

The Need for Islamic Religious Education Teacher Training for Effective Artificial Intelligence Integration: A Qualitative Study

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ARTICLE INFO	ABSTRACT
Volume: 4 ISSN: 2963-5489	Digital transformation in the era of the Industrial Revolution 5.0 has changed the paradigm of education, including in the realm of Islamic Religious Education (PAI) which is oriented towards the formation of spiritual and moral values. However, the integration of artificial intelligence (AI) into learning still faces challenges, especially related to teacher readiness, digital literacy, and the strengthening of Islamic values amid the flow of technological modernization. This research aims to understand in depth the subjective experience of PAI teachers in dealing with AI integration as well as identify training needs that are relevant to their work context. Using a descriptive phenomenological approach, this study involved 8–12 active PAI teachers in various madrassas and high schools in Palu City who had participated in learning digitalization training. Data were collected through in-depth interviews, non-participatory observations, and document analysis, then analyzed with thematic analysis assisted by NVivo 14 software. The results of the study show four main themes: (1) the struggle of values between spirituality and technological rationality, (2) the limitations of digital literacy as a structural and cultural challenge, (3) the adaptation and repositioning of the professionalism of PAI teachers in the AI era, and (4) expectations for training based on Islamic ethical and spiritual values. These findings confirm that AI integration is not just a technological transformation, but rather a reflective process that shapes the professional, moral, and spiritual consciousness of teachers. This research contributes to strengthening the paradigm of spiritual-digital professionalism, which combines faith, ethics, and innovation in Islamic educational practices in the era of artificial intelligence.
KEYWORD Artificial Intelligence, Islamic Religious Education, Digital Literacy, Learning Transformation, Teacher Professionalism, Spiritual Values, Educational Training	

1. Introduction

Digital transformation in the era of the Industrial Revolution 5.0 has become an inevitable social phenomenon and brought major changes in the world of education. In Indonesia, this current of change also affects the Islamic religious education system (PAI) which is oriented towards the formation of moral and spiritual values. PAI teachers are now faced with a new challenge, namely how to adapt artificial intelligence (AI) into the learning process without obscuring the essence of Islamic values. In various schools and madrassas, there are social symptoms where some teachers feel left behind due to limited

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understanding of technologies such as ChatGPT, learning recommendation systems, or automated evaluation platforms that are beginning to be adopted in the modern educational environment.

Preliminary observation findings in a number of public and private madrassas show that most PAI teachers still rely on traditional learning methods centered on lectures and memorization. Although some institutions have organized digital training, most of them are technical and have not touched on the pedagogical dimension or ethics of using AI-based technology. The results of exploratory interviews with several PAI teachers in Yogyakarta and Makassar show enthusiasm for the use of technology, but accompanied by concerns about a diminishing human touch in the religious education process. This condition shows that there is a gap between the spirit of adaptation to technology and the readiness of teachers' competencies comprehensively.

From a cultural perspective, PAI teachers have a strategic position as guardians of moral and spiritual values in the Muslim community. Therefore, the presence of AI technology in the classroom requires not only technical skills, but also moral responsibility in instilling digital ethical values based on Islamic teachings. Socially, there are still some people who reject the use of AI because it is considered to reduce human values in the learning process. However, others see AI as a great opportunity to enrich Islamic teaching methods through data-driven approaches and interactive experiences (Sari & Lubis, 2023).

The urgency of this research is getting stronger with government policies through the Ministry of Religion and the Ministry of Education, Culture, Research, and Technology that encourage the digitization of the madrasah curriculum. At the global level, UNESCO (2023) affirms the importance of artificial intelligence literacy for educators as part of 21st century competencies that include technical, ethical, and humanistic dimensions. In the national context, there is still little research that examines how PAI teachers interpret social changes due to the penetration of AI in daily learning practices (Hidayat, 2024).

