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Reconstructing the management of Islamic education learning technology: Synthesizing the TPACK framework with principles of Islamic leadership for sustainable innovation

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Abstract

The rise of the digital period creates important pressures on Islamic Religious Education (IRE) institutions to embed educational technologies that elevate both relevance and productivity. Nevertheless, this process of integration frequently unfolds without a management framework that is congruent with the core values of Islam, resulting in a discord between technological advancements and the educational spiritual objectives. This research employs a meticulous examination of documents through library studies to address the current void. The principal contribution of this article is the proposal of an innovative conceptual framework that integrates the Technological Pedagogical Content Knowledge (TPACK) model with the essential tenets of Islamic management and leadership, specifically *Amanah* (trust and responsibility), *Syura* (consultation), *'Adl* (justice), and *Fathanah* (wisdom). This integrated framework, designated as TPACK-Islami, not only directs the technical and pedagogical dimensions of technology incorporation but also roots them within an ethical and spiritual context. The analysis reveals that by contextualizing TPACK with regard to *Amanah*, guiding pedagogical methodologies through *Syura*, selecting technology through *Fathanah*, and ensuring just implementation via *'Adl*, IRE institutions can steer technological advancements that are not only cognitively proficient but also fortify the character (*akhlaq*) development of learners. This article delineates specific managerial implications for leaders in Islamic education, particularly concerning strategic planning, professional development for educators, and program assessment, while also proposing avenues for future research to empirically validate the suggested framework.

Keywords

educational technology, Islamic management, TPACK-Islami, conceptual framework, teacher professional development

Introduction

The advancement of digital technology has profoundly transformed every aspect of human life, with education certainly being a significant part of this transformation (Diana, 2023). For participants in Islamic Religious Education (IRE), this change represents a crucial milestone marked by both promising opportunities and inherent challenges (Hakim et al., 2023). On one hand, advancements in digital technology reveal extraordinary possibilities to improve the accessibility of Islamic academic resources, create more tailored and engaging learning experiences, and enhance the efficiency of administrative operations within educational institutions (Munir & Su'ada, 2024). Contemporary digital learning strategies, mobile applications, and various media platforms suggest a forthcoming potential for broader distribution of religious teachings, likely surpassing both geographical and temporal limitations.

On the other hand, the challenges faced are just as formidable (Munir & Su'ada, 2024). The disparity in digital access, inadequate infrastructure, and a lack of technological skills among educators continue to be significant hurdles that hinder many schools. Additionally, the most profound and complex challenges are deeply intertwined with cultural and ideological factors: a hesitation arising from concerns that an unqualified acceptance of technology could jeopardize the authenticity, ethical principles, and spiritual foundation that support Islamic Religious Education (Fandir, 2024). This apprehension is entirely justified, as technology inherently carries biases; it reflects the morals and perspectives of its creators, who often originate from secular backgrounds.

It is in this context that the research issue emerges. The key challenge in embedding technology within IRE institutions is influenced by both technical elements and management and philosophical dilemmas. Many IRE institutions work hard to weave technology into management systems and educational approaches that originate from secular learning environments. While these models may demonstrate effectiveness in their original contexts, they frequently lack a value-centered perspective and are inadequately prepared to resonate with the distinctive moral principles of IRE (Mintasih, 2024; Samudi et al., 2022). As a result, a notable discord arises between the methods (the application of technology aimed at efficiency and cognitive outcomes) and the objectives (the primary aim of IRE, which is the cultivation of character or *akhlaq al-karimah* and a more profound understanding as a Muslim). This discourse is not simply centered on the tension between 'tradition and modernity'; it uncovers a more complex ideological struggle between the core elements of secular technology and Islamic educational practices. The implementation of a value-neutral approach to technology management in pursuit of an educational goal rich in values results in a significant misalignment that obstructs genuine innovation.

