

Strategic Digital Transformation of Pesantren: Disseminating Islamic Wasathiyah Values Through Online Media

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Abstract

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This qualitative multi-site case study examines the strategic digital transformation of Islamic boarding schools (pesantren) in disseminating Islamic Wasathiyah values through online media. Pesantren face the dual challenge of maintaining theological credibility while navigating algorithmically-driven digital environments that prioritize engagement over scholarly depth. Focusing on Pondok Pesantren Annuqayah and Pondok Pesantren Nurul Islam in Sumenep, East Java, the research investigates values disseminated, strategic approaches, and the effectiveness of online media in Islamic Wasathiyah education. Data were collected through participant observation, in-depth interviews with 47 participants, and documentation analysis from December 2020 to October 2021. Within the scope of this two-site qualitative study, findings suggest that both pesantren effectively disseminate four core Wasathiyah values: national commitment, tolerance, anti-radicalism, and cultural accommodation. Strategic approaches include centralizing social media accounts, forming an editorial team, and providing digital literacy training, using Hambrick and Fredrickson's Diamond Model. Effectiveness is indicated through substantial growth (5,098 and 2,049 subscribers, respectively) and high audience engagement. The study contributes by distinguishing "Pesantren Online" from "Pesantren Virtual" and by introducing the concept of "adaptive orthodoxy" as an emerging framework for understanding how traditional institutions engage with digital environments while preserving core identities. Findings offer practical frameworks for traditional religious educational institutions seeking to leverage digital platforms without compromising institutional mission.

Kata Kunci:

Transformasi digital, Wasathiyah Islami, Media daring, Sekolah berasrama Islami, Ortodoksi adaptif

Abstrak.

Studi kasus kualitatif berbasis lapangan multi-situs ini mengkaji transformasi digital strategis pondok pesantren dalam menyebarkan nilai-nilai Islam Wasathiyah melalui media online. Pesantren menghadapi tantangan ganda: mempertahankan kredibilitas teologis sekaligus beradaptasi dengan lingkungan digital yang secara algoritmik mengutamakan keterlibatan audiens di atas kedalaman keilmuan. Berfokus pada Pondok Pesantren Annuqayah dan Pondok Pesantren Nurul Islam di Sumenep, Jawa Timur, penelitian ini menginvestigasi nilai-nilai yang disebarkan, pendekatan strategis, dan efektivitas media online dalam pendidikan Islam Wasathiyah. Data dikumpulkan melalui observasi partisipatif, wawancara mendalam dengan 47 partisipan, dan analisis dokumentasi dari Desember 2020 hingga Oktober 2021. Dalam lingkup studi kualitatif dua situs ini, temuan mengindikasikan kedua pesantren secara efektif menyebarkan empat nilai inti Wasathiyah: komitmen kebangsaan, toleransi, anti-radikalisme, dan akomodasi budaya. Pendekatan strategis dianalisis melalui Diamond Model Hambrick dan Fredrickson meliputi sentralisasi akun media sosial, pembentukan tim editorial, dan pembangunan kapasitas literasi digital secara bertahap. Efektivitas ditunjukkan melalui pertumbuhan platform yang substansial (5.098 dan 2.049 subscriber) dan keterlibatan audiens yang tinggi. Studi ini berkontribusi dengan membedakan "Pesantren Online" dari "Pesantren Virtual", memperkenalkan konsep "adaptive orthodoxy" sebagai kerangka yang lahir dari data untuk memahami respons institusi tradisional terhadap lingkungan digital, serta mendemonstrasikan equifinality strategis antar struktur organisasi yang

INTRODUCTION

The Fourth Industrial Revolution has fundamentally transformed educational institutions worldwide, with technological change estimated to be 3,000 times faster than previous industrial revolutions, compelling rapid institutional adaptation (McKinsey & Company et al., 2017; Schwab, 2021). Islamic boarding schools (pesantren) in Indonesia face a dual challenge in this digital disruption era: maintaining theological credibility and cultural identity while adapting to digital environments that algorithmically privilege engagement over scholarly depth (Lukens-Bull, 2013). The proliferation of social media platforms has democratized content creation, fundamentally altering how religious knowledge is produced and consumed, creating both opportunities for expanded reach and threats from unregulated extremist discourse contradicting the moderate Islamic teachings (Wasathiyah) traditionally propagated by Indonesian pesantren (Christensen, 2018; Hilmy, 2014). This tension compels pesantren to engage digital platforms strategically in order to maintain theological influence and counter extremist narratives.

