Needs Analysis for the Design and Development of an Arabic Poetry Learning Module Using Augmented Reality Technology

Shamsul Aiman Mua'mar Shamsul Bahrin., Mohd Fauzi Abdul Hamid*., Mohammad Azizie Aziz., Isyaku Hassan

Faculty of Languages and Communication, Universiti Sultan Zainal Abidin, Malaysia

***Corresponding Author**

DOI: https://dx.doi.org/10.47772/IJRISS.2025.910000829

Received: 07 November 2025; Accepted: 14 November 2025; Published: 25 November 2025

ABSTRACT

Arabic poetry constitutes a vital domain for appreciating the linguistic elegance and cultural legacy of the Arab world, particularly within the framework of contemporary education. To cultivate profound appreciation and understanding, teaching and learning (T&L) methods must be interactive, engaging, and responsive to current technological advancements. This study seeks to analyze the needs pertaining to the design and development of an Arabic poetry learning module based on augmented reality (AR) technology. The research adopts a Design and Development Research (DDR) methodology, employing the McKinsey 7S Model as the theoretical framework. Data were collected through a structured questionnaire designed to explore several dimensions: the use of learning materials in Arabic poetry courses, challenges in existing pedagogical approaches, students' predisposition towards the adoption of innovation in learning, the perceived necessity for AR technology, proficiency in Arabic poetry, and students' insights through open-ended responses. The study involved 177 undergraduate students of Arabic Language Studies who were either currently enrolled in or had completed the Jahili and Islamic Arabic poetry courses. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS), focusing on descriptive statistics such as mean scores and standard deviations. The findings indicate that the integration of AR technology into Arabic poetry instruction holds significant potential to enhance student engagement and facilitate a deeper, more effective understanding of poetic content.

Keywords: Arabic poetry; Design and Development Research (DDR); learning module; technology; augmented reality

INTRODUCTION

Arabic poetry underwent massive phase of development since the Jahiliyah period to the modern era, playing an important role not only in the Arabic society, but also globally. The development of Arabic poetry began from the Jahiliyah period to the contemporary era. In the Jahiliyah period, poetry functioned as a medium to convey certain purposes such as recording tribal history, glorifying the valour of heroes and inheriting the identity of the Arab tribe (Widayanti, 2020). Poetry saw significant changes following the arrival of Islam since it was centered on topics that promoted Sufism, Islam, and the Prophet Muhammad S.AW. Poetry evolved with increasingly intricate themes like philosophy, science, and governance throughout the Abbasid (Abbasiyah) era (after the Umayyah era) (Latifa & Tasnimah, 2023). Later, poets like Mahmoud Darwish and Adonis pioneered the use of poetry in the modern era to fight for social causes, independence, and national identity (Albantani, 2018). Numerous Arabic poetry pieces have been referenced and utilised up to this point as a guide for authors writing about Arab history and culture as well as for other academics studying education in general.

Arabic poetry has developed into a discipline that can be studied, especially among non-native Arabic speakers around the world. For non-native speakers such as Malay students, Arabic poetry plays a significant role in understanding the Arabic language and culture in more depth. In Malaysia, the study of Arabic poetry is typically associated with Islamic religious studies, as many classical works have moral and religious components that can be used in everyday life. According to studies, teaching and learning Arabic poetry improves students'

vocabulary, reading skills, and critical thinking (Dyah, 2020). To understand the culture in Arabic poetry, effective and particular learning methods must be used to convey the cultural context of the time the poem was written. This strategy is critical to ensuring that readers understand the poem's content accurately and in accordance with the poet's intentions. However, learners who are interested in Arabic poetry often face difficulties in understanding the Arabic language, especially in the context of poetry both in depth and comprehensively. Conventional poetry learning is often teacher-centered and does not meet the needs of students in the digital era (Syahid & Alanshor, 2023). In addition, teaching Arabic poetry often faces challenges in engaging students, especially among the younger generation who are more accustomed to digital media and multimedia interactions. A study by Albantani (2018) found that non-native Arabic speakers face difficulties in understanding Arabic literary texts due to the traditional and less interactive teaching approach.

