



DIGITAL LITERACY IN ISLAMIC EDUCATION FOR ARABIC LEARNING AT MATHLAUL HIDAYAH DARUSSALAM BOARDING SCHOOL, CIANJUR

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ABSTRACT

This research is motivated by the low effectiveness of Arabic language learning in Islamic boarding schools due to the minimal integration of modern technology into traditional learning patterns, such as the talaqqi and bandongan methods. Therefore, this study specifically aims to analyze how digital literacy tools can be utilized appropriately to strengthen the entire Arabic language learning process at Mathlaul Hidayah Darussalam Islamic Boarding School, Cianjur. The research approach used is descriptive qualitative, with primary data collection through in-depth interviews with teachers, direct classroom observations, and documentation studies of the school's digital devices. Field findings indicate that the utilization of turats book e-books, digital dictionary applications, Learning Management Systems, educational videos, and podcasts contributes significantly. These new media successfully improve students' understanding of vocabulary, syntax, morphology, and independent reading of classical texts. In conclusion, digital literacy integration successfully formulates interactive and effective modern learning models without abandoning traditional school values.

Keywords: Arabic Language, Digital Literacy, Islamic Boarding School, Traditional Learning.

INTRODUCTION

Established in 1992, the Islamic boarding school (pondok pesantren) was founded on March 4, 1992, by KH. Didin Sidiqi and his wife, Hj. Nining Mudrikah. From its establishment in 1992 until 2018, the institution was originally named Pondok Pesantren Mathlaul Hidayah and implemented a traditional curriculum centered on the study of *kitab kuning*. This orientation was influenced by the founders, who were alumni of several *salaf* pesantren (traditional Islamic boarding schools specializing in classical texts) in Tasikmalaya. In 2019, the name was expanded to include "Darussalam," becoming Pondok Modern Mathlaul Hidayah Darussalam. This change reflected the founders' strong hope that the institution would be further developed by their children, who are alumni of Pondok Modern Darussalam Gontor Ponorogo, and that they would implement the educational values practiced at Gontor. These values include the *panca jiwa* (five foundational principles of the pesantren): sincerity, simplicity, self-reliance, Islamic brotherhood, and freedom; as well as the pesantren's motto: noble character, physical well-being, broad knowledge, and independent thinking. The founders also hoped that its synthesis, orientation, and philosophical foundations would align with those of Pondok Modern Darussalam Gontor Ponorogo. Source. (Huda, 1992)

The rapid advancement of digital technology has generated substantial changes across educational settings, including within Islamic education and Arabic language instruction in pesantren, notably at Mathlaul Hidayah Darussalam in Cianjur, West Java. This article seeks to develop and analyze a digital literacy model tailored to Islamic



education as an innovative framework for improving the effectiveness of Arabic language learning in the pesantren environment. The relevance of this topic lies in its contribution to scholarly discourse by bridging three domains that are often examined separately: digital literacy, Islamic educational pedagogy, and methodologies of Arabic language instruction. The proposed integration provides new avenues for technology-enhanced learning while preserving core pesantren traditions such as *talaqqi*, *musyāfahah*, and the study of *kitab kuning*. The background of this study stems from the practical needs of pesantren, which are increasingly required to adapt to ongoing technological developments. Several studies have shown that digitalization can broaden access to learning resources, enrich instructional methods, and enhance students' motivation (F. Rahman & Ma'ruf, 2022). However, other research indicates that the adoption of technology in pesantren is often constrained by cultural resistance, limited infrastructure, and concerns that digitalization may diminish the authenticity of *turāth* or classical scholarly heritage (N. H. Rahman et al., 2021). These contrasting perspectives highlight the necessity of developing a digital literacy model that aligns with the unique characteristics and traditions of pesantren. Previous Studies and Research Gap, various studies have examined the use of digital technology in Arabic language learning; however, most of them have not fully integrated it with the values of Islamic education and the traditions of pesantren. (Mashaqba et al., 2022) emphasize phonetic challenges in mastering Arabic guttural sounds, which require strong audio-visual support. Although linguistically relevant, this study does not relate the use of technology to Islamic pedagogy or pesantren culture. Meanwhile, (Azhar et al., 2023) demonstrate that digital technology can enhance Arabic language learning through more interactive and effective approaches, yet technology is still positioned as a general pedagogical tool without integration with the study of classical Islamic texts (*kitab kuning*) and the *talaqqi* method. Furthermore, (Rahmat & Silfana, 2024) highlight the role of digital literacy in strengthening access to knowledge and students' critical thinking, but they do not specifically address its implementation in Arabic language learning, particularly in the areas of *nahwu*, *shorof*, vocabulary (*mufradat*), and reading unvowelled classical texts (*kitab gundul*). Therefore, a research gap exists in the development of a digital literacy model that is not only pedagogically effective but also integrally aligned with the values of Islamic education and the scholarly traditions of pesantren in Arabic language learning. In the context of Arabic language instruction, the use of technology is no longer viewed merely as an innovation but has become an essential component for expanding access and enhancing educational quality. Significant shifts have occurred in teaching and learning strategies, offering learners more diverse, interactive, and effective learning experiences. This technological integration enables students to acquire tangible improvements in their listening, speaking, reading, and writing skills in Arabic, making these competencies more applicable to everyday contexts (Azhar et al., 2023).

