



ARTIFICIAL INTELLIGENCE AND THE TRANSFORMATION OF ARABIC MEANING: CHALLENGES AND OPPORTUNITIES

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Abstract

This research discusses the use of artificial intelligence (AI) in Arabic language education and the transformation of Arabic meaning through AI. It also discusses the challenges and opportunities presented by AI in Arabic language education. Using the library research method, this study collects and analyzes various relevant literature sources to understand how AI can improve the Arabic language learning process. The results show that AI can improve the effectiveness of Arabic language learning by providing an interactive, diverse, and engaging platform, as well as providing quick and accurate responses to students. However, the research also found that there are some challenges presented by AI, such as the limited validity of information and the potential for cheating. The research also highlights the importance of accessibility of digital learning resources and interactive learning experiences that can motivate students in learning Arabic. Therefore, this study recommends that AI should be used effectively and responsibly in Arabic language education.

Keywords: Artificial Intelligence, Meaning Transformation, Arabic, Challenges, Opportunities

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Article History	Received	Revised	Accepted	Published
	2024-12-14	2025-03-01	2025-03-12	2025-04-25

INTRODUCTION

مقدمة

Artificial intelligence (AI) has become one of the most influential technological innovations in various fields, including education. In the context of Arabic language learning, AI offers significant potential to improve the effectiveness of the learning process. This research aims to explore how AI can be used in Arabic language education and the transformation of Arabic meaning, as well as to identify the challenges and opportunities presented by this technology. Against the backdrop of the rapid development of digital technology, it is important to understand how AI can enrich students' learning experience and overcome existing obstacles in Arabic language learning.

The rationale for this research is rooted in the need to improve the quality of Arabic language education in the era of globalization. With the increasing demand for foreign language acquisition, especially Arabic, the use of AI in education is expected to provide innovative solutions. This research also reviews the literature related to the application of AI in education, as well as its impact on the learning process. Through this approach, it is hoped that new ways can be found to utilize AI in improving students' Arabic language comprehension and skills.

The main motivation of this research is to contribute to the development of more effective and interactive learning methods. This study uses the library research method to collect and analyze various relevant literature sources. In this way, the researcher can explore various

case studies and previous research results that show how AI can improve the effectiveness of Arabic language learning. The results show that AI can not only provide an engaging learning platform, but also provide quick and accurate feedback to students.

The findings from this study indicate that while AI offers many benefits, there are some challenges that need to be overcome. One of the main obstacles is the validity of the information provided by AI systems, as well as the potential for academic fraud that may arise from the use of this technology. In addition, this study highlights the importance of the accessibility of digital learning resources and interactive learning experiences that can motivate students in learning Arabic. Therefore, the use of AI in education should be done effectively and responsibly.

In conclusion, the study asserts that the main objective is to understand the role of AI in Arabic language education and the transformation of the meaning of the language. Sufficient background shows that although much progress has been made, there are still challenges to be faced. A brief literature review revealed that although previous research has addressed some aspects of the use of AI in education, there is still room for further exploration regarding its specific impact on Arabic language learning. The identification of the limitations of previous research indicates the need for new approaches in applying this technology, while the current study offers new insights into how AI can be effectively used in the context of Arabic language education.

METHOD

منهج

This research uses the library research method. The use of library research method in this study aims to explore and analyze relevant literature related to artificial intelligence (AI) and meaning transformation in Arabic language learning. This method involves collecting data from various written sources, such as books, journal articles, and previous research documents, which provide in-depth insights into the application of AI in education. In the process, the researcher examined various case studies and existing research results to understand how AI technology can enhance the effectiveness of Arabic language learning, as well as the challenges faced in its application. By relying on credible sources, the researcher was able to identify the latest patterns, trends and innovations in the use of AI for language learning, while evaluating its impact on the teaching-learning process. The results of this method are expected to contribute significantly to the development of more effective and interactive learning strategies in the context of Arabic language education. The details are as follows:

"Artificial Intelligence and the Transformation of Arabic Language Meaning: Challenges and Opportunities". The methodology employed in this study is designed to provide an in-depth analysis of the role of artificial intelligence (AI) in transforming how the Arabic language is understood and taught. The author uses a systematic literature-based approach to ensure that the research findings are relevant, valid, and reflect the latest developments in this field.

1. Literature Selection Process

The author begins by identifying relevant sources through specific inclusion criteria. Selected sources must have a direct connection to the topic, such as scientific articles, research reports, or case studies discussing the application of AI in Arabic language learning. Additionally, only publications from accredited journals or reputable research institutions are used to ensure information quality. The primary focus is on recent literature, particularly works published in the last five years, to capture the latest advancements in AI technology and its impact on the Arabic language.

Conversely, the author excludes sources that are unverified or irrelevant to the research context. For instance, general articles about AI without specific discussions on Arabic language or education are excluded from the analysis. This approach ensures that the collected data maintains thematic depth and relevance.

