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Perceptions and Meaning-Making of 'Shariah Security' Among Muslim Digital Natives in the Use of Blockchain-Based Financial Platforms

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Abstract

This study investigates the perceptions and meaning-making processes of Muslim digital natives regarding Shariah security in their use of blockchain-based financial platforms. Employing an Interpretative Phenomenological Analysis (IPA) approach, data were collected from 20 participants who actively engage with decentralized financial applications. The analysis reveals that Shariah security is conceptualized as a multifaceted construct encompassing spiritual-moral assurance, ethical-procedural integrity, and technical-operational protection. Trust in blockchain technology emerged as a dynamic and negotiated outcome influenced by participants' religious identity, technological literacy, and interactions within online communities. The findings further highlight that blockchain engagement is not only a technological act but also a process of techno-religious identity construction, where social media plays a central role in shaping perceptions of Shariah compliance. Emotional responses, including reassurance, anxiety, and empowerment, were found to significantly impact security judgments. This research contributes a user-centered framework for understanding the intersection of Islamic ethical values and digital financial technologies, offering insights for designing culturally sensitive fintech ecosystems. The study's implications extend to the development of more inclusive and Shariah-compliant financial platforms, advancing the discourse on the integration of technology and religious principles in the digital economy.

Keywords: Shariah security; Digital natives; Blockchain finance; Meaning-making.

INTRODUCTION

The rapid expansion of blockchain technology has reshaped contemporary financial ecosystems, particularly as decentralized infrastructures redefine notions of security, transparency, and user autonomy across digital platforms [1], [2]. As blockchain-enabled financial services, such as decentralized applications (DApps), digital wallets, and smart contract–based fintech systems, become increasingly integrated into everyday financial decision-making, understanding how users interpret and negotiate technological security becomes a critical area of inquiry [3]. For Muslim users, these developments intersect not only with technological literacy but also with religious and ethical frameworks, producing unique interpretations of security that are grounded in Shariah principles [4], [5]. This intersection creates a distinct sociotechnical space in which perceptions of trust, risk, and compliance extend beyond technical specifications to include moral, spiritual, and communal considerations shaped by Islamic values.

Digital natives, who have grown up in environments saturated with mobile technology, social media, and algorithmic systems, represent a demographic that is both highly adaptive to technological innovation and deeply embedded in digital financial practices [6]. Their familiarity with digital infrastructures, coupled with intensive exposure to online financial discourse, accelerates the formation of user-generated meanings that circulate through social media networks, online communities, and digital learning spaces [7]. Within the Muslim digital native population, these meaning-making processes often involve complex negotiations between faith-based expectations, cultural identity, and perceived technological affordances. Despite the increasing relevance of blockchain within Muslim-majority contexts, existing scholarship has largely focused on regulatory compliance, Shariah governance frameworks, and the technical applicability of blockchain for Islamic finance institutions [8], [9]. Far fewer studies have examined how individual Muslim users, particularly digital natives, construct subjective interpretations of "Shariah security" when interacting with blockchain-based financial platforms.

Recent studies on technology perception highlight the importance of exploring sociocultural and identity-based factors that shape how individuals evaluate digital security, privacy risk, and ethical alignment [10], [11]. However, research addressing user-centered conceptualizations of security within Islamic digital finance remains limited, especially regarding how emerging technologies reshape religiously informed perceptions of trust, legitimacy, and moral responsibility. This gap is particularly significant because digital natives actively co-construct knowledge through online interactions, remixing religious narratives, technological discourses, and community norms circulating within social media ecologies [12]. Consequently, an in-depth qualitative exploration is needed to understand how Muslim digital natives interpret, negotiate, and attribute meaning to the concept of "Shariah security" in the context of blockchain-enabled financial systems.

This study addresses these gaps by investigating the perceptions and meaning-making processes of Muslim digital natives in relation to Shariah security when using blockchain-based financial platforms. The research aims to (1) examine how digital natives interpret the technological and ethical dimensions of blockchain-based financial security, (2) analyze the sociocultural, religious, and experiential factors that shape these interpretations, and (3) uncover how users negotiate Shariah principles within decentralized digital finance environments. By focusing on the lived experiences and narrative constructions of digital-native users, this study contributes a novel user-centered perspective to the growing literature on Islamic fintech and blockchain adoption.

