



Learning Arabic in the Digital Era: Challenges and Effective Strategies

Rezky Afril¹, Ilya Husna², Hasan Jasem³

^{1,2}UIN Imam Bonjol Padang, Indonesia, ³Yalova University, Türkiye

Corresponding E-mail: rezkyaafiril28@gmail.com

Received: 2024-05-20	Revised: 2024-07-12	Accepted: 2024-07-18
-------------------------	------------------------	-------------------------

Abstract

The learning of the Arabic language has undergone significant changes with the development of digital technology. This article aims to: 1) Explore Arabic language learning in the digital era, 2) Formulate the challenges of learning Arabic in the digital era, and 3) Outline strategies for learning Arabic in the digital era. This study employs the Library Research method with content analysis techniques. The research findings indicate that: 1) Learning Arabic in the digital era is a teaching and learning process that utilizes technology to enhance effectiveness and accessibility, 2) The main challenges of learning Arabic in the digital era include the digital divide, limited access to quality resources, the need for technological training for educators, and the lack of direct interaction with native speakers, 3) Effective strategies to address these challenges include reducing the digital divide by improving internet access, providing quality digital resources, offering technological training for educators, and facilitating direct interaction with native speakers. Despite significant challenges, the potential to improve the quality of Arabic language learning through digital innovation is substantial. With the right approach, learning Arabic can become more effective, engaging, and inclusive in this digital era. This study recommends developing research on the collaboration between the government and educational institutions to expand digital infrastructure in the education sector.

Keywords: Arabic Language Learning, Digital Era, Challenges, Effective Strategies.

مستخلص البحث

شهد تعلم اللغة العربية تغييرات كبيرة مع تطور التكنولوجيا الرقمية. يهدف هذا المقال إلى: ١) استكشاف تعلم اللغة العربية في العصر الرقمي، ٢) صياغة تحديات تعلم اللغة العربية في العصر الرقمي، و ٣) توضيح استراتيجيات تعلم اللغة العربية في العصر الرقمي. تعتمد هذه الدراسة على منهج البحث المكتبي باستخدام تقنيات تحليل المحتوى. تشير نتائج البحث إلى أن: ١) تعلم اللغة العربية في العصر الرقمي هو عملية تدريس وتعلم تستفيد من التكنولوجيا لتعزيز الفعالية وإمكانية الوصول، ٢) التحديات الرئيسية لتعلم اللغة العربية في العصر الرقمي تشمل الفجوة الرقمية، الوصول المحدود إلى الموارد ذات الجودة، الحاجة إلى تدريب تكنولوجي للمعلمين، ونقص التفاعل المباشر مع الناطقين الأصليين، ٣) الاستراتيجيات الفعالة للتغلب على هذه التحديات تشمل تقليل الفجوة الرقمية من خلال تحسين الوصول إلى الإنترنت، توفير موارد رقمية ذات جودة، تقديم تدريب تكنولوجي للمعلمين، وتسهيل التفاعل المباشر مع الناطقين الأصليين. على الرغم من التحديات الكبيرة، فإن إمكانية تحسين جودة تعلم اللغة العربية من خلال الابتكار الرقمي كبيرة. مع النهج الصحيح، يمكن أن يصبح تعلم اللغة العربية أكثر فعالية وجاذبية وشمولية في هذا العصر الرقمي. توصي هذه الدراسة بتطوير أبحاث حول التعاون بين الحكومة والمؤسسات التعليمية لتوسيع البنية التحتية الرقمية في قطاع التعليم.

الكلمات المفتاحية: تعلم اللغة العربية، العصر الرقمي، التحديات، الاستراتيجيات الفعالة

Introduction

With the rapid advancement of technology, the methods of learning Arabic have undergone significant transformation. In the past, Arabic language learning tended to be limited to the use of textbooks, face-to-face classes, and other printed resources (Nuraman, 2020). However, with the emergence of digital technology, this paradigm has radically changed. Nowadays, students have much broader access to various online learning resources, Arabic language learning apps, and e-learning platforms offering diverse materials and interactive learning methods (Mahmudah & Paramita, 2023).

This change has opened the door to a more dynamic, flexible, and adaptable Arabic language learning experience. Students are no longer restricted to specific times and places to access learning materials but can do so anytime, anywhere. They can also interact with various multimedia resources, such as videos, audios, and interactive content, enriching their learning experiences (Wibowo, 2023).

Not only students benefit from this technological advancement, but teachers as well. Teachers now have access to various digital tools and platforms that allow them to present learning materials in a more engaging, interactive, and relevant manner to students' needs. Additionally, technology facilitates communication and collaboration between teachers and students, as well as among peers, through online forums, instant messaging applications, and collaborative platforms (Sholeh & Efendi, 2023).

Furthermore, technology also facilitates collaboration between students and teachers, as well as among peers, through various communication and collaborative platforms (Ardiansyah & Kusmiati, 2023), (I. Husna dkk., 2023). Through online forums, instant messaging applications, and collaborative platforms, students can discuss, share ideas, and collaborate on learning projects. This not only enhances students' social interaction and communication skills but also expands the scope of learning beyond the classroom boundaries. Teachers can also use these platforms to provide direct feedback to students, facilitate group discussions, and monitor students' learning progress in more detail (Wijayanto, 2023). Thus, technology not

only changes the way we learn but also expands the possibilities for collaboration and interaction in the education process.

By leveraging technology in Arabic language learning, teachers can create a more inclusive and engaging learning environment for students from diverse backgrounds (Bustam dkk., 2024). For example, through the use of e-learning platforms, students can learn in a friendly and interactive environment, unrestricted by geographical or time constraints. Additionally, various digital learning tools such as online quizzes, instructional videos, and educational games can be used to increase student engagement in the learning process (Berly, 2023). This also allows for the use of innovative teaching methods, such as flipped classrooms, where students can independently study materials through digital resources before meeting with teachers to discuss and apply concepts in real-life situations.

