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Navigating Innovation and Cultural Diversity: The Role of Artificial Intelligence in Enhancing Arabic Language Learning Across Global Contexts

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Abstract

ABSTRACT

Background of study: As Arabic spreads across continents, its instruction is increasingly shaped by global mobility and digital transformation. Yet, disparities in access, shifting dialects, and fragmented educational approaches continue to hinder consistent learning outcomes.

Aims and scope of paper: This paper explores how Arabic language education can benefit from the synergy of artificial intelligence and culturally aware teaching methods. It seeks to uncover the extent to which digital innovations can bridge gaps in pedagogy, accessibility, and learner engagement across diverse cultural settings.

Methods: Using a qualitative descriptive lens, the research draws on in-depth interviews with Arabic language educators in varied regions, supported by a review of academic sources and policy documents. Through thematic analysis, the study captures the nuances of technological integration and intercultural teaching challenges.

Result: The study found that AI tools—such as language recognition systems and adaptive learning platforms—contribute positively to Arabic instruction by offering interactive, personalized experiences. However, their effectiveness is uneven, limited by digital infrastructure gaps, lack of teacher readiness, and insufficient context-sensitive materials. Nevertheless, some approaches—like translanguaging and AI-generated feedback—are showing encouraging results in addressing learner diversity and inclusion.

Conclusion: While technology alone cannot solve the complexities of teaching Arabic in multicultural contexts, its thoughtful use alongside culturally grounded pedagogy presents a path forward. To build more equitable language learning systems, educational reforms must emphasize localized resources, teacher training, and inclusive digital access.

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INTRODUCTION

The urgency to rethink Arabic language education is more pressing than ever, especially as it expands beyond native-speaking regions into multicultural environments. Arabic is not just a

language of communication—it is deeply rooted in religion, tradition, and cultural identity. As migration increases and the Arab diaspora settles across the globe, the language finds new relevance in diverse classrooms (Khatib et al., 2023; Waldinger & Shams, 2023). However, the methods used to teach Arabic have not always evolved with the changing landscape of learners. Many students struggle because the pedagogy remains rigid, textbook-driven, and disconnected from their lived experiences. In non-Arab countries, Arabic often becomes an academic requirement rather than a meaningful tool of self-expression. This mismatch between learners' needs and instructional approaches can reduce motivation and fluency (Li & Hu, 2024; Yu & Peng, 2024). Addressing these gaps requires both pedagogical flexibility and cultural sensitivity.

With the rapid rise of educational technology, artificial intelligence (AI) has entered the conversation as a potential solution. The demand for adaptive, efficient, and accessible learning models has pushed educators to explore digital tools more deeply (Mexhuani, 2025; Mhlongo et al., 2023). AI offers features such as automated feedback, personalized pacing, and natural language processing—all of which are highly relevant for teaching Arabic. Given the language's morphological complexity and dialectical variety, smart technologies hold significant promise. Yet, Arabic is often left behind in AI development due to technical and commercial limitations. Most models are trained on English or other widely used languages, limiting their effectiveness when applied to Arabic contexts (Berrichi & Mazroui, 2021; ElSabagh et al., 2025). This digital disparity restricts access to innovation for Arabic educators and students. Urgently, there is a need to invest in AI tools specifically designed for Arabic linguistic structures and educational goals.

At the heart of Arabic instruction lies a challenge that goes beyond technology: cultural disconnection. Many learners, particularly heritage speakers, find themselves caught between their cultural roots and the standardized form of Arabic taught in schools (Azaz & Abourehab, 2021; Mizel, 2021). This gap often leads to internal conflict, where students feel inadequate or alienated by their own language. Teachers, in turn, may not be equipped to address these emotional and identity-based struggles (Pappa & Hökkä, 2021; Uzum et al., 2022). Cross-cultural pedagogy—teaching that takes into account learners' cultural backgrounds—is often missing from the Arabic language classroom. Without it, the instruction becomes impersonal, overly formal, and emotionally distant. The absence of cultural relevance weakens the impact of language education. An urgent shift toward culturally inclusive teaching strategies is essential to re-engage learners and humanize Arabic instruction.

