CHALLENGES AND OPPORTUNITIES IN USING AI TECHNOLOGY IN ARABIC LANGUAGE LEARNING: PERSPECTIVES OF LECTURERS AND ARABIC LANGUAGE EDUCATION STUDENTS

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ABSTRACT

The development of artificial intelligence (AI) technology has had a significant impact on the world of education, including Arabic language learning. However, the application of this technology still encounters various opportunities and challenges, especially for lecturers and students of the Arabic Language Education Study Programme (PBA). This study formulates the problem of how the challenges and opportunities of using AI in Arabic language learning are perceived by lecturers and students. The purpose of this study is to analyse the benefits and obstacles of integrating AI into Arabic language learning, as well as to offer strategies for optimising its use. The research method used is qualitative with a case study approach, through in-depth interviews and observations of PBA lecturers and students. The results show that the use of AI has the potential to increase learning efficiency, provide interactive media, and strengthen student motivation to learn. However, the challenges to encounter include limited digital literacy, the potential for excessive dependence on technology, limited accuracy in classical Arabic texts, and academic ethical issues. Thus, the integration of AI in Arabic language learning needs to be done critically, adaptively, and sustainably.

Keywords: Artificial Intelligence, Arabic Language Learning, Challenges and Opportunities

BACKGROUND

The development of artificial intelligence (AI) technology in the field of education has become one of the important themes in the era of the Fourth Industrial Revolution and Society 5.0. In various parts of the world, the use of AI in foreign language learning has experienced significant growth, both in the form of mobile learning applications, chatbots, automatic text analysis, and learning recommendation systems. In the context of higher education in Indonesia, particularly in Arabic Language Education (PBA) departments, this phenomenon has begun to attract attention due to its relevance to improving learning effectiveness, methodological innovation, and learning management efficiency (Nurullawasepa et al., 2023).

However, the use of AI in Arabic language learning in higher education still faces a number of challenges. These challenges include the readiness of lecturers to master the technology, limitations in digital infrastructure, a lack of technological literacy among students, and academic ethical issues such as plagiarism, which has the potential to increase with the ease of access to AI technology (Perdana, n.d.). On the other hand, the opportunities offered are enormous, including personalized learning, accelerated access to teaching materials, increased student motivation to learn, and efficiency in the academic evaluation process.

Several previous studies have shown that AI can contribute positively to foreign language learning. A study by Allisa Tazkia (Fitri, 2025) on a literature review: The Integration of Artificial Intelligence (AI) in Arabic Language Learning shows the importance of developing sustainable and contextual AI integration strategies, as well as the need for collaboration between Arabic language experts, education experts, and technology developers to maximize the benefits of AI in Arabic language learning. Meanwhile, a study by Nita Rustanti (Rustanti, 2025) entitled The Use of Artificial Intelligence in Japanese Language Learning in Vocational Colleges reveals that the research explains that the types of AI used by students in the Japanese language learning process are ChatGPT, Google Translate, Gemini AI, Meta AI Whatsapp, and Japanese language applications. There are no significant negative or positive impacts of AI use on students in Japanese language learning. Meanwhile, this study focuses on the challenges and opportunities of using AI technology in Arabic language learning from the perspective of PBA lecturers and students.

Based on this background, this article aims to explore the challenges and opportunities of using AI in Arabic language learning from the perspective of lecturers and students in the Arabic Language Education (PBA) department. This research is important to provide an empirical picture of the readiness and perceptions of the academic community towards the adoption of this new technology. First, from the lecturers' perspective, the use of AI in Arabic language learning is often constrained by limited digital competence (Hakim et al., n.d.). Not all lecturers have the skills to effectively integrate technology into the curriculum. This requires ongoing training programs that can improve lecturers' digital literacy, enabling them to utilize various AI applications, such as adaptive learning platforms, automated text analysis, and virtual assistants, to enrich the learning experience of students.