Furthermore, technology also allows for more opportunities to interact with native Arabic speakers. Through online platforms, students can connect with native speakers to practice speaking and deepen their understanding of the Arabic language and culture (Nuur'ainii dkk., 2024). Direct interaction with native speakers not only helps improve students' language skills but also enriches their understanding of the cultural context in which the language is naturally used. Thus, technology serves not only as a learning tool but also as a bridge connecting students with the broader world.

In the context of learning Arabic, direct interaction with native speakers through technology can also motivate students by providing more authentic and relevant experiences. By listening to and speaking with native speakers in situations similar to everyday life, students can feel more confident in using Arabic practically (Nur dkk., 2024). Additionally, such interactions open doors for students to expand their social networks and understand diverse cultural perspectives.

In addition to the benefits of direct interaction with native speakers, technology also enables collaborative learning among students, which can enhance motivation and understanding. Through online discussion forums, collaborative projects, or group-based assignments, students can learn from each other, support one another, and build a deeper understanding of the Arabic language (Unsi, 2015). Thus,

technology not only facilitates individualistic learning but also fosters collaboration and active engagement in the learning process (Azkiya dkk., 2024).

However, despite the many benefits of using technology in Arabic language learning, challenges remain. One of them is the digital divide, where not all students have equal access to the devices and internet connections required. Additionally, there is a need for technology training for teachers, as well as a lack of direct interaction with native speakers. Therefore, it is important for educators and policymakers to work together to address these challenges so that all students can benefit from the integration of technology in Arabic language learning (Ritonga, 2023).

The article will provide a comprehensive overview of how the evolution of Arabic language learning has occurred in the digital era. It will also highlight the main challenges that arise with the use of digital technology in enhancing the Arabic language learning process, ranging from digital access gaps to the need for technology training for teachers. Finally, the article will outline effective solutions and strategies to address these challenges, with the aim of enhancing the standard of Arabic language learning and expanding its reach in this digital age.

Methods

This research is a library study or library research, which is a series of activities related to the method of collecting literature data, reading, taking notes, and processing research materials (Sari, 2021). This literature study uses library sources to gather research data, analyze the content of the literature, and draw conclusions from it. The researcher employs qualitative descriptive techniques, and the primary and secondary data sources used are library sources collected through documentation techniques, such as literature books, proceedings, recent research journals indexed in various national and international indexes related to the concept and essence of digital literacy, challenges in its implementation in Islamic Education, and supporting data to produce accurate research findings. As for the data analysis technique in this research, it uses a descriptive analysis approach and content analysis to examine the data. Starting with selecting and reducing the data to be used, analyzing and determining the relevant data for the research by clarifying and analyzing until finding results and drawing conclusions (Assyakurrohim dkk., 2023).

Result and Discussion

The Understanding of Arabic Language Learning in the Digital Era

Learning Arabic in the digital era refers to the process of teaching and learning Arabic language utilizing various digital technologies to enhance effectiveness and accessibility (Mahmudah & Paramita, 2023). In this context, "Arabic language learning" refers to the process where individuals acquire skills to comprehend, speak, read, and write in Arabic. "Digital era" refers to the period where digital technologies such as computers, the internet, and mobile devices become essential in daily life (Manasiq, 2023). Therefore, "learning Arabic in the digital era" emphasizes the utilization of digital technology in Arabic language learning process. This can be illustrated as follows.



Image 1. Arabic language learning in digital era

From the above illustration, this concept implies that digital technology is not merely a supportive tool but an integral part of the learning process. Technology is utilized to facilitate access to learning resources such as digital learning materials, Arabic learning applications, and e-learning platforms. Moreover, technology enhances interaction between students and teachers through various media such as online forums, instant messaging applications, and collaborative platforms (Firdaus dkk., 2024). The primary goal of learning Arabic in the digital era is to improve learning effectiveness, including enhancing students' understanding of the Arabic language, and making learning more accessible to all individuals, regardless of geographical or time constraints (Fitri & Hasibuan, 2024). Thus, in this context,

technology is considered a tool that enables the Arabic language learning process to be more dynamic, flexible, and inclusive.

In the context of learning Arabic in the digital era, effectiveness refers to the ability of technology to enhance students' learning achievements in terms of understanding and mastery of the Arabic language. This includes technology's ability to provide various diverse and interactive learning resources and to facilitate efficient interaction between students and teachers (Murtado dkk., 2023). Accessibility, on the other hand, refers to technology's ability to make Arabic language learning more accessible to all individuals, including those who may have physical or geographical limitations (M.S.I, 2016). By utilizing digital technology, learning Arabic can become more inclusive by providing access to those who were previously limited in accessing conventional educational resources.

The definition of learning Arabic in the digital era also encompasses the aspect of using technology to facilitate independent and collaborative learning. Students can learn independently through various available online applications and platforms, while technology also enables collaboration among students in tackling assignments or learning projects (Sakti, 2023). This reflects the importance of technology in creating a dynamic and responsive learning environment where students can gain in-depth understanding of the Arabic language through various relevant and engaging learning methods.

Thus, learning Arabic in the digital era is a process of teaching and learning that utilizes technology to enhance effectiveness and accessibility. In an era where technology has become an integral part of daily life, integrating technology into Arabic language learning is key to meeting the demands of the times. Technology enables flexibility in the learning process, where students can access learning materials anytime and anywhere according to their needs. Moreover, the use of technology enriches students' learning experiences by providing access to various learning resources and interactive learning tools that motivate and support the

learning process. By harnessing technology, Arabic language learning can become more engaging, relevant, and inclusive for all students, without exception.