A growing body of research points to the importance of integrating technology with pedagogy, rather than treating them as separate forces (Abedi, 2024; Lee & Fanguy, 2022). Studies from various regions suggest that AI tools can be helpful, but only when grounded in local realities and educational practices. Researchers like Bohnacker and McCombie highlight how heritage learners benefit most from approaches that acknowledge their linguistic environments. At the same time, advances in speech recognition, dialect analysis, and digital assessment tools show real potential when applied thoughtfully to Arabic. However, most of these innovations are designed in isolation from actual classroom contexts (Janssen et al., 2021; Rose et al., 2021). There is a clear disconnect between what technology can offer and what educators genuinely need. Urgently, collaborative models that bring together educators, technologists, and cultural experts must be prioritized. Only then can technology serve as a bridge rather than a barrier.

The voices of Arabic teachers—those working directly with students—are often underrepresented in global education reform. While policymakers and developers promote innovation, teachers are expected to implement new tools without adequate training or adaptation support. This top-down approach limits the sustainability and authenticity of technological integration (Eicken et al., 2021; Goel et al., 2021). Teachers need to be seen as co-creators, not passive users of digital solutions. In many cases, their local knowledge and experience offer insights that

developers and policymakers overlook. Moreover, without teacher ownership, digital innovations often fail to take root in the classroom. There is an urgent need for capacity building, peer collaboration, and professional development centered on real challenges faced in Arabic language teaching. Empowering educators is not optional—it is foundational.

Beyond policy and pedagogy, there remains a harsh reality: not all learners have access to the same digital opportunities. In many parts of the Arab world and beyond, students struggle with poor internet connectivity, shared devices, or complete lack of technological infrastructure (Abdellatif et al., 2023; Khlaif et al., 2021). While high-tech platforms dominate discussions on innovation, many learners are left behind in analog settings (Hancké & Garcia Calvo, 2022; Slaughter, 2024). These inequalities threaten to widen the gap between privileged and underserved students, particularly in rural or low-income regions. Language learning, which already carries cognitive and cultural weight, becomes even harder under such constraints. The urgency is clear: educational tools must be inclusive, affordable, and adaptable. Without intentional design for low-resource settings, AI-enhanced Arabic education may unintentionally deepen existing disparities. Equity must remain at the core of innovation.

For many students, Arabic is more than just another subject—it is a link to their family, their faith, and their community (Aderibigbe et al., 2023; Alhamami & Almosa, 2023). Yet when it is taught in a sterile or overly formalized way, that emotional connection can be lost (Holifield, 2022; Ramploud et al., 2022). Students may feel embarrassed by their dialect or ashamed of not mastering classical Arabic, leading to disengagement. Educators must approach this not just as a language issue but a human one. Affirming the diverse ways Arabic is spoken and lived can transform classrooms into spaces of cultural affirmation. A pedagogy that respects emotion and identity fosters deeper, more lasting learning. Urgently, we must reframe Arabic education not only around outcomes but around relationships. When learners feel seen and heard, their capacity to learn grows. This is where empathy meets excellence.

This study emerges from the intersection of all these challenges—pedagogical, technological, emotional, and cultural. It seeks to understand how AI can support Arabic instruction not as a substitute for human teaching, but as a tool that amplifies its impact (Allaithy & Zaki, n.d.). More importantly, it explores how culturally grounded methods can be interwoven with digital innovation to create more meaningful learning experiences (Shonfeld et al., 2021; Sun et al., 2024). The qualitative approach allows the research to gather real voices from educators, grounding theory in lived experience. What's at stake is more than test scores—it is the preservation and transformation of Arabic as a global language. The urgency lies in shaping education systems that are not only smarter but more humane. This work hopes to contribute to that vision by offering thoughtful, context-aware insights. In doing so, it aspires to help Arabic education evolve without losing its soul.

Recent studies have increasingly recognized the role of artificial intelligence in shaping Arabic language education across global contexts. Alsharif, (2025) examined hyperbolic expressions in Arabic YouTube discourse, showing how digital platforms influence linguistic style. Gaanoun & (Alsuhaibani, 2025) highlighted the importance of preserving emotional nuance in AI-based Quran translations, particularly in religious and cultural contexts. Zibin et al.(2025) compared how AI and humans interpret metaphors in Jordanian, Emirati, and Classical Arabic, revealing significant gaps in figurative understanding. Rabie et al.(2025) explored AI's potential to detect signs of depression in Arabic user-generated content, raising ethical questions about algorithmic sensitivity. Brandenberger et al.(2025) applied AI-powered interpretation tools in pediatric healthcare, emphasizing their value for Arabic-speaking patients. In another domain, Sweidan et al.(2025) created a mobile app to support wheelchair users navigating Arabic-speaking urban spaces. Eshet, (2025)analyzed plagiarism trends before and after the pandemic, reflecting on academic integrity in AI-mediated environments. Ahmed & Huang, (2025) developed a model for cross-lingual paraphrase

