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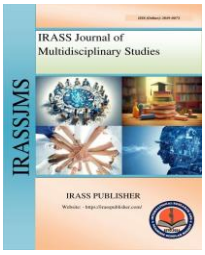

ATTITUDES OF RELIGIOUS CULTURE AND MORAL KNOWLEDGE (DKAB) TEACHERS TOWARDS ARTIFICIAL INTELLIGENCE (AI)

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Abstract: Artificial Intelligence (AI) has the potential to enhance student achievement and learning efficiency while alleviating teachers' workload by providing personalized learning experiences in education. By offering content tailored to students' individual learning speeds and needs, AI can make education more effective. The integration of AI into Religious Culture and Moral Knowledge (DKAB) courses can help students gain a deeper understanding of religious and moral values, as well as increase their awareness of different cultures and belief systems. Moreover, interactive and digital learning tools can contribute to students' ability to think more critically and analytically about ethical and spiritual issues. This study examines the attitudes of 150 DKAB teachers working in public schools in İzmir toward the use of AI. The results reveal that individuals' attitudes towards AI are associated with factors such as education level, age, and seniority. The AI Engagement dimension exhibits a positive correlation with education level (0.217), while age (-0.176) and seniority (-0.153) are negatively correlated, indicating that interest in AI decreases as these factors increase. In the Resistance to AI dimension, resistance increases with age (0.231) and seniority (0.198), whereas a negative correlation with education level (-0.289) suggests that resistance to AI declines as education level rises. The AI Adoption dimension shows a positive correlation with education level (0.312), indicating that individuals with higher education levels find AI more useful and engaging. However, as age (-0.204) and seniority (-0.176) increase, the tendency to adopt AI decreases. The study also found no significant impact of gender and school type on attitudes toward AI.

Keywords: Artificial Intelligence, AI in Education, DKAB, Teacher Attitudes.

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Introduction

The use of Artificial Intelligence (AI) technologies in education is becoming increasingly widespread and significantly impacting teaching processes. Religious Culture and Moral Knowledge (DKAB) courses are a vital area of education that aims to support students' moral development and instill spiritual and ethical values. AI-supported teaching tools have great potential in fostering student-centered learning and offering personalized learning experiences. However, there is limited research on DKAB teachers' attitudes toward AI technologies and how they integrate these technologies into their lessons. This study aims to identify DKAB teachers' attitudes toward AI, their resistance to its use, and their levels of adoption of AI, while also examining the relationship between these attitudes and demographic variables. By analyzing three primary dimensions—engagement with AI, resistance to AI, and adoption of AI—this study seeks to uncover how DKAB teachers perceive AI technologies and to what extent they are willing to use them in their teaching practices. AI is defined as computer systems that mimic human intelligence and perform cognitive functions such as learning, perception, and decision-making. This technology incorporates fields like machine learning and natural language processing, encompassing numerous capabilities. The use of AI in education allows for personalized learning experiences by providing solutions tailored to students' individual learning speeds. Furthermore, the integration of AI into DKAB courses can contribute to students' deeper understanding of religious and moral values, enhancing their awareness of different religions and cultures, and facilitating more comprehensive discussions on ethical issues. In this context, the integration of AI into DKAB courses has the potential to improve learning experiences, increase awareness of diverse religions and cultures, and encourage more critical and analytical engagement with ethical debates. However, for this process to be successfully implemented, enhancing teachers' digital literacy, improving technical infrastructure, and addressing ethical concerns are crucial. This study aims to examine these factors in detail and to explore the role and potential impact of AI in the field of education.

Artificial Intelligence

Intelligence is a distinguishing feature of living beings and is a multidimensional concept that includes abilities such as acquiring and processing environmental information, problem-solving, and learning (İnci, 2021). Ibn Sina defines intelligence as the capacity to learn sensory information received from the external world (Gürel & Tat, 2010). Similarly, the Turkish Intelligence Foundation describes intelligence as the ability to establish relationships between concrete and abstract phenomena through concepts and perceptions, draw conclusions, make evaluations, and conduct analyses. This process requires the execution of cognitive functions toward a specific goal (Türkiye Zekâ Vakfı, 2022).

Spearman (1902), Thurstone (1938), Sternberg (1986), and Atkinson et al. (1995) regard intelligence as a combination of innate abilities that are transmitted genetically across generations and associated with complex neural functions. This composition is further shaped by learning, experience, and environmental interactions, constituting the sum of various skills applied in different situations and conditions. Piaget (1959), a pioneer of cognitive theory, asserts that the ultimate goal of every activity is to achieve equilibrium. He defines intelligence as the mechanism that maintains balance in an organism's interaction with its environment, functioning through processes of assimilation and accommodation.

Howard Gardner introduced the Theory of Multiple Intelligences, classifying intelligence into eight distinct categories: logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal, intrapersonal, naturalist, and verbal intelligence (Gardner, 1999).

When examined from different perspectives, intelligence is a multidimensional phenomenon encompassing biological, psychological, and sociological aspects. Biologically, intelligence is linked to the structure of the nervous system and is shaped by the interaction between genetic and environmental factors (Uzunöz & Akbaş, 2011; Engin et al., 2008). Psychologically, intelligence represents individuals' capacity for problem-solving and information acquisition, often explained through frameworks such as the multiple intelligences theory (İnci, 2021; Elmas, 2018). From a sociological perspective, intelligence is interpreted as the ability of individuals to interact with their social environment and adapt to societal norms (Çuhadar, 2017; Çakar & Arbak, 2004). This comprehensive understanding of intelligence enables individuals to access and process information, adapt to their surroundings, and plays a crucial role in their developmental processes.

Artificial Intelligence (AI), on the other hand, refers to computer systems that can perform cognitive functions such as information processing, learning, perception, and decision-making in a manner similar to human intelligence (Johnson et al., 2018). AI was first defined at the Dartmouth Conference in 1956, with the term coined by John McCarthy (Yıldız & Yıldırım, 2018). AI is a technology designed to analyze intelligence-related behaviors observed in humans and animals and mimic these behaviors through machines (Aykın et al., 2023). It enables machines to adapt to new situations, solve problems, process complex data, and perform tasks that typically require human intelligence (Korteling at all, 2021). Moreover, AI allows machines to learn from experiences and imitate human intelligence, aiming to simplify human life and undertake more complex tasks (Machado vd. 2025). Although AI has not yet reached the stage of fully replicating human intelligence, it continues to evolve through learning algorithms (Abonamah et al., 2021). However, current AI technologies are limited in performing emotional and creative functions and primarily focus on rational decision-making processes (Ergen, 2019).

AI operates through techniques such as machine learning, deep learning, natural language processing, and data analytics. These systems are widely implemented in customer service, marketing, healthcare, finance, logistics, education, and automation (Hmoud & Laszlo, 2019). Advanced AI systems possess the capability to interpret complex and unstructured data, make autonomous decisions, and manage their own processes without human intervention (Hwang et al., 2020). Table 1 presents the differences between human intelligence and artificial intelligence.

