

Digital Technology Integration in Enhancing Student Engagement in Arabic Language Learning

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ABSTRACT

The advancement of digital technology has created opportunities for more interactive and student-centred Arabic language learning. This conceptual paper aims to discuss the integration of digital technology in enhancing student engagement in Arabic language learning. This paper employs a literature review approach by examining and synthesising relevant previous studies. The discussion is guided by the multidimensional concept of student engagement proposed by Fredricks, Blumenfeld and Paris (2004), which encompasses behavioural, emotional and cognitive engagement. The synthesis of previous studies indicates that digital technology has the potential to support students' active participation, interest and cognitive effort. However, its implementation is also influenced by teacher competency, infrastructure, access to technology and the suitability of digital content. Therefore, digital technology should be integrated systematically and pedagogically to promote more active and meaningful Arabic language learning.

Keywords: digital technology, student engagement, Arabic language learning, educational technology.

INTRODUCTION

The rapid advancement of digital technology has significantly transformed the global educational landscape. Digital technology is no longer merely regarded as a supporting tool in teaching and learning; rather, it has influenced how educational content is delivered, how students interact with learning materials, and how teachers design learning experiences. UNESCO (2023) highlights that technological advancements have transformed education through the integration of various technologies, including learning management systems, language learning applications, virtual reality, and artificial intelligence. These developments demonstrate that technology has become an integral part of the educational ecosystem, facilitating more flexible and interactive learning experiences.

The integration of digital technology also has the potential to support student engagement through the use of learning applications, multimedia, gamification, and digital platforms. Student engagement is an important aspect of learning as it encompasses students' participation, attention, and effort throughout the learning process. OECD (2021) emphasises that engagement is a prerequisite for meaningful learning and that digital learning technologies have the potential to support and sustain student engagement. However, the use of technology alone does not guarantee effective learning, as its benefits also depend on how effectively technology is integrated with appropriate pedagogical approaches.

These developments have also influenced the teaching and learning of Arabic. The use of visual and audio materials, videos, interactive applications, and gamification enables Arabic language content to be delivered through a wider range of approaches while providing students with opportunities to interact and actively participate in learning activities. In the Malaysian context, a study by Nina Nazliana Zolkapli, Siti Suhaila Ihwani, and Abdul Basit Abdur Rahim Nasution (2026) involving Arabic language teachers at Sekolah Integrasi Rendah Agama JAWI (SIRAJ) found that although teachers demonstrated a high overall level of proficiency in preparing and using teaching aids, their skills in integrating digital materials, such as videos and interactive

applications, remained at a moderate level. These findings indicate that there is still room to strengthen the integration of digital technology in Arabic language teaching.

Accordingly, the integration of digital technology in Arabic language learning should not be viewed merely in terms of the use of devices or applications, but rather in terms of its potential to support student engagement throughout the learning process. Therefore, this concept paper focuses on the integration of digital technology in enhancing student engagement in Arabic language learning by discussing the use of digital technology, the concept of student engagement, the relationship between these two elements, and the challenges associated with its implementation.

Purpose Of The Concept Paper

This concept paper aims to discuss the integration of digital technology in enhancing student engagement in Arabic language learning. The discussion focuses on the use of digital technology in Arabic language teaching and learning, the concept of student engagement, and the relationship between digital technology integration and student engagement. In addition, this concept paper examines the challenges associated with integrating digital technology into Arabic language learning and proposes recommendations to strengthen its implementation in creating a more interactive, engaging, and student-centred learning environment.

Problem Statement

Arabic language teaching and learning require approaches that can capture students' interest and encourage active engagement, particularly because language proficiency involves listening, speaking, reading, and writing skills. The use of less interactive approaches may limit students' opportunities to communicate and actively participate in the learning process. Nina Nazliana Zolkapli, Siti Suhaila Ihwani, and Abdul Basit Abdur Rahim Nasution (2026) also emphasise the importance of delivering Arabic language instruction in an engaging and enjoyable manner to stimulate students' interest in continuing to learn the language.

Digital technology offers various alternatives, such as multimedia, videos, interactive applications, and gamification, which have the potential to make Arabic language learning more interactive. However, this potential does not necessarily translate into the optimal integration of technology in teaching practices. A study by Nina Nazliana Zolkapli, Siti Suhaila Ihwani, and Abdul Basit Abdur Rahim Nasution (2026) involving Arabic language teachers at SIRAJ found that although the overall level of proficiency in preparing and using teaching aids was high ($M = 3.95$), teachers' skills in integrating digital materials, such as videos and interactive applications, were only at a moderate level ($M = 3.62$, $SD = 0.81$). This finding indicates that there is still room to strengthen the meaningful use of technology in Arabic language teaching.