The use of technology offers substantial opportunities to adapt more creative instructional approaches and to broaden access to diverse learning resources. Mobile applications and e-learning platforms have significantly transformed the ways in which students develop their Arabic language skills by providing rapid access to materials, exercises, and quizzes designed to strengthen their understanding of grammar, vocabulary, and speaking abilities. This development is increasingly crucial given that



Arabic serves as the primary medium for accessing the core sources of Islamic teachings (F. Rahman & Ma'ruf, 2022). When digital literacy is effectively integrated with religious values and traditional pesantren methods, the effectiveness of Arabic language learning has the potential to increase markedly. Accordingly, this study is driven by both practical and theoretical needs to develop a model that harmonizes digitalization with the long-standing traditions of pesantren. As traditional Islamic educational institutions, pesantren have played a pivotal role in shaping Muslim generations through the study and internalization of Islamic values, including the mastery of the Arabic language (Ningsish et al., 2021)

The literature review demonstrates that, according to Giovanni (2019), the evolution of digital literacy has brought substantial benefits, including for students in Islamic boarding schools (*santri*). Digital tools enable them to conveniently search for information related to their coursework and other constructive materials. Giovanni further emphasizes that, in the current era, learning interactions are no longer confined to the traditional relationship between *kyai* and *santri*; technological advancements have significantly reshaped how knowledge is accessed and transmitted. (Giovanni, 2019). Building on this perspective, Ningsish et al. (2021) highlight that the rapid development of technology has expanded the learning landscape for *santri*, allowing them to access a wide range of educational resources including classical Islamic texts through online platforms. With creative and meaningful integration of digital tools, instructional activities can even be conducted remotely, thereby enhancing the potential quality and reach of Islamic education. These findings collectively suggest that digital literacy is not merely an add-on to the pesantren learning environment but represents a transformative force that can complement and extend traditional pedagogical practices. (Ningsish et al., 2021). Within the field of Islamic education, professionalism has emerged as an urgent requirement for preparing 21 st-century human resources capable of competing in an increasingly globalized world. Professionalism extends beyond technological proficiency and educational management; it also encompasses the cultivation of ethical conduct, scholarly attitudes, and a strong commitment to the intellectual values embedded in the Islamic tradition (Hamid, 2020). In the pesantren context, the demand for professionalism has become even more pronounced, as these institutions are not only responsible for transmitting Islamic teachings but also for ensuring that their instructional quality remains relevant to contemporary needs. Arabic language education serving as the foundational gateway to understanding the Qur'an, ḥadīth, and the broader *turāth* constitutes a strategic domain in which such professionalism must be demonstrated (Nasir & Ridwan, 2025).

Consequently, teachers and instructors of Arabic are expected to demonstrate strong pedagogical competence, the ability to integrate digital technologies into the learning process, and the skill to design adaptive and effective instructional methods (Bulan & Zainiyati, 2020). These expectations align with broader educational trends emphasizing digital literacy, learner-centered approaches, and the capacity to innovate while preserving the epistemological integrity of Islamic scholarship. Collectively, the literature underscores that enhancing professionalism in Arabic language instruction is essential for strengthening both the pedagogical effectiveness and the intellectual mission of pesantren in the digital era. Based on the above discussion, the following research



questions are formulated: (1) What are the forms and processes of implementing Islamic education based digital literacy in Arabic language learning at Pesantren Mathlaul Hidayah Darussalam Cianjur? This question aims to explain how digital literacy is applied in Arabic language instruction at the pesantren, including the types of digital media used, patterns of utilization within learning activities (*talaqqi, sorogan, and muṭāla'ah*), and its integration with the values of Islamic education. (2) How do students respond to the implementation of digital literacy-based Arabic language learning in terms of material comprehension, learning motivation, and learning autonomy? This question focuses on students' attitudes and experiences in participating in digitally mediated Arabic language learning, particularly regarding their level of understanding, learning motivation, and independence in accessing and managing learning resources. (3) What factors determine the successful integration of digitalization with pesantren values in the Arabic language learning process? This question examines the supporting and inhibiting factors affecting the integration of digital literacy with pesantren traditions, including teacher competence, infrastructure readiness, institutional policies, digital ethics (*adab*), and leadership support. On the other hand, several scholars caution that overreliance on digital media may diminish the spiritual value of *barakah* in learning, particularly within the study of religious sciences. These differing perspectives provide a theoretical foundation for the argument that any model of digital literacy must be designed critically, selectively, and in alignment with the cultural and intellectual traditions of the pesantren (Musslifah et al., 2024). From these divergent viewpoints emerges a controversial hypothesis: digitalization may either enhance the effectiveness of Arabic language instruction, or conversely, it may undermine the core educational values of the pesantren if not guided by proper scholarly *adab*. This tension underscores the need for empirical investigation to determine the extent to which Islamic education based digital literacy can contribute positively without eroding the identity and traditions of Pesantren Mathlaul Hidayah Darussalam Cianjur. Based on the above research questions, this study aims to: Describe the forms and processes of implementing Islamic education based digital literacy in Arabic language learning at Pesantren Mathlaul Hidayah Darussalam Cianjur. Analyze students' responses to digital literacy based Arabic language learning in terms of material comprehension, learning motivation, and learning autonomy. Identify the key factors that determine the successful integration of digital literacy with pesantren values in Arabic language learning.



