



IRE Teachers' Efforts to Improve Digital Literacy to Strengthen Religious Interaction towards a Good Digital Citizenship Society

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ABSTRACT

Keywords:

Digital literacy;
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Technology;
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Digital literacy, including Islamic Religious Education (IRE), has become essential in modern education. This article discusses the efforts of IRE teachers in improving digital literacy to strengthen students' religious interactions toward forming a Good Digital Citizenship society. This study uses a qualitative approach to explore the experiences and strategies of IRE teachers in Junior High Schools (JHS) and Senior High Schools (SHS) in integrating technology into learning. Data were obtained through in-depth interviews with 10 IRE teachers skilled in digital literacy and accustomed to using digital media and content in teaching. The data were analyzed using the Miles and Huberman framework, involving data reduction, data display, and conclusion drawing to identify patterns and themes related to digital literacy integration. The study results show that IRE teachers integrate technology through digital tools such as Google For Education, Quizizz, Canva, and video platforms such as YouTube to enrich the learning experience. Teachers also create digital content such as interactive modules, educational videos, and podcasts, which engage students and expand access to relevant religious information. Additionally, teachers provide digital literacy education that includes training on digital ethics, online security, and responsible social media usage. This study concludes that digital literacy in IRE supports students' technological skills and helps shape their moral character in the digital world. This effort significantly contributes to forming students as good digital citizens who can interact ethically and productively in the digital space. The implications of this study indicate the importance of ongoing digital literacy training for teachers and students to support relevant religious education in the digital era.



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A. INTRODUCTION

In the increasingly advanced digital era, digital literacy not only plays a role in strengthening technological capabilities but also becomes a crucial aspect in fostering character and integrity, especially in the context of Islamic Religious Education (IRE), where digital literacy plays a role in instilling moral values and ethical behavior in students (Sinta et al., 2024). Applying digital literacy in the IRE curriculum can expand access to information and improve students' skills to interact responsibly in the digital space, improving learning outcomes (Quraishia et al., 2024). Digital literacy currently includes thinking critically and ethically when using technology, which is essential for students to survive in modern society (Pangrazio et al., 2020).

Moral education is essential in directing students to uphold their values amidst the torrent of negative influence from digital media (Faqihuddin, 2017; Masbur, 2024). Adequate digital literacy enhances educational and moral experiences (Erdogan et al., 2019). Digital literacy can make the Islamic Religious Education learning environment more interactive and relevant (Hadiati et al., 2024). The importance of teacher training in integrating digital literacy shows that teacher digital literacy directly affects the effectiveness of educational interventions (Starkey, 2020), while digital literacy in Islamic boarding schools proves its benefits in strengthening religious and technological education (Darajat et al., 2022).

In contemporary Islamic education environments, traditional pedagogical approaches often portray teachers as the primary source of knowledge and place students as passive recipients (Ilyasa et al., 2024). This model is increasingly outdated in the digital age, characterized by abundant information and multiple learning modalities. Students today access extensive content through the internet and social media, which serve not only as sources of information but also as arenas for social interaction, including discussions about religious beliefs and practices (Faqihuddin & Muflih, 2024). This shift underscores the mismatch between conventional methods in Islamic Religious Education (IRE) classes and the digital reality of students, who often encounter incorrect or biased information without the critical ability to check the veracity of such information about their religious teachings (Huda et al., 2024).

This transformation reinforces the need for integrating media literacy into the IRE curriculum, equipping students with the ability to distinguish credible sources of information and interact wisely with various religious narratives (Kharismatunisa, 2023). In addition, the influence of social media in shaping religious authority and practice is very significant, with social media influencers often reshaping the way religious messages are communicated and received, which tends to be more in line with the tastes of young audiences (Zaid et al., 2022). Therefore, Islamic Religious Education teachers need to not only adapt their teaching methods but also actively engage in digital platforms that students frequently use to bridge the gap between traditional religious teachings and contemporary digital interactions (Munjiat et al., 2023; Pabbajah et al., 2021).

