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The "Relevance Gap" in Islamic Education: Arabic E-Learning and the Islamic Sciences

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ABSTRAK

Abad ke-21 telah mengubah cara pengetahuan keislaman diakses, dimediasi, dan diperoleh, dan bahasa Arab-sebagai bahasa fondasi ilmu-ilmu keislaman-berada di pusat transformasi tersebut. Meskipun aplikasi e-learning berbasis Android kini menyediakan materi pembelajaran bahasa Arab yang melimpah, menarik, dan mudah diakses, belum jelas apakah materi tersebut benar-benar relevan dengan tuntutan epistemologis ilmu-ilmu keislaman atau hanya memperlakukan bahasa Arab sebagai bahasa asing pada umumnya. Dengan menggunakan analisis isi kualitatif Krippendorff, penelitian ini menelaah enam aplikasi yang dipilih secara purposif-Learn Arabic, Bahasa Arab Sehari-hari, Learn Arabic for Islamic Studies, Belajar Bahasa Arab Anak, Quranic Arabic, dan AlifBee-berdasarkan rubrik analitis lima dimensi yang mencakup relevansi konten, desain instruksional, integrasi dengan ilmu keislaman, keterlibatan dan aksesibilitas pengguna, serta keselarasan epistemologis. Temuan menunjukkan adanya "kesenjangan relevansi" yang persisten: aplikasi telah matang secara teknologi dan menarik secara pedagogis, namun dangkal secara epistemologis. Penelitian ini berargumen bahwa menutup kesenjangan tersebut memerlukan desain materi terintegrasi kurikulum yang menempatkan bahasa Arab dalam kerangka epistemologis Islam yang koheren.

KATA KUNCI

Bahasa Arab; pembelajaran daring; ilmu keislaman; analisis isi; aplikasi Android; relevansi epistemologis.

ABSTRACT

The twenty-first century has transformed the way Islamic knowledge is accessed, mediated, and acquired, and Arabic-as the foundational language of the Islamic sciences-sits at the centre of this transformation. While Android-based e-learning applications now offer abundant, attractive, and accessible Arabic learning materials, it remains unclear whether these materials are genuinely relevant to the epistemological demands of the Islamic sciences (al-'ulūm al-shar'iyyah) or whether they merely treat Arabic as a generic foreign language. Drawing on Krippendorff's qualitative content analysis, this study examines six purposively selected applications-Learn Arabic, Bahasa Arab Sehari-hari, Learn Arabic for Islamic Studies, Belajar Bahasa Arab Anak, Quranic Arabic, and AlifBee-against a five-dimension analytical rubric covering content relevance, instructional design, integration with the Islamic sciences, user engagement and accessibility, and epistemological alignment. The findings reveal a persistent "relevance gap": the applications are technologically mature and pedagogically engaging but epistemologically shallow, prioritising conversational fluency and usability over the morphological, syntactic, and interpretive competencies required to engage classical texts. The study argues that closing this gap requires the collaborative design of curriculum-integrated materials that embed Arabic within a coherent Islamic epistemological framework rather than appending Islamic vocabulary to a secular language-learning template.

KEYWORDS

Arabic language; e-learning; Islamic sciences; content analysis; Android applications; epistemological relevance.

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A. Introduction

The digital reordering of everyday life has not spared the domain of religious education. Geographic distance and the scarcity of qualified teachers, once decisive constraints on who could study Arabic and where, have been dramatically loosened by the smartphone. A learner in a remote village can now download, in seconds, an application promising to teach the language of the Qur'an through animated lessons, native-speaker audio, spaced-repetition flashcards, and gamified progress tracking. The promise is seductive, and the uptake is real: Arabic learning applications have become a fixture of the Google Play Store, and educators across the Indonesian Islamic educational landscape-from *pesantren* to state Islamic universities-increasingly treat them as complementary, and sometimes primary, instructional resources. Researchers have documented that mobile-assisted language learning (MALL) can support vocabulary acquisition, autonomous study, and learner motivation across a wide range of contexts.[1]

Yet abundance and accessibility are not the same as relevance. The central concern of this article is not whether Arabic learning applications work as language tools-a substantial literature already affirms that they often do-but whether the *materials* they deliver are relevant to the purpose for which most Indonesian learners study Arabic in the first place: gaining access to the Islamic sciences (*al-ʻulūm al-sharʻiyyah*). In the Islamic intellectual tradition, Arabic is not one foreign language among many; it is the epistemological infrastructure through which the Qur'an, the Hadith, and the classical disciplines of *tafsīr* (exegesis), *uṣūl al-fiqh* (legal theory), and *balāghah* (rhetoric) are transmitted and interpreted. A learner may achieve conversational competence in Arabic and still be unable to parse a single line of a classical commentary. This distinction-between Arabic as communication and Arabic as a vehicle of religious knowledge-is the fault line along which the relevance of digital materials must be judged.