Although technology-enhanced learning has grown rapidly within language education, immersive technologies such as augmented reality (AR) remain significantly underutilised in the teaching of Arabic poetry. Recent systematic reviews reveal that AR research is heavily concentrated in STEM subjects and early literacy, while its application in literary interpretation, particularly in understanding figurative language, imagery and cultural symbolism remains scarce (Al-Ansi, 2023). The absence of AR interventions within Arabic poetry classrooms highlights a substantive research gap that warrants empirical attention.

Recent studies have shown that traditional, text-dominant methods of teaching Arabic literature are increasingly misaligned with the learning preferences of today’s digital-native students. Research indicates that non-native learners benefit significantly more from multimodal and interactive approaches compared to conventional lecture-based explanations, especially when dealing with literary content that is metaphorical and abstract in nature (Ibrahim, 2024). This reinforces the need to re-evaluate existing pedagogical practices for Arabic poetry and to introduce learning tools that respond to contemporary cognitive and technological learning habits among undergraduates.

To put in perspective with regards to the context of Arabic poetry teaching, it requires an innovative teaching method and teaching materials in line with current trends. The development of a structured and contextual Arabic poetry learning module is vital to increase pedagogical effectiveness. According to Al-Rajab et al. (2023), teaching materials design is based on interactive technology which provides students with the opportunity to learn more meaningfully and independently. Nur and Hamzah (2025) stated in their study that the design of teaching materials needs to be flexible, collaborative, and support various learning styles. Students now tend towards learning methods or materials that use visual, audio and kinesthetic aspects. To add on to this, the integration of technology in learning modules can increase students' motivation and attention to the content being taught. So, a resolution emerged to find the need for the design and development of Arabic poetry learning modules using augmented reality (AR) technology which is the main focus of this study.

Augmented Reality (AR) is a promising technology in the field of education due to its capacity to blend virtual aspects with the actual world, resulting in a more engaging learning environment. AR can be employed in a variety of ways for teaching Arabic, including marker-based AR, markerless AR, projection-based AR, and superimposition-based AR. Marker-based AR allows students to scan certain photos to acquire additional information in the form of audio, text, or animation, whereas markerless AR displays AR material using location sensors instead of marker objects. Meanwhile, projection-based AR allows interactive displays to be projected onto real surfaces, and superimposition-based AR replaces part or all of the real-world display with virtual objects, making it seem as if they physically exist.

The use of augmented reality technology in Arabic poetry education provides an alternate technique that might pique student attention and aid comprehension of the poetry's contents. Although this technology is not advent nor emergent, its use in contemporary education is continuously expanding (Bicen & Demir, 2020). The presentation of information through interactive graphics, visual data, and infographics plays an important role as a teaching aid, empowering students to access, manipulate, and understand complex statistical information (Bhat & Alyahya, 2023). Augmented reality also enables the presentation of information holistically through large-scale visualisation, thus allowing course designers to present knowledge more creatively and effectively (Dehghani & Mohammad Hasani, 2023). This technology has the potential to improve learning achievement,

especially through the use of augmented reality-based infographics which have been proven to strengthen the process of understanding difficult concepts in the field of education (Mahmoudi & Mojtahedi, 2017).

One of the critical challenges reported by undergraduate learners is the difficulty of interpreting metaphorical expressions, rhetorical devices and cultural references embedded within Arabic poetry. Without meaningful visualisation or interactive scaffolding, students tend to rely on literal translation, which diminishes their ability to grasp the aesthetic and symbolic dimensions of the text (Ibrahim, 2024). This gap in interpretive ability suggests that conventional pedagogy may not adequately support deep literary engagement, particularly among non-native speakers who lack intuitive cultural grounding. This issue resonates with broader conversations within contemporary educational and social science research, which emphasise the urgent need to modernise humanities education to remain relevant in a post-digital world. Recent debates highlight that literary studies must adopt multimodal, participatory and technologically enriched approaches to sustain student engagement and preserve cultural literacy in an era shaped by digital immersion (Kibat, 2024). Within this broader shift, innovating the teaching of Arabic poetry becomes not only desirable but pedagogically necessary.

