LEVERAGING ARTIFICIAL INTELLIGENCE
TO DEVELOP THE PRESENTING SKILLS IN ARABIC LANGUAGE LEARNING

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Article Info

Abstracts

The development of the industrial revolution has led us to the society 5.0 era, where the integration of digital technology into people's lives was inevitable. Therefore, this study explores the opportunities of leveraging Artificial Intelligence (AI) to develop presenting skills in Arabic language learning while examining how teachers can mitigate the challenges and negative implications. We employ the interpretivism research paradigm with a qualitative approach and library research method. Data was collected through documentation techniques and analysed using Miles & Huberman's interactive analysis model during and after data collection, following the characteristic of the qualitative research data analysis approach. The study's outcomes offer two valuable things: firstly, a comprehensive understanding of the challenges and opportunities of leveraging AI in Arabic language learning, and secondly, practical strategies for successfully integrating AI into the learning process. Consequently, the results are expected to significantly improve students' engagement and learning outcomes in Arabic language learning, particularly in developing presenting skills.

Keyword:
Artificial Intelligence, Arabic Language Learning, Industrial Revolution, Learning and Digital Technology Integration, Presenting Skills, Society 5.0

Introduction

The presenting skill has become a widely studied topic and should be mastered among students in the Society 5.0 era (Ochoa & Dominguez, 2020; Olszewski-Kubilius et al., 2019; Smith & Sodano, 2011; Thomas & Jayagopi, 2022). Gelula (1997) states that presenting skill is the ability to communicate our ideas to others effectively and efficiently. Therefore, this skill becomes a crucial aspect that should be developed in education (Widyaningrum, 2016), including Arabic language learning. It is because Arabic is one of the international languages (Mustafawi et al., 2022) that can connect various cultures and encourage global communication (Hong & Minbaeva, 2022). Furthermore, Arabic has reemerged as one of the science languages besides English (Cook, 2017).

Making presentation skills an essential aspect of Arabic language learning will support students' for global and cross-cultural communication (Mahdi, 2022; Thomas & Jayagopi, 2022). It opens opportunities for active participation in the globally connected and continuously evolving digital era (Hong & Minbaeva, 2022). This objective was aligned with the Outcome Based Education (OBE) concept as the educational goal in the *Kurikulum Merdeka* (Suryaman, 2020) constructed by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. Students are not simply required to learn theoretical concepts but should be capable of mastering various skills that can be applied in global competition (Indarta et al., 2022). However, various competencies and skills acquired will only be beneficial if complemented by good presentation skills. The ability to effectively and efficiently transfer ideas and concepts becomes a crucial key to success for every individual (Marion & Fixson, 2021). Good presentation skills allow ideas and concepts to be effectively communicated to others. Conversely, even good ideas and concepts may be less appealing if not presented well.

Mastering presenting skills is more than just offering ideas and data through appealing graphics; it also considers efficient communication aspects. According to Wardani (2017), 11 indicators should be considered to produce a good presentation. Therefore, the discourse on leveraging AI to develop presenting skills in Arabic language learning becomes crucial to be studied. Its opportunities and challenges in education have been studied by researchers such as Wang (2023), who discovered that using AI in teaching would significantly improve future translators' core competencies. L. Wang's (2023) study also found a similar thing, suggesting that AI can enhance students' communication skills. Moreover, the reality of AI-based learning methods also received positive student responses.

However, other studies also issue serious notices about the integration of AI in education. It is like a sleeping giant, where AI breakthroughs are less beneficial for formal education and can potentially lead to negative consequences (Bates et al., 2020). Meanwhile, Henry et al., (2021) also revealed that integrating AI into education cannot enhance the greatest students' competencies; it just develops their representation skills slightly and does not improve their critical thinking skills. Nevertheless, they state that this is partially affected by the complexity of IT concepts that the students need help understanding. As a result, they suggest providing teacher training before integrating AI into the teaching and learning process, allowing its full potential to be effectively utilized (Henry et al., 2021).

Based on its advantages and challenges, the primary objective of this study is to explore the opportunities of leveraging AI to develop presenting skills in Arabic language learning while also examining how teachers can mitigate the challenges and negative implications. The

study's outcomes can offer two valuable things: firstly, a comprehensive understanding of the insight into the challenges and opportunities of leveraging AI in Arabic language learning, and secondly, practical strategies for successfully integrating AI into the learning process. Finally, the results are expected to significantly improve students' engagement and learning outcomes in Arabic language learning, particularly in developing presenting skills.