Table 1. Differences Between Human Intelligence and Artificial Intelligence

Criteria	Human Intelligence	Artificial Intelligence (AI)	Sources
Definition	Based on biological foundations, including consciousness, creativity, and emotions.	Limited to mathematical and algorithmic processes; lacks consciousness.	Zohuri & Rahmani, 2020; Pelaccia et al., 2019; Coşkun & Gülleroğlu, 2021
Problem-Solving	Capable of complex, intuitive, and creative problem-solving.	Solves problems within predefined rules and programmed algorithms.	Korteling et al., 2021; Chen & Burgess, 2019
Emotional Intelligence	Can empathize and make decisions within an emotional context.	Lacks emotional intelligence and consciousness but can imitate human emotions.	Pelaccia et al., 2019; Arslan, 2020
Learning Ability	Learns from experiences and can generalize knowledge.	Conducts data-based learning with limited generalization capacity.	Simon, 1981; Dong et al., 2020
Adaptability	Quickly adapts to new situations.	Adaptation is limited to programmed parameters.	Griffiths, 2020; Pirim, 2006
Creativity	Develops innovative ideas and solutions.	Can generate content based on existing data but lacks true originality.	Norman, 1991; Coşkun & Gülleroğlu, 2021
Data Processing Capacity	Slower but capable of handling more complex processes.	Can process large amounts of data rapidly.	Sternberg, 1983; Zohuri & Rahmani, 2020
Consciousness	Self-aware and possesses consciousness.	Lacks consciousness but can simulate conscious behavior.	Simon, 1981; Spector & Ma, 2019
Error Management	Can learn from mistakes and correct errors.	Prone to repeating mistakes; corrections require human intervention.	Korteling et al., 2021; Arslan, 2020

Ethics and Values	Makes decisions based on moral judgments and ethical principles.	Can be constrained by ethical codes but does not possess intrinsic ethical understanding.	Dong et al., 2020; Pirim, 2006

According to a study conducted by the World Economic Forum (Table 2), the adoption rates of artificial intelligence (AI) and automation vary significantly across different industries. Sectors focused on digital transformation, such as electronics, information and technology services, insurance, media, and entertainment, rank at the top with a priority usage rate of 90%–100%. These are followed by industries like energy, automotive, financial services, and business management, where AI adoption rates range between 80%–90%. In technology-intensive and infrastructure-heavy sectors such as healthcare, telecommunications, and infrastructure, AI usage rates are observed at approximately 70%–80%. Lower adoption rates (60%–70%) are seen in traditional industries such as agriculture, the public sector, and retail. The lowest AI adoption rates (50%–60%) are found in sectors like hospitality, real estate, and recreation. These findings suggest that the pace of digitalization varies across industries, with some sectors leading the way in AI adaptation while others progress more slowly (WEF, 2023).

Table 2. AI and Automation Adoption: Industries and Rates (2023-2027)

Adoption Rate (%)	Industries
90% - 100%	Electronics, Information and Technology Services, Insurance and Pension Management, Media, Entertainment, and Sports
80% - 90%	Energy Technologies and Tools, Automotive and Aerospace, Financial Services and Capital Markets, Research Design and Business Management Services, Business Support and Facility Maintenance Services
70% - 80%	Medical and Healthcare Services, Telecommunications, Chemicals and Advanced Materials, Infrastructure, Advanced Manufacturing
60% - 70%	Government and Public Sector, Agriculture, Forestry, and Livestock, Consumer Goods Manufacturing, Supply Chain and Transportation, Consumer Goods Retail and Wholesale
50% - 60%	Hospitality, Food, and Entertainment, Real Estate

Soruce: WEF, 2023

Artificial Intelligence (AI) is a rapidly expanding technology that is driving revolutionary changes across various sectors. From healthcare and education to manufacturing, financial analysis, and infrastructure systems, AI presents both significant opportunities and major challenges in terms of societal impact. While Gerlich (2023) argues that AI adoption can lead to positive social transformation, Yarovenko et al. (2024) emphasize that AI is a tool that can empower individuals but also poses risks of exacerbating ethical and social inequalities. Similarly, Holton (2023) asserts that AI's future remains uncertain, necessitating a pragmatic governance approach. These discussions indicate that debates on AI's societal impact are shaped around four key perspectives: optimistic, pessimistic, pragmatic, and skeptical approaches.

Optimistic Perspective: From an optimistic viewpoint, AI offers substantial opportunities to address many of humanity's challenges. Particularly in fields such as genetic research, diagnostic methods, preventive healthcare, and drug development, AI has the potential to drive significant advancements (Berente et al., 2021). Additionally, applications in nanotechnology, big data analytics, resource efficiency, and the reduction of human error further highlight the strengths of AI technology (Mei et al., 2020). AI's ability to make impartial decisions is expected to reduce errors caused by human biases, leading to a more equitable decision-making process (Tegmark, 2017). Furthermore, AI is anticipated to enhance the quality of life and contribute to overall societal well-being.

Pessimistic Perspective: The pessimistic perspective focuses on the potential harms of AI. This view argues that AI development increases human-machine interaction while raising concerns about critical decisions being delegated to machines (Noble, 2018). Such developments may blur ethical boundaries, deepen inequalities, and intensify technological dependencies (Bostrom, 2014). Experts such as Elon Musk have warned that, if AI evolves unchecked, it could pose a threat to humanity comparable to nuclear weapons (The Guardian, 2018). In this context, AI's misuse in the wrong hands is seen as a significant danger.

Pragmatic Perspective: The pragmatic approach contends that AI's societal effects cannot be assessed solely through an optimistic or pessimistic lens. Instead, this perspective emphasizes that maximizing AI's benefits while minimizing its risks is only possible through legal and technical regulations (Rich & Gureckis, 2019). AI must be employed carefully and responsibly to support both individual and societal progress. In this regard, Feldstein (2019) suggests that controlled AI governance can yield substantial benefits for society.

Skeptical Perspective: The skeptical perspective argues that AI's attempts to replicate human intelligence could lead to unforeseen threats by sidelining human agency. This view suggests that comparing human intelligence with AI may push technological boundaries too far and result in unintended consequences (UNLEASH, 2022). Kullu and Raj (2018) caution against excessive optimism toward AI, emphasizing the need for a consistently critical evaluation of this technology.

