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Challenges and Opportunities in Implementing the Merdeka Curriculum in Arabic Learning in the Digital Era: A Systematic Literature Review

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Abstract

Arabic learning in the digital era is increasingly required to move beyond the transmission of linguistic rules toward learning experiences that are flexible, contextual, communicative, and supported by technology. In Indonesia, the Merdeka Curriculum offers wider space for teachers to design learning according to students' needs, yet its application in Arabic subjects, especially in madrasahs, still faces pedagogical, institutional, and technological constraints. Previous studies have tended to address curriculum implementation and technology integration separately. This study aims to synthesize the challenges and opportunities of implementing the Merdeka Curriculum in Arabic learning in the digital era. A Systematic Literature Review (SLR) was conducted following PRISMA 2020. Records published between 2021 and 2026 were retrieved from Google Scholar through Publish or Perish; of 500 records identified, 53 journal articles

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met the inclusion criteria and were analyzed using thematic analysis. The synthesis shows that the main challenges are a shift in pedagogical orientation, uneven teacher readiness, limited digital and TPACK competence, inadequate infrastructure and digital resources, and difficulties in designing authentic assessments for productive Arabic skills. Conversely, the curriculum creates opportunities through flexible and communicative learning design, multimodal digital media, AI-supported pedagogy, teacher professional communities, and portfolio-based assessment. The study concludes that implementation is a pedagogical transformation that depends on teacher readiness, institutional support, and the nature of Arabic language skills, not on technology alone. The study implies that Arabic teachers need continuous digital-pedagogical development, while madrasahs and policymakers should provide a supportive technology ecosystem and assessment guidelines suitable for the nature of Arabic language skills.
***Keywords**: The Merdeka Curriculum, Arabic Language Learning, the Digital Age*.

Introduction

The changing landscape of education in the digital age requires educational institutions not only to adapt curriculum content but also to reorient teaching and learning methods and to create learning experiences that are relevant to students' needs. In the Indonesian context, the Merdeka Curriculum emphasizes more flexible learning, focuses on essential content, and gives teachers more versatility to customize their teaching methods according to the developmental phases and educational requirements of their students. This policy direction indicates that the curriculum is no longer viewed merely as a list of subjects, but rather as a framework for creating meaningful, adaptive, and contextual learning (Beliyawati et al., 2025).

In the madrasah environment, the execution of the Merdeka Curriculum possesses a distinct quality since the Islamic Religious Education and Arabic Language programs are tailored specifically by the Ministry of Religious Affairs, reflecting the unique essence of madrasahs. KMA No. 347 of 2022 outlines that courses aside from Islamic Education (PAI) and Arabic are created by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), while the PAI and Arabic curricula are developed specifically for madrasahs by the Ministry of Religious Affairs. This policy was subsequently updated through KMA No. 450 of 2024 regarding

guidelines for curriculum implementation in madrasahs, and further reinforced through KMA No. 1503 of 2025 along with its technical implementation guidelines. Additionally, the Decision of the Director General of Islamic Education No. 3302 of 2024 outlines the educational expectations for PAI and Arabic within the Merdeka Curriculum in madrasahs, serving as the formal framework for teaching practices. This signifies that the delivery of the Merdeka Curriculum in Arabic language teaching is closely tied to a specific regulatory structure that is unique and distinct from the guidelines pertaining to other general subjects.

Conceptually, this research topic centers on four main elements: the Merdeka Curriculum, Arabic language instruction, the digital age, and the difficulties and possibilities involved in putting it into practice. The Merdeka Curriculum emphasizes flexibility in learning and the strengthening of essential competencies (Sirait et al., 2024). The teaching of Arabic in madrasahs serves not only to help students master a foreign language, but also as a way to comprehend the origins of Islamic beliefs and developing religious literacy skills (Ahmadi & Saad, 2024). Meanwhile, the digital age has brought about significant changes in learning resources, instructional media, interaction patterns, and assessment models. Therefore, a discussion of The Merdeka Curriculum's implementation problems and possibilities in Arabic instruction in the digital age cannot be viewed solely from the perspective of the curriculum; rather, it must be understood as an intersection of policy, pedagogy, teacher competencies, subject characteristics, and developments in educational technology.

The issue at the heart of this study is that the ideals of the Merdeka Curriculum do not always align with the readiness for its implementation in the field, particularly in Arabic language instruction. Research on madrasah ibtidaiyah teachers shows that readiness to implement the Merdeka Curriculum needs to be examined across the six key aspects of the curriculum (Priatmoko et al., 2024), while studies focusing on Arabic instruction emphasize the need for intensive and subject-specific training for Arabic teachers (Nuzuli, 2025). Thus, the issue of implementation lies not only in the existence of a new curriculum, but also in the capacity of educational stakeholders to translate that curriculum into instruction that meets the needs of students and the demands of the times.

At the same time, the digital age presents opportunities while also adding complexity to the learning of Arabic. UNESCO emphasizes that in the age of AI, teachers need to

master the knowledge, skills, and values necessary to use technology appropriately, ethically, and in a human-centered manner (Okada et al., 2025). In line with this, a systematic review published in Social Sciences & Humanities Open in 2025 confirms that the integration of technology into the Arabic language curriculum is driven by a growing need for a curriculum framework relevant to the digital context; however, research in this field remains fragmented, necessitating pedagogical clarity and policy coherence (Sapawi & Yusoff, 2025). In other words, digital transformation in Arabic language learning is not just about the use of digital media, but also about the readiness of the curriculum, the clarity of learning strategies, and teachers' ability to manage technology to effectively achieve language learning objectives.

Based on previous research, studies on Arabic language instruction under the Merdeka Curriculum have actually begun to emerge, and they can be grouped into three stands. The first strand describes how the curriculum is implemented in Arabic learning: Azzahra and Muhajir (2023) offer a general qualitative overview (Azzahra & Muhajir, 2023), while Nuzuli (2025) examines the implementation of the Merdeka Curriculum in Arabic language instruction at several madrasahs and emphasizes the importance of intensive training for Arabic language teachers (Nuzuli, 2025). The second strand concerns teacher readiness, represented by Priatmoko et al. (2024), who study readiness to implement the Merdeka Curriculum in the madrasah ibtidaiyah context, although not specifically in Arabic instruction (Priatmoko et al., 2024). The third strand concerns technology in Arabic learning. Sapawi and Yusoff (2025) show that integrating technology into the Arabic curriculum requires a relevant curriculum framework, yet the research remains fragmented (Sapawi & Yusoff, 2025). A systematic review by Asy'ari et al. (2025) indicates that computer-aided Arabic learning can enhance motivation and learning outcomes when implemented within an appropriate pedagogical framework, and a TPACK-based analysis of 17 studies finds that Arabic teachers in Indonesia are generally strong in content and pedagogical knowledge but weak in technology integration (Sholahudin et al., 2025).