Methods

This study designed through the interpretivism research paradigm with a qualitative approach to provide an in-depth description (Hammond & Wellington, 2020) of the opportunities and challenges of leveraging AI to develop presenting skills in Arabic language learning. The method used is library research, which concerns understanding the literature related to a specific topic and discovering concepts and theories from previous studies (Flood et al., 2005). Through this method, Mark Garner et al. (2016) state that new insights are expected to support knowledge development. Furthermore, the concept of integrating AI into Arabic language learning, particularly in developing presenting skills which is the main topic in this study, could be explored and described comprehensively.

Data for this study was collected through documentation techniques and analysed using Miles & Huberman's interactive analysis model (Matthew B. Miles & AS. Michael Huberman, 1992). This process is conducted during and after data collection, following the characteristic of the qualitative research data analysis approach (Hammond & Wellington, 2020). Relevant data from separate sources are documented and organized based on related themes or topics. Subsequently, the data is studied to identify the types of AI that can be leveraged to develop the presenting skills, strategies for its implementation, and opportunities and challenges of integrating AI in Arabic language learning. The precise steps of data analysis consist of data collection, data reduction, data display, and drawing or verifying conclusions as illustrated below:
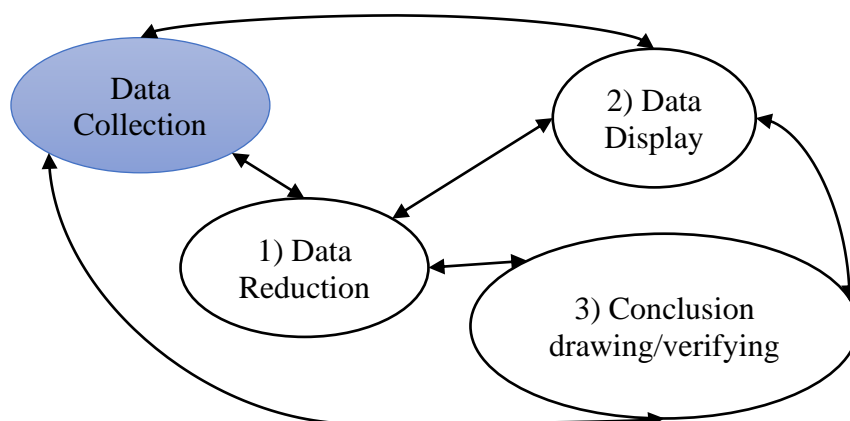

Figure 1. Miles & Huberman's interactive analysis model
(Matthew B. Miles & AS. Michael Huberman, 1992, p. 20)

Results and Discussion

Findings

Artificial Intelligence: the growth and its prospects in education

Warren McCulloch and Walter Pitts introduced the concept of Artificial Intelligence (AI) technology in 1943 for the first time. They proposed a model of artificial neurons, where each neuron is characterized as either "on" or "off" triggered to "on" by sufficient stimulation

from others. Six years later (1949), Donald Hebb developed their model by introducing a rule for updating and modifying the connection strengths between neurons known as Hebbian learning, which remains a significant model in AI (Russell & Norvig, 2010). However, AI technology during those two periods was yet to be known as Artificial Intelligence as understood by society today (Dimitriadou & Lanitis, 2023). Sadiku et al. (2021) defined that the term AI, which refers to the ability of computer systems to perform human tasks, was introduced in 1956 by John McCarthy.

The interpretation of AI presented by Sadiku is indeed relevant to the concept of the society 5.0 era, which is widely understood. Nevertheless, Russell & Norvig (2010) has provided a rather clear description of the constantly evolving definition of AI that can be understood in four main indicators; thinking humanly, thinking rationally, acting humanly, and acting rationally. Here is the description related to the definition of AI elaborated by Russell & Norvig:

Table 1. The definitions of artificial intelligence, organized into four main indicators

Thinking Humanly	Thinking Rationally
"The exciting new effort to make computers think ... machines with minds, int he full and literal sense." (Haugeland, 1985)	"The study of mental faculties through the use of computational models." (Charniak and McDermott, 1985)
"[The automation of] activities that we associate with human thinking, activities such as decision-making, problem solving, learning ..." (Bellman, 1978)	"The study of the computations that make it possible to perceive, reason, and act." (Winston, 1992)

