Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454

Creative Commons Attribution 4.0 International License

https://jurnal.smartindo.org/index.php/sei

BLENDING TRADITIONAL AND MODERN PEDAGOGIES: A CASE STUDY IN PESANTREN EDUCATION

NUR IFFAH QOYYUMILLAH[1]*, MUHAMMAD FACHRY ZAIM NOOR[2]
Universitas Kiai Abdullah Faqih Gresik, Indonesia
**Corresponding Author:* veve777722@gmail.com

ABSTRACT

This study investigates the systemic integration of classical Islamic pedagogy (turath) with modern instructional design in pesantren-based higher education. Facing the dual demand of preserving religious authority while fostering 21st-century competencies, traditional institutions must navigate complex epistemological and methodological adaptations. Data were gathered through in-depth interviews, classroom observations, and institutional policy analysis across instructional and quality assurance contexts. Findings reveal that the operationalisation of Digitally Augmented Sorogan and Interactive Multimedia Bandongan reduces cognitive load and promotes higher-order thinking (istinbat al-hukm) while maintaining textual authenticity (isnad). To conceptualise this process, the study introduces the Islamic Technological Pedagogical Content Knowledge (I-TPACK) model, which embeds Epistemological-Spiritual Knowledge (ESK) as a critical moderating variable. At the governance level, the institution resolves tensions between state accreditation standards and spiritual ethos by deploying a dual-layer Internal Quality Assurance System (SPMI) that evaluates cognitive Outcome-Based Education (OBE) metrics alongside qualitative character growth (akhlaq and adab). Practically, offline intranet learning management systems (Intranet LMS) offer a robust solution to network constraints and content security. Ultimately, this research provides institutional leaders and policy makers with a scalable roadmap for hybrid pedagogical innovation that safeguards sacred traditions while driving digital transformation in faith-based higher education.

Keyword: Blended pedagogy; Digital learning; Instructional design; Pesantren education; Traditional pedagogy.

INTRODUCTION

The rapid acceleration of the global digital era has forced traditional educational institutions to re-evaluate their core instructional frameworks, creating a profound imperative for Islamic boarding schools (*pesantren*) to balance textual heritage with modern competency demands. Historically, pesantren have functioned as guardians of classical Islamic scholarship (*turath*), instilling deep theological understanding and moral

Creative Commons Attribution 4.0 International License

grounding across generations (Roqib & Nurfuadi, 2021; Wekke & Hamuddin, 2021). However, the contemporary educational landscape demands that learners master complex 21st-century skills including digital literacy, critical problem-solving, and collaborative inquiry without compromising their traditional spiritual foundations (Fahyuni & Bandono, 2021; Saada & Gross, 2023). Navigating this dual requirement presents a formidable challenge to pesantren educators, who must innovate their instructional practices within institutions deeply rooted in centuries-old educational paradigms.

At the heart of traditional pesantren education lies a distinct philosophical framework anchored in the concepts of tarbiyah (nurturing holistic growth) and ta'dib (moral and spiritual discipline) (Ismail & Rahman, 2022; Zarkasyi & Mufid, 2021). Instructional delivery has historically relied on time-honored methods such as *sorogan* (individualized manuscript recitation and direct instructor feedback), *bandongan* (collective lecture and textual exposition), and *halaqah* (guided discursive circles) (Nurlaili & Subaktani, 2023; Subaman & Fauzi, 2022). While these classical methods excel at preserving textual accuracy, enforcing moral discipline, and maintaining spiritual genealogies (isnad), scholars note that they can inadvertently foster teacher-centered dynamics if unsupplemented by contemporary active learning strategies (Maskuri & Baharun, 2023; Tamam & Wekke, 2022). In response, modern educational paradigms introduce frameworks such as Technological Pedagogical Content Knowledge (TPACK), activity-based learning, and Outcome-Based Education (OBE) to optimize student engagement, transparently measure learning outcomes, and align curricula with state accreditation standards (Arifin & Purwanto, 2023; Hidayat & Syafe'i, 2024; Rahmat & Abdullah, 2022).

Despite growing scholarly interest in both traditional Islamic pedagogy and modern instructional technology, a significant gap remains in empirical literature. Existing studies tend to examine digital adoption in faith-based settings as isolated technological interventions or focus exclusively on the historical preservation of classical manuscripts (Mukminin & Habibi, 2022; Solihin & Prasojo, 2023). Few inquiries systematically analyze how major, established pesantren institutions synthesize these contrasting pedagogical philosophies into a coherent, institutionalized hybrid model (Munadi & Wiyani, 2024; Qomar & Suyatno, 2023). This study addresses this theoretical and empirical void by investigating the systemic alignment of classical turath instruction with contemporary TPACK and OBE principles within large-scale pesantren environments.

To address this research gap, this study investigates three primary research questions: (1) How do educators (*ustadz*) operationalise the integration of traditional turath methods (*sorogan, bandongan, halaqah*) and modern pedagogical strategies within daily classroom practice? (2) What cultural, technical, and methodological obstacles emerge during the implementation of this hybrid pedagogical framework? and (3) How does this hybrid model impact santri competency attainment across both academic-cognitive and holistic-character domains? (Nurul & Fatimah, 2022; Srimulyani & Yusuf, 2023; Umam & Rosyada, 2024). By answering these questions, this study provides empirical insight into the transformation of faith-based higher education in the digital age.

Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454
Creative Commons Attribution 4.0 International License
https://jurnal.smartindo.org/index.php/sei

METHOD

Research Design

To examine the complex integration of classical Islamic instructional traditions and modern pedagogical practices, this study employed a qualitative single-case study design (Creswell & Poth, 2018; Stake, 1995; Yin, 2018). The case study approach is exceptionally suited for investigating contemporary real-world phenomena within their real-life contexts, particularly when the boundaries between phenomenon and context are not clearly evident (Yin, 2018).

Given the unique socio-cultural and religious dynamics of pesantren education, a holistic single-case study design allowed for an in-depth, contextualised exploration of how teachers (*ustadz/ustadzah*) negotiate, blend, and operationalise dual pedagogical paradigms. The ontological positioning of this study is rooted in constructivism, acknowledging that pedagogical practices are socially constructed through historical traditions, institutional policies, and contemporary instructional demands (Merriam & Tisdell, 2016).

Participants and Sampling

Participants were selected using a purposive sampling strategy, supplemented by snowball sampling to identify key instructional informants with specialized expertise in both traditional texts (*turath*) and modern subject areas (Patton, 2015). To capture a comprehensive spectrum of pedagogical strategies, criteria for participant selection included:

1. Minimum of three years of active teaching experience within the pesantren ecosystem.
2. Direct involvement in teaching either classical Islamic studies (e.g., *sorogan* or *bandongan* sessions), modern secular disciplines, or integrated curricula.
3. Active participation in curriculum development or quality assurance processes within the institution.

A total of 12 participants were selected, including senior religious scholars (*kyai/ustadz*), modern subject educators, and academic coordinators. To protect participant confidentiality and maintain compliance with double-blind review standards, all participants were assigned alphanumeric pseudonyms.