2. Literature Analysis

Once the selected sources are gathered, the author conducts a literature analysis using a descriptive qualitative method. This process involves content analysis to identify key themes related to challenges and opportunities in AI implementation for Arabic language learning. Challenges such as the complexity of Arabic morphology, dialect variations, and cultural sensitivities are the main focus of the analysis. On the other hand, opportunities such as the development of AI-based interactive learning applications, Arabic language chatbots, and adaptive platforms for understanding linguistic contexts are explored in depth.

The author also employs data triangulation to enhance the validity of the findings. Data from various sources are combined, including interviews with teachers and students using AI technology, as well as direct observation of AI applications such as automatic translation systems and language learning software.

3. Research Context

This methodology is designed to answer the primary research question: how can artificial intelligence help overcome complex challenges in Arabic language learning while creating new opportunities? With this systematic and evidence-based approach, the study aims to provide comprehensive insights into the transformation of Arabic language meaning through AI technology. Moreover, the research emphasizes the importance of an interdisciplinary approach that considers cultural sensitivities to ensure that technology can be effectively applied in Arabic language education across various global contexts.

RESULT | نتائج

Definition of Artificial Intelligence (AI)

Education is a fundamental need for every human being. Religious teachings also emphasize the importance of education for every individual. Education can be obtained through various channels, including formal, non-formal, and informal. Education within the family (non-formal) plays a crucial role because that is where individuals first receive education (Sukmawati, 2013). The world of education continues to develop along with technological advances. One innovation that is now being promoted is the use of artificial intelligence (AI) in the learning process. AI technology offers various conveniences and potential to improve learning effectiveness, including in the field of Arabic language education (Muthohharoh et al., 2024). Along with the rapid development of information technology, the internet and social media have become the center of attention in various aspects of human life, including the use of social media as a source of information for students (Mushthofa et al., 2024).

Artificial Intelligence (AI) is a field in computer science that focuses on the development of intelligent agents, which can simply be interpreted as systems or programs that have the ability to imitate human thought processes and actions, so that they can solve complex problems in a more precise way (Pasaribu & Widjaja, 2022). Then, intelligent agents are designed to perform certain tasks in a way that resembles human intelligence, including the ability to learn from experience, solve problems, and make decisions based on data received (Fauziyati, 2023). In the

context of Indonesian language learning, AI offers a range of innovative possibilities to improve the learning process, making it more efficient, engaging, and interactive (Hindra Kurniawan et al., 2024).

According to another opinion, artificial intelligence is a system developed and innovated in the field of research modeled on machines, computers, and other artifacts that may have the same or better intelligence than humans, adaptability, and intention, featuring decision making, cognition, and learning (Manongga et al., 2022). And in the realm of Artificial Intelligence, computers are directed to be intelligent and have similar performance to humans by imitating some of the functions of the human brain, such as understanding language, absorbing knowledge, thinking, reasoning, solving problems, and even making decisions (Ridlwan, 2013). Thus, Artificial Intelligence seeks to build intelligent entities by matching human understanding of intelligence (Kusumawati, 2008).

AI is increasingly being deployed because it has strategic value for Education according to Klamma suggesting that AI could be an effective learning tool that reduces the burden on teachers and students and offers an effective learning experience for students. Coupled with current education reforms such as digitization of educational resources, gamification, and personalized learning experiences, there are many opportunities for the development of AI applications in education. For example, the modeling potential of AI techniques has been systematically leveraged to develop reactive and adaptive tutorials for the construction of individualized learning environments to compensate for teacher shortages through the use of intelligent tutoring systems (ITS) (Ronsumbre et al., 2023).

These AI-based platforms are helpful for students both outside the classroom, even for distance learning, and can reach rural communities. Artificial intelligence (AI) technology enables games to provide fun education to all students, regardless of their socioeconomic status or location AI has influenced the way learning takes place both inside and outside the classroom (Asril et al., 2024).

One application of AI in language learning is its ability to provide precise and quick feedback to students. AI systems can analyze students' answers or written work in real-time and provide specific corrections or improvement suggestions, such as identifying grammatical, spelling errors, or even providing suggestions for improving sentence structure and writing style. The speed and accuracy of this feedback is crucial in a learning environment, as it allows students to immediately understand and correct their mistakes, accelerating the learning process and improving overall language comprehension (Hindra Kurniawan et al., 2024).

Case study on the use of an interactive chatbot in conversation practice at Madrasah Al-Falah has had a positive impact on improving students' *maharah kalam* (speaking) and *maharah kitabah* (writing). This chatbot allows students to practice speaking in Arabic independently, without having to rely entirely on interaction with teachers or peers. With Natural Language Processing (NLP) technology, the chatbots can provide automatic corrections regarding pronunciation and sentence structure, so that students get immediate feedback. In addition, some chatbots feature text transcription, which helps students develop better writing skills. Data from madrasahs showed that 70% of students experienced an increase in speaking fluency, while 50% of students showed improvements in writing Arabic texts within three months of the chatbot implementation.

The implementation of interactive chatbots also faces some challenges. One of the main obstacles is the AI's limitation in understanding complex Arabic contexts, especially regarding

dialectal variations and typical grammatical structures. Some students also reported that interactions with chatbots felt stilted due to the lack of emotional elements and spontaneity in communication. In addition, dependency on technology can be an issue, where students practice more with the chatbot than with their teachers or friends. Another aspect to consider is accessibility, as not all students have devices or a stable internet connection to access the chatbot optimally.