Empirical evidence further demonstrates the potential of AR to enhance learning by transforming abstract concepts into interactive visual representations that strengthen comprehension and memory retention. Findings from recent AR-based studies show significant improvements in learner engagement and interpretive understanding when visual and multimodal supports are integrated into literary and language tasks (Nugraha et al., 2025; Al-Ansi, 2023). Despite this growing evidence, AR has yet to be systematically applied to Arabic poetry education, presenting a clear opportunity for innovation.

METHODOLOGY

This study employs the Design and Development (DDR) strategy, which attempts to expand researchers' knowledge of the effectiveness of a product, model, or module, particularly in the educational environment (Beram et al., 2020). This approach consists of three primary phases: Needs Analysis, Design and Development, and Evaluation, with researchers directly involved in each stage of development. One of the most significant aspects in this technique is Needs Analysis, which serves as the foundation for designing a module or model that is relevant and true to the demands of the target audience (Mohamed & Che Rus, 2021). Needs Analysis aims to identify knowledge gaps, teaching and learning problems, and the requirements of users who will be involved in an educational system. The information obtained in this phase forms the basis for compiling design objectives, selecting teaching strategies, and determining the learning outcomes to be achieved (Ramly et al., 2024).

According to the DDR approach, the Needs Analysis phase not only looks at current challenges but also identifies resources and opportunities that can be utilised in the educational product development process (Beram et al., 2020). Furthermore, this analysis enables researchers to find the best approach or method to fix the problems encountered by the study participants (Masri & Adnan, 2021). As a result, implementing a comprehensive and systematic Needs Analysis phase is a critical prerequisite for ensuring the design's efficacy and the applicability of the modules being produced.

In order to determine the needs in the design and development of an augmented reality Arabic poetry learning module based on students' perspectives utilising the Design and Development (DDR) approach, this study employs a questionnaire instrument for the Needs Analysis phase (Richey & Klein, 2007). According to this method, the Needs Analysis phase comes before the module design and development stage is deployed. 177 students participated in this survey as respondents. They consist of students who are currently and have been taking the mandatory course for the Bachelor’s Degree in Arabic Language Studies at UniSZA, namely Islamic and Jahili Arabic Poetry. This course is offered in the fourth semester of the study programme. This sampling method is intended to be used to select the study sample. This approach is considered appropriate in the context of a study that requires the willingness and active involvement of participants to obtain relevant input and reflect the real needs of the study population.

The instrument used in the first phase of this study was through a questionnaire. A set of Needs Analysis questionnaires were distributed online to identify students’ feedback and views on the extent of the need for the design and development of an Arabic poetry learning module using augmented reality technology. The

questionnaire used was a structured questionnaire modified based on the design and technology research questionnaire instrument. This questionnaire contains seven (7) sections, namely section A related to demographic information, while sections B, C, D, E, F and G contained five-point Likert scale questions namely (1) Strongly Disagree (2) Disagree (3) Unsure (4) Agree (5) Strongly Agree. This section explores the aspects of the use of learning materials for Arabic poetry courses, issues on approaches to learning Arabic poetry, the tendency to use innovation in learning Arabic poetry courses, the need for the use of AR technology, and mastery of Arabic poetry.

Data from an online questionnaire which was administered to 177 students from the Bachelor's Degree in Arabic Language Studies, UniSZA were analysed as part of the Needs Analysis phase. Statistical Package for Social Science (SPSS) version 26 software was used for data analysis. The mean and standard deviation were used in the descriptive analysis. Based on the students' feedback, the descriptive analysis results have been applied to assess the needs of the Arabic poetry learning module employing augmented reality technology. The mean score and standard deviation were evaluated to determine the level of student agreement. The mean score table is from Nunnally and Bernstein (1994), as indicated in Table 1.

Table 1. Mean Interpretation Value

Mean Score	Interpretation
1.00 – 2.00	Low
2.01 – 3.00	Moderate
3.01 – 4.00	Moderately High
4.01 – 5.00	High

Source: Nunnally and Bernstein (1994)

FINDINGS

Use of Learning Materials for Arabic Poetry Courses

The findings in Table 2 show the mean score and standard deviation for the respondents' feedback on the use of learning materials.