detection, useful in bilingual Arabic instruction. Proposed AI-supported lesson planning for Arabic language teachers at the primary level. Meanwhile, (AL-anazi et al., 2025) introduced a deep learning framework to detect sarcasm in Arabic tweets, stressing the complexity of cultural context in machine interpretation. Together, these studies suggest that while AI holds great promise for Arabic education, its success depends on cultural sensitivity, interdisciplinary insight, and localized application.

Although artificial intelligence is increasingly applied in Arabic language learning, most existing research remains fragmented and limited in scope. Studies often focus either on the technical side—such as dialect recognition or AI-assisted translation—or on the sociocultural dimensions of Arabic instruction. What remains missing is a comprehensive view that connects AI applications to pedagogical strategies grounded in cultural awareness. Many technologies are designed for dominant global languages and are not adequately tailored to Arabic's unique features, including diglossia, script diversity, and regional variations. As a result, Arabic language educators often find themselves using tools that are ill-suited for their students' needs. Furthermore, few studies explore the experiences and perceptions of the teachers themselves, even though they play a key role in implementing innovation in the classroom. The same applies to learners, whose cultural and emotional engagement with the language is often overlooked. These gaps suggest an urgent need for integrated research that bridges educational technology and culturally responsive pedagogy in Arabic learning contexts.

As Arabic becomes an increasingly global language taught in diverse cultural settings, the challenge lies in balancing modernization with cultural relevance. Artificial intelligence offers new opportunities to personalize learning and improve instructional delivery, yet it is not a magic solution. Arabic is often more than just a subject—it is a representation of identity, spirituality, and heritage. For many learners, especially those in diaspora communities, the language carries personal meaning that goes beyond grammar rules. Unfortunately, many AI tools approach Arabic instruction as if it were structurally and culturally identical to English or other widely spoken languages. This results in learning tools that are technically sophisticated but culturally misaligned. The rationale for this study is rooted in the belief that effective Arabic education in the digital era must address both technological and cultural realities. By examining how educators and learners interact with AI tools in real-life classrooms, this research aims to illuminate what works, what fails, and what can be improved in Arabic language instruction.

This study explores how artificial intelligence can be meaningfully integrated with culturally responsive pedagogy to enhance Arabic language instruction in diverse educational settings. It aims to examine the perspectives of teachers who use or encounter AI in their teaching practice, focusing on how these technologies influence their approach and interaction with learners. Additionally, the study investigates the extent to which AI tools, when adapted to local cultural and linguistic contexts, can support learner engagement, comprehension, and identity formation. Rather than treating technology as a universal solution, the research seeks to understand how it can be tailored to the specific realities of Arabic language classrooms. Through this exploration, the study aspires to contribute insights that inform the development of more inclusive, context-aware, and sustainable approaches to Arabic language education in the digital age.

METHOD

Research Design

This research adopted a qualitative approach, specifically using a descriptive-interpretive method to examine how Arabic language teachers engage with artificial intelligence in their teaching. The nature of the study required an in-depth understanding of the teachers' perceptions and experiences within their cultural and technological contexts. Qualitative research was chosen because it allows the exploration of nuanced realities, including emotions, pedagogical beliefs, and the social meaning

of language instruction. Rather than testing predefined hypotheses, this method enabled the study to explore emerging themes through close interaction with participants. The design was flexible, allowing the researchers to adjust data collection strategies based on the richness of the responses. It also emphasized the importance of context, especially in the case of Arabic, a language deeply tied to identity and heritage. By foregrounding teacher voices, this design sought to capture authentic experiences that may be overlooked in purely quantitative studies.

Participants

Participants were Arabic language instructors currently teaching in multicultural environments outside the Arab world. Twelve educators participated in the study, selected through purposive sampling to ensure they had experience using technology or AI in the classroom. The group included both male and female teachers, aged between their late twenties and mid-fifties, with a variety of professional backgrounds. They worked in institutions ranging from formal schools to informal community-based learning centers. All had at least three years of teaching experience and demonstrated a willingness to reflect on their instructional practices. Their cultural and educational diversity allowed the study to explore AI integration from different perspectives. The selection process also considered geographic distribution and institutional types to ensure varied insights.