Figure 1: The Mathlaul Hidayah Darussalam Islamic Boarding School Building, Cianjur, West Java



Figure 2: Students Engaged in Digital Learning



METHOD

This study employs a qualitative approach with a case study design to comprehensively examine the process of integrating digital literacy into Arabic language learning at Pesantren Mathlaul Hidayah Darussalam Cianjur Jawa Barat. This approach was selected because it enables the researcher to gain an in-depth understanding of the real research context, while also exploring educational values, instructional practices, various challenges, and the dynamics of digital technology use in both students' learning activities and teachers' instructional performance. The choice of this design is consistent with previous studies emphasizing that research on digital literacy in pesantren settings must take into account the social, cultural, and educational contexts in which these processes occur. Within the qualitative research tradition, data are typically presented in the form of words, sentences, narratives, and visual materials. In the field of education, Borg and Gall (1988) explain that research and development methods are employed to produce or validate educational products that support the effectiveness of learning processes (Nasution, 2023). Data were collected through three primary techniques. In-depth interviews were conducted with students, Arabic language teachers, and pesantren administrators to explore their experiences, perceptions, and challenges related to the implementation of digital literacy. Participatory observation was carried out during teaching and learning activities to directly examine the use of digital media and technologies, including learning applications, Learning Management Systems (LMS), e-books, educational videos, and online learning systems. In addition, documentation analysis was conducted by reviewing various sources such as the pesantren curriculum, Arabic language learning guidelines, technology policies, digital learning materials, instructional modules, evidence of digital platform usage, and students' assignments. (Swift, 2022)

Data analysis was performed using a descriptive qualitative approach. The analytical stages included: (1) data reduction, involving the selection, categorization, and focusing of data relevant to the research objectives; (2) data display, presented through narratives, interview excerpts, or thematic summaries to facilitate the identification of meaningful patterns; and (3) verification and conclusion drawing, which involved examining the consistency among interview, observation, and documentation data to generate valid interpretations addressing the research questions. (Sugiyono, 2013). To ensure data trustworthiness, several strategies were applied. Triangulation was conducted by comparing findings from interviews, observations, and documentation to enhance data accuracy. Member checking was employed by asking participants to review the researcher's preliminary interpretations to confirm the validity of meanings. Furthermore, thick description was provided to enable readers to gain a comprehensive understanding of the pesantren's context and dynamics. The researcher also engaged in critical reflection on potential bias and positionality as part of methodological transparency. (Abdussamad, 2021)

FINDING AND DISCUSSION

FINDING

The findings indicate that the implementation of digital literacy at Pesantren Mathlaul Hidayah Cianjur has brought about significant changes in students' learning



patterns, teachers' pedagogical strategies, and the overall learning management system. Digitalization functions not merely as a technical tool but also shapes a learning culture that is more autonomous, diverse, and efficient. (Farihin et al., 2023). As a traditional Islamic educational institution, the sustainability of the pesantren is largely determined by the authority and leadership of the kiai. The kiai's role as the holder of scholarly authority and a key strategic decision-maker is crucial in guiding the use of technology so that it remains aligned with adab, scholarly traditions, and the objectives of Islamic education. Accordingly, the integration of digital literacy in pesantren can only be sustained when it receives full legitimacy and support from the leadership of the kiai (Ta'rifin & Halid, 2021)

Digital media such as e-books and Arabic dictionary applications (e.g., *Al-Maany*, *Qamos*, and *Arabic Dictionary*) provide rapid access to *kitab kuning*, Arabic grammar texts, and key Islamic references. By converting classical texts into PDF formats, teachers enable students to study via smartphones or tablets, thereby enhancing accessibility and independent learning. Research indicates that e-books and digital dictionaries support vocabulary development and grammatical comprehension. (Yasin, 2021). In addition, instructional videos facilitate the learning of pronunciation, *hiwār* (dialogue), and sentence structures through visual and auditory input, effectively improving students' listening and speaking skills in authentic communicative contexts. (Rahma & Ismail, 2025).