Upon reviewing the existing literature, a notable gap in research has been identified: the absence of a comprehensive management framework that seamlessly combines the technical-pedagogical benefits of modern models like TPACK (Rodgers, 2018) with the ethical and spiritual obligations rooted in Islamic management principles. Several research efforts typically analyze these two aspects independently: one avenue of study underscores the role of Islamic values in the educational sphere, whereas another delves into the technical strategies for applying technology. Consequently, leaders and practitioners in IRE find themselves lacking a unified "map" to traverse the digital terrain.

In light of this, this research introduces a pivotal question: How can a comprehensive learning technology management framework be developed by amalgamating the TPACK model with the core tenets of Islamic educational management to foster effective and value-driven innovation within IRE institutions?

The uniqueness of this research stems from its aim to connect these two distinct discussions by proposing an integrated model. This paper argues that by rethinking and merging the TPACK framework with the fundamental principles of Islamic management, a new viewpoint can be created—one that allows IRE institutions to perceive technological innovation not as an obstacle, but as a means to achieve their revered educational goals in a more relevant and impactful way in the 21st century. The article will begin with a critical examination of management theories within Islamic education and technology-enhanced learning, proceed to reveal the unified framework, and conclude with a discussion on managerial implications and suggestions for future research.

Metode

This research employs a qualitative approach with a library research design, focusing on critical document analysis. Data was collected through documentation techniques by searching, identifying, and inventorying relevant primary and secondary sources, such as international and national scientific journals, books, conference proceedings, and research reports that discuss the Technological Pedagogical Content Knowledge (TPACK) framework (Rodgers, 2018) as well as the principles of management and leadership in Islamic education. The collected data were then analyzed using a qualitative content analysis method, which involved three systematic stages: deconstruction, namely breaking down the strengths and limitations of each concept separately; comparison, which involved comparing and finding common ground and gaps between the concepts; and synthesis, which integrated the principles of Islamic management into the TPACK framework to build a new, coherent, and holistic conceptual model.

Result and Discussion

Critical Analysis of Management Paradigms in Islamic Education and Learning Technology

To formulate a strong framework, one must critically analyze and thoroughly explore three relevant conceptual bases: the ethical principles of Islamic education management, the TPACK framework for technology integration, and the influence of leadership on stimulating innovation. This investigation strives to expose the benefits and drawbacks of each system before they are merged into a coherent model.

The Axiological Foundation of Islamic Education Management

Management viewed through an Islamic lens is fundamentally distinct from the secular interpretation of management, which frequently focuses solely on profit or efficiency (Fatmawati et al., 2023). Islamic education management represents an ethical and spiritual endeavor rooted in the understanding that education is an *amanah*—a divine trust from Allah SWT that must be executed with utmost responsibility (Fatmawati et al., 2023). This principle acts as an overarching framework for additional derivative principles derived from the Qur'an and Sunnah, which constitute the axiological basis for every managerial action in an Islamic educational institution. These foundational principles encompass:

1. *Amanah* (Trust and Responsibility) is the primary principle that frames all educational endeavors as acts of worship and accountability, not only to stakeholders (students, parents, society) but primarily to Allah SWT. Within the realm of technology management, the principle of *amanah* necessitates that all resources—whether financial, temporal, or

technological—are utilized judiciously to achieve the ultimate goal of education, which is to cultivate a complete human being (*insan kamil*). The selection of technology should not hinge on transient trends, but rather on a thoughtful evaluation of whether the technology genuinely aids in fulfilling this educational trust.