This need is aligned with the Digital Education Policy, which emphasises efforts to develop digitally fluent students and strengthen educators' digital competencies. The Ministry of Education Malaysia (2023) also emphasises the integrated, creative, innovative, and ethical use of digital technology in student-centred learning. However, the use of technology alone does not guarantee student engagement unless it is effectively integrated with appropriate pedagogy, content, and learning activities.

Furthermore, the increasing availability of digital technology does not necessarily indicate that students are actively engaged in the learning process. Students may use digital applications or access multimedia materials without demonstrating sustained participation, interest, or cognitive effort. From the perspective of student engagement, meaningful learning involves behavioural, emotional, and cognitive dimensions (Fredricks, Blumenfeld, & Paris, 2004). Therefore, the integration of digital technology in Arabic language learning should be examined not only in terms of the types of technologies used, but also in terms of how these technologies can facilitate active participation, stimulate students' interest, and encourage cognitive effort throughout the learning process.

Although previous studies have discussed the use of digital technology in Arabic language teaching, greater attention should be given to how such technology can be effectively utilised to support meaningful student

engagement. Therefore, there is a need to conceptually examine the relationship between digital technology integration and student engagement in Arabic language learning. This discussion is important for understanding how technology can support more active and interactive learning, as well as for identifying the challenges that may influence its implementation.

CONCEPTUAL FRAMEWORK

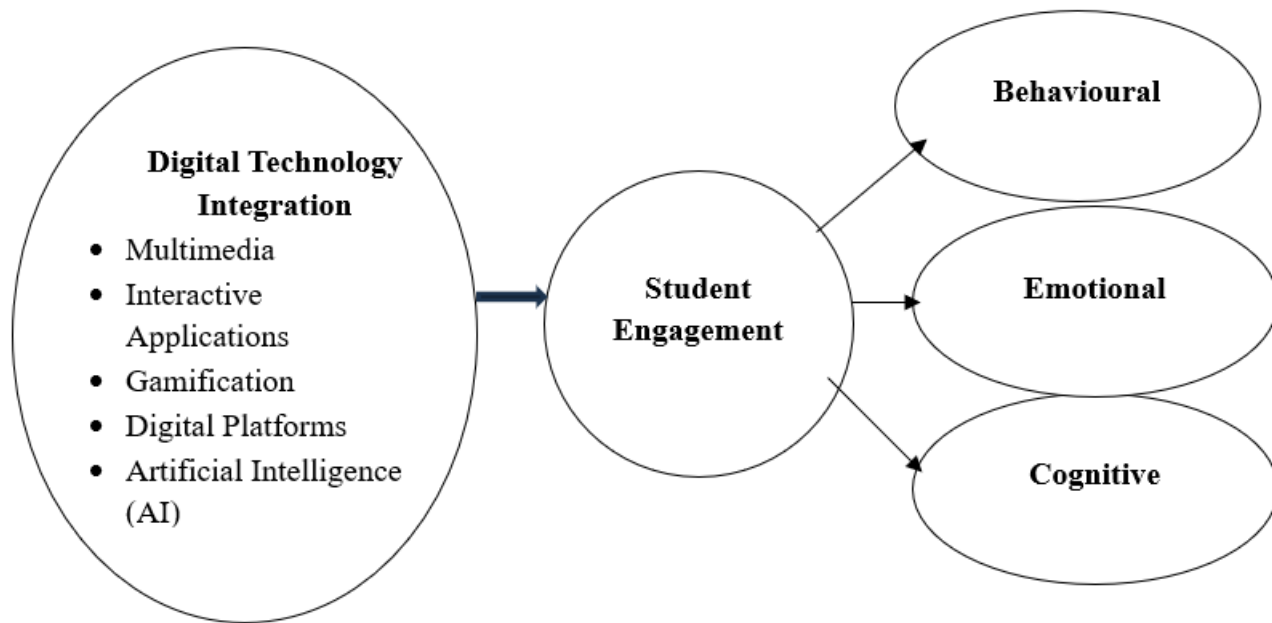


Figure 1: Conceptual Framework of Digital Technology Integration and Student Engagement in Arabic Language Learning

This conceptual framework was developed to explain the relationship between digital technology integration and student engagement in Arabic language learning. Digital technology integration encompasses the use of various technologies, such as multimedia, interactive applications, gamification, digital platforms, and artificial intelligence (AI), which are systematically incorporated into the teaching and learning process. The integration of these technologies has the potential to create a more interactive, engaging, and student-centred Arabic language learning environment. Student engagement in this framework is conceptualised based on the three main dimensions proposed by Fredricks, Blumenfeld, and Paris (2004): behavioural, emotional, and cognitive engagement. Behavioural engagement refers to students' participation and effort in learning activities, while emotional engagement involves students' interest, enjoyment, and positive responses towards learning. Cognitive engagement refers to students' concentration, mental effort, and commitment to understanding the learning content.