Second, students, as the main users, also face similar challenges. Although the younger generation is generally more familiar with technology (Fitrah et al., 2024), AI literacy for academic purposes is still relatively low. Some students tend to use technology only for practical purposes, such as simply translating text, without critically understanding the learning process that takes place. Therefore, learning strategies are needed that can foster students' awareness to use AI as a supporting tool, not as a substitute for critical and creative thinking processes. Third, digital infrastructure is also an important aspect in supporting the successful integration of AI in the campus environment. Limited access to the internet, hardware, and supporting software often hinders implementation. Universities need to provide adequate facilities, including AI-based learning management systems, digital language laboratories, and consistent technical support. Without strong infrastructure support, the use of AI in Arabic language learning will be difficult to achieve optimal results (Iman et al., 2024).

Fourth, academic ethics need serious attention. Unwise use of AI can trigger unhealthy practices, such as plagiarism and over-reliance on machines, thereby reducing students' originality in writing and thinking. Therefore, universities need to formulate clear ethical policies on AI use, accompanied by supervision and guidance so that students are able to use technology responsibly. Despite these challenges, the opportunities offered by AI remain very promising. With proper implementation, AI can help personalize learning (*Document (11).Pdf*, n.d.), provide instant feedback, and measure student learning outcomes more accurately. In addition, AI also has the potential to create more interactive and engaging Arabic language learning models, thereby increasing student motivation to learn. If the existing challenges can be overcome gradually, the integration of AI in the Arabic Language Education department will be one of the strategic steps towards a more innovative Arabic language education transformation that is relevant to the needs of the times (Nuriyah & Hikmah, 2023).

RESEARCH METHOD

This study uses a qualitative approach, which aims to observe and understand a social phenomenon comprehensively or holistically, as a phenomenon that occurs and an inseparable whole (Rifka Agustianti, 2022). The research method is a series of approaches, used specifically to obtain information systematically and measurably, in accordance with predetermined objectives related to the challenges and opportunities of using AI technology in Arabic language learning from the perspective of PBA lecturers and students. This qualitative method is used to explore and understand the meaning of individual and group behavior, as well as to provide an overview of social issues or humanitarian problems. As a research instrument, it uses the researcher himself or a human instrument, who has the responsibility of determining the focus of the research, selecting informants as sources of information, collecting data, evaluating data validity, analyzing, interpreting the results, and drawing conclusions from their research findings.

This study uses a descriptive qualitative approach (Zainal Efendi, 2024), aiming to show how lecturers and students perceive the use of AI technology in the learning process. The instrument in qualitative research is the researcher himself (human instrument). As an instrument, the researcher has an important role in determining the focus of the research, selecting informants as data sources, collecting data, evaluating data quality, analyzing data, interpreting the results of the analysis, and concluding the research findings. These steps are in line with Creswell's opinion that qualitative researchers view social phenomena comprehensively, seeing existing symptoms as a whole, a means of exploring and understanding the meaning of individuals or groups, and analyzing data inductively and obtained through in-depth interviews. The data used in this study is qualitative, so interviews were conducted with lecturers and students who use Artificial Intelligence in the learning process. The interviews aimed to explore the experiences, perceptions, views, and input of lecturers and students.

This study aims to explore the perceptions of lecturers and students regarding the use of artificial intelligence (AI) technology in Arabic language learning at the Badrus Sholeh Islamic Institute in Kediri. The research informants were lecturers and active students of the Arabic Language Education (PBA) study program, who were selected through the identification of informants with in-depth experience in AI technology. Through this data collection, the researcher hopes to gain a deeper understanding of AI technology. Through this data collection, the researcher hopes to gain a deeper understanding of how lecturers and students view the role of AI as a tool in Arabic language learning, as well as the impact of this technology on their learning experiences (Sennrich et al., 2016). The results of this study are expected to provide useful insights for optimizing the application of AI technology in Arabic language education. The data analysis technique used in this study is thematic analysis, which aims to identify, organize, and analyze patterns or themes that emerge from interview data, as well as provide an in-depth understanding of the perceptions of lecturers and students regarding the use of AI technology in Arabic language learning.