Artificial Intelligence in Education

The use of Artificial Intelligence (AI) technologies in education is transforming modern teaching approaches, offering various advantages such as personalized learning, facilitating learning processes, and enhancing student achievement (Duralar, 2024; Harry, 2023). Additionally, AI has the potential to reduce teachers' workload by making lesson planning and assessment processes more efficient (Dağlı, 2024). Particularly, AI-based applications optimize learning experiences on an individual level by providing personalized content tailored to student needs (Çam et al., 2021). Compared to traditional teaching methods, these technologies are considered powerful tools in making learning processes more interactive and engaging (Yolcu, 2024; Gülel et al., 2023). Automated exam assessment systems significantly reduce

the time required for manual grading, thereby minimizing teachers' workload and allowing them to focus more on the core educational process (Sincar, 2023; Alam, 2021).

The integration of AI into education offers numerous benefits, such as improving student performance, supporting personalized learning processes, and alleviating teachers' responsibilities (Bryant et al., 2020). AI technologies enhance learning efficiency by adapting instructional materials to meet students' individual needs (Aşık et al., 2023). For instance, personalized teaching software provides appropriate content and feedback based on each student's learning pace and style. These applications not only boost students' academic success but also enhance their engagement and motivation (Keser & Ağca, 2024). Furthermore, the automation capabilities of AI optimize teachers' evaluation and planning tasks, improving time management in education (Knox, 2020). For example, automated grading systems enable detailed feedback on students' individual performance, allowing teachers to allocate more time to pedagogical strategies (Chen et al., 2020). This, in turn, enhances the overall effectiveness of instructional methods (Luan et al., 2020).

Another key advantage of AI is its ability to analyze complex educational data, providing in-depth insights into learning processes. AI-powered systems that analyze student behaviors can identify the most challenging topics and offer personalized recommendations to improve learning (Liv et al., 2023). Additionally, AI's capacity to create gamified learning environments makes the learning experience more enjoyable, particularly for younger students (Akkol & Balkan, 2024). However, despite these promising advantages, several challenges must be addressed for AI's full integration into education. Issues such as infrastructure deficiencies, limited digital literacy among teachers, and ethical concerns pose significant barriers to the widespread adoption of AI technologies (Armağan et al., 2024).

AI also has the potential to address educational equity and accessibility issues (Salloum et al., 2024). Advanced AI systems can provide world-class educational resources to students, overcoming barriers related to geographical location and socioeconomic status (Roshanaei et al., 2023). For example, AI-powered language learning applications facilitate multilingual education, helping students overcome cultural and linguistic obstacles. Moreover, AI-based assistive tools for individuals with hearing or visual impairments enable their full participation in the learning process.

In conclusion, the rise of AI is not eliminating the role of teachers but rather redefining it. AI takes over routine and repetitive tasks, allowing teachers to engage more deeply with students. For instance, automation systems that accelerate exam grading processes free up teachers' time, enabling them to focus on pedagogical methods and students' socio-emotional needs. AI has the potential to shift teachers from being mere "knowledge transmitters" to becoming mentors and motivators for their students. Table 3 summarizes key findings from national studies examining the role of AI tools and applications in education.

Table 3. Summary of National Literature on Artificial Intelligence and Education

Theme	Study Content	Findings	Author(s)
Language Education	AI-enhanced English learning with virtual reality	Virtual reality technology improved students' vocabulary and learning motivation.	Keser & Ağca (2024)
	The impact of ChatGPT on English writing skills	ChatGPT reduced writing errors and contributed to language skill development.	Kulaksız (2024)
Teacher Perspective	AI awareness among teachers	60% of teachers found AI tools beneficial, but infrastructure limitations restricted usage.	Seyrek et al. (2024)
	Primary school teachers' attitudes toward AI	AI tools' ability to personalize teaching materials was appreciated, but technical support was needed.	Akkol & Balkan (2024)
Educational Technology	Lesson planning with Bing Chat	Bing Chat saved teachers time, but highlighted the need for improved digital skills.	Dağlı (2024)
	The impact of AI in science education	AI improved students' conceptual understanding, but teachers faced challenges adapting to these tools.	Bayram & Çelik (2023)
	The use of chatbots in education	Chatbots were effective in homework supervision, but only 30% of teachers actively used them.	Altun & Seferoğlu (2024)
Personalized Learning	AI in mathematics education	AI supported personalized learning and increased students' achievement levels.	Duralar (2024)
	The development of AI technologies in education	70% of teachers supported AI integration, but applications remained limited due to lack of guidance.	Armağan et al. (2024)
Higher Education	AI applications in graduate theses	AI was found to be effective in exam evaluation and personalized learning.	Üstün (2024)
	University students' perceptions of AI	85% of students found AI technologies useful, but concerns about data privacy and ethics were noted.	Vatansever (2024)

The table provides a comprehensive summary of national literature on the role of artificial intelligence in education, categorized into five main themes. In the context of **language education**, AI-enhanced tools, particularly virtual reality, have been found to improve students' vocabulary and motivation. Additionally, ChatGPT has contributed to reducing writing errors and enhancing language skill development. Regarding the **teacher perspective**, studies indicate that 60% of teachers perceive AI tools as beneficial, yet infrastructural limitations restrict their effective use. While AI's ability to personalize teaching materials is appreciated, teachers still require technical support for efficient implementation. In terms of **educational technology**, AI tools such as Bing Chat have facilitated lesson planning by saving teachers' time, but the need for improved digital skills persists. AI has also enhanced conceptual understanding in science education, though teachers have struggled with adaptation. Chatbots have proven

effective in supervising homework, yet only 30% of teachers actively integrate them into their teaching. Concerning **personalized learning**, AI applications in mathematics education have been shown to support individualized learning and improve students' achievement levels. While 70% of teachers favor AI integration in education, its widespread adoption remains limited due to the absence of clear guidelines. In **higher education**, AI has demonstrated effectiveness in graduate thesis research, particularly in exam evaluation and personalized learning strategies. Additionally, 85% of university students find AI technologies useful, yet concerns about data privacy and ethical considerations remain significant. Overall, the findings suggest that while AI has the potential to enhance educational practices across various domains, challenges such as infrastructure limitations, teacher training, and ethical concerns must be addressed to maximize its effectiveness.

The relationships between AI tools and applications and the educational process have been examined in various international studies. Table 4 provides a summary of some of these studies and their key findings.

