

## DEVELOPMENT OF DIGITAL LITERACY IN ISLAMIC RELIGIOUS EDUCATION: A CASE STUDY AT MAN 1 MAKASSAR

PENGEMBANGAN LITERASI DIGITAL DALAM PEMBELAJARAN PAI: STUDI KASUS DI MAN 1 MAKASSAR

**Andi Fahrunnisa**<sup>1</sup>

<sup>1</sup> Universitas Pendidikan Indonesia, Bandung, Indonesia

**Muh. Ishak**<sup>2</sup>

<sup>2</sup> Universitas Pendidikan Indonesia, Bandung, Indonesia

**Baihaq Aswaja**<sup>3</sup>

<sup>3</sup> Universitas Padjajaran, Indonesia

\*andifahrunnisa@upi.ac.id

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### ABSTRACT

This research aims to analyze the development of digital literacy in Islamic Religious Education at MAN 1 Makassar. Using a qualitative approach through case study, this research explores how Islamic education teachers integrate digital technology into the learning process, identifies challenges faced, and strategies implemented to enhance students' digital literacy competencies. Data were collected through classroom observations, in-depth interviews with teachers and students, and analysis of learning documents. The results show that digital literacy development at MAN 1 Makassar has been implemented through the use of online learning platforms, educational social media, and Islamic-based digital learning resources. Major challenges include infrastructure limitations, disparity in digital competencies among teachers, and concerns regarding content incompatible with Islamic values. Strategies implemented include continuous training for teachers, development of digital materials integrated with Islamic values, and application of blended learning models. This research contributes to the understanding of digital literacy integration in Islamic religious education in the digital era and its implications for learning practices.

**Keywords:** Digital Literacy, Islamic Religious Education, Educational Technology, MAN 1 Makassar, Blended Learning

### ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengembangan literasi digital dalam Pendidikan Agama Islam di MAN 1 Makassar. Dengan menggunakan pendekatan kualitatif melalui studi kasus, penelitian ini menggali bagaimana guru PAI mengintegrasikan teknologi digital ke dalam proses pembelajaran, mengidentifikasi

*tantangan yang dihadapi, serta strategi yang diterapkan untuk meningkatkan kompetensi literasi digital siswa. Data dikumpulkan melalui observasi kelas, wawancara mendalam dengan guru dan siswa, serta analisis dokumen pembelajaran. Hasil penelitian menunjukkan bahwa pengembangan literasi digital di MAN 1 Makassar telah diimplementasikan melalui penggunaan platform pembelajaran daring, media sosial edukatif, dan sumber belajar digital berbasis keislaman. Tantangan utama meliputi keterbatasan infrastruktur, kesenjangan kompetensi digital antar guru, serta kekhawatiran terkait konten yang tidak sesuai dengan nilai-nilai Islam. Strategi yang diterapkan mencakup pelatihan berkelanjutan bagi guru, pengembangan materi digital terintegrasi nilai keislaman, dan penerapan model pembelajaran campuran (blended learning). Penelitian ini memberikan kontribusi terhadap pemahaman tentang integrasi literasi digital dalam pendidikan agama Islam di era digital serta implikasinya terhadap praktik pembelajaran.*

**Kata Kunci:** Literasi Digital, Pendidikan Agama Islam, Teknologi Pembelajaran, MAN 1 Makassar, Blended Learning

## A. INTRODUCTION

The integration of digital literacy into Islamic Religious Education (PAI) represents an increasingly vital educational adaptation in the contemporary era of technological advancement. Digital literacy, defined by Gilster (2019) as the ability to effectively locate, evaluate, utilize, share, and create content using information technologies and the internet, has become a fundamental skill set necessary for effective participation in modern society. In the context of Islamic education, this integration presents both unique opportunities and challenges as religious educators navigate the intersection of traditional Islamic pedagogical approaches with emerging technological tools and digital competencies (Muhsyanur, 2021). MAN 1 Makassar, as one of the leading Islamic secondary schools in Eastern Indonesia, provides a valuable case study for examining how digital literacy development is being conceptualized and implemented within formal Islamic Religious Education.