The main contributions of this research lie in its development of an interpretive framework that explains how Muslim digital natives construct Shariah-aligned notions of security within decentralized financial systems, offering insights into the interplay between technology, religion, and identity. Unlike previous studies that primarily evaluate institutional governance or technical compliance, this study foregrounds users' subjective experiences and meaning-making practices, thereby enriching current understandings of socio-technological adoption in Islamic digital finance.

METHODS

This study employed a qualitative research design grounded in an interpretivist paradigm, aiming to explore how Muslim digital natives perceive and construct the meaning of Shariah security when interacting with blockchain-based financial platforms. A qualitative approach was selected because the research focuses on subjective interpretations, lived experiences, and meaning-making processes, which cannot be adequately captured through quantitative measurement alone [13]. The study followed an interpretive phenomenological strategy, which is suitable for examining how individuals understand and negotiate complex socio-technological phenomena embedded in religious and cultural frameworks.

Research Design

An Interpretative Phenomenological Analysis (IPA) approach was adopted to investigate how Muslim digital natives make sense of their experiences with blockchain-based financial technologies. IPA enables an in-depth examination of how participants interpret security, privacy, trust, and Shariah compliance within decentralized digital financial ecosystems [14]. This approach emphasizes double hermeneutics, the participants' effort to make sense of their lived experiences and the researcher's effort to interpret these interpretations, making it appropriate for studies at the intersection of technology, religion, and identity.

To provide a clear overview of the methodological structure guiding this inquiry, the sequential logic of the study's design, from participant recruitment to interpretive synthesis, is illustrated in Figure 1, which outlines the overall research design flow underpinning the Interpretative Phenomenological Analysis (IPA) approach adopted in this study.

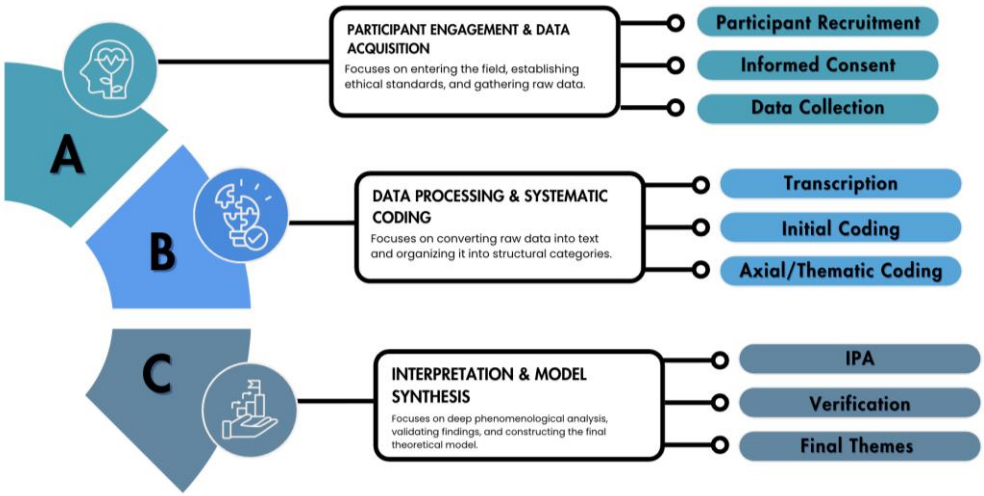

Figure 1. Overall Research Design Flow

Population and Sample

The study population consisted of Muslim digital natives, defined as individuals aged 18–35 who grew up using digital technologies and actively engage with blockchain-based financial platforms such as decentralized applications (DApps), cryptocurrency wallets, and Shariah-oriented fintech systems. Purposive sampling was used to select participants who met two criteria:

1) identify as Muslim, and
2) have at least six months of experience using blockchain-enabled financial platforms.

