The Use of Artificial Intelligence in Visual Illustrations to Improve Mahārah al-Kalām (Arabic Oral Proficiency)

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Abstract

Arabic speaking proficiency (mahārah al-kalām) continues to face pedagogical challenges, particularly in pronunciation, vocabulary, and contextual comprehension. This study aims to analyze the use of artificial intelligence (AI) in visual illustrations as instructional media to enhance Arabic speaking skills. Employing a systematic literature review method, the study examines 20 selected articles published between 2020 and 2025. The findings reveal that AI-generated visual media significantly improve learners' vocabulary acquisition, contextual understanding, and engagement in speaking activities. The study implies that AI can be effectively utilized as a pedagogical tool to promote more interactive and context-based Arabic instruction. Its primary contribution lies in proposing a visually oriented AI approach, distinguishing it from previous research that largely focused on text-based applications or chatbot systems.

Keywords: Artificial Intelligence, Visual Illustration, Mahārah Al-Kalām, Arabic Language Learning, Interactive Media

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A. Introduction

In the modern era, the mastery of the Arabic language has become increasingly vital. Arabic plays a significant role in various sectors, including international relations, business, and diplomacy—particularly in the Middle East, which serves as a central hub of global economic and political activity. Proficiency in Arabic facilitates more effective cross-cultural communication and trade cooperation, while also expanding professional networks on the international stage (Anwar, 2024). Moreover, the Arabic language serves as a gateway to the rich literary and cultural heritage of the Arab world. Mastery of the language enables individuals to directly access classical and contemporary works of literature, poetry, and philosophy—each reflecting profound expressions of human thought and creativity. A deep understanding of Arabic also broadens one's perspective on the historical and intellectual contributions of Arab civilization to the development of science and the arts (Arab, 2023).

The learning of Arabic is essential yet presents a range of challenges, including both linguistic issues—such as difficulties in phonology, word structure, and grammar—and non-linguistic factors, such as low learner motivation and the lack of engaging instructional media. To enhance the effectiveness of Arabic language instruction, it is necessary to employ innovative methods and educational media (Hijriyah et al., 2022). Arabic is often perceived as a difficult language by students due to its distinct phonological features, writing system, and sentence structure compared to their native languages. Nevertheless, mastering *mufradāt* (vocabulary) plays a crucial role in supporting students' ability to speak, write, and comprehend texts in Arabic (Koderi et al., 2020).

In contemporary contexts, the teaching of *maharah al-kalām* (Arabic speaking skills) faces a number of significant challenges. One of the primary issues is linguistic in nature, including difficulties in pronouncing Arabic letters, limited vocabulary, and inaccuracies in sentence construction. A study conducted at Madrasah Aliyah Al-Falah revealed that students struggled with these aspects, which in turn hindered their speaking proficiency (Atika Mappiara et al., 2023). In the current era of globalization, the teaching of *maharah al-kalām* (Arabic speaking skills) faces several significant challenges. One of the primary issues is linguistic, including difficulties in pronunciation of Arabic letters, limited vocabulary, and inaccuracies in sentence construction (Syamaun, 2015).

Empirical evidence, such as the study conducted at Madrasah Aliyah Al-Falah, reveals that learners encounter challenges in these aspects, which, in turn, impede the development of their speaking proficiency (Maulia Yusuf et al., 2024). The utilization of artificial intelligence (AI) in the design of images and illustrations offers an innovative solution to enhance *maharah al-kalām* (speaking skills) in Arabic language instruction. By employing AI-based collage techniques, educators can create engaging and interactive visual materials that stimulate student interest and facilitate the understanding of conversation contexts. This approach allows for the integration of relevant visual elements aligned with the learning topics, enabling students to more easily associate words and phrases with appropriate images, thereby enriching their vocabulary and improving their speaking proficiency (Prasetya Irawan et al., 2025). Furthermore, the collaboration between artists and AI in creating digital illustrations opens new opportunities for the development of more creative and adaptive learning materials. By leveraging AI, illustrations can be tailored to reflect various conversation scenarios, cultural contexts, and real-life situations, which helps students gain a deeper understanding of the contextual use of language. This approach not only enhances student engagement in the learning process but also allows for the customization of materials according to individual needs, making the learning of *maharah al-kalām* (speaking skills) more effective and personalized (Anggraini et al., 2024).