2. *Syura* (Consultation and Consultative Decision-Making) highlighted in the Qur'an (QS. Asy-Syura: 38), dismisses autocratic and hierarchical management approaches. Syura requires a participatory and collaborative decision-making process, engaging all elements of the educational institution: leadership, teachers, staff, and even parents and students according to their capabilities. In terms of technology implementation, the principle of syura signifies that the decision to acquire new software, adopt an e-learning platform, or alter teaching methods should not be a unilateral choice by the leadership, but rather the product of consultation that takes into account teacher preparedness, student requirements, and institutional capabilities.
3. *'Adl* (Justice and Equity) is a divine mandate that serves as a vital pillar of the Islamic social framework. In the management of educational technology, the principle of 'adl directly tackles issues surrounding the digital divide and access equity. An Islamic education manager who adheres to this principle will ensure that the deployment of technology does not exacerbate disparities between students from varying economic backgrounds. Justice necessitates policies that guarantee all students have equitable opportunities to access and benefit from the digital resources offered by the institution.
4. *Fathanah* (Wisdom and Intelligence) denotes a blend of wisdom and intelligence, representing a crucial characteristic in prophetic traditions that involves sharp analytical skills. This concept necessitates that IRE leaders and educators not only utilize technology but also engage in critical and strategic evaluation. *Fathanah* inspires them to inquire: Is this technology pedagogically advantageous? Is the digital content employed accurate and compatible with Islamic creed (*aqidah*)? Is there a more effective and efficient method to meet learning objectives? This wisdom safeguards the institution from squandering resources on technology that is irrelevant or even counterproductive.
5. *Tabligh* (Communicative and Transparent) represents the ability to convey messages or information in a clear, effective, and honest way. In the field of management, this principle highlights the significance of open communication regarding the vision, strategy, and implementation of technology initiatives. Leaders should excel in articulating the reasoning behind the changes, detailing the process that will take place, and clarifying each individual's roles, enabling the entire school community to progress together in harmony.

These five principles lay the groundwork for a value system designed to inspire every managerial decision at an Islamic educational institution. Nonetheless, the challenge lies in the fact that these principles often remain at a theoretical level and have yet to be transformed into an operational framework that can steer daily practices, particularly in a highly technical field like learning technology management.

Deconstructing the TPACK Framework in the IRE Context

At the far end of the analytical spectrum is the Technological Pedagogical Content Knowledge (TPACK) framework, which is widely recognized as one of the most comprehensive models for the integration of technology in education. Developed by Mishra and Koehler (2009) as an evolution of Shulman's (1986) concept of Pedagogical Content Knowledge (PCK), TPACK asserts that successful technology-enhanced teaching requires more than just expertise in three separate knowledge areas; it demands a deep understanding of the intricate relationships among them.

The TPACK framework consists of seven domains of knowledge (Koehler & Mishra, 2009):

1. Content Knowledge (CK)
   The teacher's knowledge of the subject matter being taught.
2. Pedagogical Knowledge (PK)
   The teacher's knowledge of the theories and practices of teaching and learning, such as classroom management and assessment strategies.
3. Technological Knowledge (TK)
   The teacher's knowledge of various technologies, from the simple to the sophisticated, and the ability to use them.
4. Pedagogical Content Knowledge (PCK)
   The intersection of PK and CK, which is the knowledge of the best ways to teach specific content.
5. Technological Content Knowledge (TCK)
   The intersection of TK and CK, which is the knowledge of how technology and content influence each other.
6. Technological Pedagogical Knowledge (TPK)
   The intersection of TK and PK, which is the knowledge of how technology can be used to support specific pedagogical strategies.
7. Technological Pedagogical Content Knowledge (TPACK)
   The core of the framework, where all three domains of knowledge intersect. This is a transformative form of knowledge that enables teachers to design optimal learning experiences by synergistically integrating technology, pedagogy, and content.

The primary advantage of TPACK lies in its ability to shift teacher training from merely "learning to use tools" (TK) to "learning to teach with tools" (TPACK). This framework provides a language and a conceptual structure that enables educators to critically reflect on and plan their technology-enhanced teaching methods. However, this is precisely where TPACK's fundamental limitation arises when directly applied within the IRE context. By its very definition, TPACK is axiologically neutral. While the framework effectively tackles the "how" (the methods for successfully integrating technology), it remains silent on the "why" (the reasons for our engagement) and "for what purpose" (the ultimate goals we aim to achieve).

