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Digitalization of Arabic language learning in rural contexts: opportunities, challenges, and philosophical dilemmas

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ABSTRACT

The digitalization of education has created new opportunities and challenges, particularly in rural contexts where infrastructure, resources, and cultural factors shape learning practices. While existing studies have emphasized the technical and pedagogical dimensions of digital learning, little attention has been given to the lived experiences and philosophical dilemmas surrounding the digitalization of Arabic language education in rural schools. This study addresses this gap by exploring opportunities, challenges, and philosophical tensions in the digital implementation of Arabic learning at Madrasah Ibtidaiyah Miftahul Falah Jepara, Indonesia. Employing a qualitative case study with a phenomenological orientation, data were collected over three months (June–August 2025) through classroom observations, semi-structured interviews with teachers and students, and focus group discussions with school stakeholders. The findings reveal three major opportunities of digitalization: broader access to learning resources, increased student motivation, and pedagogical innovation. At the same time, significant challenges emerged, including limited infrastructure and unstable internet connectivity, financial constraints affecting access to devices, and teachers' limited digital competence. Beyond these practical issues, the study identified philosophical dilemmas such as the reduction of cultural and spiritual values and tensions between modernization and tradition. The study concludes that digitalization in rural Arabic education must be understood not only as a technical process but as a socio-cultural transformation requiring hybrid approaches that integrate technology with traditional values. Recommendations include teacher professional development, context-sensitive policies, and culturally responsive digital platforms.

Introduction

The rapid development of digital technology in recent decades has profoundly transformed various aspects of human life, including education. The COVID-19 pandemic became a turning point that accelerated the adoption of technology in teaching and learning processes. On the one hand, digitalization offers opportunities to expand access to education; on the other hand, it also highlights structural inequalities, particularly between urban and rural contexts (Sing Yun, 2023). Schools in urban areas are relatively more prepared due to better infrastructure and technological

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literacy, while schools in rural areas continue to face challenges such as limited internet access, lack of devices, and insufficient human resources (Azzahra et al., 2025). This disparity makes digitalization in education an urgent issue to investigate, as it is closely related to the right to equitable learning opportunities for all students (Lu et al., 2024).

A general problem that arises is the uneven implementation of digitalization across social and geographical contexts. Several studies have shown that the use of technology in education increases student motivation and participation while also enriching learning resources. For example, (Miswar et al., 2024) found that rural adolescents were able to develop digital literacy independently to support their learning, despite limited facilities. However, other research reveals serious challenges, such as limited infrastructure, teachers' unpreparedness, and the declining intensity of face-to-face interaction, which remains essential for meaningful education. (Kormos & Wisdom, 2021) reported that teachers in rural schools struggled to manage online learning due to inadequate devices, internet costs, and limited digital skills. These findings suggest that digitalization is not merely a technical issue but also concerns the quality of learning experiences.

Previous studies illustrate the dialectics of opportunities and challenges within digitalization. (Hidayah, 2022) emphasized that online learning tends to widen the digital divide between urban and rural students in Indonesia. (Febriana et al., 2018) highlighted the pedagogical dilemmas faced by rural teachers who lost direct interaction with their students, which affected the quality of teaching. Conversely, demonstrated that community-based telecenters in rural areas played an important role in empowering communities through digital education. These studies indicate that while digitalization offers positive impacts such as broader access and increased student autonomy, it also brings significant limitations, particularly in maintaining the social, cultural, and philosophical dimensions of language education.

Despite these contributions, a clear research gap remains. Most existing studies focus primarily on technical and pedagogical aspects of digitalization, while relatively few explore the subjective experiences, local adaptation strategies, and philosophical dilemmas that accompany it in rural schools (Amani et al., 2025). To date, little research has examined how teachers and students interpret the digitalization of Arabic language learning, what specific challenges they encounter, and how they sustain cultural and religious values within digital educational practices. This gap becomes the main rationale for the present study.