The utilization of artificial intelligence (AI) in the creation of images and illustrations offers significant advantages in enhancing *maharah al-kalām* (speaking skills) in Arabic. One of the key strengths is AI's ability to generate high-quality images based on text descriptions, as demonstrated by the DALL·E 3 model developed by OpenAI. This model can produce illustrations tailored to learning needs, thereby facilitating students' understanding of conversation contexts and enriching their vocabulary. Thus, the integration of AI in visual media can enhance the effectiveness of Arabic language instruction (Nur Rohmawaty et al., 2024). Additionally, AI can serve as a virtual assistant in Arabic language learning, helping students understand language structures and improve their speaking skills. AI features such as search engines, translation tools, chatbots, and other virtual assistants can be utilized to provide real-time feedback and in-depth explanations of proper language usage. This enables students to learn independently and interactively, thereby enhancing their proficiency in *maharah al-*

kalām (speaking skills) (Lutfiyatun et al., 2023). Based on an analysis of seven journal articles, previous studies have shown that artificial intelligence (AI) plays a significant role in Arabic language learning, particularly in enhancing speaking skills (*maharah al-kalām*) and other aspects. Several studies highlight the use of AI-based applications, such as Tashkeel, which provides automatic diacritical marks on Arabic texts to improve reading comprehension (*maharah al-qirā'ah*) (Fahraini & Fikri Almaliki, 2023). Another study highlights the utilization of AI chatbots as a medium for learning *maharah al-kalām* (speaking skills), offering a more interactive and personalized learning experience for students (Ryan Saputra, 2025).

Additionally, there are studies that discuss the use of AI in Arabic language learning at the university level, particularly in grammatical aspects, translation (*tarjamah*), and conversation (*muhādathah*) through AI features such as search engines, translation tools, and voice assistants (Lutfiyatun et al., 2023). Several studies also highlight the role of technology in supporting *maharah al-kalām* (speaking skills) through digital platforms, social media, and language learning applications that enable interaction with native speakers (Anjani et al., 2024). Other research emphasizes the integration of AI into the ADDIE-based Arabic language learning model, which significantly enhances students' competence in grammatical aspects, translation (*tarjamah*), *maharah al-kalām* (speaking skills), as well as text analysis using big data (Indriana & Tajuddin Ahmad, 2025). Additional studies examine the use of AI as a digital learning medium in Foreign Language Development programs, where AI is employed to enhance skills in *istimā'* (listening), *kalam* (speaking), *qirā'ah* (reading), and *kitābah* (writing) (Rachmayanti & Arifin Alatas, 2023). Finally, research on the opportunities and challenges of AI in *maharah al-kalām* (speaking skills) learning at the madrasah level found that AI can help students understand Arabic more quickly and easily, although challenges such as limited internet access and dependence on technology remain (Sobriyah & Fauzen Adiman, 2024). Thus, previous studies provide a strong foundation for further exploration of the utilization of AI in Arabic language learning, particularly in the use of images and illustrations to enhance *maharah al-kalām* (speaking skills) (Safitri & Sa'dudin, 2019).

The research from the journals analyzed share a common focus on the utilization of artificial intelligence (AI) in Arabic language learning, particularly in enhancing language skills such as *maharah al-kalām* (speaking), *maharah al-qirā'ah* (reading),

tarjamah (translation), and grammar. All studies agree that AI provides significant benefits in accelerating the learning process, offering instant feedback, and creating a more interactive and adaptive learning environment. Furthermore, the majority of the studies highlight the role of various AI technologies, such as chatbots, AI-based learning applications, and virtual assistant features, in supporting the learning process (Aziz Fuadi, 2024). However, there are notable differences in the scope and research methods used. Some studies focus more on specific aspects of Arabic language learning, such as the use of the Tashkeel application to enhance *maharah al-qirā'ah* (reading skills) (Fahraini & Fikri Almaliki, 2023), while others focus on the utilization of chatbots to support *maharah al-kalām* (speaking skills). Other studies have a broader scope, discussing the integration of AI in various aspects of Arabic, including *tarjamah* (translation) and grammar, through an ADDIE-based learning model (Indriana & Tajuddin Ahmad, 2025). Additionally, another difference is observed in the educational levels targeted by the research. Some studies examine the application of AI at the higher education level, while others investigate the implementation of AI in madrasah settings. The challenges faced are also varied, ranging from the limitations of AI in understanding the complex context of the Arabic language, limited internet access, to the potential dependence of students on technology (Fahmi & Adhimah, 2024).