Challenges can become opportunities if addressed with the right strategies. To improve the understanding of the Arabic context by AI, the chatbot can be further developed with data-based machine learning technology from native Arabic speakers. A combination of chatbot practice and live discussion sessions with teachers can help reduce students' dependence on AI, while maintaining social interaction in learning. In terms of accessibility, madrasahs can provide devices or integrate chatbots in language labs, so that all students have equal opportunities to use them. With a balanced approach, interactive chatbots can be a very effective tool in improving *maharah kalam* (speaking) and *maharah kitabah* (writing), while preparing students to face the challenges of communication in Arabic in a more real-world manner.

Transformation of Arabic Meaning through Artificial Intelligence

In this era of globalization, the demand of every nation is to be able to establish communication between other nations through various languages from each country. Translation cannot be done without having basic skills in mastering foreign languages. Especially in Arabic translation, someone who will translate Indonesian into Arabic must understand how the correct form and structure of Arabic according to the rules.

There are six obstacles in translating the source language into the target language, namely not understanding the translation process, limited vocabulary, not understanding the text, unable to determine the right word equivalent based on the context, and the translation that has been written cannot be understood (Haryanti, 2019). Such obstacles will still be found more errors when translators use modern tools that translate sentences according to the source language. If the source language has been found to be incorrectly organized, then the target language will also produce an incorrect translation of the target language.

One of the advanced tools available is Google Translate. Google Translate itself supports the translation of Indonesian into Arabic. However, when viewed in terms of accuracy, Google Translate in translating Indonesian into Arabic still has confusion. Especially in terms of spelling, grammar, and diction or the right choice of words with Indonesian. In fact, the translation of Indonesian into Arabic or Arabic into Indonesian in Google Translate is only a rough result of the translation process carried out by the translator. So it will often be found that some sentences are not in accordance with the appropriate Arabic rules (Sujefri et al., 2022).

In addition to google translate, it turns out that Arabic language learning using gadgets has also been carried out by several teachers starting from *maharah istima'* (Listening). In using gadgets for *maharah istima'*, children can listen to Arabic audio repeatedly, because repeated listening will make children familiar with good and correct rhythm, intonation, and pronunciation. Language learning theory shows that intensive listening is one of the effective methods in improving children's audio comprehension and speaking skills (Saputra et al., 2023). The results show that by using gadgets, children can gain better listening skills because they have easier access and flexibility to practice listening to audio repeatedly.

Maharah Kalam (Speaking); The use of gadgets for *maharah kalam* allows children to interact directly with learning materials through Arabic language games provided in applications or websites (Istiqomah & Baroroh, 2021). Language learning theory emphasizes the importance of children's active interaction in language learning, which can improve their speaking skills (Hasan, 2023). The results showed that with challenging Arabic language games, children are more motivated to speak in Arabic and improve their overall speaking ability.

Maharah Qiro'ah (Reading); In the context of gadget use, *maharah qiro'ah* is improved because children can access various reading materials in Arabic through applications or websites (Masturoh & Mahmudi, 2023). Language learning theory suggests that active reading is key in improving children's reading comprehension and vocabulary (Firdausya et al., 2022). From the research results with the audio features accompanying the text, children can practice their reading skills while listening to the pronunciation of words, thus improving their understanding of the text.

Maharah Kitabah (Writing); In using gadgets for *maharah kitabah*, children can practice writing letters and sentences in Arabic with the help of applications or digital platforms (Saputra et al., 2023). Language learning theory shows that immediate feedback and automatic correction can improve children's writing skills (Haniefah et al., 2023). Research results show that with the auto-correction and instant feedback features, children can correct their mistakes in writing and improve their Arabic writing skills significantly (Adhimah & Hasan, 2024).

Challenges in Meaning Transformation

First, wider access to language learning resources. Currently, both educators and learners can access Arabic learning resources that are online. Some digital learning resources that have been researched and proven to be able to improve students' Arabic language competence include android-based digital eBooks that can increase students' motivation and *maharah qira'ah* (reading) competence (Eem Kurniasih et al., 2015). In addition, there is also audio-visual content that can increase students' motivation and Arabic learning outcomes, both in the form of offline interactive media applications such as PowerPoint plus iSpring applications, as well as online ones such as YouTube (Hamidah & Marsiah, 2020).

Second, interactive and engaging learning experiences. Currently, digital applications and platforms offer interactive and engaging learning experiences that can increase the motivation and effectiveness of learning Arabic at the basic education level. Based on existing research, multimedia content, gamification elements, quizzes and interactive exercises make language learning more fun and effective. For advanced levels, learners can also engage with videos, podcasts and interactive activities to improve listening, speaking, reading and writing skills (Riwanda et al., 2021).