Based on this framework, the integration of digital technology has the potential to support and enhance student engagement across all three dimensions in Arabic language learning. This framework provides a basis for discussing how digital technology can be utilised to create more active and meaningful Arabic language learning experiences. Therefore, the conceptual framework of this paper suggests that the systematic and pedagogically grounded integration of digital technology can support a more interactive Arabic language learning environment, thereby potentially enhancing students' behavioural, emotional, and cognitive engagement.

More specifically, different forms of digital technology may support the dimensions of student engagement in different ways. Interactive applications, gamification, and AI-based tools can facilitate behavioural engagement by providing opportunities for students to respond, participate, and interact with learning content. Multimedia elements such as visual, audio, and animation may support emotional engagement by stimulating interest and enjoyment. Meanwhile, digital platforms, adaptive applications, and AI-based tools may support cognitive

engagement by providing opportunities for exploration, feedback, information processing, and personalised learning. Nevertheless, these relationships are not mutually exclusive, as a particular technology may simultaneously support more than one dimension of engagement depending on how it is pedagogically integrated into the learning process.

Digital Technology Integration And Student Engagement

Digital Technology Integration in Education

Digital technology integration in education refers to the systematic and pedagogically grounded use of technology to support teaching and learning processes. This integration extends beyond the mere use of devices or applications and involves selecting technologies that are appropriate for the content, learning activities, and students' needs. UNESCO (2023) emphasises that technology in education should be used to support learning processes and human interaction rather than replace the role of teachers. Therefore, the effectiveness of technology depends on how it is utilised within the learning experience.

In practice, digital technology encompasses the use of multimedia, interactive applications, gamification, digital learning platforms, and artificial intelligence. OECD (2021) explains that digital technology has the potential to support more personalised learning while enhancing student engagement and motivation. However, the use of technology requires appropriate learning design to ensure that its benefits are translated into meaningful learning experiences. This also requires teachers to be competent in integrating technology with pedagogy and content. Kamarulnizam bin Sani and Nur Solehah Binti Azmi (2024) emphasise teachers' skills in using electronic and multimedia materials, while Jahidih Saili, Muhamad Suhaimi Taat, and Nurul Hamimi Awang Japilan (2024) highlight the importance of integrating technological, pedagogical, and content knowledge in teaching.

Recent technological developments, particularly artificial intelligence (AI), have further expanded the ways in which technology can be integrated into education. Yugeswaran Puspanathan and Siti Nur Diyana Mahmud (2026) demonstrated that the use of AI in primary school Science teaching has the potential to support students' skills and engagement through simulations and visualisations. However, the study also highlighted challenges related to infrastructure, teacher training, and dependence on technology. These findings indicate that technology should be integrated systematically to ensure its alignment with learning objectives.

In the Malaysian context, technology integration has been further strengthened through the Digital Education Policy, which emphasises the development of digitally fluent students, the enhancement of educators' digital competencies, and the strengthening of the digital education ecosystem (Ministry of Education Malaysia, 2023). From this perspective, meaningful technology integration requires alignment between technology, pedagogy, content, and students' needs. This principle provides an important foundation for examining the use of technology more specifically in Arabic language teaching and learning.

Digital Technology in Arabic Language Teaching and Learning

The advancement of digital technology has broadened the approaches used in Arabic language teaching and learning through the integration of multimedia, learning applications, gamification, digital platforms, and artificial intelligence. Amaliah, Illiyyin Zukhruf, and Moh. Abdul Kholiq Hasan (2026) explain that the use of e-learning platforms, learning applications, and online resources can support the development of language skills while helping teachers design more adaptive and creative learning experiences. Digital technology can also be adapted to specific language skills, such as the use of audio for listening skills, interactive applications for speaking skills, digital materials for reading skills, and collaborative platforms for writing practice. Mohamad Rofian Ismail, Ahmad Redzaudin Ghazali, and Khairatul Akmar Abdul Latif (2024) also identified educational technology and teaching aids as among the factors that support the effectiveness of Arabic language teaching.