Overall, although there is variation in the approaches and focuses of the research, all studies conclude that AI holds great potential in supporting Arabic language learning. However, the implementation of AI still requires further development to overcome existing limitations and provide more optimal benefits for Arabic language learners at various educational levels (Al-Shaboul et al., 2025). Previous studies and the study "Utilization of AI in Images and Illustrations to Enhance *Maharah al-Kalām*" share similarities in the use of artificial intelligence (AI) as a tool to assist in Arabic language learning. Both groups of research emphasize how AI can enhance the effectiveness of learning by providing instant feedback, creating an interactive learning environment, and helping students understand and practice speaking skills (*maharah al-kalām*). Additionally, both previous research and the study on AI in images and illustrations acknowledge the challenges in implementing this technology, such as the limitations of AI in understanding the context of the Arabic language, students' dependence on technology, and technical barriers such as internet access (Anjani et al., 2024).

However, there is a fundamental difference in the approaches used. Previous studies have largely focused on the use of AI in the form of chatbots, AI-based learning applications, and virtual assistants to enhance *maharah al-kalām* (speaking skills), while the study "Utilization of AI in Images and Illustrations to Enhance *Maharah al-Kalām*" focuses more on how AI can be used to generate images and illustrations as learning media (Udin et al., 2024). This approach is more oriented towards visual-based learning, where AI-generated images and illustrations help students better understand language concepts, vocabulary, and the context of conversations (Amirah Mohmad Mohmiddin & Abu Bakar, 2025). Additionally, previous studies often employed literature review methods and data analysis from existing AI applications, such as Tashkeel for reading Arabic texts or the use of the ADDIE-based learning model to assess the effectiveness of AI in Arabic language learning. In contrast, the study on AI in images and illustrations is likely to use more experimental or direct observation approaches to assess how AI-generated images can enhance students' understanding and speaking skills (Elsharif et al., 2023).

Thus, although both studies share similarities in the use of AI for *maharah al-kalām* (speaking skills) learning, the recent study on AI-generated images and illustrations offers a more visual approach, distinguishing it from previous research that focused more on the use of text-based technology and digital interaction.
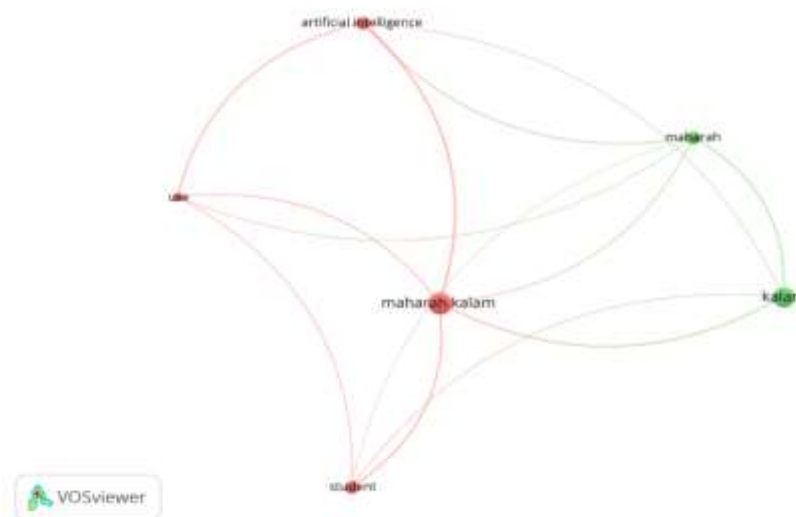
The aim of this literature review study is to analyze and explore the utilization of artificial intelligence (AI) in generating images and illustrations as learning media to enhance *maharah al-kalām* (speaking skills) in Arabic. This study focuses on several key aspects, including identifying various AI technologies that can be used in the creation of images and illustrations to support *maharah al-kalām* learning, and analyzing the effectiveness of using AI-based images and illustrations in improving the understanding of concepts, vocabulary, and conversational context in Arabic. Additionally, this study aims to compare previous studies that discuss the role of AI in language learning, particularly those emphasizing the visual aspect in speaking skills. Furthermore, this research will outline the opportunities and challenges in integrating AI-based visual elements into *maharah al-kalām* learning at various educational levels. As a practical step, this study will also provide recommendations for educators and educational technology developers on optimizing the use of AI in visual media to enhance Arabic speaking skills. This study is expected to provide a deeper understanding of the potential of AI in image and illustration-based learning, as well as how this technology can be effectively adapted in Arabic language learning.

