

Integration of Islamic Boarding School Scientific Traditions and Modern Educational Innovations in the Reconstruction of Islamic Religious Education Learning

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Abstract

Islamic Religious Education (PAI) faces increasingly complex demands for change along with the development of digital technology, changing student characteristics, and the increasing need for 21st-century competencies. This study aims to analyze and synthesize literature on the integration of Islamic boarding school scientific traditions with modern educational innovations in Islamic Religious Education (PAI) learning and formulate a conceptual framework for the reconstruction of PAI learning that is adaptive to the development of the digital era without losing the values, manners, and epistemology of Islamic boarding schools. The study uses a qualitative approach with a library research method through a systematic literature review of relevant academic literature. Data are analyzed using qualitative content analysis and thematic synthesis to identify patterns, relationships, gaps, and conceptual synthesis from various previous studies. The results of the study indicate that Islamic boarding school scientific traditions, including manners, exemplary, sanad of knowledge, talaqqi, sorogan, bandongan, and musyawarah, have relevance to modern pedagogy such as personalized learning, collaborative learning, dialogic learning, problem-based learning, and project-based learning. Digital technology and hybrid learning can function as instruments to strengthen access, interaction, and learning experiences. The research resulted in a framework for the Reconstruction of Islamic Religious Education Learning Based on the Integration of Tradition-Innovation through four dimensions, namely epistemological, pedagogical, technological, and axiological, with the principle of "tradition as a foundation, innovation as a strategy, and Islamic values as an orientation." The integration of Islamic boarding school traditions and modern educational innovation is an important strategy for building Islamic Religious Education learning that is adaptive, critical, contextual, and responsive to the digital era, while maintaining Islamic manners, morals, identity, and scientific authority.

Keywords

Educational Innovation; Islamic Boarding School Scientific Tradition; Learning Reconstruction.



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INTRODUCTION

Islamic Religious Education (PAI) faces increasingly complex demands for change along with the development of digital technology, changing student characteristics, and the

increasing need for 21st-century competencies. In the context of madrasas and Islamic boarding schools (pesantren), these changes present more fundamental issues because Islamic educational institutions are not only required to produce students with academic abilities, but also with spiritual depth, morals, Islamic identity, and the ability to adapt to changing times. Islamic boarding schools have historically had a strong tradition of scholarship through the study of yellow books, talaqqi, sorogan, bandongan, halaqah, deliberations, exemplary kiai (Islamic scholars), and the transmission of knowledge that places adab and sanad of knowledge as a vital part of the educational process (Salam et al., 2025). At the same time, modern education offers a student-centered learning approach, project-based learning, digital learning, collaboration, critical thinking, problem solving, and the use of technology (Rohman & Khaliza, 2025). This change demonstrates that the primary issue in Islamic Education (PAI) is not simply a choice between tradition and modernity, but rather how both can be productively constructed within a learning system that maintains Islamic identity while also being responsive to the needs of the times. Research on Islamic boarding school learning models also demonstrates a shift from traditional patterns to semi-modern, modern, and hybrid models that combine classical pedagogy with curriculum and technological innovation.

This issue is becoming increasingly important because modernization of education does not necessarily mean abandoning the traditions of Islamic boarding schools (pesantren). In fact, the scholarly tradition of Islamic boarding schools possesses a number of pedagogical values relevant to contemporary education, such as character building through role models, discipline, gradual learning, intensive teacher-student relationships, habituation, and strengthening moral responsibility. Research Adji, (2025) this study demonstrates that the emergence of science Islamic boarding schools marks a shift in the orientation of Islamic education, from merely maintaining traditional practices to integrating Islamic tradition with modern science. This research is significant because it demonstrates that the transformation of Islamic boarding schools occurs not only at the level of methods and curriculum but also touches on the philosophical dimension of Islamic education. However, these changes need to be managed critically to prevent modern educational innovations from marginalizing the epistemology, etiquette, scientific authority, and distinctive character of Islamic boarding schools.