RESEARCH FINDINGS

Arabic Language Education Program Lecturers' Perceptions of AI Technology in the Arabic Language Learning Process

Lecturers in the Arabic Language Education (PBA) study program have diverse views on the role of AI technology in Arabic language learning. Research shows that lecturers in the Arabic Language Education Study Program have a fairly high level of awareness of the development of artificial intelligence (AI) in the world of education. They realize that AI is an important instrument that has the potential to change the pattern of Arabic language learning. One lecturer stated, "*Now students ask more often about AI applications than printed dictionaries. This is a sign that their learning patterns have*

changed, and we as teachers need to adapt." This shows the openness of lecturers in responding to the increasingly developing dynamics of technology. In general, lecturers' perceptions of AI are positive. They believe that this technology can enrich teaching strategies in terms of material variety, interaction, and access to learning resources. One lecturer said, "*AI helps me prepare additional materials quickly, so I can focus on developing teaching strategies in the classroom*." This view confirms that AI is seen as an innovation that can strengthen the learning process, not just a technological trend (Widodo et al., 2024).

The most significant benefits for lecturers are the ease of preparing teaching materials and teaching time efficiency. Some lecturers use AI to design questions, provide conversation examples, and even check for grammatical errors. One lecturer stated, "*In the past, it took me a long time to prepare writing exercises, but now, with the help of AI, I can get a draft of the questions and then adjust them to the students' needs*." This finding confirms that AI is perceived as a pedagogical partner that enriches lecturers' creativity in teaching (Rochim, 2024).

However, the study also found considerable doubts about the use of AI, particularly regarding its limitations in understanding classical Arabic and religious texts. One lecturer revealed, "*AI is quite helpful for Arabic texts, but when it comes to classical religious texts, the results are often inaccurate*." This view shows that although AI is considered useful, lecturers remain selective in its use, especially in academic fields that demand high linguistic and scientific accuracy.

Ethical aspects are a major concern (Rochmawati et al., 2023). Lecturers are aware of the potential for AI to cause plagiarism and reduce students' critical thinking skills. One lecturer stated, "*I am concerned that students are too dependent on AI. They can copy and paste answers without trying to understand them*." Therefore, lecturers emphasize the importance of regulation and ethical literacy in the use of AI. This shows that lecturers do not only assess AI from a technical perspective, but also from its academic and moral impacts.

These findings can be explained through the Technology Acceptance Model (TAM) framework. The perceived usefulness factor is the main reason lecturers accept AI, while the perceived risk factor also appears strongly in their perceptions. One lecturer emphasized, "*AI is a tool, not a substitute. If we don't guide its use, students can go astray*." This statement confirms that lecturers are positive but remain critical and cautious about the use of this technology.

Overall, PBA lecturers' perceptions of AI can be described as positively critical acceptance. They welcome the potential of AI to improve learning effectiveness, but still emphasize the need for digital literacy, academic ethics, and pedagogical guidance. As one lecturer said, "*AI is important, but it is still the lecturers who must provide guidance. Without guidance, students will only be smart in using applications, not smart in Arabic*." This reinforces the position of AI as a partner in education, while lecturers continue to play a central role in maintaining the quality and direction of learning.

Arabic Language Education Students' Perceptions of AI Technology in the Arabic Language Learning Process

Students in the Arabic Language Education (PBA) program have diverse views on the role of AI technology in the learning process. The results of the study show that students in the Arabic Language Education study program have a high level of interest in the use of artificial intelligence (AI) in Arabic language learning. Most students consider AI to be a tool that can help them understand the material, including reading, writing, listening, and speaking skills (Abdurahman Abdurahman et al., 2025). One student said, "*When I have difficulty finding vocabulary, AI can immediately provide answers quickly.*

That helps a lot." These findings show that students' initial perceptions of AI tend to be positive because of its perceived practical benefits.

In addition to facilitating vocabulary comprehension, students use AI-based applications in writing and translation skills (Karyadi, 2023). Some students use AI-based applications to compose academic essays or translation exercises. One respondent said, "*I usually use AI to check whether my Arabic sentences are correctly structured or not*." This confirms that students see AI not only as a translation tool, but also as a learning companion that can provide instant feedback. Other findings show that students believe AI can increase their motivation to learn (Ulum, 2024). With AI-based applications, they feel that the learning process is more interactive and interesting. One student said, "*Learning Arabic feels more exciting because I can practice conversation directly with an AI chatbot*." This is in line with the principle of student-centered learning, where students are more active in seeking learning experiences that suit their style.