Taken together, these studies reveal three shortcomings. First, studies on the Merdeka Curriculum in Arabic instruction tend to describe implementation in particular contexts and give limited attention to the digital dimension. Second, studies on technology and TPACK in Arabic education have not positioned their findings within the Merdeka

Curriculum and the regulatory framework specific to madrasahs. Third, evidence on teacher readiness, infrastructure, and assessment is dispersed across separate studies and has not been synthesized into a single picture of challenges and opportunities.[I3] The research map indicates that previous studies have tended to address curriculum implementation or technology integration separately; few have specifically combined an analysis of the challenges and opportunities of implementing the Merdeka Curriculum in Arabic language instruction within the context of the digital age, particularly within the framework of the unique policies and practices of madrasah education in Indonesia. This is where the novelty of this study lies.

To address these shortcomings, this study conducts a Systematic Literature Review (SLR) guided by PRISMA 2020 to bring dispersed findings together into a thematic synthesis. The SLR is a suitable solution because it allows findings from curriculum studies, Arabic-teaching studies, and educational-technology studies to be identified, screened, and compared through explicit and replicable procedures. By treating the Merdeka Curriculum as the policy-pedagogical frame and digital technology as one dimension of its implementation, this study complements previous reviews that centered on technology integration or TPACK competence alone.

This research is important because Arabic language instruction in madrasahs holds a strategic position; however, its success is largely determined by the education system's ability to simultaneously address the demands of curriculum policy and digital transformation. Without a clear mapping of the challenges and opportunities involved in implementation, Arabic language instruction risks remaining trapped in conventional, uncommunicative patterns that fail to fully leverage the potential of technology. Conversely, if the main challenges can be accurately identified and the available opportunities can be systematically leveraged, Arabic language training that is more adaptive, meaningful, and pertinent to the traits of today's pupils can be strengthened with the help of the Merdeka Curriculum. This urgency is further heightened as madrasah curriculum regulations continue to be updated, while demands for teachers' digital competencies are also rising in the era of AI and technology-based learning.

In light of this context, This study aims to investigate the potential and challenges of implementing the Merdeka Curriculum in Arabic language education in the digital age. More precisely, this study aims to pinpoint the primary implementation challenges and

investigate the pedagogical and technological possibilities that can be utilized to create a madrasah curriculum that is flexible enough to change with the times. Therefore, it is anticipated that the study's findings will contribute conceptually to the advancement of Arabic language learning research while also acting as a useful guide for educators, madrasahs, and legislators to improve the Merdeka Curriculum's implementation.

Method

Research Design

This study employed a comprehensive literature review as its research methodology. This study focuses on identifying, selecting, evaluating, and synthesizing evidence related to The Merdeka curriculum's advantages and disadvantages for teaching Arabic in the digital age (Ramatni et al., 2025). The PRISMA 2020 principles, which seek to guarantee openness and clarity in the search for and selection of research, were followed when conducting this literature review. In order to reduce bias, make replication easier, and give a thorough summary of the themes that surfaced about the opportunities and difficulties of adopting the Merdeka curriculum in Arabic language instruction, the procedure followed methodical steps (Manasiq et al., 2026). In this study, the Merdeka Curriculum serves as the pedagogical policy framework, and digital technology is treated as one dimension of its implementation in madrasahs.

Data Sources

To gather relevant literature, a comprehensive search was conducted using leading databases including Publish or Perish, Semantic Scholar, and Google Scholar. The search returned 500 articles ordered by Google Scholar relevance rank. The literature search was conducted using specific keywords in English and Indonesian, such as “Opportunities,” “Challenges,” “Digital Age,” “Arabic,” and “Merdeka Curriculum.” Boolean operators (such as AND, OR, NOT) were used to clarify and narrow down the search results, ensuring that only articles truly relevant to the discussed topic were selected. The material published between 2021 and 2026 was the main focus of the search.

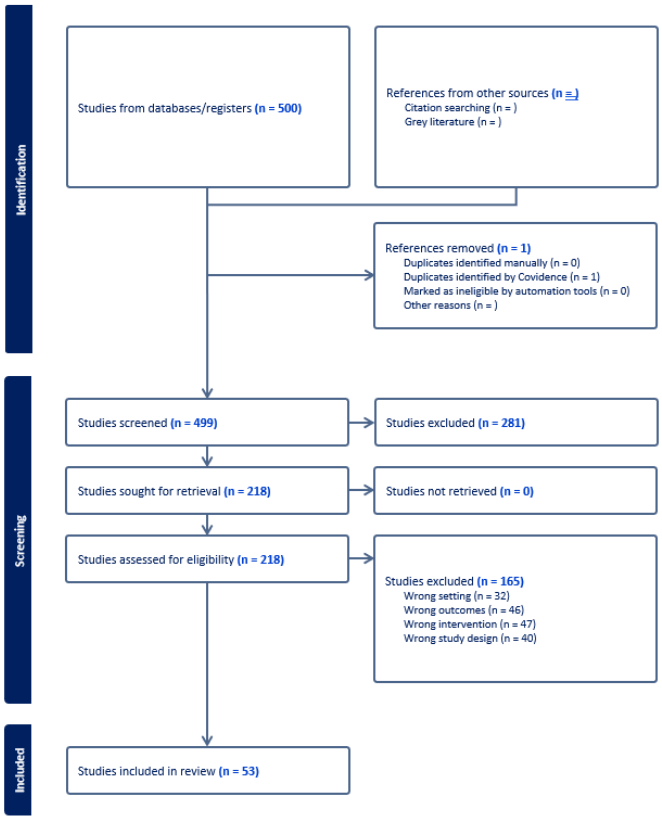
Selection Process

These publications were chosen based on their direct connection to the current research topic, which is the opportunities and difficulties of adopting the Merdeka Curriculum in Arabic language instruction in the digital age. The selection process

involved several stages, beginning with a search for articles containing the keywords "Merdeka Curriculum" and "Digital Age." The PRISMA framework, which comprises identification, screening, eligibility evaluation, and the selection of articles for analysis, was followed in the article selection procedure (Page et al., 2021). A total of 500 articles were obtained from the database during the identifying phase. One duplicate item was found after a deduplication process, leaving 499 articles to be evaluated in the following phase. The Merdeka Curriculum's implementation, learning Arabic, and the backdrop of the digital age were the research focuses of the first screening stage, which comprised examining the article titles and abstracts. At this point, 281 articles were eliminated due to their noncompliance with the inclusion criteria or their lack of relevance to the research topic. As a result, 218 articles moved forward to the full-text eligibility evaluation phase. All screening decisions were recorded in Covidence.