The use of Learning Management Systems (LMS) such as Google Classroom and Moodle plays a crucial role in organizing learning materials, assignments, discussions, and assessments in a systematic manner. Through these platforms, teachers are able to upload instructional content, exercises, and feedback in a structured way, thereby ensuring that the learning process is more organized, transparent, and well documented. In addition, podcasts and audio-based learning media are employed to develop *istimā'* (listening) skills and to improve the accuracy of Arabic pronunciation. For example, teachers record lessons on *i'rāb fī'il muḍāri'*, which students can access at any time, thus supporting repeated practice and autonomous learning. (Hasram et al., 2020). Meanwhile, interactive learning applications incorporating gamification offer structured exercises for reinforcing and revisiting *mufradāt* (vocabulary). Such applications have been shown to enhance learners' motivation and vocabulary retention in foreign language learning, including Arabic. (Zulharby & Rafli, 2022). The classical Islamic texts (*kitab kuning*) taught through digital literacy at Mathlaul Hidayah Darussalam Islamic Boarding School in Cianjur, West Java, cover several core disciplines. These include *Fiqh*, particularly *Mabādi' al-Fiqhiyyah*; *Arabic grammar*, namely *Nahwu* through *Al-Jurumiyah* and *Sharaf* (Tashrif); as well as *Adab* and *Akhlak*, represented by *Ta'lim al-Muta'allim*.

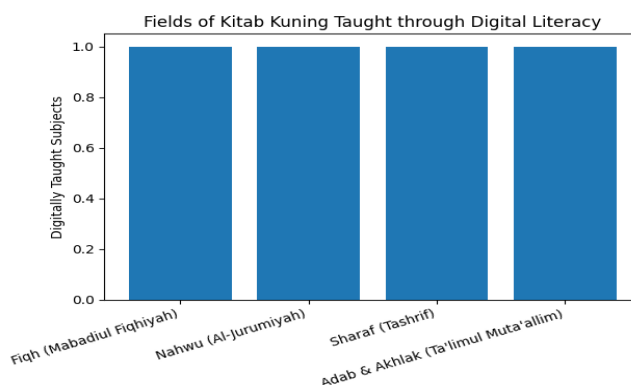


Figure 3: Digital Literacy Diagram of *Kitab Kuning*



The displayed chart illustrates the fields of *kitab kuning* taught through digital literacy at Mathlaul Hidayah Darussalam Islamic Boarding School. The four main disciplines *Fiqh*, *Nahwu*, *Sharaf*, and *Adab and Akhlak* are presented on an equal basis to emphasize that digitalization is not limited to a single subject area but encompasses the core disciplines within the pesantren's scholarly tradition.

This change is reflected in a shift in students' learning patterns from traditional methods such as *bandongan* and *sorogan* toward instruction enriched with digital media to support the acquisition of *mufradāt*, *qawā'id*, and Arabic reading and writing skills. Digital resources foster learner autonomy and accelerate comprehension, while the complex nature of the Arabic language necessitates an integrated instructional approach to ensure more effective mastery. (Wekke, 2018)

Grounded in the principles of an open pesantren, digital literacy has become a strategic component in the development of pesantren education in the contemporary era. Mathlaul Hidayah Islamic Boarding School in Cianjur demonstrates strong potential to produce students with adequate digital competencies, in line with its commitment as a modern pesantren that not only emphasizes religious instruction and character formation but also adapts to technological transformation through the integration of digital media in the learning process. (Darajat et al., 2022)

For educators, the integration of digital media provides opportunities to deliver learning materials in more diverse, interactive, and visually enriched formats, thereby enhancing students' motivation, engagement, and comprehension (Kuba, Renata & Shute, 2017). At the institutional level, digitalization supports more efficient educational management, including scheduling, documentation of learning activities, and systematic monitoring of classroom processes (Taufikin et al., 2025)

In practice, students' learning no longer relies solely on conventional methods such as *bandongan* and *sorogan*, which often face challenges related to teacher readiness, students' motivation, and limited supporting media (Mahmudi et al., 2023). Inappropriate method selection, insufficient learning media, and pesantren regulations that restrict media provision further contribute to low student enthusiasm in the learning process (Musyafaah et al., 2023). Consequently, a shift toward digital-based Arabic language learning particularly in reading skills has emerged, focusing on strengthening linguistic accuracy and textual comprehension through the use of interactive audio, grammar applications, and more diverse and efficient access to digital texts (Anis & Nurulakla, 2023).

The findings of this study are consistent with previous research indicating that digitalization enhances the relevance of pesantren in the modern era while fostering innovation in Arabic language pedagogy. In summary, the main findings are as follows:

First Arabic Language Teachers. Teachers demonstrated improved digital competence, as reflected in their ability to utilize visual media and digital platforms to explain *nahwu-sharaf* concepts and to design technology-based assessments, resulting in more effective and interactive learning.

Second Impact on Students (Santri). Digital tools and audio-visual media significantly enhanced students' learning autonomy, motivation, and creativity. Furthermore, these applications successfully improved their mastery of *mufradāt* along with core reading and listening skills.