The rapid technological transformation of educational environments has significantly impacted religious education contexts worldwide. According to Simsek and Simsek (2023), today's students are growing up as "digital natives" immersed in technology-mediated experiences that fundamentally shape their learning expectations and information-seeking behaviors. This generational shift necessitates corresponding adaptations in religious education approaches to maintain relevance and effectiveness. Ramli (2021) contends that Islamic educational institutions face particular pressure to evolve pedagogically while simultaneously preserving core religious values and content integrity, creating a unique space for innovation within tradition. This tension between technological adaptation and religious authenticity forms a central dynamic in the

development of digital literacy within Islamic Religious Education programs.

The Indonesian educational context presents distinctive considerations for digital literacy development in Islamic education. The national education system has increasingly emphasized digital competencies across the curriculum, with the Ministry of Education and Culture implementing various initiatives to promote technology integration in schools (Widodo and Riandi, 2019). However, significant digital divides persist across different regions of Indonesia, with schools in urban centers like Makassar generally having greater technological infrastructure and connectivity than those in rural areas. Rahman (2022) notes that Islamic educational institutions in Indonesia have demonstrated varying responses to digitalization initiatives, ranging from enthusiastic adoption to cautious integration, often reflecting differences in institutional philosophy, leadership vision, and resource availability. These variations create a complex landscape for understanding digital literacy development within Islamic education across the archipelago.

The specific context of Madrasah Aliyah Negeri (MAN) represents an important institutional framework for examining digital literacy in Islamic education. As state-operated Islamic secondary schools, MAN institutions follow both the national curriculum and specific religious education requirements, creating what Tan (2021) describes as a "dual curricular mandate" that must balance secular academic subjects with comprehensive Islamic studies. This distinct educational structure provides both opportunities and constraints for digital literacy development. Hefner (2020) argues that madrasah education in Indonesia increasingly serves as a site for negotiating the relationship between Islamic tradition and modernity, making these institutions particularly significant for understanding how digital competencies are integrated into religious educational contexts while maintaining Islamic educational priorities and values.

The concept of digital literacy itself has evolved significantly in recent years, moving beyond basic technical skills to encompass critical dimensions of information evaluation, ethical digital citizenship, and creative content production. According to Bawden (2022), contemporary frameworks for digital literacy include multiple competency areas including information literacy, media literacy, communication and collaboration skills, digital content creation, safety, and problem-solving in digital contexts. When applied to religious education, these competencies take on additional dimensions related to

religious discernment, ethical evaluation from faith perspectives, and the ability to navigate online religious information critically. Waghid and Davids (2020) emphasize that digital literacy in Islamic education contexts must include the capacity to evaluate online religious content for authenticity, authority, and compatibility with established Islamic scholarly traditions, adding crucial faith-based dimensions to general digital literacy frameworks.

The pedagogical approaches to developing digital literacy in religious education contexts require careful consideration (Muhsyanur et al., 2021). Traditional Islamic educational methods have historically emphasized close teacher-student relationships, textual accuracy, memorization, and oral transmission, approaches that may appear to contrast with digital learning environments. However, Sahin (2021) argues that many principles of effective digital pedagogy can align with Islamic educational values when thoughtfully integrated. For example, collaborative knowledge construction, critical inquiry, and multimedia engagement can enhance religious understanding when guided by knowledgeable teachers who ground these approaches in Islamic epistemological frameworks. This suggests the possibility of developing what Niyozov and Memon (2020) term "Islamically appropriate digital pedagogies" that honor religious educational principles while embracing the affordances of digital tools and environments.

The development of digital literacy in Islamic Religious Education also intersects with broader concerns about religious identity formation in digital contexts. According to Campbell and Evolvi (2020), young Muslims increasingly navigate their religious identities through digital media, engaging with diverse interpretations of Islam online and participating in virtual religious communities that may influence their understanding of and relationship with their faith. This digital dimension of religious experience creates both opportunities and challenges for Islamic education, highlighting the importance of equipping students with the digital literacy skills necessary to critically engage with online religious content. Albantani and Madkur (2019) suggest that Islamic Religious Education has a crucial role in helping students develop "digital religious literacy" that enables them to maintain religious authenticity while navigating the complexities of religion in digital spaces.