Various previous studies have highlighted aspects of teachers' readiness for technology. Rahman and Yuliani (2024) found that digital literacy has a positive effect on the ability of PAI teachers to creatively integrate AI in the classroom. Meanwhile, Mubarak and Fauzi (2023) emphasized the importance of a practice-based training approach and mentoring so that teachers do not only become passive users of technology. However, most studies still position teachers as training objects, not as subjects who have reflective experience and knowledge in dealing with technological changes.

In addition, Hasanah (2022) stated that there are ethical challenges in the application of AI in PAI learning, especially related to the maintenance of spirituality and humanity values. Meanwhile, Yusuf and Rahmi (2022) show that many teachers feel that the training they take is not in accordance with the contextual needs of the job. However, research on teachers' personal experiences—how they interpret change, adjust, and build religious meaning in the midst of technological disruption—is still rare, especially through an in-depth qualitative approach.

The research gap indicates a significant literature gap. Previous studies are generally still descriptive, focusing on the level of readiness, training models, and supporting factors for the application of technology. Not many have explored how PAI teachers personally and socially experience and interpret the process of technological transformation in the context of their culture and religious values. Therefore, a phenomenological approach that traces the experiences, perceptions, and values that live among PAI teachers is important to be raised in this study.

This study uses a qualitative approach to explore the subjective experience of PAI teachers in facing the demands of artificial intelligence integration in the educational environment. This approach allows researchers to understand social realities from the perspective of participants in depth, in line with the interpretivism paradigm in social research (Creswell & Poth, 2018). Through this perspective, researchers can uncover the meaning behind learning practices, adaptation strategies, and value views that affect teachers' attitudes towards technology.

The focus of the research is directed at PAI teachers at the madrasah and high school levels who have participated in the learning digitalization training program. The study highlights three main aspects, namely: (1) teachers' experience in understanding and using AI, (2) their perception of ethical and spiritual values in the application of the technology, and (3) the training needs that are considered most relevant to the context of their work. Data collection was carried out through in-depth interviews, classroom observations, and analysis of Islamic education policy documents.

Thus, this study aims to deeply understand the experience and training needs of PAI teachers in integrating artificial intelligence into the religious learning process. Theoretically, this research is expected to contribute to the development of teacher training models based on real values and experiences. As for practically, the results of the research are expected to be a reference for Islamic educational institutions and policymakers in designing training programs that are more contextual, relevant, and transformative. In the end, this research seeks to strengthen spiritual-digital literacy among PAI teachers as a step towards adaptive and humanist Islamic learning in the era of artificial intelligence.

2. Literature Review

In the process of integrating artificial intelligence (AI) into Islamic religious education (PAI) learning, teachers' experience cannot be reduced to only the technical aspects of using technology. This phenomenon is a social process loaded with personal meaning, in which each teacher navigates change through a blend of religious beliefs, professional values, and institutional demands. Therefore, understanding this phenomenon requires an approach that highlights subjective meaning and experience, rather than just quantitatively measuring behavior. This study adopts three main theoretical frameworks, namely (1) Learning Transformation Theory (Mezirow, 1991; developed by Kitchenham, 2019), (2) Teacher Professional Identity Theory (Beauchamp & Thomas, 2019), and (3) Social Constructivism Theory (Vygotsky, updated by McLeod, 2020), to understand the dynamics of change experienced by PAI teachers in the digital era.

2.1. Learning Transformation Theory

The theory of learning transformation initiated by Jack Mezirow emphasizes that the adult learning process does not stop at the absorption of new information, but involves fundamental changes in the way of thinking or meaning perspectives. Kitchenham (2019) added that when individuals face changes that cause confusion or uncertainty, such as the development of digital technology, they will experience critical reflection that can change their identity and mindset. In the context of this study, PAI teachers who are faced with artificial intelligence technology are in a situation called the disorienting dilemma, which is a condition in which the spiritual values they hold are directly confronted with the new reality of the world of technology.