In Islamic Religious Education (IRE), digital literacy evolves from basic technical skills to a deeper understanding of the ethical and responsible use of technology. This concept includes accessing, analyzing, evaluating, and creating content using technology and fostering a critical attitude toward the information encountered (Firmansyah et al., 2024; Jenuri et al., 2024). Students are equipped to distinguish between authentic and misleading information and are taught how to use social media and the internet to strengthen their faith (Faqihuddin et al., 2024). Technology Pedagogical Content Knowledge (TPACK) emphasizes the importance of harmonious integration between technology, pedagogy, and subject content, creating a dynamic and engaging learning environment that enhances students' understanding and creativity in IRE (Saili & Taat, 2023). The current state of Islamic education urges renewal through modern teaching methods and digital technology, and the readiness of educators and students in madrasahs to adopt these digital innovations shows excellent potential, provided that the technology is in line with Islamic principles (Abubakari & Priyanto, 2021; Beisenbayev & Almukhametov, 2024).

However, challenges in the effective integration of technology include inadequate infrastructure and the need for teacher training (Kumaidi et al., 2024). The COVID-19 pandemic has accelerated technology adaptation in Islamic education, emphasizing the importance of digital resources in home-based learning (Fandir, 2024; Faqihuddin et al., 2024). Digital literacy in IRE is not only about technical skills but also involves ethical considerations and the development of

critical thinking. This reflects a holistic approach to education that enhances academic achievement and contributes to students' moral and ethical development, in line with the broader goals of Islamic education (Hernawati et al., 2024).

Although digital literacy has been widely studied in the context of general education, there still needs to be studies that combine digital literacy with religious education, especially Islamic Religious Education. Many studies focus on the application of technology in education. (Faqihuddin, 2024c, 2024a, 2024b; Faqihuddin & Sinta, 2024). However, more must be explored about how technology can be integrated into teaching constructive religious values. In addition, there needs to be more research on the influence of digital literacy on religious interactions in online spaces, which are becoming increasingly relevant in today's global society. This lack opens up an opportunity to explore more deeply how digital literacy can improve religious teaching and understanding. This study brings novelty by integrating two areas often handled separately: digital literacy and Islamic religious education. By focusing on how Islamic religious education teachers can use digital tools to enrich teaching and make it more relevant to the younger generation, this study aims to identify effective strategies for integrating digital literacy into existing religious curricula. In addition, this study will also explore how digital literacy can strengthen positive religious interactions among students, leading them to become good digital citizens in religious and social contexts.

B. METHODS

This study adopted a qualitative design to understand how digital literacy is integrated by Islamic Religious Education (IRE) teachers in the learning process. The qualitative approach was chosen because it allows for in-depth research on teachers' perceptions, experiences, and practices in using digital technology in teaching. Through this approach, the study aims to comprehensively understand teaching strategies, challenges, and outcomes involving digital literacy (Faqihuddin, 2024d). The qualitative design also supports exploring how teachers adapt and utilize digital media to enrich religious interactions in the classroom. In addition, this design helps identify factors that influence the effectiveness of digital technology in religious education, including individual teacher factors, school contexts, and available resources. (Creswell, 2015; Hermawan et al., 2024).

The subjects of this study consisted of ten Islamic Religious Education teachers, five of whom taught in Junior High Schools (JHS) and five in Senior High Schools (SHS) in a metropolitan city with good access to technology and facilities. The participants were selected using a purposive sampling technique to ensure they met specific criteria relevant to the study's objectives. All selected teachers had demonstrated expertise in digital literacy and had prior experience creating digital media and content for educational purposes. This purposive sampling was chosen to ensure that the collected data reflected best practices and challenges faced by teachers who were already familiar with and actively utilizing digital technology. The research location was chosen based on the availability of adequate technology infrastructure and internet access, as these were deemed essential prerequisites for implementing digital literacy in learning. Additionally, this location provided a diverse context for examining the application of digital literacy in schools with potentially varying policies and resources. This approach ensured the data captured a comprehensive understanding of digital literacy integration in Islamic Religious Education. (Markula et al., 2023; Toft et al., 2021).