Despite growing literature on Islamic digital activism, limited empirical research examines how traditional Islamic educational institutions strategically employ online media while maintaining theological orthodoxy (Campbell & Tsuria, 2021). Existing studies predominantly focus on individual Muslim influencers (Slama, 2017) or transnational movements, leaving institutional adaptation strategies underexplored. Prior research on Indonesian pesantren and digital media offers primarily descriptive accounts without rigorous analysis of strategic processes or effectiveness metrics (Warisno et al., 2025). This study addresses three critical gaps within the specific context of Sumenep pesantren: first, theoretically distinguishing “Pesantren Online” (hybrid physical-digital institutions) from “Pesantren Virtual” (purely digital entities); second, systematically analyzing strategic mechanisms for digital Wasathiyah education in response to calls for process-oriented studies (Van Bruinessen, 2013) Third, empirically assessing effectiveness through multi-dimensional metrics beyond simple subscriber counts.

This research employs two primary theoretical frameworks. First, the Islamic Wasathiyah theory, operationalized through Indonesia’s Ministry of Religious Affairs (Kementerian Agama RI, 2019) Four indicators, national commitment, tolerance, anti-radicalism, and cultural accommodation, provide the normative content framework. Second, strategic analysis employs (Hambrick & Fiedrickson, 2005). The Diamond Model examines five interdependent elements. arenas (platform selection), vehicles (entry mechanisms), differentiators (unique value propositions), staging (implementation sequences), and economic logic (Rogers, 2003). These two frameworks are complemented by Eshet-Alkalai’s digital literacy levels as an analytical lens for assessing institutional digital capacity, and by Rogers’ Diffusion of Innovations as a contextual background for understanding institutional change processes. This focused theoretical integration enables the examination of disseminated values, employed strategic mechanisms, and achieved outcomes (Khusniyah, 2025).

The research investigates three fundamental questions through an intensive multi-site case study of Pondok Pesantren Annuqayah and Pondok Pesantren Nurul Islam in Sumenep, East Java: (1) What Islamic Wasathiyah values do pesantren disseminate through online media? (2) What strategies do pesantren employ in digital Wasathiyah education? (3) How effective are pesantren online media in Wasathiyah education? These institutions were selected for contrasting

organizational structures (federated vs. centralized) yet shared commitment to Wasathiyah propagation. Annuqayah, established in 1887 with 22 semi-autonomous branches enrolling 6,538 students, has managed the “*Infoku*” media platform since 2017. Nurul Islam, established in 1963 under centralized leadership, enrolling 1,786 students, has managed “*Nuriska.id*” since 2019. This structural variation provides analytical leverage for examining how institutional characteristics shape digital transformation strategies.

Empirically, this study contributes rich qualitative evidence of pesantren agency in navigating digital disruption, demonstrating that traditional religious institutions actively reshape digital environments rather than passively succumbing to technological change. This challenges deterministic perspectives positing inevitable institutional decline amid modernization (Peter L. Berger, 2017), instead supporting neo-institutional arguments emphasizing organizational capacity for strategic adaptation while maintaining core identities (Kraatz & Block, 2012). As an emergent contribution arising inductively from field evidence, the research introduces ‘adaptive orthodoxy,’ a concept elaborated in the Discussion section to describe the process through which traditional religious institutions maintain theological authenticity while selectively modifying presentation forms, a finding applicable beyond pesantren to diverse traditional institutions confronting modernization pressures.

Practically, this research offers actionable insights for pesantren leadership developing digital strategies, policymakers supporting Islamic educational innovation, and non-profit organizations navigating digital transformation (Rochim et al., 2025). Documented approaches to content centralization, editorial professionalization, platform selection, and effectiveness assessment provide replicable models for institutions confronting similar challenges (Islamiyah, 2025). The study validates the effectiveness of pesantren-driven digital initiatives as a moderate Islam propagation strategy aligned with Indonesia’s counter-radicalization priorities. For the broader non-profit sector, findings demonstrate that mission fidelity, incremental capacity building, and algorithm resistance may prove more sustainable than viral optimization tactics, offering an alternative framework for assessing digital effectiveness beyond commercial metrics.