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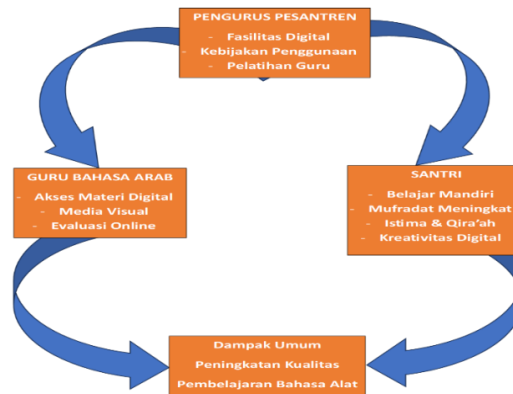


Figure 4: Research Findings Chart

A Digital Literacy Model of Islamic Education in Arabic Language Learning at Mathlaul Hidayah Darussalam Islamic Boarding School, Cianjur, West Java

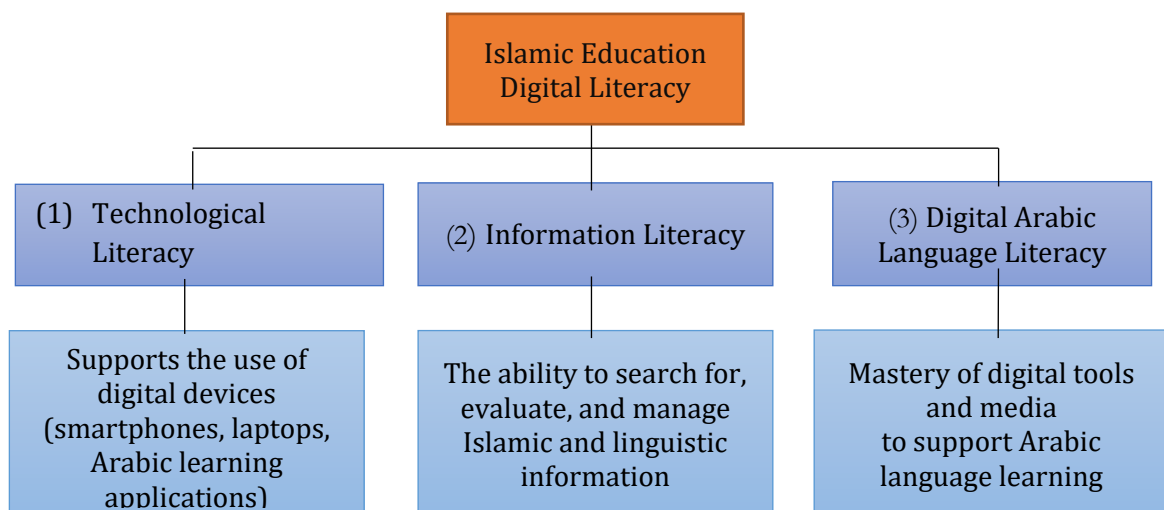


Figure 5: Diagram of the Islamic Education Digital Literacy Model in Arabic Language

Table 1.
Impact of Digital Literacy Implementation at Mathlaul Hidayah Darussalam Islamic Boarding School

Arabic Language Teachers	Students (Santri)	Pesantren Administrators
Improved readiness for digital-based teaching	Enhanced basic and advanced digital literacy skills	Strengthening pesantren digital policies
Access to modern Arabic learning resources (e-books, Arabic journals, applications)	Increased motivation to learn Arabic through digital media	Development of digital transformation programs



Arabic Language Teachers	Students (Santri)	Pesantren Administrators
Use of Arabic visual and audio media	Improved mastery of <i>mufradāt</i> , <i>qawā'id</i> , and <i>mahārah kitābah</i>	Strengthening technology-based learning management
More interactive learning processes	Greater learner autonomy in accessing learning materials	Provision of digital infrastructure (Wi-Fi, projectors, applications)
Adaptation of teaching methods	Ability to use various Arabic learning applications	Monitoring of digital learning programs

DISCUSSION

Digital Literacy in Islamic Education in Pesantren

At Pesantren Mathlaul Hidayah Cianjur, digital literacy is not understood merely as technical proficiency in using technology, but as an integrative effort that links the utilization of digital media with the internalization of Islamic scholarly values and ethics. Digital activities in the learning process are therefore directed to remain aligned with proper learning etiquette, Islamic principles, and ethical media practices, ensuring that technology serves as a means of strengthening education rather than merely functioning as an instructional tool. (Pradana et al., 2020)

Students not only use digital media to access information but are also trained to select and verify content based on Islamic scholarly perspectives. In this regard, digital literacy functions as a means of strengthening *ta'dīb*, *tahdzīb*, and *tazkiyah* through learning activities conducted in digital spaces (Gafur et al., 2024). A heutagogical approach is applied to promote self-directed, collaborative, and technology-based learning, thereby enhancing students' flexibility and engagement. In practice, both teachers and students tend to prefer more stable and familiar platforms such as Zoom and Google Meet over other media (Moh et al., 2024)

As illustrated in the figure below:

