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ENHANCING ARABIC NOVEL COMPREHENSION THROUGH MOBILE-ASSISTED LEARNING: DUOLINGO IN AN ISLAMIC STUDIES CONTEXT

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Abstract:

The comprehension of Arabic novels presents a persistent challenge for learners of Arabic as a foreign language, particularly students enrolled in Islamic studies programmes in non-Arab contexts. Arabic narrative texts are linguistically complex and culturally embedded, requiring advanced vocabulary knowledge, syntactic awareness, and interpretive competence. In recent years, mobile-assisted language learning applications such as Duolingo have gained popularity among students as supplementary tools for Arabic learning. While previous research has demonstrated the effectiveness of Duolingo in supporting vocabulary acquisition, grammatical development, and learner motivation, its role in facilitating literary comprehension remains insufficiently explored. This study investigates the extent to which Duolingo supports undergraduate Islamic studies students' comprehension of Arabic novels within a blended learning context. Adopting a mixed-methods research design, the study draws on questionnaire data, semi-structured interviews, and thematic analysis to examine students' experiences, perceived benefits, and limitations of using Duolingo alongside traditional instructional practices. The findings indicate that Duolingo contributes positively to foundational linguistic

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development and learner motivation, thereby reducing initial barriers to reading Arabic novels. However, the application is limited in supporting discourse-level comprehension, cultural contextualisation, and literary interpretation, which are essential for meaningful engagement with narrative texts. The study argues that Duolingo is most effective when positioned as a preparatory and supplementary tool within a blended pedagogical framework. By clarifying the pedagogical affordances and constraints of mobile-assisted language learning in literary contexts, this study contributes to research in Arabic as a Foreign Language and offers practical implications for the teaching of Arabic novels to non-native learners.

Keywords:

Arabic Novel, Mobile-Assisted Learning, Duolingo

Introduction

Arabic literature, particularly the novel, occupies a significant place in Arabic language and literature curricula, serving as a medium for developing advanced reading skills, cultural literacy, and critical interpretation. For students of Arabic as a foreign language, engagement with novels is expected to facilitate deeper linguistic competence and an appreciation of Arabic narrative traditions. However, for non-native learners, especially those studying Arabic within Islamic studies programmes in non-Arab contexts, Arabic novels often present substantial pedagogical challenges.

Arabic narrative texts are characterised by dense vocabulary, complex syntactic patterns, idiomatic expressions, and culturally situated meanings that extend beyond sentence-level comprehension. Scholars in Arabic language pedagogy have consistently noted that such features place heavy cognitive demands on learners whose first languages differ typologically and culturally from Arabic (Ryding, 2014; Al-Batal, 2017). As a result, many students struggle to progress from literal decoding of text toward interpretive and critical engagement with narrative structure, character development, and thematic significance.

In response to these challenges, students increasingly turn to mobile-assisted language learning (MALL) applications to supplement formal instruction. Among these, Duolingo has emerged as one of the most widely used platforms due to its accessibility, gamified design, and adaptive learning algorithms. Empirical studies have shown that Duolingo can effectively enhance vocabulary acquisition, grammatical accuracy, and learner motivation, particularly through frequent practice and immediate feedback (Vesselinov & Grego, 2016; Loewen et al., 2019). These features make the application appealing to learners seeking flexible, self-directed language learning opportunities.

Despite its demonstrated benefits, Duolingo is primarily designed to support foundational language skills and does not explicitly address extended reading, literary discourse, or cultural interpretation. Research in applied linguistics suggests that while digital applications are effective for developing discrete linguistic knowledge, they often fall short in supporting higher-order reading skills required for literary comprehension (Nation, 2013). This limitation is particularly salient in the context of Arabic novels, where meaning is shaped by narrative cohesion, rhetorical strategies, and cultural and historical references (Suleiman, 2013).

Within Arabic as a Foreign Language scholarship, there is growing recognition that literary competence involves more than grammatical accuracy or vocabulary knowledge. It requires interpretive strategies, cultural literacy, and guided engagement with texts (Ryding, 2014; Al-Batal, 2017). Consequently, scholars increasingly advocate for blended learning approaches that integrate digital tools with traditional pedagogical practices, such as close reading, instructor-led discussion, and contextual explanation, to support comprehensive learning outcomes (Al-Batal, 2019; Alhawary, 2020).