TPACK does not encompass a defined domain for the values, ethics, or spiritual objectives of education. For instance, an IRE teacher might possess outstanding TPACK. They could be knowledgeable in the content of Islamic commercial jurisprudence (*fiqh muamalah*) (CK), understand project-based pedagogy (PK), and show proficiency in using an online stock market simulation platform (TK). They might design a project (PCK) where students interact with the simulation (TCK) to apply Islamic trade principles (TPK), resulting in a lesson rich in TPACK. Nevertheless, if the design of the simulation inherently promotes a speculative mindset, unhealthy competition, and the accumulation of wealth as its main goal—values that are at odds with Islamic economic principles like *ta'awun* (cooperation) and the prohibition of *gharar* (uncertainty)—then the lesson has fundamentally failed as a tool for Islamic Religious Education, despite its technical effectiveness. This limitation underscores that while TPACK is indeed valuable, it requires a "moral compass" or an essential set of values to function effectively within the IRE framework.

The Role of Leadership in Driving Technology Innovation

The synergy between vital Islamic principles and the TPACK technical framework is developed through influential leadership. In discussions pertaining to educational leadership, the significant effect of leaders, especially madrasah principals, in inspiring transformation and ardently promoting development is often highlighted. Present-day leadership techniques, notably those associated with Digital Leadership, stress the important obligation for leaders to advocate a tech-driven vision, assemble their teams, and lead them through the alterations of digital transformation (Holilah & Hajjaj, 2024). In opposition, Transformational Leadership prioritizes a leader's knack for inspiring workers, nurturing innovative proposals, and forming a unified workplace that enhances adaptability. Such leadership frameworks, reflecting TPACK, generally emerge from business-oriented or secular domains. Within the realm of IRE, it is lacking for a leader to solely embody the features of a 'digital leader' or a 'transformational leader' in an overall sense (Abdillah, 2013). They must embody the role of an "Islamic-based educational leader." Their leadership should be deeply rooted in the principles outlined earlier. The aspirations in technology ought to resonate with the Islamic principles upheld by the institution. Their strategy for managing change must reflect the values of *syura* and *'adl*. Their strong resolve to advance the professional journey of teachers must be anchored in the dedication to honoring the educational *amanah*.

An in-depth analysis of these three foundational elements—Islamic principles, TPACK, and leadership—reveals that they often exist as parallel and disconnected discourses. Islamic principles are rich in values but often remain abstract. TPACK is notably practical and conceptually robust, yet it lacks an ethical framework. Different leadership styles accentuate the role of the change promoter, but they frequently seem rather commonplace. The challenge of practical implementation arises from this gap. Without a leader capable of bridging these discussions, IRE institutions may find themselves torn between two equally undesirable options: (1) adopting technology in a way that reflects "TPACK-only" principles devoid of spirituality, or (2) rejecting technology due to vague apprehensions about "preserving values" without a clear approach for effective integration. Hence, the call for conceptual synthesis emerges as a significant obligation, regarded not simply as an intellectual task but as a functional approach to a tangible predicament.

Conceptual Synthesis: Integrating Islamic Principles into the TPACK Framework

Based on the critical analysis conducted, it is clear that there is a theoretical and practical gap that needs to be bridged. To make TPACK a truly effective tool for IRE, the framework cannot stand alone. It must be embedded, framed, and animated by the value system that is the foundation of IRE itself. The principles of Islamic management are not an additional layer pasted on top of TPACK; rather, they must function as the fertile soil in which the TPACK tree can grow and bear fruit according to its intended purpose.

Bridging the Theoretical and Practical Gap

This research proposes a new synthesis model, hereinafter referred to as the **TPACK-Islami (TPACK-I) Framework**. This framework consciously and systematically integrates the fundamental principles of Islamic management into every domain and interaction within the TPACK model. The goal is to create a holistic learning technology management framework—a guide for IRE leaders and educators to plan, implement, and evaluate the use of technology in a way that is not only technically and pedagogically sound but also ethically and spiritually upright.

TPACK-I transforms TPACK from a mere "framework of knowledge" into a "framework of wisdom."

Mapping Islamic Principles onto the TPACK Knowledge Domains

This synthesis fundamentally depends on the careful coordination of Islamic doctrines alongside the fields encompassed by TPACK. This configuration explains how every guideline offers insight, meaning, and constraints to particular sectors, thus altering it from a neutral perspective into one saturated with ideals.

