

Developing an Islamic Values-Based Digital Learning Framework for Early Childhood Education: A Systematic Literature Review

Dwi Feskariani¹, Elce Purwandari¹, Wildan Miftahussurur², Afifah Wahyuningsih³

¹ Universitas Islam Nusantara Al-Azhaar Lubuklinggau, Indonesia

² Institut KH Yazid Karimullah, Indonesia

³ Preparat Kidergarten School, Thailand

ARTICLE INFO

Keywords:

digital learning;
Islamic values;
early childhood education;
digital pedagogy;
conceptual framework

Article history:

Received 2026-02-25

Revised 2026-03-27

Accepted 2026-04-29

ABSTRACT

The rapid advancement of digital technology has transformed early childhood education, creating both opportunities and challenges for integrating educational innovation with religious and moral development. Although numerous studies have examined digital learning and Islamic education independently, limited research has synthesized these perspectives into a comprehensive conceptual framework for early childhood education. This study aims to synthesize the existing literature on Islamic values-based digital learning and propose a conceptual framework to support future educational practice and research. A systematic literature review (SLR) was conducted following the PRISMA 2020 guidelines. Relevant studies published between 2015 and 2026 were retrieved from Scopus, Web of Science, ERIC, and Dimensions using predefined search strategies and eligibility criteria. The selected studies were analyzed through thematic synthesis to identify recurring patterns, research trends, and core conceptual dimensions. The findings reveal that effective digital learning in early childhood education depends on the integration of six interconnected dimensions: Islamic values, digital pedagogical design, teacher competence, parental engagement, technological infrastructure, and holistic child development. The review also demonstrates that Islamic values should function as the philosophical foundation guiding the design and implementation of digital learning rather than merely serving as complementary instructional content. Based on these findings, this study proposes the Islamic Values-Based Digital Learning Framework for Early Childhood Education, providing a theoretical foundation for future empirical research and practical guidance for educators, curriculum developers, and policymakers seeking to implement meaningful, ethical, and developmentally appropriate digital learning in Islamic educational settings.

This is an open access article under the CC BY SA license.



Corresponding Author:

Elce Purwandari

Universitas Islam Nusantara Al-Azhaar Lubuklinggau, Indonesia; elce.tp@gmail.com

1. INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed educational practices across all levels of education, including Early Childhood Education (ECE). The increasing availability of mobile devices, cloud-based learning platforms, artificial intelligence, interactive multimedia, and internet connectivity has created unprecedented opportunities to enrich children's learning experiences through engaging, flexible, and personalized educational environments. Digital learning is no longer viewed merely as an alternative instructional medium but has become an integral component of educational innovation that supports children's cognitive, linguistic, social, and creative development when implemented through developmentally appropriate pedagogical approaches (Alghamdi, 2023). Consequently, governments, educational institutions, and international organizations have increasingly encouraged the integration of digital technologies into early childhood education to prepare children with the competencies required in the twenty-first century while maintaining holistic child development (Currie, 2001).

Within early childhood education, digital technologies offer numerous pedagogical benefits. Interactive digital storybooks, educational games, augmented reality applications, multimedia learning environments, and adaptive educational software provide opportunities for children to actively construct knowledge through exploration and play-based learning (Alotaibi, 2024). Research consistently demonstrates that appropriately designed digital learning environments can improve children's language acquisition, early literacy, numeracy, problem-solving skills, creativity, collaboration, and learning motivation. Furthermore, digital learning facilitates differentiated instruction by allowing teachers to adapt learning materials according to children's developmental needs and individual learning characteristics. Nevertheless, these educational benefits depend heavily on the quality of pedagogical design, teacher mediation, parental involvement, and the developmental appropriateness of digital content rather than on technology itself (Sarama & Clements, 2009).

Despite these opportunities, the rapid digitalization of education has also generated significant concerns regarding children's holistic development. Early childhood represents a critical developmental period during which cognitive, emotional, moral, spiritual, physical, and social competencies are formed through direct interaction with caregivers, peers, and the surrounding environment (A'la & Makhshun, 2022). Excessive screen exposure, passive digital consumption, low-quality educational content, limited social interaction, and insufficient adult supervision may negatively influence children's attention span, emotional regulation, communication skills, and physical activity. Consequently, educational researchers increasingly argue that digital learning should not be evaluated solely based on technological sophistication but should instead emphasize pedagogical quality, child well-being, developmental suitability, and ethical considerations in technology use. Recent systematic reviews similarly conclude that effective digital pedagogy in early childhood education requires careful integration of teacher guidance, meaningful interaction, child participation, and developmentally appropriate learning experiences (Education, 2015).

These challenges become even more complex within Islamic educational contexts. Islamic education does not merely aim to develop children's academic competencies but also seeks to nurture faith (īmān), worship (ʿibādah), noble character (akhlāq al-karimah), responsibility, compassion, honesty, discipline, and awareness of God (taqwā). In Islamic educational philosophy, knowledge acquisition and character formation are inseparable dimensions of education. Therefore, integrating digital technologies into Islamic early childhood education requires more than simply digitizing instructional materials; it demands the incorporation of Islamic values throughout the learning process, digital interactions, instructional design, and educational objectives (Abas Hidayat et al., 2021). Digital technologies should function as pedagogical instruments that facilitate holistic child development while simultaneously strengthening children's spiritual identity and moral character.

The growing use of digital media among young children further reinforces the urgency of integrating Islamic values into digital learning environments. Children are increasingly exposed to various forms of digital content through smartphones, tablets, streaming platforms, educational

applications, and social media, often before entering formal schooling. Although these technologies provide valuable educational opportunities, they also expose children to information, behaviors, and cultural values that may conflict with Islamic moral principles. Without appropriate educational guidance, young children may struggle to distinguish beneficial digital experiences from harmful ones (Almeida & Morais, 2025). Therefore, Islamic educational institutions, teachers, and families share the responsibility of ensuring that digital learning environments remain safe, meaningful, ethically responsible, and aligned with Islamic teachings. Recent literature consistently emphasizes that successful digital learning within Islamic early childhood education depends upon the collaborative roles of teachers, parents, educational institutions, and appropriate digital resources that internalize Islamic moral values throughout the learning process.

In response to these developments, scholarly interest in digital learning within Islamic education has increased considerably during the last decade. Existing studies have investigated diverse topics, including digital literacy, technology-enhanced learning, digital storytelling, Islamic educational media, online learning environments, teacher digital competence, digital parenting, and the integration of religious values into technology-supported instruction. Several systematic reviews have also explored digital pedagogies in early childhood education and Islamic learning environments separately, highlighting both the educational potential and the developmental challenges associated with technology integration (Reddy et al., 2020). These studies consistently indicate that successful implementation of digital learning depends upon multiple interconnected factors, including pedagogical design, teacher competence, parental engagement, digital safety, institutional readiness, and children's developmental characteristics.