METHOD

This study employs a qualitative, multi-site case study design to investigate the dissemination of Islamic Wasathiyah through online media. The research was conducted at Pondok Pesantren Annuqayah and Pondok Pesantren Nurul Islam in Sumenep, East Java, from December 2020 to October 2021. These sites were selected through purposive sampling based on their distinct organizational structures, federated versus centralized, which provides a meaningful analytical comparison of digital transformation strategies in different institutional scales (Ridder, 2014). This naturalistic framework allows for a deep exploration of group dynamics and social settings without experimental manipulation, ensuring the findings reflect the authentic reality of both institutions (Miles & Huberman, 1994; Ridder, 2014).

Data collection was carried out through a triangulation of three methods: participatory observation, semi-structured in-depth interviews, and documentation analysis (Smith, 2002). The researcher conducted over 200 hours of observation, participating in editorial meetings and content production sessions to capture the natural flow of media management. In-depth interviews were held with 47 participants, including school leaders (kyai), media coordinators, content creators, and students, using flexible protocols to explore domains such as editorial strategies and audience engagement. Furthermore, documentation analysis examined social media content,

internal policy statements, and digital engagement metrics to provide a comprehensive view of the dissemination patterns (Yin, 2009).

The data analysis followed the descriptive-analytical model proposed by Miles and Huberman, comprising data condensation, data display, and conclusion drawing (Onwuegbuzie et al., 2016). During the condensation stage, raw data from 890 pages of interview transcripts and field notes were coded both deductively, using constructs such as Wasathiyah indicators and the Diamond Model, and inductively to capture emergent patterns (Braun & and Clarke, 2006). A total of 247 initial codes were categorized into 43 higher-level themes covering strategic dimensions and effectiveness indicators. This systematic process ensures that the findings are derived from a rigorous, verifiable analytical framework, maintaining the balance between brevity and completeness required for scholarly publication (Braun & and Clarke, 2006; Smith, 2002).

RESULT AND DISCUSSION

Result

Islamic Wasathiyah Values Disseminated

Content analysis of 100 YouTube videos (50 per institution) was conducted to identify the Wasathiyah values disseminated by each pesantren. The findings for each institution are presented separately below, followed by a cross-case synthesis. Analysis of 50 YouTube videos from Infoku reveals systematic dissemination of all four Kemenag (2019) Wasathiyah indicators. In terms of national commitment, Infoku consistently frames Islamic piety within civic responsibility.

The video 'Live: Peringatan Maulid Nabi dan Hari Santri Nasional 2021' (viewed 11,001 times) integrates national symbolism, Indonesian flag displays (at timestamp 22:03), the national anthem, and red-and-white banners into a religious celebration. A kyai states at timestamp 4:23: "Our santri are raised not only as Muslims devoted to Allah, but as Indonesian citizens committed to Pancasila and national unity." The video 'Dirgahayu Indonesiaku' similarly intertwines Islamic and nationalist content, while 'Hari Santri Nasional 2020' presents a kyai narrating the historical role of santri in defending Indonesia's independence (timestamp 0:40).

National commitment also manifests implicitly in everyday content. Across 14 kitab kuning study videos, scholars consistently frame Islamic learning as a civic obligation. The 'Siaran Pers Satgas' video series, which publicizes government COVID-19 health programs, further demonstrates alignment between pesantren and national policy imperatives. Regarding tolerance, Infoku's 47-minute 'Dialogue Lintas Agama: Membangun Kerukunan' presents a structured interfaith dialogue among Islamic scholars, Catholic priests, and Hindu leaders, with the kyai moderator emphasizing common humanitarian values at timestamp 12:15. The content employs inclusive theological framing, consistently avoiding delegitimizing truth claims about other traditions. The 'Pengajian Bahasa Madura' series and student profile features showcasing santri from Papua, Sumatra, and Kalimantan further demonstrate ethnic inclusivity.

On anti-radicalism, Infoku operates through both explicit and implicit mechanisms. Explicitly, the 73-minute 'Bahaya Radikalisme dalam Islam' lecture directly refutes extremist positions on jihad, khilafah advocacy, and takfir (timestamp 34:20). More pervasively, all 14 kitab kuning videos present multiple madhhab positions and acknowledge legitimate scholarly disagreement as a structural, methodological embodiment of moderation. The 'Ngaji Kitab Hujjati Ahlis Sunnah' and 'Ngaji Kitab Minhajul Abidin' series exemplify this pattern, with scholars

explicitly critiquing singular, rigid interpretations (e.g., critique of Kiromiyah and Mu'tazilah at timestamp 2:45).

