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FROM TEXT TO EXPERIENCE: AUGMENTED REALITY AS A PEDAGOGICAL MEDIUM FOR ADAB NUSUS LEARNING

Aisyah Aminah Che Amran[1], Rahmah Ahmad H. Osman[2*], Abdulrahman Alosman[3], Balqis Batrisya Zulkiflee[4], Che Amran Idris[5], Christian Khairallah[6]

[1] Department of Arabic Language and Literature, AbdulHamid AbuSulayman Kulliyyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia;
Department of Language and Literacy, Teaching Arabic as A Second Language, Kulliyyah of Education, International Islamic University Malaysia
Email: aaworkiium@gmail.com; aisyahamirahbintuamran@gmail.com

[2] Department of Arabic Language and Literature, AbdulHamid AbuSulayman Kulliyyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia
Email: rahmahao@iium.edu.my

[3] Department of Arabic Language and Literature, AbdulHamid AbuSulayman Kulliyyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia
Email: abdulrahman@iium.edu.my

[4] Department of Language and Literacy, Teaching Arabic as A Second Language, Kulliyyah of Education, International Islamic University Malaysia
Email: balqisbatrisyazul@gmail.com

[5] Raihan Creative Sdn Bhd
Email: cheam1960@gmail.com

[6] Aralects, Abu Dhabi, United Arab Emirates.
Email: christian-cayralat@hotmail.com

[*] Corresponding Author

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Abstract:

The teaching of Arabic literature at the pre-university level, particularly the Adab wa al-Nuṣūṣ subject within Malaysia's Sijil Tinggi Agama Malaysia (STAM) programme, continues to present significant pedagogical challenges. Students frequently experience difficulty engaging with and interpreting Arabic poetic texts due to abstract language, symbolic expression, and instructional practices that remain largely teacher-centred and text-bound. Drawing on growing evidence that immersive technologies can support learning in abstract and cognitively demanding domains, this study examines the pedagogical potential of Augmented Reality (AR) as a curriculum-aligned instructional medium for Arabic literature education at the STAM level. Guided by a Design and Development Research (DDR) methodology and grounded in constructivist learning theory, multimedia learning theory, and experiential learning theory, the study reports on the design, development, and

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preliminary classroom implementation of MySyair, an AR-based learning application aligned with the Malaysian Kurikulum Bersepadu Dini (KBD). The findings indicate that AR-supported visualisation and multimedia explanations can enhance students' engagement, comprehension, and appreciation of Arabic poetry, while also supporting teachers' instructional practices within formal classroom contexts. By extending the application of AR into curriculum-driven, school-level Arabic literary education, this study contributes a pedagogically grounded and design-based model for innovation in pre-university humanities education.

Keywords:

Augmented Reality, Adab Wa Al-Nuṣūṣ, Arabic Literature Education, STAM, Secondary Education

Introduction

Arabic literature occupies a central position within Islamic and Arabic studies, serving not only as a vehicle for linguistic development but also as a medium for transmitting cultural values, ethical reflection, and aesthetic sensibility. Within Malaysia's religious education system, this role is institutionalised through the Adab wa al-Nuṣūṣ subject offered in the Sijil Tinggi Agama Malaysia (STAM) programme. At the pre-university level, Adab wa al-Nuṣūṣ is intended to cultivate students' ability to comprehend, interpret, and appreciate classical Arabic texts, particularly poetry, while developing higher-order thinking skills that prepare them for advanced studies in Arabic, Islamic studies, and the humanities.

Despite its curricular importance, Adab wa al-Nuṣūṣ has been consistently identified as one of the most challenging subjects for STAM students. Official examination reports issued by the Malaysian Ministry of Education (KPM) indicate that the subject frequently records lower average performance compared to other STAM subjects, reflecting persistent difficulties in literary comprehension and analysis. Empirical studies further corroborate this trend, highlighting students' struggles with archaic vocabulary, dense metaphorical language, symbolic expression, and culturally embedded references that characterise classical Arabic poetry (Hashim et al., 2023). For many learners, particularly in non-native Arabic contexts, these challenges contribute to reduced motivation, anxiety toward poetry, and reliance on rote memorisation rather than interpretive understanding.

