philanthropy.

Thematic analysis was performed according to the framework suggested by Braun and Clarke (2006) to identify typical trends and gaps in the concepts of the literature. The analysis determined some of the key themes, the first being the technologicalization of Waqf management and the role of gamification in the creation of user engagement. Furthermore, the synthesis mentions the theoretical frameworks on which the adoption will be grounded and the necessity of cultural and demographic fine-tuning for the model. The other final themes were governance and transparency and the relative performance of Waqf compared with other charitable systems. During this period, the literature that implemented the most common paradigms, such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), were also given specific consideration, and the problems of regulatory fragmentation and digital literacy barriers were also considered.

The framework was designed using an iterative design approach, through which the extracted themes were correlated with the practical factors. The framework was developed using a systems thinking approach in which interrelationships were drawn up in which engagement mechanisms, transparency technologies, cultural adaptation, and governance requirements were involved. Validation was achieved by matching the framework elements with the critical results of the review to ensure that they were in tandem with the theoretical rigour of the framework and practical relevance in different Waqf settings.

RESULTS AND DISCUSSION

The Proposed Conceptual Framework

The gamification conceptual framework of Waqf management has four interrelated parts that enable ecosystem bases. The model proposes an integrated system in which the cultural adaptation and compliance of governance determine gamification mechanics and transparency technologies.