Concerning cultural accommodation, Infoku operates at two distinct levels. At the accessibility level, the Madurese language is used to reach local audiences. At the substantive accommodation level, content evaluates indigenous ceremonies through a maqasid al-shariah framework, explaining which local cultural elements are permissible under Islam. The 'Pengkukuhan Pencak Silat NU' and 'Maulid Nabi' videos feature traditional hadrah music and Madurese artistic motifs, framed as culturally grounded expressions of Islamic piety rather than innovations.

Analysis of 50 YouTube videos from Nuriska.id similarly reveals dissemination of all four Wasathiyah indicators, though through distinct content genres and institutional emphases. Regarding national commitment, the video 'Hari Santri Nasional 2020' (viewed 3,102 times) opens with the statement 'Santri dan ulama tetap setia/berkorban pertahankan Indonesia' (timestamp 0:40), explicitly positioning religious and national loyalty as inseparable. The video documents the collective istighatsah prayer (at timestamp 1:02) as an act of civic-religious solidarity. The 'Siaran Pers' series documenting compliance with national COVID-19 health protocols (timestamp 2:17: mask-wearing and handwashing) further reflects institutional alignment with national policy.

On tolerance, Nuriska.id's content employs inclusive theological framing rather than explicit interfaith dialogue. The 'Bincang Media' series presents Islamic teachings without delegitimizing other belief systems. The 'Selayang Pandang' video introduces pesantren life, emphasizing coexistence and mutual respect as core institutional values. Content in the 'Kajian Keislaman' series consistently avoids exclusivist language, presenting Islamic teachings as universally beneficial (*rahmatan lil 'alamīn*).

Regarding anti-radicalism, Nuriska.id employs a primarily narrative strategy. The 16-minute short film 'Jalan yang Salah' dramatizes a university student's radicalization trajectory and its consequences, serving as a narrative counter-radicalization tool. The 'Kajian Kitab' series covering texts such as Tafsir Yasin, Kifayatul Atqiya, and Fathul Qorib models scholarly methodological moderation through multi-perspective interpretation, constituting an implicit structural anti-radicalism mechanism.

On cultural accommodation, Nuriska.id integrates Madurese cultural expressions within an Islamic pedagogical framework. The graduation ceremony video 'Wisuda Purna Siswa XXX' features a carefully curated program that combines Madurese shalawat traditions with Western-style choral performance, a deliberate editorial choice that the kyai frames as demonstrating that pesantren is not opposed to modernity "sepanjang itu tidak berbenturan dengan nilai-nilai yang prinsip" [as long as it does not conflict with core Islamic principles]. The 'Istighatsah: Haul Akbar' video similarly showcases indigenous Madurese ceremonial forms evaluated and affirmed through Islamic criteria.

Both institutions successfully disseminate all four Kemenag (Eshet, 2004) Wasathiyah indicators, though through structurally different approaches. Annuqayah's federated structure produces greater content diversity across Islamic sciences and audiences, with more explicit interfaith and anti-radicalism content. Nurul Islam's centralized structure yields more consistent thematic branding and higher production-quality standards, with a greater reliance on narrative and ceremonial formats. These differences reflect strategic equifinality, two distinct organizational configurations achieving similar Wasathiyah dissemination objectives through different coherent pathways. In both cases, national commitment and cultural accommodation values appear most pervasively, embedded across content genres rather than confined to dedicated commemorative

videos. Tolerance and anti-radicalism, while present across all analyzed content, are more explicitly foregrounded in dedicated lectures and short films.

Table 1 further illustrates these structural differences and convergences by mapping both institutions' strategies across the five interdependent elements of Hambrick and Fredrickson's (Eshet, 2004) Diamond Model. The comparison reveals that while implementation pathways diverge substantially, reflecting each institution's organizational structure and resource base, the five strategic elements within each institution remain internally coherent and mutually reinforcing. Annuqayah's federated model necessitates distributed coordination mechanisms that produce breadth of content across Islamic sciences and diverse audience segments, while Nurul Islam's centralized model enables tighter quality control and more consistent institutional branding.

Critically, both configurations produce functionally equivalent Wasathiyah dissemination outcomes, providing empirical support for strategic equifinality in non-profit religious organizational contexts: there is no single optimal digital strategy, but rather multiple internally coherent pathways that achieve mission alignment through structures suited to each institution's governance model.