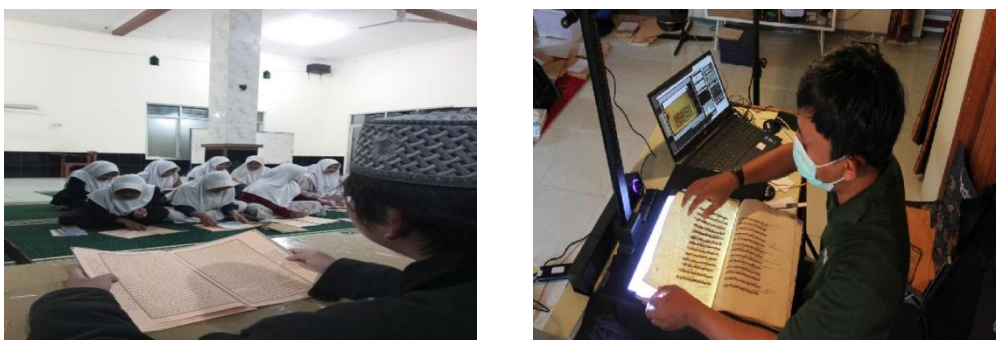


Figure 5: Learning Classical Islamic Texts (*Kitab Kuning*) Using a Dictionary

Studies on *Mabādi' al-Fiqhiyyah* indicate that the use of digital libraries, e-books, Arabic dictionaries, and learning multimedia effectively enriches students' learning experiences by enhancing their independence, creativity, and critical thinking skills (Utomo et al., 2021). At the same time, the study of *kitab kuning* under the guidance of *kiai* and *ustadz* continues to play a vital role in shaping deep religious intellectuality, comprehensive understanding of Islam, and moderate as well as tolerant attitudes toward differences in scholarly perspectives (Salim et al., 2024)



Table 2.
Digital Literacy Integration in Kitab and Arabic Language Instruction
at Pesantren Mathlaul Hidayah Darussalam Cianjur

Area of Instruction	Digital Tools Utilized	Instructional Application	Educational Outcomes
Fiqh (<i>Mabādi' al-Fiqhiyyah</i>)	E-books; Digital Arabic Dictionaries	Accessing classical texts in PDF format; searching legal terminology	Enhances comprehension of classical fiqh texts and supports self-directed learning
Arabic Grammar (Nahwu–Sharaf)	E-books; Audio Materials; Interactive PDFs	Audio-visual drills for <i>taṣrīf</i> and grammatical patterns	Improves pronunciation accuracy, memorization, and grammatical mastery
Moral Education (<i>Akhlāq</i>)	Instructional Videos; Learning Management System (LMS)	Video-based instruction and online exercises	Strengthens moral understanding through contextual and visual learning
Learning Ethics (<i>Ta'lim al-Muta'allim</i>)	Learning Management System (LMS)	Digital access to adab materials and reflective assignments	Reinforces learning ethics and promotes disciplined study habits
Assessment and Evaluation	Google Forms; Moodle Quiz	Online quizzes and automated assessments	Increases efficiency, accuracy, and transparency in learning evaluation

Thus, digital literacy in pesantren does not merely represent technological innovation, but also signifies a pedagogical transformation that integrates technology with Islamic values to foster learning processes that are more effective, adaptive, and responsive to the demands of the contemporary era.

The use of digital resources has been shown to facilitate and accelerate access to knowledge, enrich learning references, and enhance students' motivation in understanding Arabic language materials (Waqiyulloh & Dini, 2025). In line with this, digital literacy training for teachers contributes to the improvement of pedagogical competencies that are more interactive and innovative (Akbar et al., 2025). Various studies conducted in pesantren-based academic settings further confirm that the implementation of digital literacy plays a significant role in fostering students' holistic intelligence, not only by expanding access to information but also by strengthening critical thinking skills, creativity, and adaptability to global dynamics (Rahmat & Silfana, 2024).

Based on interviews with Ust. Dikri Nursya'ban Mubarak, the use of digital applications is considered to accelerate students' understanding of mufradāt and sentence structures, as they can independently check meanings and *taṣrīf* patterns without neglecting adab in the process of ta'lim (Interview, November 2025). This finding is reinforced by the author's observations, which indicate that students have been using



tablets and smartphones to access digital versions of *Mabādi' al-Fiqhiyyah* and *Al-Kaelany* during *sorogan* sessions.

In addition, Ust. Ilham “emphasized that digital literacy facilitates teachers’ explanations of *nahwu-ṣarf* materials through the support of audio and video media. (Interview, November 2025). The use of podcasts and audio-based PDF materials enables students to repeatedly practice *taṣrīf* using their personal devices, which positively contributes to improved memorization and pronunciation accuracy, as also highlighted in previous studies. (Utomo et al., 2021)

Although it offers many opportunities, digital literacy in pesantren also faces fundamental challenges that must be managed wisely so as not to erode the distinctive character of pesantren education. Its implementation requires adequate infrastructure, the enhancement of teachers’ digital pedagogical competencies grounded in scholarly ethics (*adab al-‘ilm*), as well as clear regulations and digital ethics. Moreover, digital literacy needs to be proportionally integrated with the traditional curriculum so that it complements rather than replaces the study of *kitab kuning* and classical learning methods. In line with previous studies, without proper governance, digitalization may lead to a weakening of *tafaqquh* and a shift in scholarly orientation within pesantren. (Rahmat & Silfana, 2024)

a. Factors Contributing to the Success of Digital Learning in Islamic and Arabic Education