Based on this gap, the study seeks to address three main research questions: (1) How do teachers and students experience the implementation of digitalization in Arabic language learning in rural schools? (2) What challenges and philosophical dilemmas emerge in this process? and (3) What adaptation strategies can be developed to align digitalization with the cultural, social, and religious values of rural communities? These questions are intended to extend existing discourse, which has predominantly emphasized technical concerns.

This study proposes a conceptual framework for digitalizing Arabic language education in rural contexts, derived from the lived experiences of educational actors. The framework not only identifies opportunities and obstacles but also articulates the philosophical dilemmas that shape the process. The novelty of this research lies in its integration of empirical findings with philosophical reflection, positioning digitalization not merely as technical modernization but as a transformative process that must respect human values and local wisdom. In doing so, the study contributes a fresh perspective on digital Arabic language education in rural Indonesia.

The implications of this research are both practical and theoretical. Practically, the findings are expected to serve as references for teachers, policymakers, and curriculum developers in

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designing more inclusive and context-sensitive digitalization strategies for rural schools. Theoretically, the study enriches the discourse of philosophy of language education by exploring the relationship between digitalization, learning, and cultural contexts. Thus, this study offers not only practical solutions but also critical reflections on the future direction of education in the era of digital transformation.

Method

This study employed a qualitative case study design with a phenomenological orientation to explore the lived experiences, challenges, and philosophical dilemmas of teachers and students in implementing digital Arabic language learning in a rural school context (Sugiyono, 2019). The research was conducted at Madrasah Ibtidaiyah Miftahul Falah Jepara, Indonesia, over a period of three months (Juni-Agustus 2025). Data collection followed several steps, beginning with classroom observations to examine the learning environment and the availability of digital facilities, followed by in-depth semi-structured interviews with teachers and students, and culminating in focus group discussions (FGDs) with school stakeholders such as parents and community leaders. All participants provided informed consent, and permission was obtained from the school administration.

The primary materials used were interview guides, observation sheets, and field notes. The interview guide was developed based on recent literature on digital learning in rural settings, with a focus on three central themes: experiences with digital tools, challenges and limitations, and philosophical reflections on teaching and learning. Prior to data collection, the instruments were reviewed by two experts in Arabic education and educational technology to ensure validity, and pilot interviews were conducted with two teachers from a different rural school. Adjustments were then made to refine the clarity and relevance of the questions.

Data collection was conducted according to a systematic protocol. Each teacher and student participated in individual interviews lasting approximately 45–60 minutes, conducted in Bahasa Indonesia or Javanese depending on the participant's preference. With consent, all interviews were audio-recorded and transcribed verbatim. Classroom observations were carried out during three digitalized Arabic lessons per week, focusing on teaching strategies, student engagement, and technological barriers. FGDs were organized with groups of 5–7 participants to obtain broader insights and to validate emerging findings. All data were anonymized and securely stored to protect confidentiality (Naifah et al., 2024).

Thematic analysis was then carried out using Braun and Clarke's six-step framework: familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report (Hapsari & Suranto, 2025). Trustworthiness was enhanced through member checking by sharing preliminary findings with participants, peer debriefing with academic colleagues, and reflexive journaling to minimize researcher bias. As the study was qualitative in nature, no inferential statistical tests were applied.

Result & Discussion

This section presents the findings of the study and their interpretation in relation to the research objectives and problem formulations. The results are discussed not only descriptively but also critically, by comparing them with previous studies, identifying similarities and differences, and highlighting the unique contributions of this research. The analysis is organized thematically into three main aspects that directly reflect the focus of the study, namely: (1) the opportunities of digitalization in Arabic language learning, (2) the challenges of implementing digitalization in rural contexts, and (3) the philosophical dilemmas faced by teachers and students in balancing

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technological use with cultural and spiritual values. These sub-sections provide a comprehensive understanding of how digitalization is experienced in Madrasah Ibtidaiyah Miftahul Falah Jepara, offering both theoretical insights and practical implications for rural education.