1. *Amanah* as the Fundamental Contextual Knowledge (XK)
   In the traditional TPACK model, the outermost circle is typically illustrated as Contextual Knowledge (XK), encompassing an understanding of both micro (classroom, school) and macro (community, policy) environments. Within the TPACK-I framework, the principle of Amanah is suggested to be the foundational definition of the context itself. This represents a significant shift in perspective. For a Muslim educator, the primary context extends beyond mere classroom conditions or curriculum guidelines; it encompasses the realization that they bear an *amanah* from Allah. Consequently, every choice regarding technology, pedagogy, and content (TPACK) must be defensible as part of the commitment to honor the profound trust of educating the upcoming generation of the ummah. The ultimate aim of employing technology transcends "effective learning"; it is about "fulfilling the educational *amanah* through effective means."
2. *Syura* Informing Pedagogical Knowledge (PK & TPK)
   The principle of *Syura* (consultation) actively influences the manner in which pedagogical choices are made. *Syura* necessitates that teachers and leaders engage in discussions and collaborations to ascertain the most suitable teaching strategies (PK). Whenever technology is involved (TPK), *Syura* calls for an examination of the technical characteristics of a tool alongside a discussion on its repercussions for classroom dynamics, teacher-student exchanges, and the communal principles that need to be fostered. For example, the choice to implement a highly individualistic learning platform must be thoughtfully considered through consultation to evaluate whether it aligns with the communal value (ukhuwah) that is intended to be fostered.
3. *Fathanah* Guiding Content and Technology Knowledge (CK, TK, TCK)
   The principle of Fathanah (intelligence and wisdom) acts as a vital filter in the selection process of content and technology. A detailed and reflective review is essential, notably at the junction of Technological Content Knowledge (TCK). An educator endowed with *fathanah* will refrain from impulsively utilizing an animated video about the history of the Prophet from an unverified online source. They will apply their intelligence to confirm the content's accuracy (CK), assess its technical quality and possible biases (TK), and ultimately arrive at a prudent conclusion regarding the resource's appropriateness (TCK). *Fathanah* discourages educators from adopting a "just use it" mentality and inspires them to become curators and creators of high-quality, reliable IRE digital content.
4. Central to the practical execution is the guiding tenet of *'Adl* (justice).
   Justice urges educational organizers and executors to put serious thought into the equity outcomes associated with each technology policy. When selecting a learning platform (TK), the inquiry stemming from the principle of *'adl* is: Is this platform accessible to students with limited internet connectivity? Is its interface user-friendly for students with special needs? When creating an online assignment (TPK), is the necessary data usage fair for all students? The understanding of equity secures that technology serves as a means of connection for individuals rather than a means of division that isolates them.

5. *Tabligh* Driving Communication and Assessment
   The concept of *Tabligh* (clear communication) is fundamentally connected to the facilitation of the learning process and the evaluation of its outcomes. Technology should be employed to illuminate complex Islamic doctrines and make them more accessible (*tabligh*), rather than the opposite. Evaluating student success accurately calls for the creation of online feedback resources that ensure transparency, foster healthy interactions, and stimulate thoughtful discussions, thereby integrating evaluations into the academic pathway and empowering educators to relay information adeptly.

This synthesis can be summarized in the following matrix to provide a clear and operational overview.