This is precisely where prior framings of the problem have lacked clarity. Studies frequently conflate three separable questions: whether an application is usable, whether it teaches language effectively, and whether its content serves the Islamic sciences. An application can score highly on the first two while failing the third entirely. The result is a body of evaluation that praises interface design and engagement metrics while leaving the epistemological question-arguably the decisive one for Islamic education-unexamined. The twenty-first-century skills agenda compounds the confusion, because the digital competencies that learners are urged to acquire are themselves contested and do not automatically translate into religious literacy.[2]

The stakes of this ambiguity are not merely academic. When digital materials simplify Arabic morphology and syntax to ease the path of the beginner, they may quietly strip away exactly the

[1]Kübra Okumuş Dağdeler, *"A Systematic Review of Mobile-Assisted Vocabulary Learning Research," Smart Learning Environments* 10 (2023): article 19, https://doi.org/10.1186/s40561-023-00235-z.
[2]Ester van Laar et al., "The Relation between 21st-Century Skills and Digital Skills: A Systematic Literature Review," *Computers in Human Behavior* 72 (2017): 577–588, https://doi.org/10.1016/j.chb.2017.03.010.

grammatical depth required to read scripture. When they recycle conversational phrases without exposure to Quranic register, they disconnect language acquisition from religious literacy. And when content is produced without the oversight of scholars trained in both Arabic and the Islamic sciences, there is a real risk that linguistic and theological concepts are misrepresented, or that sacred texts are rendered in a flattened, secularised idiom.[3] In an age when religious authority is increasingly mediated by platforms rather than by teachers, the design choices embedded in an Arabic learning application are also, implicitly, choices about how the Islamic sciences will be understood by the next generation.

The Indonesian setting sharpens these concerns further. Indonesia hosts one of the world's largest systems of Islamic education, encompassing tens of thousands of *pesantren*, a dense network of *madrasah*, and a tier of state Islamic universities (UIN, IAIN, and STAIN) in which Arabic is a gateway subject for the study of the religious sciences. For these institutions, Arabic is studied overwhelmingly as an instrument of access to revelation and to the classical scholarly corpus (*kutub al-turāth*), not as a tool of tourism or commerce. The mass migration of supplementary learning onto smartphones therefore raises a distinctively institutional question: can materials produced for a global consumer market serve the curricular and epistemological purposes of Indonesian Islamic education? Field studies in Indonesian Islamic schools report that teachers value the flexibility and engagement that mobile applications afford yet worry about the absence of religious context and Quranic terminology, and about whether such tools can be integrated into a religiously grounded curriculum at all. This tension between enthusiastic adoption and pedagogical unease is the practical face of the problem this study examines.

Against this background, the present study reframes the research problem with deliberate sharpness. The question is not whether Arabic learning apps are "good," but rather to what extent the Arabic language learning materials embedded in popular Android e-learning applications are relevant to the development of the Islamic sciences in the twenty-first century. Three subsidiary concerns follow from this overarching question. The first concerns the nature and quality of the content these applications deliver, and how closely it aligns with the linguistic demands of classical Islamic texts. The second concerns how their instructional designs structure the learning trajectory, and whether they scaffold learners toward higher-order religious competencies. The third concerns the degree to which the materials reflect an Islamic epistemological orientation, as opposed to a generic communicative one.

To pursue these questions, the article proceeds as an interpretive argument rather than a report of discrete experimental stages. It first establishes why, in the Islamic tradition, language and knowledge are inseparable, and then situates Arabic learning applications within the broader maturation of mobile-assisted language learning. It next reads six representative Android applications against a five-dimension analytical framework-content relevance, instructional design, integration with the Islamic sciences, user engagement and accessibility, and epistemological alignment-before drawing the threads together into

[3]Gary R. Bunt, *Hashtag Islam: How Cyber-Islamic Environments Are Transforming Religious Authority* (Chapel Hill: University of North Carolina Press, 2018), 1–20.

a single diagnostic concept, the *relevance gap*, and considering how that gap might be closed. The contribution is thus as much conceptual as empirical: by naming the relevance gap, the article supplies a critical lens through which the rapidly expanding ecosystem of Islamic educational technology can be assessed.

B. Arabic as the Epistemological Medium of the Islamic Sciences

The theoretical premise of this study is that, in Islamic education, language and knowledge are co-constitutive. Arabic is not merely the carrier of Islamic meaning; its morphology and syntax are themselves instruments of interpretation. The sciences of *naḥw* (syntax) and *ṣarf* (morphology) exist precisely because the vowelling and structure of a word can alter the legal or theological force of a verse. To learn Arabic for the Islamic sciences is therefore to learn a disciplined way of reading, not simply a set of phrases. Materials that abstract away grammatical structure in the name of accessibility may build conversational confidence while undermining the interpretive competence that is the entire point of the endeavour. This is why the integration of classical Arabic elements is repeatedly identified as the decisive enhancement that would make digital tools genuinely useful for long-term Islamic study.

The cognitive theory of multimedia learning offers a complementary lens. Effective multimedia materials manage learners' limited working memory by aligning words and images, signalling essential structure, and avoiding extraneous load.[4] Yet multimedia design principles are agnostic about disciplinary depth: a well-designed animation can teach a trivial point as elegantly as a profound one. The challenge for Arabic-for-Islamic-sciences materials is thus to harness multimedia affordances in the service of epistemologically weighty content-to use animation, audio, and interactivity to illuminate the structure of a Quranic verse rather than to gamify a vocabulary list. Vygotskian scaffolding theory adds a further requirement: learners must be guided through a graduated sequence in which each competence builds on the last, with formative feedback marking the path. Both modern pedagogy and the classical Islamic pedagogical tradition, with its ordered progression from elementary primers to advanced commentaries, converge on this principle of structured, cumulative learning.