Table 4. Summary of International Literature on Artificial Intelligence and Education

Theme	Study Content	Findings	Author(s)
Language Education	Effects of AI-based language learning tools	Language skills improved by 25-30%. However, lack of cultural content and insufficient technological infrastructure in rural areas limited progress.	Lee & Chen (2024), Fernandes & Silva (2024), Xin & Derakhshan (2024)
Teacher Perspective	AI awareness and attitudes among teachers	60-75% of teachers viewed AI tools positively, but infrastructure limitations and the need for technical support restricted implementation.	Waritsman & Hariyanti (2024), Almohesh (2024), Mahapatra (2024)
Educational Technology	AI-based simulations and collaborative learning tools	Simulation tools increased clinical success by 85%, and collaborative learning improved teamwork skills by 60%. However, the absence of human interaction was seen as a disadvantage.	Osorio (2024), Baskara (2023), Hidalgo et al. (2023)
Personalized Learning	AI's contributions to personalized learning	Motivation increased by 40%, and individualized feedback boosted student learning motivation by 35%. However, infrastructure limitations restricted implementation.	Mammadov & Jamalova (2025), Choi & Zhang (2019)
Access and Equity in Education	AI's impact on educational equity	AI increased access to education by up to 50% in low-income and rural areas, but implementation costs remained a limiting factor.	Felix et al. (2025), Mustafa et al. (2024)

The Table 4 examines the impact of artificial intelligence in education under five main themes. AI-based language learning tools have improved language skills by 25-30%, but cultural content deficiencies and technological infrastructure limitations in rural areas have constrained this progress. From the teachers' perspective, 60-75% view AI tools positively; however, infrastructure deficiencies and the need for technical support have hindered the widespread adoption of these applications. In terms of educational technology, AI-based simulation tools have increased clinical success by 85% and improved collaborative learning group work skills by 60%. However, the lack of human interaction is seen as a significant disadvantage. Regarding personalized learning, AI-supported systems have increased motivation by 40%, while personalized feedback has boosted students' learning motivation by 35%. Nonetheless, technological infrastructure deficiencies limit the effectiveness of these applications. Concerning access and equity in education, AI-supported tools have enhanced access to education in low-income and rural areas by up to 50%, yet high costs remain a limiting factor in this process. Overall, while AI brings significant advancements in education, infrastructure deficiencies and cost-related barriers emerge as key challenges restricting its widespread implementation.

Religious Culture and Moral Knowledge (DKAB) Course and Artificial Intelligence

The Religious Culture and Moral Knowledge (DKAB) course holds a multidimensional structure in Turkey's education system, given its significance and impact on students. The primary objective of this course is to equip students with religious knowledge, moral values, and social norms while also introducing them to universal human values (Konaklı et al., 2021). DKAB is considered a learning platform that supports both individuals' spiritual development and their social integration (Özdemir et al., 2021).

The content of DKAB includes teachings on various religions and belief systems, carrying the mission of fostering tolerance, understanding, and cultural awareness among students (MEB, 2018). Thus, the course is not merely limited to the transmission of religious knowledge but also aims to enhance students' multicultural awareness. Research has shown that DKAB lessons contribute to social empathy and help reduce prejudices among students (Aslan & Osmanoğlu, 2022). The scope of the course extends from moral philosophy to values education, which plays a crucial role in encouraging individuals to exhibit ethical behavior in society (Doğru, 2024). One of the fundamental goals of DKAB is to ensure that young individuals internalize moral values and apply them in their daily lives, contributing to both their personal development and social adaptation (Özdemir et al., 2021). In a broader sense, DKAB goes beyond the acquisition of religious knowledge and moral values, serving as a comprehensive course that fosters tolerance, understanding, and social awareness within the education system.

When examining the relationship between the DKAB course and artificial intelligence (AI), it becomes evident that AI plays a transformative role not only in technical subjects such as science and mathematics but also in values-based and ethics-focused courses. In this context, AI applications integrated into DKAB have the potential to personalize students' learning

experiences, enabling them to develop a deeper understanding of ethical values and religious knowledge (Gül & Sipahioğlu, 2024).

AI technologies can contribute to the Religious Culture and Moral Knowledge (DKAB) course from various perspectives. AI tools, particularly those aligned with constructivist learning models, support students' individual learning paths. AI-based learning systems analyze students' knowledge levels and provide personalized content accordingly (Özer, 2021). For instance, AI algorithms can introduce the dynamics of different religions and cultures in DKAB courses through simulations and virtual reality (VR) experiences.

One of AI's most significant advantages is its ability to create personalized learning environments. In DKAB courses, students can progress at their own pace using intelligent AI-supported learning systems, which is particularly beneficial for discussing complex ethical debates and analyzing religious texts. Additionally, AI-supported educational tools can help students develop a better understanding of different religions and cultures. For example, VR applications can allow students to "experience" religious practices, thereby fostering tolerance and empathy, which align with the fundamental goals of DKAB education.

Despite AI's potential benefits, a limited number of studies have explored its role in modern teaching approaches within DKAB education. Arıcan (2024) states that AI-supported learning systems provide pedagogical assistance for teachers, making teaching processes more effective. A study by Genç & Sancak (2024) focuses on using AI as a pedagogical tool in DKAB courses. Their research examines the effectiveness of AI-supported materials in teaching the "Mystical Interpretations in Islamic Thought" unit.

Kaya & Eliyatkin (2024) highlight the potential of AI tools like ChatGPT in generating personalized religious education content and developing teaching materials. Their study suggests that AI can create age-appropriate educational content and individualize the learning process. Similarly, Parlak (2023) explores the use of metaverse and AI technologies in DKAB teaching, emphasizing that VR environments enhance learning experiences.

The ethical aspects of AI are also a subject of discussion in DKAB education. Aykıt (2024) investigates AI models such as ChatGPT and Google Bard from the perspective of Islamic Philosophy, analyzing how these models interpret religious and moral concepts. In a related study, Çakmak, Genç & Hendek (2024) assess the reliability of AI-supported learning materials, evaluating their contributions to the learning process. These studies collectively highlight the growing interest in integrating AI into DKAB education and emphasize the opportunities and challenges it presents.

Artificial intelligence (AI) is also being utilized to assess student performance. A study conducted by Yeşilyurt (2024) explores how ChatGPT-4o can be used in language skills assessment. This research examines the differences between AI-based evaluation and human assessment in educational settings. Similarly, Demir (2019) investigates the use of virtual reality (VR) technologies in DKAB courses, analyzing teacher candidates' attitudes toward these innovations, with positive results reported. Additionally, Şengör (2024) discusses the concept of free will in relation to AI, addressing ethical concerns about AI from a religious philosophy perspective.

In general, ethical concepts frequently discussed in DKAB courses can be explored more deeply using AI's analytical capabilities. AI tools can simulate complex moral dilemmas, enabling students to develop creative and ethically sound solutions. Overall, the integration of AI into DKAB education holds significant potential to transform learning processes, offering personalized learning experiences, ethical discussions, and advanced evaluation techniques.

Methodology

Research Aim

The use of artificial intelligence (AI) technologies in education is becoming increasingly widespread, significantly influencing teaching and learning processes. Religious Culture and Moral Knowledge (DKAB) courses play a crucial role in supporting students' moral development and instilling spiritual and ethical values (Arıcan, 2024; Özdemir et al., 2021). In modern education systems, AI-assisted teaching tools have great potential to promote student-centered learning and provide personalized learning experiences (Dağlı, 2024; Sincar, 2023). However, there are limited studies examining DKAB teachers' attitudes toward AI technologies and how they integrate these technologies into their lessons.