Eligibility Criteria

At the eligibility stage, 218 publications were thoroughly reviewed throughout the full-text eligibility assessment stage to make sure they met the study's inclusion requirements. The articles that satisfied the main requirements were included in the analysis, specifically: (1) they were scientific journal articles, not final projects such as undergraduate theses, master's theses, or non-academic sources (2) published between 2021 and 2026 (3) discussing the implementation of the Merdeka Curriculum in Arabic language learning and (4) having a connection to the digital era context. Journal articles were chosen as a minimum quality filter because they have undergone peer review. Regulatory documents and official guidelines (e.g., KMA decrees and the Learning and Assessment Guidelines) were not part of the article corpus and were used only to describe the policy context. At this stage, The following breakdown shows the 165 articles that were eliminated for not meeting the eligibility requirements : 32 articles were outside the scope of the study, 46 articles did not contain relevant outcomes or findings, 47 articles did not align with the focus of the implementation under review, and 40 articles did not conform to the specified design or article type. Consequently, This Systematic Literature Review analysis included 53 articles that satisfied the inclusion criteria and theme relevance. The PRISMA Flow Diagram shows how articles are chosen and excluded **(Figure 1).**



Data Analysis

The 53 articles were analyzed using thematic analysis, following the phases described by Braun and Clarke (2006) and adapted for the thematic synthesis of review findings (Thomas & Harden, 2008): reading the full texts, coding findings related to challenges and opportunities, searching for and reviewing themes, defining themes, and reporting (Thomas & Harden, 2008). The themes were then organized into two analytic categories, challenges and opportunities, and each theme was compared with the findings of previous studies in the Results and Discussion. Coding was carried out manually by the authors.

Results And Discussion

This section presents the thematic synthesis of the 53 included articles and discusses each theme against earlier research. In line with the analytic procedure described in the Method, the themes are reported in two categories, challenges and opportunities. Each theme is then read against prior findings so that convergence, divergence, and extension

are made explicit rather than left implicit. Regulatory documents, including KMA No. 1503 of 2025 and the Learning and Assessment Guidelines, are used only to situate the findings and are not treated as part of the article corpus.

Challenges Implementation the Merdeka Curriculum in Arabic Education in the Digital Age

The difficulties in using the Merdeka Curriculum to teaching Arabic in the digital era essentially stem from a fairly fundamental shift in pedagogical orientation. Ministerial Decree No. 1503 of 2025 stipulates that instruction in madrasahs is geared toward a more holistic understanding, critical thinking, and contextual learning, with an emphasis on project-based learning, case studies, and higher-order thinking skills (HOTS) (Taufiqurrahman et al., 2025). Teachers are even reminded not only to adapt the curriculum documents but also to change their teaching approaches and methods. These changes have serious implications for Arabic language instruction, as teaching methods that rely too heavily on explaining grammatical rules, memorizing vocabulary, and closed-ended exercises are no longer sufficient to meet the curriculum's demands. At the same time, differentiated instruction a hallmark of the Merdeka Curriculum also requires teachers to conduct diagnostic assessments, map students' learning profiles, and then adapt the content, process, and products of learning. In practice, this is no simple task, as research on differentiated instruction in Arabic language learning shows that while such strategies can boost student motivation and achievement, constraints related to facilities and assessment scheduling remain a real challenge (Ninta et al., 2025).

Case evidence from madrasahs points in the same direction. Yunita et al. (2024) found that the Merdeka Curriculum at MAN Sorong was being implemented in stages, yet teachers still reported insufficient facilities, limited effectiveness of differentiated instruction, and limited understanding of the curriculum. Nuzuli (2025), combining a literature review with interviews of Arabic teachers in several madrasahs, likewise reports that the curriculum opens room for project-based and contextual lessons but is constrained by limited teaching modules, insufficient training, and low student motivation. These findings suggest that the pedagogical shift is not only a matter of first-order barriers such as resources. It also touches teachers' beliefs and practices about what Arabic lessons are for. Thus, the first challenge does not stop at a shift in teaching paradigms, but extends to teachers' ability to translate that paradigm into adaptive, communicative, and realistic

instructional designs suited to diverse classroom conditions.

Topics related to the uneven level of teacher readiness and professional development. The second theme concerns uneven teacher readiness and professional development. Priatmoko et al. (2024) show that readiness to implement the Merdeka Curriculum has to be examined across the six key aspects of the curriculum rather than assumed, although their setting is madrasah ibtidaiyah and not Arabic specifically. Within Arabic instruction, Akmalia et al. (2025) argue that Arabic teachers have limited access to effective technology-based professional development, and that existing training is marked by low digital literacy, a lack of subject-specific support, and a mismatch between training content and classroom conditions. A case study at MAN Insan Cendekia Paser reaches a compatible conclusion for madrasah teachers more broadly: practice-based training, working groups, and sustained institutional support strengthen digital-pedagogical skills, while gaps in technical skills and infrastructure remain (Afendi, 2024). Importantly, readiness appears to be trainable. Shalihah et al. (2025) report that Arabic teachers in MTs and MA Al-Muchlisin who had not yet implemented the Merdeka Curriculum were better able to write teaching modules, run project-based lessons, and differentiate instruction by learning style after training. Their study is a small school action research, however, and links these gains to student engagement mainly through reported motivation, not measured outcomes.