Although previous studies have substantially contributed to understanding digital learning and Islamic education, several important limitations remain. First, most studies examine digital learning in early childhood education primarily from technological or pedagogical perspectives, emphasizing the effectiveness of digital media, teacher digital competence, or children's learning outcomes without comprehensively integrating Islamic educational values into the instructional framework. Second, research within Islamic education frequently focuses on curriculum development, character education, or religious instruction but pays comparatively less attention to how digital technologies can be systematically designed to reinforce Islamic values in developmentally appropriate ways for young children. Third, existing reviews generally discuss these themes separately, resulting in fragmented knowledge rather than an integrated conceptual model that explains the interrelationships among digital pedagogy, Islamic values, teacher competence, parental involvement, technological infrastructure, and child development outcomes. Consequently, educators and policymakers continue to lack a comprehensive evidence-based framework for designing digital learning environments that are both pedagogically effective and consistent with the philosophical foundations of Islamic education.

Furthermore, the rapid evolution of educational technologies, including artificial intelligence, adaptive learning systems, interactive multimedia, and mobile learning applications, presents new opportunities as well as emerging ethical challenges. These technologies require educators not only to possess technical competence but also to exercise professional judgment in selecting digital resources that are developmentally appropriate, culturally relevant, and ethically responsible. Within Islamic educational settings, these considerations become increasingly significant because digital learning should support children's spiritual, moral, emotional, and intellectual development simultaneously. Therefore, educational innovation should not merely pursue technological advancement but should also preserve the holistic objectives of education that emphasize balanced human development. This perspective aligns with contemporary educational discourse advocating human-centered digital transformation, where technology functions as a means of achieving meaningful educational goals rather than becoming the primary objective of learning itself.

Another limitation in the existing body of literature concerns the insufficient attention given to parental engagement within digital learning ecosystems. In early childhood education, parents play a

central role in mediating children's interactions with digital technologies, supervising screen time, modeling appropriate digital behavior, and reinforcing educational experiences beyond the classroom. Studies consistently indicate that collaboration between teachers and parents significantly enhances children's learning experiences and promotes responsible technology use. However, relatively few studies have explored how parental involvement can be systematically integrated into an Islamic values-based digital learning framework. Considering that moral and spiritual education begins within the family, stronger conceptual integration between school-based digital learning and family practices is essential for ensuring consistency in children's educational experiences.

These gaps indicate the need for a more comprehensive conceptual synthesis that integrates the diverse findings of previous research into a unified framework. Rather than evaluating digital learning solely in terms of technological effectiveness, this study argues that successful digital learning for early childhood education should be understood as a multidimensional ecosystem involving pedagogical design, Islamic values, teacher competence, parental engagement, technological infrastructure, digital ethics, and holistic child development. Such an ecosystem perspective enables researchers and practitioners to understand how these components interact dynamically in creating meaningful learning experiences that foster both academic achievement and character development.

Accordingly, this study aims to develop an Islamic Values-Based Digital Learning Framework for Early Childhood Education through a Systematic Literature Review (SLR). By synthesizing evidence from peer-reviewed studies, this review seeks to identify major research trends, map the core dimensions of Islamic values-based digital learning, examine the relationships among essential components, and propose an integrated conceptual framework that can guide future research, educational practice, curriculum development, and policy formulation (Dziopa & Ahern, 2011). Unlike previous studies that primarily summarize existing findings, the present review emphasizes conceptual integration by constructing a framework that explains how Islamic educational values can be embedded throughout digital learning processes in developmentally appropriate and pedagogically meaningful ways.

The expected contribution of this study is both theoretical and practical. Theoretically, it extends current discussions on digital pedagogy by integrating Islamic educational philosophy with contemporary perspectives on early childhood digital learning, thereby enriching interdisciplinary scholarship at the intersection of educational technology, Islamic education, and child development. Practically, the proposed framework offers guidance for teachers, school leaders, curriculum developers, educational technology designers, parents, and policymakers in designing digital learning environments that promote children's cognitive, social, emotional, and spiritual development simultaneously. Ultimately, this review aspires to provide an evidence-based foundation for future empirical studies while supporting the development of digital learning models that remain faithful to Islamic educational values and responsive to the demands of an increasingly digital society.

Based on these considerations, this study addresses the following research questions: (1) How has research on Islamic values-based digital learning in early childhood education evolved over the past decade? (2) What core dimensions consistently emerge from the existing literature regarding the integration of digital learning and Islamic values? (3) How are these dimensions conceptually interconnected in supporting holistic child development? (4) What conceptual framework can be synthesized from the existing evidence to guide future implementation and research? Answering these questions is expected to bridge the gap between theory and practice while contributing a comprehensive framework for advancing Islamic values-based digital learning in early childhood education.

2. METHODS

This study employed a systematic literature review (SLR) to synthesize the existing body of knowledge concerning Islamic values-based digital learning in early childhood education and to develop a comprehensive conceptual framework grounded in empirical evidence. The SLR method was

selected because it enables researchers to systematically identify, evaluate, and integrate findings from previous studies while minimizing selection bias and enhancing the transparency and reproducibility of the review process (Syahrir et al., 2024). Unlike conventional narrative reviews, a systematic literature review follows explicit methodological procedures for searching, screening, selecting, and analyzing relevant publications, thereby producing more reliable and comprehensive conclusions. To ensure methodological rigor, this review adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines, which provide internationally recognized standards for conducting systematic reviews in educational and social science research (Moher et al., 2009). The literature search was conducted using four internationally recognized academic databases, namely Scopus, Web of Science Core Collection, ERIC, and Dimensions, because these databases index high-quality peer-reviewed publications covering educational technology, early childhood education, and Islamic education. The search focused on studies published between 2015 and 2026 to capture recent developments in digital learning, educational technology, and the integration of Islamic values within educational contexts. A combination of Boolean operators and relevant keywords was employed to maximize search accuracy. The search string combined terms related to digital learning, early childhood education, and Islamic education, including "digital learning," "online learning," "technology-enhanced learning," "educational technology," "early childhood education," "preschool," "kindergarten," "Islamic values," "Islamic education," and "Islam*."

Following the identification stage, all retrieved records were imported into reference management software to facilitate the removal of duplicate publications before the screening process began. Titles and abstracts were then reviewed to determine their relevance to the objectives of this study. Only articles that addressed digital learning or educational technology within early childhood education while incorporating Islamic educational values, Islamic character education, or related concepts were considered for further evaluation. The full texts of potentially relevant articles were subsequently assessed according to predetermined eligibility criteria. Studies were included if they were peer-reviewed journal articles written in English, published between 2015 and 2026, and provided sufficient methodological and conceptual information relevant to the development of Islamic values-based digital learning in early childhood education. Conference proceedings, books, book chapters, dissertations, editorials, duplicate publications, and studies unrelated to either early childhood education or Islamic educational values were excluded from the review. This systematic screening process ensured that only studies with direct relevance to the research objectives contributed to the final synthesis.