The aim of this study is to identify the attitudes of DKAB teachers working in public schools in İzmir toward AI, their resistance to its use, and their level of AI adoption. Additionally, it seeks to examine how these attitudes correlate with demographic variables such as gender, age, seniority, education level, and school type.

Specifically, the study analyzes the relationships between three key dimensions:

- AI engagement (active use of AI in education),
- AI resistance (reluctance or opposition to AI integration), and
- AI adoption (willingness to incorporate AI into teaching practices).

Through these analyses, the study aims to reveal how DKAB teachers perceive AI technologies and their willingness to use them in educational settings. The research examines DKAB teachers' involvement in AI-related research, participation in AI training, and their interest in following technological advancements. Furthermore, teachers' perceptions of AI's usefulness in education are assessed. Additionally, the study investigates how factors such as age, seniority, and education level influence teachers' responses to AI technologies.

Research Model

This study was conducted using a quantitative research method, adopting a relational survey model. The relational survey model is a method used to examine the relationships between variables and determine their effects on each other (Karasar, 2016).

Within the scope of this study, the attitudes of Religious Culture and Moral Knowledge (DKAB) teachers toward AI were analyzed across three key dimensions:

- AI Engagement (active involvement in AI-related activities),
- AI Resistance (reluctance or opposition to AI integration), and

- AI Adoption (willingness to incorporate AI into teaching practices).

The relationships between these dimensions and demographic variables such as gender, age, seniority, education level, and school type were examined. To analyze these relationships, the following statistical methods were applied:

- Spearman Correlation Analysis was used to determine the relationships between AI engagement, AI resistance, and AI adoption.
- Kruskal-Wallis Test was conducted to assess whether attitudes toward AI varied based on demographic variables.
- Additional statistical analyses were performed to test differences between demographic factors and AI attitudes.

The research model was designed to understand how individuals' attitudes toward AI are influenced by factors such as age, seniority, and education level. This study provides a valuable framework for raising awareness of AI use in education and examining teachers' perceptions of AI technologies. The findings of this study are expected to offer guidance for educational policies, contribute to the planning of teacher training programs, and support the integration of AI technologies into teaching processes through well-informed strategies.

Research Sample

The target population of this study consists of Religious Culture and Moral Knowledge (DKAB) teachers working in public schools in İzmir, Turkey. However, due to time and cost constraints, it was not feasible to reach the entire population. Therefore, the study employed the snowball sampling method to form a specific sample. Snowball sampling is a widely used and effective method, particularly in cases where identifying the entire target group is challenging (Karasar, 2016). This method relies on initial participants referring other individuals with similar characteristics, allowing the participant network to expand. In research that requires access to a specific professional group, such as DKAB teachers, using this method facilitates the inclusion of a larger number of participants. As part of the study, a total of 150 DKAB teachers from different districts in İzmir participated in the survey. The sample consisted of 104 female teachers (69.3%) and 46 male teachers (30.7%). In forming the sample group, demographic variables such as gender, professional seniority, education level, and school type were considered. The demographic characteristics of the research sample are presented in Table 5 and Table 9.

Table 5. Frequencies of Gender

Gender	Counts	% of Total	Cumulative %
Male	46	30.7%	30.7%
Female	104	69.3%	100.0%

Table 6. Frequencies of Age

Age Group	Counts	% of Total	Cumulative %
25-35	50	33.3%	33.3%
36-45	52	34.7%	68.0%
46-55	37	24.7%	92.7%
56 and above	11	7.3%	100.0%

Table 7. Frequencies of Experience (Seniority)

Experience (Years)	Counts	% of Total	Cumulative %
1-5 Years	29	19.3%	19.3%
6-10 Years	54	36.0%	55.3%
11-15 Years	29	19.3%	74.7%
16-20 Years	22	14.7%	89.3%
21 Years and above	16	10.7%	100.0%

Table 8. Frequencies of Education Level

Education Level	Counts	% of Total	Cumulative %
Bachelor's Degree	116	77.3%	77.3%
Postgraduate Degree	34	22.7%	100.0%

Table 9. Frequencies of School Type

School Type	Counts	% of Total	Cumulative %
High School	49	32.7%	32.7%
Middle School	41	27.3%	60.0%
Primary School	22	14.7%	74.7%
Imam Hatip High School	12	8.0%	82.7%
Imam Hatip Middle School	26	17.3%	100.0%

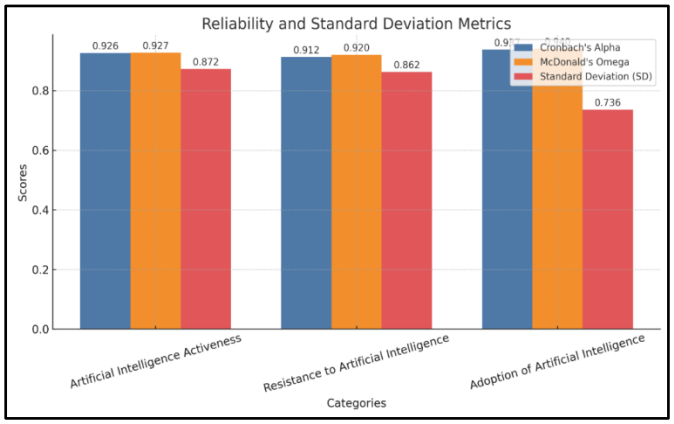
As illustrated, the gender distribution indicates that 69.3% of the participants are female, while 30.7% are male. This result suggests that the participant group is predominantly female. Regarding age distribution, the largest proportion of participants falls within the 36-45 age group (34.7%), followed closely by the 25-35 age group (33.3%). In older age groups, participation rates decline, with 24.7% of participants in the 46-55 age group and only 7.3% in the 56 and above category. In terms of seniority (years of teaching experience), 36% of the participants have 6-10 years of experience, making it the most common category. This is followed by 1-5 years (19.3%) and 11-15 years (19.3%) of teaching experience. As experience increases, the number of participants declines, with 14.7% having 16-20 years of experience and 10.7% having 21 years or more. Concerning educational background, the majority of participants hold a bachelor's degree (77.3%), while 22.7% have a postgraduate degree. This suggests that the sample group has a relatively high level of education. With respect to school type, 32.7% of the participants work in high schools, followed by 27.3% in middle schools. Lower percentages were observed in primary schools (14.7%), Imam Hatip middle schools (17.3%), and Imam Hatip high schools (8.0%). Overall, the sample profile is characterized by a predominance of female and middle-aged participants, a high level of education, and a concentration of individuals with 6-10 years of teaching experience. These demographic insights provide valuable information for understanding the study group's characteristics and developing appropriate strategic approaches for further analysis.

