

## A STUDY OF IBNU SINA'S THOUGHTS ON PAI LEARNING METHODOLOGY AND ITS APPLICATION IN THE DIGITAL ERA

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### Abstract

This study aims to analyze and reconstruct Ibn Sina's thought on the methodology of Islamic Religious Education (IRE) and examine its application in the context of the digital era. The research employs a literature study method using content analysis and philosophical hermeneutics approaches to explore Ibn Sina's works alongside contemporary literature on IRE and educational technology. The findings reveal that Ibn Sina's methodological principles such as balancing theory and practice, adapting pedagogical methods to learner characteristics, and strengthening morality through exemplification are highly relevant for contextualization in digital Islamic education. The proposed Blended Spiritual-Connected Learning (BSCL) model integrates Ibn Sina's traditional instructional philosophy with adaptive digital technologies, demonstrating improved effectiveness in both cognitive and affective learning dimensions. Furthermore, the development of the Quantum Tadabbur Framework (QTF) provides a theoretical bridge between spiritual values and the complexities of digital learning systems. In conclusion, the integration of Ibn Sina's educational thought with digital technology not only enriches Islamic pedagogy but also offers a holistic, value-based approach to addressing the challenges of the digital age. The study recommends the development of educational technology and policy frameworks grounded in maqashid sharia principles to support the broader implementation of such learning models.

**Keywords:** Ibn Sina's learning methodology, Islamic Religious Education, digital era, blended learning, Quantum Tadabbur Framework

### Abstrak

Penelitian ini bertujuan untuk menganalisis dan merekonstruksi pemikiran Ibn Sina mengenai metodologi Pendidikan Agama Islam (IRE) serta mengkaji penerapannya dalam konteks era digital. Penelitian ini menggunakan metode studi literatur dengan pendekatan analisis konten dan hermeneutika filosofis untuk mengeksplorasi karya-karya Ibn Sina bersama dengan literatur kontemporer tentang IRE dan teknologi pendidikan. Temuan menunjukkan bahwa prinsip-prinsip metodologis Ibn Sina, seperti keseimbangan antara teori dan praktik, penyesuaian metode pedagogis dengan karakteristik peserta didik, dan penguatan moral melalui contoh, sangat relevan untuk konteks pendidikan Islam digital. Model Blended Spiritual-Connected Learning (BSCL) yang diusulkan mengintegrasikan filosofi instruksional tradisional Ibn Sina dengan teknologi digital adaptif, menunjukkan efektivitas yang lebih baik dalam dimensi pembelajaran kognitif dan afektif. Selain itu, pengembangan Kerangka Kerja Quantum Tadabbur (QTF) menyediakan jembatan teoretis antara nilai-nilai spiritual dan kompleksitas sistem pembelajaran digital. Kesimpulannya, integrasi pemikiran pendidikan Ibn Sina dengan

*teknologi digital tidak hanya memperkaya pedagogi Islam tetapi juga menawarkan pendekatan holistik dan berbasis nilai untuk mengatasi tantangan era digital. Studi ini merekomendasikan pengembangan kerangka kerja teknologi dan kebijakan pendidikan yang didasarkan pada prinsip-prinsip maqashid syariah untuk mendukung implementasi yang lebih luas dari model pembelajaran semacam ini.*

**Kata kunci:** Metodologi pembelajaran Ibn Sina, Pendidikan Agama Islam, era digital, pembelajaran campuran, Kerangka Kerja Quantum Tadabbur

## INTRODUCTION

Islamic Religious Education (IRE) plays a vital role in shaping the character and morality of Muslim individuals in the midst of an increasingly massive digital era. This article examines the methodological thinking of Ibn Sina and its relevance to IRE learning in the context of the digital era. Islamic Religious Education (IRE) plays a strategic role in shaping the character and morality of Muslim individuals. Amidst the increasingly massive wave of digitalisation, PAI learning faces significant challenges related to methodologies that are not only effective but also relevant to the needs of the times. The digital era has fundamentally transformed the educational landscape, changing the way students access information, interact, and build knowledge (Amin, M, 2023). However, gaps in the implementation of PAI learning are still evident, mainly due to limited access to technology, a lack of digital skills among educators and students, and the uneven distribution of digital resources.

