

Quality Management in Arabic Language Learning: Integrating Technology and Islamic Values in the Society 5.0 Era

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Article Info	Abstract
<p>Article history: Received: Feb 15, 2026 Revised: March 12, 2026 Accepted: March 26, 2026</p> <hr/> <p>Keywords: Arabic Language Learning Islamic Values; Quality Management; Society 5.0; Technology Integration.</p>	<p>The transition toward Society 5.0 has obliged Islamic educational institutions in Indonesia to reconsider how Arabic is planned, delivered, and evaluated. Although digital tools grow abundant every year, discussions about quality tend to stop at whether the technology functions, not whether it truly upholds the spiritual and pedagogical mission of Arabic as the language of the Qur'an. This article addresses that concern through a Systematic Literature Review (SLR) following the PRISMA 2020 protocol. Forty-two peer-reviewed articles published between 2020 and 2025 were selected from Scopus, DOAJ, and SINTA 1–2 indexed journals. Thematic synthesis yielded three interrelated findings: first, effective quality management rests on leadership that is digitally literate yet anchored in adab; second, technology integration succeeds when teachers are treated as co-designers rather than end-users; third, Islamic values work only when embedded in the structural decisions of the institution, not when treated as decorative additions. A conceptual framework that bridges total quality management, human-centered technology integration, and the integration of Islamic values into the curriculum is presented. The review contributes to the discourse on digital transformation in Islamic education and outlines priorities for empirical research in madrasah and pesantren settings.</p>

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A. Introduction

For Muslims in Indonesia, Arabic has never been just one foreign language among many. It carries the weight of the Qur'an, the classical legal and theological canon, and centuries of pesantren tradition. However, one need only sit briefly in a modern Indonesian madrasah classroom to see that the question is no longer whether Arabic still matters; it clearly does, but whether it is taught in ways that speak to the world our students already inhabit. Short videos, AI assistants, augmented reality apps, and LMS dashboards now compete for their attention. According to the Ministry of Religious Affairs, by 2024, more than 70% of Islamic educational institutions had adopted some form of digital learning platform, although the depth of integration varied sharply across regions (Kemenag RI, 2024). Adoption, it seems, is no longer the question. Quality is.

The concept of Society 5.0, first articulated by the Japanese government in 2016 and gradually adopted in Indonesian educational policy, imagines a society in which physical and cyber spaces are deeply interwoven to solve human problems (Deguchi et al., 2020; Nastiti & Abdu, 2020). When this vision meets the classroom, it translates into personalised learning paths, data-informed decision-making, and the seamless integration of AI tools into instructional design. For Arabic, the possibilities are striking: real-time pronunciation feedback, adaptive vocabulary drills, virtual tutors conversant in both classical and modern Arabic, and AI-generated reading passages calibrated to each learner's level (Almelhes, 2024). However, possibility is not outcome.

The tension that motivates this study lies precisely there. On one side sits the enthusiasm for digital transformation, usually framed in the language of efficiency, engagement, and twenty-first-century skills. On the other side sits a quieter but persistent concern, voiced repeatedly by pesantren leaders, Arabic teachers, and parents, that technology, when adopted without a clear value framework, tends to hollow out the spiritual core of Arabic. Memorising mufradat through a gamified app is not the same as reciting them with adab in front of a teacher. Chatting with an AI tutor is not the same as the *sima'i* relationship in which a teacher sharpens a student's pronunciation through patient listening. The medium shapes the message.

Islami (2025) observed this directly in his study on Pondok Pesantren Darunnajah Jakarta, noting that Arabic learning in pesantren is not simply the delivery of content but the formation of character. Students learn Arabic alongside values, manners, and a way of relating to sacred texts. A subsequent study on the muhadatsah method at the same institution showed that even modern communicative approaches, when stripped of their pesantren context, tend to underperform in cultivating the *dzauq*, or linguistic sensibility, that pesantren traditionally aims for (Islami, Rostiana, et al., 2025). This echoes the finding by Nasution et al. (2024) In Nazhruna, the most successful technology-assisted Arabic programmes in Indonesian pesantren are those that supplement, rather than replace, the human relationships at the heart of Islamic pedagogy.

