Vol. 36, No. 2, 2024



International Journal of Islamic Studies

journal homepage: https://journals2.ums.ac.id/index.php/suhuf/index



How Far Artificial Intelligence influenced Mu'allim, Murabbi, and Mudarris? Transhumanism and Diffusion of Innovation Theory's Perspective

Titis Thoriquttyas a,b,1,*, Nita Rohmawati b,2

- ^a Marmara University, Istanbul, Turkey
- ^b Universitas Malang, Malang, Indonesia
- ^c Universitas Sunan Kalijaga, Yogyakarta, Indonesia
- ¹ titisthoriq.fs@um.ac.id; ² titisthoriquttyas@marun.edu.tr
- * Corresponding Author

https://doi.org/10.23917/suhuf.v36i2.3603

ARTICLE INFO

Received Month 07, 2024 Revised Month 09, 2024 Accepted Month 10, 2024

ARTICLE HISTORY

KEYWORDS

Mu'allim Murabbi Mudaris Transhumanism Diffusion of innovation theory

ABSTRACT

The rapid growth of Artificial Intelligence (AI) has begun to change many elements of education, including Islamic religious education. Traditionally, Mu'allim, Murabbi, and Mudarris have played important roles in teaching, ethics, and spiritual guidance. However, little is known about the impact of AI on the shifting existence of these terminologies. This research delves into the impact of AI on the responsibilities and perspectives of Mu'allim, Murabbi, and Mudarris, especially through the lens of transhumanism and the diffusion of innovation theory. This study uses qualitative methods to examine data, exploring the variations in AI integration in Islamic education across diverse cultural and regional backgrounds while also recognizing the specific best practices and challenges in each setting. The research seeks to close the gap in understanding between contemporary technology and Islamic educational customs by examining the evolving responsibilities of educators in the age of artificial intelligence. The findings raise significant issues regarding the preservation of humancentered values in religious education while also highlighting the potential of AI to improve educational methods. This study bridges the gap between traditional educational philosophies and technology breakthroughs, contributing to the increasing body of literature on AI in education and providing insightful information for Islamic studies researchers.

This is an open-access article under the CC-BY license.



1. Introduction

Artificial Intelligence (AI) has progressed quickly, impacting many industries, altering old ways of thinking, and introducing new ideas to the field of education. The integration of AI in Islamic religious education presents both chances and challenges that must be thoughtfully evaluated [1]. This study explores the impact of AI on the roles and perspectives of Mu'allim, Murabbi, and Mudaris in

Islamic education, specifically through the lenses of transhumanism and the diffusion of innovation theory. Islamic education has always been deeply rooted in spreading knowledge, instilling morals in children, and providing structured teaching. Mu'allim, Murabbi, and Mudarris have essential roles in this process; each one represents distinct but interrelated functions that are vital for children's overall development [2], [3]. However, the rise of artificial intelligence (AI) and its growing use in educational environments call for a reassessment of these conventional positions.

AI integration in educational environments presents both opportunities and difficulties. AI-powered solutions, like virtual teaching assistants, automated assessment platforms, and adaptive learning systems, are being used more and more to improve education. But they also raise important questions about how mentoring and teaching are changing, especially in religious settings where the importance of the human aspect in education has long been vital. An effective framework for examining how these AI advancements are being embraced by Islamic educational institutions is provided by the diffusion of innovation theory. This idea states that there are several stages in the adoption process, including information, decision-making, persuasion, execution, and confirmation. Whether they are Mu'allim, Mudarris, or Murabbi, the hypothesis aids in examining how various educators are reacting to the advent of AI. As early adopters of these technologies, are they embracing them, or are they being more cautious, maybe joining the late majority or even opposing the changes as laggards? The theory also clarifies the variables that affect AI adoption, including perceived relative advantage, suitability for current workflows, and complexity of the novel technology.

Integrating AI into education introduces fresh dynamics to teaching and learning methods. AI innovations such as virtual teaching assistants, intelligent tutoring systems, and personalized learning algorithms are revolutionizing the field of education [4]. These technologies can enhance knowledge sharing, offer tailored ethical advice, and streamline instructional approaches. Nevertheless, they also raise worries about moral dilemmas, maintaining the human touch in education, and adhering to Islamic values. This study provides three research queries, specifically: 1). What changes have occurred in the roles of the Mu'allim, Mudarris, and Murabbi as a result of the impact of AI? 2). What impact does the incorporation of AI in Islamic education have on the roles of Mu'allim, Mudarris, and Murabbi, according to a transhumanist point of view? 3). In what way does the diffusion of innovation theory elucidate the changes in the roles and significance of Mu'allim, Mudarris, and Murabbi within AI-facilitated educational settings?

AI's influence on education is only going to increase as it develops increasingly. Teachers, lawmakers, and academics may formulate plans to include AI in ways that improve rather than decrease education by proactively assessing and comprehending these effects now [5]. The utilization of this modern approach is crucial for Islamic educational institutions to adapt and thrive in an ever more technologically advanced society. The aims of this study involve offering a brief description of the connection between transhumanism and AI and raising significant philosophical questions about education, personal enhancement, and the future of learning. Through a lens of the Islamic perspective, analyzing these issues can contribute to a broader dialogue on the impact of technology on human progress and provide valuable knowledge on the integration of technical advancements with ethical and religious beliefs. Given these factors, studying the impact of AI on Islamic religious education is crucial and necessary. It considers key topics like the ethical integration of advanced technologies, the future of learning, and the protection of cultural and religious beliefs.

The aim of this research is to examine the impact of AI-driven teaching technologies on the traditional roles of Mu'allim, Mudarris, and Murabbi. It examines the extent of changes in these roles, their impact on teacher-student relationships, and the dissemination of innovation theory. It also considers the broader philosophical and ethical consequences from a transhumanist perspective. The research seeks to provide a thorough understanding of the evolving landscape of Islamic religious education in the era of AI through an analysis of these features.

AI can redefine what it means to be a teacher or mentor, according to transhumanists who see it as a step toward boosting human skills. The ideology of transhumanism promotes the use of technology to augment human capabilities. This poses important concerns regarding the role that AI should play in Islamic education, including whether it should take the place of or supplement human

educators. For example, the Mu'allim's function may change from being the exclusive transmitter of knowledge to that of a facilitator of learning experiences augmented by AI. In a similar vein, the Murabbi's existence may involve integrating AI technologies to support moral and spiritual instruction, and the Mudarris may develop into an AI-augmented instructor.

Over the past decade, there has been significant interest in using AI for educational purposes [6], [7]. Multiple research projects have explored the potential of AI to enhance student performance, tailor teaching methods, and streamline administrative tasks. Less research has been conducted on the specific impacts of AI on Islamic teaching and the traditional roles of educators in this context. This part focuses on the voids that this study aims to address through the examination of AI in education, the roles of Islamic educators (Mu'allim, Mudarris, and Murabbi), the intersection of AI and transhumanism, and the theory of innovation diffusion. AI technologies have been integrated into various educational settings to provide intelligent tutoring programs, tailored learning experiences, and data-driven assessments of student performance [8], [9]. Studies have shown that AI is beneficial for increasing student participation, allowing for personalized learning, and providing instant feedback. However, there has been minimal research on applying AI in religious teaching, with the focus mostly on secular education.