However, empirical research examining how Duolingo functions within such blended frameworks—particularly in relation to Arabic novel comprehension—remains limited. Most existing studies focus on general language learning outcomes rather than on extended literary reading or narrative interpretation. This gap is especially evident in Islamic studies contexts, where Arabic literary competence is closely linked to academic success and disciplinary engagement.

The present study addresses this gap by investigating the role of Duolingo in supporting undergraduate Islamic studies students' comprehension of Arabic novels. By examining students' experiences, perceptions, and learning strategies through a mixed-methods approach, the study seeks to clarify the pedagogical affordances and limitations of mobile-assisted language learning in literary contexts. In doing so, it contributes to ongoing discussions on the integration of digital technologies into Arabic language education and offers evidence-based insights for enhancing the teaching and learning of Arabic novels among non-native learners.

Research Problem

The comprehension of Arabic novels poses a substantial challenge for learners of Arabic as a foreign language, particularly students enrolled in Islamic studies programmes in non-Arab contexts. Arabic novels demand advanced linguistic competence, including mastery of complex syntactic structures, extensive vocabulary, idiomatic expressions, and discourse-level cohesion, as well as sensitivity to cultural, historical, and rhetorical conventions embedded in narrative texts (Ryding, 2014; Suleiman, 2013). For Malay learners, whose first language differs typologically and culturally from Arabic, these demands often result in difficulty moving beyond literal decoding toward interpretive and critical engagement with literary texts.

In response to such challenges, students increasingly turn to mobile-assisted language learning (MALL) applications, most notably Duolingo, to supplement formal instruction. Empirical studies have demonstrated that Duolingo is effective in promoting vocabulary acquisition, grammatical accuracy, learner motivation, and autonomous study habits through gamification and adaptive learning mechanisms (Vesselinov & Grego, 2016; Loewen et al., 2019). However, Duolingo is primarily designed to develop foundational language skills and does not explicitly address extended reading, literary discourse, or culturally situated meaning-making.

This creates a pedagogical tension between the affordances of digital language-learning applications and the interpretive demands of Arabic literary texts, particularly novels. While students may experience improvement in sentence-level comprehension, they often continue to struggle with narrative structure, character development, symbolism, and cultural nuance—elements central to literary understanding (Nation, 2013; Al-Batal, 2017). Despite the growing prevalence of Duolingo in Arabic learning contexts, there is limited empirical research

examining its role in supporting Arabic novel comprehension or its effectiveness when integrated into blended instructional models.

The research problem addressed in this study therefore lies in the lack of systematic, evidence-based understanding of how Duolingo contributes to—or constrains—the comprehension of Arabic novels among non-native learners, particularly within Islamic studies programmes. Without such understanding, educators risk either overestimating the pedagogical capacity of digital tools or failing to integrate them meaningfully into literature-focused curricula.

Research Objectives

The primary objective of this study is to examine the effectiveness of Duolingo as a supplementary learning tool in enhancing undergraduate Islamic studies students' comprehension of Arabic novels. Specifically, the study seeks to analyse how students use Duolingo to support their reading of extended Arabic narrative texts and to evaluate their perceptions of its usefulness in developing the linguistic competencies required for novel comprehension.

In addition, the study aims to identify the limitations students encounter when relying on Duolingo for literary learning, particularly in relation to cultural understanding, discourse-level interpretation, and rhetorical analysis. A further objective is to explore how students and instructors integrate Duolingo with traditional pedagogical practices—such as close reading, classroom discussion, and dictionary use—to achieve more comprehensive and meaningful engagement with Arabic novels. Through these objectives, the study aims to contribute to pedagogically informed strategies for integrating MALL applications into Arabic literature instruction.

Significance of the Study

This study holds significance at pedagogical, academic, and technological levels. Pedagogically, it provides Arabic language educators with empirically grounded insights into the strengths and limitations of Duolingo as a supplementary tool for teaching Arabic novels. By clarifying what Duolingo can and cannot support, the study assists educators in designing blended learning models that align digital tools with the interpretive and analytical demands of literary texts (Nation, 2013; Alhawary, 2020).