Quality management in the tradition of Total Quality Management, adapted to educational settings by Sallis (2014) offers a vocabulary for holding this tension productively. It insists that quality is not an afterthought but a planned, monitored, and continuously improved attribute of every institutional process. Applied to Arabic learning in the Society 5.0 era, it forces the question: what processes are we actually managing, and by what standard do we measure their quality? If standards derive purely from instrumental criteria, such as test scores and platform engagement metrics, we risk producing students who can pass exams but lose the heart of the language. If standards derive purely from classical ideals, we risk leaving graduates unprepared for a world in which Arabic is increasingly mediated through screens. Haddade et al. (2024) Writing in the *International Journal of Educational Management*, confirmed this empirically: Indonesian madrasah reform programmes that succeeded in raising quality were those that combined international benchmarking with sensitivity to local Islamic character, not those that imported either framework in isolation.

The existing literature on this intersection, though expanding, remains fragmented. Studies on educational technology in Arabic rarely engage deeply with Islamic values (Almelhes, 2024; Mudinillah et al., 2024). Studies on Islamic education management seldom engage seriously with Arabic pedagogy or specific digital platforms (Arif et al., 2024). Meanwhile, the emerging literature on Society 5.0 in education remains dominated by general frameworks rather than subject-specific applications. Bibliometric surveys such as Zikriah & Mauludiyah (2024) Analysis of Scopus publications indicates a clear rise in technology-related Arabic research, but also a lack of studies that tie curriculum policy, local madrasah practice, and digital transformation into a single integrated conversation. Ghufroon et al. (2025) draw a similar conclusion from their systematic study of Arabic learning and social-religious identity formation in madrasahs, calling for more integrated frameworks that bridge policy and practice. What is missing, therefore, is a systematic synthesis that brings these strands together under the specific question of quality management.

This article responds to that gap through a Systematic Literature Review. Three research questions organise the review: (1) How do recent studies conceptualise quality management in Arabic language learning in the Society 5.0 era? (2) In what forms does technology integration appear in these studies, and what challenges recur? (3) How are Islamic values addressed or left unaddressed in models that claim to integrate technology into Arabic learning? The aim is not merely to catalogue what has been published, but to identify the shape of a quality management framework that takes Society 5.0 seriously without surrendering the Islamic character of Arabic learning. The scope is intentionally focused on Indonesian Islamic educational settings (madrasah and pesantren), though findings from comparative contexts are included where they illuminate the core question.

B. Methods

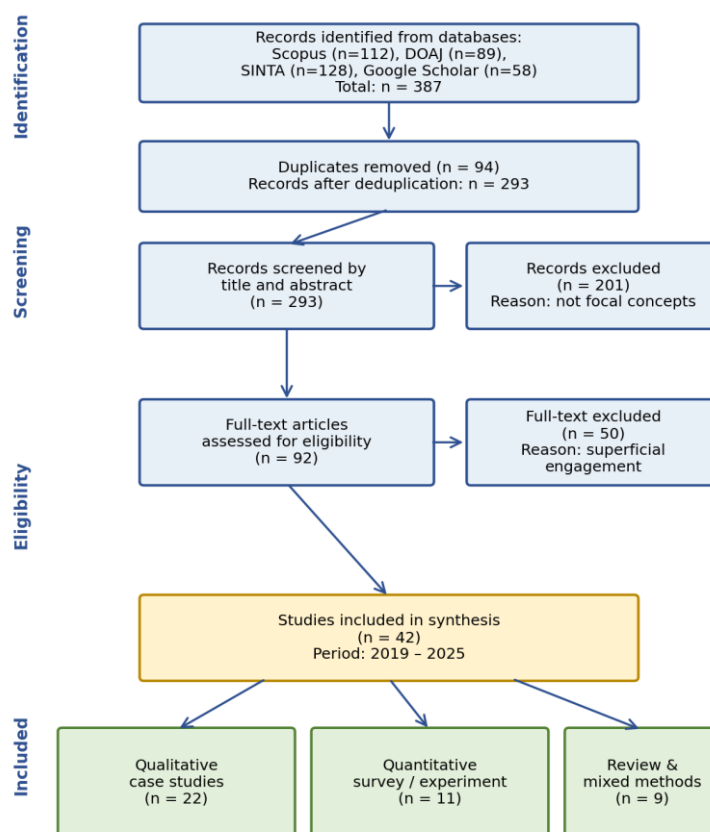
This study adopts a Systematic Literature Review (SLR) design following the PRISMA 2020 guidelines (Page et al., 2021). The SLR approach was chosen because it offers a replicable procedure for mapping a body of knowledge, identifying patterns across studies, and constructing a conceptual synthesis, tasks well-suited to the fragmented state of the literature described above (Snyder, 2019). Four databases were searched: Scopus, DOAJ (Directory of Open Access Journals), SINTA (for Indonesian nationally accredited journals at levels 1–2), and Google Scholar as a supplementary source to capture recent but not yet indexed works. The search was conducted between January and March 2025. The following Boolean query was used, with minor syntactic adjustments per database: ("*Arabic language learning*" OR "*ta'lim al-lughah al-'Arabiyyah*") AND ("*quality management*" OR "*total quality*" OR "*educational management*") AND ("*technology*" OR "*digital*" OR "*Society 5.0*" OR "*artificial intelligence*") AND ("*Islamic values*" OR "*Islamic education*"). The date range was restricted to January 2020 through February 2025 to capture the period of accelerated digital transformation following the COVID-19 pandemic, which coincided with the emergence of Society 5.0 as an analytical framework in Indonesian education discourse.