Islamic education has consistently emphasized the holistic development of students, integrating moral, intellectual, and spiritual growth. The roles of Mu'allim, Mudarris, and Murabbi are essential for this process [6], [10], [11]. Prior research has explored the educational beliefs and teaching methods that reinforce these duties, emphasizing the importance of moral instruction and personal interaction in spreading Islamic teachings. In addition, transhumanism presents philosophical challenges related to human identity, abilities, and societal functions by advancing human potential through advanced technologies like artificial intelligence [12]. The implications of AI and transhumanism on philosophy have been widely debated in non-religious platforms; however, their impact on Islamic education and traditional educators remains largely unexplored.

Furthermore, by filling in several gaps in the literature, our study contributes to the body of knowledge presently in existence. Although the effects of AI in secular education have been extensively studied, this study focuses on how AI affects Islamic religious education. It examines the specific challenges and opportunities that AI brings in this context, providing insights crucial for religious scholars, policymakers, and teachers. This research also examines how the roles of Mu'allim, Mudarris, and Murabbi have evolved in the AI era. The study offers a comprehensive look at how educators can maintain the fundamental values of Islamic education while adapting to technological advancements by analyzing the impact of AI on these traditional responsibilities. To explore the broader impacts of AI adoption in education, the project combines diffusion of innovation theory with transhumanist philosophical ideas. This interdisciplinary method closes the divide between technological advancement and religious customs, providing a distinct perspective on how educational roles and practices could be transformed. This research enhances the current understanding of the impact of artificial intelligence on Islamic religious education and enhances the conversation on using technology for human development and education by filling in these gaps.

This research is significant as it investigates the impact of AI on Islamic education, specifically focusing on the evolving roles of the Mu'allim, Mudarris, and Murabbi. Understanding the potential impact of AI technologies on traditional Islamic educational methods is crucial as they become increasingly prevalent in educational settings. The research provides an analysis of AI's incorporation in Islamic education and how AI can enhance student involvement, pedagogical methods, and personalized instruction, resulting in improved educational results. The research lays the foundation for upcoming studies by examining how AI is related to education, including Islamic education. It also adds to the broader academic conversation on the ethical and practical consequences of AI in the field of education. This research project aims to close the gap between modern technology and Islamic educational traditions by examining how educators' roles are evolving in the era of artificial intelligence.

Understanding how AI is changing the face of Islamic religious education depends on this research. It is crucial to take into account the deeper philosophical and ethical issues that arise, in



addition to the practical ramifications of AI's continued influence on educators' duties. The necessity to uphold the fundamental principles and human-centered methodology that are essential to Islamic education must be weighed against the potential for AI to improve educational practices. Thus, in an AI-driven educational environment, this study aims to offer a nuanced analysis of the changing roles of the Mu'allim, Mudarris, and Murabbi. These insights are critical for scholars, educators, and policymakers navigating this intricate and quickly changing landscape.

2. Method

This research utilizes a qualitative approach with an emphasis on library research to investigate the influence of AI on Islamic religious education, specifically the changing responsibilities of Mu'allim, Murabbi, and Mudarris, as seen through the lens of transhumanism and diffusion of innovation theory. This study is crafted for the purpose of investigating intricate phenomena and grasping the deeper significance and ramifications of AI incorporation in Islamic education. This method enables a thorough examination of current literature and theoretical viewpoints, offering indepth perspectives on the subject [13], [14]. Library research includes the methodical gathering, examination, and understanding of current literature, documents, and sources that pertain to the research subject [15], [16]. By finding appropriate sources like peer-reviewed journals, academic books, and conference proceedings on AI in education, Islamic education, transhumanism, and diffusion of innovation theory, relevant information can be gathered. The choice of research tools utilized from 2010-2024 publication dates to emphasize the originality of the research. Texts on transhumanism and philosophical discussions on the intersection of technology and education are also involved in the data collection. This research utilized academic databases such as JSTOR, Google Scholar, PubMed, and others to locate relevant literature.

The process of data analysis includes the following steps: Initially, conduct a thematic analysis to recognize and categorize recurring themes and patterns found in the literature review. Thematic analysis assists in grouping the data into significant themes connected to the changing duties of the Mu'allim, Mudarris, and Murabbi. Next, a thorough analysis of the chosen texts and interview transcripts will be conducted to grasp the subtle shifts in the duties of Islamic educators in relation to AI. Additionally, comparative analysis evaluates the results of the literature review and interviews to detect commonalities, discrepancies, and new patterns. This analysis aids in cross-referencing the data to confirm the accuracy of the research results. Interpretive analysis interprets the results within the context of the theoretical framework laid out in the literature review [17], [18]. This includes placing the outcomes in the wider conversation on AI, Islamic education, and transhumanism and exploring the consequences for upcoming educational strategies.

This study utilizes content analysis to examine the results by identifying the main themes and trends in the literature concerning the influence of AI on the functions of Mu'allim, Mudarris, and Murabbi. Possible themes could involve the passing on of knowledge, guidance on ethics, teaching techniques, moral guidance, and the implications of transhumanism. Moreover, the study categorized the identified themes in alignment with the research goals [18]. This could include organizing the literature by AI uses, teaching functions, and philosophical viewpoints. During the synthesis of findings, researchers combine information from various sources to create a cohesive story about the impact of AI on Islamic education. This includes examining various viewpoints, recognizing similarities and disparities, and combining the literature to create a thorough analysis. In order to make a clear understanding, the visualization of research method flow is shown in Fig. 1.



Fig.1. The proposed research method

Regarding ethical considerations, although the study primarily involves library research, ethical considerations include ensuring the accuracy and integrity of the literature review [19]. Proper citation and acknowledgment of sources are crucial to maintaining academic honesty. Additionally, the research should be conducted with respect to the cultural and religious sensitivities associated with Islamic education. However, this research's reliance on existing literature may limit the scope of the study to the perspectives and findings available in published sources. The absence of primary data collection through interviews or surveys restricts the study's ability to capture firsthand experiences and contemporary practices in AI-integrated Islamic education.

3. Results and Discussion

3.1. Mua'lim, Mudaris, and Murabbi: The Shifting Existence of Post-AI

Islamic teachings and practices concentrate a great deal of philosophical significance on the role of the teacher in Islamic education. Philosophically speaking, ta'lim, tarbiyah, and ta'dib—three fundamental ideas—help to explain the function of the teacher in Islamic education [20], [21]. Islam places great importance on knowledge and views it to become closer to Allah. It is believed that teachers play a crucial role in the dissemination of knowledge, passing along both religious and secular education. This includes the Quran, other sciences, Hadith, and prophetic traditions. Since this knowledge is viewed as a kind of worship and a way to improve morally and spiritually, it is the teacher's responsibility to make sure that students comprehend and internalize it [22], [23], [24], [25].

On the other side, Islamic education emphasizes students' moral and ethical upbringing in addition to their intellectual growth. Teachers are responsible for *Tarbiyah*, or nurturing the students, helping them to grow morally, build strong moral character, and adhere to Islamic principles [23], [26], [27], [28]. This all-encompassing method of teaching guarantees that students develop into responsible morally. Teachers in Islamic education is supposed to be role models for their students, according to *Tarbiyah*. They must be honest, devout, and committed, modeling the virtues and beliefs they preach. Since students are more likely to imitate the attitudes and behaviors of their educators, the idea of Uswah Hasanah is essential [26], [29]. In Islamic education, teachers commonly take on the role of spiritual mentors, assisting students in their spiritual development. This involves providing guidance and support in concerns of the heart as well as instructing in spiritual practices and traditions [30]. In this context, the relationship between the teacher and the student is very intimate and caring, with the goal of fostering a profound spiritual bond with Allah.