The specific case of MAN 1 Makassar provides a valuable window into how these broader theoretical and contextual factors manifest in practice within a leading Islamic secondary institution in

Eastern Indonesia. As one of the highest-performing madrasah schools in South Sulawesi province, MAN 1 Makassar has demonstrated institutional commitment to academic excellence and technological integration, making it a particularly insightful case for examining digital literacy development. The school serves a predominantly urban student population with relatively high levels of technological access compared to rural madrasahs, creating conditions where digital literacy initiatives encounter fewer infrastructural barriers. Additionally, Faisal (2022) notes that the school has implemented various technology integration programs in recent years, providing a rich context for examining how these initiatives specifically impact Islamic Religious Education classes and their approach to digital literacy development.

The COVID-19 pandemic has significantly accelerated educational digitalization processes worldwide, including in Indonesian Islamic educational institutions. The sudden shift to emergency remote learning during pandemic-related school closures forced religious educators to rapidly adopt digital tools and platforms, regardless of their previous technological experience or pedagogical preferences. According to Wajdi et al. (2020), this "forced digitalization" created unprecedented challenges for Islamic Religious Education teachers but also opened new possibilities for innovation in religious instruction. The pandemic context adds an important temporal dimension to this research, allowing for examination of how pre-pandemic, pandemic, and post-pandemic experiences have shaped the trajectory of digital literacy development within Islamic Religious Education at MAN 1 Makassar, potentially revealing accelerated evolution in both technological practices and pedagogical approaches.

The development of digital literacy in Islamic Religious Education ultimately involves fundamental questions about the evolving nature of religious learning and knowledge transmission in digital contexts. Eickelman and Anderson (2023) argue that digitalization processes are contributing to significant transformations in religious authority structures and knowledge dissemination patterns across the Muslim world, creating new dynamics that Islamic education must address. Within formal educational settings like MAN 1 Makassar, these broader transformations manifest in specific curricular and pedagogical decisions about how digital skills and competencies are integrated into religious instruction. This research aims to illuminate these processes, providing insights into how one leading

Islamic secondary institution navigates the complex intersection of digital literacy development and religious education in the contemporary technological era.

## **B. LITERATURE REVIEW**

Digital literacy conceptualization in religious education contexts has evolved significantly in recent years, moving beyond purely technical skill development to encompass broader dimensions of critical engagement with digital religious content. According to Buckingham (2020), comprehensive digital literacy frameworks must address four key components when applied to educational settings: operational skills (the ability to use digital tools effectively), information literacy (locating and evaluating digital information), digital creation (producing and sharing content), and critical digital consciousness (understanding broader social, cultural, and economic contexts of digital media). When applied specifically to Islamic education contexts, Abdalla et al. (2022) propose that these general competencies must be augmented with religion-specific dimensions including scriptural digital literacy (ability to navigate and evaluate digital Quranic and hadith resources), ethical digital engagement (applying Islamic ethical principles in online environments), and religious discernment (distinguishing between authoritative and questionable religious content online). This expanded conceptualization acknowledges that digital literacy in religious education must address both general technological competencies and specific faith-related considerations, creating a more holistic framework for understanding digital literacy development in Islamic Religious Education settings.

Research on technology integration in Islamic education reveals complex patterns of adoption influenced by various institutional, cultural, and theological factors. Lubis et al. (2021) identify several distinct approaches to technology use in Islamic educational institutions, ranging from selective adaptation (carefully vetting and limiting digital tools based on specific religious criteria) to comprehensive integration (embracing technological affordances while infusing them with Islamic values and perspectives). These varying approaches reflect different institutional responses to what Hashim and Langgulong (2023) describe as the "digital theology dilemma" facing Islamic educational institutions—the challenge of determining which aspects of digital culture and practice align with Islamic educational values and which require modification or alternative ap-

proaches. Studies from various national contexts suggest that successful technology integration in Islamic education typically requires explicit attention to this alignment between technological affordances and religious educational objectives, with Suyatno et al. (2020) finding that technology adoption is most sustainable when teachers perceive clear connections between digital tools and enhanced religious learning outcomes. These findings highlight the importance of examining how religious educators conceptualize the relationship between technological innovation and religious educational goals.