A number of studies have shown that efforts to reconcile tradition and modernity have become an academic concern. Alwi, (2026) shows that the classical intellectual heritage can still be placed in the context of modern pedagogy (Ramadhani et al., 2025). Through library research on the role of kiai in developing Islamic boarding school curriculum in the digital era, it shows that kiai still have a strategic position in directing curriculum integration and determining technology use policies in Islamic boarding schools. Meanwhile, research Alfauzi & Faslah, (2025) regarding the digital transformation of Islamic boarding schools shows that the use of technology can be an instrument for revitalizing the education system, but still requires control so that digital change does not eliminate the character and basic values of

Islamic boarding schools. The three studies strengthen the argument that the integration of tradition and innovation is a real need, but have not yet fully produced a conceptual framework that explains how the scientific tradition of Islamic boarding schools can be reconstructed into a pedagogical source for modern Islamic education learning innovation.

Subsequent research further clarified the opportunities for integration. Yulianti et al., (2024) examines digital media innovation in Islamic Religious Education learning and shows the importance of utilizing digital media and social media as learning tools that are relevant to technological developments (Zainuddin, 2025). More specifically, it examines hybrid learning in Islamic boarding schools by integrating digital pedagogy and Islamic values to strengthen 21st-century competencies. Zuraida & Setiawan, (2025) also shows that digital transformation has entered Islamic boarding school education, including in the learning of Al-Qur'an memorization, although infrastructure issues and curriculum burden remain challenges. These findings indicate that digital innovation is no longer an external phenomenon for Islamic boarding schools, but has become part of the transformation of Islamic education. However, the focus of this research tends to position technology as an instrument of innovation, while the scientific tradition of Islamic boarding schools has not been fully analyzed as an epistemological and pedagogical basis that can determine how technology, modern methods, and new curricula should be integrated into Islamic Religious Education learning.

Based on this study, several research gaps are identified. First, previous research has focused more on integration at the level of learning practices, curriculum, media, or technology, while the epistemological dimension of Islamic boarding school traditions has not been widely positioned as a basis for designing Islamic Religious Education (PAI) innovations. Second, some studies use a case study approach within a single institution, resulting in a contextual overview but not yet a cross-research synthesis that can explain integration patterns more broadly. Third, research on Islamic boarding school digitalization generally focuses on the use of technology, while questions about the limits, principles, values, and selection mechanisms for modern innovations to ensure they remain in line with Islamic boarding school ethics and authority have not been widely explored. Fourth, studies on traditional methods and modern innovations are often positioned as two poles that need to be integrated, rather than as systems that can be conceptually reconstructed. Thus, this study offers a novelty through an integrative synthesis that connects the epistemology of Islamic boarding school traditions, modern pedagogical principles, digital transformation, and Islamic Religious Education (PAI) learning objectives. This novelty is expected to produce a conceptual framework for the Reconstruction of Islamic Boarding School Learning Based on Tradition-Innovation Integration.

Based on the background, theoretical studies, and research gaps, this study aims to analyze and synthesize literature on the integration of Islamic boarding school scientific traditions with modern educational innovations in Islamic Religious Education (PAI) learning, specifically by identifying the forms, principles, values, and characteristics of Islamic boarding

school scientific traditions that are relevant to contemporary learning needs and mapping various pedagogical and digital innovations that have the potential to be integrated without losing the identity, manners, and epistemology of Islamic boarding school education; and formulating a conceptual framework for the reconstruction of PAI learning based on the integration of Islamic boarding school scientific traditions and modern educational innovations in the digital era by considering integration patterns, opportunities, challenges, limits of technological adaptation, and pedagogical principles that can maintain the continuity of Islamic values while responding to the demands of 21st-century competencies. Thus, this study is expected to not only summarize the results of previous research, but produce a conceptual synthesis that can become a basis for developing adaptive, contextual PAI learning that remains rooted in Islamic scientific traditions in madrasas and Islamic boarding schools.