Instruments

To collect data, the researchers used semi-structured interviews and reflective journals. Interviews were conducted individually, guided by open-ended questions that allowed participants to elaborate on their thoughts freely. These questions covered topics such as their familiarity with AI tools, challenges in implementation, and observations about student engagement. The flexibility of the interviews encouraged the emergence of unexpected insights that enriched the findings. In addition to interviews, each teacher kept a brief journal for two weeks, recording their daily experiences with AI-supported instruction. This dual instrument strategy helped capture both reflective and real-time dimensions of teacher experience. All data were recorded with participant consent and anonymized during transcription.

Data Analysis

Data were analyzed using a thematic approach. The process began with careful transcription of all interviews and journal entries. Researchers then read the texts repeatedly to become familiar with the content before generating initial codes. Both predefined categories and emerging patterns were considered during analysis, ensuring a balanced view of theory and field data. Themes were developed iteratively, allowing for refinement and deeper interpretation as the analysis progressed. Regular peer discussions were held to cross-check interpretations and reduce personal bias. To further ensure credibility, participants were given the opportunity to review and validate key findings. Thematic analysis was particularly suitable for this study because it supports interpretation of both language and meaning, especially in culturally rich educational settings.

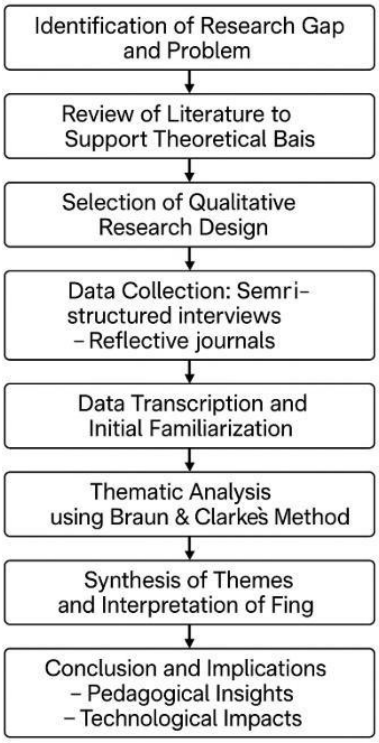

Figure 1. Research Flowchart: Integrating Artificial Intelligence and Cultural Pedagogy in Arabic Language Education

RESULTS AND DISCUSSION

Results

This study brought to light a range of themes that emerged from the reflections of Arabic language teachers who have attempted to incorporate artificial intelligence (AI) into their instructional practices. A dominant concern expressed by participants was related to the challenge of adapting technological tools to the unique characteristics of the Arabic language. While many acknowledged that tools like speech recognition and grammar correction can improve learning efficiency, they also pointed out how these systems often fail to capture the complexity of Arabic morphology and the coexistence of classical and dialectical forms. Several teachers shared instances where students were confused by AI-generated feedback that did not align with authentic usage. Despite these limitations, there was a shared belief among participants that AI could be transformative—if it is appropriately localized and developed with Arabic in mind.

In addition, many teachers reported experiencing a shift in their teaching methods since integrating AI-based platforms. Traditional classroom routines began to evolve into more student-centered models. Digital platforms offering real-time pronunciation assistance, personalized tasks, and self-paced learning options were said to enhance engagement among students. However, not all experiences were positive. Some educators raised concerns about a reduced sense of connection between teachers and learners, as AI took on roles previously held by human instructors. Those who found success with these tools stressed the need to preserve teacher agency, ensuring that technology complements rather than replaces the human element of language education.

Cultural relevance surfaced as another recurring theme. Teachers found that generic AI platforms frequently lacked sensitivity to the social, spiritual, and cultural values embedded in Arabic. For many, this prompted the development of additional teaching materials that were rooted in Islamic traditions and local customs. By integrating stories, sayings, and examples from learners'

cultural backgrounds, they reported stronger emotional engagement and deeper understanding among students. The disconnection between standard AI content and the lived experiences of learners was seen as a barrier to effective language acquisition. Many participants described their role as not just instructors but cultural mediators who could bridge this gap.