Simultaneously, an Islamic education teacher is also required to promote critical thinking and ijtihad (independent reasoning). Islamic education stresses passing down traditional knowledge while

also promoting critical thinking and ijtihad. Teachers are required to create a learning setting that promotes inquiry, examination, and cognitive development [23]. This enables students to interact with Islamic teachings in a dynamic and contextual manner, adjusting them to modern challenges while staying true to fundamental beliefs.

In a pragmatic manner, teachers are commonly viewed as community leaders in Islamic societies [31]. They play an essential part in molding the moral and intellectual structure of the community, providing guidance and leadership that extends beyond the classroom. This position highlights how crucial their role is in educational and social settings. To sum up, the role of a teacher in Islamic education is diverse, involving responsibilities such as imparting knowledge, providing moral guidance, setting a good example, guiding spiritually, leading the community, and being a continual learner [30]. This holistic method guarantees that Islamic education focuses on students' cognitive, ethical, religious, and communal growth, equipping them to make a constructive impact on society and adhere to Islamic values.

In Islamic education, the Mu'allim traditionally acts as the main provider of knowledge (Ta'lim) and holds an important position. This position involves not just spreading religious and worldly knowledge but also encouraging intellectual growth, analytical thinking, and nurturing a passion for education [2]. The Mu'allim is perceived as a knowledgeable and wise figure who holds authority and leads students through a structured educational journey. Traditionally, a Mu'alim should possess expertise in religious texts, classical languages like Arabic, and other related fields. They must also have teaching abilities to support learning and understanding, as well as moral integrity, acting as a role model for Islamic principles and ethics [3].

The incorporation of AI in education results in notable shifts in the way the role of the Mu'allim is understood and carried out. One can examine these shifts in various areas, starting with customized instruction and learning enabled by adaptive technologies. AI-powered platforms provide customized learning experiences, adjusting content and speed to cater to the unique requirements of each student. This enables better knowledge transfer (Ta'lim) by providing tailored assistance for students' individual strengths and weaknesses, resulting in increased efficiency and effectiveness [32]. AI can offer supplementary guidance with intelligent tutoring systems that provide instant feedback, practice tasks, and further explanations. This improves the Mu'allim's capability to accommodate various learning styles and levels in the classroom [33], [34], [35]. These technologies have the potential to educate about complicated theories, past occurrences, and scientific events in ways that are interesting and involve active participation. AI analytics offer important information about student performance, engagement, and learning patterns. Teachers can utilize this information to enhance their teaching methods, pinpoint areas needing improvement, and provide specific assistance to students.

Yet, as AI becomes increasingly incorporated into Islamic education, the duties and possibilities of the Mu'allim are shifting. This entails knowing how to seamlessly incorporate digital resources, adaptive learning platforms, and interactive tools into their lesson plans. Even with AI advancements, the Mu'allim's function as a guide and mentor is still crucial. Mu'allim is in charge of putting AI-generated content into context and interpreting it to ensure it reflects Islamic teachings and values [36], [37]. They also offer the personal connection needed for moral and ethical advice, something that AI cannot imitate. The fast rate of technological advancements requires Mu'allim to engage in ongoing professional development. This involves tackling issues regarding data privacy, bias in algorithms, and the ethical impacts of AI-based education. Mu'allim needs to support practices that safeguard the rights and well-being of students.

The incorporation of AI in Islamic education profoundly transforms the function of the Mu'allim. Even though AI provides effective resources for customized education, information accessibility, and teaching advancements, Mu'allim's duties as a wise leader, moral instructor, and personal connection are still essential [2]. The teacher should adjust to these technological advances by accepting new tools, engaging in ongoing professional growth, and guaranteeing the ethical use of AI in education. In this way, Mu'allim can successfully navigate the changing educational environment and keep offering comprehensive education to their students. Thus, in Islamic education, Mudarris typically acts as a teacher whose main purpose is to convey information and assist in the learning process. The

emphasis is on teaching in the classroom, creating lesson plans, and spreading religious and secular knowledge. The Mudarris is in charge of ensuring students comprehend the content, excel in the syllabus, and enhance their critical thinking abilities [35], [37]. The incorporation of AI in education brings about notable alterations in the way the role of the Mudarris is viewed and carried out. These shifts can be classified in various areas, including instructional delivery, personalized learning, classroom management, and assessment.

AI technologies make it possible to automate the distribution of content through platforms that provide pre-recorded lectures, interactive modules, and virtual classrooms. This enables Mudarris to prioritize facilitating discussions and personalized interactions over simply giving lectures. AI is now creating educational materials that can be accessed outside of regular classroom environments, allowing Mudarris to implement flipped classroom approaches. This means students can review material before class and focus on more in-depth discussions, solving problems, and applying their knowledge during class time [28]. Mudarris can utilize these systems to offer personalized teaching, guaranteeing that every student gets the help they require to do well. Analytics provide information on students' learning trends, strengths, and areas needing enhancement. Mudarris can use this data to customize their teaching methods and offer specific interventions. AI systems can observe classroom conduct and offer immediate feedback to educators, aiding in the better management of classroom interactions [38]. AI can automate formative and summative assessments, providing instant feedback to students and freeing Mudarris from the time-consuming task of grading.

As a result, as AI becomes more integrated into Islamic education, the role of the Mudarris in the Mudarris context changes to include new responsibilities and opportunities. Mudarris needs to develop skills in utilizing AI tools and technologies to improve their teaching. Mudarris interprets and contextualizes AI-generated content to ensure it remains in line with Islamic teachings and values. They also offer the personal connection needed for moral and ethical advice, something that AI cannot imitate. Moreover, Mudarris is essential in guaranteeing the ethical application of AI in the field of education. This involves tackling issues regarding data privacy, algorithmic bias, and the ethical considerations of AI-powered education. Mudarris is required to support measures that safeguard the rights and welfare of students [21].

Furthermore, historically, a key role in Islamic education has been held by the Murabbi, who is charged with guiding students' moral and spiritual growth. This position involves more than just teaching and sharing knowledge (Ta'lim); it also involves nurturing and developing students in a well-rounded way (Tarbiyah), which includes their moral, mental, and spiritual progress. The Murabbi serves as a mentor, guiding individuals and setting an example by teaching Islamic values and principles through personal interaction and ethical teaching [1]. Murabbi provides personalized guidance and mentorship to support the moral and spiritual growth of students. Murabbi acts as a role model, demonstrating Islamic values and ethical behavior in addition to prioritizing the overall development of students, which encompasses their intellectual, emotional, and spiritual health.

The role of the Murabbi undergoes significant changes in perception and execution following the emergence of AI. These changes can be classified into various factors: 1). AI technologies allow for customized learning experiences that cater to the unique needs and preferences of each student. 2). Intelligent tutoring systems and adaptive learning platforms can offer personalized content and feedback to improve the efficiency of knowledge delivery (Ta'lim). 3). Virtual guidance and support. AI-powered virtual helpers and chatbots can provide additional mentoring by offering advice and assistance on moral and spiritual issues. Although they cannot substitute the personal connection of a Murabbi, these tools can improve access to moral advice, particularly in extensive or spread-out educational environments. 4). Development of ethics and spirituality. AI integration with an ethical framework based on Islamic values can help in educating and reinforcing moral principles. For instance, AI can help initiate conversations about moral challenges, giving students chances to implement Islamic teachings in real-life situations [25].