Challenges in Arabic Language Learning in the Digital Era

In the 5.0 era, Arabic language learning has fundamentally transformed with the harmony of technology into the educational process (Fauzi & Anindiati, 2020). Previously, Arabic language learning methods were typically limited to textbooks, face-to-face classes, and other printed resources. However, with the emergence of digital technology, this paradigm has significantly shifted. Now, students have broader access to various online learning resources, Arabic language learning apps, and e-learning platforms offering diverse materials and interactive learning methods. However, despite these advancements, integrating technology into Arabic language learning also faces several adversities that need to be addressed. Among these challenges are the following:

1. Digital Divide

In Arabic language learning in the digital era, the digital divide poses a complex and profound challenge that affects various aspects of education (Manan & Nasri, 2024). This difficulty is not only practical in terms of device access and internet accessibility but also has broader impacts on educational equity, academic achievement, and learning inclusivity (Bin-Hady & Al-Tamimi, 2021). Firstly, inequalities in technology and internet access can exacerbate academic disparities among students. Students from low-income backgrounds or remote areas may not have equal access to the digital devices and internet connections needed to participate in online learning (Rachmi dkk., 2024). This results in them missing out on diverse and interactive digital learning resources, which are key elements in enhancing Arabic language comprehension.

Furthermore, the digital divide also creates issues in terms of learning inclusivity. With students lacking adequate technology access, there's a risk of them being excluded from what should be an inclusive learning process (Falaah &

Trisnawati, 2023). This creates educational inequality, hindering efforts to create a uniform and inclusive learning environment for all students.

Another challenge that arises is related to the overall quality of education. With students having limited technology access, the learning process may become less effective and dynamic (Yasin, 2022). Students may not be able to fully utilize the potential of technology to enrich their learning experiences, which, in turn, can hinder the achievement of Arabic language learning goals.

Additionally, the digital divide exacerbates academic disparities. Students with limited technology access may lag behind in Arabic language understanding and skill development compared to their peers with better access. This can lead to disparities in academic achievement among students, deepening divisions in learning (Syamsuar & Reflianto, 2019). In Arabic language learning in the digital era, the digital divide poses a complex and profound challenge that affects various aspects of education. This difficulty is not only practical in terms of device access and internet connectivity, but also has broader impacts on educational equity, academic achievement, and learning inclusivity.

2. Limited Access to Quality Resources

This phenomenon often occurs due to several complex and interconnected reasons. One main reason is the limitation of technology infrastructure in some areas or educational institutions. Some students may not have adequate admission to devices such as computers or tablets, or they may lack stable or fast internet connections (Mukhid, 2023). This creates a significant gap in students' ability to access Arabic language learning materials online, reducing their opportunities to benefit from digital learning innovations.

Additionally, quality Arabic language learning resources are not always easily accessible for free (Fauzi & Anindiati, 2020). Some of the best learning materials are often available through subscription platforms or websites that require subscription fees. This poses a barrier for students from low-income backgrounds who may not be able to afford these subscription fees. Thus,

economic disparities also contribute to disparities in access to quality learning resources.

Disparities in access to quality resources can also occur at the institutional level. Schools or educational institutions that are financially less supported may struggle to purchase or provide access to the digital devices and resources needed for effective Arabic language learning (Andriani dkk., 2021). As a result, students in financially less capable institutions may not have the same access to the learning resources needed to improve their Arabic language skills.

This challenge also affects the quality of Arabic language teaching. Teachers who do not have access to quality learning resources may struggle to present engaging and relevant learning materials to students. This can hinder students' ability to understand and master Arabic language effectively. Thus, this challenge not only affects students but also teachers in creating an effective and meaningful learning environment (Hidayah dkk., 2023). Moreover, the lack of access to quality resources also results in academic disparities among students. Those with limited access to technology may face difficulties in following online learning or accessing additional resources needed to enhance their understanding of the Arabic language (Astuti dkk., 2023). As a result, this access gap can reinforce disparities in academic achievement, with students with better access typically achieving better results than those with limited access.

This challenge also affects equality of access to educational opportunities. Students who do not have adequate access to quality learning resources may feel marginalized and less motivated to learn. This can hinder efforts to create an inclusive and equitable learning environment for all students. Additionally, access disparities can also reinforce existing social, economic, and cultural inequalities, placing students from more privileged backgrounds in a more advantageous position than those less privileged.

3. Need for Technology Training for Teachers

Although technology has become an integral part of everyday life, not all teachers have sufficient knowledge or skills to use technology to support learning. Many Arabic language teachers may be unfamiliar or lack confidence in using various digital tools and platforms available (Manan, 2023). This could be due to a lack of adequate training in digital technology or perhaps a lack of resources and institutional support to enhance their technological competencies.

This challenge is exacerbated by the fact that using technology in Arabic language learning requires a deep understanding of how to adapt existing curricula and teaching methods into the digital context (Aliyah dkk., 2024). Teachers must be able to adjust their teaching materials and strategies to fit the digital tools and platforms they use. Additionally, they also need to understand how to utilize specific technological features to create engaging and effective learning environments for students. Furthermore, the lack of technology training for teachers can hinder their ability to design and manage effective digital learning environments (Rahayu dkk., 2023). Teachers need to understand how to integrate technology into their teaching curriculum comprehensively and continuously. This includes understanding how to design relevant tasks and projects within the digital context, as well as providing effective feedback to students in an online learning environment.

Moreover, the constant evolution of technology also demands that teachers continuously update their knowledge and skills in using technology for teaching. Teachers need to stay up-to-date with the latest developments in digital technology and learn how to integrate them into their teaching practices effectively. This requires a commitment to continuous learning and flexibility to adapt to the constantly changing technological landscape (Haleem dkk., 2022).

In addition, the use of technology in Arabic language learning requires a deep understanding of how to adapt existing curricula and teaching methods into the digital context (Mohd dkk., 2019). This requires teachers to be able to adjust their teaching materials and strategies to fit the digital tools and platforms they use. However, without sufficient understanding of how to leverage technological

features, teachers may struggle to create engaging and effective learning environments for students.

Moreover, the challenges in adapting the curriculum, teachers also face challenges in designing and managing effective digital learning environments (Mohammed Nasser Hassan Ja'ashan, 2020). This includes understanding how to comprehensively and continuously integrate technology into the curriculum. Teachers need to learn how to design tasks and projects relevant to the digital context, as well as how to provide effective feedback to students in an online learning environment.