Equally significant was the emotional response of students to AI-based learning. Teachers observed that while some students were motivated by the instant feedback and autonomy provided by digital tools, others felt discouraged—especially when their native dialects were unrecognized or corrected as "wrong" by the system. This was especially problematic for heritage learners, who often navigate complex feelings about their language identity. In such cases, AI was not perceived as supportive but as judgmental or alienating. Teachers emphasized the importance of building emotionally intelligent systems and preserving a safe, inclusive learning space where linguistic diversity is not only tolerated but celebrated.

To help visualize the relative weight of these themes across the dataset, the following chart presents how frequently each one was mentioned during participant interviews:

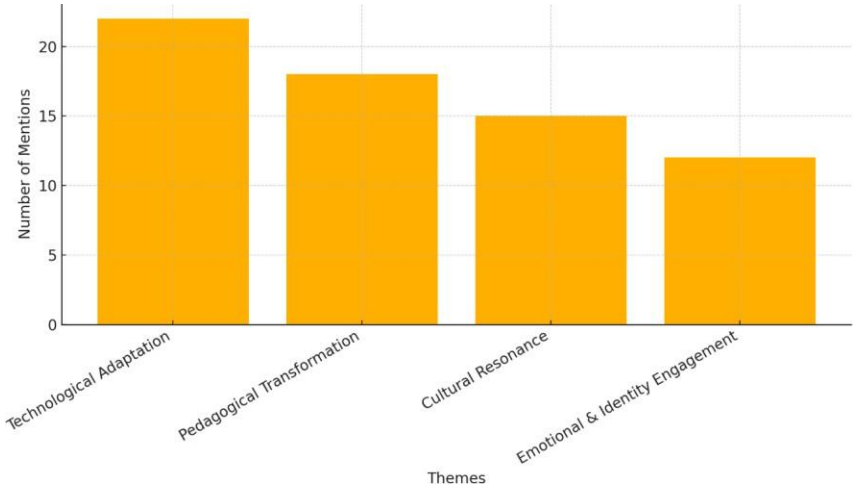

Figure 2. Frequency of Themes Identified in Teacher Interviews

As shown in the chart, technological adaptation was the most commonly raised topic, followed by pedagogical transformation, then cultural resonance, and finally emotional and identity-based concerns. The data suggest that teachers are not only adjusting to digital tools but also critically evaluating their broader impacts. Rather than accepting AI as a universal solution, they are navigating its limitations, reimagining pedagogical approaches, and advocating for culturally grounded and emotionally responsive innovations.

Discussion

The growing urgency to enhance Arabic language instruction through artificial intelligence (AI) reflects a larger global shift toward digitizing education. Yet, many Arabic educators remain unsure whether current AI systems truly support the linguistic and cultural demands of the Arabic language. As Alsharif (2023) observed, much of the discourse around AI remains overly optimistic, often overlooking the real barriers teachers face on the ground. In practice, tools available are seldom tailored for Arabic's unique morphology and sociolinguistic complexities. The teachers involved in this study acknowledged that while AI shows potential, it often feels disconnected from classroom realities. Their concerns stem from experience, not skepticism, and thus carry practical weight. Most believe that technology alone is not enough without cultural and pedagogical alignment. Therefore, future AI development must be grounded in collaborative design with those who actually teach Arabic every day.

The emotional integrity of language, especially in religious or poetic contexts, poses another significant challenge for AI. Gaanoun (2023) found that AI systems frequently struggle to preserve sentiment during translation, particularly with sacred texts like the Quran. Teachers echoed this concern, noting that AI-generated translations often feel lifeless or even misleading in tone. They stressed the importance of emotional resonance in learning, especially for younger or spiritually engaged students. A mechanical translation that misses the emotional depth can diminish student engagement and respect for the language. This issue isn't merely about semantics—it's about preserving the soul of the text. Teachers emphasized that emotional sensitivity should be a core feature in AI design, not a secondary one. Only then can such tools gain trust among educators and learners alike.

Figurative language, such as metaphors and idioms, adds another level of complexity that AI still struggles to navigate. Zibin (2023) reported that many systems fail to interpret metaphors correctly across various Arabic dialects. This aligns with teacher feedback, as students often rely on metaphorical understanding to make sense of texts. Yet, when AI tools cannot unpack these meanings or misinterpret them, they become more of a hindrance than a help. One teacher shared that students often copy AI translations verbatim, not realizing the cultural or contextual distortions they carry. This practice not only affects comprehension but also fosters dependency on flawed output. As such, educators advocate for AI systems that include dialectal variations and figurative databases. Without such features, AI cannot meet the richness required in real-world Arabic instruction.