However, not all perceptions are positive. Some students are critical, highlighting the limitations of AI. One student said, "*When it comes to classical texts, AI often misinterprets the meaning. So, I still have to open a dictionary or ask my lecturer*." This view shows that students are aware of the weaknesses of AI in handling classical Islamic scientific texts, so they still rely on lecturers and sources as their main references. Another concern that arises is related to excessive dependence on AI. Some students admitted to feeling "spoiled" by this technology. One student said, "*Sometimes I become lazy to think for myself because AI can answer everything*." This raises ethical and pedagogical questions about the extent to which students can maintain their independence in learning in the digital age.

These results can be analyzed using the Technology Acceptance Model (TAM) framework. The perceived usefulness factor is very dominant, namely students' belief that AI helps them learn Arabic more quickly and efficiently. However, the perceived risk factor is also present, especially regarding the accuracy of classical texts and the potential to reduce critical thinking skills (Rustanti, 2025). This puts students in an ambivalent position, enthusiastically accepting AI while also recognizing the potential academic risks it poses.

Overall, PBA students' perceptions of AI can be described as positive-critical. They welcome this technology because it facilitates access, speeds up the learning process, and increases motivation. However, they also recognize its limitations, both in terms of accuracy and ethical implications. One student summarized their view by saying, "*AI is important, but there must still be guidance from lecturers so that we don't go in the wrong direction*." This confirms that for students, AI is an effective learning partner, but not a substitute for lecturers in Arabic language learning.

Analysis of Comparative Perceptions of Lecturers and Students

The findings show significant similarities and differences between lecturers' and students' perceptions of the use of AI technology in Arabic language learning. Both lecturers and students agree that AI provides convenience and efficiency in the learning process, especially in terms of material provision, translation, and language practice. However, the difference lies in the main focus: lecturers emphasize pedagogical and ethical aspects, while students highlight practical and motivational aspects (Amadi & Hikmah, 2025).

From the lecturers' perspective, AI is perceived as a tool that can ease administrative and technical burdens, such as in compiling questions, providing conversation examples, and checking grammatical errors (Simon, 2023). They see AI as a pedagogical partner, but remain cautious in its use. Conversely,

students view AI as a key tool that facilitates independent learning. Students are more enthusiastic about using AI to check vocabulary, practice conversations, or write essays, sometimes even replacing traditional learning methods. Critical tendencies were seen differently in both groups. Lecturers focused more on the potential negative impact of AI on students' independent thinking, as well as its limitations in handling classical Arabic texts. One lecturer said, "*AI can help, but students risk just copying answers without thinking*." Meanwhile, students were more critical of the technical aspects, such as translation errors or grammatical inaccuracies. This shows that lecturers are more focused on academic and ethical implications, while students focus on practical functions and reliability.

From the perspective of the Technology Acceptance Model (TAM) theory, lecturers and students both have high levels of perceived usefulness, but differ in their levels of perceived risk. For lecturers, the greatest risk is the degradation of learning quality and a decline in students' critical thinking skills. Meanwhile, for students, the greatest risk is the inaccuracy of AI results in understanding Arabic texts, especially in classical texts (Azhar et al., n.d.). This difference confirms the existence of variations in perception based on roles: lecturers as learning facilitators, students as direct users. From the perspective of the Technology Acceptance Model (TAM) theory, lecturers and students both have high levels of perceived usefulness, but differ in their levels of perceived risk. For lecturers, the greatest risk is the degradation of learning quality and a decline in students' critical thinking skills. Meanwhile, for students, the greatest risk is the inaccuracy of AI results in understanding Arabic texts, especially in classical texts. This difference confirms the existence of variations in perception based on roles: lecturers as learning facilitators, students as direct users.

Thus, this comparative analysis shows that lecturers and students are in complementary positions. Lecturers provide ethical and pedagogical perspectives, while students provide practical and technical perspectives. Both have positive-critical views of AI, which, when combined, can form a strong basis for the development of technology-based Arabic language learning strategies in the future. This also emphasizes the importance of comprehensive digital literacy for the entire academic community.