Acting Humanly	Acting Rationally
"The art of creating machines that perform functions that require intelligence when performed by people." (Kurzweil, 1990)	"Computational Intelligence is the study of the design of intelligent agents." (Poole et al., 1998)
"The study of how to make computers do things at which, at the moment, people are better." (Rich and Knight, 1991)	"AI . . . is concerned with intelligent behavior in artifacts." (Nilsson, 1998)

Source: Artificial Intelligence: a Modern Approach by Russell & Norvig (2010)

With its opportunities, the improvement of artificial intelligence, which could be thinking and acting humanly and rationally, plays a significant role in collaboration with humans. This phenomenon presented the genesis of the Society 5.0 era, where human beings and technology can work together to solve various tasks and jobs effectively and efficiently. Several studies have shown that this technology has been used in various aspects of human life, such as education (Cox, 2021; Li & Wang, 2023; Mukhopadhyay et al., 2020; Y. Wang, 2023), health (Chen & Decary, 2020; Kilic, 2020; Zhang et al., 2023), industry (Ayoub Shaikh et al., 2022), economics (Mustak et al., 2021), and many other fields.

In the field of education, the integration of AI in teaching and learning encounters various pros and cons perspective. Although it has many advantages, it must be admitted that this technology also poses real threats (Bates et al., 2020). Based on the SWOT analysis of Dimitriadou & Lanitis (2023), integrating artificial intelligence and emerging technologies in smart classrooms presents some potential threats. These threats include concerns about privacy, ethics, compliance with data regulations in the context of data collection by smart AI systems and the storage of critical research data in large server stations, which may be susceptible to hacking attempts. Teachers may also need help adopting AI systems due to their limited familiarity with new technology or resistance to accepting new norms.

Additionally, using AI-based cheating tools during exams and assessments may create an unfair advantage for some students over their peers. Moreover, there is a risk of bias in machine learning systems, leading to potential unfair treatment of students. Consequently, the role of teachers in classroom management becomes a crucial point that needs to be constantly addressed to ensure that various opportunities can be maximized effectively.

The importance of presenting skills in Society 5.0 era

Presentation skills have become one of the major competencies that students must master in Arabic as a second language learning. Besides this skill, there are also listening, speaking, reading, and writing skills that have been known for years. Thomas & Jayagopi (2022) state that effective presentation skills are essential for us in the Society 5.0 era. This competence would enable us to interact with various individuals and knowledge worldwide. In line with this statement, Widyaningrum (2016) mentioned that presenting skills is an effective way to develop speaking skills. On the other hand, mastering presentation skills well is necessary to stay noticed in various information and global developments. Moreover, accessing various professionalism job will become increasingly challenging, eventually leading the individual to become an introvert (Oktaviani & Mandasari, 2020).

According to Ahmad, one of the goals of educational institutions is to prepare their graduates to be workplace-ready. Her study addresses 16 job-specific skills based on data deriving from the responses of 250 Human Resource Managers (HRMs) who represent five manufacturing industries (Aerospace and Defense, Automotive, Consumer Products, Electronics and Industrial Manufacturing) located in five regions (Northeast, Midwest, Southeast, West-Mountain and Pacific) of the United States. The findings show that the five highest ranking of 16 skills confirmed were team player, self-motivation, verbal communication, problem-solving and being proactive, which align with previous studies on workplace skills.

AI technology that can be leveraged to develop presenting skills

Wardani's study in developing assessment instruments for scientific presentations has constructed eleven indicators that can be utilized to evaluate students' ability to master presentation skills. These are 1) content quality, 2) completeness, conciseness, clarity, and coherence of material delivery, 3) opening and closing capabilities of the presentation, 4) utilization of media, 5) response and answer quality, 6) physical expression, encompassing posture, body movements, gestures, facial expressions, and eye contact, 7) vocal expression, involving volume, intonation, pauses, speed, and articulation, 8) verbal expression (choice of

words and effectiveness sentences), 9) media quality, 10) punctuality, and 11) self-confidence (Wardani, 2017).