Table 1. List of Research Participants

No	Participant ID	Category	Age	Teaching Experience (Years)
1	P01	JHS IRE Teacher	34	10
2	P02	JHS IRE Teacher	29	5
3	P03	JHS IRE Teacher	33	9
4	P04	JHS IRE Teacher	38	12
5	P05	JHS IRE Teacher	30	7
6	P06	SHS IRE Teacher	42	15
7	P07	SHS IRE Teacher	37	13
8	P08	SHS IRE Teacher	33	9
9	P09	SHS IRE Teacher	28	3
10	P10	SHS IRE Teacher	41	18

This study adhered to strict ethical research principles, including obtaining informed consent from all participants and ensuring the confidentiality and anonymity of the information they provided. Data collection was conducted through a series of in-depth interviews with the teachers involved in Islamic religious education. These interviews explored experiences, perceptions, and practices using digital media in teaching religious education. Interview questions were designed to facilitate open and in-depth discussions on how digital literacy is integrated into the learning process, including barriers faced and strategies deemed effective by teachers. Each interview was recorded with the respondents' consent and subsequently transcribed for data analysis (Adeoye-Olatunde & Olenik, 2021; Dowling et al., 2016).

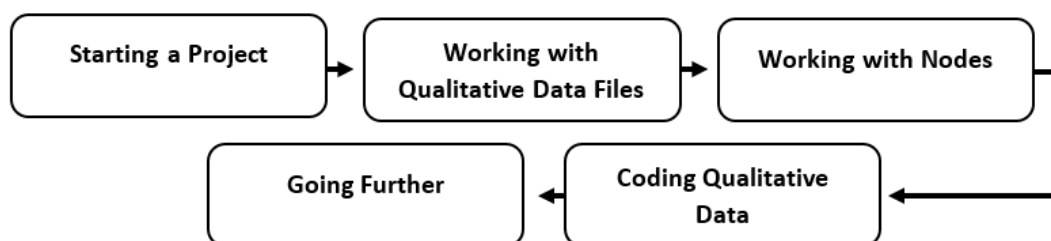


Figure 1. Workflow for Data Analysis Using NVivo Software Adapted from (Yahmady & Abri 2013).

This research step begins with the preparation and implementation of interviews, followed by data transcription and coding. Data analysis was conducted using the Miles and Huberman approach, which involves data reduction, data presentation, and conclusion drawing/verification. This process was assisted by NVivo 12 software, enabling efficient and systematic qualitative data analysis. Using NVivo helped organize data, search for patterns, and identify themes that emerged from the interviews. Data reduction was done by identifying meaningful quotes and grouping them into relevant categories based on the research theme. Data presentation involved mapping and interpreting relationships between categories to build a coherent narrative about the integration of digital literacy in Islamic Religious Education teaching. To ensure the validity of qualitative data, triangulation was applied by comparing data from different sources, such as interview transcripts, researcher observations, and relevant literature. Member checking was also conducted, where participants were given the opportunity to review

and confirm the accuracy of their interview transcripts and the interpretations derived from them. These steps ensured the reliability and credibility of the findings. The conclusion-drawing stage integrated the analysis results with existing literature to assess the findings' implications and verify the data's reliability (AlYahmady & Al Abri, 2013; Edwards-Jones, 2014; Miles & Huberman, 1994).

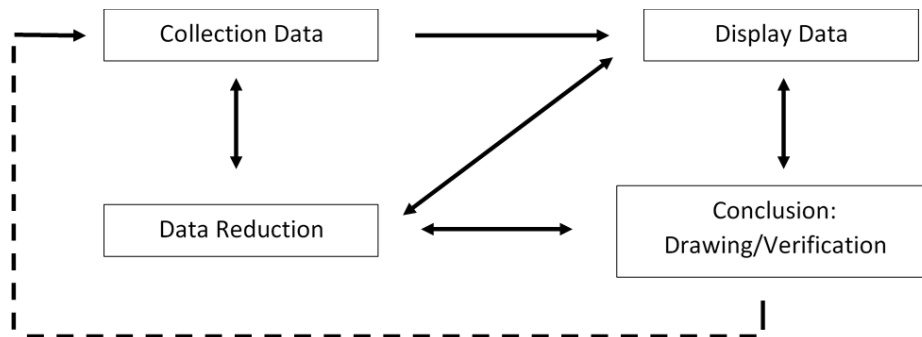


Figure 2. Data Analysis Diagram of the Miles and Huberman framework (Miles & Huberman (1994)).