A total of 20 participants were recruited, representing diverse educational backgrounds, occupations, and levels of familiarity with blockchain technologies. Maximum variation sampling ensured heterogeneity across technological proficiency, frequency of platform use, and depth of Islamic financial knowledge. Table 1 presents the demographic characteristics of the sample.

Table 1. Participant Demographics

Attribute	Range / Categories	Description
Age	18–35 years	Represents digital native generation
Gender	Male (12), Female (8)	Balanced variation for interpretive depth
Education	Undergraduate–Graduate	All participants had tertiary education exposure
Blockchain Use Durat	6 months–5 years	Ensures experiential familiarity
Platform Type	DApps, crypto wallets, Islamic fintech	Captures diverse usage contexts
Frequency of Use	Weekly to daily	Provides variation in intensity of engagement

Research Instrument

Data were collected using two complementary qualitative instruments:

1) Semi-Structured In-Depth Interviews
   Interviews explored how participants interpret Shariah security, their perceptions of blockchain-related risks, and negotiation of religious identity within digital finance ecosystems. Open-ended questions encouraged reflective and narrative responses.
2) Digital Trace Artifacts
   Participants were invited to share screenshots, platform interface elements, chat conversations, or social media posts that influenced their perceptions of blockchain financial security. These artifacts served as contextual evidence supporting participants' meaning-making processes.

An interview protocol was developed and validated through expert feedback, ensuring alignment with the research objectives and theoretical constructs. Sample questions are provided in Table 2.

Table 2. Sample Interview Questions

Domain	Example Question
Perception of Security	"How do you define 'security' when using blockchain financial applications?"

Domain	Example Question
Shariah Interpretation	"What does 'Shariah-compliant security' mean to you personally?"
Technology Experienc	"Can you describe a moment when you trusted or distrusted blockchain-based financial tools?"
Meaning-Making Proc	"How do online communities or social media shape your understanding of Shariah security?"

Data Collection Procedure

Data were collected over a three-month period from January to March 2025. Participants were contacted through online communities, blockchain forums, and Islamic finance groups. After obtaining informed consent, interviews were conducted via Zoom and Telegram voice calls, each lasting between 45 and 75 minutes.

The data collection procedure followed these steps:

1) Initial participant screening and recruitment
2) Distribution of information sheet and consent form
3) Scheduling and conducting online interviews
4) Collection of optional digital trace artifacts
5) Transcription of all audio data verbatim
6) Review and verification of transcripts through participant checking

All data were securely stored in encrypted digital folders to ensure privacy and maintain research integrity.

Data Analysis

Data analysis followed the Interpretative Phenomenological Analysis (IPA) stages:

1. Initial Coding: Reading each transcript multiple times to identify significant statements.
2. Open Coding: Labeling meaningful segments related to perceptions, emotions, and Shariah interpretations.
3. Axial Coding: Grouping codes into broader conceptual categories.
4. Theme Development: Identifying overarching patterns that describe participants' meaning-making processes.
5. Interpretive Integration: Constructing a conceptual understanding of "Shariah security" among digital natives.

NVivo 14 software was used to manage qualitative data, code transcripts, visualize themes, and enhance analytic rigor. Figure 2 illustrates the thematic analysis process.

