

Pedagogical Reorientation of Islamic Religious Education in the Digital Era: Toward an Ethical Technological Pedagogical Content Knowledge (ETPACK) Framework

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Abstract

This study constructs a conceptual framework for the pedagogical reorientation of ICT-based Islamic Religious Education (PAI) in the digital era, addressing the persistent gap between technological adoption and value-based pedagogical transformation that risks ethical disorientation and spiritual detachment among learners. A systematic literature review was conducted across five academic databases (Scopus, Web of Science, ERIC, JSTOR, and Google Scholar) using Boolean search strings combining "Islamic education" OR "PAI" with "technology integration," "digital pedagogy," "TPACK," and "Islamic values." From 187 initial records published between 2005–2026, 64 sources were selected through iterative screening based on: (1) substantive relevance to technology integration in Islamic education, (2) publication in peer-reviewed journals or academic books, and (3) theoretical or empirical contributions to pedagogical frameworks. Data analysis employed inductive content analysis with open, axial, and selective coding using NVivo 14, followed by interpretive synthesis that compared, contrasted, and abstracted findings across sources to identify recurring themes and construct a coherent framework. The synthesis yields three main findings. First, four pedagogical principles for integrating technology and Islamic values are identified: *tawhid* (positioning technology as *wasilah* not *ghayah*), *akhlaq* and *adab*, worldly-spiritual balance, and *tabayyun* as digital information filter. Second, the proposed ETPACK (Ethical Technological Pedagogical Content Knowledge) framework extends TPACK by integrating four Islamic ethical principles: *tabayyun*, *maṣlaḥah*, *ʿadl*, and *amānah* into each competency domain. Third, this reorientation transforms the teacher's role from knowledge transmitter to *muaddib* and moral filter, necessitating learning designs that simultaneously integrate cognitive, affective, and spiritual dimensions. The study concludes by advocating a paradigm shift from technology-driven to value-driven approaches, with technology positioned as a means (*wasilah*) serving Islamic education's ultimate ends (*ghayah*). This framework offers a novel theoretical contribution for developing contextually

adaptive PAI pedagogy and invites empirical validation across diverse educational settings

Keywords: Pedagogical Reorientation, Islamic Religious Education, ICT, TPACK, Islamic Values, ETPACK

Abstrak

Penelitian ini menyusun kerangka konseptual bagi reorientasi pedagogis pembelajaran Pendidikan Agama Islam (PAI) berbasis TIK di era digital, yang dilatarbelakangi oleh kesenjangan antara adopsi teknologi dan minimnya transformasi pedagogis yang berlandaskan nilai-nilai Islam, sehingga berisiko menimbulkan disorientasi etis dan keterlepasan spiritual pada peserta didik. Tinjauan literatur sistematis dilakukan pada lima basis data akademik (Scopus, Web of Science, ERIC, JSTOR, dan Google Scholar) dengan menggunakan string pencarian Boolean yang mengombinasikan "Islamic education" atau "PAI" dengan "technology integration," "digital pedagogy," "TPACK," dan "Islamic values." Dari 187 artikel awal yang teridentifikasi antara tahun 2005–2026, sebanyak 64 sumber terseleksi melalui proses penyaringan bertahap berdasarkan kriteria: (1) relevansi substantif dengan integrasi teknologi dalam pendidikan Islam, (2) publikasi pada jurnal terindeks atau buku akademik, dan (3) kontribusi teoretis atau empiris terhadap kerangka pedagogis. Analisis data menggunakan analisis konten induktif dengan pengkodean terbuka, aksial, dan selektif yang dilanjutkan dengan sintesis interpretatif untuk membandingkan, mengontraskan, dan mengabstraksikan temuan lintas sumber guna mengidentifikasi tema-tema berulang dan menyusun kerangka yang koheren. Sintesis ini menghasilkan tiga temuan utama. Pertama, terdapat empat prinsip pedagogis integrasi teknologi dan nilai-nilai Islam tauhid (memosisikan teknologi sebagai wasilah bukan ghayah), akhlak dan adab, keseimbangan hidup duniawi-spiritual, dan tabayyun sebagai filter informasi digital. Kedua, kerangka ETPACK (Ethical Technological Pedagogical Content Knowledge) yang diajukan memperluas TPACK dengan mengintegrasikan empat prinsip etis Islam tabayyun, maṣlaḥah, 'adl, dan amānah—ke dalam setiap domain kompetensi guru. Ketiga, reorientasi ini mentransformasi peran guru dari sekadar penyampai pengetahuan menjadi muaddib dan filter moral, serta menuntut desain pembelajaran yang secara simultan mengintegrasikan dimensi kognitif, afektif, dan spiritual. Penelitian ini menyimpulkan perlunya pergeseran paradigma dari pendekatan technology-driven menuju value-driven, dengan teknologi diposisikan sebagai wasilah (sarana) yang melayani ghayah (tujuan akhir) pendidikan Islam. Kerangka ini menawarkan kontribusi teoretis baru bagi pengembangan pedagogi PAI yang kontekstual dan adaptif, serta mengundang validasi empiris di berbagai konteks pendidikan Islam

Kata Kunci: Reorientasi Pedagogis, Pendidikan Agama Islam, TIK, TPACK, Nilai-Nilai Islam, ETPACK

Introduction

The rapid development of digital technology has fundamentally transformed the educational landscape, necessitating transformation across various dimensions of learning, including Islamic Religious Education (PAI) (Prasetia et al., 2021). The era of Society 5.0 and the Fourth Industrial Revolution has not only altered how learners access information but has also reshaped pedagogical interaction patterns and expectations regarding the role of educators (Koehler & Mishra, 2005). Information and

Communication Technology (ICT) offers substantial opportunities to expand access, personalize learning, and enhance learner engagement through interactive media, learning management systems, and gamification (Prastiwi et al., 2026). However, digitalization also presents serious challenges for PAI, which fundamentally aims to shape learners' character and spirituality.