The advancement of technologies such as artificial intelligence (AI) and Learning Management Systems (LMS) has also introduced new approaches to Arabic language learning. M. Agus Fujiono (2026) explains that the integration of AI and LMS has the potential to support adaptive learning through content personalisation,

feedback, and digital learning management. In the context of writing skills, Noor Anida Awang, Nooraihan Ali, and Normila Noruddin @ Che Ahmad (2025) identified language learning applications, interactive tools, gamification, and computer-supported collaborative learning as strategies that can be utilised in Arabic language learning for non-native speakers.

The use of visual and interactive digital media has also demonstrated considerable potential in Arabic language learning. Siti Zaharah Mohid et al. (2026) found that the use of 2D animation in Arabic vocabulary learning received positive responses, as it was perceived to be more interactive and enjoyable while helping students connect terms with their contexts of use. Norfaezah Mohd Hamidin et al. (2024) further demonstrated that the i-Tahaddath application could enhance children's interest in learning Arabic. At the primary school level, Norazman Syafri, Abdul Halim Ali, and Saipolbarin Ramli (2022) showed that the Sambung dan Baca Bahasa Arab (SaBBAR) innovation could help improve students' Arabic word-reading skills. These findings suggest that innovations in Arabic language learning can be adapted to students' proficiency levels and the specific language skills being developed.

Overall, digital technology provides a wide range of tools and resources to enrich Arabic language learning through text, audio, visual content, interactivity, and artificial intelligence. However, the value of technology lies not merely in the sophistication of the applications used, but in their alignment with the objectives and pedagogical approaches of Arabic language learning. Systematic and purposeful integration of digital technology can provide students with opportunities to explore, practise, and interact with the target language, thereby promoting more active student engagement in the learning process.

The Concept of Student Engagement

Student engagement is an important element in the learning process, as it reflects the extent to which students participate, pay attention, and actively engage in learning experiences. Engagement does not merely refer to students' physical presence or participation but also encompasses their emotional responses and cognitive effort towards learning. Fredricks, Blumenfeld, and Paris (2004) conceptualise engagement as a multidimensional construct comprising three main dimensions: behavioural engagement, emotional engagement, and cognitive engagement.

Behavioural engagement refers to students' participation in academic and learning activities, including paying attention, taking part in activities, demonstrating effort, and adhering to learning-related rules. Emotional engagement encompasses students' positive and negative reactions towards teachers, peers, activities, and the learning environment, including feelings of interest, enjoyment, and boredom. Cognitive engagement, meanwhile, relates to students' willingness to invest mental effort in learning, apply appropriate strategies, and strive to understand and master the knowledge or skills being learned (Fredricks, Blumenfeld, & Paris, 2004). These three dimensions demonstrate that student engagement should be understood in terms of how students behave, feel, and think throughout the learning process.

More recent studies indicate that the concept of student engagement continues to evolve alongside changes in learning environments. Wang et al. (2026), through a systematic review of 81 studies in the context of blended learning, found that behavioural, emotional, and cognitive engagement remain the most widely examined dimensions, alongside the emerging dimensions of social and agentic engagement. The study also identified four categories of factors associated with engagement: individual, instructional, interactional, and learning environment factors. These findings suggest that student engagement is influenced not only by individual characteristics but also by instructional design, learning materials, feedback, and interactions within the learning environment.

In digital learning environments, student engagement can also be identified through patterns of interaction with technology. Wong et al. (2026), for instance, used activity data from a mobile learning application and identified three student engagement profiles: active, disengaged, and utilitarian. The study demonstrated that students' levels of engagement with the application were not uniform and that engagement patterns were associated with self-regulated learning and academic performance. This suggests that the mere presence of digital technology

does not necessarily indicate that students are actively engaged in learning. Instead, engagement depends on how students interact with and use technology as part of the learning process.

Student engagement can also be influenced by internal and external factors that either encourage or hinder students' participation. Fish, Bertone, and Van Gramberg (2026) found that affective and behavioural factors can act as barriers to student engagement, indicating that engagement is influenced by multiple factors and cannot be assessed solely on the basis of observable participation. Therefore, efforts to foster meaningful engagement should consider not only opportunities for students to participate in learning activities but also their emotional experiences and the effort they invest in learning.

Based on the preceding discussion, this concept paper adopts the three dimensions of engagement proposed by Fredricks, Blumenfeld, and Paris (2004), namely behavioural, emotional, and cognitive engagement, as the basis for understanding student engagement. The selection of these three dimensions is further supported by recent research showing that they remain the primary dimensions examined in student engagement studies (Wang et al., 2026). This framework is subsequently used to explain how digital technology integration has the potential to enhance students' active participation, interest, and cognitive effort in Arabic language learning.