According to Wardani's instruments, the following are some AI that can be used to develop presenting skills. These indicators are grouped into four aspects; 1) presentation preparation skills, 2) material communication skills, 3) expressive skills, and 4) self-management and time skills. To improve the presentation materials, we can use several AI such as ChatGPT, Copy.AI, Canva, and ElevenLabs. Here is the website link and their homepage:
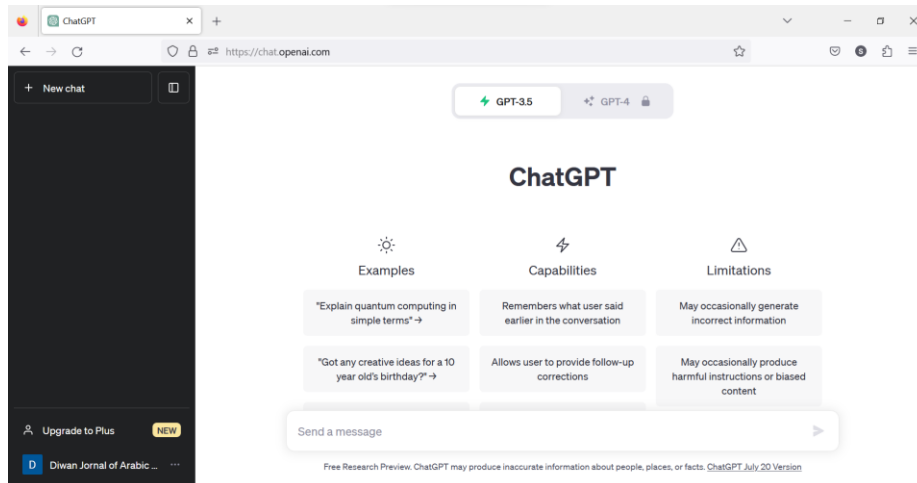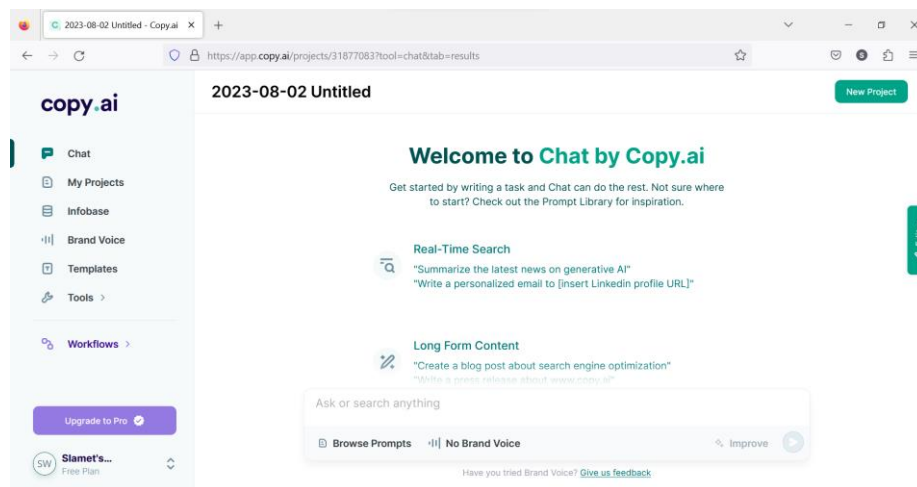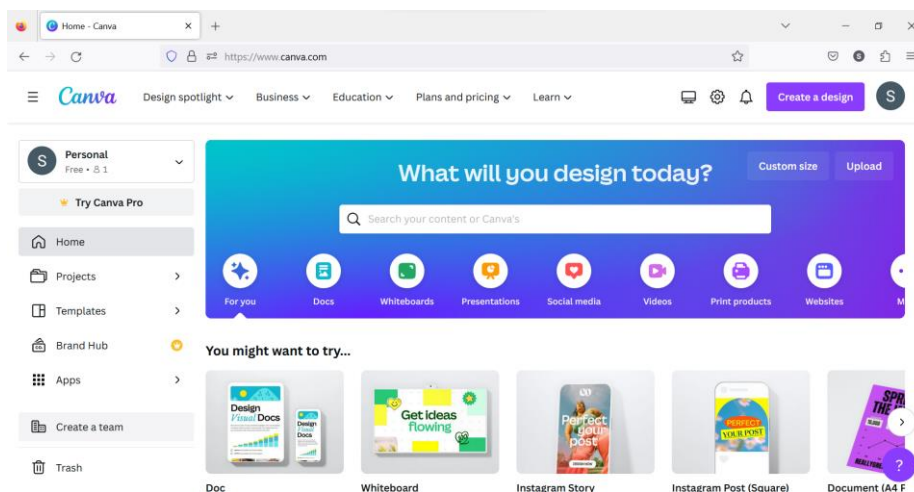