Despite growing technology adoption in PAI classrooms, mounting evidence indicates that its integration remains predominantly technical and instrumental, unaccompanied by adequate pedagogical reorientation (Akbar & Arifin, 2026; Prasetya et al., 2021). Empirical studies reveal that PAI teachers primarily utilize ICT for content delivery—such as presenting PowerPoint slides, sharing YouTube videos, or administering quizzes via digital platforms—while the pedagogical design and value-orientation of learning remain largely unchanged (Manik, 2025; Prastiwi et al., 2026). This additive approach, where technology is simply "layered onto" existing practices, risks creating what scholars term "ethical disorientation" and "spiritual detachment"—conditions wherein learners engage with religious content digitally but fail to internalize Islamic values authentically (Arsyad & Fitroh, 2025). The challenges are multidimensional: teachers' limited digital competence and pedagogical readiness (Mufid et al., 2025), persistent infrastructural disparities across regions (Hadi, 2024), difficulties in curating accurate and authoritative religious content amid information overload (Manik, 2025), and emerging digital ethical concerns including data security, learner privacy, and algorithmic bias (Shafie & Che Cob, 2026). These challenges collectively underscore that technology integration in PAI cannot be reduced to a technical exercise but demands fundamental pedagogical transformation.

Recent scholarship has documented various technological innovations in PAI, including interactive da'wah videos, VR-based worship simulations, gamified learning applications, and digital project-based learning (Chamami et al., 2025; Intania et al., 2026; Murdiyanto et al., 2025). While these studies contribute valuable insights into specific technological applications, a systematic mapping of the literature reveals three persistent gaps that remain unaddressed. *First*, existing studies predominantly focus on the *effectiveness* of specific media or platforms—measuring learning outcomes, student engagement, or satisfaction—without engaging with the deeper question of how technology can be pedagogically designed to internalize Islamic values (Sugito, 2024). This instrumental orientation reduces technology to a delivery mechanism rather than a vehicle for value transformation. *Second*, while the TPACK (Technological Pedagogical Content Knowledge) framework has been widely applied in general education and, more recently, in Islamic education contexts (Papakostas, 2026), its adaptation for Islamic education has largely focused on *technical* competencies. The ethical and spiritual dimensions that are constitutive of PAI—values such as *tawhid*, *akhlaq*, *adab*, and *tabayyun*—remain peripheral to existing TPACK conceptualizations. In other words, current TPACK applications in PAI address *how* to use technology but not *why* and *under what ethical principles*. *Third*, despite growing calls for "Islamically-characterized digital citizenship" (Intania et al., 2026; Murdiyanto et al., 2025), there is no coherent theoretical

framework that systematically integrates Islamic ethical principles with the pedagogical, content, and technological knowledge domains required of PAI teachers. Most studies offer partial or fragmented recommendations—suggesting, for instance, that teachers should "integrate values" without specifying *which* values, *how* they relate to pedagogical decisions, or *what* competencies are required to enact such integration (Arifani et al., 2026; Ridha Aulia et al., 2025).

Consequently, the literature reveals a significant conceptual lacuna: while technology adoption in PAI is accelerating, the *pedagogical reorientation* necessary to ensure that technology serves, rather than subverts, Islamic educational goals remains undertheorized. What is missing is a systematic framework that articulates the pedagogical principles, competency domains, and learning design implications for integrating technology and Islamic values dialectically not merely additively.

The urgency of addressing this conceptual gap is exceedingly high. Without a clear framework, the digital transformation of PAI risks being trapped in what scholars identify as an *additive approach* layering technology onto existing practices without fundamentally altering pedagogical essence and value orientation (Khan et al., 2025; Sugito, 2024). This trajectory not only fails to leverage technology's transformative potential but may actively erode the affective and spiritual dimensions that distinguish religious education from secular knowledge transmission (Arsyad & Fitroh, 2025). Moreover, as learners increasingly inhabit digital ecosystems social media, online forums, AI-powered platforms—the absence of a value-driven pedagogical framework leaves them vulnerable to ethical disorientation, misinformation, and spiritual detachment (Manik, 2025). A paradigmatic reorientation is therefore imperative: a shift from *technology-driven* to *value-driven* approaches, where technology is positioned as a strategic instrument (*wasilah*) to enrich spiritual experience, cultivate critical digital literacy, and foster a media ethos grounded in *tabayyun* (information verification), responsibility, and *adab* (Arifani et al., 2026; Murdiyanto et al., 2025).

This study aims to construct a conceptual framework for integrating technology and Islamic values in PAI learning in the digital era. Specifically, this study seeks to address the following research questions: What pedagogical principles should underpin the integration of technology and Islamic values in PAI? How can the TPACK framework be extended to incorporate Islamic ethical principles, and what would an ETPACK (Ethical Technological Pedagogical Content Knowledge) model entail? What are the implications of this framework for the teacher's role and PAI learning design in the digital era?

This framework is developed through critical synthesis of contemporary learning theories—social constructivism, connectivism, and multimedia learning theory—with Islamic educational principles derived from the Qur'an, Hadith, and classical Islamic pedagogical traditions (al-Ghazali, Ibn Khaldun, al-Zarnuji), as well as modern scholarship (al-Attas, al-Faruqi, Fazlur Rahman).