Third, it provides global connectivity and language exchange. Digital literacy allows language learners to connect with speakers of the target language from all over the world. Social media platforms, language learning communities and groups, and language exchange websites provide opportunities for virtual language practice, cultural exchange, and building relationships with native speakers. Since the covid 19 pandemic, students have often been introduced to online learning activities using Google classroom, Webex, and Edmodo. For the basic education level, simple platforms that are familiar and can be introduced and have been studied to have a positive impact on learning Arabic language skills include WhatsApp, Facebook, Instagram, and TikTok applications. Through these platforms, learners can engage in conversations, video

conferencing, receive feedback, and interact themselves in language and culture (Ramdani et al., 2021).

Fourth, the availability of digital applications for language practice. The development of digital technology helps learners develop digital literacy using various language learning tools. Some research results show an increase in motivation and Arabic language competence for learners who are able to use translation applications including digital dictionaries to improve vocabulary understanding for beginners. In addition, language learning software that can be utilized by teachers and students such as Arabic grammar checker applications that can help teachers assess the accuracy of Arabic texts. There are also vocabulary applications that are useful for improving the linguistic competence of novice students such as *the yaa arabi application*, *solite kids*, *fun easy learn*³⁹ and *busuu*. These tools offer instant feedback, personalized learning experiences, and adaptive exercises tailored to the needs of learners with images, animations, and android-based games (Efendi & Suyuthi, 2023).

Fifth, it provides an opportunity for users to conduct language competency assessment and feedback online with a computer or smart phone. Among the applications that can be used are *google form*, *kahoot*, and *misk*. These technologies, based on various studies, allow learners to take online language tests and receive automatic feedback on their language proficiency. This assessment helps the learner identify the strengths and weaknesses of the linguistic aspects he/she is mastering to be given follow-up, and to set learning goals. This evaluation technique can also be used by educators to identify the achievement of classroom learning objectives (Rizal et al., 2021).

Public perception of the use of AI in Education

The use of Artificial Intelligence (AI) in education is increasingly widespread, and people's perceptions of this technology vary. Among students, lecturers, and education managers, there are positive and negative views regarding the application of AI in the teaching and learning process. Positive views include: first, increased learning effectiveness. Many students feel that AI can help them understand the subject matter better and believe that AI provides faster and more accurate feedback than traditional methods (Syamsiah, 2024). Second, support for lecturers, AI as a tool that can ease their workload, especially in assessment and administrative management. With in-depth analysis of student performance provided by AI, lecturers can focus more on teaching and guidance (Ahmad Kadir & Rahayu, 2024). Third, ease of access and use, research shows that many students use AI to complete school assignments. About 86% of respondents admitted to using AI assistance, such as ChatGPT, to complete assignments (Hartanto & Rohmah, 2024). This shows that the use of AI has become common among students.

The concerns and negative views of AI include: First, reduced human interaction. Some students are concerned that the use of AI can reduce human interaction in the teaching-learning process. They feel dependent on technology, which can reduce a more personalized learning experience (Rifky, 2024). Second, the Potential for Cheating. There are concerns that students may use AI to cheat, such as looking up exam answers online without adequate study effort. This creates new challenges in academic integrity. Third, the limitations of information validity. From a teacher's perspective, there are concerns regarding the validity of the information provided by AI. Teachers feel the need to ensure that the information students get from AI is accurate and relevant (Ashshiddiqi et al., 2024).

It can be concluded that overall, people's perceptions of the use of AI in education tend to be positive, although there are significant concerns regarding its negative impacts. To

maximize the benefits of AI in education, it is important for students, lecturers, and education administrators to work together to integrate this technology effectively and responsibly. With the right approach, AI has great potential to improve the quality of education at various levels (Suryokta et al., 2023).

Opportunities Presented by Artificial Intelligence

1. Innovation in Language Learning

Artificial intelligence enables more personalized and adaptive learning. AI can analyze each student's progress and needs, so it can adjust teaching materials and methods according to the individual's level of understanding. For example, intelligent tutoring systems (ITS) can provide immediate feedback and adjust content based on student interaction. AI has an important role in improving the quality and effectiveness of Arabic language learning by providing an interactive, diverse, and engaging platform, as well as providing quick and accurate responses to students (Putri & Hasan, 2023). Research shows that the use of AI in Arabic language learning at UIN Maulana Malik Ibrahim Malang has improved the learning experience by providing an interactive and responsive platform (Rohmawaty et al., 2024).

Another research relevant to this is research (Ramadhan, 2023) entitled strategies for using Chatbot Artificial Intelligence in Arabic language learning at universities in Indonesia. The result of this research is that AI Chatbot is able to become an interactive tool that supports Arabic language understanding and skills, opening up opportunities for innovation in more adaptive and effective learning methods. Research (Ziaee, 2012) entitled Artificial Intelligence And Trustworthy Principles In Global Islamic Education. The results of this study are AI has been applied in many Islamic educational institutions in various countries such as the United Arab Emirates, Indonesia, China, Japan, and Malaysia. Research (Iskandar et al., 2023) entitled the role of Artificial Intelligence (AI) information technology at the *Al-Kahfi foundation*. The results of this study are aspects of learning, and human resources, still using manual or traditional technology. Research (Maufidhoh & Maghfirah, 2023) entitled Implementation of Artificial Intelligence-Based Learning Through Puzzle Maker Media for Elementary School Students. The results of this study are Artificial Intelligence-based learning is one of the innovations in the field of education. In addition, it can also be seen that the application of Artificial Intelligence-based learning has a positive impact on students' cognitive development.