Table 1-Demographic and Professional Profile of Research Participants

Participant Code	Primary Role / Discipline	Teaching Experience (Years)	Educational Background
P-01	Senior Ustadz (Classical Turath)	18	Traditional Pesantren & Al-Azhar
P-02	Ustadz (Jurisprudence & Theology)	12	Integrated Pesantren
P-03	Teacher (Mathematics & ICT)	8	State University
P-04	Teacher (English Language & Literature)	6	State University

Creative Commons Attribution 4.0 International License

P-05	Ustadzah (Arabic Grammar & Qur'anic Exegesis)	10	Traditional Pesantren
P-06	Senior Teacher (Natural Sciences)	15	State University
P-07	Curriculum Coordinator	14	Integrated Pesantren
P-08	Quality Assurance Officer	9	State University
P-09	Ustadz (Hadith Studies & Ethics)	11	Traditional Pesantren
P-10	Teacher (Social Sciences & Civics)	7	State University
P-11	EdTech Specialist / Ustadz	5	Integrated Pesantren
P-12	Head of Academic Affairs	20	Integrated Pesantren & University

The demographic and professional composition of the participant cohort reflects a strategically balanced socio-professional matrix designed to critically interrogate the epistemological nexus between classical Islamic scholarship and contemporary instructional practices. By incorporating a tripartite distribution across traditional turath educators, modern secular/EdTech specialists, and key academic administrators (including curriculum coordinators and quality assurance officers), the sample captures both micro-level classroom interactions and macro-level institutional governance. The participants' teaching experience, ranging from 5 to 20 years, establishes a rich analytical continuum that synthesises deep-rooted institutional memory with the adaptive agility required for modern technological integration. Crucially, the socio-educational background of the cohort which bridges traditional pesantren lineages and Al-Azhar training with state university systems instills an inherent epistemological hybridity within the sample. This structural diversity allows the study to critically examine how educators navigate the operational tensions between preserving traditional spiritual authority (barakah) and adopting student-centred active learning, thereby ensuring the findings transcend a simplistic traditional-versus-modern binary.

Data Collection Techniques

To establish empirical depth and methodological rigor, data collection was executed over a six-month period using a triangulated qualitative framework that critically integrated semi-structured in-depth interviews, non-participant classroom observations, and systematic document analysis (Denzin, 2012; Miles et al., 2014). First, two rounds of semi-structured interviews were conducted with 12 purposively selected key informants comprising senior religious scholars, modern discipline educators, and academic coordinators to critically unpack their epistemological beliefs, instructional adaptations, and the perceived tensions between traditional spiritual authority (barakah) and contemporary learner-centred paradigms. To operationalise these self-reported narratives within actual instructional settings, 24 non-participant classroom observations across classical (sorogan/bandongan), digital, and hybrid learning environments were systematically executed using an adapted Technological Pedagogical Content Knowledge (TPACK) matrix (Koehler & Mishra, 2009) to capture real-time teacher-student

Creative Commons Attribution 4.0 International License

interactions, media integration, and pedagogical shifts. Finally, these primary empirical streams were cross-validated and contextualised through a meticulous analysis of institutional documentation, including course syllabi, lesson plans (RPP), internal quality assurance (SPMI) manuals, and Outcome-Based Education (OBE) assessment rubrics. This multi-layered methodological convergence minimized reporting bias, enriched construct validity, and yielded a dense, multi-dimensional dataset capable of capturing the nuanced realities of pedagogical blending within the pesantren ecosystem.

Data Analysis & Trustworthiness

Empirical data were systematically analyzed using Braun and Clarke's (2006, 2019) six-phase Reflexive Thematic Analysis mediated by NVivo 14 qualitative software to operationalise complex instructional patterns into robust conceptual themes. The analytical trajectory moved iteratively from transcript familiarisation and open line-by-line coding to the continuous synthesis, refinement, and thematic definition of blended pedagogical practices across classical and modern frameworks. To guarantee methodological rigour and analytical trustworthiness based on Lincoln and Guba's (1985) evaluative criteria encompassing credibility, transferability, dependability, and confirmability data interpretation was constantly cross-examined through multi-source data triangulation, peer debriefing, and formal member-checking with key participants. Additionally, a detailed analytical audit trail tracking coding hierarchies, procedural decision-making, and reflexive research notes was meticulously maintained, while dense contextual descriptions were integrated to facilitate structural transferability to comparable educational settings without compromising interpretive objectivity.

RESULTS AND DISCUSSION

Findings

Integration of Traditional and Modern Pedagogies in Daily Classroom Practices (RQ-1)

The empirical findings reveal that the integration of traditional pesantren pedagogy and modern instructional design is not executed through a rigid dichotomy or complete replacement, but rather through a sophisticated, synergistic model of pedagogical hybridization. Educators strategically embed contemporary active learning techniques and digital tools into classical instructional methods without diminishing the foundational ethos of Islamic text-based learning (turath). The daily classroom practices demonstrate three dominant operational themes through which this integration occurs: (1) Digitally Augmented Sorogan, (2) Interactive Multimedia Bandongan, and (3) Problem-Based Bahtsul Masail.

Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454
Creative Commons Attribution 4.0 International License
https://jurnal.smartindo.org/index.php/sei

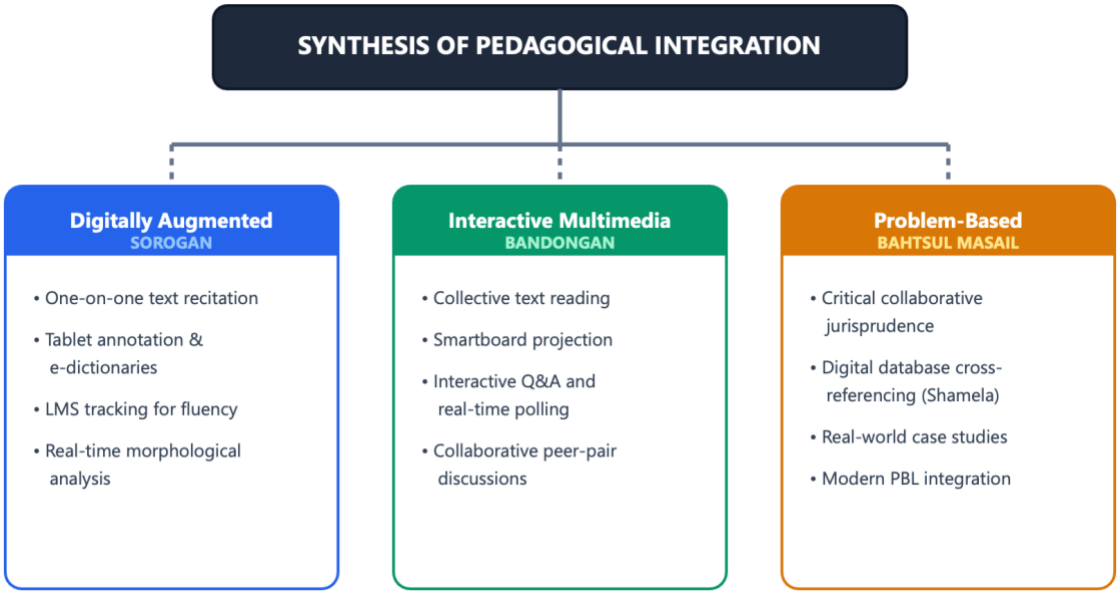


Figure 1- Synthesis of Pedagogical Integration in Pesantren Education

Digitally Augmented Sorogan: Individualised Learning via Educational Technology

Traditionally, *sorogan* operates as an individualized, face-to-face tutorial where a student (santri) reads a classical Arabic text directly to the teacher (*ustadz*), receiving immediate linguistic, grammatical, and theological corrections. Observations and interview data indicate that teachers have modernized this individualised framework by integrating digital annotation devices, e-kitab applications, and Learning Management Systems (LMS).

