Integrating Artificial Intelligence into the Arabic Language Teaching Plan at Higher Education

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Abstract. The integration of Artificial Intelligence (AI) in language education has shown significant promise in enhancing teaching effectiveness and student engagement. This study aims to explore the strategies for integrating AI into the Arabic language teaching plan at Universitas Islam Riau. The primary objective is to identify effective methods and tools that can be employed to enhance the learning experience and outcomes for Arabic language students. The research employs a qualitative approach using case study methodology to gather in-depth insights from educators and students. Data collection methods include interviews, surveys, and analysis of existing teaching materials and AI tools. The research instruments consist of structured interview guides, survey questionnaires, and evaluation rubrics for AI tools. The findings indicate that the integration of AI can significantly enhance personalized learning, provide real-time feedback, and support interactive and engaging learning experiences. However, challenges such as the need for technical training for educators and the adaptation of existing curricula to incorporate AI tools were also identified. The study concludes that while AI integration in Arabic language teaching at Universitas Islam Riau holds great potential, it requires strategic planning, continuous support, and collaboration among stakeholders to address the challenges and maximize the benefits. These insights can serve as a guide for other institutions seeking to incorporate AI into their language teaching programs.

1. Introduction

Higher Education faces significant challenges in improving the quality of Arabic language teaching, especially in the context of adapting to modern technology. The application of artificial intelligence (AI) in education has shown great potential to improve the effectiveness and efficiency of teaching despite challenges such as lack of infrastructure, training needs for teaching staff, and resistance to change (1,2). Abu Khurma (3) emphasized that the integration of ChatGPT in education can lighten teachers' workload by automating administrative tasks, allowing teachers to focus more on direct interactions with students and creative learning activities. These challenges also include data privacy issues

and algorithmic bias that need to be addressed to maximize the potential of AI in education (2,4,5).

In the current era of AI, Self-Regulated Learning is the main thing that students must have in carrying out all learning processes, especially foreign language learning (6,7), and the Heutagogical learning approach has found the right momentum (8–10), where foreign language learning requires a supportive language environment (11,12).

Furthermore, research shows that AI integration is not only limited to reducing administrative burdens but also to improving the quality of learning through personalization. Fitrianto, Setyawan, and Saleh (13) underlined that AI can create learning experiences tailored to individual needs, increasing student motivation and engagement in Arabic language learning. Smith and Jones support this view by stating that AI can help teachers design lessons that are more effective and tailored to student needs, reducing teacher workload with efficient automation tools. Additionally, research by Muñoz-Basols and Fuertes-Gutiérrez (14) shows that AI can offer innovative solutions to traditional pedagogical challenges, increasing the personalization, accessibility and effectiveness of language education through learning applications, chatbots and automated feedback systems.

However, there are also ethical and regulatory challenges that need to be considered when implementing AI in education. Nur et al. (2) highlight issues such as unequal access, privacy concerns, and potential discriminatory outcomes. They emphasized the importance of creating a unified ethical framework for AI in education to ensure responsible and ethical use. Research by Langran (4) and Bieletzke (15) supports the importance of a holistic framework to address these challenges, emphasizing the need for comprehensive training for educators and systematic evaluation models such as the AI Maturity Matrix to assess and increase AI adoption in academic institutions progressively.

Previous research also shows that other technologies, such as Augmented Reality (AR), have great potential in education. Wang and Liu (16) found that integrating AR in elementary education can improve students' motivation and academic achievement. They noted that students who learned with the help of AR showed increased intrinsic motivation and better learning outcomes compared to conventional methods. Additionally, AR is also effective in increasing student engagement and enriching their learning experience, providing an example of how technology can change traditional classroom dynamics.

On the other hand, technical challenges and adjustments to the teacher's role also need to be considered. Research by Yang shows that the integration of AI technology in foreign language teaching at the university level can improve teaching effectiveness and talent development but also bring technical challenges and adjustments to the teaching role; this includes the need for technical mastery, adapting teaching methods, and protecting student privacy. In this case, AI-based approaches can increase the accessibility of Arabic language education, especially for those who have limited access to traditional resources.

Various studies have explored the potential and challenges of AI integration in education. Smith and Jones (17,18) highlight the great potential of AI-supported lesson planning in optimizing the learning process. AI can help teachers design lessons that are more effective and tailored to individual student needs. Apart from that, AI is also able to reduce teacher workload by providing efficient automation tools. The integration of AI in lesson planning can improve the quality of education and strengthen teachers' abilities to manage the classroom more productively (3,13).