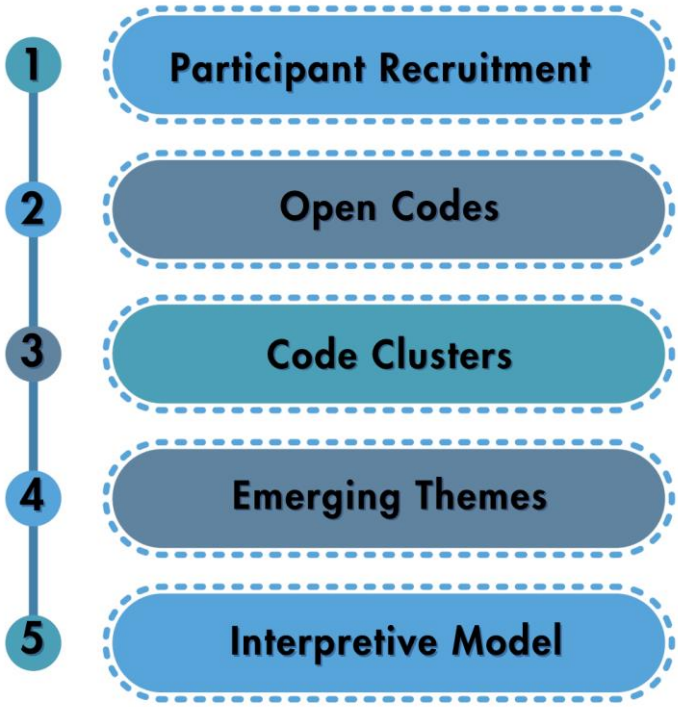

Figure 2. Thematic Coding and Interpretation Workflow

To ensure trustworthiness, triangulation across interviews and artifacts was used, alongside member checking and peer-debriefing to minimize interpretive bias.

RESULTS AND DISCUSSION

The findings of this study are presented through a synthesis of interpretative phenomenological themes that emerged from participants' accounts of their interactions with blockchain-based financial platforms. The analytical process yielded a series of interrelated thematic structures that illuminate how Muslim digital natives construct, negotiate, and operationalize the meaning of Shariah security within decentralized financial environments. The results are organized to reflect the progression from individual perceptions to broader sociotechnical meaning-making, with tables and diagrams used to clarify relationships between themes.

Shariah Security as a Multidimensional Interpretive Construct

Participants conceptualized *Shariah security* not as a singular technological attribute but as a multilayered interpretive construct encompassing spiritual, ethical, and technical domains. Rather than perceiving blockchain purely through its computational affordances, participants framed security as a moral-technical fusion, wherein cryptographic transparency, immutability, and decentralized governance were evaluated in conjunction with Islamic ethical commitments.

Three analytic dimensions consistently appeared across narratives:

1. Spiritual–Moral Assurance, grounded in the desire for religiously sanctioned financial behavior;
2. Ethical–Procedural Integrity, associated with fairness, transparency, and anti-exploitation mechanisms; and
3. Technical–Operational Protection, linked to the system's architecture and immutability.

These three interrelated dimensions, spiritual–moral assurance, ethical–procedural integrity, and technical–operational protection, form the foundational structure through which participants construct the meaning of Shariah security. A synthesized overview of these core dimensions, including their constituent elements and recurring indicators across participant narratives, is presented in Table 3.

Table 3. Core Dimensions Underpinning the Meaning of Shariah Security

Dimension	Constituent Elements	Recurring Indicators
Spiritual–Moral Assurance	Halal investment logic, avoidance of riba, divine accountability	"aman secara syariah," "tidak melanggar nilai agama"
Ethical–Procedural Integrity	Transparency, anti-fraud mechanisms	"lebih jujur," "tidak bisa dimanipulasi"
Technical–Operational Protection	Cryptography, decentralization, immutability	"tidak bisa diubah," "lebih aman"

Trust as a Negotiated Outcome Rather Than an Inherent Feature

Trust did not manifest as automatic acceptance of blockchain systems; instead, it materialized as a situated, negotiated outcome shaped by participants' technological understanding, religious commitments, and exposure to community discourses. Participants described a dynamic trust trajectory characterized by oscillations between enthusiasm, curiosity, caution, and scepticism.

A recurring pattern emerged: initial technological curiosity prompted platform exploration, followed by an evaluative phase in which participants examined Shariah compliance claims, consulted peers or online scholars, and engaged in comparative judgments across platforms. Trust, therefore, was not perceived as inherent to blockchain's technical design but as a provisional and revisable stance developed through ongoing interpretive engagement. To illustrate the dynamic and iterative nature of this evaluative process, the oscillating trajectory through which participants moved, beginning with initial curiosity and progressing toward ongoing trust renegotiation, is depicted in Figure 3, which maps the trust formation pathway among Muslim digital natives.