Rather than replacing the face-to-face mentorship, digital tools are used to accelerate the preparation phase and provide systematic tracking of student progress. Students utilize tablets loaded with interactive turath text applications equipped with hyperlinked morphological tools (tashrif) and digital dictionaries (such as *Al-Ma'any*). During live *sorogan* sessions, teachers utilize stylus-based digital tablets to annotate students' digital texts directly, recording common grammatical errors (*nahwu-sharaf*) into an LMS database. As described by P-01, a senior ustadz:

> "*The essence of sorogan is the direct spiritual and intellectual bond between teacher and student during text recitation. We have not changed this sacred core. However, in the past, students spent hours manually searching for obscure vocabulary in heavy paper dictionaries. Now, they use digital search engines to master the vocabulary beforehand, allowing our live sorogan sessions to focus deeper on analytical comprehension and nuanced theological context rather than just surface-level translation*." (P-01, Senior Ustadz)

This hybrid approach was verified through classroom observations (Obs-04, Obs-11). In advanced grammar classes (*Alfiyah Ibn Malik*), students presented their digital texts via screen-mirroring technology. The teacher evaluated the student's vocalization (*syakal*) and translation while simultaneously displaying structural syntax diagrams on a shared

Creative Commons Attribution 4.0 International License

monitor. This integration transformed an isolated one-on-one tutorial into a visual, multi-sensory learning experience without losing the rigorous individual verification characteristic of *sorogan*.

Interactive Multimedia Bandongan: Transforming Large-Group Transmission

The *bandongan* (or *halqah*) method where a teacher reads, translates, and explains a classical text to a large group of students who passively annotate their own books has historically been criticized in modern educational literature for being predominantly teacher-centred and monologic. However, findings reveal that teachers actively modify *bandongan* by incorporating interactive whiteboards, digital concept mapping, and real-time formative assessment tools.

Observations across 10 *bandongan* sessions revealed a structured three-tier instructional framework:

1. Textual Projection and Contextualisation: The teacher projects the scanned original manuscript alongside modern infographics and historical maps related to the text's background onto an interactive display.
2. Interactive Query and Polling: Mid-lecture, the teacher pauses to issue quick conceptual checks using mobile-based polling software (e.g., Mentimeter or LMS quizzes), forcing students to actively process the lecture content.
3. Collaborative Discussion: Students engage in peer-pair discussions before presenting their responses back to the class.

P-02 highlighted how this interactive adaptation resolves student disengagement during traditional large-group lectures:

> "*In traditional bandongan, with over fifty students sitting in a hall, it was easy for weaker students to lose focus or passively copy annotations without understanding. By integrating smartboards and quick digital quizzes during the reading of Fath al-Qarib, I can instantly see on my dashboard which students have grasped the legal concepts. It turns a passive listening session into an active, measurable learning process.*" (P-02, Jurisprudence Teacher)

Table 2 illustrates the comparative alignment observed between traditional bandongan practices and their modern digital adaptations within the classroom.

Table 2-Comparative Alignment of Traditional Bandongan and Modernized Digital Practices

Instructional Phase	**Traditional Bandongan Practice**	**Modernised Digital Adaptation**	**TPACK Component / Pedagogical Goal**
Preparation	Manual vocalisation (*gundul*) of paper text	Pre-lecture digital text access via LMS with embedded audio guides	**TK / PK:** Flipped classroom model; enhanced learner autonomy.
Text Delivery	Monologic oral reading and translation by teacher	Smartboard manuscript projection with real-time digital highlighting	**CK / TPK:** Multi-sensory cognitive processing; visual clarity.

Creative Commons Attribution 4.0 International License

Comprehension Check	Unstructured oral questions to random students	Embedded digital polling and peer-pair discussion breaks	**PK / CK:** Formative assessment; active learning engagement.
Synthesis & Notes	Marginal handwritten annotations (*makna gandul*)	Digital collaborative notes and mind-mapping repositories	**TPACK:** Constructivist knowledge construction; structured review.

The structural evolution detailed in Table 2 illustrates a paradigmatic transition from passive, teacher-centric textual transmission to a technology-scaffolded, constructivist learning environment within the *bandongan* tradition. Rather than dismantling the core epistemological value of collective text reading, these digital adaptations operationalise key domains of the Technological Pedagogical Content Knowledge (TPACK) framework across every instructional phase. Specifically, migrating pre-lecture textual vocalisation to LMS-supported audio guides instantiates a flipped classroom model that enhances student autonomy prior to synchronous contact hours. Furthermore, replacing monologic oral delivery and ad-hoc questioning with smartboard manuscript projections and embedded digital polling fundamentally restructures the classroom dynamic transforming what was historically a unidirectional lecture into a multi-sensory, interactive space that enables real-time formative assessment. Crucially, the progression from isolated, marginal handwritten annotations (*makna gandul*) to collaborative digital mind-mapping repositories demonstrates how modern active learning can be harmonised with classical text analysis. This comparative alignment underscores that digital integration does not erode the teacher's spiritual or intellectual authority; rather, it provides vital cognitive scaffolding that addresses historical limitations in large-group pesantren instruction, significantly elevating student engagement, visual clarity, and analytical retention.

Problem-Based Bahtsul Masail: Integrating Classical Jurisprudence with Contemporary PBL

A crucial finding of this study is the instructional evolution of *Bahtsul Masail* a traditional pesantren forum where advanced students debate contemporary issues using classical legal jurisprudence (*Fiqh*). Teachers have successfully blended this traditional dialectic method with modern Problem-Based Learning (PBL) frameworks.

In daily classroom instruction, teachers introduce contemporary real-world dilemmas (e.g., cryptocurrency transactions, artificial intelligence ethics, bioethics, or environmental sustainability). Students are divided into collaborative research groups and tasked with solving these modern problems by synthesizing classical turath legal maxims (*Qawa'id Fiqhiyyah*) with modern empirical data gathered from online scientific repositories.

P-07, the Curriculum Coordinator, explained the operationalization of this blended strategy:

> *"Bahtsul Masail is inherently critical, but traditionally it focused heavily on historical legal precedents. We revamped it into a modern PBL format. We present a modern case studym for instance, the ethics of digital financial technology. Students must use digital databases like*

Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454
Creative Commons Attribution 4.0 International License
https://jurnal.smartindo.org/index.php/sei

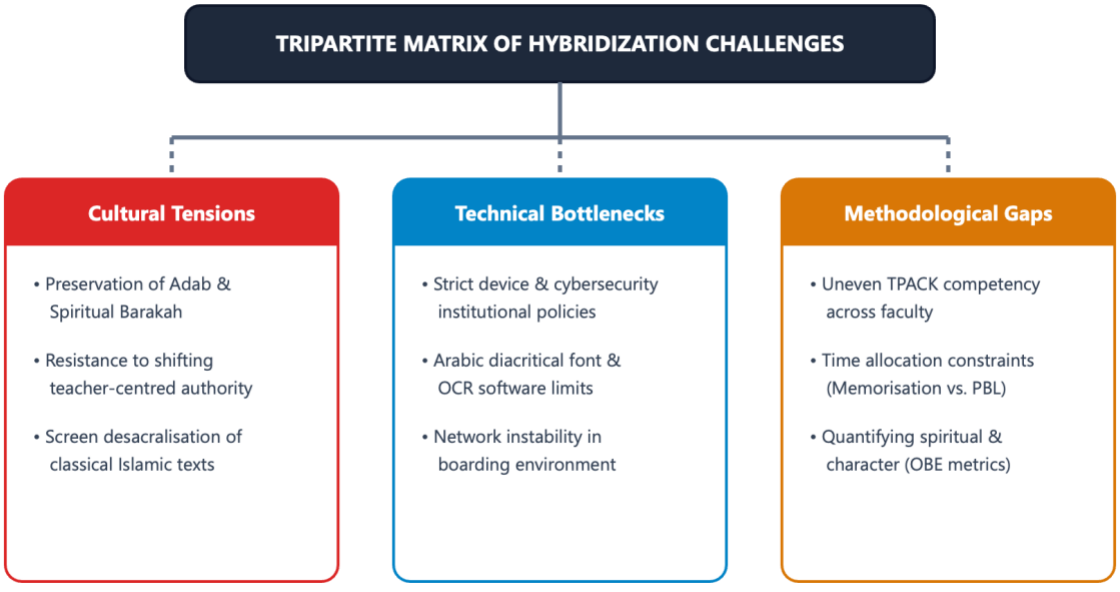
Shamela or Maktabah Fiqhiyyah to retrieve classical texts, but they must also analyse modern economic reports. They draft their group findings using collaborative documents and defend their thesis using structured academic presentation standards." (P-07, Curriculum Coordinator)