In learning Arabic, interactive learning media is also needed to improve the quality of the learning process (Rahmawati & Amaliza, 2023). Artificial Intelligence (AI) technology can also open access to varied learning materials, ranging from text, audio, video, to Arabic articles from original sources. By utilizing the media to listen to some audio songs, it can increase the motivation to learn Arabic (Fikri & Al-Furqaan, 2023). It also provides a rich and comprehensive learning environment, allowing learners to master Arabic through a multisensory approach that can improve memory and comprehension (Rahman et al., 2023).

AI also increases the accessibility of Arabic language education for various groups. With AI-based applications, students from different backgrounds can access learning resources without geographical or economic restrictions. For example, tools such as chatbots and virtual assistants allow students to learn anytime and anywhere, and provide support in self-directed learning (Supriyanto & Toifah, 2024). Anas and Zakir argue that education in the 5.0 era requires media that are not just learning aids, but can also adapt to individual needs and are able to develop critical thinking abilities and relevant problem solving skills (Anas & Zakir,

2024). This is particularly important in the context of a diverse society, where educational needs can vary significantly.

2. Improved Translation Quality

AI-based translation tools such as Google Translate, ChatGPT and other apps have revolutionized the way we translate Arabic texts. Natural language processing (NLP) technology enables more accurate and contextualized translations compared to traditional methods. Research shows that these tools not only speed up the translation process but also improve the quality of the translation by considering the context of the sentence as a whole (Putri & Hasan, 2023).

Artificial intelligence-based translation in the form of ChatGPT is capable of producing responses similar to human responses. ChatGPT has the advantage that it can facilitate the translation of texts from and to Arabic quickly and efficiently. It helps us understand more complex material and access resources in Arabic more easily (Nurullawasepa et al., 2023). And with ChatGPT it also makes it easier for us to recognize synonymous words as well as good word usage according to predetermined grammar. However, the accuracy of the translation results still needs to be checked again. Because the system is not able to understand the context of the target language and destination language and there are certainly doubts from various parties and errors in it, such as errors in linguistic units (Ruhmadi et al., 2023).

The development of interactive digital dictionaries is also supported by AI which provides easy access to users to understand the meaning of words in a broader context. These dictionaries are often equipped with features such as usage examples in sentences, synonyms, antonyms, and even audio pronunciations, which are very helpful in the process of learning Arabic (Rohmawaty et al., 2024). In addition, other resources such as interactive learning platforms that use AI can provide real-time speaking, listening, reading, and writing practice, thus improving overall language skills.

Thus, artificial intelligence opens up many opportunities in Arabic language learning innovation by creating personalized learning experiences and increasing accessibility for all. In addition, AI also contributes to the improvement of translation quality through advanced translation tools and the development of interactive digital dictionaries. By continuing to develop this technology, we can harness its full potential to support more effective and efficient Arabic language learning.

DISCUSSION

مناقشة

The use of artificial intelligence (AI) in Arabic language education has become an increasingly relevant topic in this digital age. This research discusses how AI can be used to improve the effectiveness of Arabic language learning and the transformation of the meaning of the language. With AI's ability to analyze data and provide real-time feedback, students can have a more interactive and engaging learning experience. This is particularly important given the challenges faced in Arabic language acquisition, especially in the increasingly complex context of globalization. This research aims to explore the potential of AI in Arabic language education as well as the challenges that may arise from its implementation.

One important aspect of this research is an understanding of the definition and role of AI in education. Artificial intelligence is defined as a system designed to mimic human thought processes, so as to solve problems more efficiently. In the context of language learning, AI offers various tools and platforms that can assist students in developing their language skills. For

example, AI-based applications can provide listening, speaking, reading, and writing exercises that are customized to students' needs. Thus, AI is not just a tool, but can also serve as a strategic partner in the teaching-learning process.

However, despite the many benefits offered by AI, there are also challenges that need to be overcome. One of the main obstacles is the validity of the information provided by AI systems. Automated translation tools such as Google Translate often produce inaccurate translations, which can lead to misunderstandings in learning. In addition, there are concerns regarding the potential for academic cheating and the reduction of social interaction between students and teachers due to reliance on technology. Therefore, it is important to develop more sophisticated and adaptive AI systems to better understand the context and nuances of the Arabic language.

This research also discusses the importance of accessibility of digital learning resources. With more and more online platforms providing Arabic learning materials, students have a greater opportunity to learn independently. Mobile applications that offer interactive features can increase students' motivation to learn Arabic. Research shows that the use of gadgets in Arabic language learning not only facilitates access to materials, but also allows students to practice flexibly according to their own pace.

This study confirms that the use of AI in Arabic language education has great potential to improve learning effectiveness. Despite challenges such as information validity and the potential for academic cheating, the benefits of better interaction and accessibility of digital learning resources are significant. This research provides new insights into how technology can be utilized to enrich students' learning experiences and promote Arabic language acquisition among learners around the world. With the right approach, AI can be an effective tool in Arabic language education, while opening up new opportunities for innovation in teaching methods.