METHODS

This study employed a qualitative approach with a library research method directed at a systematic literature review (SLR). Data sources included national and international journal articles, academic books, proceedings, and scientific documents relevant to Islamic boarding school (pesantren) scholarly traditions, Islamic Religious Education (PAI), modern educational innovation, digital pedagogy, and the transformation of Islamic education. Literature was selected based on inclusion criteria, namely relevance to the research focus, published in verifiable academic sources, available in full text, and having a substantive contribution to the study; while duplicate articles, popular sources, opinion pieces, and irrelevant publications were excluded. The selection process was carried out through the stages of identification, screening, eligibility checking, and inclusion with the SLR transparency principle.

Data were analyzed using qualitative content analysis and thematic synthesis. Selected articles were extracted into a matrix containing the author, year, objectives, methods, context, focus, main findings, limitations, and their relevance to the reconstruction of Islamic Religious Education (PAI) learning. The analysis was conducted through the stages of data reduction, coding, categorization, theme identification, comparison between findings, and drawing and verifying conclusions. The main themes analyzed included Islamic boarding school scientific traditions such as *adab* (adab), exemplary conduct, *sanad* (scientific chain of knowledge), *talaqqi* (talaqqi), *sorogan* (soroga), *bandongan* (musyawarah), and deliberation; as well as modern educational innovations such as student-centered learning, problem-based learning, project-based learning, critical thinking, hybrid learning, digital pedagogy, and artificial intelligence. Furthermore, the results of the synthesis were used to formulate a conceptual framework for the reconstruction of Islamic Religious Education (PAI) learning that integrates the values and epistemology of Islamic boarding school scientific traditions with modern pedagogical and technological innovations without eliminating the character of Islamic education. Data validity is maintained through triangulation of sources by comparing

different studies, perspectives, and educational contexts and retaining different or contradictory findings as part of the analysis process.

RESULTS AND DISCUSSION

Results

Integration of Islamic Boarding School Scientific Traditions and Modern Educational Innovations in Islamic Religious Education Learning

The results of the literature synthesis indicate that the Islamic boarding school's scientific tradition has a strong pedagogical foundation and remains relevant for development in Islamic Religious Education (PAI) learning in the digital era. This tradition is not only in the form of the use of yellow books or classical learning methods, but also includes a value system and epistemology that includes adab, exemplary behavior, talaqqi, sanad of knowledge, sorogan, bandongan, deliberation, habituation, closeness of teachers with students, and the orientation of tafaquh fi al-din. This tradition positions the educational process as a process of forming a whole person, namely the development of knowledge as well as the formation of morals and personality. The Islamic educational values contained in 'Aqīdatu al-'Awām can still be transformed into a modern learning context. In fact, traditional methods such as sorogan and bandongan can be enriched with Problem-Based Learning (PBL) to increase active involvement, critical thinking skills, and problem-solving without losing the substance of Islamic values. These findings indicate that the pesantren tradition does not have to be positioned as something that is opposed to educational innovation, but can be a source of values and principles that provide direction for the development of modern pedagogy.

Further analysis reveals a number of traditional Islamic boarding school practices that substantively align with modern learning principles. Musyawarah (consultation), for example, is not simply a discussion method for understanding religious issues, but also possesses dialogic learning characteristics because it provides students with the space to express arguments, question issues, listen to others' perspectives, and develop conclusions through dialogue. The practice of musyawarah in classical Islamic educational institutions can be understood through the perspective of critical pedagogy and dialogic learning because it fosters critical awareness, dialogic interaction, and student empowerment. Thus, the Islamic boarding school tradition already possesses a pedagogical foundation that aligns with the demands of 21st-century education, particularly in the areas of critical thinking, communication, collaboration, reflection, and problem-solving. The differences lie in the epistemological framework and its ultimate orientation. Modern education generally emphasizes cognitive competencies and 21st-century skills, while Islamic boarding schools place these intellectual abilities within a framework of adab (ethnicity), moral responsibility, and devotion to God. This synthesis demonstrates that the reconstruction of Islamic Education (PAI) should not replace traditional methods with modern ones, but rather seek common ground between the pedagogical strengths of both.