1.1. Opportunities of Digitalization in Arabic Language Learning

The integration of digital technology into Arabic language learning at Madrasah Ibtidaiyah Miftahul Falah has revealed several opportunities that contribute positively to the teaching and learning process. Although the school is located in a rural area with limited infrastructure, digitalization has nonetheless provided access to resources, tools, and methods that were previously unavailable. These opportunities have not only enriched the learning content but also influenced students' motivation and the pedagogical practices of teachers. The findings of this study highlight three main opportunities, namely: (1) access to broader learning resources, (2) increased student motivation and learning interest, and (3) innovation in teaching methods and media.

1.1.1. Access to Broader Learning Resources

The findings of this study indicate that digitalization has significantly broadened the learning resources available for Arabic language education at Madrasah Ibtidaiyah Miftahul Falah Jepara. Teachers explained that the integration of mobile applications, YouTube videos, and digital libraries helped them enrich lessons that were previously constrained by limited printed textbooks. Students also confirmed that the availability of audio-visual resources enhanced their understanding of vocabulary and pronunciation, offering more concrete and engaging learning experiences compared to traditional approaches.

From a theoretical perspective, these results are aligned with constructivist learning theory, which asserts that learners acquire knowledge more effectively when they can interact with diverse and meaningful resources. In this context, digitalization provided varied input that allowed students to actively construct their understanding of Arabic rather than relying solely on rote memorization from textbooks. The integration of multimedia elements also resonates with cognitive theory of multimedia learning, which highlights the role of dual channels—visual and auditory—in facilitating deeper comprehension.

In relation to previous studies, the findings of this research are consistent with (Akbar & Wijaya, 2024), who found that adolescents in rural areas of Indonesia demonstrated an ability to independently build digital literacy skills despite infrastructural limitations. The present study strengthens this evidence by showing that even within the specific context of Arabic language learning, rural students can effectively utilize digital resources to enhance their learning outcomes. Similarly, (Hidayah, 2022) argued that digital platforms function as important tools for bridging disparities in resource availability between urban and rural schools. This study supports that claim and illustrates how such platforms reduce dependency on limited school-provided materials.

At the same time, the results of this study highlight nuances that contrast with previous literature. (Aung & Khaing, 2016) emphasized that digital learning in rural contexts often struggles due to limited teacher competence, resulting in underutilized online resources. While this study also observed constraints in teachers' digital skills, it found that teachers at MI Miftahul Falah were able to adapt by curating and simplifying digital content before presenting it to students. This adaptive role of teachers shows that access to resources, by itself, is not sufficient; what matters is the way teachers contextualize those resources to fit the pedagogical and cultural needs of Arabic education.

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These findings provide several important implications. Theoretically, they suggest that "broader access" should not only be defined in terms of the number of resources available but also in terms of their pedagogical relevance and cultural appropriateness, especially since Arabic serves both as a linguistic subject and as a medium for transmitting Islamic knowledge. Practically, the study points to the necessity of designing professional development programs for rural teachers that focus on skills for selecting, adapting, and integrating digital content into their lessons. Such programs would ensure that the use of technology truly enriches Arabic learning rather than serving as a superficial supplement.

This study opens directions for further research. Future studies could investigate the long-term impact of digital resource use on students' Arabic proficiency, particularly in reading comprehension and oral expression. In addition, there is a need for research on the development of culturally responsive digital platforms that not only provide content but also embed religious and cultural values relevant to rural Muslim communities. Such research would contribute to ensuring that digitalization supports both the technical and philosophical dimensions of Arabic language education.

1.1.2. Increased Student Motivation and Learning Interest

The findings of this study show that the integration of digital tools into Arabic language learning significantly enhanced students' motivation and engagement at Madrasah Ibtidaiyah Miftahul Falah Jepara. Teachers reported that learners who were usually passive in conventional classroom settings became more responsive and active when exposed to digital media such as animations, online quizzes, and mobile flashcards. Several students also stated that they felt more enthusiastic about completing assignments when these were distributed through WhatsApp groups or simple applications. This indicates that digitalization does not merely provide new teaching materials but also changes the learning atmosphere by making it more attractive and interactive.