CONCLUSSION | خاتمة

This research discusses the role of Artificial Intelligence (AI) in the transformation of Arabic meaning, highlighting the challenges and opportunities faced in education. AI offers various innovations that can improve the learning process, such as real-time feedback, access to digital learning resources, and interactive learning experiences. However, there are also challenges to be faced, such as difficulties in accurate translation and potential dependence on technology. While tools such as Google Translate provide convenience, translation accuracy remains an issue, especially in the context of the complex Arabic language.

In addition, public perceptions towards the use of AI in education show mixed views. On the one hand, many students and teachers recognize the benefits of AI in improving learning effectiveness and reducing teacher workload. However, there are concerns that the use of AI may reduce human interaction and increase the potential for academic cheating. In conclusion, while AI has great potential to support Arabic language learning, it is important to consider the challenges that exist for this technology to be used effectively and ethically in Education.

This study highlights the role of artificial intelligence (AI) in Arabic language education, offering significant opportunities to enhance learning effectiveness and accessibility. AI technologies such as interactive chatbots, NLP-based translation applications, and automated evaluation systems enable students to receive instant feedback and a more personalized learning experience. A case study at Madrasah Al-Falah demonstrates how interactive chatbots improved students' speaking (maharah kalam) and writing (maharah kitabah) skills, with a 70% increase in fluency and a 50% improvement in writing ability within three months.

Challenges persist, including information validity, AI's limitations in understanding Arabic language context, and the risk of over-reliance on technology. Additionally, access to devices and the internet remains a concern, ensuring that AI implementation is equitable across different educational settings. To address these challenges, a balanced approach is required, combining AI with direct teacher guidance and developing more adaptive AI technologies tailored to the complexities of the Arabic language.

With the right strategies, AI has the potential to not only support but revolutionize Arabic language learning, making it more interactive, adaptive, and engaging for students. This study asserts that effective and responsible AI integration can enhance Arabic language education, providing innovative solutions to learning challenges while paving the way for advanced educational methodologies in the future.

BIBLIOGRAPHY

مراجع

- Adhimah, S., & Hasan, L. M. U. (2024). Transformasi Pembelajaran Bahasa Arab melalui Gadget oleh Komunitas Guru Anak Usia Dini. *Jurnal Pendidikan Anak*, 13(1), 65–71. <https://doi.org/10.21831/jpa.v13i1.342>
- Ahmad Kadir, A., & Rahayu, K. M. (2024). Persepsi Guru Terhadap Artificial Intelligence di Madrasah: Antara Penerimaan dan Tantangan. *Prosiding Seminar Nasional Pendidikan FKIP Universitas Lampung 2024*, 10, 411–421. <http://ejurnal.fkip.unila.ac.id/index.php/prosem/article/view/489>
- Anas, I., & Zakir, S. (2024). Artificial Intelligence: Solusi Pembelajaran Era Digital 5.0. *J-SAKTI (Jurnal Sains Komputer Dan Informatika)*, 8(1), 35–46.
- Ashshiddiqi, M. H., Mayesti, N., Irawati, I., & Rahmi. (2024). Pemanfaatan AI dalam Era Kurikulum Merdeka : Perspektif Siswa dan Guru Sekolah Menengah. *Jurnal Dimensi Pendidikan Dan Pembelajaran*, 12 Special(1), 267–278. <https://journal.umpo.ac.id/index.php/dimensi/index>
- Asril, L. Z., Maspufah, M., Zuriati, D., & Fathira, V. (2024). Pengenalan Teknologi Artificial Intelligence (AI) dalam Meningkatkan Pengalaman Belajar Bahasa Inggris. *Sociali: Jurnal Pengabdian Kepada Masyarakat*, 2(2), 116–125. <https://doi.org/10.31849/sociali.v2i2.21575>
- Eem Kurniasih, U., Muhammad, D. R., & Safitri, E. R. (2015). Penggunaan Digital Book Berbasis Android Untuk Pada Pelajaran Bahasa Arab. *PEDAGOGIA: Jurnal Ilmu Pendidikan*, 170–182.
- Efendi, M. Y., & Suyuthi, A. (2023). Meningkatkan Keterampilan Berbahasa Siswa Melalui Pembelajaran Pakem Menggunakan Aplikasi Solite Kids Dalam Pembelajaran Bahasa Arab. *Akademika*, 17(1).
- Fauziyati, W. R. (2023). Dampak Penggunaan Artificial. *Jurnal Review Pendidikan Dan Pengajaran*, 6(4), 2180–2187.
- Fikri, S., & Al-Furqaan, D. L. (2023). The effectiveness of song translation in increasing vocabulary to develop speaking skills at SDN 1 Paciran. *LUGAWIYYAT*, 5(2), 73–84. <https://doi.org/10.18860/lg.v5i2.21895>
- Firdausya, N., Sari, T., Pransiska, S., Tinggi, A., Islam, S., & Pandanaran, Y. (2022). Pengembangan bahan ajar bahasa arab braille bagi anak tunanetra di Man 2 Sleman, Yogyakarta (Development of braille arabic teaching materials for the blind students at Man