Inclusion criteria were established as follows: (a) peer-reviewed articles published between 2020 and 2025; (b) articles written in English, Indonesian, or Arabic; (c) articles addressing Arabic language learning at secondary (Madrasah Aliyah or equivalent), tertiary, or pesantren levels; (d) articles that explicitly engaged with at least two of the three focal concepts (quality management, technology, Islamic values); and (e) for SINTA sources, accreditation at level 1 or 2 at the time of publication. Exclusion criteria included: (a) conference abstracts without full text; (b) commentaries and editorials; (c) studies addressing Arabic only in non-educational contexts (business, diplomacy); and (d) studies with superficial engagement with one of the focal concepts, for instance, values mentioned only in passing in the conclusion.

The initial search returned 387 records distributed across the four databases (see Table 1). After removing duplicates ($n = 94$), 293 records proceeded to title and abstract screening. Of these, 201 were excluded for failing the focal-concept criterion, most commonly studies on Arabic learning technology that did not engage with management or Islamic values. The remaining 92 full-text articles were assessed for eligibility, and 50 were excluded at this stage for superficial engagement. The final corpus consisted of 42 articles. The full flow is depicted in Figure 1.

Table 1. Distribution of Records Across Databases

Database	Initial records	After screening	Final corpus
Scopus	112	34	15
DOAJ	89	22	9
SINTA 1–2	128	28	14
Google Scholar*	58	8	4
Total	387	92	42

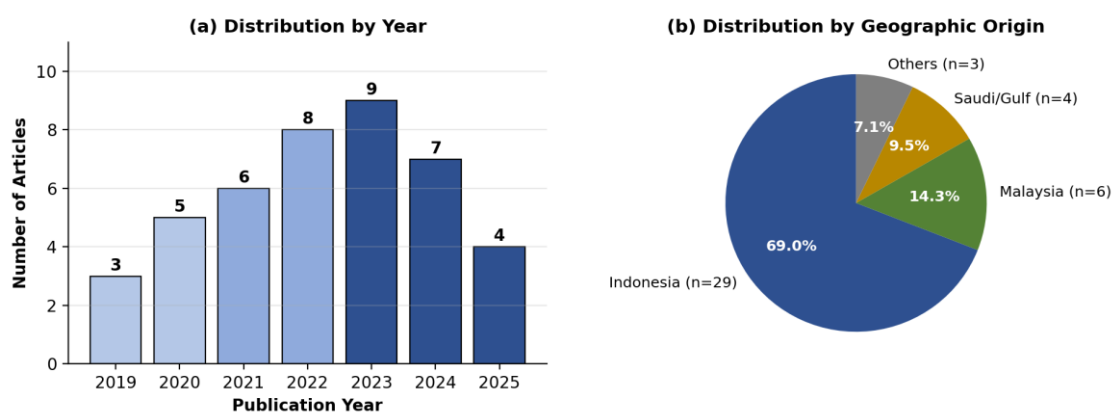
Figure 1. PRISMA 2020 Flow Diagram of Study Selection