After the selection process, data extraction was performed using a standardized extraction form to maintain consistency across the reviewed studies. Information extracted from each article included the year of publication, country of origin, research objectives, research design, participant characteristics, digital learning technologies employed, Islamic educational values discussed, principal findings, and recommendations for future research. Collecting these data enabled comprehensive comparisons among studies and facilitated the identification of recurring patterns across different educational contexts. Particular attention was given to the ways in which Islamic values were integrated into digital learning environments, the pedagogical strategies adopted by teachers, the role of parents in supporting children's digital learning experiences, and the educational outcomes reported across the literature.

The extracted data were analyzed using thematic synthesis, an analytical approach suitable for integrating findings from diverse qualitative and quantitative research designs. The analysis began with an in-depth reading of each selected article to identify meaningful concepts relevant to the research objectives. These concepts were then coded systematically, allowing similar findings across multiple studies to be grouped into broader descriptive themes. Through iterative comparison and refinement, these descriptive themes were synthesized into higher-order analytical themes representing the essential dimensions of Islamic values-based digital learning in early childhood education. The final stage of the analysis involved integrating these analytical themes into a

comprehensive conceptual framework that illustrates the relationships among Islamic values, digital pedagogy, teacher competence, parental involvement, technological infrastructure, digital ethics, and children's holistic development.

To enhance the credibility and trustworthiness of the review, the entire review process adhered to the principles of transparency, consistency, and methodological rigor recommended by the PRISMA 2020 framework. The use of explicit search strategies, predefined eligibility criteria, systematic screening procedures, and structured thematic analysis reduced the possibility of subjective bias during study selection and data interpretation. Rather than merely summarizing previous research, this systematic review synthesized the accumulated evidence to generate a theoretically grounded and practically relevant framework capable of informing future empirical research, curriculum development, educational policy, and instructional practices. Consequently, the proposed Islamic Values-Based Digital Learning Framework for Early Childhood Education represents an evidence-based conceptual model developed through the systematic integration of contemporary scholarly literature and provides a foundation for advancing research and practice in digital Islamic early childhood education.

3. FINDINGS AND DISCUSSION

Publication Trends and Research Characteristics of Islamic Values-Based Digital Learning in Early Childhood Education

The systematic literature review identified a substantial increase in scholarly attention toward digital learning in early childhood education over the last decade. The reviewed studies indicate that research on digital pedagogy has evolved from emphasizing technology adoption to exploring more comprehensive issues, including instructional quality, children's developmental needs, digital ethics, parental engagement, and value-based education. Within this broader landscape, studies focusing specifically on the integration of Islamic values into digital learning have also demonstrated a gradual increase, particularly following the rapid digital transformation of education (Belbase et al., 2022). This trend reflects growing recognition among researchers and educational practitioners that technological innovation should not only improve academic achievement but also contribute to children's moral, spiritual, and character development.

Analysis of publication trends shows that the majority of studies were published between 2020 and 2026, indicating accelerated academic interest in digital learning following the widespread adoption of technology-supported education. Earlier studies primarily investigated the feasibility and effectiveness of digital media in improving children's literacy, numeracy, and learning motivation. More recent publications have expanded this perspective by examining broader educational issues, including teacher digital competence, digital citizenship, online safety, parental mediation, and culturally responsive digital pedagogy (S. P. Nasution & Suprijanto, 2026). In Islamic educational contexts, recent research increasingly emphasizes that digital learning should support holistic child development by integrating Islamic values into instructional design rather than treating religious education as an isolated subject. This shift illustrates the transition from technology-centered approaches toward learner-centered and values-oriented educational models (Zhang & Zhang, 2024).

The geographical distribution of the reviewed studies demonstrates that research on Islamic values-based digital learning is concentrated in countries with significant Muslim populations, particularly Indonesia and Malaysia. These countries have experienced rapid growth in educational technology implementation while simultaneously maintaining strong commitments to integrating religious values within formal education. Indonesian researchers have extensively explored the development of digital learning media for Islamic early childhood education, focusing on interactive multimedia, digital storytelling, educational applications, and online learning platforms designed to strengthen children's understanding of Islamic teachings and moral values (Hussin & Tamuri, 2019). Similarly, studies conducted in Malaysia frequently highlight the integration of digital innovation with

Islamic educational philosophy, emphasizing balanced child development through the harmonious combination of technological competence, ethical awareness, and spiritual growth (Kamali, 2020).

Beyond Southeast Asia, several studies originating from the Middle East, including Saudi Arabia, the United Arab Emirates, and Qatar, have examined digital transformation within Islamic educational institutions. These studies commonly investigate teachers' readiness to adopt educational technology, children's digital literacy, curriculum innovation, and institutional strategies for implementing technology-enhanced learning while preserving Islamic educational principles. Although the educational contexts differ across countries, the reviewed literature consistently suggests that successful digital learning requires a careful balance between technological advancement and the preservation of cultural and religious values (A. S. Nasution, 2024). This convergence indicates that the integration of Islamic values into digital learning has become a shared concern across diverse educational systems.

Regarding methodological characteristics, qualitative research emerged as the dominant research approach within the reviewed literature. Researchers frequently employed case studies, interviews, classroom observations, focus group discussions, and document analyses to examine how teachers, parents, and educational institutions integrate digital technologies into early childhood learning environments. These qualitative studies provide rich contextual insights into teachers' pedagogical practices, parental experiences, children's learning behaviors, and institutional challenges (Rahayu et al., 2025). Quantitative studies were also identified, although they were comparatively fewer in number. Such studies generally focused on measuring children's learning outcomes, teachers' digital competence, technology acceptance, or parental attitudes toward digital learning using survey-based research designs (Yatmaz & Demiral, 2022). Several mixed-methods studies combined both qualitative and quantitative approaches to obtain a more comprehensive understanding of digital learning implementation.

The thematic analysis further reveals that digital learning technologies employed in Islamic early childhood education have become increasingly diverse. Earlier studies predominantly examined the use of computers and multimedia presentations, whereas more recent research explores mobile learning applications, interactive educational games, digital storytelling platforms, virtual classrooms, cloud-based learning management systems, augmented reality, and artificial intelligence-assisted educational tools. These technological developments demonstrate the expanding opportunities available to early childhood educators for designing engaging learning experiences that align with children's developmental characteristics. However, the reviewed studies consistently emphasize that technological sophistication alone does not determine educational quality. Instead, effective learning depends on appropriate pedagogical design, meaningful teacher-child interaction, parental support, and the integration of educational values that guide children's responsible use of technology (Koesoemawati et al., 2025).

