



## STRATEGIES FOR IMPLEMENTING AI-ENHANCED AUTODIDACTIC ARABIC LEARNING AT UNIVERSITAS ISLAM RIAU

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### ABSTRACT

This paper presents an in-depth examination of strategies for implementing AI-enhanced autodidactic Arabic learning at Universitas Islam Riau (UIR). Using a qualitative descriptive approach and a case study design, the research engages students and lecturers from the Arabic Language Education Study Program to explore their experiences and perceptions of AI tools like ChatGPT. The findings reveal that AI significantly enhances students' learning independence and Arabic language proficiency by providing personalized and adaptive learning resources. Despite the general positive attitude towards AI, concerns about data accuracy and accessibility remain. The study emphasizes the necessity for comprehensive training for both lecturers and students to maximize the benefits of AI in education. It also advocates for the development of adaptive curricula that cater to individual learning needs. By addressing ethical and practical challenges, the research highlights AI's potential to transform Arabic language education and recommends further longitudinal studies to assess its long-term impact.

**Keywords:** *Arabic Learning, Artificial Intelligence, Autodidactic Method*

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### 1. INTRODUCTION

The integration of artificial intelligence (AI) into educational frameworks has progressively transformed the traditional learning paradigms. One significant area of innovation is AI-enhanced autodidactic learning, where learners independently acquire skills and knowledge through AI-driven tools. This research focuses on the implementation of AI-enhanced autodidactic Arabic learning at Universitas Islam Riau (UIR), highlighting strategies to foster effective and autonomous language acquisition. The study aims to explore the potential of AI tools to support self-directed learning (SDL), particularly in the context of Arabic language education, and to propose strategic frameworks for their integration within the university's curriculum.

Universitas Islam Riau, a prominent institution in Indonesia, has been at the forefront of integrating modern educational technologies into its academic programs. The adoption of AI in education has been driven by its potential to provide personalized learning experiences, automate administrative tasks, and offer innovative pedagogical



approaches. The importance of self-directed learning, especially in language acquisition, cannot be overstated. SDL empowers students to take control of their learning processes, fostering a sense of independence and intrinsic motivation.

Previous studies have shown that AI can significantly enhance language learning by providing personalized feedback, simulating conversational practice, and offering interactive learning environments (Ajlouni et al., 2023; Alqasham, 2023). However, the application of AI in facilitating autodidactic learning, particularly in Arabic language education, remains underexplored. This gap presents a unique opportunity for UIR to pioneer innovative educational strategies that leverage AI to support SDL among its students.

This research aims to achieve the following objectives: 1) To identify effective strategies for implementing AI-enhanced autodidactic learning in Arabic language education at UIR. 2) To assess the impact of AI tools on students' language acquisition and SDL skills. 3) To develop a framework for integrating AI-driven learning tools into the Arabic language curriculum at UIR.

The focus will be on understanding how AI can be utilized to create a supportive learning environment that encourages self-direction, enhances engagement, and improves language proficiency among students.

The research is guided by the following hypotheses: 1) AI-enhanced autodidactic learning tools significantly improve students' Arabic language proficiency compared to traditional learning methods. 2) Students who utilize AI-driven learning tools demonstrate higher levels of SDL skills, including goal setting, self-monitoring, and self-assessment. 3) Integrating AI tools into the Arabic language curriculum at UIR enhances overall student engagement and motivation.

The scientific merit of this research lies in its innovative approach to integrating AI with autodidactic learning strategies within a specific cultural and educational context. By focusing on Arabic language education at UIR, this study addresses a critical need for effective language learning methods in a region where Arabic holds significant cultural and religious importance. The novelty of the research is twofold: 1) Application of AI in Autodidactic Learning: While AI's role in education has been widely studied, its specific application in promoting self-directed learning in Arabic language education remains relatively unexplored. This research will contribute new insights into how AI can



facilitate autonomous learning in a language that is both complex and contextually significant. 2) Cultural and Institutional Context: The study's focus on UIR provides a unique perspective on the challenges and opportunities associated with implementing AI in a traditional Islamic educational institution. The findings will offer valuable implications for other universities in similar cultural contexts, aiming to modernize their educational practices through AI integration.

The research is expected to yield several key outcomes: 1) Enhanced Language Proficiency: Students utilizing AI-enhanced learning tools are anticipated to show significant improvements in Arabic language proficiency, as measured by standardized language assessments (Ajlouni et al., 2023). 2) Improved SDL Skills: The use of AI tools is expected to foster higher levels of self-directed learning skills, including goal setting, self-monitoring, and self-assessment, thereby promoting lifelong learning habits (Samin, Dakhilullah, et al., 2023; Samin & Hikmah, 2021). 3) Strategic Framework: A comprehensive framework for integrating AI-driven learning tools into the Arabic language curriculum will be developed, providing a practical guide for educators and institutions seeking to implement similar strategies (Samin et al., 2022; Samin, Zulkifli, et al., 2023). 4) policy Recommendations: Based on the findings, policy recommendations will be made to support the sustainable and ethical implementation of AI in education, addressing potential challenges such as data privacy, digital equity, and faculty training (Albahiri et al., 2023; Klimova et al., 2024).