The pedagogical dimensions of digital literacy development in religious education have received increased scholarly attention, particularly regarding how traditional religious teaching approaches interact with digital pedagogical methods. Sahin (2022) identifies potential synergies between certain Islamic pedagogical traditions and contemporary digital learning approaches, noting that practices such as collaborative interpretation (which has precedent in traditional Islamic scholarly circles) can be effectively supported through digital collaboration tools. Similarly, Holland (2019) explores how multimedia resources can enhance the storytelling dimension of religious education, allowing students to engage with religious narratives through multiple sensory channels that potentially deepen comprehension and connection. However, research also identifies tensions that may arise, with Svensson (2021) documenting how religious educators sometimes struggle to maintain the contemplative, reflective dimensions of religious learning in fast-paced digital environments that may encourage superficial engagement. These studies suggest the need for thoughtful pedagogical approaches that leverage digital affordances while preserving the distinctive spiritual and ethical dimensions of religious education.

Teacher capacity and professional development emerge as critical factors influencing digital literacy integration in religious education contexts. According to Karim and Mohamed (2019), Islamic Religious Education teachers often face distinctive challenges when incorporating digital technologies, including limited technology-specific training, concerns about religious content accuracy in digital materials, and uncertainties about aligning technological approaches with religious pedagogical traditions. These challenges can create what Hamzah et al. (2020) term "technological-theological tension" where religious educators experience difficulty reconciling their understanding of effective religious instruction with digital pedagogical approaches. Professional development initiatives specifi-



cally designed for religious educators show promising results in addressing these tensions, with Rosli and Mustaffa (2021) finding that collaborative learning communities where religious teachers can share experiences and co-develop faith-aligned digital approaches prove particularly effective. These studies highlight the importance of teacher preparation and ongoing support in developing effective approaches to digital literacy in Islamic Religious Education.

The student perspective on digital literacy in Islamic education reveals generational dynamics that significantly influence educational effectiveness. Research by Aziz et al. (2021) suggests that Muslim youth in Indonesia demonstrate complex patterns of digital religious engagement, frequently using social media platforms and mobile applications to supplement their formal religious education, sometimes leading to exposure to diverse and potentially conflicting religious interpretations. This independent digital religious exploration creates what Hassan (2022) describes as a "parallel religious curriculum" that may complement or sometimes contradict formal religious instruction. According to Al-Sharqi et al. (2020), effective digital literacy development in Islamic education requires acknowledging and engaging with students' existing digital religious practices rather than assuming students are passive recipients of teacher-directed digital learning. These findings emphasize the importance of understanding students' existing digital religious literacy practices as a foundation for developing more effective formal approaches to digital literacy in Islamic Religious Education contexts.

### **C. METHOD**

This study employs a qualitative case study methodology to investigate the development of digital literacy in Islamic Religious Education at MAN 1 Makassar. According to Creswell and Poth (2023), case study research is particularly appropriate for educational research that seeks to develop an in-depth understanding of a bounded system (in this case, MAN 1 Makassar) through detailed, multi-source data collection and analysis. The case study approach allows for examining the complex interplay of factors influencing digital literacy development within the specific institutional, cultural, and pedagogical context of this Islamic secondary school. As Stake (2020) emphasizes, the strength of case study methodology lies in its ability to illuminate the particularities of educational practice within real-world settings, capturing the complexity of educational phe-



nomena that might be overlooked in broader surveys or experimental approaches. This methodological choice aligns with the research objectives of understanding both the process and context of digital literacy development within Islamic Religious Education at this specific institution.

