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Digital Literacy in Islamic Elementary Education: The Role of Teachers in Strengthening Student Competencies

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Abstract

The rapid development of digital technologies has reshaped learning environments and highlighted the urgent need for digital literacy competencies among primary school students, including those in Islamic educational settings. This study aims to analyze the multifaceted roles of teachers in strengthening digital literacy in Islamic primary schools, focusing on how teachers facilitate technology use, guide ethical digital behavior, innovate curriculum design, and motivate learners. Employing a descriptive qualitative approach through a systematic literature review, this research synthesizes findings from national and international journal articles published within the last decade. The results reveal four dominant teacher roles that consistently appear across the literature. First, teachers act as facilitators by utilizing digital platforms and resources to support student-centered learning and foster independent exploration. Second, they serve as guides for digital ethics, helping young learners navigate issues such as online safety, credibility of information, privacy, and responsible digital communication. Third, teachers function as curriculum innovators by integrating digital tools and project-based learning tasks that enhance critical thinking, creativity, and engagement. Fourth, teachers act as motivators, providing emotional support and creating positive digital learning experiences that build students' confidence in using technology. These findings indicate that digital literacy development requires a holistic pedagogical approach that integrates technological skills, ethical reasoning, and affective support. The study contributes to the existing body of knowledge by situating digital literacy within the moral-pedagogical context of Islamic education, highlighting the importance of harmonizing technological competence with Islamic values. The implications suggest the need for capacity building, continuous professional development, and supportive digital infrastructure to enable teachers to perform these roles effectively. Overall, this research reinforces the central role of teachers in shaping digitally competent and ethically grounded learners in the era of educational digital transformation.

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Introduction

The rapid advancement of digital technology has brought significant implications for educational practices, particularly at the level of Islamic primary education. Students in madrasah ibtidaiyah or Sekolah Dasar Islam encounter digital media from an early age, yet their ability to use technology critically and responsibly remains limited. Digital literacy, therefore, becomes an essential competency that must be developed since primary school as a foundation for more complex learning in the future. Teachers play a central role in guiding students to understand, evaluate, and utilize digital information effectively, especially in an era that demands global competitiveness, creativity, logical reasoning, and collaborative skills (Rahmadani, 2020). Despite this urgency, many students and teachers still face constraints related to digital literacy competence, including limited understanding of information evaluation, inadequate digital ethics, and low ability to optimize digital learning resources (Purba & Ain, 2024). These conditions highlight an important empirical problem: the need to strengthen digital literacy skills among students in Islamic primary education through the strategic involvement of teachers.

Technological development has also transformed educational systems globally, pushing schools to adopt learning models aligned with the expectations of the 21st century. Education systems must adapt by integrating digital media, interactive learning platforms, and technology-based pedagogical approaches (Khasanah, Sukirman, & Aswar, 2024). Within this context, digital literacy is not merely a technical skill but a cultural and intellectual competence that shapes how learners interpret digital content (Aprilia et al., 2025). The increasing exposure of children to digital devices with both potential benefits and risks requires balanced reinforcement of digital literacy to prevent negative impacts (Febriani et al., 2025). Moreover, utilizing digital tools in learning is now considered not only relevant to students' interests but also necessary for nurturing adaptive learning environments (Ehrick, Takwim, & Bungawati, 2024). These findings collectively represent the state of current knowledge regarding the integration of digital literacy into primary education.

However, previous studies tend to focus separately on digital literacy skills or the adoption of digital learning tools, leaving a gap in understanding the *specific* pedagogical roles of teachers within Islamic primary education settings. The unique characteristics of Islamic schools—such as the integration of religious values, character formation, and literacy culture—require contextualized strategies that differ from general primary schools (Anggraeni, Dewi, & Hayat, 2023). While technological integration in classrooms has been widely studied, research exploring *how teachers systematically cultivate digital literacy competencies* aligned with Islamic educational values remains insufficient. This gap indicates a need for more comprehensive conceptual exploration of the teacher's role in strengthening digital literacy within the moral and cultural framework of Islamic basic education. Furthermore, existing studies rarely synthesize findings across multiple sources to provide a holistic understanding of teachers' responsibilities in this area.