C. The Maturation of Mobile-Assisted Arabic Learning

Over the past two decades, mobile-assisted language learning has matured from an experimental novelty into a mainstream pedagogical field with its own theoretical commitments. Systematic reviews now map a large and methodologically diverse literature: developers have built simple and gamified applications grounded in behaviourist, cognitivist, and constructivist frameworks,

[4]Richard E. Mayer, "The Past, Present, and Future of the Cognitive Theory of Multimedia Learning," *Educational Psychology Review* 36, no. 1 (2024): article 8, https://doi.org/10.1007/s10648-023-09842-1.

and have evaluated them across school, university, and informal settings.[5] The dominant problems these tools have addressed are vocabulary acquisition and learner motivation, and there is consistent evidence that mobile applications can improve retention and afford self-paced, autonomous study.[6] Acceptance studies further show that higher-education learners broadly embrace MALL when applications are easy to use and perceived as useful, consistent with the predictions of the Technology Acceptance Model.[7]

A recurring finding, however, is that this maturity is uneven. Reviews of gamified MALL-epitomised by Duolingo and its imitators-observe that the field has tended to emphasise the *creation of tools* over the analysis of learning processes and outcomes, privileging engagement mechanics such as points, streaks, badges, and leaderboards.[8] These mechanics are powerful motivators, but they are largely indifferent to the substance of what is being learned. A gamified loop that rewards the memorisation of greetings functions identically whether the target language is Spanish or Arabic, and whether the content is a tourist phrasebook or a Quranic lexicon. This neutrality is convenient for developers but problematic for Islamic education, where the dignity and purpose of learning Arabic are inseparable from its content.

This pattern is visible in the Arabic field specifically. A recent systematic review of technology integration into the Arabic language curriculum finds that adoption is accelerating-artificial intelligence, gamified applications, and learning-management systems are all enhancing engagement and independent learning-yet the field remains fragmented across tools, strategies, and cultural dimensions, with limited attention to coherent curriculum design.[9] Where gamification has been applied directly to teaching Arabic to non-native learners, it reliably raises motivation and participation, particularly for beginners; but the same reviews stress that game elements operate at the level of engagement rather than disciplinary substance.[10] The maturation of the field, in other words, has been real but lopsided, advancing the delivery of Arabic far more confidently than the question of what that Arabic is for.

The twenty-first-century skills discourse that frames much of this development does not, on its own, resolve the imbalance. Systematic reviews caution that the relationship between twenty-first-century skills and digital skills is neither simple nor automatic: digital competencies are a distinct,

[5]Kashif Ishaq et al., "Mobile-Assisted and Gamification-Based Language Learning: A Systematic Literature Review," *PeerJ Computer Science* 7 (2021): e496, https://doi.org/10.7717/peerj-cs.496.
[6]Okumuş Dağdeler, "Mobile-Assisted Vocabulary Learning," article 19.
[7]Gustavo García Botero et al., "Acceptance and Usage of Mobile-Assisted Language Learning by Higher Education Students," *Journal of Computing in Higher Education* 30, no. 3 (2018): 426–451, https://doi.org/10.1007/s12528-018-9177-1.
[8]Mitchell Shortt et al., "Gamification in Mobile-Assisted Language Learning: A Systematic Review of Duolingo Literature from Public Release of 2012 to Early 2020," *Computer Assisted Language Learning* 36, no. 3 (2023): 517–554, https://doi.org/10.1080/09588221.2021.1933540.
[9]Muhammad Syazwan Mohd Sapawi and Nik Mohd Rahimi Nik Yusoff, "Integrating Technology into the Arabic Language Curriculum: A Systematic Review of Trends, Strategies and Cultural Dimensions," *Social Sciences & Humanities Open* 12 (2025): 101974, https://doi.org/10.1016/j.ssaho.2025.101974.
[10]Sultan A. Almelhes, "Gamification for Teaching the Arabic Language to Non-Native Speakers: A Systematic Literature Review," *Frontiers in Education* 9 (2024): 1371955, https://doi.org/10.3389/feduc.2024.1371955.

instrumental layer that may or may not be harnessed toward higher-order cognitive and disciplinary ends.[11] A learner may become adept at navigating a slick Arabic application-demonstrating real digital fluency-without thereby developing the interpretive, analytical, and ethical competencies that the Islamic sciences demand. Frameworks for techno-pedagogical practice accordingly stress that technology yields educational value only when it is integrated through deliberate pedagogical design rather than adopted for its own sake.[12] Applied to Arabic-for-Islamic-sciences, this means that the mere availability of multimedia, gamification, or adaptive features is insufficient; what matters is whether those features are orchestrated to advance religiously meaningful learning objectives.

D. Designing for the Islamic Sciences: Evidence from Purpose-Built Media

Where digital tools have been deliberately designed for Islamic education, the results are instructive. Development studies grounded in instructional-design models have produced Arabic learning media for Islamic schools that integrate audio, video, and interactive exercises with curriculum objectives, and that demonstrate measurable effectiveness when expert-validated.[13] Comparable work using authoring platforms such as Smart Apps Creator has shown that purpose-built media for Islamic junior secondary students can raise interest and comprehension when content is curriculum-aligned rather than generic.[14] Conceptual frameworks for problem-based mobile applications in Islamic education similarly stress that technology must be designed around religious learning goals from the outset, not retrofitted to them.[15]

Tellingly, learners themselves point in the same direction. Survey research with non-native Arabic learners finds that the factors most associated with effective learning are improved feedback practices, customised curricula, and the purposeful incorporation of technology-precisely the design commitments that distinguish purpose-built educational media from generic consumer applications.[16] The contrast between these deliberately designed tools and mass-market applications is what motivates the analytical framework adopted below, and it anticipates the study's central finding: integration with the Islamic sciences is achievable, but only when it is intended.

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[11]van Laar et al., "21st-Century Skills and Digital Skills," 580–583.

[12]Muhammad Mujtaba Asad et al., "Techno-Pedagogical Skills for 21st Century Digital Classrooms: An Extensive Literature Review," *Education Research International* 2021 (2021): article 8160084, https://doi.org/10.1155/2021/8160084.