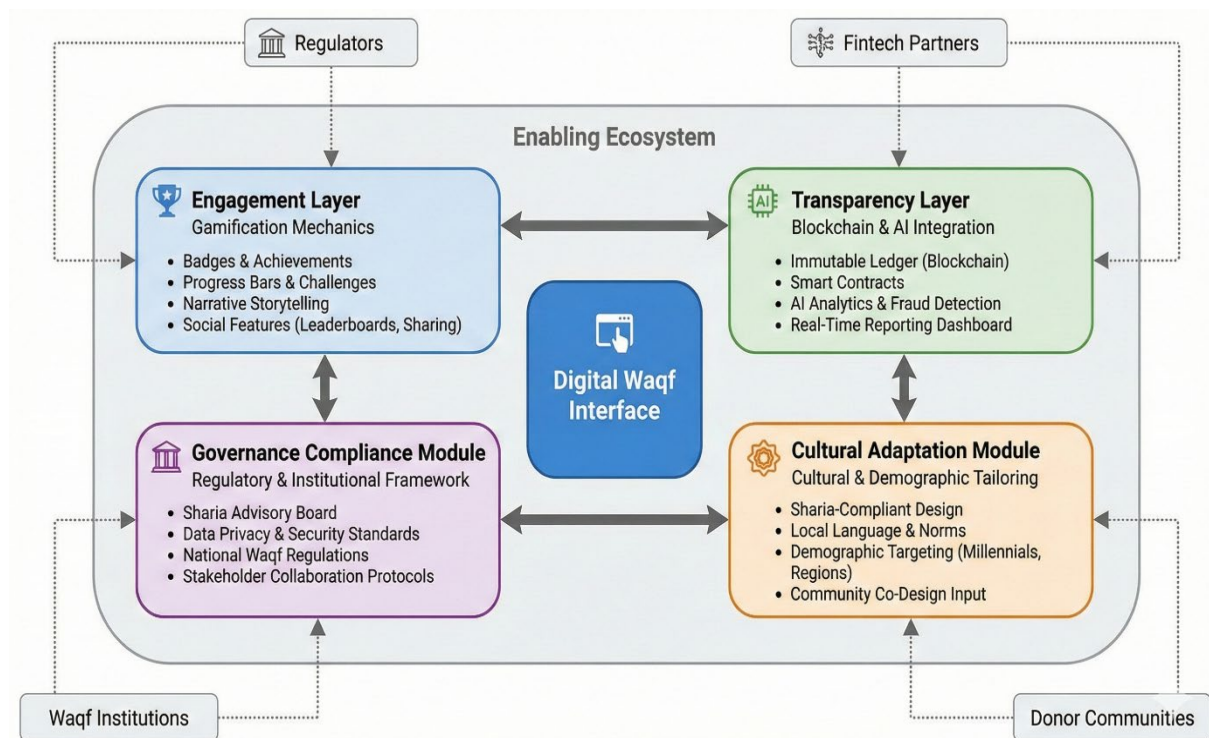


Figure 1. Proposed Conceptual Framework for Gamified Digital Waqf Management

Component 1: Engagement Layer – Gamification Mechanics

The Engagement Layer employs the use of game design to encourage the user to participate and maintain the involvement of the donors. The main mechanics comprise of progress bars, missions of achievement, challenge missions, and storytelling based on the Islamic philanthropic principles (Andre et al., 2025). The studies indicate that these factors contribute to the perceived enjoyment and loyalty of digital Waqf users, especially the millennials and demographics possessing tech skills (Wadi & Nurzaman, 2020).

Nonetheless, the framework pays attention to the complicated association between gamification and donor behaviour. Although the engagement indicators keep improving steadily, the direct effects on the quantity of donations necessitate mediating variables like the improvement of trust and social influence mechanisms (Suffaruddin & Sabarudin, 2023). As such, the layer incorporates social aspects of the community such as leaderboards, social sharing, and shared objectives based on Islamic ideas of community responsibility. The design excludes elements of chance or ambiguity to ensure Sharia compliance while maintaining a motivational appeal.

Component 2: Transparency Layer – Blockchain and AI Integration

The Transparency Layer solutions solve the problem of accountability by integrating technology. Waqf transactions also have an immutable record-keeping in blockchain, and smart contracts distribute the funds based on specific conditions (Haniff et al., 2025). This is enhanced by AI in terms of predictive analytics of donor behaviour, algorithms of fraud detection and use of personalised engagement (Yusof, 2024).

This is one of the factors that directly responds to the lack of trust in digital philanthropy. The open registry of the blockchain also enables monitoring of the money donated to the implementation in real time, which could alleviate the fear of misuse through increased visibility (Denden et al., 2023). AI enhances operational efficiency through smart resource allocation and risk analysis, which can be particularly helpful when dealing with large-scale Waqf assets (Ibrahim, 2023). This integration will be geared towards developing a more verifiable ecosystem that complies with Islamic ideals of accountability and stewardship.

Component 3: Cultural Adaptation Component

One of the keys to the framework's performance is cultural assimilation. The module under consideration is aimed at adapting the elements of gamification to local needs, languages, and religion (Insawan et al., 2024). Using the Muna Indonesian implementations as an example, the design of the implementation can be tailored to integrate the cultural paradigm of Muna, but the Middle Eastern implementation can be geared towards the other communal structure. The strategies of customisation are premised on demographics, that is, age, digital literacy, religiosity, and socioeconomic status (Nashir et al., 2024).

The module encourages the participatory design of co-creation with stakeholders to ensure that the platforms attract the target communities. This counters the drawbacks of existing implementations, which are mostly general gamification templates that are not culturally sensitive. Various Muslim societies make the framework relevant and acceptable by integrating their local values and modes of communication.

Component 4: Governance Compliance Module

The Governance Compliance Module tackles the issue of regulatory and institutional challenges. It includes Sharia advisory boards to conduct ongoing compliance, data privacy standards that are consistent with those of the rest of the world, and harmonised national Waqf frameworks (Manshor et al., 2024). The module enables collaboration between Waqf institutions, fintech providers and regulatory bodies in order to come up with supportive ecosystems.

Guidelines on implementation involve capacity-building programmes on the digital literacy of Waqf managers and donors to overcome some of the major obstacles to adoption (Ulhusna et al., 2024). The module also defines audit procedures of gamification mechanisms and technology implementation, to maintain constant compliance with Islamic ethical standards and operation demands.