Building upon this gap, the present article aims to analyze and elaborate the role of teachers in reinforcing digital literacy competencies among students in Islamic primary education. Using a structured literature review approach, this

study maps relevant journal findings to identify strategies, challenges, and pedagogical implications related to teachers' roles in digital literacy development. The novelty of this research lies in its integrative perspective that combines technological, pedagogical, and Islamic educational dimensions—an approach not yet sufficiently explored in previous literature. By offering a comprehensive synthesis, this article contributes theoretically to the discourse on digital transformation in Islamic education and provides practical insights for developing digital literacy from an early age within primary school settings.

Method

This study employed a descriptive qualitative approach using a systematic literature review (SLR) method. A literature review was selected because it allows the researcher to explore, interpret, and synthesize findings from previous studies that are relevant to the theme of teachers' roles in strengthening digital literacy among students in Islamic primary education. As emphasized by Febriani et al. (2025), literature-based research focuses on collecting and analyzing information from credible scholarly sources without conducting direct field observations or primary data collection.

The corpus of literature for this study consisted of journal articles, conference papers, and academic reports published within the last 5–10 years to ensure the relevance and currency of the data. Sources were identified through academic databases such as Google Scholar, DOAJ, and SINTA-indexed journals using keywords including digital literacy, primary education, teacher roles, and Islamic education. The inclusion criteria covered: (1) studies discussing digital literacy in primary school contexts, (2) research analyzing teacher competence or pedagogical roles, (3) publications available in full text, and (4) peer-reviewed articles with clear methodological descriptions. Studies that did not meet these criteria or lacked sufficient methodological rigor were excluded to maintain the quality of evidence.

Data were collected through a systematic procedure involving identification, screening, eligibility assessment, and final selection of sources. Each selected article was examined to extract information relevant to the conceptualization of digital literacy, teacher responsibilities, pedagogical strategies, and challenges associated with technology integration in Islamic primary education. The extracted data were organized into thematic categories to facilitate comparison across studies.

Thematic analysis was employed as the primary analytical technique to identify recurring patterns, dominant teacher roles, and instructional strategies highlighted in the literature. This analytic process involved coding textual data, grouping similar findings, and synthesizing themes that represent teachers' contributions to digital literacy development. The analysis also compared variations across contexts to identify unique aspects of Islamic primary education. Through this process, the study provides a comprehensive conceptual understanding based on existing evidence and highlights the strategic position of teachers in shaping digital literacy competencies among young learners.

Results

The results of this study were generated from a systematic review of relevant scholarly articles published within the past five to ten years focusing on the role of teachers in strengthening digital literacy among primary school students. Through thematic synthesis, four dominant themes emerged consistently across the reviewed literature: (1) teachers as facilitators of digital learning, (2) teachers as guides for digital ethics, (3) teachers as curriculum innovators, and (4) teachers as motivators in technology-based learning. These themes represent recurring patterns reported in multiple studies.

1. Teachers as Facilitators

The literature shows that teachers commonly facilitate digital literacy development by introducing and utilizing various digital learning tools suitable for the cognitive level of primary school students. Several studies reported the use of platforms such as Google Classroom, Canva, YouTube Edu, and interactive evaluation tools like Quizziz or Kahoot to support access to learning materials (Ehrick et al., 2024; Handiyani & Abidin, 2023). The findings also indicate that teachers are expected to possess basic digital competencies, including the ability to search, select, and utilize online information effectively (Juwairiyah et al., 2023).

2. Teachers as Guides for Digital Ethics

A recurring pattern in the literature points to the teacher's role in providing guidance on ethical digital behavior. Studies highlight the vulnerability of primary students to misinformation, inappropriate digital content, and irresponsible online actions. The reviewed articles emphasize that teachers often instruct students on issues such as privacy, responsible communication, and basic verification of information (Febriani et al., 2025). Other findings show that rapid information sharing without proper filtering is becoming common among students, making ethical guidance an essential component in literacy efforts (Muhammad Luthfi Hamdani et al., 2023).