[13]Koderi et al., "Developing Mobile Learning Media for Arabic Language Instruction at Islamic Senior High School in Lampung, Indonesia," *International Journal of Recent Technology and Engineering* 8, no. 2S9 (2019): 107–112, https://doi.org/10.35940/ijrte.B1024.0982S919.

[14]Erlina et al., "Arabic Learning Media Based on Smart Apps Creator for Students of Islamic Junior High School," *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban* 9, no. 2 (2022): 217–230, https://doi.org/10.15408/a.v9i2.27586.

[15]Gamal Abdul Nasir Zakaria and Aliff Nawi, "Design and Development of a PBL Mobile Application in Islamic Education: A Conceptual Framework," *International Journal of Information and Education Technology* 10, no. 1 (2020): 26–30, https://doi.org/10.18178/ijiet.2020.10.1.1334.

[16]Sultan A. Almelhes, "Enhancing Arabic Language Acquisition: Effective Strategies for Addressing Non-Native Learners' Challenges," *Education Sciences* 14, no. 10 (2024): 1116, https://doi.org/10.3390/educsci14101116.

E. The State of the Art and the Relevance Gap

Recent empirical and review studies, taken together, point toward a consistent diagnosis. Mixed-methods research on Arabic as a second language in higher education confirms that learners and teachers actively use mobile devices and value the convenience and autonomy they afford.[17] Studies of design for Arabic-speaking migrants likewise show that mobile tools can be tailored sensitively to specific learner populations.[18] Yet research situated in Islamic educational settings is more cautious. A recent systematic review of MALL in Arabic education concludes that, while integration is accelerating, the field remains weighted toward usability and engagement, with comparatively little attention to alignment with the religious and curricular demands of Islamic institutions.[19]

It is from this convergence that the organising concept of this article emerges. The literature documents, on one side, the rapid technological and pedagogical maturation of Arabic learning applications, and on the other, their persistent epistemological shallowness in religious contexts. The space between these two-between what the applications can do as language tools and what they fail to do as instruments of Islamic knowledge-is what this study terms the *relevance gap*. Naming this gap is itself a contribution to clarity, because it disentangles the question of technical quality from the question of religious relevance and makes the latter the explicit object of analysis. The remainder of this article operationalises the relevance gap empirically and considers how it might be closed.

F. Reading the Applications: Approach and Corpus

The analysis rests on a qualitative content analysis, following the systematic model articulated by Krippendorff, which proceeds through the stages of unitising, sampling, recording and coding, reducing, inferring, and narrating.[20] Content analysis is appropriate here because the object of inquiry is the manifest and latent meaning embedded in instructional artefacts-the screens, lessons, exercises, and structuring logic of the applications-rather than the behaviour or self-report of users. The approach permits a systematic, replicable reading of these artefacts against an explicit analytical framework, while remaining sensitive to the interpretive and contextual judgements that evaluating religious relevance necessarily entails.

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[17]Ahmed AlQarni et al., "Mobile Assisted Language Learning in Learning Arabic as a Second Language in Saudi Arabia," *Saudi Journal of Humanities and Social Sciences* 5, no. 2 (2020): 108–115, https://doi.org/10.36348/sjhss.2020.v05i02.009.

[18]Linda Bradley et al., "Designing Mobile Language Learning with Arabic-Speaking Migrants," *Interactive Learning Environments* 31, no. 4 (2023): 2008–2019, https://doi.org/10.1080/10494820.2020.1799022.

[19]A. Nurazizah, K. Aedi, and W. Wahyudin, "Integration of Mobile Assisted Language Learning in Arabic Language Education: A Systematic Literature Review," *Journal of Language and Literature Studies* 6, no. 1 (2026).

[20]Klaus Krippendorff, *Content Analysis: An Introduction to Its Methodology*, 4th ed. (Thousand Oaks, CA: SAGE, 2018), 84–98.

Selection was purposive and criterion-based. An initial pool of forty-two Arabic learning applications was compiled from the Google Play Store through keyword searches in English and Indonesian. Three inclusion criteria were then applied: the application's primary stated function is Arabic language learning; it is freely accessible and installable on the Android operating system through the Google Play Store; and it includes Islamic content or explicitly claims relevance to Islamic education. Applications that were purely dictionary utilities, that required institutional licences, or that had not been updated within the preceding three years were excluded. Filtering against these criteria yielded a final analytical corpus of six applications-*Learn Arabic, Bahasa Arab Sehari-hari, Learn Arabic for Islamic Studies, Belajar Bahasa Arab Anak, Quranic Arabic*, and *AlifBee*. These six were retained not because they are exhaustive but because they collectively span the principal design philosophies present in the wider pool-generic communicative apps, children's apps, Quran-centred apps, and structured proficiency platforms-thereby maximising analytical variation across the sample.

Each application was examined through three complementary instruments: an interface-and-content inventory, a pedagogical-structure review, and an assessment of alignment with Islamic educational principles. Observations were recorded against a five-dimension rubric. Content relevance was coded for the proportion of Islamic versus generic content, the presence of Quranic or classical register, and the accuracy of religious terminology. Instructional design was coded for the presence of a sequenced curriculum, scaffolding, formative feedback, adaptivity, and the principled integration of multimedia. Integration with the Islamic sciences was coded for explicit treatment of *tafsīr*, *ḥadīth*, *fiqh* terminology, and grammatical depth (*naḥw* and *ṣarf*). User engagement and accessibility were coded for gamification, offline availability, and interface-language support, with particular attention to Indonesian and Malay. Epistemological alignment was coded for whether the application frames Arabic as a vehicle of Islamic knowledge, including the presence of interpretive scaffolding and references to *adab* (the ethics of seeking knowledge).