From a theoretical perspective, these findings resonate with Self-Determination Theory (Wang et al., 2019), which posits that students' intrinsic motivation increases when their needs for autonomy, competence, and relatedness are supported. The use of digital tools allowed students to practice Arabic vocabulary independently, thereby fostering a sense of autonomy. At the same time, interactive features such as quizzes gave students immediate feedback, which enhanced their sense of competence. Collaborative activities conducted via digital platforms also strengthened relatedness by encouraging peer interaction. Thus, digitalization aligns well with motivational theories by addressing fundamental psychological needs that drive student engagement.

In comparison with previous studies, the results are consistent with (Miswar et al., 2024), who found that community-based digital learning centers in rural areas significantly boosted learner participation and enthusiasm. Similarly, (Akbar & Wijaya, 2024) noted that rural adolescents often display high levels of motivation when given the opportunity to interact with digital platforms, despite infrastructural challenges. The present study strengthens these findings by demonstrating how digitalization specifically influences motivation in Arabic language learning, a subject often perceived as difficult and less appealing due to its linguistic complexity. Here, the integration of multimedia tools appears to reduce the sense of intimidation, making Arabic more approachable and enjoyable for students.

This study also identifies aspects that diverge from some prior research. Reported that technical obstacles and limited teacher guidance in rural digital classrooms sometimes led to decreased student motivation. While similar technical issues were encountered in MI Miftahul Falah, the adaptive strategies employed by teachers—such as combining face-to-face lessons with simple digital resources—helped mitigate these negative effects. This suggests that technology

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alone cannot guarantee improved motivation; rather, its effectiveness depends on the pedagogical mediation and creativity of teachers in tailoring digital tools to students' needs.

The implications of these findings are both theoretical and practical. Theoretically, they highlight digitalization as not only a technical innovation but also a motivational catalyst in language education. Practically, the results suggest that teacher training programs should integrate motivational strategies alongside technical skills to ensure that the adoption of digital tools genuinely enhances learning interest. Schools in rural contexts should also consider policies that support sustainable access to low-cost, user-friendly digital platforms in order to maintain student engagement.

This study suggests avenues for future research. Further investigations could examine how different types of digital media affect various dimensions of motivation, such as intrinsic versus extrinsic motivation, or short-term enthusiasm versus long-term persistence in Arabic learning. Moreover, research could explore how motivational effects differ among student groups with varying levels of prior digital literacy. Such inquiries would contribute to a more nuanced understanding of the role of digitalization in shaping student motivation in rural education contexts.

1.1.3. Innovation in Teaching Methods and Media

The findings of this study reveal that digitalization stimulated innovations in teaching methods and media at Madrasah Ibtidaiyah Miftahul Falah Jepara. Teachers began experimenting with hybrid models, combining conventional face-to-face instruction with digital tools such as WhatsApp groups for sharing assignments, online videos for vocabulary enrichment, and mobile applications for practice exercises. In some cases, students were encouraged to record short videos of their recitations and share them with peers, thereby creating opportunities for collaborative learning. These practices illustrate how digitalization can shift classroom dynamics from teacher-centered to more student-centered learning environments.

From a theoretical perspective, these innovations align with the principles of blended learning and student-centered pedagogy, which emphasize flexibility, autonomy, and active engagement. The integration of simple yet effective digital media resonates with Vygotsky's sociocultural theory, as students engaged in collaborative learning activities that extended beyond the physical classroom. By using both digital and traditional resources, teachers created what can be described as a "hybrid learning ecology," where knowledge construction was facilitated through multiple modes of interaction.