The next topic concerns limited digital competencies and TPACK. This issue is further underscored by the findings of a TPACK-based analysis of 17 studies, which indicate that Arabic teachers in Indonesia generally demonstrate strong content knowledge and pedagogical skills but are weak in technology integration; technology is primarily used for communication and as a source of information, rather than for innovative and interactive learning (Sholahudin et al., 2025). Therefore, the integration of technology into the Merdeka Curriculum is becoming increasingly important and should not be understood merely as the ability to use applications; rather, it requires mastery of TPACK that is, the ability to simultaneously integrate Arabic language content, pedagogical strategies, and technology (Hanifah et al., 2024), as formulated by Mishra and Koehler (2006), holds that effective teaching with technology emerges from the interaction of content, pedagogical, and technological knowledge rather than from any one of them. A recent case at the madrasah aliyah level fits this pattern: technology was used mainly for

administration through an application, classroom use was limited and largely confined to presentations, and teachers struggled to apply digital tools pedagogically (Hariandini et al., 2026). Research on the integration of TPACK in Arabic learning according to the Merdeka Curriculum also emphasizes that schools need to provide supporting infrastructure and professional development opportunities so that the TPACK-based approach can be consistently implemented (Haniefa & Samsudin, 2023). The UNESCO AI Competency Framework for Teachers adds a further layer by describing five dimensions of teacher competence: a human-centred mindset, the ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional development (Miao & Cukurova, 2024). This means that Arabic teachers in the digital age face a dual challenge: not only must they enhance their technical skills, but they must also critically assess whether the technology being used truly aligns with the learning objectives, is ethically sound, and supports meaningful learning interactions (Fang & Zhang, 2025).

The next challenge relates to the learning ecosystem, which is not always ready to support these changes. Several studies show that the Merdeka Curriculum's effective application in teaching Arabic is heavily influenced by the availability of appropriate teaching modules, adequate digital facilities, and teachers' ability to integrate a communicative approach with the new curriculum structure. In many contexts, the issue is not merely access to the internet or devices, but the lack of digital learning materials that are actually appropriate for the type of Arabic language training in madrasahs. The evidence comes from several levels of schooling. Teachers in the MAN Sorong study cited insufficient facilities and infrastructure (Yunita et al., 2024). In a madrasah ibtidaiyah in Central Java, limited device access, unstable internet, and uneven teacher digital skills constrained the use of digital platforms even though students enjoyed them (Yusup & Nuha, 2025).). A portfolio-based writing programme at a MTs Sunan Kalijaga Kediri was held back by inadequate digital infrastructure (Baity et al., 2025), and Nuzuli (2025) adds that the shortage of teaching modules is itself a constraint. A systematic review of 86 studies on computer-aided Arabic learning reports the same cluster of barriers, infrastructure gaps and limited educator digital skills, across a wider range of contexts (Asy'ari et al., 2025a). Therefore, the challenges of implementation cannot be viewed solely as a problem for individual teachers, but also as a systemic issue: do madrasahs have sufficient learning resources, tools, time, and managerial support to make Arabic language instruction more

flexible, in-depth, and integrated with technology.

Ultimately, all of these challenges boil down to issues of assessment and the linguistic nature of the Arabic language itself. Recent systematic studies show that Arabic language learning technology is indeed advancing rapidly, but its effectiveness remains limited by the shortcomings of formal assessment for productive skills such as speaking and writing, as well as by the linguistic complexity of Arabic, which has not yet been fully accommodated by existing technology (Kawijaya & Rusmalinda, 2025). In fact, according to the logic of the Merdeka Curriculum, learning should be followed by assessments that are more authentic, performance-based, and closely aligned with real-world language use. Research on authentic assessment in Arabic language learning in the digital age confirms that evaluation should include projects, portfolios, presentations, debates, podcasts, videos, and collaborative platforms, so that the learning process and outcomes can be assessed more comprehensively (Mulyani et al., 2025). That study is a literature-based qualitative review, so it shows what authentic assessment should include, not how it performs in madrasah classrooms.

Empirical studies show why it is demanding. Fitrawan et al. (2026) identify a gap between the communicative goals of Merdeka-based Arabic textbooks and structure-focused assessment of speaking, and propose an authentic model combining textbook themes, communicative tasks, and analytic rubrics; the model, however, is reported only to the design stage and has not yet been tested. In Arabic writing, portfolio-based evaluation raised motivation and improved grammatical accuracy, vocabulary use, and coherence, but teachers faced time constraints and limited skill in designing comprehensive rubrics, and students lacked reflective habits (Baity et al., 2025). However, expanding the scope of these assessments also requires time, well-developed rubrics, the ability to provide feedback, and meticulous attention to maintaining the validity of the assessments. Taken together, the evidence suggests that the assessment challenge is less a lack of assessment ideas than a lack of validated, time-feasible instruments for Arabic productive skills. In sum, five difficulties recur across the synthesis: a shift in pedagogical orientation that includes differentiated instruction, uneven teacher readiness, limited digital and TPACK competence, gaps in infrastructure and instructional materials, and the complexity of authentic assessment of productive skills. If these five key issues are not addressed in an integrated manner, the curriculum transformation risks remaining at the administrative

level and failing to fully impact the quality of students' learning experiences.

Opportunities for Implementing the Merdeka Curriculum in Arabic Education in the Digital Age

The use of the Merdeka Curriculum in Arabic language training in the digital era actually creates a lot of development chances, despite the many difficulties that have emerged. The curriculum's flexibility, focus on essential content, and encouragement to design instruction tailored to students' needs provide opportunities for Arabic teachers to move away from teaching methods that rely too heavily on rote memorization and the isolated explanation of grammatical rules. Within this framework, Arabic language learning can be directed toward a more communicative, contextual, and language-use-oriented approach. The Deep Learning Approach further reinforces this direction by placing the processes of understanding, applying, and reflecting at the core of the learning experience (Cahyanto, 2025). For Arabic learning, this opens opportunities to design activities that are closer to real-world language use, such as interpreting announcements, understanding dialogues, composing short messages, delivering simple presentations, or developing thematic projects related to madrasah life. Empirical reports show that this flexibility is being used. At MTs Negeri 4 Sidoarjo, Arabic modules designed around students' ability levels were associated with better text comprehension and oral production and with higher motivation and participation (Nuzula & Muflihah, 2024). The report is a single-site qualitative study, therefore, it demonstrates the feasibility rather than the size of the effect. Thus, the first opportunity that arises is not merely a change in method, but a shift in the very nature of Arabic itself: from a subject synonymous with the transfer of content to a vehicle for developing language proficiency, critical thinking, and character (Halim et al., 2024).