To support comparison, each application was assigned a qualitative rating on every dimension-High, Moderate, or Limited-reflecting the depth and consistency of the evidence observed rather than a numerical score. Coding proceeded in two cycles: two members of the team independently navigated each application, completing every available introductory module and sampling intermediate and advanced content where present; the team then reconciled memos and assigned consensus ratings. Trustworthiness was pursued through an explicit, pre-specified coding framework, investigator triangulation, an audit trail of screenshots and memos, and thick, example-rich description. The study's principal limitation-that content analysis evaluates artefacts rather than measured learning outcomes-is acknowledged here and revisited in the conclusion. The ratings are summarised in Table 1 and elaborated, with examples, in the analysis that follows.

Table 1. *Summary of cross-application ratings across the five analytical dimensions*

Application	Content Relevance	Instructional Design	Islamic Integration	Engagement & Access	Epistemic Alignment
Learn Arabic	Limited	Moderate	Limited	Moderate	Limited
Bahasa Arab Sehari-hari	Limited	Limited	Limited	Moderate	Limited
Learn Arabic for Islamic Studies	High	Moderate	Moderate	Moderate	Moderate
Belajar Bahasa Arab Anak	Moderate	Moderate	Limited	High	Limited
Quranic Arabic	High	Moderate	Moderate	Moderate	Moderate
AlifBee	Moderate	High	Limited	High	Limited

Note: Ratings are qualitative judgements (High / Moderate / Limited) reflecting the depth and consistency of observed evidence, not numerical scores.

G. The Five Dimensions of Relevance

The analysis is presented across the five dimensions of the framework. For each dimension, the discussion moves from a description of what was observed across the corpus to an interpretation of its significance for the relevance of the materials to the Islamic sciences.

1. *Content Relevance*

Across the corpus, the dominant content model is a graded sequence of basic vocabulary, pronunciation, and everyday conversational phrases. *Learn Arabic* and *Bahasa Arab Sehari-hari* exemplify this model: their lessons are competently organised around functional situations-greetings, numbers, shopping, travel-and serve beginners well. This is genuinely valuable for foundational competence, and it should not be dismissed. The difficulty is one of register and purpose. The Arabic of daily conversation differs substantially from the Arabic of the Qur'an and the classical disciplines, and an exclusive diet of the former leaves learners unprepared for the latter. Only *Quranic Arabic* and *Learn Arabic for Islamic Studies* consistently embed Quranic verses, hadith excerpts, and *fiqh* terminology, transforming language drills into encounters with the sources themselves and thereby earning a High rating on this dimension.

The interpretive significance is that, for the majority of the corpus, content relevance to the Islamic sciences is incidental rather than designed. Where Islamic content appears in the generic apps, it tends to be ornamental-an occasional religious phrase inserted into an otherwise secular syllabus. This pattern echoes the broader MALL literature's observation that applications optimise for vocabulary breadth and motivational appeal rather than disciplinary depth.[21] It also tracks a wider finding about Quran-centred software specifically: a structured review of Quran mobile applications concludes that, although such apps are now numerous and technically capable, they

[21]Shortt et al., "Gamification in Mobile-Assisted Language Learning," 540–544.

concentrate on delivery-display, recitation, and search-while rarely scaffolding the interpretive engagement that distinguishes reading the text from understanding it.[22] The implication is clear: closing the relevance gap on this dimension requires content that is thematically Islamic by design, sequencing the lexicon and exemplars of the Qur'an, hadith, and classical texts rather than appending them to a tourist phrasebook.

A further nuance concerns developmental appropriateness. *Belajar Bahasa Arab Anak*, aimed at children, sensibly foregrounds concrete, high-frequency Islamic vocabulary-the names of prophets, simple invocations, and everyday religious terms-delivered through colourful, playful interaction. Judged against the needs of its audience, this is a defensible and even commendable design, and it earns a Moderate rating for content relevance. The point is not that every application must teach *tafsīr*; it is that the corpus as a whole offers no clear pathway by which a learner who begins with such foundational content can later progress toward the classical register. The relevance gap is partly a problem of articulation between levels: foundational and advanced materials exist in isolation, with no connective curriculum carrying a learner from the vocabulary of childhood piety to the syntax of scholarly interpretation.

2. *Instructional Design*

On instructional design, the corpus is at its strongest. Every application makes principled use of multimedia-audio modelling of pronunciation, written script, and supporting imagery-consistent with the multimedia learning principles that align verbal and visual channels to manage cognitive load.[23] *AlifBee* stands out, earning a High rating for its structured proficiency pathway, regular assessments, and progress tracking, and *Learn Arabic for Islamic Studies* also offers coherent progression. These features matter because they let learners monitor advancement, receive feedback, and sustain motivation over time.

The weakness is the thinness of formative feedback and adaptivity across most of the corpus. Several applications present lessons in relative isolation, without a cumulative trajectory that builds new competencies on consolidated ones-precisely the scaffolded progression that both Vygotskian theory and the classical Islamic curriculum demand. Where feedback exists, it is typically limited to right/wrong signalling on multiple-choice or flashcard items, which can reinforce rote recall but does little to develop the interpretive reasoning-*tafsīr* or analogical reasoning (*qiyās*)-that engagement with the Islamic sciences requires. This matters all the more because learners themselves identify the quality of feedback as one of the decisive determinants of successful Arabic learning.[24] Adaptive pathways that diagnose individual difficulty and adjust accordingly are largely

[22]N. H. Mat Isa et al., "Quran Mobile Application: A Structured Review," *Journal of Advanced Research in Applied Sciences and Engineering Technology* 34, no. 2 (2024): 117–132, https://doi.org/10.37934/araset.34.2.117132.
[23]Mayer, "Cognitive Theory of Multimedia Learning," article 8.
[24]Almelhes, "Enhancing Arabic Language Acquisition," 1116.

absent. Instructional design for Islamic purposes should therefore move beyond polished delivery toward tiered exercises, diagnostic assessment, and personalised recommendation, so that the sophistication of the interface is matched by sophistication of the learning trajectory.