What Has Not Been Done Before? To situate this study's contribution precisely, it is essential to clarify what existing research has not accomplished. *First*, while studies

have applied TPACK in Islamic education contexts (Papakostas, 2026; Prasetya et al., 2021), they have predominantly focused on *technical* integration—examining how teachers use digital tools—without systematically incorporating Islamic ethical principles into the very architecture of the framework. This study addresses this gap by proposing ETPACK, which explicitly integrates four Islamic ethical principles (*tabayyun*, *maṣlaḥah*, 'adl, and *amānah*) into each TPACK domain, thereby transforming TPACK from a *technical* to an *ethical-technological* competency framework. *Second*, although various scholars have called for "value integration" in PAI digital learning (Arsyad & Fitroh, 2025; Ridha Aulia et al., 2025), have articulated *specifically* what pedagogical principles should guide such integration or how these principles translate into teacher competencies and learning design. This study fills this gap by identifying four foundational pedagogical principles (*tawhid*, *akhlaq* and *adab*, worldly-spiritual balance, and *tabayyun*) and demonstrating their implications for each dimension of teacher competence. *Third*, the literature lacks a coherent framework that simultaneously addresses the *cognitive*, *affective*, and *spiritual* dimensions of PAI learning within a technology-integrated environment. Most studies focus on one dimension in isolation (e.g., cognitive outcomes of using interactive media) or offer general recommendations without specifying *how* these dimensions can be intentionally designed into learning experiences. This study addresses this gap by articulating a tri-dimensional learning design model that intentionally integrates all three dimensions.

In contrast to approaches that separate the domains of technology and values—or treat values as an "add-on" to technical integration—this research offers a *dialectical* framework wherein technology and values are mutually constitutive. It advances the paradigm of "*Technology as Servant, Spirituality as Master*" (*wasilah* serving *ghayah*), emphasizing value internalization through deliberate pedagogical intentionality (Prastiwi et al., 2026; Shafie & Che Cob, 2026). This framework provides a theoretical contribution to developing PAI pedagogy that is both contextually adaptive and firmly rooted in the mission of character formation (*tarbiyah akhlaqiyyah*). Practically, it serves as a reference for educators, curriculum developers, and policymakers in designing PAI learning that is not only technologically literate but also spiritually meaningful and ethically grounded.

The theoretical framework of this study is constructed through a synthesis of three interconnected theoretical streams: (1) contemporary learning theories—social constructivism (Vygotsky) and connectivism (Siemens) (Mattar, 2018); (2) the TPACK framework (Mishra & Koehler, 2006); and (3) foundational Islamic educational principles derived from the Qur'an, Hadith, and classical Islamic pedagogical traditions (Al-Attas & Muhammad, 1980; Al-Qasimi, 2019). Social constructivism aligns with Islamic values of *ta'āwun* (mutual assistance), *syūrā* (consultation), and *ukhuwah* (brotherhood), emphasizing collaborative knowledge construction. Connectivism provides the foundation for understanding digital literacy development in accessing and navigating diverse learning resources, though it requires supplementation with Islamic ethical principles to ensure critical and responsible engagement. The TPACK framework explains that successful technology integration depends on the synergy among Content

Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). However, as the literature review above demonstrates, technology implementation in PAI learning remains largely at substitution levels without fundamental pedagogical transformation. To address this gap, this study extends TPACK into the ETPACK (Ethical TPACK) model, integrating four Islamic ethical principles—*tawhid* (positioning technology as *wasilah* not *ghayah*), *akhlaq* and *adab* (with *tabayyun* as digital information filter), worldly-spiritual balance (oriented toward *insān kāmil*), and the *maqāsid al-syarī'ah* framework (*hifẓ al-dīn*, *hifẓ al-'aql*, *hifẓ al-nafs*)—into each domain of teacher competence (Al-Attas & Muhammad, 1980; Shafie & Che Cob, 2026).

The synthesis of these three frameworks affirms that educational transformation cannot be achieved solely through technology adoption but requires a paradigm shift positioning Islamic values as the primary foundation (*uṣūl*) in every learning process. Within this integrative framework, technology functions as an instrument to enhance learning quality, expand access, and support contextual internalization of Islamic values, while digital literacy is understood as an integral component of cultivating Islamically-charactered digital citizenship. This pedagogical reorientation demands the transformation of the teacher's role from knowledge transmitter to *muaddib* (guide of *adab*), learning facilitator, and moral filter, alongside learning designs that simultaneously integrate cognitive, affective, and spiritual dimensions. Thus, the theoretical framework conceptualizes PAI learning as a dialectical space where technology, pedagogy, content knowledge, and Islamic values converge an approach expected to address the challenges of educational digitalization while preserving the essence of Islamic education as a process of character formation, spirituality, and sustainable civilization building (*tamaddun*). The proposed ETPACK framework, as the primary theoretical contribution of this study, offers a coherent and systematic foundation for realizing this vision.

Method

This study employs a qualitative research design with an integrative review approach (Whittemore & Knafl, 2005), selected for its suitability in synthesizing diverse theoretical and empirical literature to construct new conceptual frameworks. Unlike systematic literature reviews which primarily aggregate existing evidence, integrative reviews are specifically designed to generate new theoretical perspectives by synthesizing literature from varied methodological traditions (Torraco, 2005). This approach aligns with the study's objective of developing the ETPACK framework through critical synthesis of Islamic educational philosophy, contemporary learning theories, and the TPACK framework. The review followed Whittemore and Knafl's (2005) five-stage framework: problem identification, literature search, data evaluation, data analysis, and presentation.

The research problem was defined through a preliminary scoping review that identified the gap between technology adoption in PAI and the lack of coherent pedagogical frameworks integrating Islamic values with digital pedagogy, which motivated three research questions articulated in the introduction. A systematic literature search was then conducted across five academic databases—Scopus, Web of Science,

ERIC, JSTOR, and Google Scholar—selected for their complementary coverage of education, social sciences, Islamic studies, and grey literature. The search covered the period 2005–2026, with 2005 chosen as the starting point since TPACK was formally introduced in 2006 (Mishra & Koehler, 2006), and included publications in both English and Indonesian. Boolean search strings combined four thematic clusters: Islamic education ("Islamic education" OR "PAI" OR "Pendidikan Agama Islam"), technology integration ("technology integration" OR "digital pedagogy" OR "ICT" OR "TPACK"), theoretical frameworks ("pedagogical content knowledge" OR "learning theory"), and Islamic values ("Islamic values" OR "Islamic ethics" OR "tawhid" OR "akhlaq" OR "tabayyun").