B. Methods

The method employed in this study is a systematic literature review. The research began with a comprehensive search for articles related to the research topic. The selection criteria included scholarly articles sourced from both national and international journals, published within the last five years (2020–2025). Initially, 350 articles were identified using the keywords "artificial intelligence," "images and illustrations," "mahārah kalām," and "Arabic language learning." Subsequently, a validation process was conducted by screening article titles to ensure relevance to the research focus. Through this filtering process, a total of 50 articles were retained for further analysis (Sintia Wulandari, 2022).

Next, a quality review of the relevant scholarly articles was conducted by thoroughly reading their full content to assess their alignment with the research topic. This process resulted in a final selection of 20 articles deemed relevant to the study.

1. Systematic Literature Review (SLR) Stages
   a. Problem Identification and Research Objectives

      The review focuses on exploring how artificial intelligence contributes to the development of *maharah kalam'* (speaking skills) and images and illustrations in the context of Arabic language learning in Indonesia.

   b. Literature Search

      Articles were collected through systematic searches of online databases, including Google Scholar, Scopus, ScienceDirect, and DOAJ. The search employed the following keywords: "artificial intelligence," "images and illustrations," "mahārah kalām," and "Arabic language learning," and "interactive visual media". The search was limited to articles published between 2020 and 2025.

   c. Initial Screening

      The search yielded 350 articles. An initial screening based on titles and abstracts was conducted to assess relevance to the research focus. Articles deemed irrelevant or non-empirical were excluded, resulting in 50 remaining articles.

   d. Eligibility Assessment

      A full-text review was conducted to further evaluate the relevance and methodological rigor of the selected articles. Inclusion and exclusion criteria were applied as follows:

      1) Inclusion Criteria:
         a) Empirical research articles (qualitative, quantitative, or mixed methods)
         b) Focus on artificial intelligence and Arabic language learning
         c) Reports data on *maharah kalam*
         d) Published within the last five years (2020–2025)

      2) Exclusion Criteria:
         a) Theoretical reviews without empirical data
         b) Articles not available in full-text

This stage resulted in a final selection of 20 articles eligible for further analysis.

e. Data Extraction

Data from the selected articles were extracted using a matrix format that included: author(s), year of publication, research method, learning context, skill focus (listening/speaking), and key findings related to artificial intelligence.

f. Thematic Synthesis Analysis

Data were analyzed using thematic synthesis, organizing findings into major themes: artificial intelligence strategies, impact on *maharah kalam*, and interactive visual media.

2. Quality Appraisal of Selected Articles

To assess the methodological quality of the selected studies, evaluation was based on the Critical Appraisal Skills Programme (CASP) and the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Each article was assessed according to the following criteria:

a) Clarity of research objectives

b) Appropriateness of methodology

c) Validity of data and findings

d) Relevance to the research focus

Only studies with moderate to high methodological quality were included in the final synthesis.

3. PRISMA Flow Diagram

The following diagram presents the article selection process, adapted from the PRISMA framework:
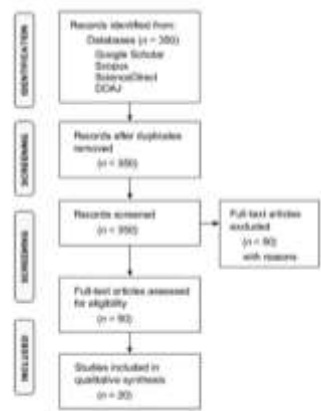
Figure 1. PRISMA Flow Diagram

C. Result and Discussion

This section presents the findings derived from a systematic literature review of twenty scholarly articles relevant to the application of artificial intelligence (AI) in developing visual media for teaching Arabic speaking skills (maharah al-kalām). The results are thematically classified into several key areas, including the identification of AI technologies utilized, the effectiveness of AI-based visual media in instruction, comparative analyses among studies, and the opportunities and challenges associated with implementation. The discussion aims to provide a comprehensive understanding of how AI contributes to enhancing the quality of Arabic speaking instruction, along with the associated pedagogical implications.