3. *Integration with the Islamic Sciences*

This dimension exposes the relevance gap most starkly. Even apps that gesture toward Islamic content rarely provide the grammatical and syntactic depth needed to read classical texts. *Belajar Bahasa Arab Anak*, for instance, introduces Islamic-themed vocabulary in an age-appropriate and engaging way, but it does not-and arguably should not, at that level-develop *naḥw* and *ṣarf*. *Quranic Arabic* goes furthest, offering Quran-based lessons that provide authentic textual exposure and some morphological breakdown of verses. Yet even here the treatment stops short of the interpretive disciplines-*tafsīr*, *uṣūl al-fiqh*, and *balāghah*-that distinguish reading the Qur'an as text from understanding it as scripture.

The deeper concern is one of scholarly oversight. The literature warns that without the involvement of *'ulamā'* and curriculum developers trained in both Arabic and the Islamic sciences, applications risk misrepresenting linguistic and theological concepts and inadvertently propagating flattened or secularised interpretations.[25] By contrast, purpose-built Islamic learning media-designed from the outset around curricular and religious goals and validated by subject-matter experts-demonstrate that integration is achievable when it is intended rather than incidental.[26] The mass-market applications in this corpus are not the product of such design processes, and it shows. Bridging this dimension is the most demanding task facing developers, because it cannot be solved by better interfaces alone; it requires the substantive participation of scholars in content design.

4. *User Engagement and Accessibility*

On engagement and accessibility, the corpus performs reasonably well, with important caveats. Most applications are designed for independent use and offer offline access, a significant advantage in regions of Indonesia where connectivity is intermittent. *AlifBee* and *Belajar Bahasa Arab Anak* earn High ratings for engagement, the former through systematic gamification-challenge, reward, and achievement structures that sustain motivation-and the latter through child-centred interactivity. The MALL literature confirms that such mechanics reliably increase short-term motivation and retention,[27] and studies of gamified Arabic instruction for non-native learners report the same effect on participation and commitment.[28]

[25]Bunt, *Hashtag Islam*, 1–20.
[26]Koderi et al., "Developing Mobile Learning Media," 109–111; Zakaria and Nawi, "PBL Mobile Application in Islamic Education," 27–29.
[27]Ishaq et al., "Mobile-Assisted and Gamification-Based Language Learning," e496.
[28]Almelhes, "Gamification for Teaching the Arabic Language," 1371955.

Two limitations qualify this strength. First, many Islamic-oriented apps lack robust engagement features altogether, which may depress retention precisely among the learners the apps are meant to serve. Second, and more consequentially for the Southeast Asian context, several applications offer interface support only in English or Arabic, with little Indonesian or Malay localisation. Given variable English proficiency among *pesantren* and *madrasah* learners, this is a real barrier to comprehension and uptake. There is also a design tension to be managed: gamification, applied thoughtlessly, can trivialise the sacredness of the material, reducing engagement with the Qur'an to the accumulation of points and streaks. The literature's caution that the field over-emphasises tool design and engagement mechanics at the expense of learning substance is pertinent here.[29] The design imperative is to localise interfaces for the target population and to calibrate gamification so that it serves, rather than displaces, the dignity of the content.

5. *Epistemological Alignment*

Epistemological alignment is the dimension on which the entire corpus is weakest, and it is the dimension that most directly defines the relevance gap. Only *Learn Arabic for Islamic Studies* makes a deliberate, if superficial, effort to position Arabic as a vehicle of Islamic knowledge transmission rather than as a neutral skill. The remaining applications, including the otherwise strong *AlifBee*, treat Arabic in the same epistemological register as any other foreign language: a system of forms to be mastered for communicative ends. Absent from nearly all is any interpretive framework-any reference to *tafsīr*, *uṣūl al-fiqh*, or *balāghah*-that would equip a learner to move from decoding words to interpreting meaning.

The significance of this finding is conceptual as much as practical. In the Islamic intellectual tradition, the intention (*niyyah*) and the higher objectives (*maqāṣid*) of seeking knowledge are constitutive of the learning itself, and the ethics of study (*adab*) shape how knowledge is received. An application that frames Arabic learning within this horizon-beginning with intention, embedding *du'ā'* and relevant verses on the pursuit of knowledge, and modelling the disposition of the seeker-reorients the learner spiritually and pedagogically. Few applications currently embed such values, and their absence is not a minor omission but a sign that the materials have been conceived outside the epistemological frame of the Islamic sciences. This is the heart of the relevance gap: the materials are linguistically competent and technologically current, yet epistemologically external to the tradition they purport to serve.

H. The Anatomy of the Relevance Gap

[29]Shortt et al., "Gamification in Mobile-Assisted Language Learning," 519, 545.