4. Limited Direct Interaction with Native Speakers

Although technology enables access to various online learning materials and resources, students may still face difficulties in obtaining direct interaction experiences with native Arabic speakers (Rifa'i, 2021). Direct interaction with native speakers is crucial in language learning as it helps students understand cultural contexts, correct pronunciation, and the use of language in real-life situations. However, in digital-era Arabic language learning, opportunities for direct interaction with native speakers may be limited.

One reason for this limited interaction is the constraints in access or technological resources to support it. Students from underdeveloped areas or with limited internet access may not have the same opportunities to engage in direct interaction with native speakers. The lack of adequate technology infrastructure in some areas can also be a barrier to providing platforms that facilitate this direct interaction (Aksenta dkk., 2023).

Moreover, the lack of sufficient time or human resources can also be limiting factors. Arabic language educators may not have enough time or personnel to organize interactive sessions with native speakers regularly. These limitations can be impediments to efforts to enhance direct interaction with native speakers in Arabic language learning (Zurqoni dkk., 2020). Furthermore, another challenge is the technical uncertainty that sometimes occurs in using technology to facilitate

direct interaction. Students or educators may experience technical issues, such as slow internet connections or network disruptions, which can disrupt or hinder the direct interaction process (Rahiem, 2020). This can reduce the effectiveness of interaction and make it less consistent.

In conclusion, while digital technology offers numerous opportunities for enhancing Arabic language learning, it also presents significant challenges that need to be addressed. Addressing the digital divide, ensuring access to quality resources, providing technology training for teachers, and facilitating direct interaction with native speakers are crucial steps in overcoming these challenges and promoting effective Arabic language learning in the digital era.

Effective Strategies to Overcome Challenges in Arabic Language Learning in the Digital Era

In the continually evolving digital era, Arabic language learning faces complex and diverse challenges. However, amidst these challenges, opportunities arise to implement effective strategies that can help overcome these obstacles (Agayon dkk., 2022). By understanding the challenges at hand, we can design innovative and inclusive approaches to enhance the quality of Arabic language learning in the digital age. In this context, strategies focused on reducing the digital divide by enhancing internet access, providing quality digital resources, technology training for educators, and facilitating direct interaction with native speakers are essential.

1. Reducing The Digital Divide by Enhancing Internet Access

Improving internet access is a crucial strategy in reducing the digital divide in Arabic language learning in the digital era (Muid dkk., 2024). One major aspect of the digital divide is the uneven access to the internet, especially in underdeveloped or remote areas. Limited internet access can be a serious barrier for students to participate in online learning, access digital resources, and interact with learning materials effectively (Ahmadi & Ilmiani, 2020).

To address this challenge, steps need to be taken to enhance internet access in various regions, especially those with limited technological infrastructure.

Investing in internet infrastructure development, such as providing broadband networks or satellite infrastructure, can help improve connectivity in previously underserved areas (A. Husna & Budiman, 2024). Additionally, subsidy programs or incentives to encourage private internet service providers to expand their reach to remote areas can also be an effective solution.

Furthermore, education and training on the benefits of the internet and how to use it wisely are crucial. Communities, especially in underdeveloped areas, need to be educated about the importance of the internet in supporting education and personal development (Putro dkk., 2023). This training can include teaching basic internet skills, such as using search engines to find information, accessing online learning platforms, and managing data securely and effectively. Moreover, measures to reduce the cost of internet access should also be considered. Subsidy programs or offering affordable internet packages to low-income communities can help ensure that internet access costs are not an insurmountable barrier for those who need it (Wijayanto, 2023).

Overall, improving internet access is a crucial step in reducing the digital divide in Arabic language learning in the digital era. By ensuring equitable and affordable access for all students, we can create a more inclusive and comprehensive learning environment where every individual has equal opportunities to access education and learning resources.

2. Providing Quality Digital Resources

Providing quality digital resources is a crucial step in enhancing the effectiveness of Arabic language learning in the digital era. Quality digital resources encompass a variety of learning materials, applications, e-learning platforms, and multimedia content designed specifically to support Arabic language learning (Ahmad dkk., 2023). This discussion will highlight the importance of providing quality digital resources, the challenges that may be faced, and strategies to overcome them.

First and foremost, it is important to recognize that quality digital resources can enhance the quality of learning by providing access to relevant, interactive, and engaging materials for students (Sumantri dkk., 2024). These materials may include texts, audio, videos, games, and other interactive activities designed to enrich students' learning experiences and help them better understand the Arabic language.

However, despite the importance of quality digital resources, there are several challenges that may be faced in providing them. One of them is the availability of resources that align with the learning curriculum and students' needs. Some resources may not meet standards or may not be relevant to students' proficiency levels or interests, thus requiring careful curation (Sinulingga, 2022).

Additionally, cost and accessibility can also be barriers to providing quality digital resources (Hazaea dkk., 2021). Some resources may require expensive subscriptions or purchases, which may be unaffordable for all educational institutions or students. Moreover, limited internet access or inadequate technological infrastructure can also hinder students' ability to access these digital resources (Indriani dkk., 2021).

To address these challenges, several strategies can be implemented. First, collaboration between governments, educational institutions, and the technology industry can help in providing quality digital resources more affordably or even for free to educational institutions and students (Rachmad dkk., 2024). Additionally, subsidy programs or grants can help fund subscriptions or purchases of expensive digital resources.

Furthermore, careful curation approaches are also important to ensure that the provided resources align with students' needs and proficiency levels. Educational institutions can form curation teams or utilize specialized platforms to review, assess, and recommend quality digital resources (Manzis, 2024). Finally, training for teachers and educational staff is also important to ensure that they can utilize digital resources to their fullest potential. This training may include

technology use, integration of digital resources into the curriculum, and effective teaching strategies utilizing these digital resources (akbar dkk., 2023). By implementing these strategies, it is hoped that the provision of quality digital resources can become more effective and have a positive impact on Arabic language learning in the digital era.