The literature also shows a shift in Islamic boarding school learning from entirely traditional patterns to semi-modern, modern, and hybrid models. This includes a progressive transformation from classical methods such as sorogan and bandongan to hybrid and digital learning models. This transformation is accompanied by efforts to maintain the religious and cultural integrity of Islamic boarding schools, despite facing issues of infrastructure inequality and digital readiness. These findings demonstrate that digitalization is no longer merely an optional option but has become part of the dynamic transformation of Islamic boarding school education. However, the results of this research synthesis indicate that digitalization relevant to Islamic Education (PAI) is not simply the transfer of texts or lectures to digital platforms. Digitalization must be directed towards expanding access to knowledge, increasing interactivity, strengthening critical thinking skills, providing diverse learning resources, and building religious digital literacy. Thus, technology is positioned as a pedagogical instrument, while the Islamic boarding school's scientific tradition remains a source of educational values and orientation.

In terms of pedagogical innovation, the synthesis results show that several modern educational approaches have strong potential to be integrated with Islamic boarding school traditions. Problem-Based Learning can be used to develop students' abilities to critically analyze religious and social issues; Project-Based Learning can connect religious knowledge with real-life issues; dialogic learning can strengthen the tradition of deliberation; while hybrid learning can combine face-to-face interaction with digital learning resources. The Islamic value-based STEAM approach can be integrated with Project-Based Learning and the principle of ta'dib in Islamic boarding schools. This integration is carried out by linking project activities with verses of the Quran and Hadith so that science and technology learning remains oriented towards Islamic values. These findings strengthen the findings of this study that modern educational innovations can be accepted in Islamic boarding school environments if they are not positioned as a system that replaces tradition, but rather as an approach that is transformed and oriented towards Islamic values. With this pattern, Islamic Education learning can move from a model that is predominantly based on knowledge transfer to active, contextual, dialogic, collaborative, reflective learning, and remains oriented towards moral formation.

In the technological dimension, the synthesis results indicate that digital pedagogy and hybrid learning are among the most feasible forms of innovation for connecting the traditions of Islamic boarding school education with contemporary learning needs. Hybrid learning in Islamic boarding schools can integrate face-to-face learning with technology-based learning in a structured manner, thus providing flexibility and a more contextual learning experience without having to abandon the Islamic values that characterize Islamic boarding schools. Digital media and social media can be used as innovative tools in Islamic Religious Education (PAI) learning to respond to technological developments and the characteristics of today's students. Based on these two findings, this study found that ideal technology integration requires the principles of selectivity, value congruence, pedagogical relevance, and ethical oversight. This means that not all digital technologies or platforms automatically suit the

character of Islamic boarding school education. The choice of technology must consider learning objectives, the quality of knowledge sources, ethical media use, scientific authority, information security, and students' ability to sort out religious information.

Thus, the synthesis of the first objective demonstrates that the integration of Islamic boarding school scholarly traditions and modern educational innovations can be built through a transformational pattern, not a substitutional one. Islamic boarding school scholarly traditions serve as the foundation of values, epistemology, ethics, and learning orientation, while modern educational innovations serve as pedagogical instruments to enhance relevance, effectiveness, creativity, collaboration, critical thinking, and digital literacy. This pattern creates a complementary relationship: sorogan can be developed into personalized and reflective learning; bandongan can be supplemented with digital resources and interactive activities; musyawarah (deliberation) can be strengthened with dialogic learning and critical pedagogy; book study can be integrated with PBL or PjBL; while the value of ta'dib can become an ethical driver of technology use. Thus, the reconstruction of Islamic Education learning is not directed at modernization that eliminates tradition or conservatism that rejects innovation, but rather at establishing an integrative model that maintains the identity of Islamic boarding school scholarship while developing students' abilities to face the complexities of the digital era.