These learning difficulties are closely linked to prevailing instructional practices in Arabic literature classrooms. Teaching approaches at the school and STAM levels remain largely teacher-centred, text-heavy, and examination-oriented, with emphasis placed on explanation and translation rather than guided interpretation and aesthetic engagement. Such practices offer limited scaffolding for visualising poetic imagery or contextualising symbolic meanings, despite curriculum intentions that emphasise appreciation, reflection, and critical thinking. As a result, students often perceive Arabic poetry as abstract and inaccessible, reinforcing negative attitudes toward literary learning.

In parallel, educational research has increasingly emphasised the role of digital and immersive technologies in addressing similar challenges across disciplines. Technology-enhanced learning environments have been shown to support learner engagement, conceptual

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understanding, and motivation, particularly in contexts involving abstract or cognitively demanding content. Among these technologies, Augmented Reality has attracted growing scholarly attention due to its capacity to overlay digital visual, auditory, and interactive elements onto real-world learning environments, thereby supporting contextualised and experiential learning (Bacca et al., 2014).

Systematic reviews of AR in education suggest that its pedagogical value lies not merely in increasing motivation, but in its ability to facilitate conceptual understanding through visualisation and multimodal representation when aligned with learning objectives (Radianti et al., 2020). These affordances are particularly relevant for poetry education, where meaning is constructed through imagery, symbolism, and imaginative engagement that may be difficult to access through text alone. Educational theories further suggest that multimodal and experiential approaches can support deeper literary engagement by connecting cognitive processing with sensory and affective experience (Mayer, 2009; Kolb, 1984).

Despite these potential benefits, the application of AR in Arabic literature education at the school and pre-university levels remains limited. Existing AR-based Arabic learning applications predominantly focus on vocabulary acquisition or basic language skills and are rarely aligned with national curricula or assessment frameworks. The use of immersive technologies to support higher-order literary interpretation within formal subjects such as Adab wa al-Nuṣūṣ has received little systematic scholarly attention.

The teaching and learning of Adab wa al-Nuṣūṣ at the STAM level are characterised by enduring pedagogical challenges that hinder students' comprehension, engagement, and appreciation of Arabic literary texts. Classical Arabic poetry, which forms a core component of the subject, is linguistically complex and rich in metaphor, symbolism, and cultural references. For many students, particularly those in non-native Arabic contexts, these features present significant cognitive barriers when instructional support is limited.

Empirical studies indicate that students' difficulties stem not only from linguistic limitations but also from ineffective instructional methods that rely heavily on teacher explanation and printed texts (Hashim et al., 2023). Such approaches provide minimal support for visualising poetic imagery or contextualising symbolic meanings, leading students to depend on memorisation rather than interpretation. This instructional gap is reflected in consistently low performance in Adab wa al-Nuṣūṣ examinations, as reported in official STAM assessment data.

Although the Kurikulum Bersepadu Dini emphasises holistic learning outcomes, including aesthetic appreciation and higher order thinking skills, classroom practices have struggled to translate these curricular intentions into effective learning experiences. While educational technologies have demonstrated potential in enhancing engagement and comprehension across subjects, their integration into Arabic literature instruction at the STAM level remains minimal and unsystematic. Consequently, there is a pressing need for a curriculum-aligned, pedagogically grounded technological intervention that addresses the specific learning challenges of Adab wa al-Nuṣūṣ students. This study responds to that need by examining how AR can be systematically designed and implemented to support Arabic literary learning in the STAM context.

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Research on Arabic literature education in Malaysia consistently identifies Adab wa al-Nuṣūṣ as a challenging subject for students, particularly at the STAM level. Learners commonly struggle with interpreting classical poetic language, metaphorical expressions, and culturally embedded meanings, difficulties that are exacerbated by limited instructional scaffolding and overreliance on rote learning strategies (Hashim et al., 2023). These challenges contribute directly to low academic performance and diminished learner motivation.

Educational technology research offers insights into potential strategies for addressing such challenges. Studies have shown that technology-enhanced learning environments can support motivation, engagement, and comprehension by presenting content through multiple modalities and enabling active learner participation (Akçayır & Akçayır, 2017). Augmented Reality, in particular, has been recognised for its ability to visualise abstract concepts and situate learning within meaningful contexts (Bacca et al., 2014).

In language and literature education, AR has been applied successfully in vocabulary learning and early language acquisition, as demonstrated by applications such as AR Mondly and ARKafa. AR-based literary applications developed for Malay poetry further illustrate the potential of immersive technologies to enhance literary appreciation through visual and interactive elements. However, these applications are rarely curriculum-aligned and do not address the specific pedagogical and assessment demands of Adab wa al-Nuṣūṣ at the STAM level.