From an academic perspective, the study contributes to research on Arabic as a Foreign Language (AFL) and mobile-assisted language learning by extending inquiry beyond basic language skills to the domain of literary comprehension. While previous studies have focused on Duolingo's impact on vocabulary, grammar, and motivation (Vesselinov & Grego, 2016; Loewen et al., 2019), relatively little research has examined its role in supporting extended reading and narrative understanding in Arabic. This study therefore addresses an important gap in applied linguistics and Arabic pedagogy.

Technologically, the findings offer insights into how existing language-learning applications might be pedagogically enhanced or supplemented to support higher-order reading skills. In an era of increasing reliance on digital learning environments, such insights are valuable for curriculum designers and educational institutions seeking to balance technological innovation with disciplinary rigour.

Literature Review

Research on mobile-assisted language learning consistently demonstrates that digital applications can enhance learner motivation, autonomy, and engagement. Duolingo, in particular, has been shown to facilitate vocabulary acquisition and grammatical development through adaptive learning algorithms, spaced repetition, and gamified tasks (Vesselinov & Grego, 2016; Loewen et al., 2019). These features make the application especially appealing to learners seeking flexible, self-directed learning opportunities.

However, scholars caution that such platforms often prioritise discrete linguistic skills at the expense of discourse-level comprehension and cultural interpretation. Nation (2013) argues that extended reading and literary comprehension require sustained engagement with texts, contextual understanding, and interpretive scaffolding—elements largely absent from most language-learning applications. This limitation is particularly pronounced in Arabic, where literary texts are densely interwoven with cultural, historical, and rhetorical meaning (Suleiman, 2013).

Studies in Arabic as a Foreign Language education emphasise that literary competence involves not only linguistic accuracy but also cultural literacy and analytical ability (Ryding, 2014; Al-Batal, 2017). Consequently, researchers increasingly advocate for blended learning approaches that integrate digital tools with traditional instructional practices to support balanced learning outcomes (Al-Batal, 2019; Alhawary, 2020). Despite these recommendations, empirical research examining the integration of Duolingo into Arabic novel instruction remains limited.

By situating Duolingo within a blended pedagogical framework and examining its role in Arabic novel comprehension, this study builds on existing scholarship while addressing a critical gap in AFL and MALL research.

Methodology

This study adopts a mixed-methods research design, combining quantitative and qualitative approaches to provide a comprehensive examination of Duolingo's role in Arabic novel comprehension. Mixed-methods research is particularly appropriate for educational studies that aim to capture both measurable learning outcomes and learners' subjective experiences (Creswell, 2014).

Quantitative data were collected through structured questionnaires administered to undergraduate Islamic studies students who used Duolingo while studying Arabic novels. The questionnaires examined patterns of application use, perceived benefits, and self-reported challenges. Descriptive statistical analysis was conducted using SPSS to identify trends in students' responses.

Qualitative data were obtained through semi-structured interviews with selected students and subject-matter experts, allowing for in-depth exploration of learning strategies, interpretive difficulties, and pedagogical perceptions. Thematic analysis was conducted using Atlas.ti to identify recurring themes related to motivation, linguistic scaffolding, and limitations in literary comprehension. The integration of quantitative and qualitative data enabled methodological triangulation, enhancing the credibility and interpretive depth of the findings (Creswell, 2014).

Findings

The findings of this study indicate that Duolingo plays a supportive but delimited role in enhancing the comprehension of Arabic novels among undergraduate Islamic studies students. Analysis of questionnaire responses, semi-structured interviews, and expert feedback reveals a patterned relationship between foundational linguistic development, affective engagement, and persistent challenges in discourse-level literary comprehension. For clarity, the key findings are presented in four interrelated strands.

The first key finding concerns Duolingo's contribution to foundational linguistic competence. Questionnaire data indicate that most participants perceived noticeable improvement in vocabulary recognition, sentence construction, and grammatical accuracy through regular use of the application. Interview responses further confirm that repeated exposure to common lexical items and syntactic patterns enabled students to recognise familiar structures when encountered in Arabic novels. At the empirical level, this finding reflects students' reported ease in decoding sentences rather than interpreting extended passages. These results are consistent with prior research demonstrating Duolingo's effectiveness in reinforcing basic language structures through adaptive repetition and gamified drills.