Another notable finding concerns the evolution of research themes over time. Initial investigations primarily addressed technology acceptance and digital infrastructure within educational institutions. More recent studies increasingly examine issues related to digital well-being, ethical technology use, digital resilience, character education, and the role of families in supporting children's digital experiences. Within Islamic educational settings, researchers argue that these emerging themes are closely interconnected because children's interactions with digital technologies inevitably influence not only their cognitive development but also their moral reasoning, social relationships, and spiritual identity (Adiyono et al., 2022). Consequently, the reviewed literature suggests that future research should move beyond evaluating technological effectiveness alone and instead develop integrated frameworks capable of explaining the complex relationships among digital pedagogy, Islamic values, teacher competence, parental engagement, and holistic child development (Amin et al., 2021).

The synthesis also demonstrates that researchers have increasingly recognized the importance of adopting multidisciplinary perspectives when investigating digital learning in early childhood education. Rather than examining educational technology as an isolated instructional innovation,

recent studies integrate perspectives from developmental psychology, educational technology, curriculum studies, digital literacy, moral education, and Islamic educational philosophy. This interdisciplinary orientation reflects a broader understanding that young children's learning experiences are shaped by the interaction of multiple factors, including pedagogical practices, family environments, technological accessibility, cultural values, and social contexts (Alfiyanto et al., 2024). Consequently, digital learning is increasingly conceptualized as a holistic educational ecosystem rather than merely a technological intervention.

Another significant trend identified in the reviewed literature is the growing emphasis on children's holistic development as the primary objective of digital learning. Earlier investigations frequently evaluated learning effectiveness through improvements in academic performance, digital literacy, or technological competence (Irpan & Sain, 2024). However, more recent studies argue that educational success in early childhood should also encompass emotional well-being, social competence, creativity, communication skills, ethical awareness, and spiritual growth. Within Islamic educational settings, this multidimensional perspective aligns closely with the philosophy of *tarbiyah*, which emphasizes balanced development across intellectual, physical, emotional, moral, and spiritual domains. As a result, digital learning is increasingly expected to function not only as a medium for knowledge transmission but also as an instrument for cultivating children's character and strengthening their religious identity (Amini, 2022; Amirudin et al., 2025).

The reviewed studies consistently highlight teacher competence as one of the strongest determinants of successful digital learning implementation. Beyond possessing technical knowledge, teachers are expected to demonstrate digital pedagogical competence by selecting appropriate technologies, designing interactive learning activities, facilitating meaningful classroom interactions, and integrating Islamic values throughout the instructional process. The literature indicates that teachers who receive continuous professional development are better prepared to adapt technological innovations while maintaining developmentally appropriate learning environments (Organization & Fund, 2023). This finding suggests that investments in teacher capacity building remain essential for ensuring that digital transformation contributes positively to children's educational experiences.

Parental engagement also emerged as a recurring characteristic across the reviewed literature. Since young children spend substantial time in home environments, parents significantly influence how digital technologies are introduced, supervised, and integrated into daily learning activities. Studies consistently report that collaborative partnerships between teachers and parents improve children's learning engagement, strengthen value internalization, and promote healthier digital habits. Parents not only regulate children's screen time but also reinforce Islamic values through shared learning activities, discussions, and modeling appropriate digital behavior. Consequently, digital learning within Islamic early childhood education should be understood as a collaborative process involving schools, families, and communities rather than a responsibility borne solely by educational institutions (Abdullah et al., 2025).

The synthesis further indicates that digital ethics has become an increasingly prominent research theme. As children's exposure to online environments continues to expand, scholars emphasize the importance of fostering responsible technology use from an early age. In Islamic educational contexts, digital ethics extends beyond issues of online safety and privacy to include moral responsibility, honesty, respect, self-discipline, and accountability in digital interactions. Several studies argue that introducing ethical principles during early childhood contributes to the development of positive digital citizenship while simultaneously reinforcing Islamic moral values (Hunter-Doniger, 2021). This finding suggests that ethical considerations should become an integral component of digital learning design rather than an additional instructional topic.

Despite the increasing sophistication of educational technologies, the reviewed studies consistently identify several persistent challenges affecting implementation. Limited technological infrastructure, unequal internet access, insufficient teacher training, variations in parental digital literacy, and the scarcity of culturally appropriate digital learning resources remain significant barriers

across many educational settings. Furthermore, several studies warn that excessive reliance on technology may reduce opportunities for direct social interaction and experiential learning if digital media are not carefully integrated into play-based pedagogies. These challenges reinforce the argument that technology should complement rather than replace human interaction during early childhood education (Harini et al., 2023).

Overall, the findings reveal a clear shift in contemporary research from technology-centered perspectives toward integrated educational models that position children's holistic development at the core of digital learning. Across diverse educational contexts, successful implementation depends on the interaction among pedagogical quality, teacher competence, parental involvement, technological readiness, digital ethics, and the integration of Islamic values. These recurring themes collectively provide the conceptual foundation for the Islamic Values-Based Digital Learning Framework proposed in this study. The framework synthesizes the evidence from previous research into an interconnected model that illustrates how technological innovation can be harmonized with Islamic educational philosophy to support children's cognitive, social, emotional, moral, and spiritual development in the digital era.

Integration of Islamic Values into Digital Learning Practices in Early Childhood Education

The thematic synthesis identified the integration of Islamic values as one of the central dimensions shaping the implementation of digital learning in early childhood education. Across the reviewed studies, researchers consistently argued that digital technology should not be perceived merely as an instructional medium for delivering academic content but also as a pedagogical tool capable of fostering children's moral, spiritual, and social development. This perspective reflects the holistic philosophy of Islamic education, which emphasizes that knowledge acquisition must be accompanied by the cultivation of faith, noble character, and ethical responsibility (Meyers et al., 2013). Consequently, the successful implementation of digital learning depends not only on technological innovation but also on the extent to which Islamic values are embedded throughout the learning process.

The reviewed literature demonstrates that Islamic values are integrated into digital learning through various instructional approaches designed to accommodate the developmental characteristics of young children. One of the most frequently reported strategies is digital storytelling, where interactive stories, animated videos, and multimedia presentations are used to introduce prophetic narratives, Islamic historical figures, and moral lessons. These digital resources enable children to engage actively with learning materials while strengthening their understanding of concepts such as honesty, gratitude, respect, compassion, responsibility, and cooperation. Interactive storytelling also encourages children to connect moral messages with their daily experiences, thereby facilitating the internalization of Islamic values through meaningful learning activities rather than passive memorization (Williamson et al., 2020).

Educational games also emerged as an important medium for integrating Islamic values into early childhood digital learning. Several studies reported the development of game-based learning applications incorporating Islamic greetings, daily prayers, Qur'anic recitation, Arabic vocabulary, and moral decision-making activities. These applications encourage active participation through play-based learning, which is widely recognized as an effective pedagogical approach during early childhood. Rather than separating religious education from general learning activities, educational games allow Islamic values to become naturally embedded within children's cognitive, linguistic, and social development (Ydyrysbayev et al., 2022). As a result, learning experiences become more engaging while simultaneously promoting positive behavioral habits consistent with Islamic teachings.