Data collection for this study incorporates multiple methods to achieve methodological triangulation, which Denzin (2021) identifies as essential for establishing the credibility and depth of qualitative case study findings. The primary data collection methods include: (1) semi-structured interviews with 8 Islamic Religious Education teachers, 4 school administrators, and 20 students selected through purposive sampling to represent different grade levels and technological proficiency levels; (2) classroom observations of 15 Islamic Religious Education lessons that incorporate digital tools or address digital literacy competencies; (3) document analysis of curriculum materials, lesson plans, school policies, and student digital projects related to Islamic Religious Education; and (4) focus group discussions with teachers and students to explore collective perspectives on digital literacy development. These multiple data sources allow for cross-verification of findings and provide diverse perspectives on the research questions. All data collection procedures followed ethical guidelines for educational research, including obtaining informed consent from participants, maintaining confidentiality through the use of pseudonyms, and securing research approval from both institutional authorities and the school administration.

Data analysis follows an inductive thematic approach guided by Miles et al.'s (2020) framework for qualitative data analysis, which involves data condensation, data display, and conclusion drawing/verification as iterative, concurrent activities throughout the analysis process. Initial coding of interview transcripts, observation notes, and documents was conducted using both predetermined codes derived from digital literacy frameworks and emergent codes that arose from the data. These initial codes were then organized into broader categories and themes through a process of pattern coding, with particular attention to how participants conceptualize digital literacy in Islamic education, what teaching approaches they employ, what challenges they encounter, and what outcomes they perceive. Analysis also included comparative examination of convergent and divergent perspectives among different participant groups (teachers, administrators, and students) and across different Islamic Religious Education subjects. To enhance analytical trust-

worthiness, member checking procedures were employed where emerging findings were shared with key participants for validation and refinement. Additionally, negative case analysis was conducted by actively searching for and addressing data that contradicted emerging patterns, ensuring a more comprehensive and nuanced understanding of digital literacy development at MAN 1 Makassar.

#### **D. RESULT AND DISCUSSION**

The conceptualization of digital literacy among Islamic Religious Education teachers at MAN 1 Makassar reveals a multidimensional understanding that extends beyond technical skills to encompass religious discernment in digital contexts. Interview data indicate that teachers predominantly define digital literacy through three primary dimensions: technical competency (ability to operate digital tools for religious learning), critical evaluation (capacity to assess the religious authenticity and authority of online Islamic content), and ethical usage (applying Islamic principles to guide online behavior). As one senior teacher expressed, "Digital literacy in PAI is not just about using technology, but using it with Islamic adab [manners] and the ability to distinguish between reliable religious knowledge and misinformation online." This conceptualization aligns with Albantani's (2021) expanded model of digital religious literacy, which emphasizes the integration of traditional Islamic knowledge authentication methods with contemporary information literacy skills. However, significant variations exist in how individual teachers prioritize these dimensions, with some emphasizing protective approaches focused on safeguarding students from misleading religious content online, while others adopt more empowering frameworks aimed at developing students' independent critical capacities for navigating digital religious resources.

The curriculum integration of digital literacy within Islamic Religious Education at MAN 1 Makassar follows several distinct patterns that reflect both systematic planning and opportunistic adaptation. Document analysis reveals that digital literacy elements appear in the curriculum through three primary approaches: dedicated digital literacy modules within specific PAI subjects (particularly Akidah Akhlak, which includes units on "Digital Ethics from Islamic Perspectives"); integrated digital components within traditional religious topics (such as using digital Quran applications for tafsir studies); and cross-curricular projects that combine religious knowledge with digital media production. The most comprehensive integration ap-

pears in the upper secondary levels (grades 11-12), while integration in lower grades tends to be more teacher-dependent and less systematically structured. This gradual progression reflects what Rosyada (2020) describes as the "developmental digital literacy spiral" in religious education, where technical skills are established in earlier grades before advancing to more complex critical and creative applications in later years. However, observations indicate that actual implementation varies considerably across different teachers and subjects, suggesting that curriculum documents and actual pedagogical practices are not always fully aligned.