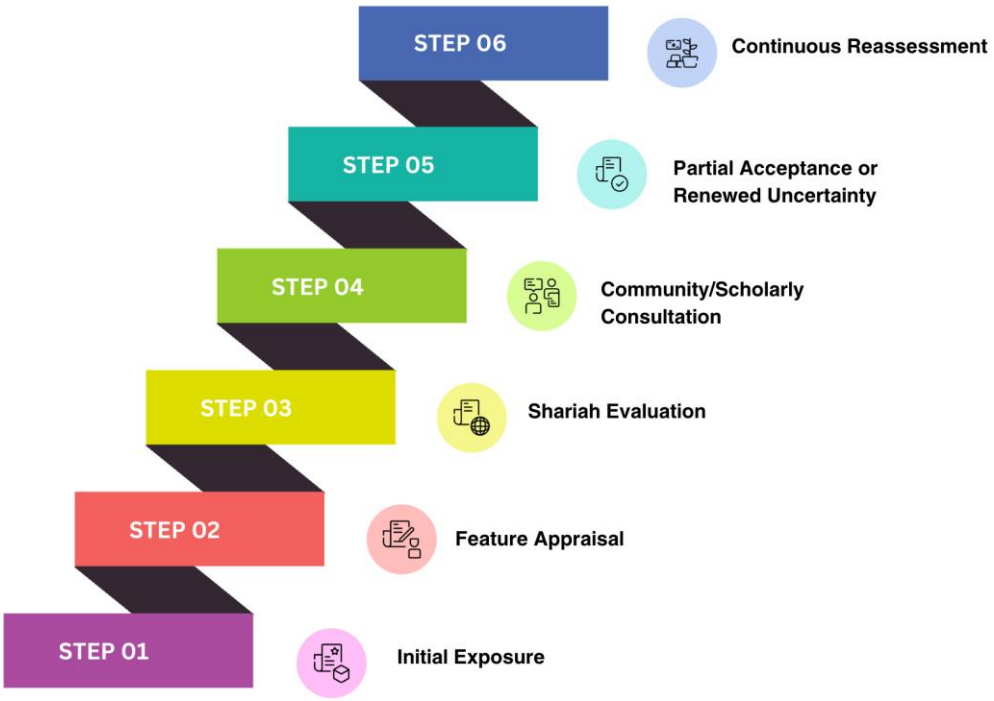

Figure 3. Trust Formation Trajectory Among Muslim Digital Natives

Identity Construction as a Mediating Force in Digital Financial Behavior

Participants' engagement with blockchain was deeply entwined with processes of identity construction, wherein technological participation was incorporated into broader narratives of what it means to be a "modern," "responsible," and "digitally-literate" Muslim. Financial behaviour was framed not merely as a technical activity but as an extension of self-concept, where Islamic values and technological aspirations converged.

This identity formation manifested through several symbolic markers, including the desire to reconcile financial autonomy with religious integrity, the aspiration to participate in emerging digital economies, and the reliance on community validation to affirm one's position within Muslim techno-financial networks. The symbolic expressions through which participants articulated these identity positions, ranging from religious–financial alignment to technologically oriented self-projection and community-dependent decision-making, are synthesized in Table 4, which outlines the key identity markers emerging from the thematic clustering.

Table 4. Identity Markers Emerging from Thematic Clustering

Identity Marker	Descriptive Characteristics	Indicative Expressions
Religious-Financial Identity	Seeking ethical and religious consonance	"ingin investasi halal"
Tech-Oriented Self-Projection	Valuing digital literacy and innovation	"biar nggak ketinggalan teknologi"
Community-Embedded Identity	Dependence on group consensus and validation	"lihat dulu komentar grup"
Cautious Innovator Identity	Balancing innovation with moral vigilance	"penasaran tapi tetap hati-hati"

Social Media as a Primary Epistemic Environment for Security Knowledge

Participants consistently relied on social media as their primary epistemic environment for evaluating the security and permissibility of blockchain-based platforms. Instead of relying on formal institutional guidelines, participants gravitated toward algorithmically curated content, micro-influencers, and community-based interpretations of Shariah compliance.