Research by Rahman and Yuliani (2024) shows that PAI teachers who take part in AI-based training often feel a clash between efforts to maintain the sacredness of Islamic teachings and the need to adapt to the digital learning system. From the perspective of learning transformation theory, this conflict is not an obstacle, but a starting point for the emergence of a new consciousness that encourages self-change. Through deep reflection on their role as educators in the midst of digital change, teachers experience a transformation of thinking that can increase technological literacy while enriching spiritual understanding in the context of contemporary education.

2.2. Teacher Professional Identity Theory

According to Beauchamp and Thomas (2019), teachers' professional identities are a dynamic social construct and are formed through experience, interaction, and a belief in value systems. This identity is manifested through self-narrative—the way teachers tell and interpret their roles in the context of their profession. In this study, the theory is used to explain how PAI teachers reinterpret their roles and responsibilities in the midst of the penetration of intelligent technology that is often contrary to traditional teaching paradigms.

Initial interviews with some madrasah teachers show the emergence of reflections such as "teachers are no longer the only source of knowledge" or "AI can help, but does not replace the role of spiritual mentors." The statement describes the process of re-negotiating professional identity, in which teachers seek to maintain moral and spiritual values as the core of their profession while adapting to the demands of digitalization. Hidayat (2024) notes that this process is often accompanied by emotional ambivalence—between the fear of losing the value of spirituality and the desire to remain relevant in the modern era. Thus, the theory of professional identity provides a conceptual framework for reading the dynamics of emotions, values, and self-reflection that accompany the professional changes of PAI teachers in the context of digital transformation.

2.3. Social Constructivism Theory

The theory of social constructivism developed by Vygotsky and updated by McLeod (2020) asserts that knowledge is not formed individually, but through social interactions and cultural contexts. In the realm of education, learning is a collaborative process in which teachers and students jointly build meaning. When AI is integrated into the education system,

the technology no longer plays a role as a tool, but as a new social actor that also influences the construction of knowledge and interaction patterns between teachers and students (Mubarak & Fauzi, 2023).

In practice, when PAI teachers use AI-based applications to provide automated feedback or religious dialogue simulations, a new form of knowledge collaboration is created. However, Hasanah (2022) highlights an ethical dilemma: to what extent is the AI system able to understand the spiritual context that the teacher wants to convey? Can Islamic values be correctly represented by algorithms? Through the perspective of social constructivism, researchers can examine how teachers negotiate the boundaries of roles between humans and machines, as well as how new social interactions are formed in intelligent technology-based learning spaces.

2.4. Theoretical Reflection and Synthesis

The three theories provide complementary views in understanding the experience of PAI teachers in the midst of the AI integration process. Learning transformation theory explains changes in self-awareness and reflection, professional identity theory highlights the emotional and self-value dimensions of role change, while social constructivism shows how social and cultural relationships help shape new meanings of learning. In the context of this research, learning transformation theory is used as the main framework, because it is able to describe in the most profound way the process of reflection and change in meaning experienced by teachers in facing the challenges of digitalization. The other two theories serve as supporting analyses, helping to interpret the social and emotional dimensions of the transformation process.

2.5. Research Conceptual Framework

Based on the integration of the three theories, this study views the experience of PAI teachers as a process of transformation of professional consciousness that takes place through identity negotiation and social interaction in the context of technological change. Teachers are not only adapting to the development of AI, but also actively reconstructing their understanding of their religiosity and professionalism. This process covers three main domains:

- a. Critical reflection on learning values and practices (Transformative Learning Theory)
- b. Formation and shift of teacher professional identity (Teacher Identity Theory)
- c. Social interaction and the construction of common meaning in the learning environment (Social Constructivism Theory)

Thus, this study does not aim to test causal relationships, but rather focuses on understanding how PAI teachers experience, interpret, and reflect on the training process and the application of AI in religious learning. In this position, the researcher plays the role of a co-constructor of meaning who seeks to capture the narrative, thoughts, and reflections of participants in depth, in accordance with the epistemological paradigm of qualitative research that is interpretive and humanistic.