Bieletzke (17) in his research, developed the AI Maturity Matrix model, a systematic framework that academic institutions can use to assess and classify their current level of AI adoption and identify areas for improvement. The model categorizes AI integration into

various stages, providing a clear path for institutions to improve their AI capabilities progressively. This model shows the importance of a gradual and structured approach in adopting AI technology so that it can be utilized optimally in an educational context (4,5,15).

Research by Wang and Liu (19) shows that the integration of Augmented technology Reality (AR) in basic education has a significant positive impact on students' learning motivation and academic achievement. Using a quasi-experimental approach, this study found that students who learned with the help of AR showed increased intrinsic motivation and better learning outcomes compared to the control group who used conventional methods. Additionally, AR has also proven effective in increasing student engagement and enriching their learning experience (13).

Fitrianto, Setyawan, and Saleh highlighted that the use of AI in designing (13) personalized Arabic learning plans has great potential to improve learning outcomes. AI enables the creation of learning experiences tailored to individual needs and preferences, which can increase learner motivation and engagement. AI-based approaches can also increase the accessibility of Arabic language education, especially for those who have limited access to traditional resources. This research supports previous findings about the personalization and efficiency benefits offered by AI in education (13,14).

Which highlights the challenges and opportunities faced by foreign language teachers in the era of artificial intelligence (AI). The research results show that the integration of AI technology in foreign language teaching at the university level can significantly improve teaching effectiveness and talent development. AI provides a variety of innovative tools that teachers can use to improve student learning outcomes. However, implementing AI also brings challenges, including the need for technical mastery, adapting teacher roles, and protecting student privacy (2,4).

Research by Muñoz-Basols and Fuertes-Gutiérrez (14) elaborates on the transformational potential of AI in language teaching and learning. They highlight that AI technology offers innovative solutions to traditional pedagogical challenges, increasing the personalization, accessibility and effectiveness of language education. By leveraging AI-based tools such as language learning apps, chatbots, and automated feedback systems, educators can provide learning experiences tailored to students' individual needs and their learning pace.

This research offers a new approach with a specific focus on the integration of AI in Arabic language teaching at Universitas Islam Riau. This approach not only aims to improve learning effectiveness but also develops AI integration models that are adaptive and contextual according to local needs. This study also proposes a holistic framework to address infrastructure and training challenges that have been identified in previous research (4,13,15).

This research aims to 1) Identify effective strategies for integrating AI in the Arabic language teaching plan at Universitas Islam Riau. 2) Evaluate the impact of using AI on the effectiveness of Arabic language learning. 3) Developing an adaptive and contextual AI integration model for Arabic language education. 4) Provide recommendations for educational policies and practices that support the application of AI in the Arabic language curriculum.

Thus, it is hoped that this research can make a significant contribution to optimizing Arabic language learning through the application of AI technology, as well as overcoming the challenges that exist in the process of integrating this technology in higher education environments.

2. Research Methodology

This research uses a qualitative approach with case study methodology to explore effective strategies for integrating artificial intelligence (AI) into Arabic language teaching plans at Universitas Islam Riau. This methodology was chosen because it allows researchers to gain in-depth insights from educators and students and analyze the various tools and methods used in teaching Arabic. This research design takes the form of an exploratory case study involving an in-depth analysis of the integration of AI in Arabic language teaching at Universitas Islam Riau. This research will include a variety of data collection techniques to ensure the comprehensiveness and accuracy of the findings.

The research subjects consisted of educators, students and managers of the Arabic language education study program at Universitas Islam Riau. Subject selection was carried out using purposive sampling to ensure that respondents had experience and knowledge relevant to the research topic.

Data collection in this research used: 1) In-depth Interviews: In-depth interviews will be conducted with educators and managers of Arabic education study programs to gain an understanding of the experiences, perceptions and challenges faced in AI integration. This interview uses a structured interview guide to ensure that all important aspects are covered. 2) Survey: A survey will be distributed to students taking Arabic language programs to collect data regarding their experiences in using AI tools in learning. The survey questionnaire will include questions about the effectiveness of AI in improving motivation and learning outcomes. 3) Document Analysis: Analysis of related documents, including syllabi, teaching materials, and evaluation reports, will be carried out to understand how AI has been integrated into the Arabic curriculum. 4) Evaluation of AI Tools: Evaluation of AI tools used in Arabic language teaching will be carried out using an evaluation rubric developed based on existing literature. This evaluation will cover aspects such as ease of use, effectiveness in improving learning, and support for personalization of learning.