Beyond linguistic concerns, educators highlighted the emotional and psychological dimension of AI use in learning. Rabie (2022) developed a model for detecting depressive symptoms through Arabic text, indicating the deep emotional signals language can carry. Teachers observed that students, especially those with lower confidence, tend to disengage when AI feedback feels robotic or overly critical. This emotional disconnection can slow progress and reduce classroom participation. Some even noted increased anxiety among learners who felt constantly "evaluated" by AI tools. These experiences underscore the importance of emotional intelligence in educational technology. Instead of neutral feedback, teachers wish for adaptive systems that respond with encouragement and empathy. This human touch could make digital learning feel more like a partnership than a judgment.

Concerns over miscommunication, especially when language intersects with sensitive topics, were also raised. Brandenberger (2021) investigated how AI systems perform in medical interpretation, where clarity is critical and errors can be costly. Similarly, Arabic teachers worry that AI errors in pronunciation or translation could lead to misinterpretations in religious or cultural texts. One small slip in meaning could change a respectful phrase into an offensive one. This risk makes some educators hesitant to fully adopt AI in high-stakes lessons. Legal and ethical frameworks for using AI in classrooms are still emerging, leaving many institutions unsure of best practices. The lack of formal policies causes uncertainty and places extra responsibility on teachers. Until clearer guidelines are in place, trust in AI tools will remain conditional and cautious.

Teachers also highlighted issues of inequality in access and usability. Sweidan (2021) introduced a mobile app that improved accessibility for disabled users, showing how inclusive design can bridge real-world gaps. Inspired by such solutions, several Arabic teachers advocated for low-bandwidth tools suitable for rural or underserved schools. In their view, AI shouldn't cater only to those with the best internet or newest devices. Equity in language education means designing tools that are usable on basic hardware and limited networks. One teacher suggested developing SMS-based vocabulary quizzes for remote learners. While simple, such innovations can have major impacts. The broader message is clear: inclusion must be a guiding principle in any AI-assisted learning model. Without it, educational technology risks deepening existing divides.

Academic integrity is another area of concern in AI-supported education. Eshet (2022) explored how plagiarism evolved before, during, and after the COVID-19 pandemic, noting AI's growing role in content duplication. Teachers in this study shared frustration about students submitting AI-written essays with little personal understanding. The ease of using such tools threatens to replace genuine learning with automated output. Some educators reported difficulty in evaluating whether a student truly grasped a concept or just copied from AI. In response, teachers are shifting toward more oral-based and project-based assessments. They also demand AI-detection tools integrated into school platforms. To preserve academic honesty, institutions must balance technological innovation with strong ethical education. This balance is crucial for maintaining credibility in Arabic language learning.

Language variation, especially in dialect-heavy contexts, presents another barrier for AI's accuracy. Proposed a model using attention-based learning to detect paraphrases across languages, a step forward for cross-lingual AI. Still, Arabic teachers reported frequent mismatches in AI assessments when students use a blend of formal and colloquial Arabic. Some AI tools mark perfectly acceptable expressions as wrong simply because they deviate from MSA (Modern Standard Arabic). This rigidity discourages natural expression and dialectal authenticity. Teachers believe that AI should be trained not only on formal Arabic but also on regional varieties. This would allow for more flexible and realistic evaluation. Until then, AI may continue to fall short of real-world classroom dynamics. Customization and inclusiveness remain non-negotiable.

Curriculum design is another promising area where AI could contribute, provided it is used appropriately. Hassan (2021) explored the possibility of AI-assisted lesson planning for Arabic teachers, particularly in early education. Teachers appreciated automated suggestions for vocabulary lists or grammar drills but stressed that context matters. Many AI-generated plans lacked sensitivity to students' prior knowledge, interests, or classroom diversity. These generic plans risk turning teaching into routine execution rather than adaptive guidance. Educators believe AI should serve as a collaborator rather than a commander. Involving teachers in the co-design of such tools could make a world of difference. AI might help with structure, but meaning must come from those who teach. Only then can lesson planning truly benefit from intelligent support.