Figure 2. ChatGPT Homepage [https://chat.openai.com]

Figure 3. Copy.ai Homepage [https://app.copy.ai]

Figure 4. Canva Homepage [https://www.canva.com]

Figure 5. ElevenLabs Homepage [https://elevenlabs.io]
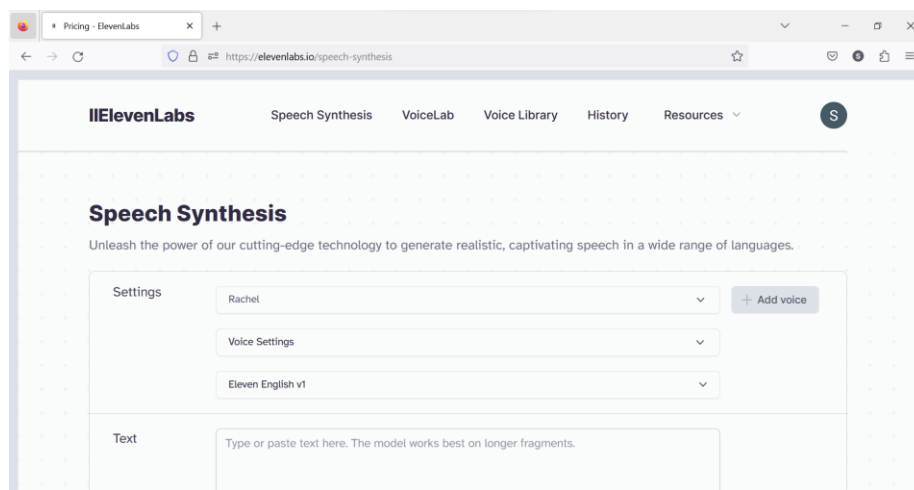
Subsequent, to improve our material communication skills, we can utilize the technologies Xembly and Sembly[Ai] as follows:

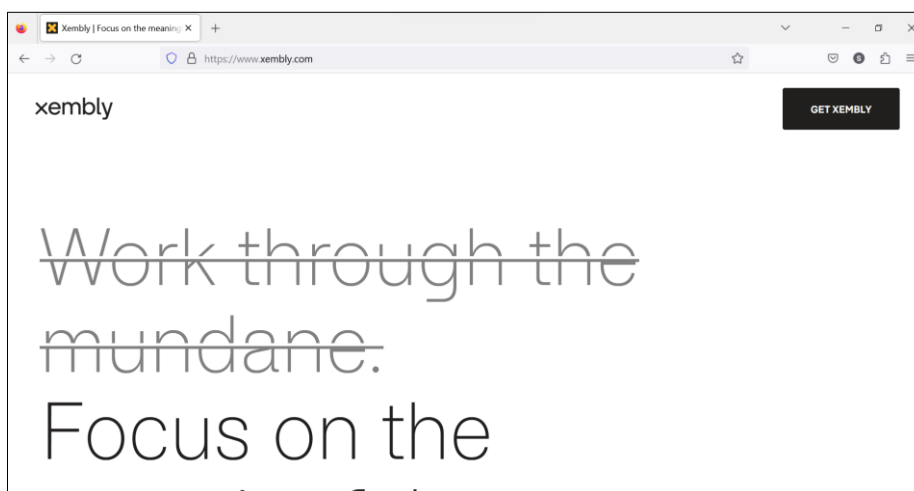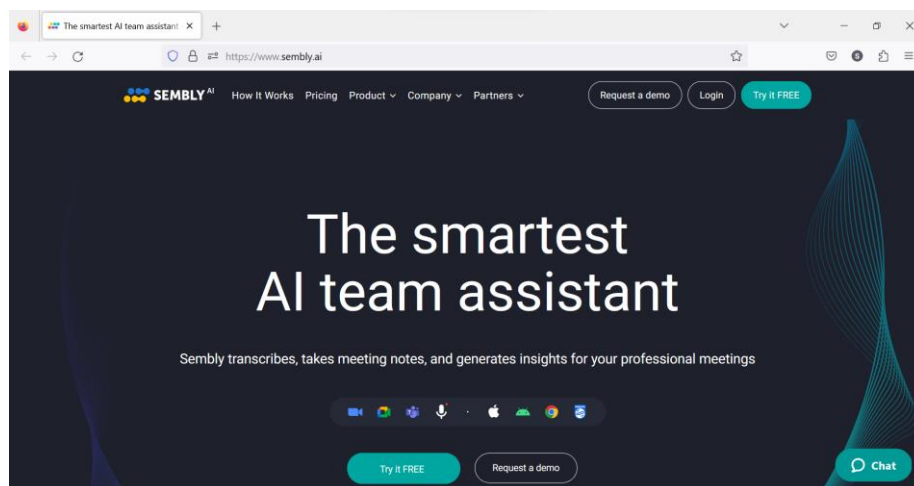Figure 6. Xembly Homepage [https://www.xembly.com]