1. Teachers’ Pedagogical and Digital Competence

The effectiveness of digital learning largely depends on the ability of Arabic language and Islamic education teachers to master not only technological tools but also relevant digital pedagogical skills. These include designing online learning activities, providing digital-based feedback, and implementing online formative assessments. (Li, 2025). Educators are therefore expected to integrate traditional pesantren instructional methods such as *talaqqi*, *sorogan*, and *bandongan* with contemporary digital approaches, including microlearning, instructional videos, and adaptive quizzes, in order to preserve the distinctive values of pesantren education while embracing technological innovation (Syafia et al., 2024)

As reflected in the interview with Ust. Ilham, digital literacy has supported teachers in delivering Arabic language instruction, particularly in teaching *nahwu-ṣarf* through audio and video-based learning. He stated that *taṣrīf* materials are greatly facilitated by PDF-based audio podcasts. Students can repeatedly listen to the readings on their smartphones, which improves both memorization and pronunciation. (Interview with Ust. Ilham, November 2025). The researcher’s observations further indicate that intermediate-level students frequently access *taṣrīf* audio recordings while memorizing *wazn* patterns, enabling more independent and faster repetition compared to conventional learning methods.

The effectiveness of digital learning implementation is further enhanced through continuous professional development, active participation in professional learning communities (PLCs), and ongoing practical mentoring within the pesantren environment (Salim et al., 2024)

2. Infrastructure Readiness and Access (Technical and Logistical Aspects)

The availability of adequate infrastructure such as stable internet connectivity, appropriate digital devices, and supportive digital learning spaces is a fundamental



prerequisite for the success of digital learning. Usth. Nida Fuadatul Mukarromah explained:

In general, infrastructure readiness has improved compared to several years ago. We now have a main Wi-Fi network, projectors in several classrooms, and tablet devices that students can use on a rotational basis. However, challenges remain particularly network stability and limited devices, as the number of students exceeds the available facilities. To address this, we often rely on offline content such as PDFs, audio files, or e-books that can be accessed without an internet connection.

She further added: Yes, some students do not yet own personal gadgets. Therefore, we implement a rotation system and provide shared digital learning spaces. Students are also encouraged to download materials when the signal is strong, so learning can continue even when internet access weakens. (Interview with Usth. Nida Fuadatul Mukarromah, November 2025). The researcher's observations indicate that internet access is available but uneven when many devices are connected simultaneously. Certain areas, such as the multimedia room and teachers' office, have more stable connectivity.

In pesantren located in areas with limited infrastructure, hybrid approaches such as providing offline content (e.g., via USB drives or e-books), implementing rotational hotspot access, or utilizing local servers have proven effective in sustaining the learning process (Salam et al., 2025). Moreover, studies on e-learning adoption indicate that facilitating conditions and perceived usefulness are key factors influencing users' acceptance and continued use of educational technologies (Awan et al., 2021).

3. Alignment of Digital Content with Pesantren Values and the Arabic Language Curriculum

Learning content must be closely aligned with the scholarly traditions of the pesantren, including the study of *kitab kuning* (turāth), core Arabic language subjects such as *nahwu* and *ṣarf*, phonetic exercises for guttural letters, and digitally supported *talaqqī* activities that strengthen memorization and text comprehension (*muṭāla'ah*).

As noted in an interview with Usth. Hj. Nining Mudzrikah, digital literacy plays an important role in moral education, particularly in teaching *Akhlaq al-Banīn*. She emphasized that "instructional videos and LMS-based materials help students understand ethical values visually, making it easier for them to grasp meanings through real-life examples" (Interview, November 2025).

Classroom observations further showed that the use of short videos on proper conduct toward teachers, parents, and peers increased students' engagement and stimulated discussion. In contrast, digital materials that are overly generic and detached from pesantren culture tend to be less well received by both students and teachers. Therefore, integrating classical resources (e.g., PDF texts of classical books, recorded lectures, and audio sermons) with modern media (such as pronunciation demonstration videos, interactive *taṣrīf* exercises, and digital quizzes) is essential for enhancing learning effectiveness and ensuring the sustainability of knowledge transfer (Meddeb et al., 2021)

4. Digital Adab and Scholarly Ethics (Governing Values)

To ensure that digitalization does not erode the distinctive values of the pesantren, systematic education in digital *adab* is essential. This includes ethical guidance on searching for, citing, and disseminating knowledge, as well as clear regulations regarding



media use, such as time restrictions, permitted platforms, and mechanisms for information verification.

Ust. Ulfie highlighted the use of a Learning Management System (LMS) for teaching *Ta'lim al-Muta'allim*, noting that “the LMS enables students to access structured summaries, practice exercises, and ethical guidelines related to seeking knowledge. Students can revisit these materials at any time.” Classroom observations further showed that during evening study sessions, students frequently accessed the LMS to review lessons on proper conduct toward teachers. This availability facilitates the internalization of *adab*, as the materials remain continuously accessible.