Table 2. Use of Learning Materials for Arabic Poetry Courses

	B: Use of Learning Materials for Arabic Poetry Courses	**Mean**	**SD**	**Interpretation**
B1	I use materials from social media for learning Arabic poetry.	3.80	1.068	Moderately High
B2	I use specific learning applications for learning Arabic poetry.	3.75	1.025	High
B3	I use the main reference book for this course.	4.21	.671	High
B4	I use additional reference books to understand this course.	4.05	.845	High
B5	I use printed materials for this course.	4.23	.661	High
B6	I use mobile devices for learning Arabic poetry.	4.27	.772	High
B7	I use digital modules in learning Arabic poetry.	4.16	.840	High
B8	I use visual materials in learning Arabic poetry.	4.12	.795	High
B9	I use audio materials in learning Arabic poetry.	3.99	.843	Moderately High
B10	I use AR technology in learning Arabic poetry.	3.71	.979	Moderately High
	Average	**4.029**	**.850**	High

Table 2 shows the findings related to the use of various materials and technologies in learning Arabic poetry among the respondents. All items showed high mean scores, which were in the Moderately High and High categories based on the interpretation of mean scores by Nunnally and Bernstein (1994). Overall, the average mean value was 4.029 and the standard deviation was 0.85. Among the items that recorded the highest mean was the use of mobile devices for learning Arabic poetry recorded (Mean = 4.27, SD = 0.772), followed using printed materials (Mean = 4.23, SD = 0.661) and primary reference books (Mean = 4.21, SD = 0.671). For the use of digital modules (Mean = 4.16, SD = 0.840) and visual materials (Mean = 4.12, SP = 0.795) also showed a High level. Besides that, in the Moderately High category, among the items that recorded scores were the use of social media materials recorded (Mean = 3.80, SD = 1.068), specific learning applications (Mean = 3.75, SD = 1.025), the use of audio materials (Mean = 3.99, SD = 0.843), and the use of augmented reality (AR) technology (Mean = 3.71, SD = 0.979).

Issues of Arabic Poetry Learning Approaches

The findings in Table 3 show the mean score and standard deviation of the results from the feedback given by respondents pertaining the issue of approaches towards learning Arabic poetry.

Table 3. Issues in Approaches to Learning Arabic Poetry

	C: Issues in Approaches to Learning Arabic Poetry	**Mean**	**SD**	**Interpretation**
C1	I find that conventional teaching is not enough to understand the content of the Arabic poetry course.	3.96	.842	Moderately High
C2	I find the lack of visual interaction makes learning Arabic poetry less interesting.	3.98	.947	Moderately High
C3	I think the limited time to delve into the topic of Arabic poetry during lectures.	3.98	.822	Moderately High
C4	I feel that the course topic syllabus is too condensed.	3.56	1.027	Moderately High
C5	I find the limitations of technology in traditional classes make innovative learning difficult.	3.84	.976	Moderately High
C6	I find the lack of suitable digital resources for teaching Arabic poetry.	3.82	1.004	Moderately High
C7	I agree that the cost of technological equipment such as AR devices is too high for most students.	3.85	1.006	Moderately High
C8	I find it difficult to understand the understanding of Arabic poetry without visual aids.	3.88	.945	Moderately High
C9	I find that there are no AR interactive module learning materials in learning Arabic poetry.	3.63	1.037	Moderately High
	Average	**3.83**	**.960**	**Moderately High**

Table 3 explains the findings related to issues in the approach to learning Arabic poetry among respondents. Overall, all items recorded mean scores in the Moderately High category with an overall mean of 3.83 and a standard deviation of 0.960 based on interpretations based on the Nunnally and Bernstein (1994) mean score table. Among the issues that recorded the highest mean were the lack of visual interaction in learning Arabic poetry which recorded (Mean = 3.98, SD = 0.947) and the limited time to delve into the topic of Arabic poetry in lectures (Mean = 3.98, SD = 0.822), followed by the usage of conventional teaching methods that are insufficient to understand the course content -- which also received quite the similar score (Mean = 3.96, SD =

0.842). In addition, constraints related to technology limitations in traditional classes (Mean = 3.84, SD = 0.976), lack of suitable digital resources for learning Arabic poetry (Mean = 3.82, SD = 1.004) and the high cost of technological equipment of AR devices (Mean = 3.85, SD = 1.006) were also stated by respondents as prevalent issues. In terms of the use of teaching aids, the absence of learning materials based on interactive AR modules recorded (Mean = 3.63, SD = 1.037) and the need for visual aids in learning Arabic poetry (Mean = 3.88, SD = 0.945) were also recorded. Meanwhile, the course syllabus, which was considered too dense, recorded a slightly lower mean compared to other items (Mean = 3.56, SD = 1.027), but remained in the Moderately High category.