- 2 Sleman, Yogyakarta). *EDUKASI: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, 20(2), 216–232.
- Hamidah, & Marsiah, M. (2020). Pembelajaran Maharah Al-Istima' Dengan Memanfaatkan Media Youtube: Problematika Dan Solusi. *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya*, 8(2), 147–160.
- Hanief, R., Samsudin, M., Tinggi, S., Islam, A., & Iman, N. (2023). Penerapan technological pedagogical and content knowledge (Tpack) dalam pengajaran keterampilan berbahasa arab. *Journal of Arabic Education & Arabic Studies*, 2(1), 61–72. <https://journal.stai-nuruliman.ac.id/index.php/tlmi/article/view/62/34>
- Hartanto, A. Y., & Rohmah, F. N. (2024). *lis: Alfons Yoshio Hartanto & Fina Nailur Rohmah. Makin Marak Siswa Pakai AI Untuk Mengerjakan Tugas.*
- Haryanti, D. (2019). *Kendala Mahasiswa Dalam Menerjemahkan Teks Berbahasa Inggris Ke Bahasa Indonesia.*
- Hasan, L. M. U. (2023). Studi implementasi dan efektivitas tpack dalam pembelajaran maharah kalam. *MUMTAZA : Journal of Arabic Teaching, Linguistic And Literature*, 3(1), 91–101. <https://ejournal.stibada.ac.id/index.php/mumtaza/article/view/60>
- Hindra Kurniawan, Adiguna Sasama W.U, & Tambunan, R. W. (2024). Potensi AI dalam Meningkatkan Kreativitas dan Literasi dalam Pembelajaran Bahasa Indonesia. *JAMI: Jurnal Ahli Muda Indonesia*, 5(1), 10–17. <https://doi.org/10.46510/jami.v5i1.285>
- Iskandar, O., Amanda, P., Cahyaningsih, N. P., Yuliyanti, N., Rahmadiani, R., Nurul, A., & D. (2023). *Peranan Teknologi Informasi Artificial Intelligence (AI) Pada Yayasan Al- Kahfi.*
- Istiqomah, M., & Baroroh, R. U. (2021). Pengembangan pembelajaran bahasa arab di rumah pada masa covid 19. *Jurnal Studi Keislaman FALASIFA*, 1(1), 38–48.
- Kusumawati, R. (2008). Kecerdasan Buatan Manusia (Artificial Intelligence); Teknologi Impian Masa Depan. *ULUL ALBAB Jurnal Studi Islam*, 9(2), 257–274.
- Manongga, D., Rahardja, U., Sembiring, I., Lutfiani, N., & Yadila, A. B. (2022). Dampak Kecerdasan Buatan Bagi Pendidikan. *ABDI Jurnal*, 3(2), 40–55.
- Masturoh, F., & Mahmudi, I. (2023). Implementasi kurikulum merdeka belajar dalam pembelajaran bahasa arab. *Kalamuna: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, 4(2), 207–232. <https://doi.org/10.52593/klm.04.2.07>
- Maufidhoh, I., & Maghfirah, I. (2023). Implementasi Pembelajaran Berbasis Artificial Intelligence Melalui Media Puzzle Maker Pada Siswa Sekolah Dasar. *ABUYA: Jurnal Pendidikan Dasar*, 1(1).
- Mushthofa, F. N., Wathoni, K., & Daryono, R. W. (2024). the Mediating Impact of Social Media Intensity on the Influence of Islamic Learning and Spiritual Intelligence on the Negative Influence of Social Media. *Abjadia : International Journal of Education*, 9(2), 477–491. <https://doi.org/10.18860/abj.v9i2.28163>
- Muthohharoh, N., Mardiyah, M. K., Rifqi, A. F., Muslih, M., Hamdun, K., Hamidah, A., Ahmad, N. C., Islamiyah, N., Qudsiyah, N., Rochmawati, L., & Charisma, M. R. (2024). Evaluasi Pembelajaran Bahasa Arab Berbasis AI Opexam. *Edukatif : Jurnal Ilmu Pendidikan*, 6(4), 2992–3000. <https://doi.org/10.31004/edukatif.v6i4.7057>