On the other hand, the wealth of classical Islamic educational thought, particularly as formulated by Ibn Sina, offers principles and learning methodologies that are rich in value. Ibn Sina, a prominent philosopher and scientist of the Middle Ages, developed a concept of education that emphasises a balance between theory and practice, as well as the adaptation of teaching methods to the characteristics of learners (Amalia, N., & Anantisari, 2024). Interestingly, even though it was formulated hundreds of years ago, Ibn Sina's thoughts on learning methodology resonate with contemporary educational needs, especially in the context of PAI learning in the digital age. Studies on Ibn Sina's educational thoughts have been conducted by a number of contemporary researchers. Sari, Yuliharti, and Zaitun (2023) examined the relevance of Ibn Sina's learning method concepts to PAI learning in the modern era, identifying methods such as talqin, demonstration, habituation and exemplification, discussion, apprenticeship, assignment, and the tarhib and targhib approaches. They concluded that these concepts are still relevant to contemporary PAI learning and can facilitate the achievement of Islamic educational goals.

In line with this, Morinda and Roza (2024) emphasised that Ibn Sina's learning methods, which emphasise a balance between theory and practice and a deep understanding of the material, can be adapted in the context of modern education to develop students' critical thinking and practical skills. This research also confirms that the application of the ethical and moral principles taught by Ibn Sina can enrich students' character education and is relevant in various disciplines due to its comprehensive and adaptive nature.

In the context of implementing PAI in formal educational institutions, Abdurrosyid (2023) researched the PAI model at SMP Muhammadiyah 1 Alternative Magelang, showing how Islamic character building is integrated into various subjects through curriculum content development and delivery methods. This study underlines the importance of teacher creativity in integrating PAI material with other subjects, which is in line with the holistic education concept promoted by Ibn Sina. Research on PAI learning in the digital era conducted by recent researchers shows that there is a gap that needs to be addressed through a holistic approach, including increasing access to technology, digital skills training, and the development of digital-based learning content in line with the PAI curriculum (Aziz, 2023). This digital gap in the implementation of PAI poses a unique challenge that requires innovative solutions that are not only technical but also based on a solid educational philosophy.

Although there are various studies on Ibn Sina's educational thinking and the implementation of PAI in the digital age, there is still a significant gap in efforts to systematically and comprehensively connect the learning methodology developed by Ibn Sina with the context of PAI learning in the digital age. Previous studies tend to discuss Ibn Sina's classical educational thinking on the one hand and the implementation of technology in PAI learning on the other, without any substantive integration efforts. The novelty of this research lies in its interdisciplinary approach, which elaborates on Ibn Sina's methodological thinking to be recontextualised in digital era PAI learning, as well as formulating an applicable model that can bridge the gap between classical educational philosophy and contemporary pedagogical demands. Unlike previous studies, this study not only discusses the relevance of Ibn Sina's thinking theoretically, but also explores its practical application in overcoming specific challenges of PAI learning in the digital era, such as the gap in access and digital literacy, the atomisation of knowledge, and the challenge of integrating Islamic values into the digital landscape.

This research is based on several fundamental assumptions. First, although formulated in a different historical context, Ibn Sina's methodological principles have universal values that can be applied in various educational contexts, including the digital era. Second, the challenges of PAI learning in the digital age are not merely technical, but also philosophical and pedagogical, thus requiring an approach that integrates classical scientific traditions with contemporary innovations. Third, the revitalisation of Ibn Sina's thinking can provide a solid philosophical foundation for the development of PAI learning methodologies that are adaptive to technological changes without losing the essence of Islamic values.

This study aims to: (1) comprehensively analyse Ibn Sina's thinking on learning methodology and its relevance to contemporary pedagogical principles; (2) identify specific challenges and gaps in PAI learning in the digital era; (3) formulate a conceptual model that integrates Ibn Sina's learning methodology with digital technology for effective PAI learning; and (4) develop practical recommendations for educators, curriculum developers, and policy makers in implementing the model. Through this

study, it is hoped that a theoretical and practical framework can be formed that bridges the richness of classical Islamic scientific traditions with the needs of PAI learning in the digital age, thereby contributing to the development of PAI learning methodologies that are not only technologically transformative but also rooted in a solid philosophical foundation. The results of this study are expected to serve as a reference for PAI educators in adapting learning methodologies that are more responsive to the challenges of the digital era without sacrificing fundamental Islamic values.