Read across the five dimensions, a coherent pattern emerges. The applications cluster at the high end on instructional design, engagement, and-for a subset-content relevance, but at the low end on Islamic integration and epistemological alignment. In other words, their strengths are exactly those that a generic, well-engineered language application would possess, and their weaknesses are exactly those that distinguish Arabic-for-Islamic-sciences from Arabic-as-foreign-language. The relevance gap is therefore not a random scattering of shortcomings but a systematic tilt: the market rewards usability, accessibility, and engagement, which are legible to general consumers, and under-rewards epistemological depth, which is legible only to the Islamic educational community. This is consistent with the wider literature's finding that MALL research and development privilege tool-building and engagement over learning substance and disciplinary alignment.[30]

Crucially, the gap is not inevitable. The contrast between mass-market apps and expert-validated, curriculum-integrated Islamic learning media demonstrates that the very same technological affordances-multimedia, interactivity, gamification, offline delivery-can be marshalled in the service of epistemologically serious content when developers, educators, and scholars collaborate from the design stage onward. The relevance gap is thus a gap of intention and process, not of technical possibility. It persists because the applications most learners actually download were not built within an Islamic educational framework, and it can be narrowed only by changing who designs the materials and on what terms.

I. Closing the Gap: Implications for Design and Islamic Education

The diagnosis of a systematic relevance gap carries direct design implications, which can be organised as a set of priorities for closing it. First, content must be conceived from an Islamic epistemological starting point rather than retrofitted: the syllabus should be sequenced around the lexicon, structures, and exemplars of the Qur'an, hadith, and classical texts, so that linguistic progression and religious literacy advance together. Second, grammatical depth in *naḥw* and *ṣarf* must be treated not as an obstacle to be minimised but as the very competence that distinguishes reading scripture from decoding phrases; multimedia should be deployed to make that structure visible and tractable rather than to bypass it. Third, scaffolding and adaptive feedback should carry learners along a coherent trajectory toward interpretive tasks, mirroring both Vygotskian principles and the graduated progression of the classical Islamic curriculum.

Fourth, gamification and engagement features-demonstrably effective at sustaining motivation-should be calibrated to honour rather than trivialise the dignity of the material, and interfaces should be localised for Indonesian and Malay users to remove a needless barrier to comprehension. Fifth, and most fundamentally, the production process itself must change: the substantive involvement of *'ulamā'*

[30]Nurazizah, Aedi, and Wahyudin, "Integration of Mobile Assisted Language Learning"; Shortt et al., "Gamification in Mobile-Assisted Language Learning," 540.

and curriculum specialists trained in both Arabic and the Islamic sciences is the precondition for everything else, because epistemological alignment cannot be engineered by interface designers working alone. The evidence that purpose-built, expert-validated Islamic learning media achieve precisely this integration confirms that these priorities are realistic rather than utopian,[31] as does the broader finding that technology adds value to the Arabic curriculum chiefly when it is curriculum-aligned and contextually grounded rather than generic.[32] What is required is a reorientation of who designs Arabic learning materials, and toward what end.

It is worth stating plainly what this pattern means for the everyday learner. A student in a *madrasah* who downloads the most polished application available will likely enjoy the experience, make rapid early progress in vocabulary and pronunciation, and feel a satisfying sense of momentum from streaks and scores. That same student, however, will encounter little that prepares them to open a page of Quranic commentary, to recognise why a particular morphological form carries legal weight, or to appreciate Arabic as the disciplined medium through which the tradition reasons about revelation. The applications succeed, in other words, at the threshold of the discipline and fall silent thereafter. For Islamic education, whose object lies precisely beyond that threshold, the consequence is that digital tools currently function as an attractive antechamber rather than as a doorway into the Islamic sciences. Recognising this is not a counsel of despair but a specification: it identifies, with some precision, where design effort must now be concentrated.

J. Conclusion

This study set out to clarify a question that prior treatments had left muddled: not whether Arabic learning applications work as language tools, but whether the materials they deliver are relevant to the development of the Islamic sciences in the twenty-first century. By reading six representative Android applications against a five-dimension framework, the study found that these materials are, with few exceptions, technologically mature and pedagogically engaging yet epistemologically shallow. They excel at instructional delivery and motivation while falling short on integration with the Islamic sciences and on epistemological alignment-the dimensions that most distinguish Arabic-for-Islamic-sciences from generic language learning. The article has named this systematic shortfall the relevance gap and argued that it is a gap of design intention rather than technical capacity.

The implications are practical and concrete. For developers, the priority is co-design with *'ulamā'* and Arabic-and-Islamic-sciences curriculum specialists, so that Quranic and classical register, grammatical depth, and interpretive scaffolding are built in from the outset, and so that the materials are localised for Indonesian and Malay users. For educators in *pesantren*, *madrasah*, and Islamic

[31]Erlina et al., "Arabic Learning Media Based on Smart Apps Creator," 224–228; Zakaria and Nawi, "PBL Mobile Application in Islamic Education," 27–29.
[32]Sapawi and Nik Yusoff, "Integrating Technology into the Arabic Language Curriculum," 101974.

universities, the findings counsel selective and critical adoption: applications can valuably supplement foundational vocabulary and engagement, but they cannot yet substitute for instruction that develops interpretive competence. For policymakers and journal-supported scholarship, the relevance gap offers a clear evaluative criterion against which future Islamic educational technology can be assessed.

The study's limitations frame its contribution. As a content analysis, it evaluated artefacts rather than measured learning outcomes, and its corpus, while varied, was small and confined to freely available Android applications at a single point in time. Future research should therefore pursue user-based, longitudinal designs that test whether epistemologically aligned materials actually improve learners' capacity to engage classical Islamic texts, and should extend the analysis to other platforms and to applications produced specifically within Islamic institutions. Bridging the relevance gap-so that e-learning becomes not merely a convenient delivery channel but a faithful extension of the Islamic learning tradition-will require exactly this kind of sustained, interdisciplinary inquiry.