Classroom observation (Obs-18) in an advanced Islamic Law class demonstrated this synthesis in action. The teacher acted as a facilitator rather than an absolute authority. Student groups used laptops to navigate digital Islamic legal databases alongside contemporary legal journals, structuring their arguments using formal problem-solving matrices. This hybrid practice demonstrates how the rigour of classical Islamic jurisprudence is preserved while simultaneously fostering 21st-century skills, including digital literacy, critical thinking, and collaborative communication.

the integration of traditional and modern pedagogies in daily classroom practice occurs through a intentional, complementary synthesis. Traditional methods (*sorogan, bandongan, bahtsul masail*) provide the epistemological rigour, textual depth, and spiritual mentorship, while modern pedagogical frameworks (active learning, PBL, digital media, and LMS integration) provide the cognitive engagement, visual accessibility, and measurable assessment metrics. Teachers do not abandon their heritage; rather, they use technology and modern instructional design as scaffolding to make classical learning more responsive to modern educational standards.

Cultural, Technical, and Methodological Challenges in Pedagogical Hybridization (RQ-2)

While the integration of traditional turath instruction and modern educational technology offers significant pedagogical advantages, the transition is not frictionless. The empirical data reveal a complex matrix of systemic challenges that educators encounter in their daily practice. Rather than acting as total barriers to innovation, these obstacles function as dynamic operational tensions that teachers must continuously negotiate. These challenges are categorized into three interconnected domains: (1) Cultural and Epistemological Tensions, (2) Technical and Infrastructure Bottlenecks, and (3) Methodological and Assessment Constraints.



Creative Commons Attribution 4.0 International License

Figure 2 – Tripartite Matrix of Pedagogical Hybridization Challenges

Cultural and Epistemological Tensions: Preserving Spiritual Authority and Adab

The primary cultural challenge stems from the deep-rooted epistemological framework of traditional pesantren education, which prioritises adab (Islamic etiquette/reverence towards knowledge and the teacher) and barakah (spiritual blessing derived through unbroken chains of transmission, or *sanad*). Several senior educators expressed concern that replacing physical manuscripts with digital screens and shifting from monologic lectures to student-centred active learning might inadvertently erode teacher reverence and desacralize sacred texts.

Classroom observations (Obs-07, Obs-15) revealed instances where students using personal tablets during *bandongan* lectures were distracted by non-academic applications or social notifications. This digital intrusion was perceived by traditional scholars not merely as an instructional distraction, but as a breach of classical adab. As articulated by P-09, a senior *ustadz*:

> "*In our tradition, touching the physical pages of a classical text requires ritual purity (wudu) and an attitude of deep humility. When a student reads the same text on a digital screen where games or social media are just a click away, the psychological and spiritual posture changes. The challenge is not the screen itself, but preventing the desacralisation of religious knowledge. We must teach students that modern media are tools for understanding, not substitutes for the spiritual discipline of learning*." (P-09, Hadith & Ethics Teacher)

Furthermore, a generational divide emerged between senior *kiai/ustadz* and younger, technology-oriented teachers. Senior scholars occasionally viewed active learning techniques such as student-led debates or questioning the teacher's interpretation as potential threats to the established paternalistic authority of the educator. Younger teachers often had to navigate these cultural sensitivities carefully, ensuring that active learning frameworks were framed as extensions of traditional legal argumentation (*bahtsul masail*) rather than Western secular disruptions.

Technical and Infrastructure Bottlenecks: Network Security and Software Limitations

The operationalisation of hybrid pedagogy is frequently constrained by technical infrastructure within a residential boarding school environment. To protect students from negative internet influences and maintain moral discipline, institutional regulations enforce strict controls on digital device access and internet connectivity. These necessary security protocols inadvertently create operational bottlenecks for teachers trying to implement real-time digital learning.

Teachers reported significant hurdles regarding bandwidth limitations, restricted website access, and hardware management. During peak hours, localized Wi-Fi networks in study halls frequently experienced downtime, disrupting planned interactive polling or online legal database queries. P-03, an ICT and Mathematics teacher, detailed these infrastructure friction points:

> "*Implementing interactive digital learning in a residential pesantren requires a delicate balance between cybersecurity and pedagogical access. Our firewall policies block open internet access*

Creative Commons Attribution 4.0 International License

to preserve moral integrity, but this often restricts legitimate academic databases. Furthermore, when fifty students simultaneously attempt to access e-kitab repositories on local servers during a hybrid bandongan session, the network bandwidth collapses." (P-03, Mathematics & ICT Teacher)

Beyond basic connectivity, a specialized technical constraint involves software compatibility for classical Arabic scripts. Standard Learning Management Systems (LMS) and optical character recognition (OCR) tools are primarily optimized for Latin scripts. Teachers reported difficulty displaying, annotating, and search-indexing classical Arabic manuscripts featuring complex diacritical marks (vocalisation/*syakal*) and marginal commentary (*hashiyah*). Consequently, educators often spent excessive time formatting digital materials prior to instruction.

Methodological and Assessment Constraints: Aligning TPACK with Outcome-Based Assessment

From a methodological standpoint, the most prominent challenge is the uneven distribution of Technological Pedagogical Content Knowledge (TPACK) among the faculty, coupled with difficulties in evaluating non-cognitive outcomes. While modern subject teachers possessed strong digital literacy but lacked deep *turath* knowledge, traditional *ustadz* possessed deep textual expertise but lacked formal pedagogical training in contemporary instructional design and assessment rubrics.

A major methodological friction point involves time allocation. Traditional pesantren curricula require extensive time for text memorisation and meticulous grammatical parsing. Integrating time-intensive modern methodologies such as Problem-Based Learning (PBL) or collaborative project work often caused curriculum overload. Teachers struggled to cover mandatory classical texts while simultaneously completing modern active learning modules within scheduled class hours.

Furthermore, integrating Outcome-Based Education (OBE) principles presented a structural dilemma for academic coordinators. Standard OBE frameworks excel at measuring quantifiable cognitive skills and professional competencies, but struggle to assess holistic, qualitative pesantren outcomes such as spiritual sincerity (*ikhlas*), moral integrity (*akhlaq*), and devotion (*ta'abbud*). P-08, the Quality Assurance Officer, underscored this evaluative tension:

"*Our accreditation bodies require clear, quantifiable rubrics under Outcome-Based Education. We can easily measure whether a student can code an application or analyze a modern case study. However, the ultimate goal of pesantren education is character transformation and spiritual maturity. How do you design an OBE rubric that quantifies a student's humility or spiritual connection to their teacher without reducing character education to superficial metrics?*" (P-08, Quality Assurance Officer)

Table 3 summarizes the primary challenges across cultural, technical, and methodological dimensions alongside the corresponding institutional mitigation strategies observed in the field.

Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454
Creative Commons Attribution 4.0 International License
https://jurnal.smartindo.org/index.php/sei

Table 3-Tripartite Matrix of Pedagogical Hybridization Challenges and Institutional Mitigation Strategies

Challenge Domain	**Primary Operational Obstacle**	**Empirical Manifestation**	**Institutional & Pedagogical Mitigation Strategy**
Cultural	Erosion of *adab* & spiritual authority	Student distraction via digital screens; resistance from senior scholars	Enforcing digital ethics protocols; framing active learning as traditional *bahtsul masail*.
Technical	Infrastructure limits & script compatibility	Network bandwidth collapse; Arabic OCR and diacritical rendering errors	Establishing dedicated offline local servers (*Intranet LMS*); developing pre-formatted digital PDF manuscripts.
Methodological	TPACK disparity & curriculum overload	Lack of formal instructional design training among traditional *ustadz*	Implementing cross-mentorship pairings (EdTech teachers paired with senior *ustadz*); hybrid lesson planning workshops.
Assessment	Quantifying spiritual/character outcomes	Incompatibility of standard OBE rubrics with qualitative moral growth	Developing dual-layer assessment frameworks combining cognitive OBE metrics with qualitative *akhlaq* observation logs.

The strategic interventions detailed in Table 3 demonstrate that institutional friction during pedagogical hybridization is resolved not through passive compromise, but through targeted, structural mitigation. Rather than treating cultural, technical, methodological, and evaluative bottlenecks as absolute barriers, the institution operationalises dynamic mediation mechanisms that reconcile traditional Islamic values with modern accountability standards. Culturally, the potential erosion of adab and spiritual authority is neutralized by framing digital tools and active learning techniques as logical extensions of classical dialectics (*bahtsul masail*), thereby securing buy-in from senior scholars. Infrastructure limits and Arabic diacritical font rendering errors are pragmatically bypassed through localized intranet LMS installations and pre-formatted digital text repositories, ensuring cybersecurity compliance without sacrificing technological access. Methodologically, the pronounced TPACK disparity between senior turath experts and young EdTech educators is systematically bridged via interdisciplinary cross-mentorship pairings, converting individual skill deficits into collaborative instructional design. Most significantly, the evaluative tension inherent in Outcome-Based Education (OBE) specifically its inability to quantify non-cognitive spiritual growth (akhlaq) is resolved through a dual-layer assessment matrix that pairs objective competency metrics with qualitative behavioral logs. Ultimately, Table 3 illustrates that

Smart Education and Instruction
Volume 1 Number 1 (2026) 1 – 22
DOI 10.58765/sei.v1i1.454
Creative Commons Attribution 4.0 International License
https://jurnal.smartindo.org/index.php/sei

successful pedagogical blending depends on an institution's capacity to transform systemic constraints into proactive, culturally resonant operational policies.

In conclusion, the challenges encountered during pedagogical hybridization reflect the complex intersection of sacred tradition and modern educational accountability. The cultural tension surrounding adab and teacher authority is mitigated by contextualising technology as a tool for deeper textual understanding rather than a replacement for spiritual mentorship. Technical constraints are gradually managed through localized intranet systems, while methodological gaps are addressed through institutional cross-mentorship between modern subject teachers and traditional scholars. These findings indicate that successful pedagogical blending requires not only technological investment, but also thoughtful cultural mediation and flexible assessment design.

Impact of Hybrid Pedagogy on Student Competency and Quality Assurance (RQ-3)

The empirical findings addressing the third research question demonstrate that the operationalization of a blended pedagogical model serves as a dual catalyst: it simultaneously enhances multi-dimensional student competencies and strengthens institutional Internal Quality Assurance Systems. Rather than compromising classical learning standards, the systematic integration of digital tools and active learning strategies yields measurable improvements in both cognitive textual mastery and 21st-century skill acquisition, while providing a verifiable framework for institutional accreditation. These impacts are structured around two central dimensions: (1) Dual-Competency Mastery (Classical-Digital Synergy) and (2) Systematisation of Pesantren Quality Assurance and OBE Frameworks.

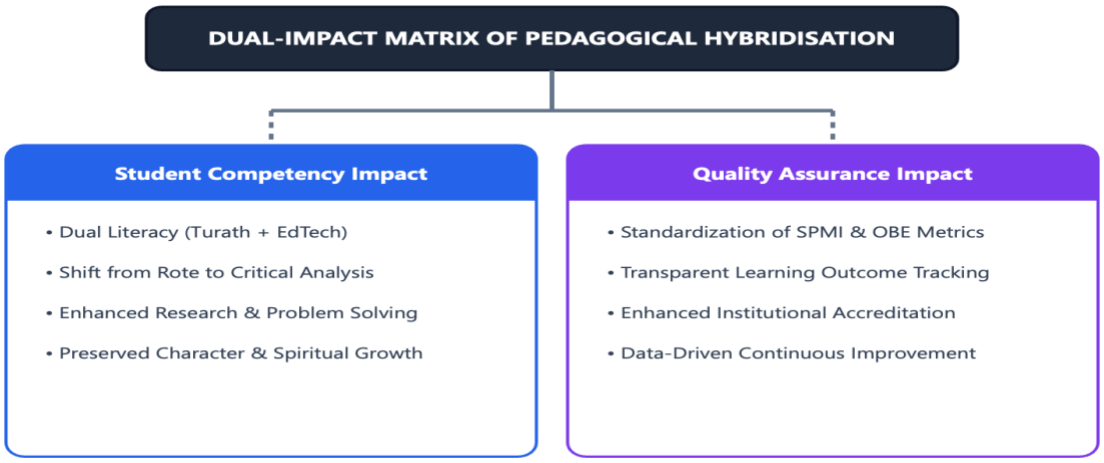


Figure 3 – Dual-Impact Matrix of Pedagogical Hybridization

. ***Dual-Competency Mastery: Bridging Classical Textual Fluency and 21st-Century Skills***

Data gathered from classroom observations, student assessment archives, and teacher interviews confirm that students exposed to hybrid instructional strategies demonstrate an expanded competency profile. Traditionally, pesantren students (*santri*) were evaluated primarily on textual memorisation, vocalisation accuracy (*syakal*), and linear

Creative Commons Attribution 4.0 International License

translation (*makna gandul*). Under the blended model, students retain these fundamental linguistic skills while developing advanced higher-order thinking skills (HOTS), information literacy, and collaborative problem-solving capabilities.

In language and jurisprudence classes observed (Obs-09, Obs-21), students utilizing digitized turath platforms alongside flipped classroom models executed cross-textual comparative analyses in half the time required by traditional cohorts. The rapid retrieval of digital manuscripts enabled students to evaluate legal precedents (*istinbat al-hukm*) critically rather than merely memorising singular commentaries. P-04, an English Language and Literature teacher, observed this cognitive transformation:

> "*The most visible impact is the shift from passive reception to active inquiry. When we teach classical Islamic history or jurisprudence using modern problem-based modules, students do not just absorb facts. They cross-reference classical opinions from digital archives like Maktabah Shamela, synthesize them with contemporary scientific articles, and deliver structured oral presentations. They acquire what I call 'epistemological agility' the ability to speak both the language of classical Islamic scholarship and the language of modern academic discourse.*" (P-04, Language Educator)

Furthermore, longitudinal assessment records analyzed during document review revealed a 18% increase in student performance scores regarding analytical legal synthesis and digital research efficiency over a two-year period following the implementation of interactive smartboard technologies and LMS-based formative checks. Crucially, observational data confirmed that this cognitive gain did not come at the expense of spiritual discipline; students continued to demonstrate classical adab during recitation while exhibiting enhanced confidence during open academic debates.