The data collected will be analyzed using thematic analysis techniques to identify key themes related to AI integration strategies. This analysis will include the following steps: 1) Transcription and Coding: Transcription of the interview results will be carried out, and then the data will be coded to identify the main themes. 2) Theme Categorization: The identified themes will be categorized based on their relevance to the research objectives. 3) Data Triangulation: Data triangulation will be carried out by comparing findings from various data sources (interviews, surveys, document analysis, and AI tool evaluation) to increase the validity and reliability of the findings.

The instruments of this research are: 1) Structured Interview Guide: This guide contains questions that will be asked in in-depth interviews with educators and program managers. 2) Survey Questionnaire: This questionnaire consists of closed and open questions designed to collect data from students about their experiences with AI in learning. 3) AI Tool Evaluation Rubric: This rubric is used to evaluate AI tools based on criteria such as ease of use, effectiveness, and personalization.

This research will adhere to the principles of research ethics, including obtaining written informed consent from all participants, maintaining confidentiality of data, and ensuring voluntary, non-coerced participation. Each participant will be given clear information about the research objectives, procedures and their rights as participants.

3. Results and Discussion

Based on the data obtained from interviews with lecturers and students at Universitas Islam Riau, as well as results distributed questionnaires to 100 Arabic Language Education students, the following findings are mainly related to the integration strategy of artificial intelligence (AI) in plan teaching Arabic.

3.1 View Lecturer towards AI Integration

3.1.1 View about AI Integration:

Most lecturers view positive deep AI integration in teaching Arabic. First informant stated that AI delivers opportunities to make learning more interactive and interesting for students. Second informant adds that AI is a necessary innovation in Arabic education, especially in providing bait back to students individually, which is difficult to do with conventional methods. The third informant mentions that AI integration is the future of education, and we must adapt fast to make use of it.

3.1.2 Benefit AI Uses:

The lecturer identified several benefits of the main use of AI, including the ability to give bait Real-time feedback, personalization learning, and improvement involvement of students. The first informant mentioned that application learning AI-based can quickly repair error pronunciation among students, which is very helpful in increasing the skills they speak. Second informant adds that AI can increase the involvement of students through gamification and learning methods. Third informant also sees AI as an efficient tool for monitoring the progress of students and providing recommendations for personalized learning.

3.1.3 AI Integration Challenges:

Challenges faced in AI integration include a lack of infrastructure and resource power, the need for comprehensive training for lecturers, and an adaptation curriculum. The first informant mentioned that lots of lecturers Do not have adequate access to device hardware and device software. The second informant emphasizes that the curriculum moment needs to be updated to accommodate the use of AI tools, and there is resistance from several lecturers comfortable with new technology. The third informant adds that lack of training is one of the challenges and main side problems with the availability of adequate devices.

3.1.4 Suggestions for Enhancement:

The lecturer recommends an enhancement of investment in infrastructure technology and training for the lecturer, as well as an enhancement of collaboration with developer technology to create appropriate tools for specific learning Arabic. The first informant mentioned the importance of collaboration with developer technology to create appropriate tools. The second informant emphasizes the necessity to support sustainable institutions in the form of updated technology and resource Power addition. The third informant recommends the development of a flexible curriculum that can easily integrate AI technology.

3.2 View Student towards AI Integration

3.2.1 Experience with deep AI Arabic Learning:

Most of the respondents (95%) stated that they know What Artificial Intelligence (AI) or intelligence is. This shows that the level of awareness and knowledge about AI in circles respondents Enough tall. As for the use of AI in All Arabic Language Learning, respondents (100%) also stated that they had Once used the tool deep AI-based learning Arabic before. This matter shows that the application of AI technology is already common among students in Arabic at Universitas Islam Riau. Whereas frequency Use of AI in Learning Arabic, Respondents gave variation in matter frequency use of AI in learning Arabic Several times a month: 50% mentioned several times in a month.
In contrast, only 25% mentioned it several times in a week, and as many as 25% said it seldom very; this shows that although the use of AI is sufficiently spread breadth intensity, its use Still varies. Most users use it several times a month, which shows that integration exists, but it has not yet fully become a routine part of daily learning.
Analysis This describes temporary knowledge and use of AI, which is already high enough. There is still room for increased frequency and intensity of the use of AI in learning Arabic. More AI implementation strategies are structured and in-depth, which can help increase the effectiveness of learning and adoption of technology. This, in a way, is wide.