Figure 7. Sembly^{Ai} Homepage [https://www.sembly.ai]

Meanwhile, for the third aspect (expressive skills), we can use Veed.io, which can transform the text into voice. It allows the students to learn how to pronounce some Arabic sentences correctly. This AI tool can also enhance self-management and time skills, making it easier to practice time management and boost self-confidence.
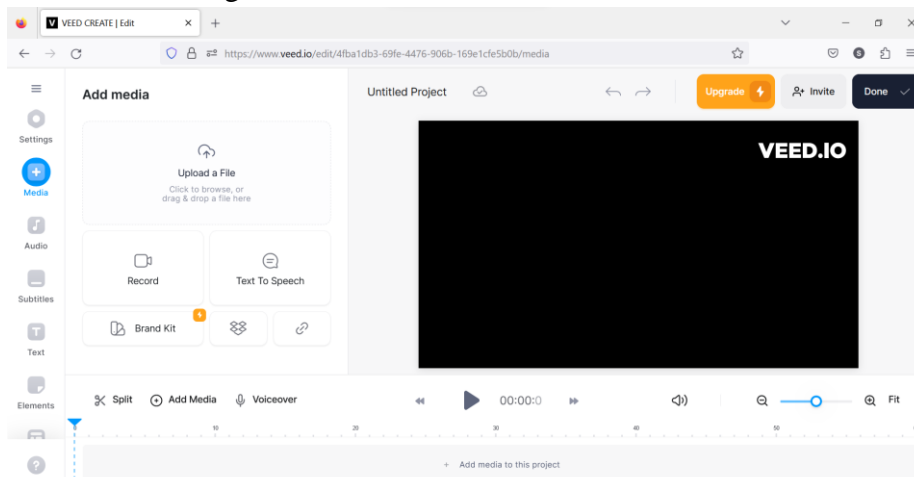

Figure 8. Veed.IO Homepage [https://www.veed.io]

Analysis

AI and presenting skills in Arabic language learning: challenges and opportunities

Artificial Intelligence (AI) in Arabic language learning significantly positively impacts the students' presenting skills development. However, its implementation also presents several threats that teachers need to anticipate. One of the main challenges is the potential dependence of students on AI technology in the presentation learning process. In line with this view, Bates et al. (2020) mentioned that integrating AI into education without proper regulation would cause students to rely entirely on AI for feedback and guidance in their presentations, reducing their opportunities for critical thinking and independent decision-making. Moreover, integrating AI into Arabic language learning also has the potential to cause social isolation for students (Popenici & Kerr, 2017). Excessive interaction with technology and reduced

interaction with peers and teachers can reduce students' ability to communicate effectively and engage in real presentation scenarios (Dimitriadou & Lanitis, 2023).

However, amidst these challenges, AI offers opportunities to develop presenting skills (Mahdi, 2022). AI enables better-personalized learning by identifying individual students' abilities and needs (Lai et al., 2023). Through data analysis, AI can adjust the materials and learning methods to match each student's ability and learning style, assisting them in developing presenting skills more effectively. This technology also can provide the capability to offer real-time feedback during presentations (An et al., 2023). AI technologies such as Veed.io, ElevenLabs, and Canva can provide immediate feedback on students' presentation quality, allowing timely adjustments.

Furthermore, AI can create realistic virtual presentation simulations. Students can practice in a safe yet challenging environment, building confidence and enhancing presenting skills without fearing failure (Kendeou et al., 2005). The development of automatic translation ability through AI such as ChatGPT also supports multilingual presentations in Arabic and other languages, facilitating language learning for students who speak different languages and promoting cross-cultural understanding. AI can assist in designing the right and effective presentation materials. It can also recommend composing materials that captivate the audience's attention by analysing relevant ideas and data.