Table 1. Diamond Model Strategic Comparison (Infoku) vs. (Nuriska.id)

Diamond Model Element	Federated Structure (Infoku)	Centralized Structure (Nuriska.id)
Arenas (Platform Selection)	YouTube (flagship), Instagram (youth), Facebook (alumni & community)	YouTube (flagship), Instagram (youth)
Vehicles (Entry Mechanisms)	Federated coordination: branch accounts consolidated under the Infoku umbrella while branches retain supplementary local accounts	Full consolidation: all institutional levels unified under a single Nuriska.id brand
Differentiators (Unique Value Propositions)	Content diversity across Islamic sciences; explicit interfaith engagement; multi-branch contributor network	Consistent thematic branding; high narrative production quality; direct kyai editorial authority
Staging (Implementation Sequence)	Five incremental phases (2017–2022): experimental initiation → infrastructure → content expansion → engagement → optimization	Accelerated phases (2019–2022): rapid consolidation → professional production → content diversification
Economic Logic (Value Creation)	Da'wah effectiveness; alumni relationship cultivation; institutional memory archiving; student vocational development	Da'wah effectiveness; institutional brand strengthening; student vocational development
Outcomes (Convergence Point)	Effective dissemination of all four Wasathiyah indicators; sustained platform growth	Effective dissemination of all four Wasathiyah indicators; sustained platform growth

Source: Data Collection, 2026

Digital Wasathiyah Strategies

Three strategic mechanisms were identified across both institutions, operationalized through Hambrick and Fredrickson's Diamond Model. Social media centralization: Both pesantren consolidated dispersed accounts into coordinated institutional channels. Annuqayah's federated structure required establishing central coordination across 22 branches, while Nurul Islam's centralized structure enabled direct editorial control. Arena selection reflects discernment:

both institutions avoided TikTok, explicitly citing incompatibility between 15-second formats and contemplative theological content.

First, both institutions established structured editorial teams combining religious scholars, technical staff, and communication strategists. Annuqayah’s team operates through distributed coordination; Nurul Islam’s through centralized oversight. Both institutionalize kyai review as a quality control mechanism. Second, Digital literacy training: Phased capacity-building programs were implemented at both institutions. Training progressed from basic smartphone operation to professional production techniques and content strategy. Student involvement generates dual benefits: content production and vocational skill development

The alignment of these strategic mechanisms demonstrates that digital transformation in both *pesantren* is not merely a technical shift, but a calculated theological and managerial response. By selecting specific platforms and avoiding those deemed incompatible with contemplative learning, such as TikTok, both institutions prioritize the integrity of *Wasathiyah* values over viral trends. This deliberate "arena selection" ensures that the medium remains a faithful vessel for the message, allowing religious moderation to be disseminated in a manner that preserves its depth and intellectual rigour.

Furthermore, the integration of structured editorial teams and *kyai* oversight serves as a vital quality-control filter, bridging traditional authority and modern digital literacy. The contrast between Annuqayah’s distributed coordination and Nurul Islam’s centralized oversight reveals that, while management styles may differ, the objective remains the same: to institutionalize a "digital *pesantren* identity" that is both modern and rooted in tradition. This dual-layered governance ensures that every piece of content published is not only technically proficient but also doctrinally sound in line with the school’s core values.

Ultimately, the phased capacity-building programs and the active involvement of students create a sustainable ecosystem for character building and vocational growth. By transforming students from passive consumers into active content creators, both institutions have successfully turned digital media management into a pedagogical tool. This synergy between strategic management and educational goals underscores that the dissemination of *Islamic Wasathiyah* is most effective when embedded in a responsive, adaptive, and value-driven institutional framework.

Effectiveness of Online Media

Quantitative metrics were captured at two time points. Primary engagement data were recorded during fieldwork (December 2020–October 2021), and platform subscriber counts were verified on May 21, 2022, to document growth trajectories. Data are presented in Tables 1 and 2.

