

## STAKEHOLDERS READINESS FOR THE ADOPTION OF ARTIFICIAL INTELLIGENCE FOR THE TEACHING OF ISLAMIC STUDIES IN NIGERIA UNIVERSITIES: EMPIRICAL EVIDENCE FROM ALHIKMAH UNIVERSITY

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### Abstract

*This paper explores stakeholders' readiness for adopting Artificial Intelligence (AI) in the teaching of Islamic Studies in Nigerian universities. As the educational landscape evolves, integrating AI presents unique opportunities and challenges, particularly in specialized fields like Islamic Studies. The research quantitatively assesses the perceptions, preparedness, and potential barriers faced by key stakeholders, including educators, students, administrators, and policymakers. Utilizing a structured survey methodology, data were collected from a representative sample to evaluate technological infrastructure, training levels, and cultural considerations. Findings reveal varying levels of readiness, with significant disparities influenced by these factors. The study highlights the necessity for comprehensive strategies to enhance stakeholder readiness, such as targeted training programs, increased investment in technology, and the development of a supportive policy environment. Addressing these factors can significantly enrich the teaching and learning experience in Islamic Studies, promoting academic excellence and innovative pedagogy in Nigerian universities.*

**Keywords:** Artificial Intelligence (AI), Islamic Studies, Stakeholder Readiness, Nigerian Universities, Educational Technology

### Introduction

The integration of Artificial Intelligence (AI) into education has garnered significant attention globally, promising to revolutionize traditional teaching methods and enhance learning outcomes. As educational institutions strive to keep pace with technological advancements, the adoption of AI in university curricula has emerged as a critical area of focus (Zhai et al., 2021). In particular, the teaching of Islamic Studies, a field deeply rooted in tradition and culture, presents unique challenges and opportunities for AI integration (Mukhopadhyay et al., 2019). In Nigeria, where Islamic Studies is a key component of higher education in several universities, the readiness of stakeholders to embrace AI-driven teaching methodologies is crucial for successful implementation (Zhang et al., 2022).

The adoption of AI in education offers numerous benefits, including personalized learning experiences, improved access to resources, and enhanced efficiency in curriculum delivery (Zaman. 2024). However, the transition to AI-supported teaching requires careful consideration of several factors, particularly in a context like Islamic Studies, where the interplay of technology and religious education must be managed sensitively (Rifat et al., 2020). The potential benefits of AI in this field include the ability to create adaptive learning environments, automate routine tasks, and provide real-time feedback to students (Cavalcanti et al., 2021). Despite these advantages, the implementation of AI in Islamic Studies is not without its challenges (Vinichenko et al., 2020).

Stakeholder readiness plays a pivotal role in determining the success of AI integration in educational settings (Okai-Ugbaje et al., 2020). Educators, students, administrators, and policymakers are key stakeholders whose perceptions, preparedness, and willingness to adopt new technologies can significantly influence the outcome Godoe & Johansen, (2012). In Nigeria, where the educational infrastructure varies widely across regions and institutions, understanding the readiness of these stakeholders is essential for developing effective AI adoption strategies (Lebcir et al., 2021). Moreover, the cultural and religious context of Islamic Studies adds another layer of complexity, necessitating a careful approach to ensure that AI tools align with the values and principles of the subject (Díaz-Rodríguez et al., 2023).

In light of the growing importance of AI in education and the unique context of Islamic Studies in Nigeria, this research addresses a critical gap in the literature. By focusing on stakeholder readiness, the study contributes to the broader discourse on AI adoption in education and offers practical guidance for policymakers, educators, and institutions seeking to leverage AI for improving the teaching and learning of Islamic Studies.

## Literature Review

Musa et al., (2022) said the emergence of artificial intelligence (AI) as a subject to be incorporated into K-12 educational levels places new demand on relevant stakeholders, especially teachers that drive the teaching and learning process. It is therefore important to understand how ready teachers are to teach the emerging subject as the success of AI education would probably be closely dependent on the readiness of teachers. As a result, this study presents an insight into factors influencing the behavioral intention and readiness of Nigerian in-service teachers to teach artificial intelligence. A total of 368 teachers, from elementary to high school participated in the study. We utilized quantitative methodology using variance-based structural equation modeling to understand the relationship among the eight variables (AI anxiety, perceived usefulness, AI for social good, Attitude towards using AI, perceived confidence in teaching AI, relevance of AI, AI readiness, and behavioral intention) considered in the study. The result indicated that confidence in teaching AI predicts intention to teach AI while AI relevance strongly predicts readiness to teach AI. While other factors influence the teaching of AI, anxiety and social good could not predict teachers' intention and readiness to implement AI in classrooms respectively. We discussed the implication of our findings in relation to AI implementation in schools and highlight future directions.