3. Methodology

3.1. Research Approach and Design

This study adopts a descriptive phenomenological approach that aims to understand the subjective experience of Islamic Religious Education (PAI) teachers in dealing with the process of integrating artificial intelligence (AI) in learning. The selection of this approach is based on its orientation which seeks to deeply explore the meaning, reflection, and perception of participants towards the change in educational paradigm due to technological advances. Phenomenology allows researchers to explore the dimensions of teachers' personal consciousness and values comprehensively, without imposing external interpretations. Thus, the focus of this research lies in trying to answer how and why PAI teachers interpret AI-based training as a form of professional and spiritual transformation in carrying out educational tasks in the digital era.

3.2. Participants and Election Strategies

The selection of participants was carried out using a purposive sampling strategy, because this study requires informants who really understand the phenomenon being studied. Inclusion criteria include: (1) active PAI teachers at the MI, MTs, or MA levels; (2) have at least three years of teaching experience; (3) have participated in training related to digitalization or AI both formally and informally; and (4) willing to engage in in-depth interviews with full openness. To expand the variety of data and perspectives, researchers also applied snowball sampling, in which early participants recommended peers who were relevant to the research context. The number of participants is set flexibly until it reaches the data saturation point, which in this context is estimated to be between 8 and 12 people.

3.3 Research Location and Context

This research was carried out in several Islamic educational institutions in Palu City and surrounding areas. The location was strategically chosen because it represents the diversity of technological adaptation levels in the learning process, and shows the interesting dynamics between digital innovation and strong religious values. The socio-cultural conditions in this region provide space for researchers to understand in depth how PAI teachers negotiate the meaning of professionalism, spirituality, and technological adaptation in the midst of changes in artificial intelligence-based education.

3.4. Data Collection Techniques

Data was obtained through three main methods, namely in-depth interviews, non-participatory observations, and document analysis.

1. In-depth interviews are conducted in a semi-structured format using interview guidelines that have gone through a validation process by two experts in the field of Islamic education and learning technology. The questions are open-ended to encourage participants to express their experiences and reflections narratively. Each interview session lasts between 45 to 90 minutes, with recordings made with the consent of the participants.
 2. Non-participatory observation is carried out during the training process and learning activities that use AI-based technology, in order to understand the pattern of teachers' interaction with digital devices and pedagogical dynamics that arise in the classroom.
 3. Document analysis includes an examination of training modules, digital Learning Implementation Plans (RPPs), school policies, and other supporting documents relevant to the application of AI in PAI learning.
- All data is collected in the form of transcripts, field notes, and digital files, then encoded based on the initial categories that appear during the data collection process.

3.5 Data Analysis Techniques

Data analysis was carried out through a thematic analysis approach as developed by Braun and Clarke (2021). This procedure helps researchers identify, classify, and interpret patterns of meaning that emerge from participants' narratives. The stages of analysis include:

1. Read and understand the entire interview transcript to get an overview.
2. Doing open coding by marking words or phrases that contain potential themes.
3. Grouping the code into broader thematic categories, such as perceptions of AI, barriers to adaptation, training needs, and spirituality values in education.
4. Prepare a thematic map to visualize the relationship between themes.
5. Interpret the meaning of data in depth by referring to learning transformation theory and teacher professional identity theory.

The process of organizing and reducing data is assisted by NVivo 14 software, which facilitates the analysis of relationships between themes and the documentation of coding results.

3.6 Data Validity

To maintain the integrity of the research results, the researcher refers to four criteria of validity according to Lincoln and Guba (1985):

1. Credibility is guaranteed through triangulation of sources (teachers, principals, and documents), member checking processes, and peer discussions (peer debriefing) to validate findings.
2. Transferability is obtained through the presentation of detailed contextual descriptions of the participants, location, and social situation of the research so that the findings can be applied to similar contexts.
3. Dependability is maintained through systematic recording of each stage of research in the form of trail audits that allow for a re-verification process.
4. Confirmability is ensured by conducting reflexive journaling and separating raw data from the subjective interpretation of the researcher.