No.	Research Title	Research Method	Analysis Results
1	Analysis of Arabic against The Use of Artificial Intelligence (AI) through Tashkeel (Automatic Harokat) Application to Increase Maharah Qiraah	Library research	The study revealed that the Tashkeel application generally provides syntactically accurate harakat on Arabic texts, despite minor errors. It is considered a practical

	(Fahraini & Fikri Almaliki, 2023)		technological tool to enhance Arabic reading skills (maharah qira'ah) among learners and the general public.
2	Pengembangan Komik Keteladanan KH. A. Wahab Hasbullah untuk Meningkatkan Keterampilan Berbicara Bahasa Arab (Ganistan & Dian Rahmawati, 2023)	Research and Development (Borg and Gall)	The bilingual e-comic significantly improved students' Arabic language skills, especially in reading and vocabulary retention. It was deemed effective as a communicative and practical learning medium.
3	Pengembangan Media Tepuk Gambar dalam Pembelajaran Bahasa Arab Maharah Al-Kalam di Madrasah Aliyah Negeri 1 Mojokerto (Awaluddin Katalaini et al., 2024)	Research and Development (Modified Borg and Gall)	The bilingual image card media showed substantial positive effects on students' speaking enthusiasm and proficiency. It received a cumulative feasibility score of 78% from expert validation.
4	Pembelajaran Mufradat dalam Meningkatkan Maharah al-Kalam Santri di Pondok Pesantren (Munthe et al., 2022)	Qualitative (observations, interviews, documentation)	Vocabulary instruction at the pesantren positively impacted lexical acquisition but yielded modest gains in speaking proficiency. It emphasized the foundational role of vocabulary in oral communication.

5	Implementasi Community Language Learning untuk Meningkatkan Maharah Kalam Siswa Madrasah Aliyah (Widini Alfi et al., 2025)	Classroom Action Research (two cycles, mixed methods)	CLL method significantly enhanced students' speaking proficiency from 27.78% to 83.33% in KKM attainment, fostering a communicative and confidence-building environment.
6	Peningkatan Keterampilan Berbicara (Maharah Kalam) Bahasa Arab Melalui Media Gambar (Nafisah, 2022)	Classroom Action Research (two cycles)	Using image media improved students' speaking performance, with achievement rising from 46.88% to 78.12%, exceeding the classical success threshold.
7	Desain Strategi Pembelajaran Maharah Al Kalam wa Al Kitabah Berbasis Promosi Produk di Era Modern (Sofi Anwar, 2023)	Qualitative library research (descriptive-analytic)	The product-promotion-based strategy using Canva and Instagram enhanced learners' speaking and writing skills, while fostering digital entrepreneurship motivation.
8	Efektivitas Artificial Intelligence Text to Speech dalam Meningkatkan Maharatul Qira'ah (Sarif & AR, 2024)	Qualitative library research	AI-based Text-to-Speech technology proved effective in improving Arabic reading skills by providing clear pronunciation, diverse reading models, continuous practice, and accessibility

			for learners with reading limitations.
9	Implementasi Pemanfaatan Media Visual untuk Keterampilan Berbicara pada Pembelajaran Bahasa Arab (Vandayo & Hilmi, 2020)	Library research with descriptive analysis	Visual media, such as posters and bulletin boards, were found to enhance student engagement and teacher innovation, effectively supporting speaking skill development when well-designed visually.
10	Problematika Penggunaan AI (Artificial Intelligence) di Bidang Ilustrasi: AI vs Artist (Fadilla et al., 2023)	Qualitative descriptive (case study and questionnaire)	AI demonstrates speed and efficiency in illustration but lacks originality and emotional depth. It should serve as a tool, not a replacement for human artists.
11	Literature Review: Penggunaan Teknologi Media Artificial Intelligence ChatGPT untuk Pembelajaran Bahasa Arab di Madrasah Aliyah (Fadilla Sari et al., 2025)	Qualitative literature review (2020–2025 publications)	ChatGPT effectively enhances speaking and writing skills through instant feedback and interactive dialogue, but faces linguistic comprehension and infrastructure limitations.
12	Media Pembelajaran Berbasis Game Gambar Berangkai dalam Pembelajaran Maharah	Research and Development (Borg & Gall)	The chain-picture game media was validated as highly effective and engaging for improving listening skills, increasing