Due to this, AI is progressively being incorporated into Islamic education, leading to the transformation of Murabbi's role to include new duties like AI-enhanced guidance and technology proficiency, along with ethical AI considerations. AI can help monitor students' moral and religious

growth, giving the Murabbi important details to customize their advice [36]. Due to this, AI is progressively being incorporated into Islamic education, leading to the transformation of Murabbi's role to include new duties like AI-enhanced guidance and technology proficiency, along with ethical AI considerations. Murabbi can utilize artificial intelligence tools to improve their mentorship, utilizing data-driven information to gain a better understanding of students' requirements and development [39]. AI can help monitor students' moral and religious growth, giving the Murabbi important details to customize their advice.

Comparing the roles of Murabbi, Mua'lim, and Mudaris, Murabbi is primarily responsible for the moral and spiritual upbringing of students. This role encompasses mentoring, guiding, and nurturing the character and ethical development of the learners as the spiritual and moral mentor [37]. On the other hand, Murabbi also focuses on the whole development, which is on the overall personal development of the student, including emotional, social, and spiritual dimensions. Murabbi aims to cultivate good manners (adab) and virtues in students [40]. Murabbi also provides individualized attention and mentorship to help students develop strong moral character and spiritual awareness, demonstrate exemplary behavior, and serve as a role model for students to emulate. Murabbi also reinforces ethical principles and Islamic values through daily interactions and specific lessons. In the learning method, Murabbi employs "one-on-one" sessions or small group discussions to address personal development and ethical issues. Encouraging students to participate in community service and activities that promote social responsibility and compassion.

3.2. The Shifting Role of AI Impact: Transhumanism's Perspective

To enrich the analysis of the findings, this research employs the philosophical perspective related to the shifting meaning of IRE teachers, namely Transhumanism. Transhumanism, a philosophical and intellectual movement that supports enhancing the human condition through advanced technologies like AI, provides a unique viewpoint on the presence and importance of teachers alongside AI [41]. Transhumanist philosophy believes that technology can surpass human limitations, resulting in significant shifts in identity, ability, and societal roles [42], [43], [44]. This viewpoint is especially important for grasping how AI changes the roles and duties of instructors in Islamic religious schooling. Transhumanism advocates for the improvement of human skills using technology, such as cognitive and intellectual capacities. Regarding teachers' presence, they may be viewed as recipients of cognitive enhancement technologies, potentially enhanced by artificial intelligence to enhance their teaching skills [45]. This could include utilizing AI for decision-making, customizing educational approaches, and using advanced cognitive tools to better address a variety of learning requirements.

From the transhumanism perspective, the relationship between humans and machines can be synergizing. The perspective of transhumanists emphasizes the synergy between humans and machines, viewing AI as an extension of human capability rather than a replacement [46], [47]. Teachers could function in partnership with AI systems, leveraging these technologies to enhance educational outcomes. AI could handle administrative tasks, data analysis, and personalized tutoring, allowing teachers to focus on more complex, creative, and human-centered aspects of education.

Furthermore, transhumanists are able to offer the concept of redefining human roles, which often questions traditional human roles, advocating for a redefinition of work and purpose in a technologically advanced society [48], [49]. The traditional role of teachers might shift towards mentorship, ethical guidance, and emotional support, areas where human qualities are irreplaceable. The focus could be on developing students' emotional intelligence, creativity, and critical thinking, with AI providing informational and routine instructional support. The basic thought of transhumanism is offering the idea of immortality of knowledge [48]. In the view of transhumanists, transhumanism seeks to preserve and enhance human knowledge through digital means, potentially achieving a form of digital immortality. After the blossoming of AI, teachers' knowledge and expertise could be digitized and made accessible through AI, ensuring that valuable educational

content is preserved and continuously available. This could democratize access to high-quality education, transcending geographical and temporal limitations.

Mudarris, traditionally focused on instructional delivery and classroom management [23], faces a significant transformation in the age of AI. From a transhumanist perspective, AI offers tools that can augment Mudarris's capabilities, leading to a more efficient and personalized educational experience. The impact of AI in the role of Mudarris was mapped to three models: 1). Enhanced instructional delivery. AI can automate routine instructional tasks, allowing Mudarris to focus on more complex and creative aspects of teaching. AI-driven platforms can deliver lectures, manage administrative tasks, and provide real-time feedback on student performance. Furthermore, in the learning organizing context, the concept of flipped classrooms, which is offered by the implementation of AI, enables Mudarris to shift from traditional lecture-based instruction to interactive, discussion-based learning. This aligns with transhumanist ideals by leveraging technology to enhance cognitive engagement and critical thinking. 2). Personalized learning models. AI-driven adaptive learning systems can tailor educational content to individual student needs, ensuring that each learner receives personalized support. This personalized approach aligns with transhumanist goals of maximizing human potential through tailored educational experiences.

In relation to the viewpoint of transhumanism, this perspective highlights the ethical supervision of the educational process [46]. Transhumanism places importance on the ethical application of technology. Mudarris are essential in overseeing the ethical use of AI applications in education and ensuring they adhere to Islamic values, thus upholding the integrity of the educational process [50]. On the flip side, AI analytics offer Mudarris in-depth insights into how students learn, allowing them to modify teaching methods and provide specific interventions. This approach, which is driven by data, improves Mudarris's capability to effectively address a wide range of learning needs.

On the other hand, Mu'allim, traditionally seen as a transmitter of knowledge and a source of wisdom [51], [52], experiences a redefined role with the advent of AI. Viewed through a transhumanist lens, AI has the potential to improve Mu'allim's ability to spread knowledge and foster critical thinking. AI has the ability to automate how educational content is delivered, expanding access to knowledge for a wider range of people. This supports transhumanist objectives by making education more accessible and guaranteeing that top-notch information is accessible to everyone. This technology enhances transhumanist beliefs by improving the learning process and increasing intellectual development. These instruments improve critical thinking and intellectual involvement, essential elements of transhumanist educational ideas [49]. Otherwise, AI can assist Mu'allim in conducting research and staying updated with the latest developments in their field. This continuous professional development ensures that Mu'allim remains knowledgeable and effective in their teaching roles.

By looking at the existence of Murabbi from a transhumanist perspective, traditionally, Murabbi has been responsible for the moral and spiritual upbringing of students [2] and faces unique challenges and opportunities with the rise of AI. From a transhumanist perspective, AI can support Murabbi's role but cannot replace the human touch essential for spiritual and ethical development. The role of Murabbi and its shifting model on the use of AI changed the moral and spiritual development of the learning process. AI can be programmed with Islamic ethical frameworks to assist in teaching moral values. However, Murabbi's role in providing personalized spiritual guidance and mentorship remains irreplaceable [27], [53]. Transhumanism acknowledges the limitations of AI in replicating human empathy and moral reasoning. While these tools enhance accessibility, they cannot fully replicate the depth of personal interaction provided by a Murabbi.

The balance aligns with transhumanist ideals by integrating technology to enhance, rather than replace, human capabilities. At the same time, the AI-driven learning process can support the



emergence of emotional support, which is Murabbi's role in providing emotional support, and understanding remains critical. Transhumanism emphasizes the enhancement of human capacities, and Murabbi's empathetic guidance is essential for holistic development [42]. From a transhumanist perspective, the roles of the Mudarris, Mu'allim, and Murabbi in Islamic education are significantly transformed by the advent of AI. While AI offers powerful tools to enhance instructional delivery, personalized learning, and ethical guidance, the human elements of mentorship, moral development, and spiritual guidance remain irreplaceable [45], [49]. The difficulty is in finding a balance between incorporating technology and upholding human values and ethical factors, making sure that AI improves the educational process without sacrificing the overall growth of students.