3. Technology Training For Educators

Technology training for educators is a key step in improving the quality of learning in the digital era. With the rapid development of technology, teachers need to continuously develop their knowledge and skills to effectively utilize it in the teaching process (Qureshi dkk., 2021). This training is important because it allows educators to become more proficient in using relevant digital tools and platforms within their learning contexts.

One of the main benefits of technology training for educators is their ability to adapt existing curriculum and teaching methods to the digital context. Through this training, teachers can learn how to tailor learning materials and teaching strategies to fit with the tools and digital platforms they use (Keshav dkk., 2022). This enables them to create engaging and effective learning environments for students (Núñez-Canal dkk., 2022).

Additionally, technology training also helps educators in designing and managing effective digital learning environments. Teachers need to understand how to integrate technology into their learning curriculum comprehensively and sustainably (Zhu dkk., 2023). This includes understanding how to design relevant tasks and projects in the digital context, as well as how to provide effective feedback to students in online learning environments.

The continuous evolution of technology also demands that teachers continuously update their knowledge and skills in using technology in teaching. With the right training, teachers can stay up-to-date with the latest developments in digital technology and learn how to integrate them into their teaching practices

effectively. This requires a commitment to continuous learning and flexibility to adapt to the ever-changing technological landscape (Kasneci dkk., 2023).

Thus, technology training for educators not only enhances the quality of teaching but also helps them remain relevant in the continually evolving digital era. Investing in this training is a crucial step to ensure that teachers can maximize the use of technology in supporting the learning process and creating effective and meaningful learning environments for students.

4. Facilitating Direct Interaction with Native Speakers

Facilitating direct interaction with native Arabic speakers is a crucial aspect of Arabic language learning in the digital era. Direct interaction with native speakers not only allows students to enhance their practical understanding of Arabic but also helps them understand cultural context, correct pronunciation, and language usage in real-life situations (Harbi & Abdullah, 2022). In the context of Arabic language learning in the digital era, there are several strategies that can be used to facilitate direct interaction with native speakers:

First, Video Conference Usage. One way to facilitate direct interaction with native speakers is through the use of video conferencing technology. Teachers can invite native speakers to participate in virtual classroom sessions, where students can interact directly with them. This allows students to communicate directly, ask questions, and listen to authentic Arabic conversations (Bailey dkk., 2022).

Second, Language Exchange Programs. Language exchange programs are an effective way to facilitate direct interaction with native speakers. In these programs, Arabic language learners can partner with native speakers who want to learn their language. They can communicate through online platforms, such as messaging apps or video calls, to practice speaking Arabic directly (Gong dkk., 2021).

Third, Collaboration with Local Communities. Collaboration with local communities that have native Arabic speakers can also be an effective way to facilitate direct interaction. Schools or educational institutions can partner with local organizations or community groups that have native Arabic speakers. This

can allow students to attend events or activities that involve direct interaction with native speakers (Aldhafeeri & Alotaibi, 2022).

Fourth, Utilization of Social Media. Social media can also be used as a tool to facilitate direct interaction with native speakers. Teachers can create groups or online communities on social media platforms where students can interact with native Arabic speakers. They can share experiences, ask about vocabulary or grammar, and participate in Arabic conversations virtually (Siddig, 2020).

By utilizing these various strategies, Arabic language educators can create a learning environment that supports direct interaction with native speakers. This will not only enhance students' Arabic language skills but also help them understand and appreciate the cultural and linguistic diversity within Arab society.

Conclusion

From the results of this research, it can be concluded that Arabic language learning has undergone a significant transformation with the advancement of digital technology. This transformation presents challenges such as the digital divide, limited access to quality resources, the need for technology training for teachers, and the lack of direct interaction with native speakers. Effective solutions include improving internet access, providing quality digital resources, offering technology training for educators, and facilitating interaction with native speakers. Despite these challenges, the potential to enhance Arabic language learning through digital innovation is immense.

The author's recommendations include encouraging collaboration between the government, educational institutions, and technology providers to improve access and the quality of digital resources. Continuous training for educators is crucial, and programs for direct interaction with native speakers should be expanded. With the right strategies, Arabic language learning can become more effective, engaging, and inclusive in the digital era. Therefore, this research recommends developing studies on the collaboration between the government and educational institutions to expand digital infrastructure in the education sector.

Acknowledgement

The author would like to express sincere gratitude to all those who have contributed to this research. Special appreciation goes to the author's family for their unwavering support and motivation. Thanks also to all the authors and researchers whose works have been an inspiration for this study.