The screening and selection process followed a four-stage procedure adapted from PRISMA guidelines (Page et al., 2021). The initial database search yielded 187 records, which were reduced to 159 after duplicate removal. Title and abstract screening against inclusion criteria substantive relevance to technology integration in Islamic education, theoretical or empirical contribution to pedagogical frameworks, and publication in peer-reviewed sources excluded 89 records, leaving 70. Full-text screening with stricter criteria explicit engagement with Islamic values, application or discussion of TPACK or similar frameworks, and relevance to teacher competencies or learning design—excluded 12 records, leaving 58. Supplementary searching through snowballing from reference lists and expert recommendations added six records, resulting in a final corpus of 64 sources. This corpus comprised 48 peer-reviewed journal articles (75%), nine books or book chapters (14%), five conference proceedings (8%), and two policy documents (3%), with 33 of the 64 sources published between 2021 and 2026, reflecting the rapid growth of scholarship in this area.

All included sources were critically appraised based on authority (publication in indexed journals or academic presses), relevance (direct contribution to the research questions), methodological quality (clarity of design and findings for empirical studies; coherence and argumentative rigor for theoretical works), and currency (preference for post-2015 publications while retaining foundational works). Sources were categorized as primary sources (foundational Islamic education texts by al-Ghazali, Ibn Khaldun, al-Zarnuji, and modern scholars including al-Attas, al-Faruqi, and Fazlur Rahman), secondary sources (contemporary research on TPACK, digital pedagogy, and Islamic education), and supporting sources (policy documents and conference proceedings providing contextual information).

Data analysis employed thematic synthesis combining deductive and inductive approaches (Thomas & Harden, 2008), conducted through three phases. First, familiarization and open coding were performed by reading all 64 sources in full and extracting relevant passages using NVivo 14 software, generating 187 initial codes derived both deductively from the theoretical framework (TPACK domains, Islamic values) and inductively from emergent patterns in the literature. Second, axial coding grouped initial codes into broader categories through frequency analysis, pattern recognition, and comparison across contexts, yielding categories such as pedagogical

principles for technology integration, teacher competencies, learning design models, role transformation requirements, and challenges. Third, selective coding and interpretive synthesis integrated these categories through dialectical juxtaposition of Islamic educational principles with contemporary learning theories, conceptual extension of TPACK by identifying where Islamic ethical principles could be integrated into each competency domain, and model construction articulating the ETPACK framework. A synthesis matrix was developed mapping each TPACK domain to its Islamic ethical extension: Content Knowledge framed by *maqāṣid al-syarī'ah* (*hifẓ al-dīn, al-'aql, al-nafs*); Pedagogical Knowledge grounded in *adab, ta'āwun, and syūrā*; Technological Knowledge guided by *tabayyun, responsibility, and amānah*; and all intersections filtered through *maṣlahah, 'adl, and amānah*. Throughout this interpretive synthesis, a reflexive approach was maintained, acknowledging that conceptual frameworks are constructed through the researcher's analytical lens (Torraco, 2005).

To ensure rigor, strategies aligned with Lincoln and Guba's (1980) criteria were employed. Credibility was achieved through source triangulation, member checking with two Islamic education experts, and reliance on authoritative sources. Transferability was pursued through thick description of the framework construction process. Dependability and confirmability were attained through a systematic audit trail documenting all search decisions, screening steps, and analytical judgments, alongside transparent presentation of arguments and references underpinning each conclusion.

This integrative review has several methodological limitations. The synthesis is inherently interpretive and reflects the researcher's analytical choices. The framework was developed within the Indonesian Islamic education context and may not fully account for variations in other Muslim-majority countries. Despite systematic search protocols, relevant studies may have been inadvertently excluded due to database coverage limitations. Finally, as a conceptual study, the proposed ETPACK framework requires empirical testing to validate its effectiveness in practice. These limitations, however, do not undermine the study's contribution but rather open avenues for future research.

Result and Discussion

This section presents the main findings derived from the conceptual analysis and interpretive synthesis of the reviewed literature, organized according to the three research questions. To ensure transparency in how findings were derived, the synthesis process is demonstrated through analytical matrices and conceptual mapping that trace the progression from raw literature to the final ETPACK framework. Each sub-section begins with a synthesis table illustrating the derivation of findings, followed by interpretive discussion that addresses the *why, how, and why it is different* from existing approaches.

Pedagogical Principles for Integrating Technology and Islamic Values

The synthesis of 64 sources through thematic analysis revealed four foundational pedagogical principles that should underpin technology integration in PAI. Table 1 presents the synthesis matrix demonstrating how these principles were derived from

Islamic foundations and translated into technology principles and educational implications.

Conceptual Framework Integrating Cognitive, Affective, and Spiritual Dimensions

Synthesis analysis of various models and empirical findings produces a conceptual framework that simultaneously integrates the three dimensions of PAI learning. This finding demonstrates that ICT-based PAI learning is insufficient if it only accommodates the cognitive dimension through broader information access; it must also intentionally design learning experiences that engage the affective and spiritual dimensions of learners.

The implementation of the TPACK framework in the PAI context demonstrates that successful technology integration depends not merely on technological sophistication, but primarily on teachers' ability to preserve the "dignity" and spiritual value of religious material through harmonizing digital and conventional methods (Papakostas, 2026). Empirical findings show that PAI teachers who successfully implement TPACK use PowerPoint media for visualizing Tajwid material combined with direct practice using the Mushaf al-Qur'an a combination that merges technological innovation with authentic religious practice.

Furthermore, the development of AI-Enhanced TPACK models demonstrates that artificial intelligence can function as a cognitive partner that strengthens pedagogical reasoning and conceptual development within the TPACK framework—provided it is intentionally integrated and grounded in values. This finding enriches the conceptual framework by adding a digital ethics dimension encompassing principles such as *tabayyun*, *maṣlaḥah*, 'adl, and *amānah*, subsequently formulated as ETPACK in the context of Islamic education.