Table 2. Platform Metrics Comparison (as of May 21, 2022)

Platform / Metrik	Infoku (Annuqayah)	Nuriska.id (Nurul Islam)
YouTube Subscribers	5,098	2,049
Instagram Followers	4,746	1,201
Facebook Page Likes	11,442	-
Facebook Group Members	12,120	-
Website Visitors/Month	±30	-

Source: Data Collection, 2026

Table 3. Sample Content Engagement Selected YouTube Videos (Data collected May 2022)

Judul Video	Lembaga	Views	Likes	Dislikes
Live: Maulid + Hari Santri Nasional 2021	Annuqayah	11,001	592	0
Peringatan Maulid Nabi Muhammad SAW	Annuqayah	6,036	311	0
Ngaji Kitab Minhajul Abidin	Annuqayah	867	55	0
Ngaji Kitab Mukhtarul Ahadits	Annuqayah	867	55	0
'Molean Santre Lakean' Santri Event	Nurul Islam	3,102	196	0
NADIA (Short Movie)	Nurul Islam	3,052	265	0
Wisuda Purna Siswa XXX (Part 4)	Nurul Islam	2,541	42	0
Takabbur [KH. Ilyasi Siraj]	Nurul Islam	694	83	0

Source: Data Collection, 2026

Table 2 shows notable differences in platform scale between the two institutions. Infoku (Annuqayah) has more than twice as many YouTube subscribers as Nuriska.id (5,098 vs. 2,049), consistent with the difference in platform age. Infoku has been active since 2017, Nuriska.id since 2019. Annuqayah also manages a Facebook Page (11,442 likes) and a Facebook Group (12,120 members) that are not operated by Nuriska.id, reflecting a broader multi-platform strategy.

Table 3 reveals meaningful variation in engagement patterns. Religious-national commemorative content achieves the highest views: the live-stream 'Maulid + Hari Santri Nasional 2021' reached 11,001 views, far exceeding regular kitab kuning sessions (867 views). Notably, Nuriska.id's narrative formats short film 'NADIA' (3,052 views, 265 likes) and the santri event 'Molean Santre Lakean' (3,102 views) achieved engagement comparable to that of similarly long Annuqayah content, suggesting that content format quality can offset differences in platform age.

Most significantly, none of the examined content received any dislikes (value: 0 across all eight videos). This finding warrants cautious interpretation: YouTube's November 2021 policy of hiding public dislike counts may suppress visible negative feedback regardless of actual sentiment. Additionally, social inhibition in religious authority contexts, where disliking kyai content carries reputational risk, may create a social desirability effect. Nevertheless, the complete absence of negative feedback remains a meaningful indicator, particularly given that religious content in Indonesia's polarized digital landscape frequently attracts opposition.

Qualitative indicators show a progressive evolution in production quality from amateur (smartphone recording, inconsistent audio, static camera, basic graphics) to professional standards (professional cameras, lapel microphones and audio mixers, dynamic multi-camera coverage, sophisticated editing with b-roll and graphics, drone footage for aerial shots). Content adaptation strategies include edited summary versions (a 90-minute lecture condensed into 20-minute highlights), serialization (a lengthy graduation ceremony split into six 10-15-minute segments), and format variations, including narrative short films that attract higher engagement than comparable-length lectures.

Digital literacy assessment using Eshet-Alkalai's (Eshet, 2004) The framework indicates that both pesantren communities achieved the Information Literacy level (*the fourth of five stages*), as evidenced by systematic source-verification procedures, critical content evaluation, and strategic information-dissemination planning embedded in editorial routines. Kyai oversight, ensuring scholarly credibility, institutionalizes critical evaluation as a standard procedure. However, evidence does not support Socio-Emotional Literacy achievement (*highest level*), as community members reported falling for online misinformation, demonstrating continued vulnerability requiring educational intervention.

DISCUSSION

Findings fundamentally challenge technological determinism, positing the inevitable decline of traditional religious institutions amid digitalization, instead demonstrating considerable pesantren strategic agency in actively appropriating digital technologies to advance core missions while maintaining theological authenticity. This agentic orientation aligns with neo-institutional perspectives emphasizing organizational capacity for strategic adaptation within constraint structures rather than passive victimhood (Kraatz & Block, 2012). Evidence of agency manifests across multiple dimensions: platform selection demonstrates discernment rather than indiscriminate adoption, with TikTok avoidance reflecting a sophisticated understanding that technological affordances shape content possibilities (Crosby et al., 1990).

This demonstrated agency carries theoretical implications for the diffusion of innovations theory. While Rogers (Rogers, 2003) emphasizes innovation attributes that influence adoption rates; findings suggest that organizations do not merely passively receive innovations but actively reshape them during adoption. Both pesantren modified social media platforms' typical usage patterns, eschewing viral-content strategies, avoiding algorithm-gaming tactics, and resisting commercialization pressures to align with their educational missions (Emmers-Sommer, 2004).