Systematic reviews of immersive technologies in education suggest that AR remains underutilised in humanities subjects, particularly in school-based and curriculum-driven contexts (Radianti et al., 2020). This study addresses this gap by positioning AR as a pedagogically structured medium for Arabic literary learning rather than a supplementary or motivational tool. Through the development of MySyair, the study contributes to both Arabic literature pedagogy and educational technology research by offering a contextually grounded AR-based model for pre-university education.

Research Objectives

This study is guided by the overarching aim of improving the teaching and learning of Adab wa al-Nuṣūṣ at the STAM level through the integration of Augmented Reality. Specifically, the study seeks to design and develop MySyair, an AR-based learning application that is fully aligned with the Malaysian KBD curriculum and the learning outcomes of the Adab wa al-Nuṣūṣ subject.

In addition, the study aims to enhance students' comprehension and appreciation of Arabic literary texts, particularly poetry, by providing immersive visualisation and multimedia explanations that support interpretation of imagery, themes, and symbolic meanings. Another key objective is to increase students' engagement, motivation, and interest in learning Arabic literature by transforming conventional text-based instruction into interactive and learner-centred experiences.

The study also seeks to support teachers' instructional practices by offering curriculum-aligned digital resources that complement existing pedagogical approaches rather than replacing them. Finally, the research aims to evaluate the feasibility and pedagogical relevance of MySyair as

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an instructional tool for STAM students, with consideration of its potential scalability to other secondary school levels offering Arabic literature subjects.

Methodology

This study adopts a Design and Development Research (DDR) methodology, which is appropriate for the systematic creation and evaluation of educational innovations within authentic learning contexts. DDR emphasises the integration of theory, empirical inquiry, and practical design, ensuring that instructional products are pedagogically grounded and responsive to real classroom needs.

The research process comprises three phases. The first phase involves a needs analysis based on documented learner difficulties in Adab wa al-Nuṣūṣ, curriculum documents, and classroom observations. This phase identifies key pedagogical gaps and learner expectations within the STAM context. The second phase focuses on the design and development of the MySyair AR application, guided by KBD requirements and Adab wa al-Nuṣūṣ learning outcomes. Multimedia explanations, poetic visualisation, and interactive AR elements are integrated to support comprehension and engagement.

The final phase involves the implementation and evaluation of the MySyair prototype in a relevant STAM learning environment. Data are collected through classroom observations, user interaction feedback, and implementation reflections to evaluate usability, practicality, and pedagogical relevance. This methodological approach ensures that MySyair is curriculum-driven, learner-informed, and instructionally grounded.

Findings

A key finding relates to students' improved comprehension of poetic imagery and thematic content. Classical Arabic poetry frequently relies on metaphorical language and symbolic representation that are difficult for pre-university learners to conceptualise. The use of AR-based visualisation in MySyair enabled students to form clearer mental representations of poetic scenes, cultural settings, and symbolic elements, supporting more accurate interpretation of meaning. Multimedia explanations, including audio narration and contextual annotations, further facilitated understanding of complex vocabulary and rhetorical devices commonly found in Arabic poetry.

To provide a concrete illustration of how Classical Arabic poetic texts are transformed into immersive learning experiences, this study presents the MySyair prototype as part of the findings. The prototype serves to operationalise the pedagogical and design principles discussed earlier by demonstrating how Augmented Reality is integrated into the learning of Adab wa al-Nuṣūṣ at the STAM level. Rather than functioning as evaluative evidence of learning effectiveness, the prototype is presented to support a descriptive analysis of the application's design features, instructional structure, and pedagogical affordances.

The MySyair prototype was developed to guide learners through a structured interaction sequence that begins with content selection and progresses toward immersive engagement with poetic texts. Attention is given to the visualisation of poetic imagery, the integration of multimedia explanations, and the sequencing of learner interaction with the text. These design elements aim to support learners' comprehension of abstract imagery, symbolic meaning, and thematic content commonly found in Classical Arabic poetry.

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The application interface allows users to select literary periods or poetic themes before engaging with individual poems. Each poem is presented alongside contextual support through visual cues, annotations, and AR-based representations that correspond to the poetic imagery described in the text. This design enables learners to move beyond linear text reading and engage in interpretive exploration supported by visual and multimedia scaffolding.