C. RESULT AND DISCUSSION

This study reveals several significant findings regarding the efforts of Islamic Religious Education (IRE) teachers in integrating digital literacy into the learning process. Based on interviews with ten IRE teachers from Junior High School (JHS) and Senior High School (SHS) levels, it was found that they actively use digital technology to enrich teaching materials and increase student engagement and interaction. First, the study results show that IRE teachers use digital tools to support learning. For example, Google for Education and Learning Management Systems (LMS) manage virtual classes and facilitate access to online learning resources. Game-based learning tools such as Quizizz and Wordwall are also utilized to make learning more interactive and exciting for students. In addition, applications such as Canva are used to create visual media that enrich teaching materials, while YouTube is used as a platform to share religious content videos. Second, IRE teachers also demonstrate skills in developing relevant digital content. They create interactive modules, educational videos, podcasts, and social media content conveying religious material and moral values. This helps students gain a more holistic and contextual learning experience that fits the needs of the times. Third, Islamic Religious Education teachers' teaching focuses on digital literacy education. Teachers train students on digital ethics, online security, and responsible use of social media. They also emphasize the importance of critical thinking in dealing with misinformation in the digital world and teach students how to become wise and ethical netizens. Overall, the study results indicate that efforts to integrate digital literacy by Islamic Religious Education teachers strengthen students' technological skills and help them develop ethical and responsible attitudes in interacting in the digital world. This contributes to forming a Good Digital Citizenship society, where students can participate productively and positively in the digital space with a view based on religious values, as shown in Table 2 and Figure 3.

49 times, percentage 1.55%) and "online" (length 6, repeated 45 times, Percentage 1.42%) indicate the tools and platforms used to support digital teaching. Meanwhile, the words "religious" (length 9, repeated 38 times, percentage 1.20%) and "teaching" (length 8, repeated 37 times, Percentage 1.17%) underline the religious content delivered through modern and digital teaching methods. Considering these data, it is clear that digital literacy has become an integral part of Islamic Religious Education teaching, indicating a real effort to enrich traditional teaching methods with technology to educate ethical and digital-conscious students in a religious context.

The results of this analysis provide an overview of how Islamic Religious Education teachers adapt technology in religious education to meet the needs of students in the digital era. It also highlights the importance of digital literacy in improving the way of teaching that not only maintains the essence of religion but also makes it more relevant and exciting for students accustomed to digital technology. Therefore, this study shows a significant effort from Islamic Religious Education teachers to integrate technology into teaching, which not only helps strengthen digital literacy among students but also provides them with tools to interact in a civilized and productive digital society. This effort directly supports forming an excellent digital citizenship society based on religious values, as shown in Table 3.

Table 3. Mapping of Islamic Religious Education Teachers' Efforts in Improving Digital Literacy

IRE Teachers' Efforts to Improve Digital Literacy	Code	Definition	Implementation	Code	Participants
Integration of Technology in IRE Learning	INT	Integrating technology in Islamic Education (IRE) Learning involves using digital tools and applications to enhance the quality and effectiveness of teaching.	1. Use of Google For Education as access to learning resources	INT1	P01, P04, P06
			2. Utilization of Game-Based Learning via Wordwall	INT2	P02, P05, P07
			3. Use of Learning Management Systems	INT3	P03, P08
			4. Use of Quizizz modules	INT4	P01, P04, P09
			5. Use of Canva as a learning media	INT5	P02, P10
			6. Utilization of YouTube videos	INT6	P05, P06
Development of Digital Content	CON	Digital content development by Islamic Education (IRE) teachers is the process where teachers create or adapt learning materials into engaging and educational digital formats.	1. Creation of YouTube video content on Islamic practices	CON1	P07, P10
			2. Utilization of Smart Apps Creator	CON2	P01, P03, P05
			3. Creation of Digital Modules	CON3	P06, P08
			4. Use of Instagram for sharing video content	CON4	P04, P09

IRE Teachers' Efforts to Improve Digital Literacy	Code	Definition	Implementation	Code	Participants
			5. Creation of Podcast content to support the IRE curriculum	CON5	P02, P10
Digital Literacy Education	LIT	Digital literacy education by Islamic Education (IRE) teachers is a teaching and learning process designed to equip students with essential skills and knowledge about the ethical, responsible, and effective use of information and communication technology.	1. Training on digital ethics 2. Training on online security 3. Training on responsible social media use 4. Training to counter misinformation 5. Training to prepare students to be smart and ethical netizens	LIT1 LIT2 LIT3 LIT4 LIT5	P01, P03, P06 P04, P07 P05, P08, P10 P02, P09 P01, P04, P06, P10