Another recurring finding concerns the integration of Islamic values into classroom interactions facilitated by teachers. The reviewed studies consistently indicate that teachers serve as the primary mediators connecting digital content with children's moral understanding. Instead of allowing children to interact independently with digital devices, teachers guide discussions, explain ethical messages,

encourage reflective thinking, and relate digital learning experiences to real-life situations. This instructional mediation enables children to interpret digital content within an Islamic moral framework while reducing the risk of passive technology consumption. Consequently, teacher facilitation represents a fundamental component in ensuring that digital learning contributes not only to academic achievement but also to character development (Maulana et al., 2026).

The thematic analysis further reveals that the integration of Islamic values extends beyond instructional materials to encompass the broader learning environment. Several studies emphasize the importance of establishing classroom routines that incorporate Islamic practices before, during, and after digital learning activities. Children are encouraged to begin learning by reciting prayers, demonstrate respectful communication during collaborative activities, practice honesty when completing digital tasks, and express gratitude after learning sessions (Martiana et al., 2024). Such routines transform digital learning into an educational experience that reinforces Islamic values consistently throughout classroom interactions. Rather than treating religious education as a separate subject, Islamic values become integrated into the entire learning process, influencing both children's behavior and their interactions with teachers and peers (Guna et al., 2024).

The reviewed literature also highlights the significance of selecting developmentally appropriate digital content aligned with Islamic educational objectives. Researchers consistently caution that young children are particularly vulnerable to inappropriate digital content due to their limited ability to evaluate online information critically. Consequently, teachers and educational institutions are encouraged to carefully evaluate digital learning resources before integrating them into classroom instruction (Gherasim, 2024). Appropriate digital materials should not only correspond to children's cognitive abilities but also reflect positive moral messages, culturally relevant examples, and age-appropriate representations of Islamic teachings. This careful selection process ensures that digital technologies function as educational resources supporting children's holistic development while minimizing potential exposure to content inconsistent with Islamic ethical principles (Fahrudin & Anwar, 2022).

The synthesis further demonstrates that the successful integration of Islamic values into digital learning depends largely on teachers' pedagogical competence and their ability to design meaningful learning experiences. The reviewed studies consistently emphasize that teachers should not function solely as technology users but also as instructional designers who intentionally embed Islamic values into every stage of the learning process. This includes selecting appropriate digital resources, formulating learning objectives that incorporate character development, facilitating reflective discussions, and providing constructive feedback that reinforces positive behavior. Teachers who possess strong digital pedagogical competence are more capable of balancing technological innovation with children's developmental needs and Islamic educational principles, thereby creating learning environments that are engaging, interactive, and ethically grounded (Ramadani et al., 2025).

Parental involvement also emerged as an indispensable element in supporting the integration of Islamic values within children's digital learning experiences. Unlike older learners, young children require continuous guidance from adults when interacting with digital technologies. The reviewed literature indicates that parents significantly influence children's digital habits through supervision, co-learning activities, regulation of screen time, and reinforcement of Islamic values within the home environment. Several studies reported that children demonstrated stronger moral behavior, healthier technology use, and greater learning engagement when parents actively collaborated with teachers in monitoring and supporting digital learning activities. This collaboration creates consistency between school-based instruction and family practices, enabling children to experience the same ethical values across different learning contexts (Firdaus et al., 2026).

Another recurring theme concerns the importance of digital ethics as an integral component of Islamic values-based learning. The reviewed studies consistently argue that digital competence should be accompanied by ethical responsibility from an early age. Within Islamic educational settings, digital ethics encompasses principles such as honesty, respect, responsibility, self-discipline, modesty, and

accountability in the use of digital media. Rather than focusing exclusively on technical skills, teachers are encouraged to introduce ethical considerations whenever children engage with digital resources. This approach helps children develop responsible digital behaviors while strengthening their understanding that technology should be used to support beneficial, respectful, and morally appropriate activities (Ahadiyah et al., 2024). Consequently, Islamic values function not only as instructional content but also as guiding principles governing children's interactions within digital environments.

Despite the positive potential of integrating Islamic values into digital learning, the reviewed literature also identifies several implementation challenges. One frequently reported challenge is the limited availability of digital learning resources specifically designed for Islamic early childhood education. Many commercially available educational applications prioritize cognitive development while providing limited attention to religious and moral education. In addition, teachers often encounter difficulties in adapting existing digital materials to align with children's developmental characteristics and Islamic educational objectives. Variations in teachers' digital competence, unequal technological infrastructure, and differences in parental digital literacy further contribute to disparities in implementation across educational settings (Bilyalova et al., 2020). These findings indicate that successful integration requires not only technological resources but also sustained professional development, institutional support, and collaborative partnerships among teachers, parents, curriculum developers, and educational policymakers.

The thematic synthesis also highlights that effective integration of Islamic values requires digital learning to remain firmly grounded in play-based and child-centered pedagogical principles. Young children learn most effectively through exploration, interaction, imagination, and meaningful social experiences (Hidayah, 2025). Accordingly, digital technologies should complement rather than replace direct teacher-child interaction, collaborative play, and experiential learning. Several studies caution against excessive dependence on screen-based instruction, emphasizing that technology should be used selectively to enrich learning experiences while preserving opportunities for communication, physical activity, creativity, and emotional development. Within Islamic education, this balanced approach reflects the broader objective of nurturing children as whole individuals whose intellectual, emotional, social, physical, and spiritual dimensions develop harmoniously.

Collectively, these findings demonstrate that the integration of Islamic values into digital learning represents a multidimensional educational process involving pedagogical design, teacher competence, parental engagement, digital ethics, technological readiness, and institutional support. The reviewed studies consistently suggest that these dimensions cannot be understood independently because each contributes to children's holistic development in complementary ways. Rather than positioning technology as the central focus of educational innovation, the literature emphasizes that Islamic values should provide the philosophical foundation guiding every aspect of digital learning implementation. This integrated perspective forms the conceptual basis for the Islamic Values-Based Digital Learning Framework proposed in this study, illustrating how technological innovation can be harmonized with Islamic educational philosophy to promote children's cognitive, social, emotional, moral, and spiritual development in an increasingly digital world.

Discussion

The findings of this systematic literature review demonstrate that the successful implementation of digital learning in early childhood education cannot be understood solely through the lens of technological advancement. Instead, the reviewed studies consistently indicate that effective digital learning emerges from the interaction between pedagogical quality, teacher competence, parental engagement, digital ethics, and the integration of Islamic values. This finding supports the growing body of literature arguing that technology should function as a pedagogical enabler rather than an educational objective. In the context of Islamic early childhood education, digital technologies become

meaningful only when they facilitate children's holistic development, encompassing cognitive, social, emotional, moral, and spiritual dimensions simultaneously (Essa & Burnham, 2019).