	Istima' (Dalimunthe & Rahmaini, 2023)		student focus and active participation.
13	Pengembangan Model Pembelajaran Bahasa Arab Berbasis Ai Untuk Meningkatkan Kompetensi Pembelajaran Gramatikal, Tarjamah, Dan Maharah Di Universitas Nahdlatul Ulama Sunan Giri Bojonegoro (Indriana & Tajuddin Ahmad, 2025)	Developmental research (ADDIE model)	AI-based learning significantly improved grammatical, translation, speaking, and corpus analysis skills, demonstrating AI's potential for enhancing Arabic instruction nationwide.
14	Pemanfaatan AI sebagai Media Pembelajaran Digital dalam Foreign Language Development Program (FLDP) IAIN Madura (Rachmayanti & Arifin Alatas, 2023)	Descriptive qualitative (questionnaires, observation, documentation)	Canva AI effectively improved the four main Arabic skills—listening, speaking, reading, and writing—while enhancing hybrid learning engagement and student-teacher communication.
15	Analisis Pembelajaran Berbasis SAVI (Somatis, Auditori, Visual, dan Intelektual) dalam Maharah Kalam (Siregar et al., 2021)	Qualitative library research	The SAVI model promoted student engagement by integrating multiple learning styles, resulting in notable improvements in Arabic speaking proficiency.
16	Analisis Pemanfaatan Artificial Intelligence (AI) sebagai Referensi dalam	Exploratory research	AI platforms offered valuable visual references for design creation, though

	Desain Komunikasi Visual (Muhaemin & Artikel, 2023)		the quality heavily depended on prompt clarity; human creativity remains essential for refined outputs.
17	Pemanfaatan Artificial Intelligence dalam Pembuatan Presentasi bagi Guru-Guru Brainfor Islamic School Kisaran (Maharani et al., 2024)	Training and mentoring (community service framework)	Teachers improved their skills in using ChatGPT and Canva for designing interactive and creative presentations, enhancing teaching quality and collaboration.
18	Mengoptimalkan Pembelajaran Maharah Al–Kalam Mahasiswa dengan Aplikasi Duolingo: Solusi Efektif dalam Pembelajaran Bahasa (Fikri, 2025)	Qualitative library research	Duolingo effectively enhanced speaking skills via interactive features, but cultural and idiomatic understanding was limited. Direct interaction is recommended to complement the digital experience.
19	Peluang dan Tantangan Artificial Intelligence (AI) terhadap Pembelajaran Mahārotul Kalām (Sobriyah & Fauzen Adiman, 2024)	Qualitative (observation, interviews, documentation)	AI provides interactive speaking practice and objective assessments, though technical limitations and dialect recognition issues remain challenges.
20	Analisis Tanda Artificial Intelligence untuk Perancangan Visual Identity (Dwiastuti, 2024)	Qualitative descriptive (semiotic analysis)	AI-generated logo designs were functionally creative but lacked perfection in visual balance and proportions, requiring

	refinement by human designers.

1. Identification of AI Technology

In the digital transformation era, the integration of Artificial Intelligence (AI) technologies has significantly influenced various sectors of education, including the teaching of Arabic. One emerging area of interest is the use of AI tools to generate visual media—such as images and illustrations—to support the development of speaking skills (*maharah kalam*). These technologies have demonstrated potential in enhancing learner engagement and reinforcing contextual visual cues in language practice. Recent studies have identified a range of AI applications—including Canva AI, Midjourney, Leonardo AI, and Shutterstock AI—that are capable of producing instructional illustrations aligned with educational objectives. The quality and relevance of these AI-generated visuals rely heavily on the precision of prompt formulation and the user's understanding of key visual design principles such as composition, color, and style. These outputs can take the form of flashcards, educational comics, infographics, or Arabic-language promotional content, which serve as engaging tools in classroom interaction.