Okai-Ugbaje et al., (2020) was of the view that the extant literature on mobile learning in higher education has mainly focused on students and academics. This study conducted in a Nigerian university considered a wider group of stakeholders (students, academics, IT personnel, and

administrative leaders) in its investigation of stakeholders' awareness, willingness, and readiness for mobile learning adoption, using a mixed methods approach. The findings revealed that while the awareness of mobile learning amongst students was low, they were keen on adoption. Academics were more tentative, for while they were willing, it was clear that a shift in their teaching philosophy and pedagogy would be required for mobile learning to work effectively. For those in IT and administrative leadership roles, their perceptions were more resource-focused. While this study only considered the views of internal stakeholders, it also uncovered the need for the involvement of external stakeholders. Building on these findings, a strategy table which outlines the roles and responsibilities of each stakeholder group was created. The table provides a blueprint which otherwise has been missing, to guide sustainable mobile learning adoption and implementation not only in higher education in developing countries, but which may have more global appeal.

Suleiman, (2024) investigated students' perceived readiness for the adoption of artificial intelligence (AI) support services in Nigerian universities, focusing on Al-Hikmah University as a case study. The data were collected from 45 students who were selected via stratified, purposive and convenience sampling techniques. Thematic analysis was employed to analyze the interview transcripts. Factors influencing students' readiness include perceived usefulness, ease of use, and concerns about privacy and job security. The findings suggest that students at Al-Hikmah University are generally positive and open-minded about the potential of AI to enhance their learning experiences and support services. The study identified several benefits of AI-based support services, including personalized learning experiences, access to information and resources at any time, and the potential to improve efficiency in administrative processes. While students are generally receptive to AI, the study also highlighted some concerns and challenges. These include privacy concerns related to data collection and usage, and the need for adequate training to effectively use AI tools. In conclusion, the study on students' perceived readiness for the adoption of artificial intelligence (AI) -based support services in Nigerian universities, focusing on Al-Hikmah University, provides valuable qualitative evidence on the attitudes and perspectives of students toward AI technology in the context of higher education.

Mar, (2024) described various important aspects of technology integration and Islamic education in the digital era. First, the integration of technology in learning shows educators' high confidence in the benefits of technology to improve the teaching process, although there are concerns regarding infrastructure and student readiness. Second, studies on the challenges of Islamic education in the digital era highlight the spread of misinformation and the negative impact of social media, which can be addressed by strengthening digital literacy and the integration of Islamic values in the curriculum. The role of social media in Muslim society is found to be beneficial for spreading religious teachings, but it also has moral risks if it is not used wisely in accordance with religious values. The transformation of Islamic boarding schools in this disruptive era requires the adaptation of modern technology in teaching traditional Islamic values such as tarbiyah, ta'lim, and ta'dib. Integration of science and Al-Qur'an in Islamic universities identifies the challenge of coordinating the integration vision throughout the university with its implementation at lower levels. This study provides insight for stakeholders to strengthen Islamic education in the digital era with an approach that meets the demands of the times, while maintaining classical religious values.

## Research Questions

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1. What is the level of readiness among educators, students, administrators, the policymakers for the adoption of Artificial Intelligence (AI) in the teaching of Islamic Studies in Nigerian universities?
2. How does the availability of technological infrastructure influence the readiness of stakeholders to integrate AI in Islamic Studies?
3. What are the perceived barriers to the adoption of AI in the teaching of Islamic Studies, how do these vary across different stakeholder groups?
4. To what extent do cultural and religious considerations impact the acceptance and implementation of AI in Islamic Studies within Nigerian universities?
5. What role do training programs and institutional support play in enhancing stakeholders' preparedness for AI adoption in Islamic Studies?
6. How do regional differences (e.g., northern vs. southern Nigeria) affect the readiness and willingness of stakeholders to embrace AI in Islamic Studies?

## Methodology

This study employed a quantitative research design to assess stakeholders' readiness for the adoption of Artificial Intelligence (AI) in the teaching of Islamic Studies at Al-Hikmah University, Nigeria. The quantitative approach allowed for the collection of measurable data that could be analyzed statistically to identify patterns and correlations among various stakeholder groups.