In comparison with previous studies, these results corroborate (Wiwin et al., 2022), who reported that digital tools could transform learning patterns by encouraging autonomy and interaction. Similarly, (Hidayah, 2022) found that the integration of community-based digital platforms fostered innovation in rural learning practices. However, the present study adds a specific contribution by showing how innovations emerge not from sophisticated technology but from the creative adaptation of accessible tools—such as WhatsApp, YouTube, and simple mobile apps—into the teaching of Arabic, a subject that has traditionally relied heavily on rote memorization and teacher explanations.

these findings diverge from (Zhao, 2024), who observed that attempts to digitalize learning in rural schools often failed to produce significant innovations due to teachers' limited digital competence. Although similar constraints were present in MI Miftahul Falah, this study demonstrates that teachers' adaptive use of simple technologies enabled them to overcome such limitations. This suggests that innovation in rural education should not be measured solely by the

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adoption of advanced platforms but rather by the creative pedagogical practices that emerge when teachers contextualize technology to local realities.

The implications of these results are twofold. Theoretically, they reinforce the idea that digitalization should be conceptualized as a catalyst for pedagogical transformation rather than as a mere technical add-on. Practically, the findings highlight the need for teacher development programs that focus not only on technical proficiency but also on pedagogical creativity in using digital tools. Schools and policymakers should support initiatives that encourage teachers to innovate within their means, recognizing that effective digitalization does not always require high-cost infrastructure but rather thoughtful integration of accessible media into existing pedagogical frameworks.

this study opens up opportunities for future research. Further studies could examine the long-term effects of hybrid learning practices on Arabic language proficiency, particularly in reading comprehension and oral expression. Moreover, there is scope for comparative research across different rural schools to explore variations in innovative practices and their outcomes. Such research would provide deeper insights into how local adaptation and teacher creativity contribute to sustaining meaningful innovations in the digitalization of Arabic language education.

1.2. Challenges of Digitalization in Rural Contexts

Despite the opportunities offered by digitalization, the implementation of Arabic language learning in rural contexts such as Madrasah Ibtidaiyah Miftahul Falah Jepara faces several significant challenges. These challenges are shaped by structural, economic, and pedagogical limitations that affect both teachers and students. In particular, issues related to infrastructure, financial capacity, and teacher competence emerge as recurring barriers that hinder the effective integration of digital tools in the classroom. Understanding these challenges is crucial not only to evaluate the feasibility of digitalization in rural education but also to identify strategies for addressing the digital divide. Based on the findings of this study, three key challenges are highlighted: (1) limited infrastructure and unstable internet connectivity, (2) financial constraints and unequal access to devices, and (3) teachers' limited digital competence.

1.2.1. Limited Infrastructure and Internet Connectivity

The findings of this study reveal that one of the most persistent obstacles to digitalizing Arabic language education in Madrasah Ibtidaiyah Miftahul Falah Jepara is the limitation of infrastructure and the instability of internet connectivity. Teachers reported that school-based internet access was unreliable, while many students living in remote villages struggled with weak signals. This condition often disrupted the learning process, particularly when tasks were distributed or submitted online. Several students admitted that they could not complete digital assignments on time because of frequent disconnections or lack of data availability.

From a theoretical perspective, these findings reflect the concept of the "structural digital divide" (Cahyani, n.d.), which emphasizes that inequality in infrastructure creates barriers to equitable access to education. In rural areas, internet instability directly undermines the potential benefits of digitalization, reducing it from an enabler of learning to a source of frustration. This situation also aligns with the notion of "technological determinism" in education, where access to infrastructure becomes a decisive factor for learning success or failure.

When compared with previous studies, the results of this research are consistent with (Rukmini et al., 2023), who found that unstable internet networks were among the primary barriers to online learning in rural Indonesian schools. Similarly, (Hidayah, 2022) highlighted that

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infrastructural disparities often widened the gap between urban and rural learners, limiting rural students' access to educational resources. However, this study also contributes a distinctive perspective by documenting local adaptive strategies: teachers often prepared offline learning materials in advance, enabling students to continue their learning without relying exclusively on real-time connectivity.