5.4 Digital Technology Integration in Enhancing Student Engagement in Arabic Language Learning

The integration of digital technology in Arabic language learning has the potential to enhance student engagement when technology is used not merely as a medium for delivering content but as an integral part of the learning experience that provides students with opportunities to interact, respond, and explore the language being learned. Based on the engagement framework proposed by Fredricks, Blumenfeld, and Paris (2004), this potential can be understood through three main dimensions: behavioural, emotional, and cognitive engagement. These three dimensions are important because the mere use of technology does not necessarily indicate that students are genuinely engaged in learning. Instead, technology should provide learning experiences that promote active participation, stimulate interest, and encourage students to invest cognitive effort in the learning content.

In terms of behavioural engagement, digital technology can provide students with greater opportunities to actively participate in Arabic language learning. Activities such as digital quizzes, language games, interactive applications, and the use of AI require students to respond, make choices, explore, and interact with learning content. Khazri Osman et al. (2025) found that the use of AI in Arabic language instructional communication has the potential to enhance two way interaction and promote more active student engagement. This finding suggests that technology, when used interactively, can provide students with greater opportunities to participate in learning rather than merely receiving information passively. In the broader context of digital learning, the use of Quizizz, which incorporates game-based elements and immediate feedback, has also demonstrated the potential of digital approaches to promote active learning (Wee Sel Lee & Faridah Mydin Kutty, 2026).

In terms of emotional engagement, technological features such as visuals, audio, animations, games, and interactivity have the potential to create more engaging and enjoyable Arabic language learning experiences. Norfaezah Mohd Hamidin et al. (2024), through the use of the i-Tahaddath application in Arabic language learning among preschool children, found that interactive digital learning helped increase children's interest in learning Arabic. This is important because interest and enjoyment are key elements associated with students' emotional experiences in learning. In the context of Arabic language learning in Malaysia, Nor Fatini Aqilah Mohamad Soad, Kaseh Abu Bakar, and Lily Hanefarezan Asbulah (2024) also found that students enrolled in an Arabic language studies programme demonstrated moderate to moderately high levels of enjoyment and engagement. Although the study did not specifically examine digital technology, its findings reinforce the importance of enjoyment and engagement in the Arabic language learning experience.

The use of digital media also has the potential to support emotional engagement when language content is presented in a more contextualised and engaging manner. Siti Zaharah Mohid et al. (2026) found that the use of 2D animation in Arabic vocabulary learning received positive responses from students, as the approach was perceived as more interactive and enjoyable. These findings demonstrate that digital technology not only changes

the way learning content is delivered but can also influence students' experiences of the learning process. Therefore, selecting technologies that incorporate interactive features and are appropriate for students' proficiency levels may help reduce boredom and foster more positive emotional responses towards Arabic language learning.

In terms of cognitive engagement, digital technology has the potential to provide a learning environment that encourages students to pay attention, process information, and make an effort to understand Arabic language content. Technologies such as multimedia, adaptive applications, and artificial intelligence enable content to be presented through a combination of text, visuals, and audio, while also providing feedback on students' learning activities. M. Agus Fujiono (2026) explains that the integration of AI and Learning Management Systems in Arabic language education provides opportunities for adaptive learning, content personalisation, and feedback. Siti Zaharah Mohid et al. (2026) also demonstrate the potential of animation in helping students connect vocabulary with its context of use. These findings suggest that technology can provide stimuli that encourage students to process language content more actively. However, improved understanding or academic achievement should not be directly equated with cognitive engagement. Instead, technology should be incorporated into activities that genuinely require students to think, make connections, and invest effort in understanding the learning content.

A comparison of previous studies suggests that different forms of digital technology may support different dimensions of student engagement. Interactive applications and AI-based tools appear to provide greater opportunities for behavioural engagement through active responses and two-way interaction, while visual and animation-based media are more closely associated with interest, enjoyment, and positive emotional experiences. Technologies that provide feedback, personalisation, and opportunities for information processing may further support cognitive engagement. However, these effects should not be generalised across all technologies or learners, as the studies reviewed involve different educational levels, technological tools, and learning contexts. This variation highlights the importance of considering both the pedagogical purpose of the technology and the characteristics of learners when evaluating its potential to enhance engagement.