In the specific context of *maharah kalam*, the implementation of AI-generated visual media has proven effective in fostering students' motivation, facilitating comprehension of spoken context, and promoting active participation in speaking activities. Moreover, these technologies enable both teachers and learners to independently produce instructional materials with efficiency, reducing reliance on professional illustrators. Nevertheless, it is essential to acknowledge that AI cannot fully replicate the cultural nuance, local specificity, and artistic depth offered by human creativity. Thus, AI should be positioned as a pedagogical support tool to enrich interactive and visual language learning. Consequently, the identification and integration of suitable AI technologies for illustration development represents a strategic effort to advance a more contextualized, personalized, and effective approach to teaching Arabic speaking skills.

2. Analysis of Effectiveness

In the evolving landscape of Arabic language instruction, Artificial Intelligence (AI)-based technologies are increasingly utilized as visual learning tools to enhance instructional effectiveness. One prominent innovation is the integration of AI-generated images and illustrations to support conceptual understanding, vocabulary acquisition, and speaking competence (*maharah kalam*). These technologies offer flexible, engaging, and contextually appropriate media that accommodate learners at diverse proficiency levels. A growing body of research has demonstrated that AI-driven visual media significantly facilitates vocabulary comprehension in Arabic language learning. Through direct visual representation of terms and expressions, learners are able to form stronger mental associations between images and linguistic meaning. Moreover, such media clarify the contextual usage of vocabulary in authentic conversational settings. For instance, the use of bilingual educational comics or illustrated flashcards has proven effective in reinforcing visual-verbal connections, particularly in vocabulary retention and application. Additionally, AI-based visual content contributes to learners' conceptual understanding of communicative structures and social contexts in Arabic. The visualization of conversational scenarios—depicting real-life settings such as marketplaces, schools, or homes—enables students to grasp discourse patterns and the pragmatic use of language. With AI assistance, educators can rapidly and personally tailor visual materials to match thematic content, thus fostering more meaningful engagement in classroom dialogue.

Overall, the effectiveness of AI-generated images and illustrations is reflected in increased learner motivation, improved contextual comprehension, and greater communicative competence. This analysis underscores the pedagogical value of AI-enhanced visual media as a responsive and forward-looking approach to improving the teaching and learning of Arabic speaking skills in the digital age.

3. Comparison of Studies

The advancement of artificial intelligence (AI) technologies has led to significant innovations in language learning, particularly in the domain of speaking skills (*maharah kalam*). A range of previous studies have explored the integration of AI—either directly

or indirectly—in enhancing Arabic language instruction through visual approaches. Despite their methodological diversity, these studies commonly indicate that AI-supported visual media contribute meaningfully to learners' comprehension, engagement, and oral proficiency. Several earlier investigations focused on conventional visual media, such as illustrations and comics, which were later developed into digital formats. For instance, the study by Yazmir Ganistan and Rina Rahmawati (2023) employed bilingual e-comics to enhance Arabic speaking skills, while the research by Muhammad Awaluddin Katalaini et al. (2024) introduced "Tepuk Gambar" bilingual flashcards for the same purpose. Although these studies did not explicitly integrate AI technologies, they laid the foundation for more advanced digital innovations. More recent research demonstrates direct utilization of AI to generate visual materials. Mohammad Sofii Anwar's (2023) study showcased the use of *Canva AI* to design Arabic-language promotional content for speaking and writing instruction. Similarly, Irma Rachmayanti and Mochamad Arifin (2023) integrated *Canva AI* into the Foreign Language Development Program at IAIN Madura, reporting improvements in learner engagement and linguistic understanding. These findings affirm the pedagogical value of AI-enhanced visual media in language learning.

Notably, the effectiveness of these approaches varies depending on the level of AI integration and the instructional design. Static images tend to support basic vocabulary acquisition, while context-driven AI-generated content—such as digital comics and promotional posters—better fosters communicative competence and learners' confidence in spoken interaction. Thus, this comparative analysis underscores that higher levels of AI integration into visual instruction yield greater impact on learners' mastery of *maharah kalam*.

4. Opportunities and Challenges

The integration of visual-based Artificial Intelligence (AI) technologies in the instruction of *maharah kalam* presents promising opportunities for enhancing the quality of Arabic language education. With AI's capacity to generate interactive, contextual, and visually engaging materials, speaking skills instruction can become more dynamic and communicative. Across various educational levels—from secondary schools to higher education institutions—AI allows teachers and learners to rapidly produce illustrations, animations, and simulated dialogues that align with instructional objectives.