The implications of these findings are twofold. Theoretically, they reinforce the argument that digital equity must be understood not only in terms of device ownership but also in terms of infrastructural reliability. Practically, the results suggest the need for policymakers and school administrators to prioritize investment in rural internet infrastructure and to provide low-bandwidth learning platforms that are more compatible with unstable connections. For future research, a deeper exploration of how offline and hybrid learning strategies can compensate for infrastructural limitations would offer valuable insights into sustaining digital learning in rural contexts.

1.2.2. Financial Constraints and Device Accessibility

The findings of this study reveal that financial constraints and unequal access to digital devices remain critical challenges in the digitalization of Arabic language learning at Madrasah Ibtidaiyah Miftahul Falah Jepara. Many students came from low-income households that could not afford personal smartphones or laptops. As a result, several students depended on shared family devices, which limited their ability to participate consistently in digital learning. Teachers reported that some students could only complete assignments late at night when their parents' phones were available, while others occasionally missed tasks altogether because of lack of access. This situation reflects the broader socioeconomic disparities that affect rural communities and directly shape the equity of digital education.

From a theoretical perspective, this phenomenon illustrates what (Hargittai, 2002) describes as the "second-level digital divide," where inequality is not only about access to technology but also about the quality, frequency, and autonomy of its use. In contexts like rural Jepara, ownership of devices becomes a determinant of participation, and shared access often reduces opportunities for individualized learning. This reinforces the idea that economic capital is closely tied to digital capital, meaning that financial status directly influences students' ability to benefit from digital resources.

The findings are consistent with (Akbar & Wijaya, 2024), who reported that financial limitations in rural Indonesia were a major factor in students' inability to engage with digital learning platforms. They also align emphasized that even when rural students are motivated to learn, limited access to devices and the high cost of internet data packages hinder effective participation. However, this study offers additional insights by showing how teachers attempted to mitigate these barriers. For instance, some teachers created low-bandwidth materials that could be accessed on basic phones, while others encouraged peer-sharing practices, such as students working together on a single device to complete assignments.

The implications of these findings are significant. Theoretically, they highlight the intersection between socioeconomic inequality and educational access, showing that digitalization risks reproducing existing social gaps if not supported by adequate interventions. Practically, the results suggest the need for policy measures such as subsidized internet data packages, provision of school-owned shared devices, or community-based digital hubs that can be accessed by rural learners. For future research, there is a need to explore sustainable models of device sharing and resource pooling that might reduce the impact of financial constraints on digital learning outcomes in rural schools.

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1.2.3. Teachers' Limited Digital Competence

The findings of this study demonstrate that teachers' limited digital competence constitutes a major challenge in the digitalization of Arabic language learning at Madrasah Ibtidaiyah Miftahul Falah Jepara. Several teachers admitted that they were only confident using WhatsApp to send assignments and announcements, while they lacked the skills to integrate more advanced applications or platforms into their lessons. Observations confirmed that most digital practices remained basic and largely administrative in nature, such as distributing worksheets or collecting student tasks, rather than leveraging technology for interactive learning. This condition limited the potential of digitalization to transform teaching methods into more engaging and student-centered approaches.

From a theoretical perspective, this finding aligns with the Technological Pedagogical Content Knowledge (TPACK) framework proposed by (Mishra & Koehler, 2006). According to this model, effective digital teaching requires the integration of technological knowledge, pedagogical knowledge, and content knowledge. In rural contexts like Jepara, however, the technological component often remains underdeveloped, resulting in a weak intersection among the three domains. Consequently, teachers are unable to design meaningful digital learning experiences, even when digital tools are available.

This study's findings are consistent with (Rukmini et al., 2023), who reported that rural teachers' lack of confidence and digital training hindered the effectiveness of online learning. Similarly, (Moila & Mhlanga, 2024) found that limited teacher competence was one of the main reasons why digitalization failed to achieve its intended outcomes in rural classrooms. However, the present study also provides a more nuanced perspective: while teachers at MI Miftahul Falah lacked advanced skills, they demonstrated a willingness to adapt by experimenting with simple innovations, such as asking students to record recitations or create short videos of Arabic dialogues. These practices, although modest, represent initial steps toward building digital pedagogical competence.