This '*domestication of technology*' whereby users appropriate tools for purposes diverging from designers' original intentions (Rogers, 2003) merits greater attention in digital religion scholarship, particularly in non-Western religious institutional contexts. Furthermore, the findings challenge binary framings that oppose tradition and modernity, authenticity and adaptation, and religious authority and digital democratization (Sternberg & Barnes, 1985). The introduced "*adaptive orthodoxy*" concept theorizes how traditional religious institutions maintain theological authenticity while modifying presentation forms, balancing this by discerning which elements constitute core identity that requires preservation versus surface expressions that are amenable to modification (Athanasopoulou, 2009).

This organizational variation demonstrates strategic equifinality, with multiple structural configurations achieving similar strategic objectives through different pathways, challenging prescriptive management recommendations that advocate singular "best practices" in favour of emphasizing a contingent fit between organizational characteristics and strategic approaches (Gresov & Drazin, 1997). Federations require coordination mechanisms that prevent fragmentation; centralized hierarchies need flexibility to prevent rigidity. The finding also speaks to long-standing debates in pesantren scholarship regarding modernization and institutional change. Rather than a linear modernization trajectory from traditional (*salaf*) to modern (*kehalaf*) forms implied by Dhofier's (Dhofier, 1982) foundational typology, subsequently challenged by Lukens-Bull (Dhofier, 1982), who argues that tradition and modernity represent "*two sides of the same coin*" rather than opposing poles, further complicated by Azra, Afrianty, and Hefner (Dhofier, 1982).

Who document hybrid institutional forms navigating between national ideals and religious tradition, and recently confirmed by Isbah's (Dhofier, 1982) A longitudinal analysis demonstrating pesantren's sustained adaptability across shifting historical and technological contexts finds more complex patterns of selective modernization. Both pesantren simultaneously maintain traditional elements (kitab kuning curriculum, kyai authority, boarding system) while selectively adopting modern digital technologies and organizational practices. This selective modernization, rather than wholesale transformation or defensive traditionalism, characterizes successful institutional adaptation in Indonesia's contemporary digital landscape (Dhofier, 1982).

The emergence of Infoku and Nuriska.id as institutional digital media platforms represents what may be described as a fourth typological layer in Indonesian pesantren development: beyond the salaf-khalaf-modern spectrum documented by Dhofier (Dhofier, 1982) and subsequently refined by later scholars, these institutions demonstrate what may tentatively be described as a 'pesantren digital' orientation, defined not merely by technology adoption but by the strategic deployment of digital tools in service of the institution's core Wasathiyah mission. This conceptual extension of pesantren typology warrants further empirical validation across broader institutional samples before it can be established as a confirmed typological category (Dhofier, 1982).

Alumni engagement metrics indicate relationship quality rather than merely audience size, with nostalgic comments, content sharing, and subsequent donations demonstrating that digital presence cultivates affective bonds that translate into material support crucial for non-profit institutions' financial sustainability (Barasch & Berger, 2014). The archival function provides value independent of contemporary viewership, as videos documenting elder kyai lectures, major institutional events, and traditional ceremonies preserve institutional memory for future generations, comparable to libraries or museums, accruing value over time rather than manifesting immediately, and requiring longitudinal rather than snapshot assessment (Hassebrauck & Fehr, 2002). These multi-dimensional considerations of effectiveness challenge scholarly and practitioner tendencies to uncritically adopt commercial social media success metrics in non-commercial contexts (Qiu et al., 2025).

The application of a digital literacy framework to institutional rather than individual analysis extends theoretical understanding of digital competence. Conventional scholarship focuses predominantly on individual skills, but findings demonstrate that organizational digital literacy emerges from coordinated capabilities across multiple actors contributing specialized competencies (Buckingham, 2007). Both pesantren achieved Information Literacy through distributed expertise rather than universal individual competence. Editorial teams combine members with complementary capabilities (*technical specialists, religious scholars, communication strategists*) through a division of labour coordinated by editorial structures and oversight mechanisms, generating a collective capacity that exceeds any individual's competence (Peter L. Berger, 2017).

Practical implications for pesantren leadership developing digital strategies include prioritizing pedagogically appropriate platforms over audience maximization, implementing centralization to prevent fragmentation while maintaining quality standards, investing in incremental capacity building through training rather than expensive outsourcing, involving students for dual benefits of content production and skill development, and employing mission-specific effectiveness metrics rather than generic commercial benchmarks (Afshari et al., 2012; Blaik Hourani et al., 2021). For policymakers, the results validate support for pesantren-driven digital initiatives as an effective, moderate strategy for the propagation of Islam, aligned with Indonesia's counter-radicalization priorities (Afshari et al., 2012).