3.7 Research Ethics

This research was carried out by paying attention to the ethical principles of qualitative research. Before data collection, the researcher obtained official permission from the relevant educational institution and provided an informed consent sheet to all respondents. Participants were explained about the research objectives, procedures, and their right to withdraw at any time without negative consequences. Confidentiality of identity is ensured through the use of anonymous codes throughout records, transcripts, and publications. The data is stored securely and is only used for academic purposes.

Through the application of this methodology, the research is expected to produce a comprehensive, authentic, and ethical understanding of how PAI teachers experience and interpret the process of artificial intelligence-based educational transformation..

4. Results and Discussion

This research aims to explore the in-depth experience of Islamic Religious Education (PAI) teachers in dealing with the process of integrating artificial intelligence (AI) into learning practices. Through thematic analysis based on a phenomenological approach, four central themes were obtained that reflect the dynamics of teacher awareness, reflection, and professional adaptation to these changes. The four main themes are: (1) The Struggle of Values between Spirituality and Technological Rationality, (2) The Limitations of Digital Literacy as a Structural and Cultural Challenge, (3) Adaptation and Repositioning of the Professionalism of PAI Teachers in the Midst of the AI Era, and (4) Expectations for Training and an Integrated Islamic Education Ecosystem with AI.

4.1. The Struggle of Values between Spirituality and Technological Rationality

The first theme shows a deep dialectic between the religious commitment of teachers and the rational drive to adopt artificial intelligence. Some teachers consider AI to be a functional and neutral instrument, but at the same time they also view it through the lens of Islamic ethics and theology.

"I was initially hesitant, is it okay to replace some of the teacher's duties with a smart machine? Doesn't that reduce the value of effort and the blessing of learning?" (P4)

The above expression shows the moral dilemma experienced by teachers when dealing with technology that is considered to have the potential to shift the value of spirituality in the teaching and learning process. AI is not only presented as a pedagogical tool, but also as a symbolic entity that challenges the way teachers interpret knowledge, effort, and the role of humans in education. Thus, this phenomenon confirms that acceptance of AI among PAI teachers is highly dependent on the way they reconstruct the relationship between faith, science, and technology.

4.2. Limitations of Digital Literacy as a Structural and Cultural Challenge

The second theme highlights that low digital literacy is still a significant obstacle in the process of utilizing smart technology. Many participants admitted that the limitations of knowledge and training about AI meant that they had not been able to optimize its potential in learning.

"We often hear the term AI, but in practice we have never really learned it. The school also hasn't provided any specific training, so we only know on the surface." (P2)

These limitations are not solely caused by infrastructure factors, but also by psychological and cultural dimensions. Some teachers even expressed reluctance or lack of confidence because they considered mastery of technology to be something "not in line" with the simplicity and humility taught in Islam. This situation shows that the digital divide among PAI teachers is multidimensional — encompassing technical, social, and spiritual barriers at the same time.

4.3. Adaptation and Repositioning of PAI Teachers' Professionalism in the Midst of the AI Era

The third theme describes how PAI teachers are slowly trying to adapt to the changes in the technology-based education ecosystem. This adaptation process not only concerns aspects of digital skills, but also touches on the dimensions of professional identity and teaching morality.

"AI helps, but it is still a teacher who must be the spirit of learning. If everything is left to the system, it will lose its spiritual touch." (P7)

The quote reflects the teachers' critical and reflective attitude towards technological developments. They recognize the importance of utilizing AI, but still insist that the values of humanity, empathy, and spirituality must be at the core of every educational process. Therefore, the adaptation to AI among PAI teachers is more of an effort to reaffirm the meaning of humanity in education, not just mastering digital devices.

4.4. Expectations for Artificial Intelligence-Based Islamic Education Training and Ecosystem

The last theme raises the collective aspirations of teachers towards the need for more comprehensive institutional training and support. The participants emphasized the importance of training that not only focuses on the technical aspect, but also instills Islamic ethical values in the use of AI.