References

- Agayon, A. J. D., Agayon, A. K. R., & Pentang, J. (2022). *Teachers in The New Normal: Challenges and Coping Mechanisms in Secondary Schools* (SSRN Scholarly Paper 4026389). <https://papers.ssrn.com/abstract=4026389>
- Ahmad, A. K., Sumarni, Rahayu, K. M., & Lisnawati, S. (2023). Pembelajaran Berbasis E-Learning di Madrasah Dalam Peningkatan Kualitas Pendidikan: Kasus MTsN Al Azhar. *EDUKASI: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, 21(3), Article 3. <https://doi.org/10.32729/edukasi.v21i3.1572>
- Ahmadi, A., & Ilmiani, A. M. (2020). The Use of Teaching Media in Arabic Language Teaching During Covid-19 Pandemic. *Dinamika Ilmu*, 307–322. <https://doi.org/10.21093/di.v20i2.2515>
- akbar, J. saddam, Ariani, M., Zulhawati, Z., Haryani, H., Zani, B. N., Husnita, L., Firmansyah, M. B., Sa'dianoor, S., Karuru, P., & Hamsiah, A. (2023). *Penerapan Media Pembelajaran Era Digital*. PT. Sonpedia Publishing Indonesia.
- Aksenta, A., Irmawati, I., Ridwan, A., Hayati, N., Sepriano, S., Herlinah, H., Silalah, A. T., Pipin, S. J., Abdurrohman, I., Boari, Y., Mardiana, S., Sutoyo, M. N., Sumardi, S., Gani, I. P., & Ginting, T. W. (2023). *LITERASI DIGITAL: Pengetahuan & Transformasi Terkini Teknologi Digital Era Industri 4.0 dan Society 5.0*. PT. Sonpedia Publishing Indonesia.
- Aldhafeeri, F. M., & Alotaibi, A. A. (2022). Effectiveness of digital education shifting model on high school students' engagement. *Education and Information Technologies*, 27(5), 6869–6891. <https://doi.org/10.1007/s10639-021-10879-4>
- Aliyah, A., Sari, D. P., & Warlizasusi, J. (2024). *Analisis Permasalahan dan Kebutuhan Pelatihan Guru dalam Mengimplementasikan Kurikulum Merdeka Belajar (Studi Pada Guru PAI SDIT Annajiyah Lubuklinggau)*, [Masters, Pascasarjana IAIN Curup]. <http://e-theses.iaincurup.ac.id/5897/>
- Andriani, W., Subandowo, M., Karyono, H., & Gunawan, W. (2021). *Learning Loss dalam Pembelajaran Daring di masa Pandemi Corona*.
- Ardiansyah, A. C., & Kusmiati, M. (2023). Pengaruh Komunikasi Efektif Dalam Era Teknologi Informasi Terhadap Interaksi Dan Pembelajaran Dalam Konteks Pendidikan. *SNHRP*, 5, 704–720.
- Assyakurrohman, D., Ikham, D., Sirodj, R. A., & Afgani, M. W. (2023). Metode Studi Kasus dalam Penelitian Kualitatif. *Jurnal Pendidikan Sains Dan Komputer*, 3(01), Article 01. <https://doi.org/10.47709/jpsk.v3i01.1951>
- Astuti, M., Herlina, H., Ibrahim, I., Rahma, M., Salbiah, S., & Soleha, I. J. (2023). Mengoptimalkan Penggunaan Teknologi Dalam Pendidikan Islam. *Concept:*

- Journal of Social Humanities and Education*, 2(3), Article 3.
<https://doi.org/10.55606/concept.v2i3.504>
- Azkiya, H., Husna, I., Madona, A. S., Yulisna, R., Shaumia, D., & Handayani, D. F. (2024). University Students' Perception of Indonesian Language Learning Innovation-Based Podcast. *AL-ISHLAH: Jurnal Pendidikan*, 16(2).
<http://www.journal.staihubbulwathan.id/index.php/alishlah/article/view/3026>
- Bailey, D. R., Almusharraf, N., & Almusharraf, A. (2022). Video conferencing in the e-learning context: Explaining learning outcome with the technology acceptance model. *Education and Information Technologies*, 27(6), 7679–7698.
<https://doi.org/10.1007/s10639-022-10949-1>
- Berly, M. (2023). *Strategi Pembelajaran dalam sekolah*. OSF.
<https://doi.org/10.31219/osf.io/s9ktg>
- Bin-Hady, W. R. A., & Al-Tamimi, N. O. M. (2021). The use of technology in informal English language learning: Evidence from Yemeni undergraduate students. *Learning and Teaching in Higher Education: Gulf Perspectives*, 17(2), 107–120.
<https://doi.org/10.1108/LTHE-09-2020-0037>
- Bustam, B. M. R., Astari, R., Yulianto, N., Aisyah, U. N., & Ali, N. S. (2024). *Inovasi media pembelajaran bahasa Arab berbasis pemanfaatan teknologi*. UAD PRESS.
- Falaah, M. F., & Trisnawati, S. N. I. (2023). Pembelajaran Jarak Jauh: Konsep Dan Tantangan. *Penerbit Tahta Media*.
<https://tahtamedia.co.id/index.php/issj/article/view/236>
- Fauzi, M. F., & Anindiati, I. (2020). *E-Learning Pembelajaran Bahasa Arab*. UMM Press.
- Firdaus, A., Asrori, A., Hakim, D. A., & Anggraini, H. (2024). Implementasi Model Manajemen Pendidikan Islam Berbasis Teknologi Dalam Meningkatkan Kinerja Guru Di Era Digital. *Unisan Jurnal*, 3(1), Article 1.
- Fitri, T., & Hasibuan, R. (2024). Transformasi Pembelajaran Bahasa Arab Di Sekolah Dasar Islam Terpadu Alam Talago: Pendekatan Kurikulum Berbasis Teknologi. *Journal in Teaching and Education Area*, 1(1), Article 1.
- Gong, Y. (Frank), Gao, X. (Andy), Li, M., & Lai, C. (2021). Cultural adaptation challenges and strategies during study abroad: New Zealand students in China. *Language, Culture and Curriculum*, 34(4), 417–437.
<https://doi.org/10.1080/07908318.2020.1856129>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Harbi, M., & Abdullah. (2022). *Arabic diglossia and its impact on the social communication and learning process of non-native Arabic learners: Students' perspective* (SSRN Scholarly Paper 4037655). <https://doi.org/10.2139/ssrn.4037655>
- Hazaea, A. N., Bin-Hady, W. R. A., & Toujani, M. M. (t.t.). *Emergency Remote English Language Teaching in the Arab League Countries: Challenges and Remedies*.
- Hidayah, N., Parihin, P., & Rusandi, H. (2023). Dampak Penggunaan Teknologi dalam Pembelajaran Bahasa Arab Terhadap Motivasi Belajar Siswa. *Journal of Millennial Education*, 2(1), Article 1.