Conceptual Framework for Reconstructing Islamic Education Learning Based on the Integration of Islamic Boarding School Traditions and Modern Innovations

Based on the literature synthesis, this study found that the reconstruction of Islamic Education learning can be formulated through four main dimensions: epistemological, pedagogical, technological, and axiological. The epistemological dimension relates to the sources and methods of acquiring knowledge, which in the Islamic boarding school tradition are rooted in the Qur'an, hadith, traditional books, the sanad of knowledge, and the authority of teachers. The pedagogical dimension relates to how this knowledge is transmitted, developed, and understood through sorogan, bandongan, talaqqi, deliberation, habituation, and role models. The technological dimension includes the use of digital media, hybrid learning, learning platforms, digital learning resources, and technology-based innovation. The axiological dimension relates to the ultimate goals of education, namely the formation of manners, morals, responsibility, religious awareness, and the usefulness of knowledge. The results of the synthesis show that these four dimensions cannot stand alone. Technology without epistemology can result in a flood of information; pedagogy without values can lose moral orientation; tradition without innovation risks being less responsive to change; while innovation without manners has the potential to shift the orientation of education from the formation of human character to merely the achievement of competence.

The first framework identified is epistemological reconstruction, which involves shifting the perspective on Islamic boarding school traditions from mere legacies of the past to contextualized sources of knowledge and pedagogical principles. From this perspective, the yellow books are viewed not only as teaching materials but also as sources for shaping ways

of thinking, argumentative traditions, depth of study, and scientific continuity. Sanad is understood not only as a mechanism for transmitting knowledge but also as a mechanism for maintaining the authority and validity of knowledge. Similarly, talaqqi (religious rites) and the teacher-student relationship are not merely learning methods but also form educational relationships that emphasize exemplary behavior, etiquette, and responsibility. The values contained in classical literature can still be taught through a modern approach. Traditional deliberations have a dialogical and critical character. These findings form the basis for the reconstruction of Islamic Education (PAI) must begin with a reinterpretation of the function of tradition, not its elimination.

The second framework is pedagogical reconstruction, which involves developing traditional methods through modern learning principles while maintaining the goals of Islamic education. The synthesis results indicate a potential relationship between sorogan and personalized learning, bandongan and guided learning, musyawarah and collaborative and dialogic learning, and book study and problem-based learning (PBL) and project-based learning (PjBL). This integration allows Islamic Religious Education (PAI) learning to be oriented not only toward mastery of content but also toward students' abilities to interpret, critique, connect, and apply religious knowledge in real life. The integration of STEAM, PjBL, and the principle of ta'dib demonstrates that pedagogical innovation can be developed without separating modern knowledge from Islamic values. Based on these results, this study formulates the pedagogical principle of "tradition as the foundation, innovation as the strategy, and Islamic values as the orientation." This principle is one of the main formulations in the reconstruction of Islamic Religious Education learning resulting from the literature synthesis.

The third framework is digital reconstruction, which positions technology as a medium that strengthens the learning process, not as a substitute for the pedagogical relationship between teachers and students. The study results show that the digitalization of Islamic boarding schools has moved toward a hybrid and digital model, but this transformation still faces issues of human resource readiness, infrastructure, the quality of learning resources, and inequality in technology adoption. Face-to-face learning is combined with technology-based learning without eliminating Islamic values. Based on this synthesis, this study positions digitalization in three functions: access, interaction, and learning expansion. Technology can expand access to books and sources of knowledge, enhance interaction through digital learning media, and expand learning spaces beyond the classroom and the Islamic boarding school environment. However, the validity of sources, digital etiquette, scientific authority, and digital literacy skills must be integral parts of this process.