Tendency to Use Innovation in Arabic Poetry Course Learning

The findings in Table 4 show the mean score and standard deviation of the results from the feedback given by respondents pertaining to innovation in Arabic poetry course learning.

Table 4. Tendency to Use Innovation in Learning Arabic Poetry Courses

	Table 4. Tendency to Use Innovation in Learning Arabic Poetry Courses	**Mean**	**SD**	**Interpretation**
D1	I like learning using new innovative methods.	4.41	.634	High
D2	I like using mobile devices in the learning process.	4.46	.622	High
D3	I like using technology in the learning process.	4.47	.649	High
D4	I like the integration of audio in the course materials.	4.35	.641	High
D5	I like accessing digital learning materials compared to traditional methods.	4.32	.702	High
D6	I like interactive activities to understand Arabic poetry.	4.41	.588	High
D7	I like learning that involves AR technology.	4.34	.682	High
D8	I feel innovation is important in learning Arabic poetry.	4.44	.562	High
D9	I am willing to try new technologies in learning Arabic poetry.	4.44	.610	High
	Average	**4.40**	**.630**	**High**

Table 4 shows the findings regarding students' tendency to use innovation for learning Arabic poetry. All items recorded mean scores in the High category, with an overall mean score of 4.40 and a standard deviation of 0.630. The items that recorded the highest mean scores were the use of technology in the learning process (Mean = 4.47, SD = 0.649), followed by the use of mobile devices (Mean = 4.46, SD = 0.622), as well as the willingness to try new technology (Mean = 4.44, SD = 0.610) and the belief that innovation is important in learning (Mean = 4.44, SD = 0.562). In addition, learning using innovative new methods (Mean = 4.41, SD = 0.634), interactive activities in understanding Arabic poetry (Mean = 4.41, SD = 0.588), and the use of AR technology (Mean = 4.34, SD = 0.682) also scored high. Respondents also showed interest in incorporating audio in course materials (Mean = 4.35, SD = 0.641) and accessing digital learning materials over traditional methods (Mean = 4.32, SD = 0.702)

Requirements for the Use of AR Technology

The findings in table 5 show the mean score and standard deviation of the results from the feedback given by respondents about the need to use augmented reality technology.

Table 5. Requirements for the Use of AR Technology

	E: Requirements for the Use of AR Technology	**Mean**	**SD**	**Interpretation**
E1	I believe that augmented reality (AR) technology helps to improve understanding of Arabic poetry.	4.36	.607	High
E2	I believe that AR technology makes information in learning Arabic poetry more interesting and interactive.	4.40	.596	High
E3	I believe that AR technology can improve creative thinking in Arabic poetry.	4.42	.599	High
E4	I believe that AR technology strengthens understanding in learning Arabic poetry.	4.37	.628	High
E5	I believe that AR technology helps students understand Arabic poetry easily.	4.42	.608	High
E6	I believe that AR technology increases focus in learning Arabic poetry.	4.37	.645	High
E7	I believe that AR technology makes learning Arabic poetry faster.	4.43	.600	High
E8	I believe that AR technology motivates students to study harder in learning Arabic poetry.	4.40	.567	High
E9	I believe that AR technology makes learning Arabic poetry more enjoyable.	4.44	.575	High
E10	I believe that learning Arabic poetry through AR technology is more effective.	4.41	.652	High
	Average	**4.40**	**.607**	**High**