The second key finding relates to learner motivation and engagement. Across data sources, students consistently reported that Duolingo's gamified features, such as progress indicators, rewards, and daily goals encouraged sustained engagement with Arabic outside the classroom. Interview participants described increased confidence and reduced anxiety when approaching Arabic novels, attributing this affective shift to routine language exposure rather than to changes in interpretive ability. Empirically, this finding reflects affective and behavioural engagement rather than direct gains in literary comprehension.

The third key finding highlights limitations in discourse-level and interpretive comprehension. Despite gains in vocabulary and sentence recognition, students reported ongoing difficulty understanding narrative development, character relationships, thematic progression, and symbolic meaning in Arabic novels. Interview data indicate that while students could comprehend isolated sentences, they struggled to construct coherent interpretations of longer narrative segments. This finding points to a clear empirical distinction between sentence-level comprehension and discourse-level understanding, as reflected consistently across participant responses.

The fourth key finding concerns cultural and contextual understanding. Students frequently noted that Arabic novels contain cultural references, idiomatic expressions, and socio-historical contexts that were not addressed through Duolingo's instructional content. As a result, participants relied on supplementary resources such as instructor explanations, dictionaries, and online commentaries to interpret culturally embedded meanings. Expert interviewees similarly observed that Duolingo does not provide sufficient cultural scaffolding to support literary interpretation.

Taken together, the findings indicate that Duolingo functions most effectively as a preparatory linguistic tool rather than as a comprehensive platform for Arabic literary comprehension. Empirically, students' learning practices reveal an emergent blended strategy, in which Duolingo supports vocabulary and grammatical familiarity while interpretive understanding is developed through traditional pedagogical mediation.

Discussion

The findings of this study contribute to ongoing scholarly discussions on the pedagogical role of mobile-assisted language learning (MALL) in higher-order language education, particularly within Arabic literary studies. When interpreted in relation to existing scholarship in Arabic as a Foreign Language (AFL), applied linguistics, and digital pedagogy, the findings clarify the specific instructional space that Duolingo occupies within literary learning rather than assuming broad pedagogical transferability.

From a linguistic perspective, the observed effectiveness of Duolingo in supporting vocabulary acquisition and grammatical awareness aligns with prior empirical research highlighting the strengths of app-based language instruction for foundational skill development (Vesselinov & Grego, 2016; Loewen et al., 2019). These findings suggest that Duolingo can reduce initial linguistic barriers that often impede learners' access to Arabic novels. However, the present findings empirically reinforce the distinction between mastery of discrete linguistic items and the ability to comprehend extended narrative discourse. As Nation (2013) argues, vocabulary and grammar knowledge are necessary but insufficient conditions for successful reading comprehension, particularly in literary contexts that require inferencing, cohesion tracking, and interpretive reasoning.

A central contribution of this study lies in its empirical demonstration of the limits of decontextualised language practice for literary comprehension. While Duolingo effectively supports sentence-level processing, it does not facilitate the integration of meaning across narrative units, nor does it support interpretation of character development, thematic progression, or symbolic representation. These findings challenge implicit assumptions within some MALL research that improvements in linguistic micro-skills naturally extend to higher-order reading abilities. In the context of Arabic novels, where meaning emerges cumulatively through discourse structure and cultural resonance, such assumptions appear pedagogically insufficient.

The findings also underscore the importance of cultural and contextual mediation in Arabic literary comprehension. Arabic novels are deeply embedded in socio-historical, religious, and cultural frameworks that shape narrative meaning (Suleiman, 2013). Students' reliance on instructor explanation and supplementary resources reflects the absence of cultural scaffolding within Duolingo's instructional design. This supports longstanding arguments in AFL scholarship that literary competence encompasses cultural literacy and interpretive sensitivity in addition to linguistic accuracy (Ryding, 2014; Al-Batal, 2017). Without explicit pedagogical mediation, digital applications risk reinforcing surface-level engagement with texts rather than facilitating meaningful interpretation.

The motivational benefits associated with Duolingo merit careful qualification. Consistent with previous studies, participants reported increased engagement, confidence, and persistence due to the application's gamified features (Munday, 2020; Alamer & Al Khateeb, 2021). However, the present findings suggest that heightened motivation does not automatically translate into deeper literary understanding. Rather, motivation functions as an enabling condition that increases exposure to language input, while interpretive development remains dependent on guided instructional practices. This distinction is critical for avoiding overgeneralised claims regarding the pedagogical impact of gamification in literary education.