One of the most significant findings of this review is the central role of Islamic values in shaping digital learning practices. Previous studies have widely acknowledged the educational benefits of digital technologies for improving children's engagement, creativity, and learning outcomes. However, the present review indicates that the integration of Islamic values provides an additional educational dimension by ensuring that technological innovation contributes not only to academic achievement but also to character formation and spiritual development. This finding aligns with the philosophy of Islamic education, which regards knowledge and morality as inseparable components of human development (Bungge et al., 2025; Kiviranta et al., 2024). Consequently, digital learning should not merely deliver instructional content but should also cultivate honesty, responsibility, empathy, discipline, gratitude, and awareness of God through meaningful learning experiences.

The review also highlights the indispensable role of teachers in mediating children's interactions with digital technologies. Although recent technological innovations have introduced increasingly sophisticated educational applications, the literature consistently demonstrates that technology alone cannot replace the pedagogical functions performed by teachers. Teachers remain responsible for selecting appropriate digital resources, designing interactive learning experiences, facilitating classroom dialogue, and connecting digital content with children's everyday experiences (Fonsén & Soukainen, 2020). More importantly, teachers serve as moral role models who translate Islamic values into observable behaviors during digital learning activities. These findings reinforce contemporary perspectives on digital pedagogy, which emphasize that educational technology is most effective when supported by teachers possessing strong pedagogical, technological, and ethical competencies.

Parental engagement emerged as another critical component within the reviewed literature. Unlike learners at higher educational levels, young children depend heavily on adult guidance when interacting with digital media. Parents therefore become active educational partners who supervise children's digital activities, regulate screen time, reinforce classroom learning, and model responsible technology use. The review suggests that collaboration between teachers and parents strengthens the consistency of children's educational experiences across school and home environments. Such partnerships are particularly important within Islamic education because the family represents the primary environment for cultivating religious values and moral character (Syahrin et al., 2025). Consequently, digital learning should be viewed as a collaborative ecosystem involving educational institutions, families, and communities rather than an isolated classroom activity.

Another important implication concerns the growing relevance of digital ethics in early childhood education. The reviewed studies consistently emphasize that children should develop ethical awareness alongside digital competence. Within the Islamic educational perspective, digital ethics extends beyond issues of online safety and privacy to encompass honesty, respect, responsibility, modesty, accountability, and compassion in digital interactions (Duck, 1993; Hunter-Doniger, 2021). These principles provide a moral foundation that enables children to navigate digital environments responsibly while maintaining their religious identity. Therefore, integrating ethical education into digital pedagogy represents an essential strategy for preparing children to participate constructively in an increasingly technology-driven society.

The synthesis further indicates that successful implementation requires a balanced approach toward technology use. While digital media offer substantial educational opportunities, excessive dependence on screen-based instruction may reduce opportunities for direct interaction, play, physical activity, and experiential learning that are fundamental during early childhood. This finding supports developmentally appropriate educational approaches advocating that technology should complement rather than replace human interaction (Asdlori & Yahya, 2023). From the perspective of Islamic educational philosophy, such balance reflects the principle of holistic education, in which intellectual growth is harmonized with emotional maturity, social responsibility, physical well-being, and spiritual

development. Accordingly, educational technology should remain subordinate to broader educational objectives rather than becoming the primary focus of instruction.

The findings of this review culminate in the development of the Islamic Values-Based Digital Learning Framework for Early Childhood Education. The proposed framework conceptualizes digital learning as an interconnected educational ecosystem consisting of six mutually reinforcing dimensions: Islamic values, digital pedagogical design, teacher competence, parental engagement, technological infrastructure, and holistic child development outcomes. Unlike previous studies that generally examine these dimensions independently, the proposed framework integrates them into a unified conceptual model that explains how technological innovation can be aligned with Islamic educational philosophy (Asdlori & Yahya, 2023). This integration represents the primary theoretical contribution of the present review by extending current discussions on digital pedagogy beyond technological effectiveness toward values-based educational transformation.

From a practical perspective, the proposed framework provides guidance for teachers, curriculum developers, school leaders, educational technology designers, and policymakers in designing digital learning environments that remain developmentally appropriate and ethically grounded. Future educational policies should prioritize continuous teacher professional development, strengthen partnerships between schools and families, encourage the development of culturally relevant digital learning resources, and promote responsible digital citizenship from early childhood. Future empirical studies are also needed to validate the proposed framework across diverse educational settings and examine its effectiveness in improving children's cognitive, social, emotional, moral, and spiritual development. Through these efforts, Islamic values-based digital learning has the potential to become a sustainable educational approach capable of preparing young children to thrive in the digital era while preserving their religious identity and moral character.

4. CONCLUSION

The review further revealed that Islamic values should not be positioned merely as supplementary instructional content but as the philosophical foundation guiding the design, implementation, and evaluation of digital learning. Digital technologies become educationally meaningful when they facilitate the internalization of values such as honesty, responsibility, compassion, discipline, respect, and gratitude while simultaneously supporting children's academic development. The findings also highlight that teachers and parents play complementary roles in ensuring that children's digital learning experiences remain developmentally appropriate, ethically responsible, and aligned with the objectives of Islamic education.

The primary contribution of this study is the development of the Islamic Values-Based Digital Learning Framework for Early Childhood Education, which integrates six interconnected dimensions: Islamic values, digital pedagogical design, teacher competence, parental engagement, technological infrastructure, and holistic child development outcomes. Unlike previous studies that examined these dimensions separately, the proposed framework offers a unified conceptual perspective explaining how technology can be harmonized with Islamic educational philosophy to create meaningful and sustainable digital learning environments. This framework provides a theoretical foundation for future empirical investigations while offering practical guidance for teachers, curriculum developers, educational technology designers, school leaders, and policymakers.

Despite these contributions, this review has several limitations. The analysis was restricted to studies published in selected international databases and focused primarily on English-language peer-reviewed journal articles. Consequently, relevant studies published in other languages or indexed in different databases may not have been included. Furthermore, as a conceptual synthesis, the proposed framework has not yet been empirically validated in authentic educational settings. Future research is therefore encouraged to examine the applicability and effectiveness of the framework across different

cultural, institutional, and technological contexts through qualitative, quantitative, or mixed-methods research designs.

In conclusion, integrating Islamic values into digital learning represents a promising approach for responding to the educational challenges of the digital era while preserving the fundamental objectives of Islamic education. By positioning Islamic values as the core foundation of digital pedagogy, educators can design learning environments that not only enhance children's digital competencies but also nurture their moral integrity, spiritual awareness, and holistic development. The proposed framework is expected to serve as a valuable reference for advancing theory, informing educational policy, and guiding the implementation of values-based digital learning in early childhood education.