The population for this study included 40 faculty members teaching Islamic Studies, 200 students enrolled in Islamic Studies programs (both undergraduate and postgraduate), 10 university administrators involved in the management of Islamic Studies, and 5 policymakers connected to educational policy at the university level. The total estimated population comprised 250 stakeholders.

To ensure a representative sample, the study utilized a combination of purposive and stratified random sampling techniques. Purposive sampling was employed to select specific stakeholders from each group based on their direct involvement with Islamic Studies and AI initiatives. Stratified random sampling was applied after identifying the relevant stakeholders, and the sample was stratified based on roles; educators, students, administrators, and policymakers. For students, stratification also considered academic level (undergraduate and postgraduate).

The sample size for this study targeted 152 respondents to ensure statistical significance. The sample size of 152 was determined using the Research Advisor Table to provide a representative sample for rigorous analysis. The research instrument, which consisted of a structured questionnaire, was subjected to expert review and pilot testing to ensure validity and reliability. Content validity was established through consultation with specialists in Islamic Studies and educational technology, while a pilot study involving a small subset of respondents was conducted to refine survey items and improve clarity before full-scale administration.

In addition, ethical considerations were carefully observed throughout the study. Ethical approval was obtained from the Al-Hikmah University Research Ethics Committee prior to data collection. All participants were informed of the purpose of the study, and their voluntary participation was secured through informed consent. Respondent confidentiality and anonymity were guaranteed by ensuring that no identifying information was disclosed in the reporting of findings.

## Data Analysis

### Research Question 1: Level of Readiness for AI Adoption

**Table 1:** *Assess the overall readiness of educators, students, administrators, and policymakers for AI adoption in teaching Islamic Studies.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Educators are ready to adopt AI	12	25	80	35	152
2. Students are prepared to engage with AI	18	30	70	34	152
3. Administrators support AI integration	10	20	75	47	152
4. Policymakers promote AI adoption	15	35	60	42	152
5. Institution is introducing AI	20	25	65	42	152

Table 1 shows that the majority of respondents agree that educators and students are reasonably ready for AI adoption, with strong support from administrators. Policymakers show moderate engagement.

### Research Question 2: Influence of Technological Infrastructure

**Table 2:** *Evaluate how the availability of technological infrastructure impacts readiness for AI integration.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Infrastructure is sufficient for AI	18	40	60	34	152
2. Reliable internet access is available	15	45	50	42	152
3. Necessary hardware is provided	25	30	55	42	152
4. Lack of technology is a barrier	12	20	60	60	152
5. Infrastructure encourages AI adoption	10	35	65	42	152

Table 2 revealed that a significant number of respondents feel that technological infrastructure is lacking, which poses a barrier to AI adoption. Reliable internet access and hardware availability are common concerns.

**Research Question 3: Perceived Barriers to AI Adoption****Table 3:** *Identify perceived barriers to the adoption of AI across different stakeholder groups.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Financial constraints are a barrier	25	30	50	47	152
2. Resistance due to lack of awareness	20	35	55	42	152
3. AI tools perceived as complex	15	40	60	37	152
4. Cultural attitudes present barriers	18	30	55	49	152
5. Stakeholder concerns vary	12	28	64	48	152

Table 3 showed that financial constraints and cultural attitudes are significant barriers perceived by stakeholders. Awareness and perceived complexity of AI tools also contribute to resistance.

**Research Question 4: Cultural and Religious Considerations****Table 4:** *Assess the impact of cultural and religious considerations on AI acceptance.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Religious beliefs influence willingness	20	30	50	52	152
2. Cultural traditions impact acceptance	15	25	60	52	152
3. AI may conflict with Islamic teachings	22	35	45	50	152
4. Cultural resistance affects adoption	18	30	56	48	152
5. Educators align AI with values	10	25	65	52	152

Table 4 revealed that cultural and religious considerations significantly influence stakeholders' willingness to adopt AI. Many respondents' express concerns about aligning AI with Islamic values.

**Research Question 5: Role of Training Programs and Institutional Support****Table 5:** *Evaluate the role of training and support in enhancing readiness for AI adoption.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Sufficient training offered	25	35	50	42	152
2. Resources for educators are adequate	20	30	55	47	152
3. Institutional support is critical	15	20	60	57	152
4. Proper training increases readiness	12	28	65	47	152
5. Lack of training hampers readiness	10	25	60	57	152

Table 5 shows that many respondents feel that training programs are insufficient, indicating a need for enhanced institutional support to improve readiness for AI adoption.