- Nurullawasepa, M., Mandani, N. Z., Adawiyah, R., Al Ayyubi, S., & Abdillah, A. A. (2023). AI (Artificial Intelligence) dalam penerjemahan teks Bahasa Arab. *SENRIABDI*, 141–157.
- Pasaribu, M., & Widjaja, A. (2022). *Artificial Intelegence: Perspektif Manajemen Strategis*. Kepustakaan Populer Gramedia.
- Putri, A. N., & Hasan, M. A. K. (2023). Penerapan kecerdasan buatan sebagai media Education, pembelajaran bahasa arab di era society 5.0. Tarling. *Journal of Language*, 7(1), 69–80.
- Rahman, S., Sembiring, A., Aulia, R., Dafitri, H., & Liza, R. (2023). Pengenalan ChatGPT untuk Meningkatkan Pengetahuan Siswa-Siswi di SMK Negeri 1 Pantai Labu. *Prioritas: Jurnal Pengabdian Kepada Masyarakat*, 5(1), 1–7.
- Rahmawati, F. A., & Amaliza, F. R. (2023). Tathbiiq Wasilah al-Ta'liim Puzzle Envelope fi Ta'allum al-Lughoh al-Arabiyyah li Thullab Madrasah Budi Mulia al-Mutawassithoh al-Tsaaniyah Yogyakarta. *LUGAWIYYAT*, 5(2), 111–122. <https://doi.org/10.18860/lg.v5i2.20905>
- Ramadhan, A. R. (2023). *Strategi penggunaan Chatbot Artificial Intelligence dalam Pembelajaran Bahasa Arab pada Perguruan Tinggi di Indonesia*. 2(2).
- Ramdani, N. S., Nugraha, H., & Hadiapurwa, A. (2021). Potensi Pemanfaatan Media Sosial Tiktok Sebagai Media Pembelajaran Dalam Pembelajaran Daring. *Akademika*, 10(2), 425–236.
- Ridlwan, M. (2013). *Konsep Kecerdasan Perspektif Ary Ginjaran Agustian*.
- Rifky, S. (2024). Dampak Penggunaan Artificial Intelligence Bagi Pendidikan Tinggi. *Indonesian Journal of Multidisciplinary on Social and Technology*, 2(1), 37–42. <https://doi.org/10.31004/ijmst.v2i1.287>
- Riwanda, A., Ridha, M., & Islamy, M. I. (2021). Increasing Arabic Vocabulary Mastery Through Gamification; Is Kahoot! Effective? *LISANIA: Journal of Arabic Education and Literature*, 5(1), 19–35. <https://www.journalregister.iainsalatiga.ac.id/index.php/lisania/article/view/5284>
- Rizal, M., Syihabuddin, S., & Mad'ali, M. (2021). Evaluasi Pembelajaran Bahasa Arab Dengan Memanfaatkan Aplikasi MiSK. *Tsaqofiya: Jurnal Pendidikan Bahasa Dan Sastra Arab*, 3(2), 199–213.
- Rohmawaty, E. N., Hilmi, D., Uqba, M. S. S., & Saleh, U. S. (2024). Peran Artificial Intelligence (AI) dalam Pembelajaran Bahasa Arab Mahasiswa Pascasarjana UIN Maulana Malik Ibrahim Malang. *Jurnal Pendidikan Dan Sosial Humaniora*, 4(3), 316–328.
- Ronsumbre, S., Rukmawati, T., Sumarsono, A., & Waremra, R. S. (2023). Pembelajaran Digital Dengan Kecerdasan Buatan (AI): Korelasi AI Terhadap Motivasi Belajar Siswa. *Jurnal Educatio FKIP UNMA*, 9(3), 1464–1474. <https://doi.org/10.31949/educatio.v9i3.5761>
- Ruhmadi, A., Zaka, M., & Farisi, A. (2023). Analisis Kesalahan Morfologi Penerjemahan Arab–Indonesia pada ChatGPT. *Aphorisme. Journal of Arabic Language, Literature, and Education*, 4(1), 55–75. <https://doi.org/10.37680/aphorisme.v4i1.3148>
- Saputra, P., Ritonga, A. W., Bahruddin, U., Islam, U., Maulana, N., Ibrahim, M., Timur, J., Barat, J., Islam, U., Maulana, N., Ibrahim, M., Timur, J., & Arab, B. (2023). Pendekatan technological pedagogical content knowladge (Tpack) dalam pembelajaran bahasa arab di Man 2 Payakumbuh. *Shibghoh: Prosiding Ilmu Kependidikan UNIDA Gontor*, 54–56.
- Sujefri, A., Irnaini Al Badri, H. R., Arifah, Z., & Basid, A. (2022). Analisis Sintaksis Kesalahan

- Penerjemahan Teks Bahasa Indonesia Ke Bahasa Arab Melalui Google Translate. *Al-Muyassar: Journal of Arabic Education*, 1(2), 167. <https://doi.org/10.31000/al-muyassar.v1i2.6476>
- Sukmawati, H. (2013). Tripusat Pendidikan. *Jurnal Pilar*, 2(2), 175–194. <https://journal.unismuh.ac.id/index.php/pilar/article/view/458>
- Supriyanto, & Toifah, N. (2024). *Efektivitas Penggunaan Artificial Intelligence (Ai) Dalam Pembelajaran Bahasa Arab Di Era Society 5 . 0* : 42–54.
- Suryokta, E., Taruklimbong, W., & Sihotang, H. (2023). Peluang dan Tantangan Penggunaan AI (Artificial Intelligence) dalam Pembelajaran Kimia. *Jurnal Pendidikan Tambusai*, 7(3), 26745–26757.
- Syamsiah, N. (2024). *Persepsi Penggunaan AI Terhadap Pembelajaran di Perguruan Tinggi*.
- Ziaee, A. A. (2012). A PHILOSOPHICAL APPROACH TO ARTIFICIAL INTELLIGENCE AND ISLAMIC VALUES. *IIUM Engineering Journal*, 12(6). <https://doi.org/10.31436/iiumej.v12i6.191>