Source: Authors' construction based on PRISMA 2020

Data extraction followed a coding sheet containing the following fields: authors, year, country, research design, level of education, focal concepts addressed, conceptual framework, main findings, and stated limitations. Coding was conducted independently by both authors, and discrepancies were resolved through discussion. For synthesis, a reflexive thematic analysis was used following Braun & Clarke (2019), producing three overarching themes that structure the Results and Discussion below. Inter-coder consistency was monitored during a pilot extraction of the first 10 articles and was acceptable (Cohen's kappa = 0.81). Several methodological limitations should be stated plainly. First, the exclusion of non-digital sources may have missed relevant discussions preserved in classical pesantren print literature. Second, the language limitation to English, Indonesian, and Arabic excludes relevant works in Malay and Urdu. Third, as with any literature review, the synthesis captures what has been published, not necessarily what is happening in every classroom. These limitations shape the boundaries of generalisation and are returned to in the Conclusion.

C. Result and Discussion

The 42 articles in the final corpus show a clear temporal curve peaking in 2022–2023 (see Figure 2a), reflecting the acceleration of digital-education research following the COVID-19 pandemic, alongside the gradual uptake of Society 5.0 as an analytical framework. Geographically, Indonesian authors dominate the corpus at 69% (Figure 2b), reflecting a focus on pesantren and madrasah settings but also signaling a limitation: the global conversation on this topic remains regionally concentrated. Among Indonesian authors, roughly three-quarters are affiliated with UIN, IAIN, or STAIN institutions, with a smaller but growing presence from private Islamic universities such as Darunnajah, Darussalam Gontor, and UII.

Figure 2. Distribution of the Final Corpus (n = 42)

Source: Authors' analysis of the final corpus (n = 42)

In terms of research design, 22 articles used qualitative case studies, 11 used quantitative survey or quasi-experimental designs, 7 were literature reviews of varying rigour, and 2 used mixed methods. The methodological weight of case studies suggests that the field is still in a descriptive phase, mapping what is happening rather than an explanatory or predictive phase. Three themes organise the discussion below. Each corresponds to one of the research questions but also cuts across the others, reflecting the problem's integrated character.

Quality Management: From Compliance to Adab-Based Leadership

The first cluster of findings concerns the conceptualisation of quality management in the reviewed literature. Early articles in the corpus (2020–2021) tended to frame quality in terms of compliance: meeting ministry standards, accreditation criteria, or international benchmarks such as the CEFR adapted for Arabic. The conceptual vocabulary was largely borrowed from the general TQM literature and applied to Arabic learning with little contextual adjustment. Quality, in these treatments, becomes a property of measurable outputs, such as test scores, platform completion rates, and certificate achievement. A shift becomes visible from 2022 onwards. Haddade et al. (2024) Drawing on three-level madrasah fieldwork in South Sulawesi, the study shows that the Madrasah Reform programme produced durable quality gains where strategic leadership combined digital literacy with a commitment to Islamic character formation, not where institutions adopted new technological tools. Similar patterns appear in the comparative study by Atabik et al. (2024) Across boarding-school-based Madrasah Aliyah in Kebumen, successful Arabic programmes were those whose leaders articulated clear links between language learning and religious character, embedded in the daily rhythm of pesantren life.

This is not a rejection of TQM but a reinterpretation. Sallis (2014) Emphases on customer focus, continuous improvement, and systemic thinking remain useful, but the "customer" in an Arabic learning context is reconceived as a learner whose ultimate goal includes taqarrub ila Allah — drawing closer to God, not merely job readiness. Continuous improvement, therefore, includes the continuous refinement of teacher–student relationships, not only curriculum artefacts. Framed this way, quality management becomes a genuinely Islamic discipline rather than an imported management fad dressed in religious language. (Islami, Rostiana, et al., 2025) writing in Nuansa Akademik reinforces this point with data from Darunnajah: the pesantren's Arabic programme was judged successful not primarily because of its digital infrastructure but because its principal and teachers had internalised a culture in which language learning and character formation were inseparable.