To conclude this subchapter, the philosophical implication of transhumanism is a redefinition of education. Transhumanism suggests a fundamental rethinking of education, where traditional boundaries between human and machine intelligence blur. The teacher's role becomes more about guiding the integration of these technologies into human life in a meaningful and ethical manner [22], [31]. While some fear that AI might replace human teachers, the transhumanist perspective is more about augmentation—using AI to enhance human abilities rather than replace them entirely. Teachers, within a transhumanist framework, would serve as ethical stewards, ensuring that the implementation of AI in education adheres to ethical standards and promotes human flourishing [50], [54]. From a transhumanist perspective, the existence and role of teachers in the age of AI are not diminished but transformed. Teachers are seen as augmented by AI, enabling them to focus on the uniquely human aspects of education—emotional support, ethical guidance, and the nurturing of creativity and critical thinking. This perspective envisions a synergistic relationship between human educators and AI, where both work together to enhance the educational experience and address the ethical challenges posed by advanced technologies.

3.3. The Shifting role of AI impact: Diffusion of Innovation Theory's Perspective

Historically, The Diffusion of Innovation (DOI) theory, developed by Everett Rogers in 1962, explains how, why, and at what rate new ideas and technology spread through cultures [55]. According to Rogers, diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system [56], [57]. It identifies stages of adoption and factors influencing individuals' acceptance and implementation of innovations. This theory is concerned with the concept of innovation as an idea, practice, or object perceived as new by an individual or other unit of adoption. The ideas are not only static in the minds but also transmitted through communication. The means by which information about the innovation is transmitted. Rogers also identifies five stages in the adoption process: knowledge, persuasion, decision, implementation, and confirmation [58], [59]. In the first stage, the individual becomes aware of the innovation and has some idea of how it functions. It is included in the positions of Muallim, Mudarris, and Murabbi. Also, they engage and put the innovation into activities that lead to a choice to adopt or reject the innovation. The individual seeks reinforcement for the innovation-decision and may reverse this decision if exposed to conflicting messages.

In the context of Islamic education, the adoption of AI technologies can be analyzed using the DOI theory to understand how AI is influencing the roles of Mu'allim, Mudarris, and Murabbi. The adoption of AI in these roles can be viewed as an innovation spreading through the educational community. The DOI theory provides a comprehensive framework to analyze the shifting roles of Mu'allim, Mudarris, and Murabbi in the context of AI integration in Islamic education.



Table 1. Diffusion of Innovation Theory's Perspective and the Shifting of Muallim, Mudarris, and Murabby

Stage	Muallim	Mudarris	Murabby
Knowledge	Awareness of AI-driven	Learning about AI	Understanding AI
Stage	educational tools that can aid in knowledge transmission. These might include AI-powered lecture capture systems, automated grading, and content recommendation systems.	technologies that can assist in instructional delivery, such as adaptive learning platforms and intelligent tutoring systems.	applications in ethical and moral education, including AI-driven mentoring systems and virtual ethics guides.
Persuasion Stage	Developing a favorable attitude towards AI tools that can enhance the effectiveness and reach of knowledge dissemination	Forming positive perceptions of AI technologies that can streamline administrative tasks, allowing for more focus on interactive and personalized teaching	Recognizing the potential benefits of AI in providing supplementary moral and spiritual guidance while maintaining personal mentorship
Decision Stage	Deciding to integrate AI tools into their teaching practices to augment traditional methods and improve student engagement.	Choosing to adopt AI- driven instructional aids and classroom management tools to enhance teaching efficiency and effectiveness.	Opting to use AI as a complementary tool for ethical and spiritual education, ensuring it aligns with Islamic values.
Implementation Stage	Utilizing AI-powered platforms to deliver lectures, provide automated feedback, and track student progress.	Implementing AI technologies in daily teaching routines, such as using adaptive learning systems to personalize instruction and interactive AI tools to facilitate classroom discussions.	Integrating AI-driven mentoring systems to provide additional moral support and guidance while continuing to offer personalized mentorship.
Confirmation Stage	Seeking reinforcement of the decision to use AI tools by evaluating their impact on knowledge transmission and student learning outcomes.	Confirming the effectiveness of AI integration by assessing improvements in instructional delivery, classroom management, and student performance.	Validating the use of AI in moral and spiritual education by ensuring it enhances, rather than replaces, personal mentorship and aligns with ethical standards.

Emerging roles of Mu'allim through transitioning from a sole transmitter of knowledge to a facilitator of AI-enhanced learning experiences, using AI to provide personalized and adaptive content [60], [61]. Related to Mudarris 's existence, evolving from a traditional instructor to an AI-augmented educator, leveraging AI for personalized instruction, interactive learning, and efficient



classroom management. In the context of Murabbi, shifting from a purely human mentor to an AI-supported moral guide, integrating AI tools to supplement ethical and spiritual guidance while maintaining a personal touch. Through analyzing the adoption phases and factors impacting AI technology diffusion, we can see how these roles are changing and identify new opportunities and responsibilities that are arising. This examination emphasizes the need to maintain a balance between technological progress and upholding traditional and ethical principles. It is vital that AI is utilized to support, rather than replace, the crucial duties of Islamic educators.

4. Conclusion

This study examines how Artificial Intelligence (AI) affects Islamic religious education, with a specific focus on the changing responsibilities of the Mu'allim, Mudarris, and Murabbi through the lenses of transhumanism and diffusion of innovation theory. From the perspective of transhumanism, these concepts are demonstrated through the delegation of routine duties to automation and the delivery of personalized educational encounters, enabling a greater emphasis on critical reasoning and cognitive growth. In the meantime, as per diffusion of innovation theory, the integration of AI in Islamic education progresses through phases of awareness, convincing, choosing, applying, and verifying, with educators at varying levels based on their openness to new technologies. Incorporating AI creates novel positions and duties for Islamic educators, such as AI-enhanced mentors, ethical supervisors, and promoters of digital literacy. Understanding the changing nature of teaching, mentoring, and information transmission in Islamic contexts is made possible by the study's unique theoretical framework, which integrates the viewpoints of transhumanism and diffusion of innovation theory.

Despite the comprehensive analysis, the study has several limitations in scope, cultural constraints, and technological variability. The research focuses primarily on theoretical perspectives and lacks empirical data from actual implementations of AI in Islamic educational settings. The findings may not be universally applicable across different Islamic educational institutions with varying cultural and regional contexts. Furthermore, rapid advancements in AI technology mean that the study may not capture the most recent developments and their impacts on education.

To build on the findings of this study, future research could explore empirical studies and cross-cultural analysis. Conducting empirical research involving case studies, surveys, and interviews with educators and students to gather real-world data on the impact of AI in Islamic education, as well as investigating how AI integration in Islamic education varies across different cultural and regional contexts and identify best practices and challenges unique to each setting. This research offers significant contributions to both society and theoretical discussions. It emphasizes the changing responsibilities of Islamic teachers in the era of AI, emphasizing the importance of ongoing professional growth and ethical education to successfully incorporate AI while upholding Islamic principles. Simultaneously, merging transhumanism with the diffusion of innovation theory creates a strong foundation for comprehending the intricate dynamics of AI implementation in education, providing useful insights for upcoming theoretical studies. To sum up, the influence of AI on Islamic religious education results in a substantial change in the duties and functions of educators. Through the perspectives of transhumanism and diffusion of innovation theory, we can effectively address the challenges and opportunities of AI in education within the framework of Islamic pedagogy.