The fourth framework is axiological reconstruction, which ensures that learning innovation remains oriented toward the fundamental goals of Islamic education. The research findings indicate that the successful integration of tradition and innovation is not solely measured by increased technology use, creative methods, or mastery of 21st-century competencies. It must also be seen in the learning process's ability to produce students with

good manners, morals, responsibility, spiritual awareness, critical thinking skills, digital literacy, and the ability to use knowledge for the greater good. The principle of ta'dib (religious education) used in the STEAM research in Islamic boarding schools reinforces the notion that Islamic education innovation must have moral and spiritual dimensions. Therefore, this research finds that Islamic education reconstruction cannot be equated with Islamic education digitalization. Digitalization is only one instrument, while reconstruction is a broader process involving changes in how knowledge is understood, how it is taught, how technology is used, and the goals to be achieved through education. Within this framework, technology must be subordinated to educational goals, while pedagogical innovation must remain within the corridor of Islamic values and ethics.

Based on the overall results of the synthesis, this study formulates a PAI Learning Reconstruction Model Based on the Integration of Tradition-Innovation with the pattern: Foundation of Islamic Boarding School Scientific Traditions→Adaptation of Modern Pedagogy→Digital Technology Integration→Strengthening Literacy and Competence→The Formation of Islamic Manners and Character. Traditional foundations provide identity and epistemological orientation; modern pedagogy provides active and contextual learning strategies; digital technology provides the means for access, interaction, and expansion of learning; while Islamic values serve as both a control mechanism and an ultimate goal. This model also addresses the gaps in previous research because it does not position tradition and innovation as two elements that must be opposed, but as two components that can be reconstructed within a single learning ecosystem. The findings of a recent systematic review of the transformation of Islamic boarding school learning models also show that the direction of Islamic boarding school education development is moving toward a hybrid model that maintains traditional learning while adopting contemporary technology and innovation. Thus, the results of this study confirm that the future of Islamic Religious Education (PAI) learning in madrasas and Islamic boarding schools is not about abandoning tradition to become modern, but rather reconstructing tradition so that it can become the foundation for educational innovation relevant to the digital era. This model is a major conceptual contribution of this research and the basis for subsequent empirical research to test its application to various madrasah and Islamic boarding school characteristics.

Discussion

The research findings indicate that the integration of Islamic boarding school (pesantren) scholarly traditions and modern educational innovations in Islamic Religious Education (PAI) learning should be understood as a process of reconstruction, not a replacement of tradition with modernity. This finding aligns with the view that Islamic education is essentially oriented not only toward mastering knowledge, but also toward developing knowledgeable, civilized, and morally responsible individuals. In the pesantren tradition, the educational process is built through a close relationship between knowledge, manners, role models, and the transmission of knowledge through teachers. The concept of ta'dib (religious guidance) places the formation of manners as an integral part of education,

while the concept of ta'lim (religious guidance) emphasizes the process of transmitting and developing knowledge. In this context, modern educational innovations such as student-centered learning, problem-based learning, project-based learning, and digital learning should not be positioned as a replacement for tradition, but as a strategy to expand the ways in which students acquire, process, and apply knowledge. This finding strengthens the research (Saifullah et al., 2025) which shows that Islamic values in 'Aqīdatu al-'Awām can be integrated with Problem-Based Learning, so that Islamic intellectual traditions can still be contextualized through modern pedagogy. Thus, the results of this study expand the study by showing that integration can not only be done on one method or one classical source, but can be developed as a framework for reconstructing Islamic Education learning that brings together values, epistemology, methods, and technology.

The research also shows that several traditional Islamic boarding school methods are strongly relevant to constructivist, dialogic, and active learning theories. Sorogan, for example, is characterized by individual learning because students interact directly with the teacher, receive corrections, and receive personal feedback. Bandongan is characterized by guided learning because the teacher provides explanations and interpretations of texts studied together. Meanwhile, musyawarah is closely related to collaborative learning, dialogic learning, and critical pedagogy because it allows students to present arguments, question opinions, compare perspectives, and build understanding through interaction. These findings are highly relevant to this research. (Sa'diyah, 2025) This study demonstrates that the practice of deliberation in classical Islamic educational institutions is characterized by critical pedagogy and dialogic learning. From this perspective, the Islamic boarding school tradition is inappropriately viewed as a passive educational practice oriented solely toward memorization. Rather, it possesses pedagogical potential that allows it to be developed into more active and critical learning. The difference is that this research does not stop at identifying the compatibility between traditional methods and modern pedagogical theory, but rather synthesizes both into the principle of "tradition as foundation, innovation as strategy, and Islamic values as orientation." This principle is an important conceptual development because it provides direction on how traditional methods can be transformed without losing their epistemological and moral character.