The next opportunity lies in the increasing availability of multimodal learning resources and experiences. A systematic review of Computer-Aided Arabic Learning indicates that the integration of technology can enhance motivation and learning outcomes in Arabic when implemented within an appropriate pedagogical framework (Asy'ari et al., 2025a). This finding is significant because the digital age allows teachers to integrate text, audio, video, animations, interactive quizzes, and digital feedback into a single, richer learning experience. For receptive skills, technology helps provide more diverse and authentic language examples. For productive skills, technology offers opportunities for more

frequent, documented, and easily assessable practice (Ritonga et al., 2024). In this context, the great opportunity of the digital age lies not only in the abundance of applications, but in its ability to connect the material directly with language use and to align Arabic language learning with the learning habits of a generation familiar with digital media (Susiawati et al., 2025).

Field studies support this finding, at madrasah ibtidaiyah in Central Java, Duolingo, Quizizz, and interactive videos raised students' interest and understanding, especially of vocabulary and pronunciation (Yusup & Nuha, 2025), and at a MAN 2 Tuban, Quizizz with scenario-based tasks gave instant feedback and supported self-paced, student-centred learning (Rahmawati et al., 2025). Interactive digital media are likewise argued to increase interest, engagement, and understanding in madrasah ibtidaiyah Arabic classes, although that source is a literature study (Safitri et al., 2025). The quantitative evidence needs more careful reading. A meta-analysis of ten studies on instructional media and Arabic vocabulary in junior secondary schools found a large pooled effect (SMD = 2.549), but with very high heterogeneity (I^2 = 94.43%), indications of publication bias, and exclusive reliance on one-group pretest–posttest designs, media type did not significantly moderate the effect, although digital media were higher descriptively (Khairani et al., 2026). The opportunity of multimodal media is therefore real but conditional. It depends on how media are embedded in learning tasks rather than on the media alone, which is consistent with the emphasis of Asy'ari et al. (2025) on an appropriate pedagogical framework.

AI-supported pedagogy is a further, emerging opportunity. A systematic review of AI in Arabic learning covering 2016–2025 reports that adaptive feedback and personalised platforms are associated with higher motivation and proficiency, including support for grammar and speaking practice. It also reports that human instructors remain necessary for the cultural and contextual complexity of Arabic, and that successful implementation requires a balance between automated systems and human pedagogical guidance (Yaqin et al., 2025). This is consistent with the view that computer-aided Arabic learning increasingly relies on adaptive and gamified tools (Asy'ari et al., 2025b) and with the call for a curriculum framework that gives such technologies pedagogical direction (Sapawi & Yusoff, 2025), within the Merdeka Curriculum, teachers' autonomy in selecting materials and methods makes AI a pedagogical decision rather than a technical add-on,

which aligns with the human-centred orientation of the UNESCO framework (Okada et al., 2025). At the same time, evidence from madrasah classrooms is still thin: most of what is cited here is review-based or conceptual, so AI should be treated as an opportunity under development rather than a proven gain.

In practice, these opportunities are already beginning to emerge in the field. A number of madrasahs have adopted digital platforms for Arabic language instruction, such as the training on the Alef platform for Arabic teachers at MIN 3 Karimun (Regional Office of the Ministry of Religious Affairs for the Riau Islands Province, 2024), and the recognition of students at MIN 9 Langkat who completed their digital-based Arabic language studies through Alef in 2025 (Rozie, 2025), as well as the Arabic Teachers' Working Group forum in Sleman, which discussed the use of AI in education in 2025 and training on AI-based educational digitization in 2026 (sleman.kemenag.go.id). These examples show that implementation opportunities are not merely conceptual but are already being applied and developed in madrasahs. From this, at least three opportunities are evident: the emergence of technology-based learning innovations, the strengthening of the Arabic language teachers' learning community, and the opening up of professional development that is better aligned with classroom needs. When innovations are no longer isolated but are discussed in training sessions, subject-based teacher working groups (MGMP), and madrasah practices, the implementation of the Merdeka Curriculum has a greater chance of developing sustainably.

Scholarly evidence supports the role of teacher communities, at a madrasah Aliyah in Southeast Sulawesi, teachers collaborated on syllabi, materials, and assessments through WhatsApp groups and Google Classroom, and this collaboration was one of three practices through which TPACK was embodied within the Merdeka Curriculum (Nisa et al., 2025). In a school action research, training in the Merdeka Curriculum improved Arabic teachers' ability to write modules, run project-based lessons, and differentiate instruction, while remedial learning and mentoring helped address varied student abilities and limited time (Shalihah et al., 2025). These findings echo the call for professional development that is contextualised, inclusive, and sustainable. Notably, the communities that worked relied on low-threshold, familiar tools, which suggests that professional learning can progress even where infrastructure is limited.

Another crucial opportunity lies in strengthening authentic and reflective assessment. The

official Learning and Assessment Guidelines emphasize that portfolios can be used to track students' learning progress through documentation of their work accompanied by teacher and student reflections, while the Deep Learning document identifies self-assessment, peer assessment, reflection, and formative assessment as integral parts of the learning process (Kemdikdasmen, 2025). In Arabic learning, this approach offers opportunities to expand the forms of assessment beyond written tests to include oral performance, recorded dialogues, language projects, writing portfolios, reflective journals, and digital collaborative assignments. These opportunities are highly strategic because they allow teachers to assess language proficiency development more holistically, while fostering learning habits that are process-oriented rather than solely focused on final outcomes.

Studies of Arabic classrooms support this. Portfolio-based evaluation of writing at a MTs Sunan Kalijaga Kediri increased motivation, helped students track their own progress, and improved grammatical accuracy, vocabulary use, and coherence through iterative feedback (Baity et al., 2025). Authentic assessment can be built around the four language skills and supported by tools such as podcasts, videos, and collaborative platforms (Mulyani et al., 2025), and speaking can be assessed through contextual simulations, oral presentations, and narrative tasks scored on fluency, pronunciation accuracy, lexical relevance, structural adequacy, meaning clarity, and communicative confidence (Fitrawan et al., 2026). At the same time, field support such as the Merdeka Mengajar Platform provides additional opportunities for teachers to access teaching resources, training modules, and spaces for sharing best practices, ensuring that the strengthening of instructional design, Technology utilization and assessment development are interdependent. The application of the Merdeka Curriculum in Arabic language instruction has the potential to develop into a concrete pedagogical transformation that is more adaptable, contextual, collaborative, and pertinent to the demands of language learning in the digital age if these opportunities are maximized.