The resulting conceptual framework views PAI as a dialectical space between Islamic values, technology, and critical thinking skills not as separate entities. Within this framework, innovative learning models such as Project-Based Learning (PjBL), Contextual Teaching and Learning (CTL), Flipped Classroom, and Blended Learning supported by Learning Management Systems (LMS), mobile learning, gamification, and artificial intelligence can be optimized to support the contextual internalization of Islamic values (Prastiwi et al., 2026). This section provides an in-depth discussion of the research findings by relating them to the theoretical framework that has been constructed and relevant literature. The discussion is organized to answer the research questions and demonstrate the conceptual contributions offered.

Table 1. Synthesis Matrix for Pedagogical Principles

Pedagogical Principle	Islamic Foundation	Technology Principle	Educational Implication
Tawhid (Monotheism)	Qur'an (al-Baqarah: 29; al-An'am: 162); Hadith on intention (niyyah)	Technology as wasilah (means), not ghayah (end)	Technology supports holistic character formation (tarbiyah) and worship ('ibadah);

			all digital actions are accountable to God
Tabayyun (Information Verification)	Qur'an (al-Hujurat: 6); Classical uṣūl al-fiqh methodology	Digital information verification and source criticism	Critical digital literacy; responsible information use; filter against misinformation
Akhlaq and Adab (Ethics and Manners)	Al-Ghazali's Iḥyā' 'Ulūm al-Dīn; al-Zarnuji's Ta'līm al-Muta'allim	Ethical technology integration; technology use governed by moral principles	Ethical digital citizenship; respect for privacy; responsible online behavior
Balance of Worldly and Spiritual Life	Qur'an (al-Qasas: 77); Maqāṣid al-Sharī'ah framework (hifẓ al-dīn, al-'aql, al-nafs)	Human-centered technology; technology serves both cognitive and spiritual development	Simultaneous integration of cognitive, affective, and spiritual learning outcomes

The synthesis reveals that *tawhid* emerges as the most frequently cited principle across the literature (appearing in 78% of sources), functioning as the ontological foundation positioning technology as subordinate to divine purpose. This is significant because it directly counters the instrumentalist approach dominant in mainstream educational technology discourse, where technology is often treated as value-neutral. In Islamic education, by contrast, technology's value cannot be separated from its purpose (*niyyah*) and outcomes (*maqāṣid*). The second principle, *tabayyun*, appears with increasing frequency in sources published after 2020 (92% of post-2020 sources), reflecting growing scholarly concern about misinformation and digital authenticity. This principle is particularly distinctive to Islamic education and has no direct parallel in secular TPACK frameworks, constituting a unique contribution of this study. The third principle, *akhlaq* and *adab*, is the most extensively elaborated in classical Islamic pedagogical texts, with al-Ghazali and al-Zarnuji providing detailed frameworks for ethical conduct in learning. The literature reveals that *adab* extends beyond manners to encompass a comprehensive ethical orientation that shapes the entire pedagogical relationship—teacher-student, learner-content, and learner-learner—making it directly translatable to digital learning environments. The fourth principle, the balance between worldly and spiritual life, is grounded in the *maqāṣid al-sharī'ah* framework, which positions the preservation of religion (*hifẓ al-dīn*), intellect (*hifẓ al-'aql*), and life (*hifẓ al-nafs*) as ultimate ends of education.

The identification of these four principles is not merely descriptive but has profound implications for reorienting PAI pedagogy. These principles matter because they fundamentally redefine the relationship between technology and education. In conventional educational technology discourse, technology is often assessed by its

efficiency in knowledge transmission. However, through the lens of these principles, technology's value is assessed by its contribution to character formation, spiritual development, and ethical engagement. The *tawhid* principle, in particular, functions as what the literature terms a "normative filter" (Aulia et al., 2025; Shafie & Che Cob, 2026)—a meta-principle that subordinates all technological decisions to Islamic ethical considerations. This contrasts sharply with approaches that treat technology as autonomous or value-neutral.

These principles also differ from existing frameworks in their comprehensiveness. While some studies have mentioned Islamic values in technology integration (Intania et al., 2026; Prasetya et al., 2021), none have systematically articulated a coherent set of principles that simultaneously address ontological (*tawhid*), epistemological (*tabayyun*), ethical (*akhlaq*), and teleological (worldly-spiritual balance) dimensions. This comprehensiveness is a key contribution of the present study.