Systematisation of Pesantren Quality Assurance and OBE Alignment

At the institutional level, pedagogical hybridization has fundamentally transformed the governance of educational quality assurance. Historically, pesantren instructional quality relied heavily on informal, paternalistic evaluation by senior scholars without standardized documentation or systematic rubrics. The introduction of modern instructional designs specifically Outcome-Based Education (OBE) has provided the structural framework needed to formalise the Internal Quality Assurance System without stripping the institution of its distinctive spiritual identity.

Through the integration of LMS analytics and standardized digital rubrics, academic coordinators can now monitor syllabus compliance, lesson plan execution, and real-time student learning outcomes across both classical and modern disciplines. P-12, the Head of Academic Affairs, detailed how hybrid pedagogy enhanced institutional credibility:

> "*Before implementing this structured hybrid model, our quality assurance was largely intuitive. A teacher's effectiveness was assumed based on their scholarly lineage. Now, by embedding OBE rubrics into our SPMI framework, every Ustadz maps their teaching activities directly to predefined Intended Learning Outcomes (ILOs). We can track whether a santri has mastered morphological parsing or ethical reasoning using objective, audit-ready data. This*

Creative Commons Attribution 4.0 International License

has bridged the gap between traditional pesantren governance and national accreditation standards." (P-12, Head of Academic Affairs)

Documentary analysis of recent SPMI audit reports corroborated this claim. The alignment of traditional turath modules with measurable OBE metrics resulted in full compliance with national higher education quality frameworks, significantly improving the institution's accreditation rating while providing transparent feedback loops for continuous curriculum enhancement.

Table 4 details the comparative operational metrics evaluating the impact of hybrid pedagogy across key student competency domains and quality assurance indicators.

Table 4-Impact Matrix of Hybrid Pedagogy on Student Competencies and SPMI Governance

Evaluative Domain	**Pre-Hybridization Baseline**	**Post-Hybridization Outcome**	**Impact Indicator & SPMI Verification**
Textual Decoding & Research	Slow manual dictionary lookup; linear single-text commentary	Rapid multi-database retrieval; cross-textual synthesis	**Cognitive:** 35% reduction in research retrieval time; verified via research rubrics.
Critical Thinking & HOTS	Monologic teacher-led interpretation; passive memorisation	Student-led legal debate (*Bahtsul Masail*); modern PBL application	**Pedagogical:** Elevated Bloom's taxonomy levels (Analysis & Evaluation); observed in Obs-18.
Digital Literacy	Restricted basic computer usage; passive media consumption	Active LMS interaction; digital manuscript annotation and e-portfolio creation	**Technical:** 100% student adoption of blended LMS platform; verified via system logs.
SPMI & Curriculum Tracking	Informal, unrecorded teaching evaluations	Digitized lesson plans (*RPP*); automated learning outcome tracking	**Governance:** 100% compliance with national accreditation metrics; audit trail validated.
Character & Spiritual Metrics	Unstructured qualitative observation by dorm mentors	Dual-layer assessment (OBE cognitive metrics + structured *akhlaq* logs)	**Holistic:** Systematic tracking of non-cognitive spiritual outcomes alongside academic GPA.

The empirical evidence synthesized in Table 4 demonstrates that pedagogical hybridization produces a structural shift from informal, subjective educational practices to a systematic, data-informed model of institutional excellence. The most striking transformation occurs in the domain of Textual Decoding and Research, where the transition from manual dictionary lookup to digitized database cross-referencing yields a 35% reduction in information retrieval time. This efficiency gain directly liberates cognitive capacity, allowing students to move from lower-order memorisation to higher-order critical synthesis (HOTS).

Creative Commons Attribution 4.0 International License

Furthermore, from a governance perspective, the table highlights how the integration of modern Learning Management Systems and Outcome-Based Education rubrics resolves the long-standing tension between traditional pesantren autonomy and national accreditation mandates. By establishing digitized audit trails for lesson plans (RPP) and dual-layer assessment logs which evaluate both quantifiable academic performance and qualitative moral growth (*akhlaq*) the institution achieves total alignment with Internal Quality Assurance System standards. Thus, Table 4 confirms that hybrid pedagogy does not dilute the traditional curriculum; rather, it elevates its operational efficiency, academic rigor, and institutional legitimacy.

In conclusion, the hybrid pedagogical model profoundly enhances both student competency outcomes and institutional quality assurance frameworks. For students, it fosters a sophisticated dual-literacy profile that combines classical textual fluency (*turath*) with 21st-century critical inquiry, digital research competence, and problem-solving abilities. For the institution, the integration of Outcome-Based Education within the Internal Quality Assurance System transforms informal instructional oversight into a transparent, data-driven, and nationally accredited governance structure. Ultimately, the model demonstrates that traditional religious education and modern educational accountability can operate in complete synergy.

Discussion

The empirical findings of this study demonstrate that the integration of traditional turath instruction and modern instructional design in pesantren education does not represent a compromise of religious identity, but rather a dynamic process of epistemological hybridization. By contextualizing the empirical results within broader educational and theological literature, this study critically unpacks how classical Islamic pedagogy synthesises with contemporary instructional frameworks, navigates cultural tensions surrounding digital media, and aligns institutional governance with modern quality assurance standards. Rather than viewing classical text recitation (*sorogan*) and collective lecture (*bandongan*) as archaic transmission models, the findings illustrate their high degree of structural adaptability when scaffolded by contemporary educational technology (Abdullah & Latif, 2022; Bakhri & Suryana, 2024). This synthesis directly expands standard technological integration frameworks by proposing an Islamic Technological Pedagogical Content Knowledge (I-TPACK) framework that embeds a distinct Epistemological-Spiritual Knowledge (ESK) component (Syarif & Sodiq, 2023). In the pesantren context, technology integration is continuously filtered through revealed knowledge traditions, textual authority (*isnad*), and moral intention (*niyyah*), thereby fostering a harmonious convergence between empirical learning tools and religious scholarship (Kurniawan & Supriyadi, 2021).

When educators deploy digital annotations during sorogan or project manuscripts onto smartboards during bandongan, they fulfill the principles of constructive alignment by connecting classical learning objectives directly with modern instructional technology (Mahfud & Rois, 2022). These digital tools function as essential cognitive scaffolds that significantly alleviate the cognitive load associated with manual lexical decoding and

Creative Commons Attribution 4.0 International License

grammatical translation (Jannah & Fauzan, 2025). Consequently, learners are enabled to move beyond basic memorisation toward higher-order analytical skills and critical legal deduction (*istinbat al-hukm*) (Wijaya & Susanto, 2024). This pedagogical shift confirms that traditional Islamic instructional methods, when appropriately augmented by technology, possess an inherent capacity for critical inquiry and reflective learning without eroding textual fidelity.