Data Collection and Analysis in the Study

In the data collection process of the study, a survey was administered to the participants. The data collection tool used was the "Attitude Scale Towards the Use of Artificial Intelligence in Education by Teachers," developed by Aksekili and Kan (2024), which consists of three dimensions. Descriptive Statistics were used for the analysis in the study to summarize the demographic characteristics of the participants (frequency, percentage, mean, and standard deviation). These analyses serve as the foundation for describing the general structure of the sample. Between-Group Comparisons (t-test and ANOVA) were conducted to compare the perception averages of different groups based on gender, age, seniority, education level, and whether participants had received measurement and evaluation training. These tests were preferred to

identify significant differences between the groups. Reliability analyses (Cronbach's Alpha and McDonald's Omega) were used to assess the internal consistency of the scales and sub-dimensions. These analyses were conducted to test the reliability and validity of the scales. Validity and reliability testing was performed on the scale for this study (Figure 1).

Figure 1. Validity and Reliability of the Measurement Tool



The Cronbach's Alpha value is considered to indicate the following reliability levels: values of 0.90 and above represent "Very High (Excellent) Reliability," 0.80 - 0.89 indicate "High Reliability," 0.70 - 0.79 suggest "Acceptable Reliability," 0.60 - 0.69 are considered "Low Reliability," and values below 0.59 are categorized as "Unreliable Scale" (Kartal & Dirlik, 2016). According to Figure 2, the reliability levels of the scales are very high in terms of both Cronbach's Alpha and McDonald's Omega values. The "Activity in Artificial Intelligence" sub-dimension demonstrates excellent reliability with Cronbach's Alpha (0.926) and McDonald's Omega (0.927) values. The "Resistance to Artificial Intelligence" dimension also shows a high level of reliability with Cronbach's Alpha (0.912) and McDonald's Omega (0.920) values. In the "Adoption of Artificial Intelligence" sub-dimension, the Cronbach's Alpha (0.937) and McDonald's Omega (0.940) values are the highest, indicating that this sub-scale has the strongest internal consistency. Overall, the fact that all sub-dimensions have reliability coefficients above 0.90 demonstrates the very high internal consistency of the scale. The closeness of the Cronbach's Alpha and McDonald's Omega values further supports the scale's homogeneity and stability. When examining the standard deviation values, it is observed that the "Adoption of Artificial Intelligence" dimension (SD = 0.736) has a lower variance compared to the other sub-dimensions, indicating that participants provided more similar responses to the items in this sub-dimension. In contrast, the "Activity in Artificial Intelligence" (SD = 0.872) and "Resistance to Artificial Intelligence" (SD = 0.862) dimensions show a wider distribution of responses. Based on these findings, it can be concluded that all sub-dimensions of the scale are highly reliable and can be confidently used in research.

Findings

The findings related to the Proactiveness in Artificial Intelligence attitudes of Religious Culture and Ethics (DKAB) teachers participating in the study regarding their attitudes towards artificial intelligence are presented in Figure 2.

Figure 2. Proactiveness in Artificial Intelligence

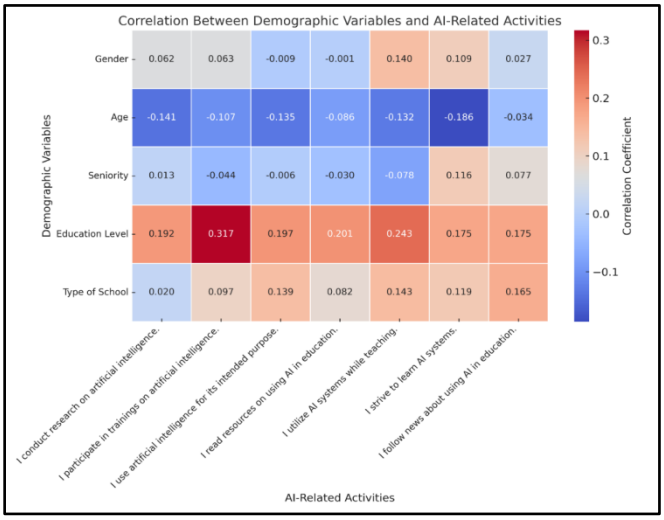


Figure 2 presents the correlations between the dimension of Proactiveness in Artificial Intelligence and demographic variables. The results obtained from the analysis can be summarized as follows:

Relationship Between Gender and Proactiveness in Artificial Intelligence: A weak positive correlation is observed between the gender variable and certain perceptions of artificial intelligence. For instance, the item “I conduct research on artificial intelligence” has a correlation value of 0.062 with gender. Similarly, the item “I make an effort to learn artificial intelligence systems” shows a positive correlation of 0.140 with gender. This finding suggests that there might be slight differences in attitudes toward artificial intelligence between male and female participants. However, overall, the effect of gender remains quite weak.

Relationship Between Age and Proactiveness in Artificial Intelligence: The age variable exhibits significant negative correlations with certain perceptions of artificial intelligence. For example, the item “I make an effort to learn artificial intelligence systems” has a correlation value of -0.186 with age. Similarly, a negative correlation of -0.135 is observed between the item “I use artificial intelligence appropriately for its intended purpose” and age. These results indicate a tendency for a decline in the willingness to learn and use artificial intelligence systems as age increases.

Relationship Between Seniority and Proactiveness in Artificial Intelligence: A weak negative correlation is found between the seniority variable and certain perceptions of artificial intelligence. For instance, the item “I use artificial intelligence appropriately for its intended purpose” has a correlation value of -0.135 with seniority. Additionally, the item “I utilize artificial intelligence systems while teaching” exhibits a negative correlation of -0.086 with seniority. This finding suggests that more senior individuals may be less proactive in learning and using artificial intelligence systems.

Relationship Between Educational Level and Proactiveness in Artificial Intelligence: There are positive correlations between educational level and perceptions of artificial intelligence. For example, a significant positive correlation of 0.317 is observed between the item “I participate in training programs on artificial intelligence” and educational level. Additionally, the item “I read resources on the use of artificial intelligence in education” has a correlation value of 0.197 with educational level. These results

indicate that as the level of education increases, participation in artificial intelligence-related activities and awareness also increase.

Relationship Between the Type of School and Proactiveness in Artificial Intelligence: Positive correlations exist between the type of school where participants work and certain perceptions of artificial intelligence. For example, the item "I participate in training programs on artificial intelligence" has a positive correlation of 0.097 with this variable. Additionally, a correlation value of 0.143 is observed between the item "I utilize artificial intelligence systems while teaching" and the type of school where participants work. This finding suggests that perceptions of artificial intelligence may vary depending on the type of school and that certain school types may encourage artificial intelligence usage more than others.

The findings related to Resistance to Artificial Intelligence attitudes of Religious Culture and Ethics (DKAB) teachers participating in the study are presented in Figure 3.