Author Contribution: Titis Thoriquityas contributed to the design and implementation of the research, as well as to the analysis of the results and to the writing of the manuscript. Titis developed the theoretical framework. In addition, Nita Rohmawati was involved in supervising the work. Nita performed the analysis, drafted the manuscript, and designed the figures. Nita aided in interpreting the results and worked on the manuscript. All authors discussed the results and commented on the manuscript.

Acknowledgment: The authors would like to thank the Turkish Government for the Türkiye Burslari Scholarship that allowed Titis to pursue a PhD program at the Institute for Social Sciences, Marmara University, Istanbul Türkiye in 2022, and the State University of Malang for institutional and funding support.

Conflicts of Interest: The authors declare no conflict of interest.



References

- [1] I. Aisah and H. Permana, "Integrating Professional Teachers in The Transition of The New Habits Through Professional Teacher Competency Training Karawang District," *Nazhruna J. Pendidik. Islam*, vol. 5, no. 1, pp. 293–301, 2022, doi: https://doi.org/10.31538/nzh.v5i1.2094.
- [2] I. F. Kasmar *et al.*, "The Concepts of Mudarris, Mu'allim, Murabbi, Mursyid, Muaddib in Islamic Education," *Khalifa J. Islam. Educ.*, vol. 3, no. 2, pp. 107–125, 2019, [Online]. Available: https://d1wqtxts1xzle7.cloudfront.net/90413609/pdf-libre.pdf?1661780072=&response-content-disposition=inline%3B+filename%3DThe_Concepts_of_Mudarris_Muallim_Murabbi.pdf&Expire s=1729586315&Signature=Fb9n6pAZopMGonWZEqM0RRlcQVIPJ7gRUAtm4y0LaoBk0A0kKo BIBGaFKK
- [3] A. Mamat and W. N. W. Abdullah, "Konsep Mudarris dalam Amalan Pengajaran Guru Pendidikan Islam Prasekolah [The Concept of Mudarris in the Teaching Practices of Islamic Education Teachers in Preschool]," in *Prosiding Kolokium Siswazah Pengajian Islam (KASPI) 2014: Memartabatkan Penyelidikan Pengajian Islam*, 2014, pp. 28–37, (in Malaysian). [Online]. Available: http://eprints.unwahas.ac.id/1626/1/Prosiding Seminar Internasional di Malaysia ber ISBN (baca httpmudzakkiraliunwahas.blogspot.co.idpkategori.html).pdf#page=40
- [4] M. S. Burdett, "The Religion of Technology: Transhumanism and the Myth of Progress," in *Religion and Transhumanism: The Unknown Future of Human Enhancement*, London: Bloomsbury Publishing, 2015, pp. 131–147. [Online]. Available: https://www.torrossa.com/en/resources/an/5531161#page=146
- [5] H. A. Campbell and G. Evolvi, "Contextualizing Current Digital Religion Research on Emerging Technologies," *Hum. Behav. Emerg. Technol.*, vol. 2, no. 1, pp. 5–17, 2020, doi: https://doi.org/10.1002/hbe2.149.
- [6] M. Chassignol, A. Khoroshavin, A. Klimova, and A. Bilyatdinova, "Artificial Intelligence Trends in Education: a Narrative Overview," *Procedia Comput. Sci.*, vol. 136, pp. 16–24, 2018, doi: https://doi.org/10.1016/j.procs.2018.08.233.
- [7] M. A. Chaudhry and E. Kazim, "Artificial Intelligence in Education (AIEd): A High-level Academic and Industry Note 2021," *AI Ethics*, vol. 2, no. 1, pp. 157–165, 2022, doi: https://doi.org/10.1007/s43681-021-00074-z.
- [8] L. Chen, P. Chen, and Z. Lin, "Artificial Intelligence in Education: A Review," *Ieee Access*, vol. 8, no. April, pp. 75264–75278, 2020, doi: https://doi.org/10.1109/ACCESS.2020.2988510.
- [9] C. Zhang and Y. Lu, "Study on Artificial Intelligence: The State of the Art and Future Prospects," *J. Ind. Inf. Integr.*, vol. 23, no. September, pp. 1–9, 2021, doi: https://doi.org/10.1016/j.jii.2021.100224.
- [10] M. Shidiq, "The Use of Artificial Intelligence-based Chat-gpt and its Challenges for the World of Education: From the Viewpoint of the Development of Creative Writing Skills," in *Proceeding of international conference on education, society and humanity*, 2023, pp. 353–357. [Online]. Available: https://ejournal.unuja.ac.id/index.php/icesh/article/view/5614
- [11] F. Ouyang, L. Zheng, and P. Jiao, "Artificial Intelligence in Online Higher Education: A Systematic Review of Eempirical Research from 2011 to 2020," *Educ. Inf. Technol.*, vol. 27, no. 6, pp. 7893–7925, 2022, [Online]. Available: https://link.springer.com/article/10.1007/s10639-022-10925-9
- [12] M. Fahimirad and S. S. Kotamjani, "A Review on Application of Artificial Intelligence in Teaching and Learning in Educational Contexts," *Int. J. Learn. Dev.*, vol. 8, no. 4, pp. 106–118, 2018, doi: https://doi.org/10.5296/ijld.v8i4.14057.
- [13] S. N. Khan, "Qualitative Research Method: Grounded Theory," *Int. J. Bus. Manag.*, vol. 9, no. 11, pp. 224–233, 2014, doi: http://dx.doi.org/10.5539/ijbm.v9n11p224.
- [14] S. N. Khan, "Qualitative Research Method Phenomenology," *Asian Soc. Sci.*, vol. 10, no. 21, pp. 298–310, 2014, doi: http://dx.doi.org/10.5539/ass.v10n21p298.