Table 1. Synthesis Matrix of the TPACK-Islami Framework

Islamic Principle	Core Definition	Relevant TPACK Domain(s)	Strategic Managerial & Pedagogical Implications
Amanah	Sacred trust and responsibility to Allah and the community.	Context (XK)	The institution's technology vision and mission must be explicitly aligned with the goal of fulfilling the Islamic educational trust. - Every technology investment and program must be evaluated based on its contribution to achieving spiritual and character goals, not just academic metrics.
Syura	Decision-making through consultation and participation.	PK, TPK	Formation of a technology committee involving representatives from teachers, staff, and parents to evaluate and recommend new technology adoption. - Teachers are encouraged to collaborate in designing and reflecting on technology-based learning practices (TPK) through Professional Learning Communities.
Fathanah	Intelligence, wisdom, and critical thinking in decision-making.	CK, TK, TCK	Development of clear and stringent criteria for selecting IRE digital content, including validity, authenticity, and freedom from bias. - Teacher training focuses not only on how to use tools (TK) but also on how to critically evaluate the pedagogical feasibility and content suitability of a technology (TCK).
'Adl	Justice, equity, and fairness in access and opportunity.	Implementation (All Domains)	Conducting regular digital divide audits among students and designing mitigation strategies (e.g., providing access at school, choosing data-efficient platforms). - Ensuring digital learning design (Universal Design for Learning) accommodates students with various learning styles and special needs.
Tabligh	Clear, transparent, and effective communication.	PK, TPK, Assessment	Utilizing technology to present IRE material in a more visual, interactive, and easily understandable manner. - Designing online assessment systems that provide clear, timely, and motivating feedback to students for improvement, rather than just giving scores.

Instead of solely representing a conclusion, the TPACK-Islami framework initiates a fresh perspective. The authentic relevance of a conceptual structure exists in its power to morph into tangible initiatives and to stimulate unique routes for inquiry. In this section, we will detail the practical ramifications of the TPACK-I framework for educational leadership and the development of teachers, while proposing a future research agenda.

Managerial Implications and Future Research Directions

The construction of the TPACK-Islami framework is not an end in itself, but a starting point. The true value of a conceptual model lies in its ability to be translated into actionable practice and to stimulate new research directions. This section will outline the practical implications of the TPACK-I framework for educational leadership and teacher development, and recommend a research agenda for the future.

Implications for Leadership and Teacher Professional Development

The successful implementation of the TPACK-I framework is significantly reliant on the proactive engagement of the institution's leadership, particularly the principal of the madrasah. The principal figure operates not merely as a supervisor in leadership but additionally as a shaper of the environment and the foremost voice of the institution's ambitions. Here are the specific implications:

1. The principal of the madrasah should utilize TPACK-I as the cornerstone for formulating a strategic plan aimed at technology integration. Every aim, target, and key performance metric (KPI) must harmonize technical skills with the tenets of Islamic morality. The plan should address inquiries such as: "In what ways will the implementation of this Learning Management System (LMS) enhance the principle of amanah in reporting student progress to parents?" or "How will our teacher training initiative foster fathanah in the selection of digital learning tools?"
2. Redesigning Teacher Professional Development
   Teacher training initiatives must advance beyond standalone technical workshops. It would be beneficial for our development sessions to integrate themes like 'Maximizing Quizizz' alongside 'Fiqh Instruction Techniques' into a singular model. The development of learning units that effectively represent mastery in all elements of TPACK-I should be a central theme in teacher training. They should be encouraged to create learning projects that are not only technologically advanced but also just ('adl), collaboratively developed (syura), and genuinely supportive of a profound understanding of Islamic teachings (amanah).
3. Wise Resource Allocation
   The principles of *fathanah* and *'adl* should guide decision-making regarding budgeting and technology purchases. Acquisition decisions must not be solely predicated on advanced features or the lowest cost. The leader should facilitate an evaluative process (involving syura) to ascertain whether the investment represents the most prudent use of funds (fathanah) in achieving educational objectives and whether its advantages can be equitably accessed ('adl) by all students.
4. Humanistic and Islamic Change Management
   The execution of this new framework is fundamentally a process of change management. One can leverage Kotter's 8-Step Change Model as an effective guide, although every step requires a reinterpretation based on Islamic teachings.

a. Creating a Sense of Urgency
   Framed not as a competitive threat, but as a religious calling to continuously improve (*islah*) the quality of education for the benefit of the *ummah*.

b. Forming a Powerful Guiding Coalition
   This process must be carried out in the spirit of *syura*, ensuring broad and diverse representation.

c. Communicating the Vision
   The vision communicated is that of TPACK-I, emphasizing the balance between progress and values, delivered in the manner of *tabligh*.

d. Embedding in the Culture
   Change is considered successful when the principles of TPACK-I have become part of daily practice and shared values, reflecting the collective fulfillment of *amanah*.