An important theoretical implication of this study concerns the positioning of Duolingo within blended learning frameworks. Rather than functioning as an autonomous instructional solution, Duolingo operates most effectively as a linguistic scaffolding tool that prepares learners for more demanding interpretive tasks. The empirical evidence indicates that students themselves adopt blended strategies, combining Duolingo with close reading, classroom discussion, dictionary consultation, and instructor guidance. This learner-driven integration aligns with pedagogical models advocated by Alhawary (2020) and Al-Batal (2019), which emphasise the complementary roles of digital tools and teacher-led mediation.

From an instructional standpoint, the discussion highlights the need for pedagogical alignment between technological affordances and curricular objectives. When the instructional goal involves literary interpretation, narrative analysis, and cultural understanding, reliance on MALL applications alone is insufficient. Instead, educators must intentionally situate digital tools within broader instructional designs that foreground interpretive practice and disciplinary expertise. Failure to do so risks conflating language practice with literary learning and may lead to inflated expectations of technological efficacy.

Collectively, the discussion clarifies the study's theoretical contribution by empirically distinguishing between linguistic facilitation and literary comprehension within MALL contexts. By demonstrating where Duolingo's pedagogical strengths end and where guided instruction becomes indispensable, this study refines existing understandings of technology-mediated learning in Arabic literature education. These insights provide a foundation for more principled integration of digital tools into AFL curricula and inform future research on discipline-specific applications of MALL.

Conclusion

This study set out to examine the role of Duolingo in supporting the comprehension of Arabic novels among undergraduate students enrolled in Islamic studies programmes in non-Arab contexts. By empirically distinguishing between foundational linguistic facilitation and higher-order literary comprehension, the study clarifies the specific pedagogical space occupied by mobile-assisted language learning within Arabic literature education. The findings demonstrate that while Duolingo contributes positively to vocabulary acquisition, grammatical awareness, and learner motivation, its instructional capacity remains limited when applied to extended narrative interpretation.

The study confirms that Arabic novels present distinct challenges for non-native learners due to their linguistic density, narrative complexity, and cultural embeddedness. Although Duolingo reduces initial barriers at the sentence level, it does not adequately support discourse-level comprehension, cultural contextualisation, or interpretive analysis. This reinforces established distinctions in applied linguistics between language proficiency and literary competence, underscoring the need for pedagogical mediation when engaging with complex literary texts (Nation, 2013; Suleiman, 2013; Al-Batal, 2017).

A key contribution of this research lies in its empirical validation of blended learning as a necessary instructional framework rather than an optional enhancement. Students' learning practices reveal that Duolingo is most effective when positioned as a preparatory and supplementary tool, integrated with close reading, classroom discussion, instructor guidance, and cultural explanation. This finding aligns with contemporary pedagogical models in Arabic

as a Foreign Language that advocate balanced integration of digital tools and teacher-led instruction (Alhawary, 2020; Al-Batal, 2019).

From a pedagogical perspective, the study cautions against overgeneralised claims regarding the effectiveness of mobile-assisted language learning applications for advanced learning outcomes. While gamification and adaptive learning mechanisms enhance engagement and persistence, they do not substitute for interpretive instruction or disciplinary expertise in literary studies. Educators are therefore encouraged to align technological use with clearly defined instructional objectives, ensuring that digital applications support rather than displace core pedagogical practices.

Academically, this study contributes to research in Arabic as a Foreign Language and mobile-assisted language learning by extending inquiry into the underexplored domain of literary comprehension. By critically examining the affordances and constraints of Duolingo within a literature-focused context, the study refines existing MALL scholarship and challenges assumptions of automatic skill transfer from micro-level language practice to macro-level textual interpretation. The findings thus offer a more nuanced understanding of how technology can be responsibly integrated into Arabic literature curricula.

In conclusion, Duolingo represents a valuable resource for supporting foundational Arabic language development, but its role in Arabic novel comprehension is necessarily complementary rather than comprehensive. Effective pedagogy in Arabic literary education requires a holistic, blended approach that integrates digital tools with guided interpretation, cultural contextualisation, and critical engagement. Future research should explore longitudinal outcomes of such blended models, investigate discipline-specific digital tools tailored to literary learning, and examine comparable pedagogical dynamics across diverse non-Arab educational contexts.

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