The findings suggest that digital natives' epistemic authority is increasingly shaped by decentralized knowledge flows, where religious and technological narratives converge through short-form content, public commentary, and viral discourse. The sequential dynamics through which social media content is encountered, interpreted, and transformed into personalized assessments of Shariah security are illustrated in Figure 4, which maps the epistemic pathway mediating participants' understanding of blockchain-based financial platforms.

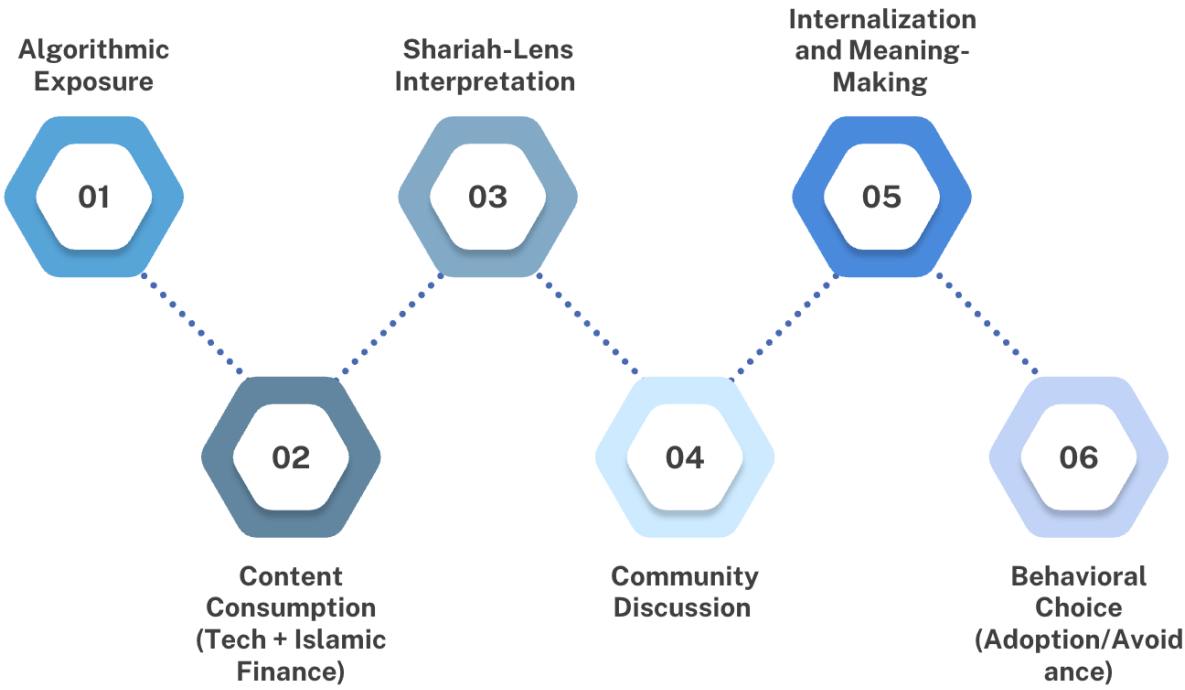

Figure 4. Social Media–Mediated Epistemic Pathway

Emotional and Affective Dimensions of Security Perception

Security perceptions were not solely cognitive or evaluative but were deeply suffused with emotional and affective tones. Participants expressed feelings of reassurance when perceiving moral or religious congruence, anxiety when confronted with conflicting information, and empowerment when mastering new technologies within Shariah parameters.

These affective responses directly influenced behavioural decisions, reinforcing the notion that security, for Muslim digital natives, is both an affective and ethical state rather than merely a technical condition. A consolidated overview of these affective dynamics, capturing the distinct emotional tones, their triggering conditions, and the behavioural responses they elicited, is presented in Table 5, which summarizes the affective patterns identified across participant narratives.

Table 5. Affective Patterns Identified Across Participant Narratives

Affective Tone	Triggering Condition	Behavioral Outcome
Reassurance	Apparent Shariah alignment	Continued use
Curiosity	Encounter with new technologies	Exploration
Anxiety	Ambiguous compliance signals	Hesitation or withdrawal
Empowerment	Mastery of technology + religious coherence	Confident engagement

Divergent Interpretive Frameworks for Assessing Shariah Alignment

Despite broad consensus that blockchain possesses intrinsic transparency that could support Islamic values, participants exhibited divergent interpretive frameworks for determining Shariah alignment. Some equated transparency with inherent permissibility, while others emphasized the need for institutional oversight, fatwa guidance, or asset-backing to establish compliance.