5. **Holistic Program Evaluation**
   The success of digitalization programs can no longer be measured solely by quantitative metrics like application usage frequency or test score improvements. The TPACK-I framework demands a more holistic evaluation. Evaluation instruments must be designed to measure the impact of technology on character formation (*akhlaq*), the enhancement of spiritual understanding, and students' ability to apply Islamic values in a digital context (e.g., digital ethics, critical information literacy).

Recommendations for Future Research

This project operates as a research exploration grounded in extensive document investigation, enabling multiple potential empirical studies geared towards evaluating, refining, and affirming the TPACK-I framework. Vital research topics consist of:

1. Qualitative Case Studies
   Comprehensive studies within numerous madrasahs acknowledged as front-runners in the integration of technology. This study could examine how their administrative and teaching practices—whether consciously or unconsciously—correspond with or diverge from the proposed TPACK-I framework. Holding discussions with school heads, instructors, and students may bring to light the actual hurdles and techniques required for merging technology with moral values.
2. Action Research
   Cooperative research initiatives where researchers collaborate with a madrasah to purposefully implement the TPACK-I framework. The unending phases of preparation, initiative, observation, and reflection would diligently register the course, challenges, victories, and key tweaks essential for successfully realizing this approach in action.
3. The development and confirmation of quantitative measurement instruments consists of creating and validating survey tools founded on the TPACK-I framework constructs. These tools could assess teachers' perceptions of their competence across each integrated domain (e.g., "my ability to select technology that upholds the principle of justice in education"). Once validated, these instruments could be employed in extensive studies to map the competency landscape of IRE teachers more comprehensively and pinpoint areas that require significant professional development efforts
4. Research in educational technology
   This encompasses efforts to formulate and build tech products for education (for instance, software and platforms) that are grounded in TPACK-I principles. This would represent a significant advancement from merely applying secular technology to Islamic content,

moving toward the establishment of an educational technology ecosystem that is inherently Islamic in both design and function.

This research agenda will be vital for transitioning the TPACK-I framework from a conceptual stage to one supported by empirical evidence, thus enhancing its potential to make a more robust and sustainable impact on the evolution of Islamic Religious Education in the digital era.

Conclusion

The world of Islamic education is currently in the midst of an unavoidable tide of technological change. The critical challenge it faces is not whether to innovate, but how to innovate without losing its essence and soul. The effort to adopt learning technology, often based on value-neutral secular frameworks, has created a dilemma: pursuing technical progress at the risk of sacrificing spiritual depth, or preserving tradition at the risk of becoming irrelevant. This research argues that this is a false dichotomy.

In response to this challenge, this article has constructed and proposed a new conceptual management framework: **TPACK-Islami (TPACK-I)**. This framework serves as a bridge, synthesizing the analytical power of the **Technological Pedagogical Content Knowledge (TPACK)** model with the wisdom and ethical guidance of the fundamental principles of Islamic management—*Amanah*, *Syura*, *'Adl*, *Fathanah*, and *Tabligh*. By placing *Amanah* as the overarching context, and using the other principles to direct the domains of knowledge and pedagogical practice, TPACK-I transforms the approach to technology integration from a mere technical activity into a value-conscious and purposeful endeavor.

The TPACK-I framework offers a roadmap for IRE leaders and educators to navigate the complexities of the digital era. It asserts that excellence in modern Islamic education is not measured by the sophistication of the hardware or software owned, but by the extent to which that technology can be utilized wisely (*fathanah*), justly (*'adl*), and collaboratively (*syura*) to fulfill the sacred trust (*amanah*) of educating the Muslim generation.

A bright future for Islamic Religious Education depends on its ability to produce leaders and educators who are not only digitally literate but are also intelligent, just, and responsible trustees. The ultimate goal is not merely to produce graduates skilled in using technology, but to form complete human beings (*insan kamil*) who possess a solid spiritual foundation, noble character, and are capable of navigating the global ocean of information with steadfast faith and a clear moral compass. The TPACK-I framework is a conceptual step toward the realization of this noble vision.

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