By minimizing the challenges and leveraging existing prospects, integrating AI in developing presenting skills in Arabic language learning can affect beneficial and productive results for students. The teacher become a mentor and facilitator who is key in instructing students to wield AI technology prudently, developing relevant and valuable presenting skills in our progressively interconnected society. This concept relates to Rahim's statement that the teacher assumes a central role in managing and performing the learning process (Mansyur, 2022). Effective teacher leadership can be embraced through a democratic approach, promoting openness in learning and creating a collaborative environment with students, encouraging a harmonious and tight learning atmosphere.

The Role of Teachers in AI-Based Arabic Language Learning

The development of AI brings significant positive impacts to Arabic language learning, but it also poses several challenges and unfavourable effects that teachers need to anticipate. In facing these threats impacts, the role of teachers evolves critical in instructing students and creating a proportional learning environment (Ivanović et al., 2022). Here are some ways in which teachers can anticipate the negative impacts of AI development in Arabic language learning:

Firstly, teachers should assist students in understanding the limitations of AI in Arabic language learning. Although AI can provide valuable assistance in evaluating and enhancing language proficiency, it is better to replace the complexity of human interactions in the learning process (Popenici & Kerr, 2017). Teachers should emphasize the importance of interpersonal communication and direct interaction to master the language effectively. Secondly, in response to AI development, teachers should focus on developing human skills that technology cannot replace. These include critical thinking, creativity, empathy, and adaptability (Bearman et al., 2023). Teachers can design learning activities encouraging students to cultivate these skills, valuable assets in the AI era.

Moreover, using AI technology in Arabic language learning may lead to social isolation if not properly managed. Teachers must create opportunities for students to interact directly with their peers and teachers in the learning process. This can be achieved through group discussions, collaborative projects, or extracurricular activities that promote positive social interaction. Furthermore, teachers play a vital role in teaching Ethics of Technology during learning (Bates et al., 2020). They should instruct students on the responsible and ethical use of AI technology. It includes awareness of data privacy, understanding how AI affects society, and avoiding harmful uses of AI technology.

The development of AI can change the job landscape in the future (Olszewski-Kubilius et al., 2019). Teachers should assist students in preparing for these challenges by developing relevant skills for the evolving job market, such as technological proficiency, problem-solving, and leadership. Moreover, using AI technology in learning should adopt an inclusive approach to ensure all students have equal access to technology and learning opportunities (L. Wang, 2023). Teachers should work to bridge the digital divide and ensure that technology is used to promote equality in education.

By anticipating the negative impacts of AI development, teachers can make Arabic language learning more effective and positively impactful for students. As mentors and facilitators of learning, teachers play a key role in helping students understand, appreciate, and overcome the challenges and benefits of AI technology in Arabic language learning.

Conclusion

The findings of this study reveal that presentation skills are an essential competence for students in Arabic language learning, even in the Society 5.0 era that emphasizes technology integration. Integrating AI technology in Arabic language learning presents significant opportunities for effective presentation skill development. However, threats such as privacy, ethics, and data regulation related to AI systems need to be carefully handled. Therefore, practical strategies are necessary for integrating AI into Arabic language learning. Some of the strategies offered by this study include 1) identifying learning needs and objectives, 2) selecting and implementing appropriate AI tools, 3) providing teacher training, 4) adjusting the curriculum and learning materials, 5) monitoring and evaluation, 6) technical support and infrastructure, and 7) collaboration and sharing experiences. With this strategy, utilizing AI in Arabic language learning can be more effective in developing students' presentation skills.

However, this study has some limitations that need to be considered. Firstly, since it uses a library research method, it does not involve direct data collection from samples or respondents, thus limiting a comprehensive understanding of how AI can be fully integrated into Arabic language learning and its direct impact on students. Additionally, this study focuses only on leveraging AI in developing presentation skills, with limited elaboration on other skills.

It is recommended for further research to combine library research methods with field research to strengthen the results and gain a more comprehensive insight. Further studies should involve more interactions with teachers and students in actual Arabic language learning settings to identify practical AI integration strategies. Moreover, focusing on developing and implementing AI technology that aligns with the Arabic language and culture will be a meaningful step in maximizing the potential of AI to improve students' presentation skills in Arabic.

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