These divergences highlight the absence of a unified meaning-making framework among digital natives and underscore the heterogeneity of religious-technological reasoning within this demographic.

Discussion

The purpose of this study was to examine how Muslim digital natives construct the meaning of Shariah security in their engagement with blockchain-based financial platforms. The findings provide insight into the complex interplay between religious identity, technological affordances, communal epistemologies, and affective orientations. This section synthesizes these findings with existing scholarship and theoretical perspectives, offering a nuanced interpretation of how meaning-making occurs at the intersection of Islamic ethics and emerging digital infrastructures.

The first major finding, that Shariah security is conceptualized as a multilayered construct integrating spiritual, ethical, and technical dimensions, aligns with contemporary discussions of sociotechnical security, which emphasize the inseparability of social meaning from technological architecture [15]. Prior studies have demonstrated that users' perceptions of digital security extend beyond technical affordances, incorporating culturally embedded interpretive frameworks and normative expectations [16], [17]. Within Islamic finance, such expectations are further complicated by the requirement that technology align with Shariah principles of transparency, justice, and anti-exploitation. The present study extends this literature by demonstrating that Muslim digital natives do not evaluate blockchain solely through its mathematical or cryptographic properties; rather, they engage in a form of moral–technical reasoning in which religious commitments and technological cues are integrated into a coherent interpretive schema.

The finding that trust is negotiated rather than inherent is consistent with research on trust formation in decentralized systems, which highlights the socially contingent nature of technological trust [18], [19]. Although blockchain is frequently characterized as a "trustless" technology due to its distributed verification mechanisms, empirical studies increasingly note that user trust remains deeply social, relational, and culturally mediated [20]. For Muslim digital natives, trust is not granted based on technical attributes alone but emerges through iterative evaluation processes involving religious heuristics, community guidance, and affective responses. This resonates with earlier research on Islamic fintech adoption showing that perceived Shariah compliance is a critical determinant of trust and behavioral intention [21]. The present study advances this discourse by

illustrating how trust fluctuates dynamically over time, shaped by ongoing negotiations between religious identity, social media influences, and blockchain's technical affordances.

The prominence of identity construction as a mediating factor corroborates broader literature on digital religiosity and technologically mediated identity work. Digital natives frequently conceptualize participation in digital finance as part of broader identity performances that blend modernity, ethics, and self-optimization [22]. Prior studies have shown that young Muslims increasingly engage with financial technologies as a way to reconcile aspirations for digital fluency with commitments to Islamic ethical norms [23]. The current findings deepen this by revealing that blockchain participation becomes a symbolic act of inhabiting a techno-religious identity, one that validates both technological competence and moral integrity. This contributes to emerging scholarship on "Islamic techno-citizenship," where religious identity is enacted through engagement with digital infrastructures.

The role of social media as the primary epistemic environment reinforces recent findings that algorithmically mediated content has become a dominant site for religious–technological knowledge production [24], [25]. Research on Islamic digital literacy indicates that young Muslims increasingly rely on micro-influencers, online scholars, and peer communities to navigate complex financial and ethical questions [26]. In the context of blockchain, the present study shows that these digital ecosystems function as distributed interpretive networks that shape users' understandings of Shariah compliance, technological risk, and financial legitimacy. This aligns with studies demonstrating that social media fosters "vernacular authority," where informal voices gain epistemic weight in religious–technological discourse [27]. By demonstrating how participants' security perceptions were mediated by algorithmic exposure and community reinforcement, this study challenges assumptions that Shariah compliance is understood primarily through formal legal or institutional channels.