- Husna, A., & Budiman, L. (2024). *Menghubungkan yang Tak Terhubung: Pelajaran untuk Meningkatkan Internet Cepat dan Reliabel dari Kabupaten Sumba Barat Daya*. <https://repository.cips-indonesia.org/publications/567757/>
- Husna, I., Febriani, S. R., Rahmawati, R., & Dinata, R. S. (2023). Utilization Of The Sevima Edlink Platform In Arabic Language Learning At Uin Imam Bonjol Padang. *Proceedings of Imam Bonjol International Conference on Islamic Education*, 261–271. <https://ibicie.uinib.ac.id/index.php/ibicie/article/view/68>
- Indriani, F., Diba, F., Ubaedullah, D., & Pratama, A. (2021). Strategi Pemasaran Pendidikan Dalam Meningkatkan Citra Lembaga Pendidikan Islam. *Jurnal Isema: Islamic Educational Management*, 6, 131–148. <https://doi.org/10.15575/isema.v6i2.13656>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Keshav, M., Julien, L., & Miezal, J. (2022). The Role Of Technology In Era 5.0 In The Development Of Arabic Language In The World Of Education. *Journal International of Lingua and Technology*, 1(2), 79–98. <https://doi.org/10.55849/jiltech.v1i2.85>
- Mahmudah, M., & Paramita, N. P. (2023). Transformasi Pembelajaran Bahasa Arab di Era Digital: Tantangan dan Peluang dalam Pendidikan. *Prosiding Pertemuan Ilmiah Internasional Bahasa Arab*, 14(1), Article 1.
- Manan, A. (2023). Pendidikan Islam dan Perkembangan Teknologi: Menggagas Harmoni dalam Era Digital. *SCHOLASTICA: Jurnal Pendidikan Dan Kebudayaan*, 5(1), Article 1.
- Manan, A., & Nasri, U. (2024). Tantangan dan Peluang Pendidikan Bahasa Arab: Perspektif Global. *Jurnal Ilmiah Profesi Pendidikan*, 9(1), Article 1. <https://doi.org/10.29303/jipp.v9i1.2042>
- Manasiq, G. Z. A. S. (2023). Peningkatan Kompetensi Pengajar Bahasa Arab Melalui Aplikasi Mondly Arabic. *Tanfidziya: Journal of Arabic Education*, 3(01), Article 01. <https://doi.org/10.36420/tanfidziya.v3i01.380>
- Manzis, I. (2024). *Implementasi Pembelajaran Berdiferensiasi dengan Pemanfaatan Platform Merdeka Mengajar di Sekolah Dasar* [Other, Universitas Jambi]. <https://repository.unja.ac.id/>
- Mohammed Nasser Hassan Ja'ashan, M. (2020). The Challenges and Prospects of Using E-learning among EFL Students in Bisha University. *Arab World English Journal*, 11(1), 124–137. <https://doi.org/10.24093/awej/vol11no1.11>
- Mohd, K. N., Mohd Adnan, A. H., Yusof, A. A., Ahmad, M. K., & Mohd Kamal, M. A. (2019). *Teaching Arabic Language to Malaysian University Students Using Education Technologies Based on Education 4.0 Principles* (SSRN Scholarly Paper 3511137). <https://papers.ssrn.com/abstract=3511137>
- M.S.I, D. A. S., S. Ag. (2016). *Aksesibilitas Penyandang Disabilitas terhadap Perguruan Tinggi ; Studi Kasus di Empat Perguruan Tinggi Negeri di Yogyakarta*. Lkis Pelangi Aksara.

- Muid, A., Arifin, B., & Karim, A. (2024). Peluang Dan Tantangan Pendidikan Pesantren Di Era Digital (Studi Kasus di Pondok Pesantren Al-Islah Bungah Gresik). *MODELING: Jurnal Program Studi PGMI*, 11(1), Article 1. <https://doi.org/10.36835/modeling.v11i1.2254>
- Mukhid, M. P. (2023). *Disain Teknologi Dan Inovasi Pembelajaran Dalam Budaya Organisasi Di Lembaga Pendidikan* (B. Saladin, Ed.). Pustaka Egaliter.Com. <http://repository.iainmadura.ac.id/904/>
- Murtado, D., Hita, I. P. A. D., Chusumastuti, D., Nuridah, S., Ma'mun, A. H., & Yahya, M. D. (2023). Optimalisasi Pemanfaatan Media Pembelajaran Online Sebagai Upaya Meningkatkan Hasil Belajar Siswa di Sekolah Menengah Atas. *Journal on Education*, 6(1), Article 1. <https://doi.org/10.31004/joe.v6i1.2911>
- Núñez-Canal, M., de Obesso, M. de las M., & Pérez-Rivero, C. A. (2022). New challenges in higher education: A study of the digital competence of educators in Covid times. *Technological Forecasting and Social Change*, 174, 121270. <https://doi.org/10.1016/j.techfore.2021.121270>
- Nur, H. W. N. H. W., Mustofa, S. M. S., & Rusuly, U. R. U. (2024). Implementasi Metode Role-Play dalam Meningkatkan Kemampuan Berbicara Bahasa Arab di Sekolah Islam. *Reslaj: Religion Education Social Laa Roiba Journal*, 6(4), Article 4. <https://doi.org/10.47467/reslaj.v6i4.772>
- Nuraman, N. (2020). *Efektivitas Pengaplikasian Teknologi E-Learning dalam Pembelajaran Bahasa Arab: Studi kasus di Kelas Bahasa MAN 2 Kota Serang, Banten* [masterThesis, Sekolah Pascasarjana UIN Syarif Hidayatullah Jakarta]. <https://repository.uinjkt.ac.id/dspace/handle/123456789/57492>
- Nuur'ainii, Z. L., Suparmin, & Septiari, W. D. (2024). Membangun Fondasi Pembelajaran Bahasa Indonesia yang Efektif bagi Penutur Asing: Studi Kasus Konten Youtube "Nihongo Mantappu." *Jurnal Onoma: Pendidikan, Bahasa, Dan Sastra*, 10(2), Article 2. <https://doi.org/10.30605/onoma.v10i2.3560>
- Putro, A. N. S., Wajdi, M., Siyono, S., Perdana, A. N. C., Saptono, S., Fallo, D. Y. A., Khoirotunnisa, A. U., Ningtyas, Kma. W. A., Leuwol, F. S., Pationa, S. B., Kumalasanti, R. A., & Setiyatna, H. S. (2023). Revolusi Belajar di Era Digital. *Penerbit PT Kodogu Trainer Indonesia*. <https://publisher.kodogutrainer.com/index.php/isbn/article/view/3>
- Qureshi, M. I., Khan, N., Raza, H., Imran, A., Ismail, F., & BiS, U. (2021). *Digital Technologies in Education 4.0. Does it Enhance the Effectiveness of Learning?* <http://localhost/jspui/handle/123456789/25661>
- Rachmad, Y. E., Indrayani, N., Harto, B., Judijanto, L., Rukmana, A. Y., Rahmawati, N. F., Ambulani, N., & Saktisyahputra, S. (2024). *Digital Technology Management: Mengelola Daya Saing melalui Teknologi Digital*. PT. Sonpedia Publishing Indonesia.
- Rachmi, Surachman, A., Putri, D. E., Nugroho, A., & Salfin. (2024). Transformasi Pendidikan di Era Digital Tantangan dan Peluang. *Journal of International Multidisciplinary Research*, 2(2), Article 2. <https://doi.org/10.62504/6y4qb169>
- Rahayu, I. T., Pramuswari, M. F., Santya, M., Oktariani, R., & Fatimah, S. (2023). Analisis Hasil Pengaruh Perkembangan Iptek Terhadap Hasil Belajar Siswa Sd/Mi. *HYPOTHESIS : Multidisciplinary Journal Of Social Sciences*, 2(01 Juni), Article 01 Juni.