Pedagogical approaches for developing digital literacy within Islamic Religious Education at MAN 1 Makassar demonstrate creative adaptations of both traditional Islamic teaching methods and contemporary digital learning strategies. Classroom observations reveal several predominant teaching approaches, including guided inquiry using digital religious resources, collaborative critical analysis of online religious content, creation of digital media to explain Islamic concepts, and reflective discussions on ethical dimensions of Muslim digital citizenship. Among these, the guided critical analysis approach appears most frequently, with teachers selecting specific online religious materials (including videos from popular Islamic preachers and social media content) for structured classroom analysis using Islamic textual authorities as evaluative frameworks. This approach reflects what Alshammari (2022) terms "critical religious digital literacy pedagogy," which focuses on developing students' capacity to evaluate digital religious content through traditional Islamic scholarly principles while acknowledging the changing dynamics of religious authority in online contexts. Teachers report that this pedagogical approach helps students develop transferable critical skills that they can apply independently when encountering religious content online outside the classroom environment.

The technological infrastructure at MAN 1 Makassar provides both opportunities and constraints for digital literacy development within Islamic Religious Education. The school possesses relatively advanced facilities compared to many Indonesian madrasahs, including two computer laboratories, classroom projectors, stable internet connectivity, and a digital library with religious reference materials. However, interview data with administrators reveal significant challenges related to maintenance of existing equipment, limitations in specialized software for Islamic education, and restrictions on student device usage during school hours that sometimes im-

pede more extensive technology integration. As the school's ICT coordinator explained, "We have adequate basic infrastructure, but we need more targeted resources specifically designed for Islamic subjects rather than adapting general educational technologies." These conditions create what Hassan (2021) describes as "infrastructure sufficiency without specialization," where basic technological needs are met but without the customization that might better serve specific religious educational objectives. Teachers have responded to these limitations through various adaptive strategies, including development of offline digital resources, utilization of students' personal devices for specific learning activities, and creation of blended learning approaches that combine digital and traditional resources.

Student perspectives on digital literacy development in Islamic Religious Education reveal generational dynamics that significantly influence learning processes. Focus group discussions with students demonstrate high levels of comfort with technology but varying levels of critical awareness regarding online religious content. Most students report regularly consuming Islamic content through YouTube, Instagram, and TikTok outside of school, with many describing this as a significant part of their religious learning experience. However, many students show limited initial awareness of authentication methods for evaluating online religious information, with one 11th grader noting, "Before our ustadz [religious teacher] taught us how to check sources, I just trusted religious content if it sounded convincing or had many views." This confirms Aziz and Mayeetae's (2022) findings regarding the "digital religious literacy gap" among Muslim youth who may have technical proficiency but lack critical evaluation skills specific to religious content. Students report particularly valuing learning activities that help them develop practical criteria for evaluating religious information online and appreciate when teachers acknowledge their existing digital religious practices rather than dismissing them entirely.

The development of critical digital literacy skills for evaluating online religious content emerges as a central focus of teachers' efforts at MAN 1 Makassar. Document analysis and interview data reveal that teachers have developed several structured approaches to help students assess the reliability of digital religious information, including credential verification frameworks for online religious speakers, content authentication methods using established Islamic textual sources, and collaborative evaluation exercises using case

examples of misleading religious content. One particularly effective practice observed involves the use of "digital isnād" (chain of authentication) exercises, where students trace religious claims made in social media posts back to their original Quranic or hadith sources through digital religious databases. This approach creatively adapts traditional Islamic authentication methods to digital contexts, reflecting what Suyuti (2021) describes as the "revitalization of traditional Islamic methodologies through digital tools." Teachers report that these critical evaluation skills develop gradually over time, requiring sustained practice across different Islamic Religious Education subjects.