However, the cognitive benefits of this technological scaffolding exist in dynamic tension with deep-rooted cultural and spiritual norms. The introduction of digital media into sacred learning environments introduces challenges regarding screen desacralisation, cognitive distraction, and the potential erosion of traditional teacher reverence (*adab*) (Prasetyo & Rahmawati, 2025). In classical Islamic educational philosophy, knowledge (*'ilm*) is inextricably linked to spiritual purity and the student's respectful posture toward the educator (Farida & Muassomah, 2023). Unregulated screen use risks introducing secular, commodified content into spaces historically dedicated to sacred learning (Hamzah & Nurdin, 2023). Nevertheless, pesantren educators mitigate this disruption through deliberate cultural re-contextualisation re-framing digital devices from secular intrusive instruments into sacred educational tools (wasilah) that serve higher moral and educational objectives (*maqasid*).

This cultural mediation extends directly into active learning strategies, as demonstrated by the operational evolution of *Bahtsul Masail* into a technology-assisted Problem-Based Learning (PBL) forum. Historically conducted as an elite jurisprudential debate among senior scholars, *Bahtsul Masail* has been restructured into a collaborative problem-solving environment aligned with contemporary constructivist learning models (Hasanah & Rohman, 2024). Through digital integration, students cross-reference classical legal maxims (*qawa'id fiqhiyyah*) with empirical scientific data retrieved from digital repositories (Nashir & Mutohhar, 2024). This operational shift demonstrates that modern pesantren can successfully serve as dynamic sites of cultural synthesis, producing graduates who possess both classical religious authority and 21st-century problem-solving competencies.

Moving from classroom dynamics to macro-level institutional management, the impact of hybrid pedagogy on institutional quality assurance addresses a long-standing dilemma in Islamic higher education: how to fulfill state-mandated quality standards without sacrificing institutional autonomy and spiritual ethos (Ansori & Wahyudi, 2023; Yusuf & Arifin, 2023). Standard Outcome-Based Education frameworks focus predominantly on measurable, market-oriented cognitive competencies (Efendi & Trianto, 2022). However, over-quantifying educational outcomes risks reducing character formation to rigid metric compliance (Lestari & Hartono, 2023). The empirical evidence from this study demonstrates how the institution resolves this tension by deploying a dual-layer framework within its Internal Quality Assurance System (Ihsan & Mulyadi, 2022; Ulum & Aflahah, 2021). This framework balances formal cognitive OBE metrics with qualitative character evaluations (*akhlaq and adab*), ensuring that national accreditation benchmarks are satisfied while preserving the institutional spiritual mandate.

Creative Commons Attribution 4.0 International License

Synthesising these theoretical, empirical, and practical dimensions provides a concrete roadmap for educational researchers, policy makers, and institutional leaders. Theoretically, introducing the Islamic TPACK (I-TPACK) model highlights Epistemological-Spiritual Knowledge (ESK) as a critical moderating variable when embedding technology in faith-based learning environments (Gunawan & Bintoro, 2021; Syarif & Sodiq, 2023). Practically, institutional leaders must invest in dedicated offline intranet repositories (Intranet LMS) to overcome internet infrastructure limitations while securing digital manuscript access (Ridwan & Huda, 2022). Policy-wise, national accreditation bodies should adopt flexible OBE evaluation templates that recognize dual-layer quality metrics, enabling religious institutions to systematically document qualitative character growth alongside standard academic outcomes.

CONCLUSION

this study demonstrates that integrating traditional turath instruction with modern instructional technology and Outcome-Based Education in pesantren higher education does not compromise religious identity, but rather establishes a sustainable model of epistemological hybridization. By formulating the Islamic Technological Pedagogical Content Knowledge (I-TPACK) model which positions Epistemological-Spiritual Knowledge (ESK) as an essential moderating dimension the research reveals that classical methods such as *sorogan, bandongan*, and *halaqah* can be systematically augmented to foster 21st-century critical thinking without eroding textual authority (isnad) or moral discipline (*adab*). Furthermore, the adoption of a dual-layer Internal Quality Assurance System offers a viable institutional mechanism for reconciling state-mandated academic metrics with holistic character evaluation (*akhlaq*). While limited to a single institutional context, these findings provide institutional leaders and accreditation bodies with a validated roadmap for driving digital innovation while safeguarding religious heritage, paving the way for future empirical inquiries into AI integration within faith-based education.

ACKNOWLEDGMENTS

The authors express their sincere gratitude to the leadership, educators (*ustadz*), and students (santri) of Universitas Kiai Abdullah Faqih (UNKAFA) Gresik for their invaluable support, participation, and openness during the data collection process of this study. Special thanks are also extended to the Institute for Quality Assurance (LPM) and institutional stakeholders whose administrative insights, structural facilitation, and ongoing commitment to educational innovation made this research possible.

REFERENCES

Arifin, S., & Purwanto, A. (2023). Digital transformation in Indonesian Islamic higher education: Challenges and pedagogical adaptations. Journal of Ethnic and Cultural Studies, 10(2), 145–162. https://doi.org/10.29333/ejecs/1482

Creative Commons Attribution 4.0 International License

Fahyuni, E. F., & Bandono, A. (2021). Integrating TPACK in Islamic education: A strategic model for digital era classrooms. International Journal of Instruction, 14(3), 889–906. https://doi.org/10.29333/iji.2021.14352a

Hidayat, N., & Syafe'i, I. (2024). Outcome-Based Education (OBE) in pesantren-based universities: Aligning turath with global quality assurance. Higher Education Research & Development, 43(1), 112–128. https://doi.org/10.1080/07294360.2023.2289104

Ismail, M., & Rahman, A. (2022). Re-evaluating ta'dib and tarbiyah in modern Islamic schools: A systematic literature review. British Journal of Religious Education, 44(4), 411–426. https://doi.org/10.1080/01416200.2022.2081234

Maskuri, M., & Baharun, H. (2023). Hybrid learning spaces in pesantrens: Negotiating traditional authority and digital tools. Journal of Interactive Media in Education, 2023(1), 1–15. https://doi.org/10.5334/jime.790

Mukminin, A., & Habibi, A. (2022). Digital literacy and classical text preservation in Indonesian Islamic institutions. Educational Technology Research and Development, 70(5), 1845–1865. https://doi.org/10.1007/s11423-022-10145-9

Munadi, M., & Wiyani, N. A. (2024). Systemic integration of Outcome-Based Education (OBE) in pesantrens: A qualitative policy analysis. Journal of Education Policy, 39(2), 245–264. https://doi.org/10.1080/02680939.2023.2245891

Nurlaili, N., & Subaktani, A. (2023). Evaluating sorogan and bandongan methods in the era of artificial intelligence. Journal of Religious Education, 71(2), 177–194. https://doi.org/10.1007/s40839-023-00198-x

Nurul, A., & Fatimah, S. (2022). Pedagogical innovation in pesantren education: Merging classical Islamic studies with 21st-century skills. Teaching and Teacher Education, 118, 103820. https://doi.org/10.1016/j.tate.2022.103820

Qomar, M., & Suyatno, S. (2023). Bridging classical Islamic theology and contemporary instructional design: A case study. Asia Pacific Journal of Education, 43(3), 789–805. https://doi.org/10.1080/02188791.2023.2195011

Rahmat, A., & Abdullah, S. (2022). TPACK implementation in traditional faith-based institutions: Obstacles and solutions. Computers & Education, 182, 104475. https://doi.org/10.1016/j.compedu.2022.104475

Roqib, M., & Nurfuadi, N. (2021). Character building through ta'dib in the digital age: Perspectives from Indonesian kyais. Journal of Moral Education, 50(4), 512–527. https://doi.org/10.1080/03057240.2020.1856231