The implications of these findings are noteworthy. Theoretically, they suggest that digital competence in rural education should be viewed as a developmental continuum rather than a binary "skilled or unskilled" condition. Practically, the results underscore the urgent need for targeted professional development programs that focus on integrating digital pedagogy into Arabic language teaching. Training should not only cover technical skills but also emphasize pedagogical strategies that make digital tools relevant and effective for language learning. Furthermore, school administrators should support teachers with mentoring systems and opportunities to share best practices, thereby fostering a collaborative culture of digital competence building.

For future research, it would be valuable to explore how teachers' digital competence evolves over time with sustained training and practice. Longitudinal studies could provide insights into the process of professional growth and identify the most effective strategies for supporting teachers in rural schools. Such research would deepen the understanding of how competence gaps can be gradually reduced, ensuring that digitalization benefits both teachers and learners in Arabic language education.

1.3. Philosophical Dilemmas in Digitalization of Arabic Learning

Beyond opportunities and practical challenges, the digitalization of Arabic language learning in rural contexts such as Madrasah Ibtidaiyah Miftahul Falah Jepara also raises deeper philosophical dilemmas. Unlike infrastructural or financial issues that can be solved through resources, these dilemmas touch upon cultural identity, religious values, and the preservation of

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traditional pedagogy. Teachers and parents expressed ambivalence: on the one hand, they recognized the benefits of technology in making Arabic learning more accessible and engaging; on the other hand, they worried that excessive reliance on digital tools might erode the spiritual essence of Arabic and weaken time-honored practices such as recitation and direct moral guidance. This study identified two central dilemmas that capture this tension, namely: (1) the reduction of cultural and spiritual values, and (2) the tension between modernization and tradition.

1.3.1. Reduction of Cultural and Spiritual Values

The findings reveal that one of the key dilemmas faced by teachers and parents in Madrasah Ibtidaiyah Miftahul Falah is the fear that digitalization reduces the cultural and spiritual depth of Arabic language learning. Teachers expressed concern that when lessons rely heavily on digital applications and multimedia, Arabic is perceived by students primarily as a technical subject rather than as a language imbued with religious and cultural meaning. Parents also worried that digital devices might expose children to content beyond the intended curriculum, thereby distracting them from the spiritual objectives of studying Arabic.

Theoretically, this dilemma resonates with the perspective of critical pedagogy (Mclaren & Shirley R. Steinberg, 2007), which warns that education reduced to mechanical processes risks neglecting its emancipatory and value-based dimensions. In the context of Arabic, which functions not only as a language but also as a vehicle of Islamic identity, overreliance on technology risks diminishing its moral and spiritual purposes.

This concern is consistent with the findings of Hidayah (2022), who observed that digital learning sometimes undermines the role of religious values in rural Islamic schools. Similarly (Jamil & Abdullayev, 2024) emphasized that technology-mediated learning in Arabic contexts must balance linguistic instruction with the transmission of faith and ethics. Unlike those studies, however, the present research documents how teachers actively negotiated this dilemma by supplementing digital lessons with traditional practices such as Qur'anic recitation, face-to-face discussions, and moral guidance. These practices highlight that digitalization does not necessarily replace cultural and spiritual values, but requires deliberate effort to ensure their integration.

The implications of this dilemma are significant. Theoretically, it points to the need for a culturally responsive model of digital pedagogy in Arabic education. Practically, it suggests that teacher training should emphasize not only technical skills but also strategies for embedding Islamic values into digital content. Future research could explore how digital platforms can be designed with built-in features that support the preservation of cultural and spiritual dimensions in language learning.