- [15] S. Tenny, J. M. Brannan, and G. D. Brannan, *Qualitative Study*. 2017. [Online]. Available: https://www.ncbi.nlm.nih.gov/books/NBK470395/
- [16] K. Nielsen *et al.*, "The Art of Preceptorship: A Qualitative Study," *Nurse Educ. Pract.*, vol. 26, no. September, pp. 39–45, 2017, doi: https://doi.org/10.1016/j.nepr.2017.06.009.
- [17] S. R. Shrivastava, P. S. Shrivastava, and J. Ramasamy, "Force Field Analysis: An Effective Tool in Qualitative Research," *J. Curr. Res. Sci. Med.*, vol. 3, no. 2, pp. 139–140, 2017, doi: https://doi.org/10.4103/jcrsm.jcrsm_55_17.
- [18] T. L. Haven and D. L. Van Grootel, "Preregistering Qualitative Research," *Account. Res.*, vol. 26, no. 3, pp. 229–244, 2019, doi: https://doi.org/10.1080/08989621.2019.1580147.
- [19] S. R. M. Arifin, "Ethical Considerations in Qualitative Study," *Int. J. care Sch.*, vol. 1, no. 2, pp. 30–33, 2018, doi: https://doi.org/10.31436/ijcs.v1i2.82.
- [20] D. Winarti and D. Khusnah, "Keistimewaan Pendidikan Islam Dan Tipologi Pendidik Ideal Dalam Al-Quran Dan Hadis [The Uniqueness of Islamic Education and the Typology of the Ideal Educator in the Quran and Hadith]," *Piwulang J. Pendidik. Agama Islam*, vol. 4, no. 1, pp. 1–23, (In Indonesia), 2021, doi: https://doi.org/10.32478/piwulang.v4i1.671.
- [21] M. Masrur, "Figur Kyai dan Pendidikan Karakter di Pondok Pesantren [The Figure of the Kyai and Character Education in Islamic Boarding Schools (Pondok Pesantren)]," *Tarb. J. Ilm. Pendidik.*, vol. 1, no. 01, pp. 272–282, (in Indonesia), 2018, doi: https://doi.org/10.32332/tarbawiyah.v1i01.1022.
- [22] M. Shobahiya, "Studi Komparatif Profil Guru Pendidikan Agama Islam Dalam Perspektif Hasan Langgulung Dan Syed Muhammad Naquib Al-Attas [Comparative Study of the Profile of Islamic Religious Education Teachers from the Perspectives of Hasan Langgulung and Syed Muhammad N," *Suhuf Int. J. Islam. Stud.*, vol. 29, no. 1, pp. 38–49, (in Indonesia), 2017, doi: https://doi.org/10.23917/suhuf.v29i1.5086.
- [23] W. A. A. W. Abdullah, K. A. Razak, and M. I. Hamzah, "Model Guru Pendidikan Islam Komprehensif [Comprehensive Islamic Education Teacher Model]," *Asean Comp. Educ. Res. J. Islam Civiliz.*, vol. 4, no. 1, pp. 63–74, (in Indonesia), 2021, [Online]. Available: https://spaj.ukm.my/acerj/index.php/acer-j/article/view/64
- [24] C. Amelia, A. Aprilianto, D. Supriatna, I. Rusydi, and N. E. Zahari, "The Principal's Role as Education Supervisor in Improving Teacher Professionalism," *Nidhomul Haq J. Manaj. Pendidik. Islam*, vol. 7, no. 1, pp. 144–155, 2022, doi: https://doi.org/10.31538/ndh.v7i1.2075.
- [25] S. Hanafy, "Pemikiran Pendidikan Islam pada Era Kontemporer [Islamic Educational Thought in the Contemporary Era]," *Tasamuh J. Stud. Islam*, vol. 10, no. 1, pp. 79–91, (in Indonesia), 2018, doi: https://doi.org/10.47945/tasamuh.v10i1.66.
- [26] F. Fithriani, "Implementasi Filsafat Pendidikan Terhadap Komponen Pendidikan Islam [The Implementation of Educational Philosophy on the Components of Islamic Education]," *Intelektualita*, vol. 4, no. 2, pp. 72–86, (in Indonesia), 2018, doi: http://dx.doi.org/10.22373/ji.v4i2.4138.
- [27] Y. M. Fauzin, S. Hidayat, and M. A. Muthoifin, "Konsep Guru dan Murid dalam Surat al-Kahfi Ayat 65-78 Perspektif Tafsir at-Thabari dan Tafsir al-Maraghi [The Concept of Teacher and Student in Surah Al-Kahf, Verses 65-78 from the Perspective of Tafsir At-Thabari and Tafsir Al-Maraghi]," Universitas Muhammadiyah Surakarta, 2023. [Online]. Available: http://eprints.ums.ac.id/id/eprint/118971
- [28] V. Nita and A. F. As'ad Badar, "Konsep Guru dalam Pandangan Ki Hajar Dewantara dan dari Perspektif Pendidikan Islam [The Concept of Teachers in the View of Ki Hajar Dewantara and from the Perspective of Islamic Education]," *Abil. J. Educ. Soc. Anal.*, vol. 4, no. 1, pp. 170–180, (in Indonesian), 2023, doi: https://doi.org/10.51178/jesa.v4i1.1156.
- [29] H. Z. Muchtarom, Filsafat Pendidikan Islam. Jakarta, 1992.
- [30] P. Buldan, "Peran Pendidik di Madrasyah Menurut Prespektif Pendidikan Islam [The Role of Educators in Madrasahs According to the Perspective of Islamic Education]," in *International Education Conference (IEC) FITK*, 2021, pp. 76–83, (in Indoneisan). [Online]. Available:



- https://proceedings.radenfatah.ac.id/index.php/iec/article/view/12
- [31] A. Shafrianto, "Epistemologi Pendidik dalam Pendidikan Islam [The Epistemology of Educators in Islamic Education]," *Raudhah Proud To Be Prof. J. Tarb. Islam.*, vol. 9, no. 1, pp. 218–225, (in Indonesian), 2024, doi: https://doi.org/10.48094/raudhah.v9i1.652.
- [32] M. Mustafa, "Filsafat Pendidikan Islam: Telaah Epistimologi Ilmu [Islamic Educational Philosophy: An Epistemological Study of Knowledge]," *J. Ilm. Iqra*', vol. 3, no. 1, pp. 81–87, (in Indonesian), 2018, doi: https://dx.doi.org/10.30984/jii.v3i1.551.
- [33] I. Siregar, "Hakikat Pendidik Menurut Hadis Nabi [The Essence of Educators According to the Hadith of the Prophet]," *Khazanah J. Islam. Stud.*, vol. 1, no. 4, pp. 1–14, (in Indonesian), 2022, [Online]. Available: https://pusdikra-publishing.com/index.php/jelr/article/view/968
- [34] M. Maisyaroh, "Hakikat Pendidik dalam Perspektif Falsafah Pendidikan Islami [The Essence of Educators in the Perspective of Islamic Educational Philosophy]," *J. Pendidik. Agama Islam Al-Thariqah*, vol. 4, no. 2, pp. 1–9, (in Indonesian), 2019, doi: https://doi.org/10.25299/althariqah.2019.vol4(2).4079.
- [35] E. D. Pulungan, "Hakikat Pendidik dalam Perspektif Filsafat Pendidikan Islam [The Essence of Educators in the Perspective of Islamic Educational Philosophy]," *B. Chapter Proc. Journey-Liaison Acad. Soc.*, vol. 2, no. 1, pp. 62–76, (in Indonesia), 2023, [Online]. Available: https://j-las.lemkomindo.org/index.php/BCoPJ-LAS/article/view/633
- [36] K. Iskandar, "Profesionalisme Guru dalam Pendidikan Islam dan Gambaran Ideal Seorang Pendidik [Teacher Professionalism in Islamic Education and the Ideal Image of an Educator]," *JALIE J. Appl. Linguist. Islam. Educ.*, vol. 1, no. 1, pp. 21–40, (in Indonesia), 2017, doi: https://doi.org/10.33754/jalie.v1i1.82.
- [37] A. Aziz, "Pendidik Profesional yang Berjiwa Islami [A Professional Educator with an Islamic Spirit]," *Pancawahana J. Stud. Islam*, vol. 10, no. 1, pp. 56–58, (in Indonesia), 2015, [Online]. Available: https://ejournal.kopertais4.or.id/tapalkuda/index.php/pwahana/article/view/1147
- [38] M. S. Amirrudin, "The Qur'an's Ideal Teacher Profile," *AT-TAKILLAH J. Pendidik. dan Keislam.*, vol. 1, no. 1, pp. 12–17, 2023, [Online]. Available: https://jurnal.rahiscendekiaindonesia.co.id/index.php/attakillah/article/view/29
- [39] A. Arifuddin, "Konsep Pendidikan Profetik (Melacak Visi Kenabian Dalam Pendidikan) [The Concept of Prophetic Education (Tracing the Prophetic Vision in Education)]," *J. MUDARRISUNA Media Kaji. Pendidik. Agama Islam*, vol. 9, no. 2, pp. 319–338, (in Indonesia), 2019, doi: http://dx.doi.org/10.22373/jm.v9i2.4782.
- [40] A. H. I. Alawi, "Pendidikan Penguatan Karakter Melalui Pembiasaan Akhlak Mulia [Character Strengthening Education Through the Practice of Noble Morals]," *Qiro'ah J. Pendidik. Agama Islam*, vol. 9, no. 1, pp. 16–29, (in Indonesia), 2019, doi: https://doi.org/10.33511/qiroah.v9n1.16-29.
- [41] J. Huxley, "Transhumanism," *ETHICS Prog.*, vol. 6, no. 1, pp. 12–16, 2015, doi: https://doi.org/10.14746/eip.2015.1.2.
- [42] J. Cordeiro, "The Boundaries of the Human: From Humanism to Transhumanism," *World Futur. Rev.*, vol. 6, no. 3, pp. 231–239, 2014, doi: https://doi.org/10.1177/1946756714555916.
- [43] J. H. Evans, "Faith in Science in Global Perspective: Implications for Transhumanism," *Public Underst. Sci.*, vol. 23, no. 7, pp. 814–832, 2014, doi: https://doi.org/10.1177/0963662514523712.
- [44] J. Guerreiro, S. M. C. Loureiro, J. Romero, O. Itani, and S. Eloy, "Transhumanism and Engagement-Facilitating Technologies in Society," *J. Promot. Manag.*, vol. 28, no. 5, pp. 537–558, 2022, doi: https://doi.org/10.1080/10496491.2021.2009615.
- [45] R. Ranisch, *Post-and Transhumanism: An Introduction*. Bern: Peter Lang, 2014. [Online]. Available: https://philpapers.org/rec/RANPAT-15
- [46] A. Porter, "Bioethics and Transhumanism," *J. Med. Philos.*, vol. 42, no. 3, pp. 237–260, 2017, doi: https://doi.org/10.1093/jmp/jhx001.