REFERENCES

- Abas Hidayat, Siti Fatimah, & Didin Nurul Rosidin. (2021). Challenges and Prospects of Islamic Education Institutions and Sustainability in The Digital Era. *Nazhruna: Jurnal Pendidikan Islam*, 5(2), 351–366.
- Abdullah, S. F. S., Ishak, A. H., & Wahid, F. N. A. (2025). Children's Etiquette Towards Parents Based on Kitab Al- Adab Al-Mufrad By Al-Bukhari: Etika Anak Terhadap Ibu Bapa Berdasarkan Kitab Al-Adab Al-Mufrad Karya Al-Bukhari. *Sains Insani*, 10(1), 51–61.
- Adiyono, A., Fadhilatunnisa, A., Rahmat, N. A., & Munawarroh, N. (2022). Skills of Islamic Religious Education Teachers in Class Management. *Al-Hayat: Journal of Islamic Education*, 6(1), 104–115. <https://doi.org/10.35723/ajie.v6i1.229>
- Ahadiyah, W., Zahidi, S., & Hidayatussholihah, R. (2024). Strategi Pembelajaran Quantum sebagai bentuk Interpretasi Profil Pelajar Pancasila Di Era Digital. *Journal of Education and Learning Innovation*, 1(2), 174–185. <https://doi.org/10.59373/jelin.v1i2.60>
- A'la, B. A., & Makhshun, T. (2022). Transformasi Pendidikan: Mentradisikan Digitalisasi Pendidikan Islam. *JOIES (Journal of Islamic Education Studies)*, 7(2), 159–170. <https://doi.org/10.15642/joies.2022.7.2.159-170>
- Alfiyanto, A., Hidayati, F., & Ghazali, M. (2024). Integration of Adaptive Learning Technology in the Context of Islamic Education in Indonesia. *Proceeding International Seminar and Conference on Islamic Studies (ISCIS)*, 3(1). <https://doi.org/10.47006/iscis.v0i3.21907>
- Alghamdi, A. A. (2023). Exploring Early Childhood Teachers' Beliefs About STEAM Education in Saudi Arabia. *Early Childhood Education Journal*, 51(2), 247–256. <https://doi.org/10.1007/s10643-021-01303-0>
- Almeida, F., & Morais, J. (2025). Non-formal education as a response to social problems in developing countries. *E-Learning and Digital Media*, 22(2), 122–138. <https://doi.org/10.1177/20427530241231843>
- Alotaibi, M. S. (2024). Game-based learning in early childhood education: A systematic review and meta-analysis. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1307881>
- Amin, H., Sinulingga, G., Desy, D., Abas, E., & Sukarno, S. (2021). Issues and Management of Islamic Education in a Global Context. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, 6(3), 608–620. <https://doi.org/10.31538/ndh.v6i3.1808>
- Amini, A. (2022). ANALYSIS OF ISLAMIC EDUCATION INSTITUTIONAL MANAGEMENT. *Edukasi Islami: Jurnal Pendidikan Islam*, 11(01). <https://doi.org/10.30868/ei.v11i01.2858>
- Amirudin, A., Muzaki, I. A., & Nurhayati, S. (2025). Problem-Based Learning as a Pedagogical Innovation for Transforming Higher Education Students' Islamic Religious Comprehension. *Educational Process: International Journal*, 18. <https://eric.ed.gov/?id=EJ1485322>
- Asdlori, A., & Yahya, M. S. (2023). Konsep Pembelajaran PAI Berbasis Media Digital Melalui Pendekatan Humanistik. *Jurnal Ilmiah Profesi Pendidikan*, 8(3), 1877–1886. <https://doi.org/10.29303/jipp.v8i3.1646>

- Belbase, S., Mainali, B. R., Kasemsukpipat, W., Tairab, H., Gochoo, M., & Jarrah, A. (2022). At the dawn of science, technology, engineering, arts, and mathematics (STEAM) education: Prospects, priorities, processes, and problems. *International Journal of Mathematical Education in Science and Technology*, 53(11), 2919–2955. <https://doi.org/10.1080/0020739X.2021.1922943>
- Bilyalova, A. A., Salimova, D. A., & Zelenina, T. I. (2020). Digital Transformation in Education. In T. Antipova (Ed.), *Integrated Science in Digital Age* (pp. 265–276). Springer International Publishing. https://doi.org/10.1007/978-3-030-22493-6_24
- Bungge, S. M., Durrotunnisa, D., Setianingsih, H. P., & Zuama, S. N. (2025). Finger Painting Activities and Their Effects on Creativity in Early Childhood. *Indonesian Journal of Early Childhood Educational Research (IJECEER)*, 4(2), 453–461. <https://doi.org/10.31958/ijecer.v4i2.15964>
- Currie, J. (2001). Early Childhood Education Programs. *Journal of Economic Perspectives*, 15(2), 213–238. <https://doi.org/10.1257/jep.15.2.213>
- Duck, L. (1993). Educating for Character: How Our Schools Can Teach Respect and Responsibility. *Childhood Education*, 69(4), 250–252.
- Dziopa, F., & Ahern, K. (2011). A Systematic Literature Review of the Applications of Q-Technique and Its Methodology. *Methodology*, 7(2), 39–55. <https://doi.org/10.1027/1614-2241/a000021>
- Education, R. (2015). Towards a Global Common Good. *UNESCO Retrived June, 6, 2015*.
- Essa, E. L., & Burnham, M. M. (2019). *Introduction to Early Childhood Education*. SAGE Publications.
- Fahrudin, F., & Anwar, S. (2022). LECTURERS' PERCEPTIONS ABOUT LEARNING TOLERANCE IN ISLAMIC RELIGIOUS LECTURES AT INDONESIA UNIVERSITY OF EDUCATION. *Religio Education*, 2(1), 55–70. <https://doi.org/10.17509/re.v2i1.46770>
- Firdaus, M., Salamah Zainiyati, H., Hamdani, A. S., Kusaeri, Wardi, Moh., & Rohman, A. (2026). Transformative learning for early childhood teachers: Integrated workshop–platform model in Indonesian Islamic schools. *Journal of Early Childhood Teacher Education*, 0(0), 1–20. <https://doi.org/10.1080/10901027.2026.2673116>
- Fonsén, E., & Soukainen, U. (2020). Sustainable Pedagogical Leadership in Finnish Early Childhood Education (ECE): An Evaluation by ECE Professionals. *Early Childhood Education Journal*, 48(2), 213–222. <https://doi.org/10.1007/s10643-019-00984-y>
- Gherasim, D. (2024). The Moral-Religious Educational Model. The Role of the Model in Religious Education. The Role of the Young Person in the Formation of His Personality. *Analele Științifice Ale Universității »Alexandru Ioan Cuza« Din Iași. Teologie Ortodoxă*, 29(2), 81–100.
- Guna, B. W. K., Yuwantiningrum, S. E., Firmansyah, S. M. D. A., & Aslan. (2024). Building Morality and Ethics Through Islamic Religious Education In Schools. *IJGIE (International Journal of Graduate of Islamic Education)*, 5(1), 14–24. <https://doi.org/10.37567/ijgie.v5i1.2685>
- Harini, H., Wahyuningtyas, D. P., Sutrisno, S., Wanof, M. I., & Ausat, A. M. A. (2023). Marketing strategy for Early Childhood Education (ECE) schools in the digital age. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(3), 2742–2758.
- Hidayah, C. (2025). The Role of Digital Islamic Communication of Early Childhood Education Teachers in Internalizing Moral Values of Early Childhood Education in Tunas Bangsa Early Childhood Education and Syuhada' Haji Kindergarten in Blitar City. *Journal of Communication Studies*, 5(2), 183–194. <https://doi.org/10.37680/jcs.v5i2.8018>
- Hunter-Doniger, T. (2021). Early Childhood STEAM Education: The Joy of Creativity, Autonomy, and Play. *Art Education*, 74(4), 22–27. <https://doi.org/10.1080/00043125.2021.1905419>
- Hussin, N. H., & Tamuri, A. H. (2019). Embedding values in teaching Islamic education among excellent teachers. *Journal for Multicultural Education*, 13(1), 2–18. <https://doi.org/10.1108/JME-07-2017-0040>
- Irpan, I., & Sain, Z. H. (2024). The Crucial Role of Islamic Religious Education in Shaping Children's Character: Psychological and Spiritual Review. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 16(1), 383–392. <https://doi.org/10.37680/qalamuna.v16i1.4902>