1.3.2. Tension Between Modernization and Tradition

Another philosophical dilemma identified in this study is the tension between modernization through digital tools and the preservation of traditional teaching methods. Teachers acknowledged the value of technology in making Arabic lessons more engaging, yet they also emphasized the importance of classical pedagogical approaches such as rote memorization, recitation (tilawah), and direct teacher-student mentorship. This tension reflects a broader concern within rural Islamic education: how to embrace innovation without undermining deeply rooted traditions.

From a theoretical standpoint, this dilemma illustrates the concept of educational dualism (Taufikin et al., 2025), where schools struggle to reconcile modern educational demands with traditional religious-cultural norms. Digitalization symbolizes progress and efficiency, while

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tradition represents continuity and authenticity. The coexistence of these two poles generates friction but also creates opportunities for hybrid pedagogical models.

The findings of this study are in line with those of (Wiwin et al., 2022), who noted that rural schools adopting digital practices often experienced resistance from educators who feared that tradition would be eroded. Likewise, (Miswar et al., 2024) observed that parents in rural areas were ambivalent toward digital education, appreciating its benefits but worrying about cultural dilution. However, the present study contributes further nuance by showing that teachers at MI Miftahul Falah attempted to balance these forces: for instance, using WhatsApp to distribute assignments while still relying on face-to-face sessions for Qur'anic recitation and moral instruction. This demonstrates the possibility of creating a blended approach that honors tradition while embracing modernization.

The implications are twofold. Theoretically, they highlight the need for frameworks that conceptualize digitalization not as a replacement but as a complement to traditional education. Practically, they suggest that rural Islamic schools should adopt policies that encourage hybrid methods, ensuring that modernization strengthens rather than undermines tradition. Future research could investigate models of hybrid pedagogy that successfully integrate digital efficiency with cultural authenticity, offering a sustainable path for rural Arabic language education.

Table 1.1: Analysis of Digitalization in Arabic Language Learning in Rural Contexts

Main Theme	Empirical Findings	Representative Quotes	Researcher's analysis & Interpretation
Opportunities	Digital tools (apps, YouTube, digital libraries) complemented limited textbooks and improved vocabulary/pronunciation.	"YouTube videos help me pronounce Arabic words better." (Student)	Digitalization enriched learning input and aligns with constructivist theory by enabling self-directed learning.
Challenges	Internet access was unstable, especially in remote areas.	"The signal often drops, so students cannot submit tasks on time." (Teacher)	Reflects the structural digital divide; local adaptations (offline materials) partially mitigated the barrier.
Philosophical Dilemmas	Concerns that digitalization reduces the spiritual depth of Arabic and weakens Islamic identity.	"Learning through apps is fun, but it feels less serious than studying the kitab." (Teacher)	Consistent with critical pedagogy: overreliance on technology risks neglecting moral-spiritual dimensions.

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Conclusion

This study confirms that the digitisation of Arabic language learning in rural areas brings opportunities in the form of wider access to learning resources, increased motivation, and pedagogical innovation, but also faces serious challenges such as infrastructure limitations, financial constraints, and low digital competence among teachers. In addition to technical aspects, there are also philosophical dilemmas related to the preservation of cultural and spiritual values amid the tide of modernisation. The proposed solution is a hybrid approach that combines digital technology with traditional methods, accompanied by teacher professional development and contextual policies.

The limitations of this study lie in the nature of the case study, which cannot be generalised, and its short time frame. Therefore, further research is recommended using a longitudinal and comparative approach in various rural contexts, while also developing a digital platform based on Islamic culture. Thus, digitisation can function not only as a technical innovation, but also as an educational transformation that remains rooted in traditional values.

Based on these limitations, future research is recommended to adopt longitudinal and comparative approaches across different rural contexts to capture broader variations and longer-term outcomes. Researchers should also explore the development of culturally responsive digital platforms that integrate Islamic values into learning materials, ensuring that modernization strengthens rather than undermines tradition. Such studies would deepen the theoretical discourse on digital pedagogy and provide practical strategies for sustaining inclusive, value-based digitalization in rural education.

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