The relationship between digital technology and student engagement should also be examined critically. Wang et al. (2026) indicate that engagement in technology-enhanced learning environments is influenced by a combination of individual, instructional, interactional, and learning environment factors. Therefore, the use of a particular application does not necessarily result in the same level of engagement among all students. Technology that is visually appealing but does not provide opportunities for students to interact, think, or use the Arabic language may only generate temporary attention. In contrast, technology that is integrated with purposeful pedagogical activities is more likely to foster meaningful student engagement.

Based on the synthesis of previous studies, it can be argued that the potential of digital technology to enhance student engagement lies in how technology is designed and integrated into Arabic language learning experiences. Interactive technologies can provide students with opportunities to respond and participate, thereby supporting behavioural engagement. Visual, audio, animation, and game-based elements can stimulate interest and enjoyment, which support emotional engagement. Meanwhile, activities involving exploration, feedback, and information processing can support cognitive engagement. Thus, digital technology should not be viewed as a factor that automatically enhances student engagement, but rather as a pedagogical medium whose potential depends on the appropriateness of the technology, the design of learning activities, and the teacher's role in guiding the learning process.

5.5 Challenges of Digital Technology Integration in Arabic Language Learning

Although digital technology has the potential to enrich Arabic language learning, its implementation also faces several challenges. One of these challenges is teachers' competence in integrating technology with pedagogy and learning content. Maya Shafiqah Shaharom et al. (2024) emphasise the importance of teachers' knowledge and competence in using technology based materials, while Hasifah Hassan, Muhammad Faizal A. Ghani, and Sharifuddin Suhaimi (2026) also identify teacher competence as an important element in technology integration at the primary school level. In the context of Arabic language education, Nina Nazliana Zolkapli, Siti Suhaila

Ihwani, and Abdul Basit Abdur Rahim Nasution (2026) found that SIRAJ teachers' skills in integrating digital materials, such as videos and interactive applications, remained at a moderate level, with constraints related to technical skills, training, and the time required to prepare learning materials.

In addition, infrastructure and access to technology also influence the implementation of digital learning. Adequate devices, reliable internet access, and appropriate digital platforms are necessary to ensure the consistent use of technology. Khazri Osman et al. (2025) identified infrastructure limitations and gaps in digital literacy as among the challenges associated with AI integration in Arabic language teaching. M. Agus Fujiono (2026) also highlighted issues related to infrastructure and educators' digital literacy in the implementation of AI and Learning Management Systems in Arabic language education.

These challenges also raise concerns regarding equity in digital learning. Differences in access to devices, reliable internet connectivity, and digital literacy may result in unequal opportunities for students to benefit from technology-enhanced Arabic language learning. Students with limited access or digital support may experience greater difficulty participating consistently in digital learning activities. Therefore, the integration of digital technology should take into account differences in students' technological access and readiness to ensure that digital learning does not unintentionally widen existing educational disparities.

The advancement of artificial intelligence also presents challenges related to content accuracy and dependence on technology. Khazri Osman et al. (2025) raised concerns regarding the accuracy of AI in processing the Arabic language and the risk of students becoming overly dependent on technology, while M. Agus Fujiono (2026) highlighted the limitations of AI models in adapting to the linguistic characteristics of Arabic. Therefore, teachers continue to play an important role in evaluating the accuracy and appropriateness of digital content and ensuring that technology does not replace the interaction and language practice required for effective learning.

Overall, the challenges associated with digital technology integration in Arabic language learning involve teacher competence, training, infrastructure, access, content accuracy, and the balanced use of technology. Therefore, the effectiveness of technology integration does not depend solely on the sophistication of the technology but also on its alignment with pedagogy, learning content, and students' needs. Addressing these challenges is essential to ensure that technology can be effectively utilised to support student engagement in Arabic language learning.

RECOMMENDATIONS AND CONCLUSION

Based on the discussion, the integration of digital technology in Arabic language learning should be implemented systematically, with priority given to the alignment of technology with learning objectives and students' needs. The use of technology should not focus merely on the variety of applications available. Instead, it should be carefully planned to create activities that encourage students to respond, interact, explore learning content, and actively use the Arabic language. In this regard, multimedia, interactive applications, gamification, digital platforms, and artificial intelligence can be utilised according to the specific language skills to be developed.

In addition, attention should be given to developing teachers' digital competencies to ensure that technology can be effectively integrated into Arabic language pedagogy. This is particularly important as the study by Nina Nazliana Zolkapli, Siti Suhaila Ihwani, and Abdul Basit Abdur Rahim Nasution (2026) showed that SIRAJ Arabic language teachers demonstrated a moderate level of proficiency in integrating digital teaching aids, such as videos and interactive applications. Therefore, continuous professional development should emphasise not only the technical skills required to use digital applications but also teachers' ability to select, design, evaluate, and integrate technology in accordance with appropriate pedagogical approaches and Arabic language content. Such training could include practical workshops on designing technology-enhanced Arabic language activities, evaluating the accuracy and suitability of AI generated content, selecting digital tools for specific language skills, and adapting digital activities to students' proficiency levels and learning needs. This effort is aligned with the emphasis of the Digital Education Policy on strengthening educators' digital competencies (Ministry of Education Malaysia, 2023).