Comparison with existing literature reveals both confirmation and extension of digital religion scholarship. Consistent with Campbell & Tsuria's (Campbell & Tsuria, 2021) observation that religious communities actively negotiate rather than passively adopt digital technologies, pesantren demonstrate selective appropriation aligned with religious values. However, while much digital religion scholarship focuses on individual believers' online practices or transnational Islamic movements, institutional focus reveals organizational strategies and collective capacities underexplored in existing literature, challenging deterministic perspectives predicting inevitable religious authority erosion amid digital democratization (Echchaibi, 2011).

Results also nuance Slama's (Slama, 2017) Analysis of Indonesian Islamic influencers' "*subtle economy of time*," in which individual influencers maximize personal brand value while institutional actors pursue collective missions irreducible to individual celebrity, suggests that digital Islamic landscapes encompass diverse actor types employing platforms toward distinctive objectives through varied strategies. Concerning pesantren scholarship, findings support Bruinessen's (Van Bruinessen, 2013) argument against binary tradition-modernity frameworks, with "adaptive orthodoxy" providing an analytical framework for understanding how traditional institutions engage contemporary challenges without abandoning core identities, extending beyond pesantren to other religious educational contexts confronting similar tensions (Azra, 2012).

Theoretical contributions include four major advances. *First*, the conceptual distinction between "*Pesantren Online*" (hybrid institutions that maintain a physical presence while extending digitally) and "*Pesantren Virtual*" (purely digital entities lacking physical infrastructure) clarifies ambiguities in the existing literature, enabling a more precise examination of how different institutional configurations navigate digital transformation (Abdullah, 2020.; Islamiyah, 2025). *Second*, the "*adaptive orthodoxy*" concept theorizes the maintenance of theological authenticity while engaging contemporary cultural forms by discerning how to preserve core commitments alongside surface-level adaptation, applicable beyond digital contexts to ritual adaptation, architectural innovation, and curriculum development (Dhofier, 1982).

Third, the demonstration of strategic equifinality in religious organizational contexts challenges technological determinism and structural functionalism, which posit optimal organizational forms for given environmental conditions, suggesting that strategic success depends on achieving coherence between the chosen structure and the implementation approach rather than conforming to a singular ideal type (Chen & Guo, 2020; Islamiyah, 2025). *Fourth*, a multi-dimensional effectiveness framework integrating reach metrics, engagement quality, capacity development, relationship cultivation, and archival preservation provides an alternative to commercial social media success criteria, applicable to diverse mission-driven organizations employing digital platforms beyond pesantren, including non-profit advocacy groups, cultural preservation initiatives, educational institutions, and community organizations (Buckingham, 2007; Campbell & Tsuria, 2021).

CONCLUSION

This study concludes that Pondok Pesantren Annuqayah and Pondok Pesantren Nurul Islam have successfully integrated digital transformation with Islamic orthodoxy through a strategic framework known as "*adaptive orthodoxy*." Both institutions effectively disseminate the four core values of Islamic Wasathiyah: national commitment, tolerance, anti-radicalism, and cultural accommodation by aligning their digital presence with the Diamond Model's strategic elements. This is achieved by prioritizing pedagogically sound platforms over viral trends, centralizing content management to maintain theological consistency, and developing internal digital capacity. The research highlights "*strategic equifinality*," in which both federated and centralized organizational structures achieve similar dissemination goals through internally coherent pathways. Ultimately, effectiveness is measured through mission-specific metrics such as institutional capacity building and the preservation of religious authority, demonstrating that traditional institutions can actively shape moderate online discourse without compromising their core values.

However, this research is subject to several limitations, including its geographic focus on Sumenep, the potential influence of the COVID-19 pandemic on digital activity levels, and the

lack of audience reception data to verify the actual internalization of value. To address these gaps, future research should expand into multi-regional comparative studies across diverse Indonesian pesantren contexts and employ longitudinal designs to track the sustainability of these digital strategies. Furthermore, future studies should incorporate direct audience feedback through surveys or interviews to assess the real impact of content on netizen behaviour. A critical focus should also be placed on developing socio-emotional digital literacy, as this remains the highest competency level yet to be fully achieved, which is essential for protecting communities against online misinformation in an increasingly complex digital landscape.

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