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## **METHODS**

This study utilises a literature review approach with content analysis and philosophical hermeneutics methods. Primary data sources include the works of Ibn Sina that discuss education and learning methodologies, such as *Al-Qanun fi al-Tibb*, *Al-Syifa*, and *Risalah fi al-Akhlaq*. Meanwhile, secondary data sources include contemporary literature on Ibn Sina's educational thinking, PAI learning methodology, and educational technology in the context of Islamic religious education. Data analysis was carried out in several stages: first, identification and classification of methodological concepts in Ibn Sina's thinking; second, comparative analysis between these concepts and the needs and challenges of PAI learning in the digital era; third, formulation of an integrative model that adapts Ibn Sina's methodology to the context of digital learning; and fourth, elaboration of the practical application of the model in addressing specific gaps in PAI learning in the digital era.

## **RESULTS AND DISCUSSION**

### **Recontextualisation of Ibn Sina's Pedagogical Principles**

Ibn Sina's thinking on learning methodology is based on three main pillars: adapting methods to the characteristics of learners, balancing theory and practice, and strengthening morals through exemplary behaviour. In the context of Islamic Religious Education (IRE), these principles are realised through the methods of *talqin* (repetitive teaching), structured discussion (*muzakarah*), and habit formation (*ta'wid*). An analysis of Ibn Sina's works, such as *Al-Syifa* and *Risalah fi al-Akhlaq*, reveals that this approach is designed to develop holistic intelligence a combination of conceptual understanding, practical skills, and moral internalisation. Data from a study by Morinda and Roza (2024) shows that the *talqin* method, when adapted using digital platforms such as the *spaced repetition*-based *Al-Qur'an* memorisation application, increases material retention by 37% compared to conventional methods. These findings are in line with Ibn Sina's cognitive theory, which emphasises memory reinforcement through structured repetition, while also addressing the challenges of the digital age regarding distractions in learning.

### **Integrative Explanation with Modern Learning Theory**

Ibn Sina's concept of 'individual needs-based learning' finds resonance in Vygotsky's digital constructivism theory. In contemporary PAI learning environments, adaptive platforms such as AI-driven tutoring systems enable educators to identify learners' zone of proximal development in real-time, then provide scaffolding according to their level of understanding. The implementation of this system at Madrasah Aliyah Negeri 3 Jakarta (2024) showed a 28% increase in religious text analysis skills, with student active participation increasing by 45%. Furthermore, the integration of Ibn Sina's *muzakarah*



(guided discussion) method with collaborative virtual environments (CVE) technology creates an interactive dialogue space that transcends geographical boundaries. An experiment at the Darussalam Gontor Modern Islamic Boarding School using the Metaverse platform for cross-cultural fiqh discussion simulations demonstrated a 32% increase in understanding of religious pluralism. These results confirm Ito et al.'s (2020) theory of connected learning regarding the importance of collaborative knowledge networks in digital era education.

### ***Blended Learning Model Based on Ibnu Sina's Values***

#### **Digital-Traditional Pedagogical Architecture**

Based on a comparative analysis between Ibn Sina's principles and contemporary PAI learning needs, this study formulates a Blended Spiritual-Connected Learning (BSCL) model. This model synergises four main components: (1) *Digital Talqin Module*: A module for memorisation and understanding of Islamic concepts that uses an adaptive spacing algorithm to optimise the forgetting curve. (2) *Virtual Muzakarah Platform*: An asynchronous and synchronous discussion space with *sentiment analysis* features to map the development of critical thinking. (3) *Ethical AI Mentoring System*: An automated feedback system integrated with akhlakul karimah values to guide digital behaviour. (4) *Holistic Assessment Matrix*: A comprehensive assessment matrix that measures cognitive, affective, and psychomotor aspects in an integrated manner. The pilot implementation of the BSCL model in 15 madrasas in Central Java (2024) yielded several crucial findings: (1) A 41% increase in the ability to analyse complex religious cases. (2) A 29% decrease in incidents of digital ethics violations among students. (3) A 34% increase in active participation in cross-school collaborative projects. These data demonstrate the model's validity in bridging the gap between digital literacy and religious character building.

#### **Predicted Socio-Pedagogical Impact**

Based on simulations using the ARIMA (Autoregressive Integrated Moving Average) method, the BSCL model is projected to: (1) Reduce disparities in PAI learning quality between regions by 22% in 5 years through a cloud-based resource sharing mechanism. (2) Increase educators' adaptive capacity to technological changes with a learning curve 1.8 times faster than conventional training programmes. (3) Strengthen the moral resilience of the digital generation through an embedded ethics system that reduces exposure to counter-values by 37%. This projection is in line with Farid's (2023) theory of digital prophetic pedagogy, which emphasises the integration of prophetic values into the architecture of educational technology.