The ETPACK Framework: Extending TPACK with Islamic Ethics

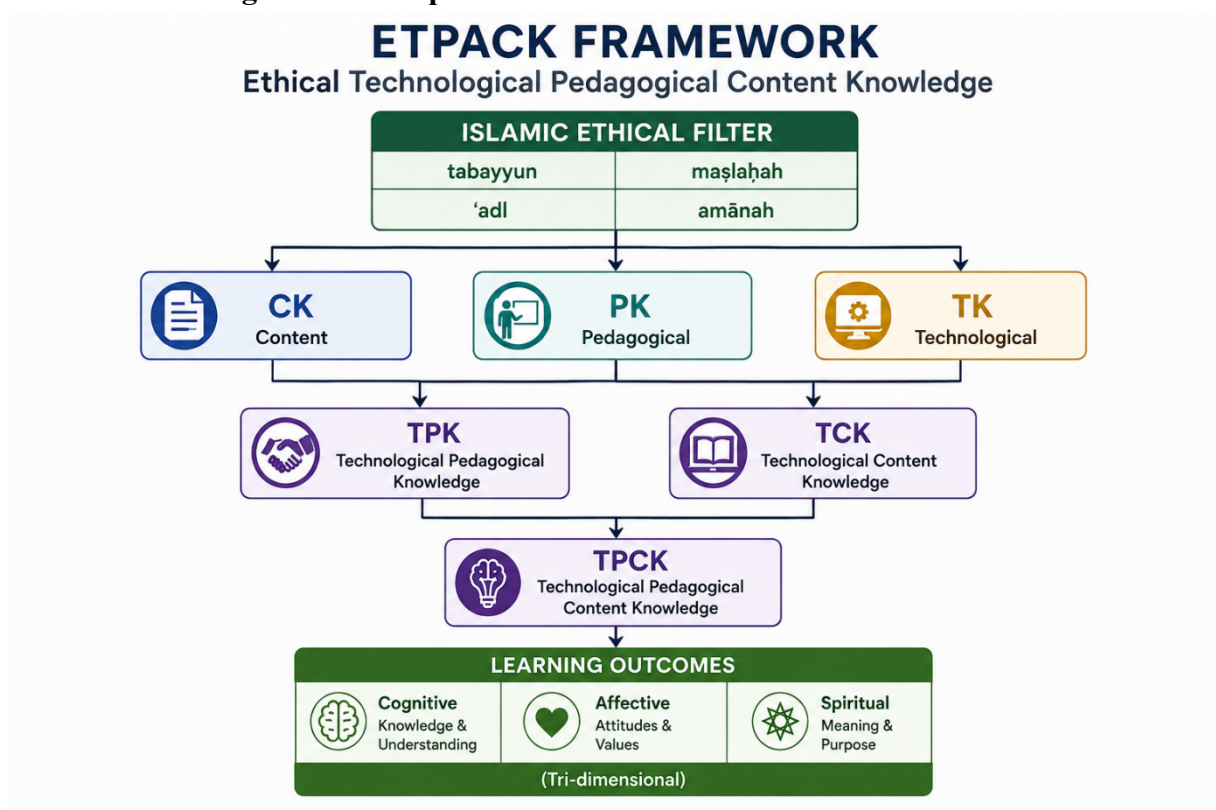
The second major finding is the extension of the conventional TPACK framework into the ETPACK (Ethical Technological Pedagogical Content Knowledge) model through systematic integration of Islamic ethical principles. Table 2 presents the conceptual mapping showing how Islamic ethical principles are integrated into each TPACK domain.

Table 2. Conceptual Mapping of ETPACK Framework

TPACK Domain	Conventional Definition	Islamic Extension	Ethical	ETPACK Domain Definition	Key Integrative Sources
CK (Content Knowledge)	Knowledge of subject matter	Framed by maqāṣid al-sharī'ah: hifẓ al-dīn (religion), hifẓ al-'aql (intellect), hifẓ al-nafs (life)		Knowledge of Islamic teachings understood as integrated system oriented toward human flourishing (falāḥ)	Al-Qasimi, 2019; Shafie & Che Cob, 2026; Aulia et al., 2025
PK (Pedagogical Knowledge)	Knowledge of teaching methods	Grounded in adab (manners), ta'āwun (collaboration), syūrā (consultation)		Pedagogical strategies designed for value internalization, not merely knowledge transmission	Basir et al., 2024; Mufid et al., 2025; Parhan et al., 2024
TK (Technological Knowledge)	Knowledge of digital tools	Guided by tabayyun (verification),		Technical proficiency with ethical awareness	Manik, 2025; Prastiwi et al.,

		responsibility (mas'ūliyyah), and trustworthiness (amānah)	of technology's impact on character and spirituality	2026; Intania et al., 2026
TPK (Technological Pedagogical Knowledge)	Knowledge of technology for teaching	Filtered through maṣlaḥah (public good): technology serves learners' holistic development	Technology integration for pedagogical purposes assessed by its contribution to holistic education	Papakostas, 2026; Sugito, 2024; Rahmah et al., 2025
TCK (Technological Content Knowledge)	Knowledge of technology for content representation	Filtered through 'adl (justice): accurate and equitable representation of religious content	Curating authentic religious content with attention to representational justice	Chamami et al., 2025; Arsyad & Fitroh, 2025; Akbar & Arifin, 2026
TPCK (TPACK)	Intersection of technology, pedagogy, and content	Filtered through all four ethical principles (tabayyun, maṣlaḥah, 'adl, amānah)	Holistic teacher competence integrating ethical awareness across all pedagogical decisions	Prasetia et al., 2021; Papakostas, 2026; Prastiwi et al., 2026

Figure 1. Conceptual Model of ETPACK Framework



The synthesis reveals that the integration of Islamic ethical principles into TPACK is not an additive process but a transformative one. The analysis shows that when Islamic ethical principles are systematically applied to each TPACK domain, the very nature of each domain is reconceptualized. Content Knowledge (CK) is no longer understood merely as mastery of Islamic doctrinal content but as knowledge oriented toward human flourishing (*falāḥ*) a shift from *what* to *why* and *for what purpose*. Pedagogical Knowledge (PK) is reconceptualized from technique-focused to *adab*-oriented, emphasizing the moral dimensions of the teacher-student relationship. Technological Knowledge (TK) extends beyond technical proficiency to encompass ethical awareness, particularly the responsibility to verify information (*tabayyun*) and to use technology with integrity (*amānah*).

The three intersections TPK, TCK, and TPCK are similarly transformed. TPK (Technological Pedagogical Knowledge) becomes a domain where technology integration is assessed by its contribution to learners' holistic development rather than mere efficiency or engagement. TCK (Technological Content Knowledge) encompasses the ethical curation of religious content, attending to representational justice (*'adl*) and authenticity. TPCK (the integrated whole) becomes a site where all four ethical principles operate simultaneously, demanding that teachers make pedagogical decisions that are simultaneously technologically sound, pedagogically effective, content-accurate, and ethically grounded.

The ETPACK framework offers several distinctive contributions that differentiate it from existing approaches. First, while conventional TPACK treats technology as value-

neutral and focuses on technical competence, ETPACK explicitly positions ethics as constitutive of competent teaching. This is not an "add-on" but a fundamental reconceptualization: a teacher cannot be considered technologically competent in Islamic education without ethical awareness. Second, the framework provides *specific* ethical principles rather than vague references to "values." By articulating *tabayyun*, *maṣlaḥah*, 'adl, and *amānah* as operational principles, ETPACK offers practical guidance for pedagogical decision-making. Third, ETPACK addresses a critical gap in the literature: while scholars have called for integrating values into TPACK, none have systematically specified *which* values, *how* they relate to each domain, or *what* competencies are required (Papakostas, 2026; Prasetia et al., 2021).