Figure 3. Resistance to Artificial Intelligence

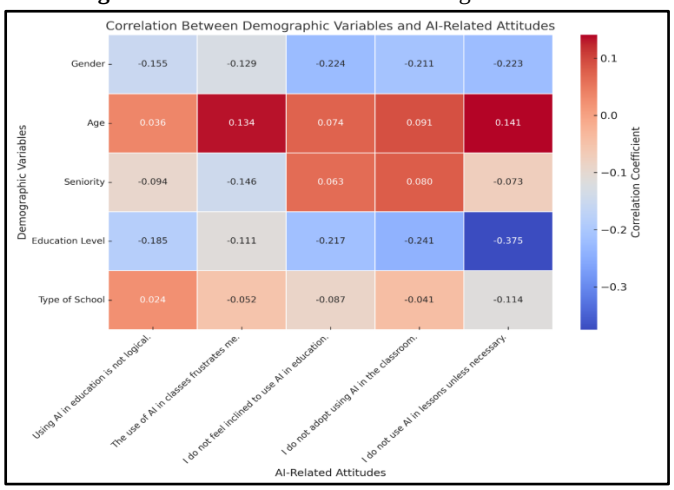


Figure 3 presents the correlations between the dimension of Resistance to Artificial Intelligence and demographic variables. The results obtained from the analysis can be summarized as follows:

Relationship Between Gender and Resistance to Artificial Intelligence: A weak negative correlation is observed between the gender variable and certain resistance to artificial intelligence items. For example, the item "I do not feel inclined to use artificial intelligence in education" has a correlation value of -0.224 with gender. Similarly, the item "I do not use artificial intelligence in class unless I am required to" shows a negative correlation of -0.138 with gender. This suggests that there may be slight differences between male and female participants in terms of their resistance to artificial intelligence usage. However, the overall effect of gender on these items remains weak.

Relationship Between Age and Resistance to Artificial Intelligence: The age variable exhibits significant positive correlations with certain resistance to artificial intelligence items. For example, the item "The use of artificial intelligence in lessons makes me frustrated" has a correlation value of 0.134 with age. Similarly, a positive correlation of 0.121 is observed between the item "Using artificial intelligence in education is not logical" and age. These results indicate that negative attitudes toward artificial intelligence usage tend to increase slightly with age.

Relationship Between Seniority and Resistance to Artificial Intelligence: A negative correlation is found between the seniority variable and certain resistance to artificial intelligence items. For instance, the item "I do not adopt the use of artificial intelligence in the classroom" has a correlation value of -0.241 with seniority. Additionally, the item "I do not feel inclined to use artificial intelligence in education" exhibits a negative correlation of -0.198 with seniority. This finding suggests that more senior individuals may have lower levels of negative perceptions toward artificial intelligence usage. However, the overall effect of seniority remains weak.

Relationship Between Educational Level and Resistance to Artificial Intelligence: Generally, negative correlations are observed between educational level and resistance to artificial intelligence items. For example, the item "I do not use artificial intelligence in class unless I am required to" exhibits a strong negative correlation of -0.375 with educational level. Additionally, the item "Using artificial intelligence in education is not logical" has a correlation value of -0.192 with educational level. These findings suggest that as the level of education increases, negative attitudes toward the use of artificial intelligence tend to decrease.

Relationship Between the Type of School and Resistance to Artificial Intelligence: Weak negative correlations exist between the type of school where participants work and certain resistance to artificial intelligence items. For instance, the item "I do not feel inclined to use artificial intelligence in education" has a correlation value of -0.114 with this variable. Similarly, the item "I do not use artificial intelligence in class unless I am required to" exhibits a weak negative correlation of -0.089 with the type of school. This indicates that the type of school has only a limited effect on perceptions of artificial intelligence.

The findings related to Acceptance of Artificial Intelligence attitudes of Religious Culture and Ethics (DKAB) teachers participating in the study are presented in Figure 4.

Figure 4. Acceptance of Artificial Intelligence

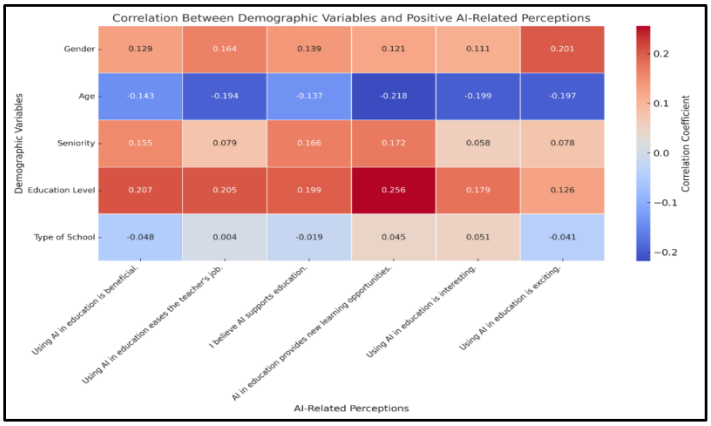


Figure 4 presents the correlations between the dimension of Acceptance of Artificial Intelligence and demographic variables. The results obtained from the analysis can be summarized as follows:

Relationship Between Gender and Acceptance of Artificial Intelligence: Weak positive correlations are observed between the gender variable and certain acceptance of artificial intelligence items. For example, the item "Using artificial intelligence in education is engaging" has a correlation value of 0.082 with gender. Similarly, the item "Using artificial intelligence in education makes the teacher's job easier" shows a weak correlation of 0.067 with gender. This suggests that there might be slight differences in the level of acceptance of artificial intelligence

between male and female participants. However, the overall effect of gender on these items remains very weak.

Relationship Between Age and Acceptance of Artificial Intelligence: The age variable exhibits negative correlations with certain acceptance of artificial intelligence items. For example, the item "Using artificial intelligence in education is exciting" has a correlation value of -0.176 with age. Similarly, a negative correlation of -0.153 is observed between the item "Artificial intelligence in education provides new learning opportunities" and age. These results indicate that as age increases, enthusiasm and positive expectations regarding the use of artificial intelligence in education tend to decline.

Relationship Between Seniority and Acceptance of Artificial Intelligence: Weak negative correlations exist between the seniority variable and certain acceptance of artificial intelligence items. For instance, the item "Artificial intelligence in education provides new learning opportunities" has a correlation value of -0.124 with seniority. Additionally, the item "Using artificial intelligence in education is exciting" exhibits a negative correlation of -0.145 with seniority. This suggests that as seniority increases, positive perceptions of artificial intelligence use in education may slightly decrease.

Relationship Between Educational Level and Acceptance of Artificial Intelligence: Educational level generally exhibits positive correlations with acceptance of artificial intelligence items. For example, the item "Using artificial intelligence in education is beneficial" has a correlation value of 0.217 with educational level. Additionally, a significant positive correlation of 0.234 is observed between the item "Using artificial intelligence in education makes the teacher's job easier" and educational level. These results indicate that as the level of education increases, individuals tend to adopt artificial intelligence more readily.