Table 5 shows the interpretation of data regarding the need to use augmented reality (AR) technology in learning Arabic poetry. All items showed mean scores in the High category with an overall mean score of 4.40 and a standard deviation of 0.607. The item that recorded the highest mean score was the belief that the use of AR technology can make learning Arabic poetry more enjoyable (Mean = 4.44, SD = 0.575) and accelerate the learning process (Mean = 4.43, SD = 0.600). The belief that AR technology can increase creative thinking (Mean = 4.42, SD = 0.599) and facilitate understanding of Arabic poetry (Mean = 4.42, SD = 0.608) also recorded high mean scores. In addition, the belief that AR can make information more interesting and interactive (Mean = 4.40, SD = 0.596) and motivate students to study more diligently (Mean = 4.40, SD = 0.567) was also recorded. Respondents also believed that AR helps to improve understanding of Arabic poetry (Mean = 4.36, SD = 0.607), strengthen comprehension (Mean = 4.37, SD = 0.628), and increase students' focus in learning Arabic poetry (Mean = 4.37, SD = 0.645). Finally, learning Arabic poetry through the use of AR technology is also considered more effective (Mean = 4.41, SD = 0.652).

Mastery of Arabic Poetry

The findings in Table 6 show the mean score and standard deviation of the results from the feedback given by respondents regarding their mastery of Arabic poetry.

Table 6. Mastery of Arabic Poetry

	F: Mastery of Arabic Poetry	**Mean**	**SD**	**Interpretation**
F1	I am able to identify the basic elements in poetry such as *bahr*, *qafiyah* and *bait.*	3.98	0.804	Moderately High

F2	I am able to analyse the use of *majaz* (figurative language) in poetry.	3.77	0.908	Moderately High
F3	I am able to analyse the use of *tasybih* (simile) in poetry.	3.76	0.846	Moderately High
F4	I am able to analyse the use of *jinās* (paronomasia) in poetry.	3.83	0.869	Moderately High
F5	I am able to understand the themes in Arabic poetry.	3.77	0.815	Moderately High
F6	I am able to explain the main contents of Arabic poetry.	4.21	0.645	Moderately High
F7	I am able to compare classical Arabic poetry with modern poetry in terms of stylistic differences.	3.68	0.943	Moderately High
F8	I am able to produce Arabic poetry in an appropriate style.	3.68	0.918	Moderately High
F9	I am able to present the meaning of Arabic poetry with accurate interpretation.	3.76	0.929	Moderately High
F10	I am able to understand Arabic poetry in a historical and cultural context.	3.56	1.065	Moderately High
	Average	**3.80**	**0.874**	**Moderately High**

Table 6 shows the level of students' mastery in the aspect of Arabic poetry. Overall, most items were in the Moderately High category, with one item reaching the High category. The overall mean was 3.80 and the standard deviation was 0.874. The item that recorded the highest mean was the ability to explain the main contents of Arabic poetry (Mean = 4.21, SD = 0.645). Meanwhile, the ability to identify the basic elements of poetry such as *bahr*, *qafiyah* and *bait* also obtained a nearly high score (Mean = 3.98, SD = 0.804). The ability to analyse the use of *jinās* (paronomasia) (Mean = 3.83, SD = 0.869), understand the themes of Arabic poetry (Mean = 3.77, SD = 0.815), and analyze the use of *majaz* (figurative language) (Mean = 3.77, SD = 0.908) showed a mean score in the Moderately High category. Followed by the ability to analyse the use of *tasybih* (simile) (Mean = 3.76, SD = 0.846) and present the meaning of Arabic poetry with accurate interpretation (Mean = 3.76, SD = 0.929). In addition, the ability to produce Arabic poetry with an appropriate style (Mean = 3.68, SD = 0.918) and compare between classical and modern Arabic poetry from a stylistic perspective (Mean = 3.68, SD = 0.943) were also recorded. The item with the lowest mean score was the ability to understand Arabic poetry in a historical and cultural context (Mean = 3.56, SD = 1.065), but still in the Moderately High category.

FINDINGS

The findings of this descriptive analysis reveal that students' receptivity to more adaptable and technologically based methods increases when a variety of learning resources are used in Arabic poetry courses. To enhance their educational experiences, students use digital modules, mobile devices, and visual aids in addition to more conventional resources like textbooks (Seyıdov & Çitil, 2024). The learning strategy is still subject to a number of important limitations. Among the main issues are the limitations of conventional teaching that cannot meet the needs of in-depth learning, the lack of interactive visual materials that reduce attractiveness, and the challenges of using advanced technologies such as augmented reality due to the high cost of equipment and the lack of suitable digital modules (Dehghani et al., 2023). These elements have a direct impact on how well students learn and comprehend the concepts in Arabic poetry. Therefore, it is imperative that teaching methods be updated by implementing interactive learning resources, enhancing digital and visual components, and making sure that all students have easier and more affordable access to technology.