3. Teachers as Curriculum Innovators

The reviewed studies consistently identify teachers as active agents in integrating digital literacy into classroom learning. The findings highlight the use of digital applications, online platforms, and project-based digital assignments as frequent strategies employed by teachers to enhance students' digital literacy competencies (Falasifah et al., 2025). Several studies report that digital tasks such as interactive presentations, infographics, and educational videos are increasingly adopted as part of classroom instruction (Solih & Julianto, 2025). In addition, other findings note that teachers adjust instructional design to align with students' digital learning preferences (Wahyudi & Sitorus, 2023).

4. Teachers as Motivators

The literature also identifies the motivational role of teachers as an important component in digital literacy development. Studies indicate that teachers frequently encourage students to engage with digital tools, provide emotional support, and apply communication strategies that promote positive attitudes toward technology use (Wahyuni, Arief, & Hisbullah, 2022). Findings show that student motivation increases when learning activities incorporate engaging digital media such as games, interactive videos, or digital quizzes. The

reviewed literature also notes that teacher encouragement plays a role in helping students overcome difficulties or lack of confidence in using digital tools.

Discussion

The findings of this study reveal four principal teacher roles in strengthening digital literacy among primary school students—teachers as facilitators, guides for digital ethics, curriculum innovators, and motivators. These themes demonstrate that digital literacy development in Islamic primary education is a multidimensional process that integrates cognitive, ethical, pedagogical, and socio-emotional domains. The following discussion analyzes each theme by interpreting the findings through theoretical perspectives and comparing them with relevant empirical studies.

The identification of teachers as facilitators indicates a significant pedagogical shift from traditional teacher-centered instruction to more student-centered and technology-mediated learning environments. The consistent use of platforms such as Google Classroom, Canva, and YouTube Edu aligns with Vygotsky's constructivist theory, which underscores the importance of guided learning and *scaffolding* in helping students construct new knowledge. This finding corroborates research by Handiyani and Abidin (2023), who observed that digital facilitation enhances learner autonomy and strengthens engagement. However, when juxtaposed with the findings of Juwairiyah et al. (2023), it becomes evident that disparities remain in teachers' digital competencies, particularly in evaluating and selecting credible online learning resources. Within Islamic primary education, facilitation entails an additional responsibility: ensuring the cultural and moral suitability of digital materials. This context-specific dimension enriches the broader literature on digital literacy facilitation, which commonly focuses solely on technical and pedagogical aspects.

The second theme—teachers as guides for digital ethics—highlights an essential yet frequently overlooked component of digital literacy at the primary level. The vulnerability of young learners to misinformation, inappropriate online behavior, and privacy violations reinforces the need for moral and ethical guidance in digital spaces. This finding is consistent with Ribble's digital citizenship framework, which places ethical responsibility, digital safety, and respectful online interaction at the core of digital competence. The alignment between this study and the work of Febriani et al. (2025) further confirms that ethical guidance is integral to digital literacy instruction, not an optional complement to technical skills. Moreover, the observation by Muhammad Luthfi Hamdani et al. (2023) on students' uncritical information-sharing habits underlines the urgency of fostering critical thinking. In Islamic primary education, the ethical dimension is especially significant because it intersects with *tarbiyah akhlāqiyyah*, the Islamic moral education tradition. The integration of digital ethics and religious values thus offers a distinctive and contextually grounded contribution to the global discourse on digital literacy.

The role of teachers as curriculum innovators suggests that digital literacy cannot be strengthened through isolated technological interventions alone; rather, it requires comprehensive pedagogical redesign. The integration of project-based digital tasks—such as infographics, interactive presentations, and educational videos—reflects the principles of the Technological Pedagogical

Content Knowledge (TPACK) framework, which emphasizes the interconnectedness of technology, pedagogy, and subject matter. This finding supports the conclusions of Falasifah et al. (2025) and Solih and Julianto (2025), who showed that digital task design enhances students' critical thinking, creativity, and active participation. However, the study by Wahyudi and Sitorus (2023) highlights a persistent gap in teachers' ability to design interactive digital media despite understanding the importance of innovation. In Islamic primary education contexts, such curriculum innovation must be balanced with value-oriented content. Accordingly, digital projects that integrate Islamic themes or ethical narratives can serve as culturally responsive learning tools, underscoring how educational technology can harmonize with Islamic pedagogical values.