3.2.2 Perception towards AI Integration:

All 100% of respondents felt that effective AI tools help understand material Arabic, though differences in level perception between answers are effective, enough effective and very effective. This shows that AI can become a significant tool in the language learning process. Almost half of the respondents (45%) felt that motivation increased with the use of AI. Meanwhile, 30% answered Enough increased, and 25% answered neutral. Most of the respondents (70%) agreed that AI makes learning more Arabic interesting. This shows that AI can increase Power pull material lessons. As for 30%, they behave neutral; this shows that there are different opinions about how interesting learning is with AI.
Most (70 %) respondents agree that AI delivers a useful return. This shows that AI can help in giving information and useful feedback to students. Meanwhile, 30% behaved neutral. This shows that not all students benefit directly from bait-back AI. Most of the respondents (80%) agreed that AI helps in personalization learning. This shows that AI can adapt learning to individuals. 20% of respondents behave neutral. This shows that there is a need to increase deep AI capabilities and personalization.

3.2.3 Challenges in Use of AI

Most of the respondents (71.43%) felt that a lack of training was the main challenge. This shows the need for more training programs that are good for maximizing the use of AI. Fraction respondents (7.14%) were worried about data privacy. This shows that although there are privacy issues, there are, however, No worries, mainly big students. Some respondents (21.43%) said they challenge others. This shows that various other possible factors influence the effective use of AI.
Analysis results show that most students feel that AI is effective and useful in learning Arabic. However, there is a necessary challenge to overcome, especially in the matter of training AI use and concerns about data privacy. Recommendation For to front is to improve training and handling programs' problem privacy to ensure more AI implementation successful and efficient at the Islamic University

3.2.4 Challenge in AI Uses:

Students also identify several challenges in the use of AI, including a lack of training about the use of AI (52.63%), concerns about data privacy (10.53%), and lack of access to adequate technology (10.53 %). Several students also mentioned challenges in the matter of time required to learn new technology.

3.2.5 Recommendation for Enhancement:

After thorough data coding, identification patterns and trends, and exploration context, the recommendation for the repair is as follows: 1) Improve Access Technology: Improve infrastructure technology at Universitas Islam Riau to ensure more access. Good for students. 2) Introduction to AI: Hold workshops or seminars to introduce AI and its uses in learning Arabic. 3) Freedom in the Use of AI: Providing freedom to students to use AI to support the learning process.

3.3 Discussion

3.3.1 Potential and Benefits of AI Integration:

Research results show that deep AI integration in teaching the Arabic language at Universitas Islam Riau has the potential to increase quality learning. The main identified areas cover personalization learning, improvement in student involvement, and efficiency in assessment and feedback. AI makes it possible to make learning interactive and interesting, as well as provide bait comeback time that is useful for increasing the Skills of Language students. Findings This is in line with a study earlier that showed that AI can increase the effectiveness of teaching and outcomes Study students (13,14).

3.3.2 The challenge in AI Integration:

Although potency benefits big, AI integration is also facing a significant challenge. The main identified cover the lack of infrastructure technology, the need for training for lecturers, and the adaptation curriculum. Lack of training and technical skills among lecturers become obstacles to the effective use of AI. Besides that, a worry about student data privacy is also an important issue that must be overcome. Findings This is consistent with a study earlier that showed that challenging technical and adaptation curriculum is an obstacle in the application of deep AI technology education (2,4,15).

3.3.3 Strategy for Overcome Challenge:

To overcome the challenge, the research recommends several strategies, including enhancement of investment in infrastructure technology, sustainable training for lecturers, and collaboration with developer technology. Comprehensive and ongoing training for lecturers is very important to ensure that they own the necessary skills for using AI effectively in teaching. Besides that, collaboration with developer technology can help create appropriate AI tools for specific learning Arabic. Enhancement of infrastructure technology is also needed to support the widespread and effective use of AI on campus.

3.3.4 Implications for Education Policy and Practice:

Study These implications are important for policies and practices in education. Deep AI integration teaching Arabic requires planning strategies and support sustainability from all holder interests. Institution education needs to provide sources of adequate Power, in the form of technology or training, to support the use of AI in learning. Besides, That's a supportive policy. Ethical and safe use of AI is essential to ensure that student data privacy is protected. Support policies are also needed to facilitate the effective adaptation of possible curriculum AI integration in the learning process.

4. Conclusion

Deep AI integration teaching the Arabic language at Universitas Islam Riau shows potency for increasing quality learning through personalization, improving student involvement, and improving efficiency in assessment and feedback. However, challenges like lack of infrastructure technology, the need for training for lecturers, and worries about data privacy are a must overcome with Good. Study This recommends the enhancement of investment in technology, training on sustainability, and collaboration with technology developers to overcome challenges. With thorough planning and support sustainable from all holder interests, AI integration can make a significant contribution to increasing the quality of Arabic education at Universitas Islam Riau.

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