Figures presented in Table 1 illustrate key interface screens and AR interaction scenes from the MySyair prototype. These visuals are intended to exemplify how the application's design translates pedagogical intentions into functional learning experiences. Empirical assessment of learning outcomes is beyond the scope of this article and is reserved for subsequent phases of the research.

Table 1: MySyair (High-Fidelity)

Scene 1: Home Interface	Description	Scene 2: Poem Selection	Description
	The MySyair home interface displays the MySyair logo and provides a level-based menu aligned with the Malaysian secondary school Arabic literature curriculum. Users can select from Form 4, Form 5, or Form 6, each containing the relevant Arabic poetry texts prescribed in the official textbooks. This ensures structured progression and syllabus-based learning tailored for high school students.		After selecting a particular school level (Form 4, Form 5, or Form 6), users are presented with a curated list of poems that are part of the official Arabic literature syllabus for that level. Each poem is displayed with its title, allowing students to easily choose the poem they wish to study in greater depth.

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Scene 3: Poem Details + AR	Description	Scene 4: Ubiquitous Learning	Description
	When a poem is selected, this screen shows detailed information about the poem, including its full text, background, and author. This screen also provides a dedicated button that allows users to activate the Augmented Reality (AR) experience, bringing the poem to life in a more immersive visual form.		In this screen, after selecting a poem, several interactive buttons are made available to support independent learning. These include: • Audio (Singing/Qasidah): Listen to the poem performed in song form to aid memorization. • Audio (Recitation): Hear the poem read aloud in Arabic with correct pronunciation. • Visual Images: View AR-based illustrations or animations representing the meaning of each verse. • Translation: Access translations in either Malay or English. Through these integrated features, users can understand the poem not only linguistically but also in terms of meaning, context, and aesthetic value.

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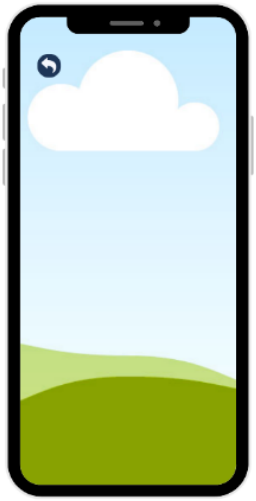
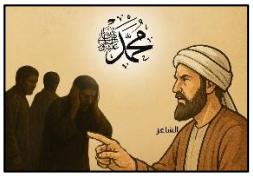
Scene 5: AR Camera Interface	Description	Scene 6: How AR Works	Description
	Upon tapping the AR button, the app transitions to AR camera mode. In this scene, users can scan a printed marker or visual cue, and the poem's verses will appear as interactive 2D images. These visuals are designed to illustrate the meanings and imagery intended by the poet in the scanned text, and they are overlaid into the real world, enhancing understanding and enriching the learning experience through immersive visual engagement.	Text Displayed: يا جَاهِلِينَ عَلَى الْهَادِي وَدَعْوَتِهِ هَلْ تَجْهَلُونَ مَكَانَ الصَّادِقِ العَلَمِ AR Visual Experience: 	This is the first text from a selected poem by the renowned Jahiliyyah poet, Imru' al-Qais that learned among STAM students. When the user scans this text (either printed or digital), a second image appears through AR, visually representing the meaning or imagery conveyed in the verse. This interactive 2D illustration helps students grasp the poetic message in a more vivid and contextualized manner.

Discussion

This study can be interpreted through the lens of established learning theories and existing scholarship on Augmented Reality in education. From a constructivist perspective, the effectiveness of MySyair lies in its ability to transform students from passive recipients of literary explanations into active participants in meaning-making. Constructivist theory emphasises that understanding emerges through interaction with content and contextual cues rather than through rote memorisation. By engaging students in AR-supported exploration of poetic imagery and themes, MySyair creates conditions that support active interpretation and deeper literary understanding.

Multimedia learning theory provides further insight into why AR-based instruction is particularly suitable for Adab wa al-Nuṣūṣ learning. Mayer's (2009) cognitive theory of multimedia learning posits that learners process information through separate verbal and visual channels and that meaningful learning occurs when these channels are integrated coherently. In the context of Arabic poetry, where learners must simultaneously process unfamiliar language and abstract imagery, AR functions as a cognitive scaffold that bridges text and meaning. The use of structured visualisation and multimedia explanations in MySyair supports

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conceptual integration and reduces extraneous cognitive load, thereby facilitating comprehension.