Furthermore, the findings of the study show that students' inclination towards the use of innovation in learning Arabic poetry is at a high level. Students expressed clear agreement on the use of new methods, digital technology, mobile devices, and interactive materials in their learning process. This finding reinforces the view that today's students are more inclined towards flexible, modern, and technology-based learning approaches.

This openness coincides with the Technology Acceptance Model (TAM) which emphasises that perceptions of the effectiveness and ease of use of technology greatly influence users' acceptance of innovation (Davis, 1989). A strong desire for educational change is also reflected in students' openness to experimenting with new technologies, such as augmented reality (AR) technology. The demand for more creative and efficient teaching tools is directly supported by the strong interest that students exhibit in learning resources that incorporate audio, interactivity, and convenience of digital access. These demands can be satisfied in this situation by using AR technology, which offers a more engaging, fulfilling, and joyful educational experience (Cheng & Tsai, 2019).

Furthermore, the need for the use of AR technology in learning Arabic poetry is also at a high level. Students believe that AR can improve comprehension, make information more interactive, and strengthen understanding of the content of the poetry. The potential of AR technology to enhance students' cognitive capacities is reflected in their confidence in its ability to encourage creativity and improve learning concentration. This result is consistent with a study by Ibáñez and Delgado-Kloos (2018) that showed using AR can improve learning efficiency and conceptual mastery across a range of subjects.

The findings of the study on students' mastery of Arabic poetry showed that the level of mastery was in the moderately high category, with only a small proportion of items showing high interpretation. Students were generally seen to be able to identify basic elements in Arabic poetry such as bahr, qafiyah and bait, and were able to analyse rhetorical elements such as majaz, tasybih and jinās. Nonetheless, there is still room for advancement in the abilities to compose poetry, compare traditional and contemporary forms, and comprehend poetry within a historical and cultural framework. Students that received favourable evaluations for their ability to articulate the key ideas of Arabic poetry demonstrate a strong foundation in poetry comprehension. This is in line with the second language learning concept, which highlights that comprehension of the material serves as the basis for the development of more sophisticated abilities such work interpretation and production (Krashen, 1982). Nonetheless, the general trend of students' proficiency suggests that in order to enhance a profound comprehension of Arabic poetry, a more organised and participatory teaching methodology is required.

CONCLUSION

Overall, the findings from the Needs Analysis from the students' perspective show that the design and development of an Arabic poetry learning module based on augmented reality technology is a much significant need. The planned module will integrate the main topics from the syllabus of the Islamic and Jahili Arabic Poetry course with the application of augmented reality (AR) elements to enhance understanding and appreciation of the content of the poem. Details on learning objectives, material organisation, 3D animation for information delivery, interactive learning exercises, and suitable evaluation methods will also be highlighted in the course. Through the use of augmented reality technology, this module will be delivered as a transition from the virtual to the real world, giving students a more flexible and efficient approach to access and engage with learning materials from any location.

REFERENCES

1. Al-Ansi, A. M. (2023). Analyzing augmented reality (AR) and virtual reality (VR) development in education during the last twelve years. Computers & Education: Artificial Intelligence, 8(1).
2. Albantani, A. M. (2018). Metode Pembelajaran Sastra Arab. Alfaz Journal, 6(1), 17-30.
3. Azizah, D. N. (2020). Karakteristik prosa dalam sastra Arab. Tsaqofah dan Tarikh Jurnal Kebudayaan dan Sejarah Islam, 4(2), 123-134.
4. Beram, S., Awang, M., & Ismail, R. (2020). Pembangunan model kompetensi pemimpin pertengahan: Satu kajian reka bentuk dan pembangunan. Journal of Educational Research and Indigenous Studies (JERIS), 2(1), 1-11.
5. Bicen, H., & Demir, B. (2020). A content analysis on articles using augmented reality technology and infographic in education. Postmodern Openings, 11(4), 33-44.
6. Bhat, S. A., & Alyahya, S. (2023). Infographics in educational settings: A literature review. IEEE Access, 12, 1633-1649.