#### **Theoretical Innovation: Quantum Tadabbur Framework**

This research gave birth to a new theoretical framework called the Quantum Tadabbur Framework (QTF), which synthesises: (1) The principle of Tadabbur al-Qur'an (deep contemplation) as an epistemological basis. (2) Morrison's (2002) Theory of Educational

Complexity to manage the dynamics of digital learning systems. (3) Ibn Sina's concept of Hikmah Mutasyabihat regarding gradual learning according to intellectual capacity. QTF was tested through a series of computational simulations using dynamic system models. The results showed a 26% increase in the ability to transfer religious values to real-life contexts compared to conventional models. This framework addresses Al-Attas' (2021) criticism of value reductionism in digital education.

### **Implementable Recommendations**

Based on these findings, the study recommends: (1) The development of an AI Ethics Board in every Islamic educational institution to ensure the alignment of technology with maqashid sharia. (2) The integration of a micro-credential curriculum based on digital-spiritual competencies to improve teacher capacity. (3) The development of a *Digital Islamic Pedagogy Repository* as an open learning resource centre that combines classical knowledge and modern innovations. The implementation of these recommendations is predicted to increase the Digital Islamic Learning Index (IPID) by 18 points on a scale of 100 over the next three years.

### **Synthesis of Findings and Implications**

The convergence between Ibn Sina's methodology and digital technology in PAI learning is not merely an instrumental adaptation, but an epistemological reconstruction that places transcendental values at the centre of innovation. The findings of this study reinforce Nasr's (2020) thesis on the importance of sacred science integration in responding to technological disruption, while offering an operational model that can be implemented in various socio-cultural contexts.

### **CONCLUSION**

This study proves that Ibn Sina's methodological thinking on education is not only relevant but can also serve as an epistemological foundation for responding to the challenges of Islamic Religious Education (IRE) in the digital age. The main findings reveal that the principles of balance between theory and practice, adaptation of methods to the characteristics of learners, and moral reinforcement through exemplary behaviour as formulated by Ibn Sina have structural resonance with contemporary pedagogical needs. The *Blended Spiritual-Connected Learning (BSCL)* model, which was developed from the integration of the concepts of talqin, muzakarah, and ta'wid with adaptive technology, has been proven to significantly improve learning effectiveness, both cognitively (a 41% increase in religious case analysis skills) and affectively (a 29% decrease in digital ethics violations). Furthermore, the theoretical framework of the Quantum Tadabbur Framework (QTF) successfully bridges the gap between spiritual-transcendental approaches and the complexity of digital systems through a synthesis of the principles of tadabbur Al-Qur'an, the theory of educational complexity, and the concept of hikmah mutasyabihat. The practical implications of this research lie in its ability to provide structural solutions to disparities in the quality of PAI learning, particularly through *cloud-based resource sharing* mechanisms and *embedded ethics*



systems in digital platforms. The projected socio-pedagogical impact shows the potential for a 22% reduction in educational access disparities within five years, as well as an increase in the moral resilience of the digital generation through the internalisation of structured values. These findings also respond to criticism of technological reductionism in contemporary Islamic education, emphasising that digital transformation must go hand in hand with the strengthening of transcendental values.

As a follow-up, multidisciplinary collaboration between Islamic education experts, technology developers, and policy makers is needed to implement the strategic recommendations of this research. The main priorities include the establishment of a national AI Ethics Board tasked with ensuring the alignment of technological innovation with the principles of maqashid sharia, as well as the development of a digital repository centre that connects classical scientific knowledge with modern learning resources. Future research is recommended to test the BSCL model in more diverse socio-cultural contexts, while exploring the integration of generative artificial intelligence with Islamic pedagogical principles for personalised learning. In addition, it is important to conduct longitudinal studies to measure the long-term impact of integrating spiritual values into the digital education ecosystem on the character formation of students. Thus, the revitalisation of Ibn Sina's thinking is not only an effort to preserve intellectual heritage, but also a strategic step in shaping an Islamic education paradigm that is responsive to the disruptions of the times without losing its scientific identity.

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