Discussion: Positioning the Findings against Previous Studies

Table 1. Comparison of the present findings with previous studies

Previous study	Focus and design	Main finding	Position of the present review
Nuzuli (2025)	Merdeka Curriculum in Arabic; literature review and teacher interviews	• Room for project-based • contextual lessons limited modules • insufficient training • low student motivation	Confirms
Yunita et al. (2024)	Case study, MAN Sorong	• Staged implementation • insufficient facilities • limited effectiveness of differentiation • limited teacher understanding	Confirms: shows the same constraints recur across contexts
Sholahudin et al. (2025)	TPACK analysis of 17 studies	Strong content and pedagogical knowledge weak technology integration	Consistent
Asy'ari et al. (2025)	Systematic review of 86 studies on computer-aided Arabic learning	• Gains in motivation and outcomes • barriers of infrastructure • digital skills • productive-skill assessment, and Arabic complexity	Consistent
Sapawi & Yusoff (2025)	Systematic review of technology in the Arabic curriculum	Need for a relevant curriculum framework	Consistent
Yaqin et al. (2025)	Systematic review of AI in Arabic learning (2016–2025)	• Personalisation and adaptive feedback help • human instructors remain necessary	Consistent: adds that evidence from madrasah classrooms is still thin
Khairani et al. (2026)	Meta-analysis of 10 studies on media and Arabic vocabulary	Large pooled effect but very high heterogeneity	Qualifies: media effects are conditional on design, not uniform

The synthesis qualifies two assumptions found in the literature. The first is that the effects of technology are uniform. The meta-analytic evidence shows a large average effect but very high heterogeneity (Khairani et al., 2026). The second is that Arabic teachers are generally weak at technology integration (Sholahudin et al., 2025), The case reported by Nisa et al. (2025) shows effective TPACK integration within the Merdeka Curriculum, and Shalihah et al. (2025) show that training changed practice. These findings do not contradict the TPACK review. They suggest instead that the gap is conditional on collaboration, training, and the choice of low-threshold tools matched to learning tasks. Challenges and opportunities are interdependent rather than separate lists. Each

opportunity has a corresponding challenge that determines whether it can be realised: flexible design depends on modules and diagnostic capacity, multimodal media and AI depend on infrastructure and TPACK, teacher communities depend on sustained institutional support, and authentic assessment depends on rubrics, time, and validity safeguards.

These findings carry three implications. For teachers, continuous digital-pedagogical development should be practice-based and subject-specific, built around Arabic skills rather than generic applications. For madrasahs and policymakers, a supportive ecosystem is needed: usable teaching modules, appropriate infrastructure, and assessment guidelines with rubrics suited to speaking and writing. For researchers, empirical studies are needed that test, at specific madrasah levels, how the Merdeka Curriculum, TPACK, and AI are integrated and with what learning outcomes, which also answers the recommendation made in the Conclusion.

Conclusion

This study set out to the primary challenges of implementing the Merdeka Curriculum in Arabic language instruction in the digital age and investigate the pedagogical and technological opportunities that can be utilized to build a flexible madrasah curriculum. Regarding the first objective, the synthesis shows that implementing the Merdeka Curriculum in Arabic instruction in the digital age is a process of pedagogical transformation that involves not only curricular change but also teacher readiness, institutional support, the features of Arabic language proficiency, and the use of technology. The biggest practical obstacle is the shift in learning orientation from a content-centered approach toward communicative, contextual, differentiated, and competency-oriented learning. This challenge is compounded by limited teachers' digital competence, suboptimal TPACK integration, limited infrastructure and digital learning resources, and difficulties in designing authentic assessments for productive skills such as speaking and writing. Regarding the second objective, the findings indicate that the digital era presents significant opportunities: the flexibility of the Merdeka Curriculum lets teachers design lessons that are better tailored to students' needs; multimodal technology, AI, digital platforms, and interactive resources can enrich Arabic learning in both receptive and productive skills; and teacher learning communities and performance-

based assessment strengthen the quality of Arabic instruction in madrasahs. The challenges and opportunities are therefore interdependent: the opportunities can be realized only when the challenges are addressed in an integrated manner. The implications of this study are the need to strengthen Arabic teachers' digital-pedagogical competencies through continuous training that is not only technical but also based on language learning needs. Madrasahs and policymakers need to provide infrastructure support, digital learning resources, and authentic assessment guidelines that align with the nature of language skills. It is advised that more study be done to empirically investigate how the Merdeka Curriculum, TPACK, and AI are integrated into Arabic language instruction at particular madrasah levels so that the findings are not just theoretical but also offer more useful implementation models.

Declaration of AI and AI Assisted Technologies in the Writing Process

The authors used Claude (Anthropic) as an assistant to support to refine the language and readability of the text, organise the flow of presentation, and check the consistency of figures, citations, and the reference list. Claude was also used as a sounding board in drafting the wording of the statements at the end of the manuscript. The formulation of the research problem and objectives, the literature search and selection, data coding, thematic analysis, and the drawing of conclusions were carried out entirely by the authors. All outputs were subsequently reviewed and revised by the authors, who assume full responsibility for the final content of the publication.

Author Contribution Statement

Rifda Zulfa Anindita played the leading role in all stages of the research: conceptualizing and designing the study, searching for and selecting the literature, collecting and coding the data, conducting the thematic analysis, and preparing the original draft of the manuscript. Reza Renaldy contributed to verifying the screening and eligibility process and to editing the introduction. Arini Fitrota contributed to checking the coding and the formulation of themes and to reviewing the results and discussion. Muhammad Zulhaq contributed to the presentation of the PRISMA flow diagram and tables and to the management of the reference list. Ola Fedda contributed to the critical review of the interpretation of findings and the implications from the perspective of Arabic language learning. All authors have read and approved the final version of the manuscript.

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Data Availability Statement

This study is a systematic literature review and did not generate primary data. The data supporting the findings, namely the search records, screening decisions, and article coding results, are available from the corresponding author upon reasonable request. The reviewed articles were drawn from publicly accessible publications.