The affective dimensions of security perception highlighted in the findings further illustrate that technological experiences are not purely cognitive but deeply emotional. Emerging scholarship in digital finance emphasizes that affect, such as anxiety, reassurance, and empowerment, plays a significant role in shaping user engagement and decision-making [28]. Within Islamic contexts, emotions associated with moral accountability, divine obligation, and spiritual safety amplify the stakes of financial decision-making [29]. The present study contributes to this literature by illustrating how affective states arise at the intersection of religious uncertainty and technological complexity, thereby exerting a powerful influence on user behaviour.

Finally, the finding that participants relied on divergent interpretive frameworks for assessing Shariah alignment reflects broader debates within Islamic finance regarding the plurality of jurisprudential interpretations and the evolving nature of digital Shariah governance. Previous research has noted that ambiguities surrounding cryptocurrency classification, asset-backing, and regulatory oversight lead to substantial interpretive variation among scholars and practitioners [30]. This study reveals that such variation is equally pronounced at the user level, where digital natives construct personalized evaluative frameworks shaped by technological familiarity, religious literacy, and social media discourse. This aligns with theories of individualized religiosity in the digital age, where religious meaning is increasingly self-curated and negotiated [31].

CONCLUSION

This study demonstrates that Muslim digital natives construct the meaning of Shariah security within blockchain-based financial environments through a complex interplay of spiritual, ethical, technological, communal, and affective dimensions. Rather than perceiving security as a purely technical attribute, participants interpret blockchain through a moral–technical lens that integrates Islamic ethical commitments with decentralized technological affordances. Trust emerges not as an inherent feature of blockchain but as a negotiated, dynamically evolving stance shaped by religious identity, social-media-mediated knowledge flows, and ongoing evaluative practices. The findings further reveal that blockchain engagement forms part of broader processes of techno-religious identity construction, wherein participants position themselves as ethically responsible, technologically literate Muslims navigating an increasingly digitized financial landscape. Social media operates as a primary epistemic environment, reinforcing community-driven interpretations of Shariah compliance and shaping users' affective responses, including reassurance, anxiety, and empowerment. Divergent interpretive frameworks underscore the absence of a universally accepted user-level understanding of digital Shariah alignment. Collectively, these insights highlight that meaning-making in Islamic digital finance is a deeply situated sociotechnical process, offering valuable implications for the design of Shariah-sensitive financial technologies, digital literacy initiatives, and future research on religion–technology interactions.

LIMITATIONS

This study acknowledges several methodological and conceptual limitations that should be considered when interpreting its findings. First, the use of purposive sampling and a relatively small qualitative sample limits the generalizability of the results beyond digitally active Muslim populations, particularly those who are highly engaged with blockchain-based financial platforms. Second, participants' narratives relied on self-reported experiences, which may be influenced by recall bias, impression management, or selective disclosure, thereby constraining the depth and accuracy of certain interpretive accounts. Third, the study focused exclusively on Muslim digital natives in urban, digitally connected environments, which may not reflect the perceptions of older generations or individuals with limited technological exposure. Fourth, the rapidly evolving nature of blockchain technologies and Islamic fintech ecosystems means that participants' interpretations are temporally situated and may shift as regulatory frameworks, fatwa guidelines, and technological affordances continue to develop. Fifth, the reliance on social media artifacts introduces potential bias due to algorithmic curation and the unequal visibility of religious or financial opinions across platforms. Despite these limitations, the study provides rich phenomenological insights that contribute meaningfully to understanding Shariah-oriented meaning-making in emerging digital financial ecologies.

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AUTHOR CONTRIBUTION

M.I. conceptualized the research, designed the methodology, and supervised the overall project. I.B. managed data collection, conducted the data analysis, and prepared the visualizations. Muhammad Iqbal contributed to the literature review, data interpretation, and drafting of the discussion section. Izra Berakon critically revised the manuscript to ensure academic rigor and compliance with international journal standards. Both authors reviewed, edited, and approved the final version of the manuscript, agreeing to be accountable for all aspects of the work.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DECLARATION OF USE OF AI IN SCIENTIFIC WRITING

The authors used OpenAI's ChatGPT to support language refinement and Napkin AI to generate graphics. All content was carefully reviewed and revised by the authors, who assumes full responsibility for the final manuscript.

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