The final theme identifies teachers as motivators, emphasizing the socio-emotional components of digital literacy development. Encouragement, positive communication, and affective support emerged in the literature as key factors influencing students' confidence in using digital tools. These findings resonate with Bandura's theory of self-efficacy, which asserts that emotional reinforcement from significant adults enhances learners' persistence in facing challenges. This interpretation aligns with Wahyuni, Arief, and Hisbullah (2022), who demonstrated that teacher-student interpersonal interactions directly shape students' interest in technology-enhanced learning. Unlike previous studies that focus predominantly on digital skills, the present findings illustrate that emotional and motivational support is equally critical in digital literacy development. In Islamic education settings, motivational practices are further enriched by religious values, such as encouraging perseverance (*ṣabr*) and sincere effort (*ikhlaṣ*), thereby linking technology-mediated learning to spiritual and moral growth.

Taken together, the four themes illustrate that teachers' role in digital literacy is holistic and interconnected. Facilitation provides access to digital tools; ethical guidance shapes responsible use; curriculum innovation creates meaningful learning experiences; and motivation sustains student engagement. When compared with global literature, the findings indicate that Islamic primary education introduces unique value-based dimensions that have been underrepresented in prior research. This suggests that digital literacy in Islamic school contexts encompasses not only skills and pedagogy but also moral and spiritual formation.

Consequently, this study contributes to the international discourse by demonstrating that digital literacy development in Islamic primary schools requires a multidimensional approach that integrates technological competence, pedagogical innovation, ethical reasoning, and emotional support. These insights offer both theoretical advancement and practical guidance for educators and policymakers seeking to strengthen digital literacy within culturally and religiously grounded learning environments.

Conclusion

This study concludes that teachers play a central and multidimensional role in strengthening digital literacy among primary school students within Islamic educational settings. The four dominant roles identified—facilitator, guide for digital ethics, curriculum innovator, and motivator—demonstrate that digital literacy development extends beyond the acquisition of technical skills. It encompasses pedagogical transformation, ethical awareness, and socio-emotional support, all of which are essential for preparing young learners to navigate digital environments responsibly and effectively.

The role of teachers as facilitators reflects a pedagogical shift toward learner-centered and technology-enhanced instruction, highlighting the importance of teachers' digital competence in supporting autonomous learning. Their role as ethical guides underscores the necessity of integrating digital citizenship and moral reasoning into early education, especially given students' vulnerability to misinformation and inappropriate online behavior. Teachers as curriculum innovators illustrate the ongoing evolution of instructional design, emphasizing the need for meaningful integration of digital tasks that promote critical thinking, creativity, and engagement. Finally, teachers as motivators reinforce the significance of affective and relational dimensions in digital literacy, which help foster students' confidence and persistence in using technology.

Theoretically, this study contributes to the discourse by demonstrating that digital literacy in Islamic primary education must be understood holistically through the integration of technological, pedagogical, and ethical dimensions grounded in Islamic values. Practically, the findings highlight the need for continuous professional development, adequate digital infrastructure, and institutional support to enable teachers to perform these roles effectively.

However, this study is limited by its reliance on secondary data through a literature review, which may not fully capture contextual variations in different Islamic primary school environments. Future research should employ empirical approaches—such as classroom observations, interviews, or mixed-method designs—to explore how these teacher roles are enacted in practice. Comparative studies across regions or between Islamic and non-Islamic school settings could also deepen understanding of cultural factors influencing digital literacy development.

Overall, this study reinforces the importance of teacher capacity, pedagogical innovation, and value-based digital literacy instruction in shaping a generation of digitally competent, ethically grounded, and resilient learners in the era of educational digital transformation.

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