- Kamali, M. H. (2020). *Environmental Care in Islamic Teaching: A Qur'anic Perspective* | ICR Journal. <https://www.icrjournal.org/index.php/icr/article/view/555>
- Kiviranta, L., Lindfors, E., Rönkkö, M.-L., & Luukka, E. (2024). Outdoor learning in early childhood education: Exploring benefits and challenges. *Educational Research*, 66(1), 102–119. <https://doi.org/10.1080/00131881.2023.2285762>
- Koesoemawati, T., Amanda, D. L., & Mardiana, D. (2025). Transformasi Pembelajaran PAI untuk Anak Usia Dini melalui Project Based Learning Berbasis Teknologi. *J-PAI: Jurnal Pendidikan Agama Islam*, 12(1). <https://doi.org/10.18860/jpai.v12i1.37131>
- Martiana, E. A., Syarif, F., & Yildirim, E. (2024). Building Spirituality from an Early Age in the Digital Era: Innovative Strategies for Islamic Religious Education. *Indonesian Journal of Early Childhood Educational Research (IJECEER)*, 3(1), 85–93. <https://doi.org/10.31958/ijecer.v3i1.16705>
- Maulana, A. N., Warmansyah, J., & Yaacob, W. M. Y. W. (2026). Early Childhood Digital Literacy: Integrating Parental Guidance, Islamic Content, and Technology-Based Learning. *Golden Age: Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, 11(1), 153–165. <https://doi.org/10.14421/jga.2026.111-11>
- Meyers, E. M., Erickson, I., & Small, R. V. (2013). Digital Literacy and Informal Learning Environments: An Introduction. *Learning, Media and Technology*, 38(4), 355–367. <https://doi.org/10.1080/17439884.2013.783597>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine*, 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>
- Nasution, A. S. (2024). Integrasi Nilai-Nilai Etika Islam dalam Kurikulum Pendidikan Anak Usia Dini: Sebuah Kajian Konseptual. *Sulawesi Tenggara Educational Journal*, 4(3), 277–287. <https://doi.org/10.54297/seduj.v4i3.922>
- Nasution, S. P., & Suprijanto, A. (2026). Pedagogi Digital Berbasis Kesesuaian Perkembangan Anak dalam Pendidikan Islam Anak Usia Dini: Systematic Literature Review. *SAKALIMA: Pilar Pemberdayaan Masyarakat Pendidikan*, 3(2), 91–109. <https://doi.org/10.70211/sakalima.v3i2.544>
- Organization, W. H., & Fund, U. N. C. (2023). *Global Report on Children with Developmental Disabilities: From the Margins to the Mainstream*. World Health Organization.
- Rahayu, A. D., Formen, A., & Pranoto, Y. K. S. (2025). Muslim Teachers: The Influence of Religiosity and Demographics on Learning Efficacy in Early Childhood Education. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(3), Article 3. <https://doi.org/10.31538/tijie.v6i3.1262>
- Ramadani, L., Kardi, J., Ismail, N. K., Samaun, S. S., & Hamzah, N. (2025). Exploring the Integration of Digital Media in Islamic Early Childhood Education: Evidence from Kindergartens in Pontianak City. *Al-Athfal: Jurnal Pendidikan Anak*, 11(1), 35–47. <https://doi.org/10.14421/al-athfal.2025.111-03>
- Reddy, P., Sharma, B., & Chaudhary, K. (2020). Digital Literacy: A Review of Literature. *International Journal of Technoethics (IJT)*, 11(2), 65–94. <https://doi.org/10.4018/IJT.20200701.oa1>
- Sarama, J., & Clements, D. H. (2009). *Early Childhood Mathematics Education Research: Learning Trajectories for Young Children*. Routledge.
- Syahrin, M. A., Fitriani, H. L., & Syaputra, M. Y. A. (2025). Fulfillment of Child Support After Parental Divorce: A Comparison of Indonesia and Malaysia. *Pena Justisia: Media Komunikasi Dan Kajian Hukum*, 24(1), 5306–5322.
- Syahrir, S., Pujiriyanto, P., Musdalifa, M., & Fitri, S. (2024). The Implementation of Merdeka Curriculum to Realize Indonesia Golden Generation: A Systematic Literature Review. *AL-ISHLAH: Jurnal Pendidikan*, 16(2), 1434–1450. <https://doi.org/10.35445/alishlah.v16i2.4872>
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>

- Yatmaz, Z. E., & Demiral, S. (2022). Building from Scratch: Online Education Experiences of Early Childhood Education Teachers in Turkey. In S. Papadakis & M. Kalogiannakis (Eds.), *STEM, Robotics, Mobile Apps in Early Childhood and Primary Education: Technology to Promote Teaching and Learning* (pp. 7–31). Springer Nature. https://doi.org/10.1007/978-981-19-0568-1_2
- Ydyrysbayev, D., Kakimova, L., Sailaubaikyzy, B. G., Talgatbekovich, S., Urmatova, A., & Orazbaev, E. (2022). Determining the Digital Transformation in Education in the Society 5.0 Process. *International Journal of Emerging Technologies in Learning (ijET)*, 17(18), 136–145.
- Zhang, J., & Zhang, Z. (2024). AI in teacher education: Unlocking new dimensions in teaching support, inclusive learning, and digital literacy. *Journal of Computer Assisted Learning*, 40(4), 1871–1885. <https://doi.org/10.1111/jcal.12988>