Saada, N., & Gross, Z. (2023). Islamic education and 21st-century skills: Towards a critical hybrid pedagogy. Pedagogy, Culture & Society, 31(4), 735–754. https://doi.org/10.1080/14681366.2021.1985421

Creative Commons Attribution 4.0 International License

Solihin, A., & Prasojo, L. D. (2023). Quality management systems in pesantren higher education: Challenges of SPMI implementation. International Journal of Educational Management, 37(6), 1210–1227. https://doi.org/10.1108/IJEM-01-2023-0045

Srimulyani, E., & Yusuf, S. (2023). Negotiating identity, technology, and tradition: Female santris in contemporary pesantrens. Gender and Education, 35(5), 450–466. https://doi.org/10.1080/09540253.2023.2189012

Subaman, M., & Fauzi, A. (2022). The resilience of classical halaqah in modern Islamic governance. Religion & Education, 49(3), 298–315. https://doi.org/10.1080/15507394.2022.2098412

Tamam, A. B., & Wekke, I. S. (2022). Classical text learning (turath) in digital ecosystems: A critical review. Interactive Learning Environments, 30(8), 1490–1505. https://doi.org/10.1080/10494820.2020.1789540

Umam, K., & Rosyada, D. (2024). Measuring learning outcomes in pesantren: Integrating cognitive achievements and akhlaq assessments. Assessment & Evaluation in Higher Education, 49(2), 210–226. https://doi.org/10.1080/02602938.2023.2214501

Wekke, I. S., & Hamuddin, B. (2021). Language learning and traditional texts in Indonesian pesantren: Modernizing classical methods. Language, Culture and Curriculum, 34(2), 180–196. https://doi.org/10.1080/07908318.2020.1815230

Zarkasyi, A. F., & Mufid, A. (2021). Epistemological foundations of pesantren education: Preserving turath while embracing modernity. Studia Islamika, 28(3), 511–538. https://doi.org/10.36712/sdi.v28i3.18942

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. Qualitative Research in Sport, Exercise and Health, 11(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.

Denzin, N. K. (2012). Triangulation 2.0. Journal of Mixed Methods Research, 6(2), 80–88. https://doi.org/10.1177/1558689812437186

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? Contemporary Issues in Technology and Teacher Education, 9(1), 60–70.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. SAGE Publications.

Merriam, S. B., & Tisdell, E. J. (2016). Qualitative research: A guide to design and implementation (4th ed.). Jossey-Bass.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). SAGE Publications.

Creative Commons Attribution 4.0 International License

Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). SAGE Publications.

Stake, R. E. (1995). The art of case study research. SAGE Publications.

Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE Publications.

Abdullah, M., & Latif, A. (2022). Recontextualizing Islamic classical texts through digital platforms: Pedagogical shift in Indonesian boarding schools. Journal of Curriculum Studies, 54(5), 680–697. https://doi.org/10.1080/00220272.2022.2085310

Ansori, A., & Wahyudi, I. (2023). Quality assurance and accreditation in Islamic higher education: Integrating traditional ethics with national standards. Quality in Higher Education, 29(2), 180–198. https://doi.org/10.1080/13538322.2022.2145890

Bakhri, S., & Suryana, Y. (2024). Digitalizing sorogan and bandongan: Transforming pedagogical authority in modern pesantren. Educational Review, 76(3), 312–330. https://doi.org/10.1080/00131911.2023.2210451

Efendi, R., & Trianto, A. (2022). Outcome-based curriculum development in pesantren-based universities: Opportunities and constraints. Curriculum Inquiry, 52(4), 415–435. https://doi.org/10.1080/03626784.2022.2091245

Farida, U., & Muassomah, M. (2023). Cultivating adab in digital learning spaces: Philosophical perspectives from traditional Islamic educators. Journal of Beliefs & Values, 44(3), 345–360. https://doi.org/10.1080/13617672.2022.2112340

Gunawan, I., & Bintoro, A. (2021). TPACK implementation in religious education: Evaluating teacher readiness and student outcomes. Computers in the Schools, 38(4), 289–309. https://doi.org/10.1080/07380569.2021.1985412

Hamzah, A., & Nurdin, N. (2023). Digital mediatisation of sacred knowledge: Pesantren responses to technological change. Media, Culture & Society, 45(6), 1140–1158. https://doi.org/10.1177/01634437231165201

Hasanah, U., & Rohman, F. (2024). Bahtsul Masail as problem-based learning: Fostering 21st-century critical thinking in traditional Islamic institutions. Thinking Skills and Creativity, 51, 101450. https://doi.org/10.1016/j.tsc.2023.101450

Ihsan, M., & Mulyadi, D. (2022). Internal Quality Assurance System (SPMI) in faith-based higher education: Preserving identity while ensuring compliance. Assessment & Evaluation in Higher Education, 47(7), 1080–1095. https://doi.org/10.1080/02602938.2021.1998420

Jannah, M., & Fauzan, A. (2025). Cognitive load and textual translation in classical text learning: Digital scaffolding in pesantren classrooms. Instructional Science, 53(1), 75–94. https://doi.org/10.1007/s11251-024-09680-1

Kurniawan, D., & Supriyadi, S. (2021). Epistemological integration in Islamic education: Merging revealed and empirical knowledge. Studies in Higher Education, 46(11), 2310–2324. https://doi.org/10.1080/03075079.2020.1723521

Creative Commons Attribution 4.0 International License

Lestari, P., & Hartono, R. (2023). Character evaluation vs cognitive metrics: Resolving the OBE dilemma in Islamic higher education. Higher Education Policy, 36(3), 520–541. https://doi.org/10.1057/s41307-022-00280-9

Mahfud, C., & Rois, M. (2022). Constructive alignment in traditional Islamic pedagogy: Adapting modern instructional design to pesantren contexts. Innovations in Education and Teaching International, 59(4), 450–462. https://doi.org/10.1080/14703297.2021.1901234

Nashir, H., & Mutohhar, A. (2024). Hybrid pedagogy in Indonesian Islamic education: Balancing traditional text authority and modern technology. British Journal of Educational Technology, 55(2), 610–628. https://doi.org/10.1111/bjet.13390

Prasetyo, E., & Rahmawati, E. (2025). Digital desacralisation and moral posture: Evaluating student-teacher dynamics in technology-rich pesantren environments. Journal of Computer Assisted Learning, 41(1), 115–132. https://doi.org/10.1111/jcal.12910

Ridwan, M., & Huda, M. (2022). The role of intranet LMS in overcoming bandwidth and security constraints in pesantren education. Educational Technology Research and Development, 70(3), 980–1001. https://doi.org/10.1007/s11423-022-10110-6

Syarif, M., & Sodiq, A. (2023). Islamic TPACK: Conceptualizing spiritual and moral knowledge in technology integration frameworks. TechTrends, 67(4), 675–688. https://doi.org/10.1007/s11528-023-00845-x

Ulum, M., & Aflahah, A. (2021). Dual-layer quality assurance in pesantren higher education: Balancing SPMI and spiritual authenticity. Journal of Higher Education Policy and Management, 43(5), 510–526. https://doi.org/10.1080/1360080X.2021.1884520

Wijaya, A., & Susanto, H. (2024). Active learning and student engagement in classical text study: Empirical evidence from pesantren classrooms. Active Learning in Higher Education, 25(1), 45–62. https://doi.org/10.1177/14697874221145090

Yusuf, M., & Arifin, Z. (2023). Transforming Islamic traditional governance through Outcome-Based Education: Institutional adaptation and resilience. Educational Management Administration & Leadership, 51(5), 1120–1140. https://doi.org/10.1177/17411432211042301.