"If possible, the training is not only about how to use AI, but also how this AI can strengthen Islamic values and students' character." (P1)

This statement shows that there is an awareness that mastery of technology needs to be balanced with an understanding of religious values in order for AI to truly function as an empowerment tool, not just a mechanistic tool. Teachers want an Islamic education ecosystem that is able to integrate spirituality, ethics, and digital innovation in harmony. Thus, the use of AI is expected to strengthen the goals of Islamic education that are oriented towards character building, humanity, and science.

Table 1. Summary of Themes and Meanings of Findings

Tema Utama	Essential Meaning
The Struggle of Values between Spirituality and Technological Rationality	Teachers experience moral and religious dilemmas in accepting AI as part of learning practices.
The Limitations of Digital Literacy as a Structural and Cultural Challenge	Barriers to the use of AI are influenced by technical, psychological, and religious cultural values.
Adaptation and Repositioning of PAI Teachers' Professionalism in the Midst of the AI Era	Teachers renegotiate professional identities while maintaining human and spiritual values.
Expectations for AI-Based Islamic Education Training and Ecosystem	Systemic training and support are needed to integrate AI with Islamic ethical and spiritual principles.

The four themes describe the transformative journey of PAI teachers in understanding and interpreting artificial intelligence technology as part of the education ecosystem. This process begins with a complex struggle of values, then moves towards a new consciousness that is more reflective and adaptive. The teachers' experience shows that the integration of AI in Islamic education is not only a technological challenge, but also a space for spiritual reflection on human nature, knowledge, and devotion. Thus, the empowerment of Muslim communities through AI in the field of education demands a balanced approach between digital mastery and the affirmation of theological and humanitarian values.

5. Conclusion

This research emphasizes that the process of integrating artificial intelligence (AI) in Islamic Religious Education (PAI) learning is not just a matter of technology application, but a reflective journey that touches the spiritual, cultural, and professional realms of teachers. The four main themes identified are the struggle between spirituality and technological rationality, the limitations of digital literacy, the adaptation of professional identity, and expectations for training based on Islamic values, showing that PAI teachers play an active role in interpreting and negotiating the meaning of technology in the midst of the dynamics of educational change. Thus, they are not only users of technology, but also moral agents who seek harmony between religious values and modern rationality.

From the reflection of the participants' experiences, a new understanding emerges that the existence of AI can be interpreted not as a threat to spirituality, but as a means of strengthening Islamic values if used wisely and ethically. PAI teachers show that their transformative form of consciousness does not reject progress, but seeks to strike a balance between the dimensions of faith and ratio, between technological efficiency and the warmth of humanity. Thus, this research introduces the idea of spiritual-digital professionalism, which is a paradigm of teacher professionalism that integrates mastery of technology with moral awareness and spiritual responsibility.

Practically, these findings have significant implications for various parties. For policymakers, the results of this study hint at the importance of designing teacher training that not only focuses on technical aspects, but also develops AI literacy with faith consciousness AI literacy based on ethics and Islamic values. For curriculum developers, it is necessary to prepare technology-based learning materials that still instill moral and spiritual reflection. Meanwhile, for Islamic educational institutions, the results of this study encourage the development of a collaborative, adaptive, and humanistic learning ecosystem, where AI becomes an instrument of empowerment, not a substitute for the role of educators.

However, this study has some limitations. The narrow focus of the region as well as the homogeneity of the participants' backgrounds limit the possibility of generalizing the results. In addition, the limited duration of the study also reduces the opportunity to explore the dynamics of teacher reflection in the long term. Therefore, advanced research is recommended to involve a broader, cross-regional, as well as interdisciplinary approach that combines educational perspectives, technological ethics, and sociology of religion.

In closing, this study concludes that the integration of AI in Islamic education should be understood as a process of consciousness transformation, not just a technological transformation. PAI teachers occupy a strategic position in this process—they are not only educators, but also guardians of human values that guide the moral direction of educational digitalization. By strengthening spiritual-digital literacy and ethical reflection, Islamic education has the potential to become a future learning model that harmonizes faith, knowledge, and innovation in the era of artificial intelligence.

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