Declaration of Interests

The authors declare that there are no financial, personal, professional, or other competing interests related to this study.

References

Afendi, A. R. (2024). Pengembangan profesional guru di era digital: Strategi mengintegrasikan teknologi dan pedagogi (Studi kasus di MAN Insan Cendekia Paser Kalimantan Timur). *Idarah Tarbawiyah: Journal of Management in Islamic Education*. https://doi.org/10.32832/itjmie.v5i5.18096

Ahmadi, A., & Saad, N. M. (2024). Harmony of Tradition and Innovation: A Distinctive Approach for Arabic Language Learning in Madrasah with Adab and Tahfidz Integration. *MUDARRISA: Jurnal Kajian Pendidikan Islam*, *16*(1), 102–127. https://doi.org/10.18326/mudarrisa.v16i1.1077

Asy'ari, H., Siraj, T., Rufaiqoh, E., & Yaqin, M. 'Ainul. (2025a). Computer Aided Arabic Language Learning: A Systematic Review of Technology Integration and Effectiveness. *Alsinatuna*. https://doi.org/10.28918/alsinatuna.v11i1.12602

Asy'ari, H., Siraj, T., Rufaiqoh, E., & Yaqin, M. 'Ainul. (2025b). Computer Aided Arabic Language Learning: A Systematic Review of Technology Integration and Effectiveness. *Alsinatuna*. https://doi.org/10.28918/alsinatuna.v11i1.12602

Azzahra, T. A., & Muhajir, M. (2023). Implementation of the Kurikulum Merdeka in Arabic Language learning. *Inovasi Kurikulum*. https://doi.org/10.17509/jik.v20i2.59793

Baity, A. N., Gorda, M. A., & Dewi, R. A. (2025). Portfolio-Based Evaluation as a Catalyst for Improving Arabic Writing Instruction and Learning Outcomes. *Lugawiyyat*, *7*(2), 18–31. https://doi.org/10.18860/lg.v7i2.37203

Beliyawati, B., Pahrudin, A., & Rahmi, S. (2025). Model, konsep, desain, pendekatan dan model pengembangan kurirkulum. *Social : Jurnal Inovasi Pendidikan IPS*. https://doi.org/10.51878/social.v5i2.5378

Cahyanto, B. (2025). Deep Learning and Application in Elementary Schools: an Exploration of Learning Practices. *GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*. https://doi.org/10.19105/ghancaran.v7i1.18892

Fang, Y., & Zhang, S. (2025). Review of AI Competency Framework for Teachers, Fengchun Miao and Mutlu Cukurova, 2024. *Journal of China Computer-Assisted Language Learning*, *5*(2), 317–326. https://doi.org/10.1515/jccall-2025-0018

Fitrawan, T., Baroroh, R., Lestari, O. D., & Muttakin, K. (2026). Authentic Assessment Innovation for Speaking Skills in The Grade 10 Arabic Language Book of The Merdeka Curriculum. *ARMADA : Jurnal Penelitian Multidisiplin*. https://doi.org/10.55681/armada.v4i5.2344

Halim, A., Iskandar, Ansari, A., & Halim, N. M. (2024). A study on how the Merdeka curriculum promotes multilingualism in Indonesian ELT classrooms. *XLinguae*. https://doi.org/10.18355/xl.2024.17.02.07

Haniefa, R., & Samsudin, M. (2023). Penerapan Technological Pedagogical and Content Knowledge (TPACK) dalam Pengajaran Keterampilan Berbahasa Arab. *Ta'limi | Journal of Arabic Education and Arabic Studies*. https://doi.org/10.53038/tlmi.v2i1.62

Hanifah, U., Adam, Z. B., Faizin, M., Jannah, I. M., & Hanafi, Y. (2024). Accelerating the digitalisation of learning post-COVID-19 era to improve the pedagogical competence of pre-service Arabic teachers. *Cogent Education*, *11*(1), 1–16. https://doi.org/10.1080/2331186X.2024.2413241

Hariandini, Y., Yuda, I. B., Ahmed, W., Hariandini, Y., Yuda, I. B., & Ahmed, W. (2026). *Implementing Digital Integrated Learning in Schools : Evidence from Classroom Practices Implementing Digital Integrated Learning in Schools : Evidence from Classroom Practices*. *2*(1).

Kawijaya, J., & Rusmalinda, R. (2025). Rekonstruksi Pembelajaran Kitabah Berbasis Digital di Program Studi Pendidikan Bahasa Arab Institut Agama Islam Darul A'mal Lampung. *ANWARUL*. https://doi.org/10.58578/anwarul.v5i4.7035

Kemdikdasmen. (2025). *Panduan Pembelajaran dan Asesmen*.

Khairani, A. R., Sutaman, Solihah, M., & Syalsabila, A. (2026). Instructional Media and Arabic Vocabulary Mastery: A Meta-Analysis. *Media Pembelajaran Dan Penguasaan Kosakata Bahasa Arab: Sebuah Meta-Analisis*, *5*(2), 343–364. https://doi.org/10.58194/eloquence.v5i2.3495

Manasiq, G., Contemporary, A. G.-J. of E. and, & 2025, undefined. (2026). Tren Komunikasi dalam Pengajaran Bahasa Arab: Sebuah Tinjauan Literatur Sistematis (2020-2025). *Journal.Alifba.IdGZAS Manasiq, A GhaniJournal of Education and Contemporary Linguistics, 2025•journal.Alifba.Id*, *2*(2), 2025. http://journal.alifba.id/index.php/jcl/article/view/105

Miao, F., & Cukurova, M. (2024). *AI competency framework for teachers*. UNESCO. https://doi.org/10.54675/ZJTE2084

Mulyani, R. E., Habib, I., & Hadi, N. (2025). *Implementing Authentic Assessment to Enhance Language Skill in Arabic Language Learning*. *10*(2), 338–349. https://doi.org/10.18860/abj.v10i2.32783

Ninta, A. I. S., Susanto, A., Misriandi, & Hadi, M. S. (2025). Implementasi Pembelajaran Berdiferensiasi Dalam Kurikulum Merdeka Untuk Meningkatkan Motivasi Dan Hasil Belajar Peserta Didik Di Sd Muhammadiyah Palangka Raya. *J-Simbol: Jurnal Magister Pendidikan Bahasa Dan Sastra Indonesia*. https://doi.org/10.23960/simbol.v13i2.1061