K. References

AlQarni, Ahmed, et al. "Mobile Assisted Language Learning in Learning Arabic as a Second Language in Saudi Arabia." *Saudi Journal of Humanities and Social Sciences* 5, no. 2 (2020): 108–115. https://doi.org/10.36348/sjhss.2020.v05i02.009.

Almelhes, Sultan A. "Enhancing Arabic Language Acquisition: Effective Strategies for Addressing Non-Native Learners' Challenges." *Education Sciences* 14, no. 10 (2024): 1116. https://doi.org/10.3390/educsci14101116.

Almelhes, Sultan A. "Gamification for Teaching the Arabic Language to Non-Native Speakers: A Systematic Literature Review." *Frontiers in Education* 9 (2024): 1371955. https://doi.org/10.3389/feduc.2024.1371955.

Asad, Muhammad Mujtaba, Kanwal Aftab, Fahad Sherwani, Prathamesh Churi, Antonio-José Moreno-Guerrero, and Biuck Pourshahian. "Techno-Pedagogical Skills for 21st Century Digital Classrooms: An Extensive Literature Review." *Education Research International* 2021 (2021): article 8160084. https://doi.org/10.1155/2021/8160084.

Botero, Gustavo García, Frédéric Questier, Silvia Cincinnato, Tao He, and Chang Zhu. "Acceptance and Usage of Mobile-Assisted Language Learning by Higher Education Students." *Journal of Computing in Higher Education* 30, no. 3 (2018): 426–451. https://doi.org/10.1007/s12528-018-9177-1.

Bradley, Linda, Linn Bartram, Khaled W. Al-Sabbagh, and Anne Algers. "Designing Mobile Language Learning with Arabic-Speaking Migrants." *Interactive Learning Environments* 31, no. 4 (2023): 2008–2019. https://doi.org/10.1080/10494820.2020.1799022.

Bunt, Gary R. *Hashtag Islam: How Cyber-Islamic Environments Are Transforming Religious Authority*. Chapel Hill: University of North Carolina Press, 2018.

Erlina, Irwandani, Koderi, M. Aridan, and Umi Hijriyah. "Arabic Learning Media Based on Smart Apps Creator for Students of Islamic Junior High School." *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban* 9, no. 2 (2022): 217–230. https://doi.org/10.15408/a.v9i2.27586.

Ishaq, Kashif, Nor Azan Mat Zin, Fadhilah Rosdi, Muhammad Jehanghir, Samia Ishaq, and Adnan Abid. "Mobile-Assisted and Gamification-Based Language Learning: A Systematic Literature Review." *PeerJ Computer Science* 7 (2021): e496. https://doi.org/10.7717/peerj-cs.496.

Koderi, Achmad Maulana, Umi Hijriyah, and Dwi Prasetyo Rukimin. "Developing Mobile Learning Media for Arabic Language Instruction at Islamic Senior High School in Lampung, Indonesia." *International Journal of Recent Technology and Engineering* 8, no. 2S9 (2019): 107–112. https://doi.org/10.35940/ijrte.B1024.0982S919.

Krippendorff, Klaus. *Content Analysis: An Introduction to Its Methodology*. 4th ed. Thousand Oaks, CA: SAGE, 2018.

Mat Isa, N. H., N. H. Abd Aziz, M. Ishak, W. A. Mustafa, and M. N. Abd Rahman. "Quran Mobile Application: A Structured Review." *Journal of Advanced Research in Applied Sciences and Engineering Technology* 34, no. 2 (2024): 117–132. https://doi.org/10.37934/araset.34.2.117132.

Mayer, Richard E. "The Past, Present, and Future of the Cognitive Theory of Multimedia Learning." *Educational Psychology Review* 36, no. 1 (2024): article 8. https://doi.org/10.1007/s10648-023-09842-1.

Nurazizah, A., K. Aedi, and W. Wahyudin. "Integration of Mobile Assisted Language Learning in Arabic Language Education: A Systematic Literature Review." *Journal of Language and Literature Studies* 6, no. 1 (2026).

Okumuş Dağdeler, Kübra. "A Systematic Review of Mobile-Assisted Vocabulary Learning Research." *Smart Learning Environments* 10 (2023): article 19. https://doi.org/10.1186/s40561-023-00235-z.

Sapawi, Muhammad Syazwan Mohd, and Nik Mohd Rahimi Nik Yusoff. "Integrating Technology into the Arabic Language Curriculum: A Systematic Review of Trends, Strategies and Cultural Dimensions." *Social Sciences & Humanities Open* 12 (2025): 101974. https://doi.org/10.1016/j.ssaho.2025.101974.

Shortt, Mitchell, Shantanu Tilak, Irina Kuznetcova, Bethany Martens, and Babatunde Akinkuolie. "Gamification in Mobile-Assisted Language Learning: A Systematic Review of Duolingo Literature from Public Release of 2012 to Early 2020." *Computer Assisted Language Learning* 36, no. 3 (2023): 517–554. https://doi.org/10.1080/09588221.2021.1933540.

van Laar, Ester, Alexander J. A. M. van Deursen, Jan A. G. M. van Dijk, and Jos de Haan. "The Relation between 21st-Century Skills and Digital Skills: A Systematic Literature Review." *Computers in Human Behavior* 72 (2017): 577–588. https://doi.org/10.1016/j.chb.2017.03.010.

Zakaria, Gamal Abdul Nasir, and Aliff Nawi. "Design and Development of a PBL Mobile Application in Islamic Education: A Conceptual Framework." *International Journal of Information and Education Technology* 10, no. 1 (2020): 26–30. https://doi.org/10.18178/ijiet.2020.10.1.1334.