In terms of digital transformation, research findings indicate that technology plays a strategic role in the development of Islamic Religious Education (PAI) learning, but its use must be selective and pedagogically oriented. This finding aligns with the theory of digital transformation in education, which positions technology not merely as a tool but as part of a changing learning ecosystem, including changes in interaction patterns, learning resources, teaching strategies, and student competencies. (Rahmi, 2022) shows that digital media can be an important innovation in Islamic Religious Education learning, while (Maulidy et al., 2026) found that hybrid learning in Islamic boarding schools can combine digital pedagogy with Islamic values and 21st-century competencies. A systematic review of the development of Islamic boarding school learning also shows a shift from traditional patterns to a hybrid

model that combines classical learning with digital technology. However, this research provides a more critical emphasis: digitalization is not synonymous with the reconstruction of Islamic education. Technology is only one component in the reconstruction process. Without an epistemological foundation, digital literacy, ethical control, and scholarly authority, digitalization can actually lead to Islamic Religious Education learning becoming merely the consumption of unverified religious information. Therefore, technology integration requires considering the validity of sources, digital etiquette, information literacy skills, the security of technology use, and the teacher's position as a guide and murabbi. In this context, the sanad tradition and scholarly authority of Islamic boarding schools take on new relevance as mechanisms for filtering and validating religious knowledge amidst the flood of digital information.

The following research findings show that pedagogical innovations such as Problem-Based Learning, Project-Based Learning, STEAM, hybrid learning, and dialogic learning can be a means of actualizing Islamic boarding school values in a modern educational context. These findings are related to the research(Sitompul et al., 2025)which shows that the STEAM approach can be integrated with Islamic values, Project-Based Learning, and the principle of ta'dib in Islamic boarding school education. Theoretically, this integration can be explained through the idea that Islamic education should not separate religious knowledge from general knowledge dichotomously. Modern knowledge can be an instrument for understanding and solving life's problems, while Islamic values provide moral direction for the use of that knowledge. In Islamic Education (PAI) learning, this approach can be realized through projects that connect religious issues with social, environmental, technological, health, economic, or community life issues. Students are not only asked to understand the concepts of fiqh, aqidah, morals, or the Qur'an textually, but also to analyze their relevance to contemporary issues. Thus, the results of this study expand on previous research findings because the integration of innovation is not only aimed at improving 21st-century skills but also at revitalizing the function of Islamic boarding school scientific traditions in addressing contemporary issues. Pedagogical innovation thus becomes an instrument of contextualization, while scientific traditions become a source of values and a framework for thinking.

From the perspective of Islamic educational theory, the research findings confirm that the successful reconstruction of Islamic Religious Education (PAI) learning must maintain a balance between the cognitive, affective, spiritual, moral, and social dimensions. This is important because one of the weaknesses of modern education is the tendency to measure educational success through measurable competencies, while Islamic boarding school education has a broader orientation toward moral and personality development. Research on Trensains by(Harmathilda et al., 2024)shows that the transformation of Islamic boarding schools can take place through the meeting between Islamic traditions and the development of modern science.(Hasmiza & Muhtarom, 2022)also shows that kiai (Islamic scholars) continue to play a crucial role in developing Islamic boarding school curricula amidst

digitalization. Both studies reinforce the argument that the modernization of Islamic boarding school education cannot be separated from the authority and values that have become the institution's character. This study further develops this argument by positioning Islamic religious education teachers and kiai as epistemological and pedagogical mediators, not simply users of technology. Teachers have a role to play in selecting sources of knowledge, guiding the use of technology, building a culture of dialogue, maintaining ethical learning practices, and connecting religious knowledge with life issues. Therefore, the reconstruction of Islamic religious education requires a shift in teacher competency from mere content transmitters to learning facilitators, ethical guides, knowledge curators, and cultural mediators capable of bridging the traditions of Islamic scholarship with the demands of modern education.