The implication for practice is concrete. In the reviewed articles, madrasahs that reported strong Arabic learning outcomes were not those with the most expensive technology, but those led

by principals who combined digital literacy with a deep commitment to pesantren values (Atabik et al., 2024; Ubaedullah et al., 2025). Leadership, as in most educational reform literature, remains the lever, but the specific texture of that leadership, in this context, is anchored in adab.

Technology Integration: Teachers as Co-Designers, Not End-Users

The second theme concerns how technology actually enters the Arabic classroom. The reviewed literature describes a striking variety of tools: learning management systems such as Moodle and Google Classroom; mobile apps including Duolingo Arabic, Bayna, and Kaleem; AI-powered assistants (ChatGPT, Gemini, specialised Arabic chatbots); augmented and virtual reality applications for immersive vocabulary acquisition; and gamification layers for grammar drills (Almelhes, 2024; Koderi et al., 2023; Mudinillah et al., 2024). The sheer diversity is itself a finding: there is no single dominant technology in Arabic learning. Institutions adopt what fits their budget, culture, and technical capacity.

However, diversity of tools does not guarantee depth of integration. A recurring observation across the corpus is that technology often sits on the surface of instruction rather than reshaping it. Teachers receive a few hours of training on how to operate a platform, use it for a semester, and then either abandon it or reduce it to a digital photocopier. Albahuth (2023), writing in *Interactive Learning Environments*, reported an instructive case from a flipped-classroom experiment for Arabic grammar in a Saudi secondary school: the experimental group significantly outperformed the control group, but close reading of the implementation shows that gains depended on substantial, sustained teacher engagement with the redesign of the learning environment, not on the flip itself. This pattern what Cuban (1986) Once called the "optimism–skepticism cycle" in educational technology, it repeats itself in Arabic learning with surprising consistency.

What distinguishes the successful integration cases in the corpus is the teachers' position in the process. Where teachers were treated as passive recipients of institutional mandates (use this platform by the end of the semester), adoption was shallow and short-lived. Where teachers were treated as co-designers invited to shape tool selection, to pilot them, to feed back into refinement, adoption was deeper and more sustainable (Nasution et al., 2024; Ubaedullah et al., 2025). This aligns with broader findings in educational technology literature but carries particular weight for Arabic learning, where teacher authority and the teacher–student relationship are themselves pedagogical resources rather than obstacles to efficiency. Islami et al. (2023) In their study of tajwid instruction through nadhom in pesantren, they make a similar point in a different idiom. They show how the integration of instructional tools succeeds when aligned with the teacher's established authority and the cultural logic of the pesantren, not when it attempts to displace them. The Society 5.0 framing adds a further layer to this discussion. If the vision is genuinely human-centred, then the "human" at the centre of Arabic learning must include the teacher, not only the learner. Quality management frameworks that allocate all adaptive capacity to the technology and treat teachers as interchangeable facilitators misread the situation badly. The reviewed data is consistent on this point: when teachers are empowered to shape the digital environment, the technology amplifies their pedagogy; when they are not, it substitutes poorly for it.

A further concern that runs through articles published in 2023–2024 is the need to anticipate unintended consequences of over-automation. Almelhes's (2024) systematic review on gamification in Arabic reached a notable conclusion: short-term motivational gains are easy to demonstrate, but long-term gains in genuine linguistic competence require structures that go beyond the game's motivational pull. Convenience, if unchecked, can corrode competence. Ubaedullah et al. (2025), writing on AI-based curriculum models for Jakarta secondary schools, report a parallel concern: AI tools dramatically reduce teacher workload on some tasks but risk flattening the distinctively Islamic

content that pesantren and madrasah seek to cultivate, unless the curriculum design actively resists that flattening.