- Rahiem, M. (2020). *Technological barriers and challenges in the use of ICT during the COVID-19 emergency remote learning*. <https://doi.org/10.13189/ujer.2020.082248>]
- Rifa'i, A. (2021). Kajian Filosofi Pendekatan Komunikatif dalam Pembelajaran Bahasa Arab. *Revorma: Jurnal Pendidikan Dan Pemikiran*, 1(1), Article 1. <https://doi.org/10.62825/revorma.v1i1.1>
- Ritonga, S. (2023). Strategi Dalam Mengatasi Tantangan Pembelajaran Bahasa Arab Bagi Guru Di Era Teknologi Modern. *HIKMAH: Jurnal Pendidikan Islam*, 12(2), Article 2. <https://doi.org/10.55403/hikmah.v12i2.571>
- Sakti, A. (2023). Meningkatkan Pembelajaran Melalui Teknologi Digital. *Jurnal Penelitian Rumpun Ilmu Teknik*, 2(2), 212–219. <https://doi.org/10.55606/juprit.v2i2.2025>
- Sari, R. K. (2021). Penelitian Kepustakaan Dalam Penelitian Pengembangan Pendidikan Bahasa Indonesia. *Jurnal Borneo Humaniora*, 4(2), Article 2. https://doi.org/10.35334/borneo_humaniora.v4i2.2249
- Sholeh, M. I., & Efendi, N. (2023). Integrasi Teknologi Dalam Manajemen Pendidikan Islam: Meningkatkan Kinerja Guru Di Era Digital. *Jurnal Tinta: Jurnal Ilmu Keguruan Dan Pendidikan*, 5(2), 104–126.
- Siddig, B. (2020). Social Media in Teaching of Languages. *International Journal of Emerging Technologies in Learning (ijET)*, 15(12), 72–80.
- Sinulingga, S. (2022). Tantangan Implementasi Kurikulum Merdeka Menghadapi Perkembangan Tehnologi Di Era Revolusi Industri 4.0. *Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*, 1, 142–147.
- Sumantri, A., Tamyis, & Ekowati, E. (2024). Penerapan Metode Pembelajaran Berbasis Teknologi Terhadap Peningkatan Pemahaman Materi Pendidikan Agama Islam. *Unisan Jurnal*, 3(1), Article 1.
- Syamsuar, S., & Reflianto, R. (2019). Pendidikan Dan Tantangan Pembelajaran Berbasis Teknologi Informasi Di Era Revolusi Industri 4.0. *E-Tech : Jurnal Ilmiah Teknologi Pendidikan*, 6(2), Article 2. <https://doi.org/10.24036/et.v2i2.101343>
- Unsi, B. T. (2015). Kemahiran Berbicara Bahasa Arab melalui Penciptaan Lingkungan Bahasa. *Tafāqquh: Jurnal Penelitian Dan Kajian Keislaman*, 3(1), Article 1. <https://doi.org/10.52431/tafaqquh.v3i1.42>
- Wibowo, H. S. (2023). *Pengembangan Teknologi Media Pembelajaran: Merancang Pengalaman Pembelajaran yang Inovatif dan Efektif*. Tiram Media.
- Wijayanto, A. (2023a). *Ilmu Pengetahuan dan Pedagogi dalam Terapan serta Teknologi*. <https://doi.org/10.31219/osf.io/t93fs>
- Wijayanto, A. (2023b). *OPTIMALISASI PEMANFAATAN TEKNOLOGI PEMBELAJARAN*. <https://doi.org/10.31219/osf.io/m3rf7>
- Yasin, I. (2022). Guru Profesional, Mutu Pendidikan dan Tantangan Pembelajaran. *Ainara Journal (Jurnal Penelitian Dan PKM Bidang Ilmu Pendidikan)*, 3(1), Article 1. <https://doi.org/10.54371/ainj.v3i1.118>
- Zhu, B., Zheng, Y., Ding, M., Dai, J., Liu, G., & Miao, L. (2023). A pedagogical approach optimization toward sustainable architectural technology education applied by massive open online courses. *Archnet-IJAR: International Journal of Architectural Research*, 17(3), 589–607. <https://doi.org/10.1108/ARCH-07-2022-0151>

Zurqoni, Retnawati, H., Rahmatullah, S., Djidu, H., & Apino, E. (2020). Has Arabic Language Learning Been Successfully Implemented? *International Journal of Instruction*, 13(4), 715-730.