At the same time, the provision of adequate infrastructure and high-quality digital resources should be strengthened to support the consistent implementation of digital learning. Attention should also be given to the accuracy and appropriateness of digital Arabic language content, particularly when artificial intelligence technologies are used. Teachers should play an active role as facilitators and content evaluators to ensure that technology is used in a balanced manner without reducing the human interaction, communication, and language practice that are essential to Arabic language learning.

Overall, the integration of digital technology has the potential to enhance student engagement in Arabic language learning. Based on the multidimensional concept of engagement proposed by Fredricks, Blumenfeld, and Paris (2004), this potential can be understood through behavioural, emotional, and cognitive engagement. Technologies that provide opportunities for students to interact and respond can support active participation in terms of behavioural engagement. Visual, audio, and gamification elements have the potential to stimulate students' interest and enjoyment, thereby supporting emotional engagement. Meanwhile, digital activities involving exploration, information processing, and feedback can support students' attention and mental effort, thereby fostering cognitive engagement.

However, digital technology should not be regarded as a factor that automatically enhances student engagement. Its effectiveness depends on how technology is integrated with pedagogy, learning content, teacher competence, and the educational environment. Therefore, this concept paper suggests that pedagogically grounded digital technology integration that focuses on student engagement represents a more meaningful approach to Arabic language learning. This approach is not only aligned with current developments in digital education but also has the potential to create more interactive, active, and meaningful Arabic language learning experiences for students.

Future research should empirically examine the relationship between different forms of digital technology and the behavioural, emotional, and cognitive dimensions of student engagement in Arabic language learning. Comparative studies across different educational levels and learning contexts could also provide a clearer understanding of how technological access, teacher competence, and pedagogical design influence student engagement. Such empirical evidence would help validate and further refine the conceptual relationships proposed in this paper.

REFERENCES

1. Amaliah, Illiyyin Zukhruf & Moh. Abdul Kholiq Hasan. 2026. Pembelajaran Bahasa Arab di era digital. *Jurnal Ilmiah Wahana Pendidikan* 12(6.C): 107–113.
2. Fish, N., Bertone, S. & van Gramberg, B. 2026. Improving student engagement in employability development: Recognising and reducing affective and behavioural barriers. *Studies in Higher Education* 51(1): 181–196.
3. Fredricks, J. A., Blumenfeld, P. C. & Paris, A. H. 2004. School engagement: Potential of the concept, state of the evidence. *Review of Educational Research* 74(1): 59–109.
4. Hasifah Hassan, Muhammad Faizal A. Ghani & Sharifuddin Suhaimi. 2026. Kepimpinan penyeliaan dan kompetensi guru sebagai pemacu pengintegrasian teknologi dalam pendidikan sekolah rendah di Malaysia. *Jurnal Kepimpinan Pendidikan* 13(1).
5. Jahidih Saili, Muhamad Suhaimi Taat & Nurul Hamimi Awang Japilan. 2024. Integrasi Pengetahuan Teknologi Pedagogi Kandungan (PTPK) dalam PdP Sirah dan Tamadun Islam: Keperluan dan cabaran. *UMRAN International Journal of Islamic and Civilizational Studies* 11(3): 27–40.
6. Kamarulnizam bin Sani & Nur Solehah Binti Azmi. 2024. Kemahiran penggunaan bahan bantu mengajar guru pelatih Fakulti Pendidikan Universiti Islam Selangor semasa latihan mengajar. *Attarbiawi: Malaysian Online Journal of Education* 8(1): 26–38.
7. Kementerian Pendidikan Malaysia. 2023. *Dasar Pendidikan Digital*. Putrajaya: Kementerian Pendidikan Malaysia.
8. Khazri Osman, Al Dairi Salha Juma Mohamed, Marhamah Ulfa, Dayang Sakini Mohd Kadri & Mohamad Yazid Abdul Majid. 2025. Integrasi AI dalam komunikasi pengajaran Bahasa Arab: Tinjauan kritis dari perspektif guru. *Al-Qalam International Journal of Arabic Studies* 7: 80–92.