Islamic Values: Structural, Not Decorative

The third theme, and the one most unevenly handled in the corpus, concerns the place of Islamic values. In a substantial portion of the reviewed articles, Islamic values appear as what might be called a decorative layer: the introduction cites a Qur'anic verse about the importance of knowledge, the conclusion mentions akhlaq, but the body of the article, where the actual integration of technology and management is discussed, proceeds as if values were a separable element. The more compelling articles in the corpus take a different approach. Values are treated as structural: they shape how the curriculum is sequenced, how assessment is designed, which technologies are adopted or rejected, and how teacher professional development is framed. Sopian et al. (2025) In their study of multicultural pesantren settings, they show how Arabic instruction functions as a medium through which pesantren negotiate identity, cultural context, and religious commitment rather than as a neutral skill module sitting alongside religious education. Ghufroon et al. (2025) extend this argument through a systematic study of madrasah policy and practice, demonstrating that the formation of religious identity in Arabic classrooms depends heavily on whether local curriculum decisions treat values as integrated with, or separable from, language outcomes.

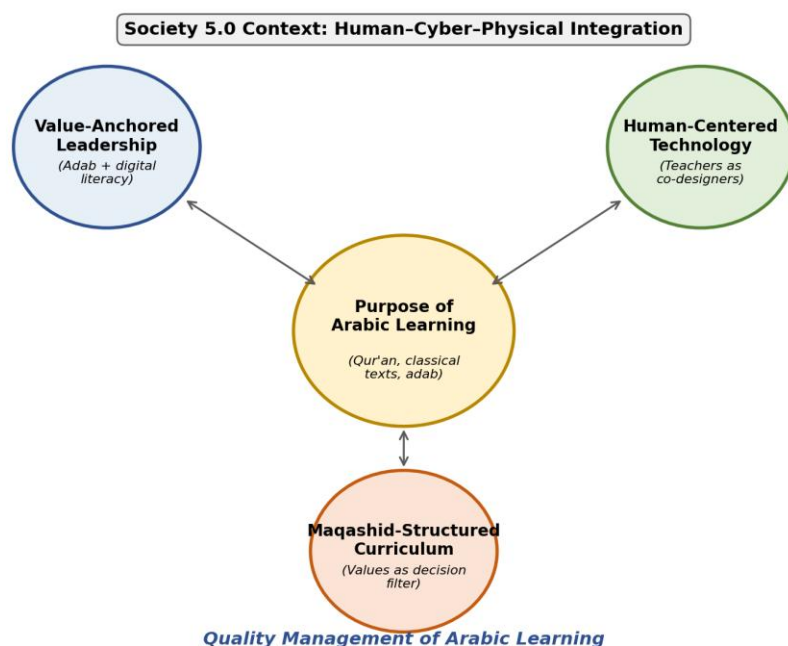
Consider a concrete example. AI-generated vocabulary quizzes, seen through an instrumental lens, are efficient drill tools. Seen through a values-integrated lens, they prompt a different question: do they maintain the connection between each word and its Qur'anic usage, or do they detach words from their moral weight and textual context? The answer depends on how the quizzes are designed, not on the tool itself. That is precisely the point. Technology is not value-neutral, but neither is its value orientation fixed; the quality management framework determines which direction it tilts. Islami, Abdullah, et al. (2025), in their Arabic-language study of language acquisition among new students at Darunnajah, documented this concretely: the learning outcomes for students in classrooms that linked technology-assisted vocabulary work to Qur'anic and classical-text contexts differed systematically from those in classrooms that used technology in a more generic mode, even when lesson duration and teacher quality were comparable.

Nasution et al. (2024) articulate what a values-integrated design looks like in practice at traditional pesantren. Their study identifies several orientating principles observed across successful cases: technology must amplify rather than replace the musyafahah relationship between teacher and student; digital content should draw substantially from Qur'an, hadith, and classical texts rather than only from modern textbook material; and technology choices must respect the infrastructural realities of pesantren with limited digital resources, to avoid creating a two-tier system in which well-resourced institutions can pursue integration while others fall behind. These principles are not revolutionary. They do, however, provide a workable set of decision criteria for quality management in madrasah and pesantren settings.