The creation of digital religious content by students represents an increasingly important dimension of digital literacy development at MAN 1 Makassar. Analysis of student projects and classroom activities reveals a progression from basic content consumption to increasingly sophisticated content creation, including digital infographics explaining Islamic concepts, short videos addressing contemporary religious questions, podcasts discussing Islamic perspectives on social issues, and interactive presentations of Quranic analysis. These creative projects typically combine religious knowledge with digital production skills and often include explicit attention to audience considerations and communication effectiveness. As one teacher explained, "Having students create digital content forces them to deeply understand both the religious material and how to communicate it effectively in digital formats that their peers will engage with." This confirms Hashim and Karim's (2020) findings regarding the cognitive benefits of religious digital media production, which requires students to transform their understanding of religious concepts through digital expression rather than merely reproducing memorized content. However, assessment practices for these creative projects remain an area of ongoing development, with teachers sometimes struggling to balance evaluation of technical quality, religious accuracy, and creative expression.

The role of teachers in mediating digital religious content emerges as a crucial factor influencing effective digital literacy development. Observation data reveal that teachers at MAN 1 Makassar serve multiple mediating functions in relation to digital content, including curator (selecting appropriate digital religious resources), interpreter (helping students understand complex religious information), validator (evaluating the authenticity of digital content), and guide (directing students toward reliable digital religious sources).

This mediating role appears particularly important during students' early development of digital religious literacy, gradually shifting toward more independent student evaluation as their skills develop. As one experienced teacher noted, "Initially I need to directly tell students which sources are reliable, but eventually I want them to recognize reliable content themselves using the principles we've practiced." This pedagogical approach aligns with what Ibrahim and Hashim (2022) describe as "guided religious autonomy" in digital contexts, where teachers progressively transfer evaluative authority to students while maintaining clear Islamic epistemological frameworks. However, this mediating role creates significant demands on teachers' own digital religious literacy, highlighting the importance of ongoing professional development.

Professional development for Islamic Religious Education teachers regarding digital literacy reveals both formal and informal learning pathways at MAN 1 Makassar. Interview data indicate that teachers access several professional learning channels, including ministry-provided technology training, school-based ICT workshops, religious education conferences addressing technology integration, online teacher communities, and peer learning through colleague collaboration. However, teachers report that most general technology training sessions inadequately address the specific challenges of religious education contexts, creating a gap between general digital competencies and their specialized application in Islamic subjects. As one teacher explained, "The technology training we receive rarely addresses questions like how to teach students to evaluate online fatwas or how to maintain the spiritual dimensions of religious learning in digital formats." This highlights a professional development gap identified by Rosli et al. (2021) regarding the need for specialized technology training that addresses the unique epistemological and pedagogical considerations of religious education. The most effective professional learning appears to occur through informal collaborative communities where Islamic Religious Education teachers share specific strategies and resources for digital integration.

The COVID-19 pandemic significantly accelerated digital literacy development within Islamic Religious Education at MAN 1 Makassar, though with uneven impacts across different dimensions. Analysis of pre-pandemic and current practices reveals substantial shifts in technological adoption, pedagogical approaches, and digital resource development. Prior to the pandemic, digital integration

was largely supplementary and teacher-dependent, whereas post-pandemic practices show more systematic and essential integration of digital components across Islamic Religious Education subjects. As the school's principal noted, "The pandemic forced us to develop digital approaches to religious education that we might have taken years to implement otherwise." This accelerated adoption confirms findings by Wajdi and Khaliq (2022) regarding the pandemic's role as a "forced catalyst" for digital transformation in Islamic education. However, teachers report that while technical skill development advanced rapidly during remote learning periods, deeper aspects of digital religious literacy—particularly critical evaluation and ethical dimensions—were more difficult to develop in fully online formats and required renewed attention during the return to face-to-face instruction.

Ethical dimensions of digital literacy receive explicit attention within Islamic Religious Education at MAN 1 Makassar, with teachers emphasizing Islamic ethical frameworks for digital engagement. Document analysis shows that curriculum materials address several key ethical areas, including Islamic perspectives on privacy and data sharing, appropriate communication in online environments, intellectual property and attribution from Islamic perspectives, digital representation of self and others, and Islamic guidelines for social media usage. These topics are typically addressed through case-based discussions that apply traditional Islamic ethical principles to contemporary digital scenarios, reflecting what Alhabshi (2022) terms "applied digital akhlaq" (Islamic ethics in digital contexts). Students demonstrate particular interest in discussions regarding ethical complexities that lack clear historical precedents in Islamic tradition, such as questions about digital self-representation and online religious identity expression. These ethical discussions provide important counterbalance to more technical skill development, reflecting what Saeed and Rahman (2021) describe as the necessary integration of Islamic moral development within comprehensive digital literacy education.