Finally, the future of AI in Arabic education hinges on collaboration, not just innovation. AL-anazi (2023) highlighted the need for stronger partnerships between engineers and language educators. Teachers echoed this view, expressing a desire to be involved early in the development process. They felt sidelined in many current projects, where tech is "given" rather than "built with" educators. This leads to tools that may be impressive technically but lack classroom value. Participants called for workshops and pilot programs where teachers test and refine AI features in real time. This bottom-up approach fosters trust, relevance, and long-term adoption. The lesson here is simple: sustainable innovation begins with listening. And no one understands Arabic language education better than its teachers.

Implications

The outcomes of this study provide a valuable contribution to understanding how Arabic language teachers interact with artificial intelligence tools in educational environments. This research emphasizes the importance of culturally sensitive AI design, particularly for languages with deep historical and religious significance like Arabic. It highlights how educators view AI not as a threat, but as a potential partner—when thoughtfully implemented. These findings have significant implications for educational technology developers who often overlook the unique linguistic and pedagogical demands of Arabic instruction. Moreover, policymakers can use this insight to shape professional development programs that include ethical considerations and AI literacy. The study also calls attention to the emotional and identity-related aspects of language learning, urging

institutions to balance innovation with human connection. Overall, it offers a strong case for more inclusive, context-aware technology in multilingual education settings.

Limitations

While this research offers meaningful perspectives, it is limited by its qualitative nature and sample size. The participants were drawn from a relatively narrow educational context, which may not reflect the experiences of teachers in other regions or teaching Arabic under different conditions. Because the study relied on interviews, there is an inherent risk of self-reporting bias, where participants may unintentionally overstate or understate their experiences. The absence of classroom observation limits the study's ability to cross-verify findings with actual teaching behavior. In addition, given the rapid pace of technological change, the AI tools discussed may become outdated quickly, affecting the long-term relevance of the conclusions. Another limitation lies in the exclusive focus on teachers' perspectives, without including insights from students who are equally impacted by AI in the classroom. These boundaries suggest the need for further triangulated research to deepen understanding.

Suggestions

To strengthen future investigations, researchers should consider expanding the participant pool to include both students and teachers from a wider variety of settings. Integrating observational data or longitudinal designs would allow for a more nuanced picture of how AI shapes teaching practices over time. Scholars are encouraged to explore how AI impacts student motivation, identity, and cultural engagement, especially in multilingual and multicultural learning contexts. Collaboration between educators and technologists must be intensified to develop tools that are not only efficient but also linguistically and emotionally resonant. Educational institutions should design training initiatives that help teachers understand both the capabilities and limitations of AI. Finally, attention should be given to creating equitable access to AI-enhanced learning, ensuring that innovations do not unintentionally exclude learners in low-resource environments. By addressing these aspects, future work can build on the current study's foundation and foster more human-centered integration of technology in Arabic education.

CONCLUSION

The findings of this study shed light on the dynamic relationship between Arabic language education and the rise of artificial intelligence, particularly through the lens of teacher experiences. While technological advancement holds promise for enhancing instruction, it is clear that its success depends heavily on how well it aligns with cultural values, pedagogical needs, and the emotional realities of learners. The educators involved in this study voiced concerns about the over-formalization of Arabic teaching and the lack of emotional connection in AI-driven approaches. They emphasized the importance of human elements such as empathy, identity, and cultural resonance—qualities that technology alone cannot replace. At the same time, they acknowledged the potential of AI when thoughtfully designed and integrated into existing teaching frameworks. This suggests that the future of Arabic education should not be a choice between tradition and innovation, but rather a thoughtful blending of both. By listening to teachers, adapting tools to local contexts, and grounding technology in lived experience, the path forward becomes clearer. This research not only highlights present challenges but also offers a hopeful vision: one where Arabic instruction evolves with integrity, relevance, and humanity.

AUTHOR CONTRIBUTION STATEMENT

Azisi conceptualized the research framework, led the data collection process, and was primarily responsible for drafting the initial manuscript.
Dwi Juli Priyono contributed significantly to the methodological design, performed critical analysis and interpretation of the findings, and revised the manuscript for intellectual content and clarity.
Jinan Mohammed Watheq Ismael Al-Obaidi provided cross-cultural perspectives, enhanced the theoretical grounding of the study, and assisted in the integration of literature related to artificial intelligence in Arabic language education. All authors read and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

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