Discussion: Framework Integration and Implications

The contributions made are theoretical to the framework since they add to the existing technology adoption models in terms of Islamic specificities of philanthropy. Although TAM and UTAUT offer premises of the perceived usefulness and ease of use, the framework introduces aspects of perceived ethical compliance and cultural resonance as significant factors of adoption. This is in line with the results that religiosity and social influence have a strong influence on technology acceptance in Waqf situations (Widiastuti et al., 2024; Zakariyah et al., 2023).

The interrelations of framework components are also bidirectional, which indicates the interdependence of digital Waqf ecosystems. Mechanisms of engagement that lack transparency guarantees might enhance participation and not trust, whilst non-culturally customised technological solutions might experience resistance during adoption. The Governance Compliance Module ensures that every element functions within the ethical and regulatory framework and helps to overcome fragmentation issues discovered in investigations (Haniff et al., 2025).

In the real-world sense, the framework offers Waqf institutions a systematic implementation route. Components may be prioritised based on contextual requirements, such as by institute; cultural adaptation tests are always done before gamification mechanics are designed, or transparency technologies and governance arrangements have been put in place. This incremental practice will help deal with the resource limitation that is typical in philanthropic organisations and will guarantee an inclusive digital change.

The comparative analysis can be done with other charitable systems to identify both the principles that can be transferred and their specific needs. Although gamification can be successfully used to increase engagement in philanthropic areas, the fact that Waqf is an ongoing process that requires sustainability and adherence to Sharia regulations requires specific consideration of long-term sustainability and religious aspects (Weerawarna et al., 2017). These peculiarities are considered in the framework and adaptable elements of successful charitable crowdfunding are also included.

CONCLUSION

In this paper, the authors suggest a broad conceptualisation of the gamification of digital Waqf administration to improve its engagement and transparency. The framework incorporates the mechanics of gamification with blockchain and artificial intelligence technologies through systematic literature synthesis based on adapting the culture appropriately and adhering to the regulations.

The model fills major gaps in the currently applied methodologies that offer a systematic culturally sensitive avenue of digital transformation in Islamic philanthropy. There are two major contributions to the framework. In theory, it will apply technology adoption models to incorporate Islamic ethical and cultural aspects that are unique to Waqf management. In practice, it provides practical advice to institutions adopting gamified online platforms with a focus on the co-design of stakeholders, the implementation process in phases, and ongoing compliance control. Future studies should empirically validate this framework by conducting pilot studies under various regulatory and cultural conditions. The gap in evidence would be closed through longitudinal research that will be used to study the effects of gamification on the sustainability of long-term donor retention and Waqf. Furthermore, studies on the best models of technology integration in environments with limited resources would increase practical implications.

Finally, gamification offers transformative potential for Waqf institutions in bridging conventional philanthropic values and digital innovation. Institutions will be able to improve their social impact by being more engaged, transparent, and efficient on their structured and culturally sensitive digital platforms. This ensures that Waqf, a form of charitable endowment in the Islamic tradition, remains relevant in response to modern social issues.

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CONFLICT OF INTEREST

The authors affirm that there is no conflict of interest in this article.

CO-AUTHOR CONTRIBUTION

Mohd Hisham Johari conceived the study, developed the conceptual framework, and drafted the manuscript. Norfadilah Kamaruddin conducted the thematic analysis and contributed to the literature synthesis. Mohd Tarmizi Ibrahim reviewed the framework for Sharia compliance and cultural relevance and edited the final manuscript.

AI GENERATIVE DECLARATION

The author declares that generative AI tools were not used in the creation of this article, except for text paraphrasing and cross-checking references. The author assumes full responsibility for the accuracy, integrity, and final content of this work.

RESEARCH ETHICS STATEMENT

The author(s) declare that this study did not involve any human biological samples or data, or animal subjects. Consequently, formal ethics committee approval and informed consent were not required for this research.

DATA AVAILABILITY STATEMENT

The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to institutional and ethical requirements.

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