9. M. Agus Fujiono. 2026. Transformasi pembelajaran Bahasa Arab di era digital: Integrasi Artificial Intelligence dan Learning Management System dalam pendidikan Bahasa Arab. *Jurnal At-Ta'bir: Jurnal Pendidikan Bahasa Arab* 4(1): 73–82.
10. Maya Shafiqah Shahrarom, Mohd Faez Ilias, Mohd Izzuddin Mohd Pisol, Hasrol Basir & Mohd Amin Mohd Noh. 2024. Tahap kompetensi pengetahuan guru terhadap penggunaan bahan berasaskan teknologi dalam pengajaran dan pembelajaran di Kelas KAFA Menengah Negeri Selangor: Kajian rintis. *Attarbawiy: Malaysian Online Journal of Education* 8(1): 125–134.
11. Mohamad Rofian Ismail, Ahmad Redzaudin Ghazali & Khairatul Akmar Abdul Latif. 2024. Faktor-faktor keberkesanan pengajaran Bahasa Arab: Satu sorotan literatur berdasarkan kajian-kajian lepas. *Afaq Lughawiyah* 2(1): 306–322.
12. Nina Nazliana Zolkapli, Siti Suhaila Ihwani & Abdul Basit Abdur Rahim Nasution. 2026. Tahap kemahiran guru Bahasa Arab Sekolah Integrasi Rendah Agama JAWI dalam penyediaan dan penggunaan bahan bantu mengajar. *Journal of Research, Innovation, and Strategies for Education* 3(3): 179–188.
13. Noor Anida Awang, Nooraihan Ali & Normila Noruddin@Che Ahmad. 2025. Sorotan literatur cabaran dan strategi memperkasakan kemahiran menulis Bahasa Arab dalam kalangan pelajar bukan penutur jati. *BITARA International Journal of Civilizational Studies and Human Sciences* 8(1): 1–11.
14. Nor Fatini Aqilah Mohamad Soad, Kaseh Abu Bakar & Lily Hanefarezan Asbulah. 2024. Enjoyment and engagement of Malaysian learners in Arabic studies programme. *International Journal of West Asian Studies* 16: 18–32.
15. Norazman Syafri, Abdul Halim Ali & Saipolbarin Ramli. 2022. Penggunaan kaedah Inovasi Sambung dan Baca Bahasa Arab (SaBBAR) dalam meningkatkan kemahiran membaca perkataan Bahasa Arab murid di Sekolah Rendah. *Firdaus Journal* 2(2): 62–71.
16. Norfaezah Mohd Hamidin, Yaakob Hasan, Adnan Mat Ali, Roslinda Ramli & Nor Hanieza Esa. 2024. Pembelajaran digital Bahasa Arab dalam pendidikan awal kanak-kanak melalui aplikasi i-Tahaddath. *Attarbawiy: Malaysian Online Journal of Education* 8(2): 163–173.
17. OECD. 2021. *OECD Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots*. Paris: OECD Publishing.
18. Siti Zaharah Mohid, Muhammad Adam Nazmi Zsman, Nurkaliza Khalid, Noor Fadzilah Ab Rahman, Roslinda Ramli & Helyawati Baharudin. 2026. Integrasi media digital dalam pembelajaran kosa kata Bahasa Arab teknologi maklumat. *Malaysian Journal of Information and Communication Technology (MyJICT)* 11(1): 31–39.
19. UNESCO. 2023. *Global Education Monitoring Report 2023: Technology in Education: A Tool on Whose Terms?* Paris: UNESCO.
20. Wang, L., van der Rijst, R., Wilfried, A. & de Jonge, M. 2026. Factors related to student engagement in blended learning in higher education: A narrative synthesis based on a systematic review. *Computers & Education* 250: 105625.
21. Wee Sel Lee & Faridah Mydin Kutty. 2026. Pendekatan pembelajaran aktif menggunakan Quizizz terhadap motivasi murid SKM dalam penguasaan kosa kata. *Malaysian Journal of Social Sciences and Humanities (MJSSH)* 11(4): e003945.
22. Wong, J., Khalil, M., Suschevskiy, V., Baars, M., de Koning, B. & Paas, F. 2026. Student engagement profiles in a mobile app: Links to self-regulated learning and performance. *Educational Technology Research and Development* 74: 617–637.
23. Yugeswaran Puspanathan & Siti Nur Diyana Mahmud. 2026. Pengintegrasian kecerdasan buatan dalam pengajaran Sains untuk meningkatkan kemahiran 4C murid sekolah rendah. *Malaysian Journal of Social Sciences and Humanities (MJSSH)* 11(4): e003874.