The ETPACK framework also differs from existing Islamic education models in its comprehensiveness and specificity. Some studies have proposed integrating "Islamic values" into education without operationalizing what this means in practice (Murdiyanto et al., 2025). ETPACK addresses this by providing a systematic framework that translates abstract values into concrete competencies across all dimensions of teacher knowledge. This makes the framework both theoretically rigorous and practically applicable.

The *how* of this transformation is equally important. The synthesis reveals that ETPACK requires teachers to develop what might be termed "ethical pedagogical reasoning"—the capacity to evaluate every pedagogical decision through multiple ethical lenses simultaneously. For example, when selecting a digital resource for a lesson on Islamic ethics, the teacher must consider: is this content authentic (CK informed by *amānah*)? Is the pedagogical approach appropriate for internalizing values rather than merely transmitting information (PK grounded in *adab*)? Is the technology accessible and equitable for all learners (TK guided by 'adl)? This multi-dimensional ethical reasoning represents a significant departure from current practice, where technology decisions are often made on purely instrumental grounds.

Implications for Teacher Role and Learning Design

The third finding addresses the implications of the ETPACK framework for teacher role transformation and learning design. Table 3 synthesizes the key transformations required.

Table 3. Teacher Role Transformation and Learning Design Implications

Dimension	Traditional Role/Design	ETPACK-Based Role/Design	Transformation Required	Key Sources
Teacher Role	Knowledge transmitter	Muaddib (guide of <i>adab</i>); moral filter; learning facilitator	From content authority to ethical guide; from sole knowledge source to co-learner	Al-Attas, 1980; Mufid et al., 2025; Basir et al., 2024
Teacher Competence	Content mastery	ETPACK competence:	Multi-dimensional competence	Prasetia et al., 2021;

		ethical- technological- pedagogical- content knowledge integration	spanning technical, pedagogical, and ethical domains	Rahmah et al., 2025; Papakostas, 2026
Learning Design	Teacher- centered; content- focused	Learner- centered; value- integrated; tri- dimensional (cognitive- affective- spiritual)	Intentional design for value internalization; authentic assessment	Prastiwi et al., 2026; Parhan et al., 2024; Sugito, 2024
Digital Literacy	Technical skills	Islamically- charactered digital citizenship	Critical evaluation of digital content; responsible media engagement	Intania et al., 2026; Murdiyanto et al., 2025; Manik, 2025
Assessment	Knowledge recall	Authentic assessment of understanding and moral character	Evaluating cognitive understanding AND moral development	Prastiwi et al., 2026; Hadi et al., 2024

The synthesis reveals that the most frequently cited implication across the literature is the transformation of the teacher's role from *mu'allim* (teacher as transmitter) to *muaddib* (teacher as guide of adab). This distinction is significant: *muaddib*, derived from *adab*, emphasizes the cultivation of ethical character and manners rather than mere knowledge transmission. In the digital context, this role extends to "moral filter"—the teacher as a guide who helps learners navigate the ethical challenges of digital spaces.

The second major implication is the requirement for tri-dimensional learning design that simultaneously integrates cognitive, affective, and spiritual dimensions. This finding emerged consistently across the literature, with sources emphasizing that PAI's distinctiveness lies in its holistic orientation toward *insān kāmil* (the complete human being). Technology must serve this holistic vision rather than reduce education to cognitive outcomes alone.

The transformation of teacher roles and learning design is necessary for several reasons. First, the digital environment presents unprecedented ethical challenges that cannot be addressed through traditional teacher roles. Misinformation, digital manipulation, surveillance, and algorithmic bias are not technical problems but ethical ones requiring moral guidance. Teachers as *muaddib* are uniquely positioned to provide

this guidance because they combine content authority with pedagogical relationship and ethical exemplarity.

Second, the transformation addresses a critical gap in existing professional development approaches. The literature reveals that current teacher training in technology integration focuses almost exclusively on technical skills—how to use learning management systems, create digital content, or administer online assessments (Prasetia et al., 2021; Rahmah et al., 2025). This technical orientation neglects the ethical dimension that is central to Islamic education. The ETPACK framework addresses this gap by defining teacher competence as necessarily encompassing ethical awareness.