As technological advancements continue to reshape educational paradigms, integrating artificial intelligence (AI) into language learning has become increasingly important. This paper discusses the implementation strategies and outcomes of AI-enhanced autodidactic Arabic learning at Universitas Islam Riau (UIR). The study aims to enhance students' learning independence and language proficiency through AI technologies like ChatGPT.

Employing a qualitative descriptive approach and case study design, this research involves students and lecturers from UIR's Arabic Language Education Study Program. Data were collected via semi-structured interviews, participatory observation, and document analysis. These methods provided comprehensive insights into the experiences and perceptions of AI-assisted learning from both students and lecturers.



## **2. METHOD**

Data Collection Methods: 1) In-depth Interviews: Semi-structured interviews with students and lecturers provided detailed insights into their experiences and perceptions of AI-assisted learning. 2) Participatory Observation: Researchers observed AI-integrated classes to understand the practical application of AI in learning environments. 3) Documentation: Analysis of relevant documents such as AI-based learning modules, curriculum materials, and student progress reports complemented the interview and observation data.

### **Data Analysis**

The collected data were analyzed using thematic analysis, which involved coding, identifying themes, and interpreting the findings. Triangulation techniques ensured the validity and reliability of the data by cross-verifying information from multiple sources.

## **3. FINDINGS AND DISCUSSION**

### **Finding**

#### **AI's Impact on Learning Independence and Proficiency**

The study found that AI significantly enhances students' learning independence and Arabic language proficiency. Students appreciated the flexibility and personalized learning resources provided by AI tools. This is consistent with findings by Klimova et al. (2024), who reported improvements in cognitive, creative, and critical skills through AI usage.

#### **Perceptions of AI in Education**

Students and lecturers generally viewed AI positively, recognizing its role in facilitating and streamlining the learning process. However, concerns about data accuracy and AI service accessibility were also noted, echoing Ajlouni et al. (2023).

#### **Impact on Student Personality and Performance**

AI-supported autodidactic learning positively influenced students' personalities and performance, fostering greater confidence, independence, and proactive learning behaviors. These findings align with those of Khan et al. (2021), who observed that autodidactic learning enhances students' informational power and performance.



## **Discussion**

The integration of AI into Arabic language learning at UIR presents numerous benefits, including increased learner autonomy and improved language skills. However, ethical and practical challenges, such as data accuracy and reliance on AI, need to be addressed. Effective training for lecturers and students on the optimal use of AI is essential. Moreover, developing adaptive curricula that leverage AI technology can cater to individual student needs, enhancing the overall learning experience.

### **Enhancing Learner Autonomy**

The use of AI tools in language learning significantly enhances learner autonomy. Students can control their learning pace and access resources tailored to their individual needs, fostering a more personalized and effective learning experience.

### **Personalized Learning and Flexibility**

AI tools provide a level of personalization that traditional methods struggle to achieve. By adapting to each student's learning style and pace, AI enhances the overall learning experience, making education more flexible and accessible.

### **Ethical and Practical Challenges**

Despite the benefits, integrating AI in language learning poses challenges such as data accuracy and service accessibility. Ensuring the reliability of AI tools and addressing ethical concerns are crucial for successful implementation.

### **Training and Curriculum Development**

Comprehensive training for both lecturers and students is essential to maximize the benefits of AI. Additionally, developing adaptive curricula that incorporate AI technology can further enhance learning outcomes by meeting individual needs.

## **Recommendations**

### **Training for Lecturers and Students**

Educational institutions should provide comprehensive training programs for lecturers and students to maximize the benefits of AI in learning. This training should cover the functionality of AI, its application in educational contexts, and strategies for overcoming potential challenges.



## **Adaptive Curriculum Development**

Developing adaptive curricula that integrate AI technology is crucial. These curricula should be designed to meet individual student needs, supporting their learning independence and fostering a personalized learning experience.

## **Future Research**

Further research is necessary to explore the long-term impact of AI on Arabic language learning. This should include ongoing evaluations of AI's effectiveness and its integration with traditional learning methods to create a holistic and practical educational approach.

## **4. CONCLUSIONS**

This study demonstrates that AI, particularly ChatGPT, can significantly enhance autodidactic Arabic language learning at UIR. Despite challenges related to data accuracy and AI accessibility, the benefits of increased learning independence and improved language proficiency are substantial. Comprehensive training and adaptive curricula are essential for optimizing AI use in education, paving the way for more effective and efficient language learning.

By embracing AI-supported autodidactic learning, UIR can lead the way in modernizing Arabic language education and preparing students for the demands of the digital age. The findings of this study provide a foundation for future research and practical implementations that can transform the landscape of language learning in higher education.

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