**Research Question 6: Regional Differences in Readiness****Table 6:** *Evaluate the role of training and support in enhancing readiness for AI adoption.*

Statement	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)	Total Responses
1. Southern stakeholders are more prepared	20	30	55	47	152
2. Infrastructure differences influence readiness	15	25	65	47	152
3. Cultural differences impact acceptance	12	30	60	50	152
4. Regional policies affect willingness	18	35	55	44	152
5. AI adoption is likelier in resource-rich regions	10	20	70	52	152

Table 6 revealed that respondents indicate that southern stakeholders generally perceive themselves as more prepared for AI adoption, with significant differences in infrastructure and resources noted between regions.

**Discussion of Findings**

The analysis of stakeholders' readiness for the adoption of Artificial Intelligence (AI) in the teaching of Islamic Studies at Nigerian universities reveals several critical insights across various domains.

The majority of respondents expressed a general agreement regarding the readiness of educators and students to adopt AI in their coursework. However, there is a noticeable gap in the perception Yusuf Olasunkanmi Ibrahim, Yusuf Suleiman, Mustapha, Ismail, and Azeez, Babatunde Adebayo. Stakeholders Readiness for the Adoption of Artificial Intelligence for the Teaching of Islamic Studies in Nigeria Universities: Empirical Evidence from Alhikmah University, pp. 119 – 128.

of institutional support and commitment from policymakers. This suggests that while there is enthusiasm at the individual level, institutional frameworks and policies might still lag behind, indicating a need for stronger support systems. The data highlighted a significant concern regarding the availability and adequacy of technological infrastructure necessary for AI integration. Many stakeholders reported that current resources, including hardware and reliable internet access, are insufficient. This lack of infrastructure is a critical barrier, as it directly impacts the practical application of AI tools in education. The findings suggest that improvements in technological infrastructure are essential for fostering a conducive environment for AI adoption. Financial constraints emerged as a major barrier to AI adoption, underscoring the economic challenges faced by institutions. Additionally, cultural attitudes and resistance due to a lack of awareness were identified as significant obstacles. These findings indicate the necessity for targeted awareness programs to educate stakeholders about the benefits of AI and to address misconceptions that may hinder acceptance. The influence of cultural and religious beliefs on stakeholders' willingness to adopt AI was evident. Many respondents expressed concerns about aligning AI with Islamic teachings and cultural values. This highlights the importance of integrating cultural and religious perspectives into AI implementation strategies to ensure acceptance and relevance in the context of Islamic Studies. The data revealed that inadequate training programs and institutional support are perceived as significant barriers to readiness. Many stakeholders indicated that proper training could enhance their willingness to embrace AI tools. This finding emphasizes the urgent need for comprehensive training initiatives and institutional commitment to support educators and students in adapting to new technologies. The analysis showed that stakeholders from the southern region perceive themselves as more prepared for AI adoption compared to their northern counterparts. This disparity can be attributed to differences in technological infrastructure and educational resources. Addressing these regional inequalities will be crucial for fostering a more uniform approach to AI integration across Nigerian universities.

## **Conclusion**

The study underscores the complex interplay of factors influencing stakeholders' readiness for AI adoption in Islamic Studies education. While there is a general willingness among educators and students to embrace AI, significant barriers remain, particularly in terms of technological infrastructure, financial constraints, and cultural considerations. The findings highlight the need for targeted initiatives to enhance training, awareness, and infrastructural support.

## **Recommendations**

Universities should invest in upgrading technological resources, including reliable internet access and necessary hardware, to facilitate AI integration effectively. Develop and implement training programs tailored to the needs of educators and students, focusing on the practical applications of AI in Islamic Studies. Institutions should create policies that actively support AI initiatives, including funding for resources and training, to demonstrate commitment to AI adoption. Conduct workshops and seminars to raise awareness about the benefits of AI in education, addressing common misconceptions and cultural concerns. Encourage collaboration between northern and southern institutions to share resources, best practices, and strategies for successful AI integration in Islamic Studies. Engage with community leaders and stakeholders to ensure that AI tools align with cultural and religious values, fostering acceptance and relevance in the educational context.



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