From an experiential learning perspective, AR offers pedagogical affordances that are especially valuable for literary education at the pre-university level. Kolb (1984) argues that learning begins with concrete experience, which then leads to reflection and abstraction. Poetry, as an imaginative and affective form, benefits from experiential engagement that precedes analytical interpretation. MySyair's immersive AR environments provide students with experiential entry points into poetic worlds, allowing them to encounter imagery and themes in a more tangible manner before engaging in formal literary analysis.

Beyond theoretical interpretation, this study contributes to the broader literature on AR in education by extending its application into curriculum-driven Arabic literary instruction at the school and STAM levels. While previous AR research has largely focused on vocabulary acquisition or STEM subjects (Akçayır & Akçayır, 2017; Bacca et al., 2014), this study demonstrates that AR can support higher-order interpretive skills when aligned with curricular goals and pedagogical theory. Importantly, the curriculum alignment of MySyair addresses concerns that AR may function merely as a motivational novelty, showing instead that immersive technologies can be meaningfully integrated into formal humanities education.

Taken together, the discussion highlights the pedagogical value of MySyair as a theory-informed instructional innovation for Adab wa al-Nuṣūṣ. By integrating constructivist, multimedia, and experiential learning principles into AR design, the application supports both cognitive and affective aspects of literary learning. The study thus provides a compelling case for the thoughtful integration of AR into secondary-level Arabic literature education and offers a foundation for future empirical research and broader curriculum implementation.

Conclusion

This study sought to address persistent pedagogical challenges in the teaching and learning of Adab wa al-Nuṣūṣ at the STAM level by examining the potential of Augmented Reality as a curriculum-aligned instructional medium. Grounded in constructivist learning theory, multimedia learning theory, and experiential learning theory, the development of the MySyair application demonstrates that immersive technologies can be meaningfully integrated into Arabic literary education when guided by sound pedagogical principles rather than technological novelty (Piaget, 1972; Mayer, 2009; Kolb, 1984).

The study contributes to Arabic literature pedagogy by responding directly to long-standing concerns regarding students' difficulties in interpreting classical Arabic poetry, including abstract imagery, symbolic language, and culturally embedded meanings. Previous research has consistently shown that such difficulties are exacerbated by teacher-centred and text-heavy instructional practices, particularly within the STAM context (Hashim et al., 2023). By offering structured visualisation, contextual explanation, and interactive engagement, MySyair presents an alternative instructional model that supports learners' cognitive and affective needs while remaining aligned with curriculum intentions and assessment requirements.

From a theoretical perspective, this research extends existing scholarship on Augmented Reality in education by situating AR within a curriculum-driven, humanities-based learning environment. While prior studies have demonstrated the effectiveness of AR in supporting

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learner motivation and conceptual understanding, most notably in STEM disciplines and foundational language learning (Akçayır & Akçayır, 2017; Bacca et al., 2014), its application in school-level Arabic literary education has remained underexplored. The MySyair framework illustrates that AR can function as a pedagogically structured medium that supports higher-order thinking, literary interpretation, and aesthetic appreciation when aligned with learning theory and disciplinary goals.

The implications of this study are significant for teachers, curriculum designers, and educational policymakers. For teachers, MySyair offers a practical, curriculum-aligned digital resource that complements existing pedagogical practices and supports more interactive and learner-centred instruction. For curriculum developers, the findings provide evidence that immersive technologies can be integrated within the Kurikulum Bersepadu Dini without compromising disciplinary rigour or curricular coherence. At the policy level, the study supports broader initiatives to promote digital innovation in humanities education, a domain that has often lagged behind STEM fields in educational technology adoption (Radianti et al., 2020).

Despite its contributions, this study has several limitations. As a design and development research project evaluated through preliminary implementation, the findings are primarily qualitative and exploratory in nature. Future research should build upon this foundation through experimental or mixed-method studies that examine learning outcomes, interpretive skill development, and long-term retention. Further investigation is also needed to explore teachers' instructional practices when integrating AR into classroom contexts and to assess the scalability of MySyair across different school settings and learner profiles.

In conclusion, this study establishes MySyair as a theoretically informed and pedagogically meaningful AR-based model for Adab wa al-Nuṣūṣ instruction at the STAM level. By bridging learning theory, curriculum requirements, and technological design, the research offers a sustainable and inclusive framework for innovation in Arabic literature education. It underscores the potential of Augmented Reality to revitalise the teaching of classical literary traditions while preserving their intellectual depth, cultural significance, and educational value in contemporary school contexts.

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