DISCUSSION

The Implications of AI on Arabic Language Learning Outcomes

The rapid development of AI technology has had a significant impact on various aspects of life, including education. In the context of learning, AI technology is an innovation that can change the paradigm of the teaching and learning process (Fitri, 2025). The presence of this technology opens up new opportunities to improve the quality of learning outcomes, while also presenting challenges that need to be anticipated wisely by educators and learners.

The use of AI technology in Arabic language learning allows for a more personalized, adaptive, and interactive learning process. AI-based systems can analyze the abilities of individual learners and then present learning materials that are tailored to their needs and level of proficiency. This helps learners study Arabic more effectively because each material is tailored to their individual learning speed. In addition, AI technology is capable of providing instant feedback on pronunciation or writing errors, so that students can immediately correct their mistakes and continuously improve their language skills.

The presence of AI also expands access to Arabic language learning. Through online platforms equipped with virtual tutors or intelligent chatbots, students can practice anytime and anywhere without relying on the physical presence of lecturers. This situation provides more flexibility for students to explore Arabic in various contexts, both academic and everyday communication.

However, behind these various benefits, the application of AI technology in Arabic language learning also poses a number of challenges. Overall, technology has great potential to improve learning outcomes. With the right approach, AI can accelerate the mastery of vocabulary, grammar, and Arabic communication skills. However, the success of this technology's application also depends on the readiness of lecturers, students' digital literacy, and policies governing the use of AI in education. Therefore, the application of AI should not be interpreted as a replacement for the role of lecturers, but rather as a tool that enriches the learning process and strengthens the achievement of Arabic learning outcomes in the digital era.

Challenges and Opportunities in Using AI Technology in Arabic Language Learning

The results of the study show that there are several challenges and opportunities in the use of AI iSn Arabic language learning.

1. Challenges

a. Limitations in Technological Literacy

Students still experience difficulties in operating AI-based applications. One student stated, “I am often confused when using AI applications for vocabulary practice because the interface is unfamiliar.” This shows the need for initial training for students.

b. Lecturer Readiness

Some lecturers feel that AI technology is too complex. One lecturer said, “I understand the benefits of AI, but I am not used to using it in class. It requires additional learning time.”

c. Technological Infrastructure

Infrastructure is also an obstacle. Not all students have compatible devices, and internet connections are often unstable.

2. Opportunities

a. Personalized Learning

Students feel that AI helps tailor material to individual needs. For example, AI applications can recommend nahwu exercises that address students' weaknesses.

b. Increased Motivation

Respondents mentioned that using AI chatbots for conversation practice makes them more motivated, as they can practice without feeling embarrassed.

c. Evaluation Efficiency

Lecturers admit that they are assisted in providing automatic feedback through AI-based text analysis systems, making assessment more efficient.

SThese findings reveal a gap between the potential of AI and its readiness for use in the context of Arabic language education. In terms of opportunities, AI can enrich Arabic language learning methods through an adaptive approach that emphasizes the importance of integrating technology, pedagogy, and content in learning. Arabic language educators are required to not only master Arabic language material, but also pedagogical strategies that are in line with digital technology. In addition, ethical issues are an important concern. Some lecturers are concerned that students will misuse AI for plagiarism, especially in writing papers or translations. Therefore, there needs to be an ethical policy on the use of AI, including digital academic literacy training that emphasizes integrity.

These findings imply that the adoption of AI in Arabic language learning requires a holistic approach. It is not enough to simply provide the technology; lecturers and students must also be supported through training, infrastructure provision, and clear regulations.

CONCLUSION

This study concludes that the use of AI in Arabic language learning in the Arabic Language Education Study Program presents both challenges and opportunities. The main challenges include limited technological literacy, lecturer readiness, and infrastructure. Meanwhile, the opportunities that arise are personalized learning, increased student motivation, and efficiency in evaluation. The practical implications of this study are the need for digital literacy training for lecturers and students, the provision of adequate infrastructure, and ethical policies related to the use of AI. The theoretical implications are the need to develop AI-based Arabic language learning models that are suitable for the characteristics of students in Indonesia. Further research is recommended to explore AI implementation models for specific language skills, such as speaking or writing, and to conduct comparative studies with other foreign language learning approaches.

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