- [47] J. Thompson, "Transhumanism: How far is too far?," *New Bioeth.*, vol. 23, no. 2, pp. 165–182, 2017, doi: https://doi.org/10.1080/20502877.2017.1345092.
- [48] N. Vita-More, "History of Transhumanism," in *The Transhumanism Handbook*, Springer, 2019, pp. 49–61. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-030-16920-6_2
- [49] H. Tirosh-Samuelson, "Technologizing Transcendence: A Critique of Transhumanism," in *Religion and Human Enhancement*, Springer, 2017, pp. 267–283. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-319-62488-4_16
- [50] R. M. Amin, "Guru dalam Perspektif Islam [Teachers in the Islamic Perspective]," *Bacaka J. Pendidik. Agama Islam*, vol. 1, no. 1, pp. 88–95, (in Indonesia), 2021, [Online]. Available: https://www.ejournal-bacaka.org/index.php/jpai/article/view/24
- [51] D. W. Anggraeni, "Kompetensi Kepribadian Guru Menurut Peserta Didik dalam Kitab Ta'lîmul Muta'allim karya Syech Az-Zarnuji [The Teacher's Personal Competence According to Students in the Book Ta'lîmul Muta'allim by Shaykh Az-Zarnuji]," Universitas Islam Negeri Maulana Malik Ibrahim, 2019. [Online]. Available: http://etheses.uin-malang.ac.id/id/eprint/14752
- [52] I. Askhabi, "Etika Murid Terhadap Guru Menurut Kitab Ta'lim al-Muta'allim Karya Syaikh Az-Zarnuji [The Ethics of Students Toward Teachers According to the Book Ta'lim al-Muta'allim by Shaykh Az-Zarnuji]," IAIN Purwokerto, 2019. [Online]. Available: https://eprints.uinsaizu.ac.id/5226/1/COVER_BAB I_BAB V_DAFTAR PUSTAKA.pdf
- [53] N. E. M. Noor, T. S. A. T. Kasim, and Y. M. Yusoff, "Peranan Guru dalam Pelaksanaan E-Pembelajaran Pendidikan Islam Menurut Perspektif Al-Ghazali [The Role of Teachers in the Implementation of E-Learning in Islamic Education According to Al-Ghazali's Perspective]," *J. Islam. Educ. Res.*, vol. 6, pp. 52–63, (in Indonesia), 2021, doi: https://doi.org/10.22452/jier.vol6no2021.4.
- [54] Z. M. Nawi, "Peranan Guru Pendidikan Islam dalam Membawa Transformasi Terhadap Mobility Sosial dalam Masyarakat [The Role of Islamic Education Teachers in Bringing Transformation to Social Mobility in Society]," *J. Islam dan Masy. Kontemporari*, vol. 21, no. 3, pp. 178–188, (in Indonesian), 2020, doi: https://doi.org/10.37231/jimk.2020.21.
- [55] R. L. Miller, "Rogers' Innovation Diffusion Theory (1962, 1995)," in *Information Seeking Behavior and Technology Adoption: Theories and Trends*, IGI Global, 2015, pp. 261–274. doi: https://doi.org/10.4018/978-1-4666-8156-9.ch016.
- [56] F. S. Berry and W. D. Berry, "Innovation and Diffusion Models in Policy Research," in *Theories of the Policy Process*, 4th ed., Routledge, 2018, pp. 253–297. [Online]. Available: https://www.taylorfrancis.com/chapters/edit/10.4324/9780429494284-8/innovation-diffusion-models-policy-research-frances-stokes-berry-william-berry
- [57] J. W. Dearing and J. G. Cox, "Diffusion of Innovations Theory, Principles, and Practice," *Health Aff.*, vol. 37, no. 2, pp. 183–190, 2018, doi: https://doi.org/10.1377/hlthaff.2017.1104.
- [58] E. Karakaya, A. Hidalgo, and C. Nuur, "Diffusion of Eco-innovations: A Review," *Renew. Sustain. Energy Rev.*, vol. 33, no. May, pp. 392–399, 2014, doi: https://doi.org/10.1016/j.rser.2014.01.083.
- [59] E. M. Rogers, A. Singhal, and M. M. Quinlan, "Diffusion of Innovations," in *An Integrated Approach to Communication Theory and Research*, Routledge, 2014, pp. 432–448. [Online]. Available: https://www.taylorfrancis.com/chapters/edit/10.4324/9780203887011-36/diffusion-innovations-everett-rogers-arvind-singhal-margaret-quinlan
- [60] S. L. Vargo, M. A. Akaka, and H. Wieland, "Rethinking the Process of Diffusion in Innovation: A Service-Ecosystems and Institutional Perspective," *J. Bus. Res.*, vol. 116, no. August, pp. 526–534, 2020, doi: https://doi.org/10.1016/j.jbusres.2020.01.038.
- [61] G. Zanello, X. Fu, P. Mohnen, and M. Ventresca, "The Creation and Diffusion of Innovation in Developing Countries: A Systematic Literature Review," *J. Econ. Surv.*, vol. 30, no. 5, pp. 884–912, 2016, doi: https://doi.org/10.1111/joes.12126.