Overall, the discussion shows that the Reconstruction of Islamic Religious Education Learning Based on the Integration of Tradition and Innovation is an approach that can address the tension between preserving tradition and the demands of educational modernization. While previous research tends to discuss Islamic boarding school traditions, digitalization, modern learning methods, or curriculum innovation separately, this study combines them in a conceptual construct consisting of four dimensions: epistemological, pedagogical, technological, and axiological. The epistemological dimension ensures that the source and validity of knowledge remain rooted in the Islamic scientific tradition; the pedagogical dimension develops Islamic boarding school methods through active, dialogical, collaborative, and contextual learning strategies; the technological dimension utilizes digital media selectively and responsibly; while the axiological dimension ensures that the entire process remains directed towards the formation of manners, morals, religious literacy, critical thinking skills, and the welfare of the community. Thus, the main contribution of this study lies in the paradigm shift from "tradition versus modernity" to "tradition as a foundation and innovation as an instrument of transformation." This position also provides an answer to the research gap found, because integration is not understood as the attachment of modern technology or methods to traditional systems, but as a comprehensive reconstruction process that makes the strength of Islamic boarding school traditions the basis for developing Islamic Education learning that is adaptive to the digital era without losing the identity and orientation of Islamic education.

The novelty of this research lies in the formulation of a conceptual framework for the Reconstruction of Islamic Religious Education (PAI) Learning based on the integration of Islamic boarding school scientific traditions and modern educational innovations in the digital era that combine four dimensions in an integrated manner, namely epistemological, pedagogical, technological, and axiological. Different from previous research that generally examines Islamic boarding school traditions, pedagogical innovations, digitalization, hybrid learning, or partial integration of Islamic values, this research places Islamic boarding school scientific traditions including *adab*, *sanad* of knowledge, *talaqqi*, *sorogan*, *bandongan*, *musyawarah*, and *exemplary* as the epistemological and pedagogical foundation, while

modern educational innovations such as student-centered learning, problem-based learning, project-based learning, dialogic learning, hybrid learning, and digital pedagogy are placed as instruments of learning transformation. This synthesis produces a new principle of “tradition as a foundation, innovation as a strategy, and Islamic values as an orientation,” so that the reconstruction of Islamic Education is not directed at replacing tradition with modernity, but at transforming tradition into a pedagogical source that is contextual, adaptive, critical, and responsive to digital developments while maintaining the morals, identity, scientific authority, and goals of Islamic education.

CONCLUSION

The results of the study indicate that the integration of Islamic boarding school scientific traditions such as adab, exemplary conduct, sanad of knowledge, talaqqi, sorogan, bandongan, and musyawarah is relevant to modern pedagogy and can be strengthened through digital technology and hybrid learning. This study produces a framework for the Reconstruction of Islamic Education Learning Based on the Integration of Tradition and Innovation that includes epistemological, pedagogical, technological, and axiological dimensions with the principle of "tradition as a foundation, innovation as a strategy, and Islamic values as an orientation." In conclusion, Islamic education modernization is not the replacement of tradition with technology, but the reconstruction of learning that is adaptive, critical, and contextual, and maintains Islamic etiquette, morals, and identity. The recommendation is that madrasas and Islamic boarding schools need to develop a selective integration of traditional methods, modern pedagogy, and technology, accompanied by strengthening teacher competency, digital-religious literacy, and ethics in the use of technology; further research needs to test this framework empirically in various madrasas and Islamic boarding schools.

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