The relationship between home and school digital practices emerges as an important factor influencing the effectiveness of digital literacy development. Interview and focus group data reveal significant variation in how students' home digital religious practices align with school-based digital literacy development. Some students describe strong continuity between school guidance and family digital religious practices, with parents reinforcing similar evaluation



criteria for online religious content that teachers promote. Others report disconnections between these contexts, with family members sometimes following different online religious authorities or applying different criteria for evaluating digital religious content than those taught at school. As one student explained, "My ustadz tells us to check the scholarly credentials of online preachers, but at home my family follows religious influencers because they are entertaining and speak to everyday issues." This confirms Alateyah's (2021) findings regarding the "digital religious ecology" surrounding young Muslims, where school represents just one influence among multiple sources of digital religious guidance. Teachers report attempting to address these discontinuities through parent education initiatives and by explicitly discussing with students how to navigate potential differences between school and home digital religious practices.

The outcomes of digital literacy development within Islamic Religious Education at MAN 1 Makassar appear multidimensional and evolving. Teacher assessments and student self-reports indicate several key areas of development, including enhanced ability to locate diverse religious perspectives on contemporary issues, improved skills in evaluating the credibility of online religious content, greater awareness of digital rights and responsibilities from Islamic perspectives, and increased capacity to express religious understanding through digital formats. However, development across these dimensions is uneven, with students generally demonstrating stronger technical and informational skills than critical evaluation capabilities. As one teacher observed, "Students quickly master digital tools but develop more slowly in their ability to critically evaluate religious content—that requires deeper religious knowledge that develops over time." This aligns with Abdullah and Rahman's (2023) developmental model of Islamic digital literacy, which suggests that technical and informational competencies typically develop more rapidly than critical and ethical dimensions. Longitudinal assessment of these outcomes remains a challenge, particularly regarding how school-based digital literacy development influences students' independent digital religious practices outside educational contexts.

## **E. CONCLUSION**

The development of digital literacy within Islamic Religious Education at MAN 1 Makassar reveals a dynamic educational process characterized by creative adaptation rather than simple technologi-

cal adoption. This research demonstrates that effective digital literacy development in this context involves a complex integration of traditional Islamic educational values with contemporary digital competencies, creating what might be termed "Islamically-grounded digital literacy"—an approach that addresses both general technological capabilities and specific religious dimensions of digital engagement. The findings highlight several critical factors that influence this development process, including teacher conceptualizations of digital literacy, curricular integration approaches, pedagogical strategies, technological infrastructure, student digital practices, critical evaluation frameworks, content creation opportunities, teacher mediating roles, professional development pathways, pandemic-related adaptations, ethical frameworks, and home-school relationships. Collectively, these elements form an interconnected ecosystem that shapes how students develop the capacity to effectively, critically, and ethically engage with digital religious content and environments.

The implications of this research extend beyond the specific case of MAN 1 Makassar to offer broader insights into the relationship between religious education and digital literacy development in contemporary contexts. The findings suggest that effective digital literacy education in religious contexts requires attention to both general digital competencies and tradition-specific dimensions of evaluation and engagement. Moreover, this research highlights the importance of teacher preparation and ongoing professional development specifically addressing the intersection of religious education and digital literacy. Future research directions might productively explore longitudinal outcomes of school-based digital religious literacy initiatives, comparative approaches across different religious educational traditions, and the evolving relationship between institutional religious education and the broader digital religious ecology that students navigate. As religious education continues to adapt to increasingly digital environments, the experience of institutions like MAN 1 Makassar provides valuable insights into how traditional religious educational values and emerging digital competencies can be meaningfully integrated to prepare students for thoughtful religious engagement in digital contexts.

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