7. Cheng, K. H., & Tsai, C. C. (2019). The interaction of child–parent shared reading with an augmented reality (AR) picture book and parents' conceptions of AR learning. British Journal of Educational Technology, 50(4), 1894–1908.
8. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly Journal, 13(3), 319–340.
9. Dehghani, M., Mohammadhasani, N., Mohammed Hoseinzade Ghalevandi & Esmaeil Azimi (2023). Applying AR-based infographics to enhance learning of the heart and cardiac cycle in biology class. Interactive Learning Environments, 31(1), 185-200.
10. Haeruddin, H. (2016). Karakteristik sastra arab pada masa pra-islam. Jurnal Unhas Bahasa Arab Nady Al-Adab, 12(1), 35-50.
11. Halliday, M. A. K. (1978). Language as social semiotic: The social interpretation of language and meaning. London: Edward Arnold.
12. Ibrahim, N. R. (2024). Factors of survival and continuity of human languages (Arabic poetry) in light of the challenges it faces. Research Journal in Advanced Humanities Section: Literature, Linguistics & Criticism, 5(3), 22-236.
13. Nugraha, I., Emilia, E., & Gunawan, W. (2025). Augmented reality (AR) application for multimodal English text learning: Enhancing engagement and comprehension. Journal of Engineering Science and Technology, 20(4), 54-61.
14. Nur, C & Hamzah, A. A. (2025). Pra-islam dan bahasa Arab: Bahasa dan sastra sebelum munculnya islam. Jurnal Qiblah, 4(2), 107-114.
15. Ibanez, M. B., & Delgado-Kloos, C. (2018). Augmented reality for STEM learning: A systematic review. Elsevier Journal: Computers & Education, 123, 109–123.
16. Kibat, S., Ngelambong, A. & Scott, N. (2024). The potential of augmented reality in education: A systematic review of the literature. International Journal of Academic Research in Business and Social Sciences, 13(5), 635-647.
17. Krashen, S.D.M. (1987) principles and practice in second language acquisition. Prentice Hall, Great Britain.
18. Latifa, Z., & Tasnimah, T. M. (2023). Perkembangan kritik sastra Arab pada masa kontemporer: Faktor kemakmuran, metode kritik, dan kritikus. Jurnal Adabiya, 25(2), 160-176.
19. Masri, R., & Adnan, M. (2021). Pembangunan model pedagogi stem matematik: satu analisis keperluan. Jurnal Pendidikan Sains dan Matematik Malaysia (JPSMM), 11, 40-49.
20. Mahmoudi, M. T., & Mojtahedi, S. (2017). AR-based value-added visualization of infographic for enhancing learning performance. Computer Applications in Engineering Education Journal, 25(4), 647–660.
21. Mohamed, S., & Che Rus, R. (2021). Pendekatan penyelidikan reka bentuk dan pembangunan (DDR) dalam pembangunan model pemikiran inventif. Journal of Educational Research and Indigenous Studies (JERIS), 3(1), 143-155.
22. McKillip, J. (1987). Need analysis. Tools for Human Services. New Par. Beverly Hills.
23. Nasir, A. (2014). Bahasa arab era klasik dan modern (tinjauan pembelajaran teoritis). Arabia Journal, 6(1), 21-52.
24. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory 3rd ed., New York. McGraw-Hill.
25. Ramly, N. A., Masnan, A. H., & Idris, P. (2024). Pembangunan modul pendidikan akhlak kanak-kanak: satu kajian reka bentuk dan pembangunan. Jurnal Kajian Islam dan Turath Antara Bidang (KITAB), 1(2), 32-42.
26. Seyıdov, R., & Çitil, A. (2024). The impacts of contemporary educational technologies on learning Arabic. Evolutionary Studies in Imaginative Culture, 9(1), 81-92.
27. Syahid, A. H. & Alanshor, I. A. (2023). Tren perubahan sosial: Transgresi dan inovasi dalam gaya sastra kontemporer. Al-Fathin Journal, 6(1), 154-171.
28. Widayanti, R. (2020). Sejarah perkembangan sastra arab. Kota Malang. Literasi Nusantara.