Toward an Integrative Framework

Synthesising across the three themes, a conceptual framework can be sketched (see Figure 3). Quality management of Arabic learning in the Society 5.0 era is not a matter of combining three independent elements: management, technology, and values in some proportion. It is a matter of organising them around a single centre of gravity, which the reviewed literature consistently identifies as the purpose of Arabic learning itself. If the purpose is to cultivate students who can read the Qur'an, engage classical texts, and live Arabic as a spiritual and intellectual discipline, then management, technology, and values must align toward that purpose. When they do not, Arabic instruction becomes either an efficient but hollow exercise or a values-rich but irrelevant one.

Figure 3. Integrative Conceptual Framework of Quality Management for Arabic Language Learning in the Society 5.0 Era



Three propositions emerge from this synthesis. First, quality management in this context is best understood as a form of value-anchored leadership rather than a technical exercise in process control. Second, technology integration succeeds when it respects the human core of Arabic pedagogy, treating teachers as co-designers and students as adab-bearers rather than information consumers. Third, Islamic values become operational only when built into the institution's structural decisions, from curriculum sequencing to platform selection, rather than added as rhetorical embellishment. These propositions are consistent with, but sharper than, the general calls for "holistic integration" that dominate Indonesian educational policy discourse. They offer what policy language typically lacks: clear implications for who does what. Principals must cultivate digital-plus-adab leadership. Curriculum designers must treat the integration of Islamic values as a structural rather than decorative concern. Technology procurement must undergo a values audit, not just a cost-benefit analysis. Teacher professional development must treat teachers as intellectual partners, not users to be trained. Each implication is concrete enough to guide action, and each has anchor points in the reviewed literature.

Finally, the review exposes several gaps that should be stated frankly. Empirical studies with robust designs, longitudinal, multi-site, mixed-methods remain rare in this field. The corpus consists largely of single-case qualitative studies or descriptive surveys, which are valuable but limited in their capacity to establish causal claims. Research on students' own perspectives, as distinct from those of teachers and principals, is particularly thin. And the experiences of Arabic learners in non-Muslim-majority contexts, Indonesian diaspora communities, converts (*mualaf*), and comparative settings are almost absent (Greentree et al., 2025). These gaps are not merely academic; they shape which quality management decisions the field is currently equipped to inform.

D. Conclusion

This review began with a simple worry: that the rush toward digital Arabic learning risks losing the spiritual and pedagogical heart of the language it claims to teach. The systematic survey of 42 articles published between 2020 and 2025 largely confirms that worry, but it also shows that a way forward is emerging within the literature itself. The way forward is neither a retreat into pre-digital pesantren nor an uncritical embrace of every new platform. It is a mode of quality management that holds three commitments in steady tension: the demand for measurable quality, the capacities of new

technologies, and the non-negotiable centrality of Islamic values. Three conclusions can be stated concisely. First, quality management in Arabic learning in the Society 5.0 era is a leadership problem before it is a technical one. Institutions led by adab-grounded, digitally literate principals outperform those with superior equipment but weak direction. Second, technology integrates well when teachers are treated as co-designers and poorly when they are not, regardless of the tool's sophistication. Third, Islamic values shape outcomes only when embedded structurally in institutional decisions, not merely in slogans. The framework proposed here, value-anchored leadership, human-centered technology integration, and values-integrated curriculum, is offered as a synthesis of the reviewed literature rather than a final model. The framework requires empirical testing in madrasah and pesantren settings, particularly through designs that move beyond single-case descriptions. Three directions for future research are especially urgent. First, longitudinal studies tracking how the adoption of specific technologies affects both Arabic competence and Islamic character formation over multi-year periods. Second, student-centered research that surfaces learners' own experiences of digital Arabic environments and their ability to articulate when technology has helped or hindered their engagement with the language. Third, comparative studies across Southeast Asian and Middle Eastern contexts to identify which elements of the framework are culturally specific and which might travel. Only by pursuing these directions can the field progress from mapping the current terrain to actively shaping it, a task whose urgency grows with every new generation of students raised in and by digital environments.

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