One of the key opportunities lies in AI's ability to streamline the development of visual learning resources. Applications such as Canva AI, Midjourney, and Leonardo AI can be employed to design image-based content that supports vocabulary acquisition, conversational context comprehension, and sentence construction in Arabic. Furthermore, the use of AI fosters project-based and participatory learning, where students are encouraged to create visual products as part of their speaking practice in meaningful and creative ways. Nevertheless, several challenges must be addressed. A primary concern is the digital infrastructure gap, particularly in lower-level institutions lacking stable internet access or sufficient technological resources. Additionally, AI technologies often struggle to grasp the nuanced cultural context and dialectal variations of the Arabic language. There are also pedagogical concerns regarding overreliance on AI tools at the expense of deep linguistic understanding.

To ensure the effective integration of visual AI into *maharah kalam* instruction, educational systems must invest in teacher training, pedagogical readiness, and curriculum frameworks that support critical and informed technology use. When opportunities and challenges are managed thoughtfully, AI can serve as a powerful catalyst for delivering Arabic language instruction that is more interactive, personalized, and contextually grounded in the 21st century.

5. Implementation Recommendations

The advancement of Artificial Intelligence (AI) in education—particularly in the domain of visual media—presents a significant opportunity for optimizing the teaching of *maharah kalam*, or Arabic speaking skills. Based on the findings from various studies, AI-powered visual media have been shown to enhance instructional engagement, strengthen learners' contextual understanding, and foster active participation in oral language practice. Consequently, it is imperative to provide practical recommendations for educators and educational technology developers to ensure the effective and sustainable implementation of AI in this context. For educators, it is recommended to gradually integrate AI-generated visual materials into language instruction, starting with simple illustrations and flashcards and progressing to more advanced materials such as promotional posters or video presentations in Arabic created using platforms like Canva AI. Teachers must be equipped with digital literacy skills, particularly in crafting effective

prompts and selecting visuals that align with instructional objectives. Collaborative media creation between teachers and students can also enhance learners' emotional and cognitive engagement with the content. For educational technology developers, it is crucial to design AI platforms that are user-friendly, culturally relevant, and compatible with Arabic language curricula. These systems should offer adaptive features for different educational levels and support a wide range of speaking activities, including dialogues, oral presentations, and conversation simulations. Additionally, there is a need for clear ethical and pedagogical guidelines to ensure that AI applications are not only technically efficient but also educationally meaningful.

In sum, this set of recommendations underscores the importance of aligning technological innovation with communicative pedagogical principles in Arabic language education. AI should not be viewed merely as a visual aid but as a transformative facilitator capable of enriching the learning experience of Arabic speaking skills in a functional and context-sensitive manner in the 21st century.

D. Conclusion

Drawing from the analysis of multiple studies, it can be concluded that the integration of Artificial Intelligence (AI) through visual illustrations significantly contributes to the development of *mahārah al-kalām* (Arabic speaking skills). AI-generated visual media have been shown to enhance students' understanding of linguistic concepts, vocabulary, and conversational contexts more effectively than conventional methods. These technologies not only increase learner motivation and engagement but also allow for personalized instruction and efficient production of contextually rich and visually appealing learning materials. Nevertheless, the successful implementation of AI in *mahārah al-kalām* instruction is highly contingent upon educators' pedagogical readiness, digital literacy, and the availability of supporting technological infrastructure. Challenges such as unequal access to internet connectivity, disparities among educational institutions, and AI's limited capacity to comprehend cultural subtleties and dialectal diversity must be addressed. Collaborative efforts among teachers, technology developers, and educational institutions are therefore essential to ensure that AI serves as a meaningful pedagogical facilitator rather than a mere technical tool. In sum, the

application of AI in visual illustration for Arabic language instruction holds strong potential as an innovative, context-sensitive, and learner-centered approach aligned with the educational demands of the 21st century. Accordingly, the development of carefully designed, ethically guided, and adaptive implementation strategies is vital to ensure that this technology genuinely enhances the teaching and learning of *mahārah al-kalām* in sustainable and impactful ways.

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