Relationship Between the Type of School and Acceptance of Artificial Intelligence: Weak positive correlations are found between the type of school where participants work and certain acceptance of artificial intelligence items. For instance, the item "Using artificial intelligence in education is engaging" has a correlation value of 0.091 with this variable. Similarly, a correlation value of 0.075 is observed between the item "Artificial intelligence in education provides new learning opportunities" and the type of school. These findings suggest that while there may be slight differences in perceptions of artificial intelligence across different school types, the overall impact remains minimal.

The relationships between different dimensions of artificial intelligence attitudes are presented in Figure 5.

Figure 5. Relationships Between Dimensions

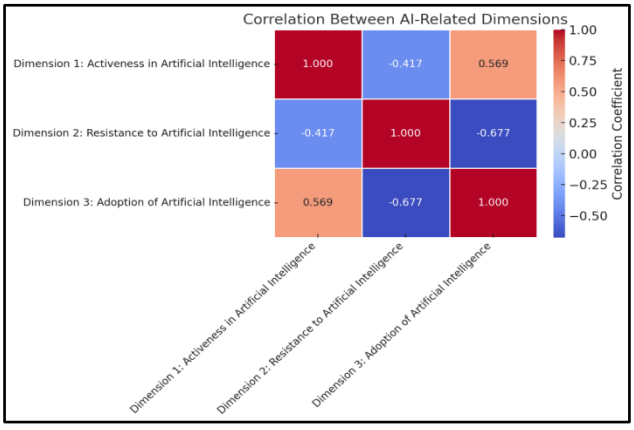


Figure 5 presents the correlation analysis between dimensions, revealing the relationships between attitudes and behaviors toward artificial intelligence.

Relationship Between Proactiveness in Artificial Intelligence and Resistance to Artificial Intelligence: A negative correlation is observed between Proactiveness in Artificial Intelligence and Resistance to Artificial Intelligence. This finding suggests that individuals who actively engage with artificial intelligence—such as conducting research, attending training sessions, and following AI-related news—tend to show lower resistance to its use in education. In other words, individuals who are more proactive regarding artificial intelligence are more open to its educational applications and exhibit a more positive attitude toward its use beyond necessity.

Relationship Between Proactiveness in Artificial Intelligence and Acceptance of Artificial Intelligence: A strong positive correlation is observed between Proactiveness in Artificial Intelligence and Acceptance of Artificial Intelligence. This indicates that individuals who conduct research on AI, participate in training programs, and stay updated on technological advancements tend to find AI beneficial, engaging, and a facilitator for teachers in education. It can be concluded that individuals who actively engage with artificial intelligence are more likely to embrace and adopt the technology in educational contexts.

Relationship Between Resistance to Artificial Intelligence and Acceptance of Artificial Intelligence: A significant negative correlation exists between Resistance to Artificial Intelligence and Acceptance of Artificial Intelligence. This relationship suggests that individuals who resist AI implementation in education are less likely to perceive AI as beneficial, less likely to acknowledge its potential to facilitate teaching, and less likely to find it engaging or exciting. In other words, individuals with higher resistance to AI tend to have lower levels of acceptance toward this technology.

Overall Implications: The findings indicate that individuals who are more engaged with artificial intelligence are more likely to adopt it, while those who resist AI are less likely to embrace its benefits. These results highlight the importance of education and awareness initiatives to increase AI adoption. Enhancing participation in AI-related research and training programs can contribute to individuals evaluating AI more positively. Additionally, organizing hands-on training and awareness programs may help individuals with higher resistance to AI develop a more favorable attitude toward the technology.

Conclusion and Discussion

This study examines the impact of artificial intelligence (AI) in education and its integration into the Religious Culture and Moral Knowledge (RCMK) course, revealing how different demographic groups perceive this technology. The findings indicate that the adoption and effective use of AI in education are influenced by factors such as age, seniority, and education level. When compared with existing literature, both similarities and differences emerge.

Studies by Lee and Chen (2024) and Fernandes and Silva (2024) indicate that AI-based language learning tools improve language proficiency by 25-30%. However, these studies also highlight that cultural content deficiencies and infrastructure limitations restrict these advancements. Similarly, our study finds that AI can contribute to the transmission of ethical and religious

values in the RCMK course, but attention must be paid to cultural and moral compatibility.

Research by Waritsman and Hariyanti (2024) and Almohesh (2024) shows that 60-75% of teachers have a positive perception of AI tools, yet technical support and infrastructure deficiencies limit their implementation. Our findings align with this, revealing that RCMK teachers have varying levels of interest in AI, with the primary obstacle being a lack of sufficient guidance and training. In particular, senior and older teachers demonstrate greater reluctance toward AI integration.

Studies by Baskara (2023) and Hidalgo et al. (2023) indicate that AI-based simulation tools enhance clinical success by 85% and improve collaborative learning by 60%. However, these studies also emphasize that the lack of human interaction is a significant disadvantage. Similarly, our study finds that AI has the potential to create personalized learning environments in RCMK courses, but a balanced approach is necessary to maintain human interaction in ethical and religious education.

In conclusion, this study highlights that the effective use of AI in education is correlated with specific demographic variables and that careful integration is required, especially in courses like RCMK, which focus on ethics and values education. Consistent with the existing literature, we recommend the development of teacher training programs to enhance AI awareness, strengthening technical infrastructure, and implementing personalized learning strategies. Specifically, in the context of the RCMK course, it is crucial to ensure a balanced use of AI to convey moral and ethical values effectively.

General Conclusions: When examining the relationships between attitudes and behaviors toward AI, demographic factors, and AI-related dimensions, the following conclusions can be drawn:

- Higher education levels strengthen positive attitudes toward AI, while age and seniority reduce willingness to use AI.
- More educated individuals are more likely to conduct research on AI, participate in training programs, and adopt AI technologies.
- Older and more senior individuals approach AI with more hesitation and are less inclined to actively engage with AI technologies.
- Gender and type of school do not have a significant impact on AI-related attitudes, suggesting that AI perceptions are influenced more by individual experience and education level than by gender or workplace environment.
- Individuals who actively engage with AI are more likely to accept and perceive its benefits in education, whereas those resistant to AI tend to exhibit more negative attitudes toward its educational use.

Implications for AI Awareness and Training: The findings highlight the critical role of education and awareness initiatives in increasing AI adoption, particularly among older and more senior individuals. Hands-on training and awareness programs should be designed to help individuals with AI resistance develop more favorable attitudes toward this technology.

Additionally, developing AI-related content tailored to different educational levels and encouraging active engagement with AI will contribute to a more effective and widespread integration of AI in education. These efforts will ensure that AI technologies are not only embraced but also efficiently utilized in teaching and learning environments.

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