Nisa, A. K., Annisa, N., & Gunawan, F. (2025). Integration of TPACK in the Implementation of Arabic Language Learning in the Digital Technology-Based Kurikulum Merdeka. *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya*. https://doi.org/10.23971/altarib.v13i2.10748

Nuzula, A. F., & Muflihah. (2024). Implementasi Modul Ajar Bahasa Arab Berdiferensiasi di Madrasah Tsanawiyah. *Al Asma : Journal of Islamic Education*. https://doi.org/10.24252/asma.v6i2.51420

Nuzuli, Z. (2025). Implementasi Kurikulum Merdeka dalam Pembelajaran Bahasa Arab: Peluang dan Tantangan. *Jurnal Ilmiah Guru Madrasah*, *4*(1), 92–105. https://doi.org/10.69548/jigm.v4i1.43

Okada, A., Sherborne, T., Panselinas, G., & Kolionis, G. (2025). Fostering Transversal Skills Through Open Schooling Supported by the CARE-KNOW-DO Pedagogical Model and the UNESCO AI Competencies Framework. *International Journal of*

Artificial Intelligence in Education, *35*, 1953–1998. https://doi.org/10.1007/s40593-025-00458-w

Page, M., McKenzie, J., Bossuyt, P., Boutron, I., Hoffmann, T., Mulrow, C., Shamseer, L., Tetzlaff, J., Akl, E., Brennan, S., Chou, R., Glanville, J. M., Grimshaw, J., Hrõbjartsson, A., Lalu, M., Li, T., Loder, E., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Journal of Clinical Epidemiology*. https://doi.org/10.1016/j.jclinepi.2021.03.001

Priatmoko, S., Santoso, A., Dewi, R., & Sugiri, W. A. (2024). Examining Teachers' Readiness To Implement The Kurikulum Merdeka In The Madrasah Ibtidaiyah Context. *Al-Bidayah : Jurnal Pendidikan Dasar Islam*. https://doi.org/10.14421/al-bidayah.v16i1.9572

Rahmawati, J., Matusakdiyah, K., Faizah, S. N., & Amin, F. (2025). Optimalisasi Media Quizizz dalam Meningkatkan Keaktifan Siswa pada Mata Pelajaran Fikih Kelas X-1 di Madrasah Aliyah Negeri 2 Tuban. *MARAS: Jurnal Penelitian Multidisiplin*, *3*(2), 671–680. https://doi.org/10.60126/maras.v3i2.953

Ramatni, A., Fata, T. H., & Surajiyo, S. (2025). Management of character learning based on islamic education: a literature review. *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, *11*(2), 116–127. https://doi.org/10.29210/020254778

Ritonga, M., Mudinillah, A., Wasehudin, W., Julhadi, J., Amrina, A., & Shidqi, M. H. (2024). The effect of technology on Arabic language learning in higher education. *Journal of Education and Learning*, *18*(1), 116–127. https://doi.org/10.11591/edulearn.v18i1.20867

Safitri, A., Alfattunisa, A., Afifah, A., Abdullah, D., & Mardani, D. (2025). Efektivitas Media Interaktif Berbasis Digital dalam Pembelajaran Bahasa Arab Untuk Siswa MI. *Wulang: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*. https://doi.org/10.55656/wjp.v3i2.355

Sapawi, M. S. M., & Yusoff, N. M. R. N. (2025). Integrating technology into the Arabic language curriculum: A systematic review of trends, strategies and cultural dimensions. *Social Sciences & Humanities Open*. https://doi.org/10.1016/j.ssaho.2025.101974

Shalihah, S., Faroji, A., Nuroh, N., & Aljabr, B. N. (2025). Improving the Professional

Competence of Arabic Language Teachers through Independent Curriculum Training. *Jurnal Al Bayan: Jurnal Jurusan Pendidikan Bahasa Arab*, *17*(1), 78–97. https://doi.org/10.24042/albayan.v17i1.25977

Sholahudin, S., Nurbayan, Y., & Ali, M. (2025). The Competence of Arabic Language Teachers in The Digital Era: A Study Based on The Technological Pedagogical Content Knowledge (TPACK) Framework. *Dinasti International Journal of Education Management And Social Science*. https://doi.org/10.38035/dijemss.v6i3.3940

Sirait, A. A., Febrian, M., Saifundi, S., & Halimah, S. (2024). Pengembangan Perangkat Pembelajaran Kompetensi (Pp-Pk) Dalam Kurikulum Merdeka. *Dirosat : Journal of Islamic Studies*. https://doi.org/10.28944/dirosat.v9i2.2000

Susiawati, I., Mardani, D., & Alhaq, M. F. (2025). The role and strategy of digital technology in improving the arabic language learning process. *Hunafa Jurnal Studia Islamika*. https://doi.org/10.24239/jsi.v21i2.783.209-232

Taufiqurrahman, T., Widyaningsih, E., & Dewi, R. R. (2025). Pembelajaran Holistik, Kontekstual dan Futuristik. *TSAQOFAH*. https://doi.org/10.58578/tsaqofah.v5i3.5621

Thomas, J., & Harden, A. (2008). *Bmc Medical Research Methodology Open Access Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews*. https://consensus.app/papers/bmc-medical-research-methodology-open-access-methods-for-thomas-harden/b8762125624d5e10896457e6d3a638ea/

Yaqin, M. A., Adlani, H., Ridwan, & Laili, M. (2025). Artificial Intelligence in Arabic Language Learning: A Systematic Literature Review of Educational Trends and Future Directions. *Al-Muyassar: Journal of Arabic Education*. https://doi.org/10.31000/vpmkc594

Yunita, S., Masrura, D., Bayzura, S., & Saariah. (2024). Pembelajaran bahasa Arab berbasis Kurikulum Merdeka di Madrasah Aliyah Negeri Sorong: Implementasi dan problematikanya. *Nady Al-Adab: Jurnal Bahasa Arab*, *21*(3). https://doi.org/10.20956/jna.v21i3.40293

Yusup, T., & Nuha, M. A. U. (2025). Navigating Digital Shifts in Arabic Language Education: A Contextual Inquiry in Indonesian Islamic Primary Schools. *Learning, Media and Technology in Arabic Education*. https://doi.org/10.53515/d77v3325