Such efforts ensure that technology functions as a *wasilah* (supportive instrument) rather than an end in itself, while sustaining the long-standing tradition of pesantren learning. Studies in pesantren contexts consistently emphasize that the cultivation of these values is crucial for preventing the infiltration of unfiltered or inappropriate content into Islamic educational environments. (Karomani et al., 2021)

5. Leadership Support (Kiai/Administrators) and Institutional Policy

The authority and support of *kiai* and pesantren leaders are decisive factors in the acceptance of instructional innovation. Supportive policies such as budget allocation, the structuring of study schedules, continuous professional development programs, and recognition for creative teachers significantly accelerate the adoption of digital technologies.

Usth. Nida Nabila explained that the *kiai* strongly supports digitalization initiatives as long as they preserve students' *adab* and the core values of the pesantren. She emphasized that technology is regarded as a tool rather than an end in itself; therefore, every digital innovation must remain aligned with the traditions of *talaqqi* and *kitab kuning* study. The pesantren administration also allocates an annual budget for the necessary digital equipment. Furthermore, Pesantren Mathlaul Hidayah has established clear regulations on gadget usage schedules, application access restrictions, and standard operating procedures for LMS use by teachers. Regular training programs are provided to equip teachers with digital teaching competencies, while institutional encouragement and appreciation are given to those who actively develop digital learning media (Interview with Usth. Nida Nabila, November 2025).

Without leadership legitimacy and institutional backing, digitalization efforts risk becoming unsustainable, even when technical facilities are available. Consistent with previous studies on e-learning adoption, social influence and institutional support are identified as dominant factors in ensuring successful and sustained implementation (Awan et al., 2021)

6. Monitoring, Evaluation, and Sustainability

A structured monitoring system such as LMS activity logs, digital portfolios, and online assessments serves as a critical foundation for improving instructional design. Data-driven evaluation enables teachers and pesantren administrators to make more accurate adjustments to teaching methods, learning materials, and digital approaches. As noted by Usth. Aisyah, the use of Moodle Classroom has increased assessment efficiency by providing automatic scoring, progress tracking, and immediate feedback for students (Interview, November 2025). Classroom observations also showed that tablet-based



examinations in the multimedia room generated instant results, allowing teachers to concentrate more on addressing students' linguistic weaknesses.

To ensure long-term sustainability, digital learning initiatives require systematic planning, including regular device maintenance, continuous content updates, and consistent budget allocation. Studies on e-learning implementation emphasize the importance of comprehensive evaluation models that assess learning outcomes, user satisfaction, and the intensity of system utilization to support sustainable adoption (Eraku et al., 2021)

Table 3.
Summary of Key Determining Factors

Determining Factor	Impact on Success	Brief Recommendation
Teacher Competence	Effectiveness of digital instruction	Blended professional development, mentoring
Infrastructure	Continuity of learning services	Regular audits, offline solutions
Content Alignment	Relevance and student acceptance	Integrated modules linking classical texts and digital media
Adab and Ethics	Preservation of pesantren traditions	Digital adab curriculum, standard operating procedures
Leadership Support	Institutional legitimacy and funding	Engagement of kiai, supportive policies
Student Readiness	Utilization of resources and learning motivation	Information literacy training, project-based learning
Monitoring	Continuous improvement	LMS analytics, KPIs, ongoing evaluation

CONCLUSION

This study concludes that the implementation of Islamic education-based digital literacy in Arabic language learning at Pesantren Mathlaul Hidayah Darussalam Cianjur has been carried out through the utilization of various digital media, including e-books of classical Islamic texts (*kutub al-turāth*), digital Arabic dictionary applications, Learning Management Systems (LMS), instructional videos, and podcasts. These media are contextually integrated with traditional pesantren learning methods such as *talaqqi*, *sorogan*, and *muṭāla'ah*, enabling technology to function as a supportive tool without diminishing the scholarly character and traditions of the pesantren. The findings indicate that students' responses to digital literacy-based Arabic language learning are predominantly positive. Students demonstrate improved comprehension of *mufradāt*, *naḥw*, *ṣarf*, and enhanced ability to read unvowelled classical texts (*kitab gundul*). Moreover, the use of digital media has been shown to increase learning motivation and foster greater learner autonomy in accessing and managing learning resources.

The successful integration of digital literacy with pesantren values is influenced by several key factors, including teachers' pedagogical and digital literacy competencies, the availability of adequate infrastructure, institutional leadership and policy support, the



alignment of digital content with the Arabic language curriculum and classical text traditions, as well as the reinforcement of digital ethics and scholarly conduct (*adab*) within the learning process. Based on these findings, this study recommends strengthening digital pedagogical training for educators, improving supporting facilities and infrastructure, and developing pesantren policies that encourage innovation in digital literacy-based learning while remaining grounded in Islamic values. Future research is encouraged to expand the scope to other pesantren contexts and to incorporate quantitative approaches in order to examine the effectiveness of digital literacy integration models more comprehensively and sustainably.

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