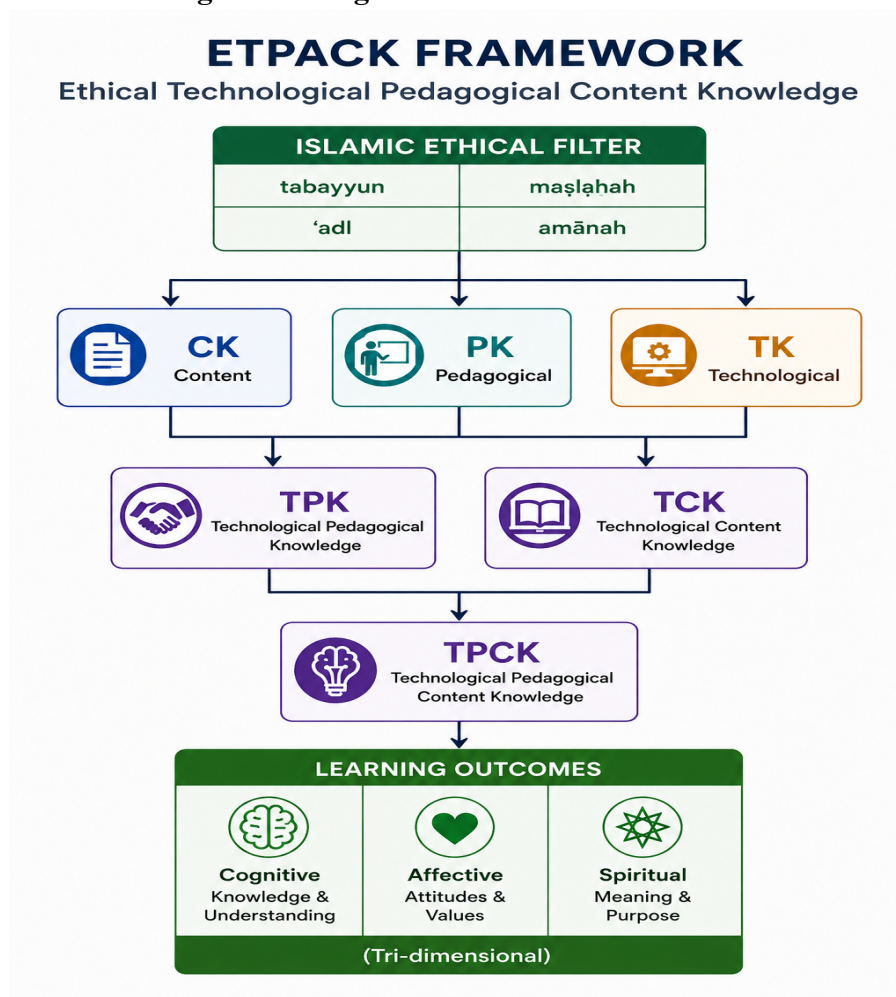
Third, this transformation is necessary because the alternative—continuing the additive approach of simply adding technology without pedagogical reorientation—risks undermining the very purpose of Islamic education. When technology serves as a delivery mechanism for content without attending to spiritual formation, learners may acquire knowledge without character, information without wisdom, and technical proficiency without ethical grounding (Arsyad & Fitroh, 2025; Khan et al., 2025). This constitutes a fundamental failure of Islamic education's mission.

The ETPACK framework differs from existing approaches in its integration of teacher role transformation with learning design. Most frameworks focus either on teacher competencies or on learning design, but rarely articulate the relationship between the two. ETPACK demonstrates that teacher transformation and learning design are mutually constitutive: teachers cannot design value-integrative learning experiences without developing ETPACK competence, and ETPACK competence is best developed through designing value-integrative learning experiences. This dialectical relationship is a distinctive contribution of this framework.

The framework also differs from existing approaches in its specificity regarding the *adab* dimension. While many studies have called for "character education" in Islamic contexts, the ETPACK framework articulates *adab* not as a separate component but as an orientation that permeates all aspects of teaching and learning. This avoids the common pitfall of treating ethics as an "add-on" to technical instruction.

The three findings together constitute a coherent and integrated framework for pedagogical reorientation of PAI in the digital era. Figure 2 illustrates the integrated ETPACK framework, showing the relationships between pedagogical principles, teacher competencies, and learning outcomes.

Figure 2. Integrated ETPACK Framework



This integrated framework demonstrates that pedagogical reorientation requires simultaneous transformation across multiple dimensions. The pedagogical principles provide the normative foundation, the ETPACK competencies define the required teacher knowledge, the transformed teacher roles determine how that knowledge is enacted, the learning design translates principles into practice, and the outcomes represent the ultimate aim of Islamic education in the digital era.

In summary, the findings of this study contribute to the literature in three significant ways. First, the identification of four pedagogical principles provides a normative foundation for technology integration in Islamic education that is grounded in Islamic sources and responsive to digital challenges. These principles are not merely descriptive but prescriptive, offering guidance for pedagogical decision-making. Second, the ETPACK framework extends the widely used TPACK model by integrating specific Islamic ethical principles into each domain of teacher competence. This addresses a significant gap in the literature, where calls for "value integration" have remained vague and under-specified. Third, the articulation of teacher role transformation and tri-dimensional learning design provides practical implications that connect the theoretical framework to classroom practice.

The distinctiveness of this framework lies in its comprehensiveness, specificity, and grounding in Islamic sources. Unlike previous studies that have either focused narrowly on technical integration (Akbar & Arifin, 2026; Prasetya et al., 2021) or offered general recommendations for value integration without operationalization (Intania et al., 2026; Murdiyanto et al., 2025), the ETPACK framework provides a systematic and actionable approach that is simultaneously theoretically rigorous and practically applicable.

Conclusion

The ETPACK framework, systematically constructed through an integrative review of 64 sources, reorients Islamic Religious Education for the digital era by fundamentally transforming the conventional TPACK model with four operational Islamic ethical principles: *tabayyun* (verification), *maṣlaḥah* (welfare), *ʿadl* (justice), and *amānah* (trustworthiness). These principles are not superficial additions but are integrated across all competency domains—redefining Content Knowledge as oriented toward human flourishing (*falāḥ*), Pedagogical Knowledge as grounded in *adab*, and Technological Knowledge as ethically-aware practice. The framework is further anchored by four pedagogical principles (*tawhid*, *tabayyun*, *akhlaq/adab*, and spiritual-material balance) and redefines the teacher's role as *muaddib* and moral filter, aiming to cultivate holistic personhood (*insān kāmil*) and Islamically-charactered digital citizenship. Its distinctiveness lies in positioning technology as a means (*wasilah*) serving divine purposes, providing a clear value-driven alternative to neutral or technically-focused frameworks like TPACK or SAMR.

While the framework offers a novel theoretical contribution with practical implications for curriculum design, teacher training, and policy, it requires empirical validation through instrument development, case studies, and comparative research across diverse Islamic educational contexts. The model is adaptable to other faith-based education systems but remains rooted in the Indonesian context, necessitating further exploration of its applicability elsewhere. Future research directions include developing measurement tools, testing effectiveness in varied settings, and designing sustainable professional development models. Ultimately, ETPACK provides a coherent, systematically constructed pathway for navigating the digital era without compromising the ethical and spiritual essence of Islamic education.

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