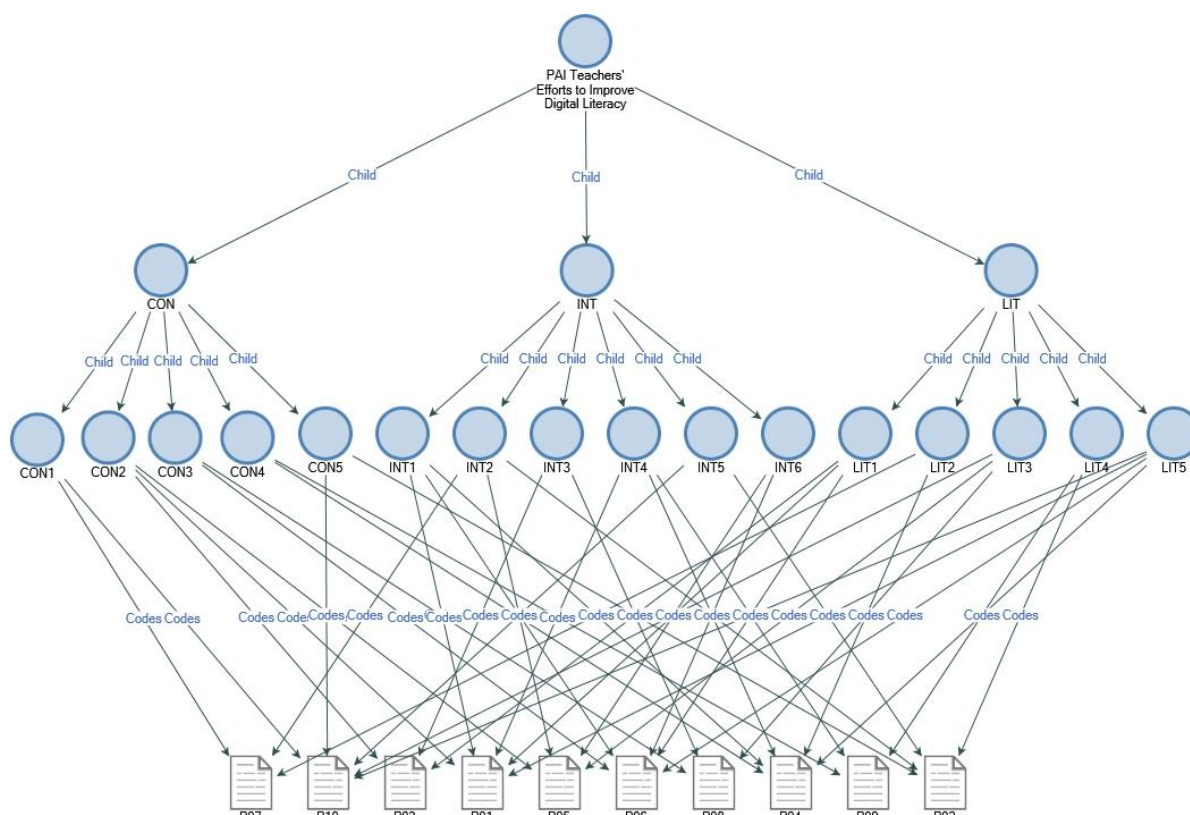


Figure 4. Project Map on NVIVO 12 Mapping of Islamic Religious Education Teachers' Efforts in Improving Digital Literacy.

The Table 3 and Figure 4 above illustrate the results of the analysis using the Project Map on NVIVO 12, which maps the efforts of Islamic Religious Education (IRE) teachers in improving digital literacy. The efforts of Islamic Religious Education (IRE) teachers in improving digital literacy are reflected in the use of various tools and methods in learning that aim to

strengthen religious interactions towards the formation of a Good Digital Citizenship society. These teachers integrate technology in Islamic Religious Education teaching by using various digital tools that improve the quality and effectiveness of learning (Subakti et al., 2024). For example, using Google for Education facilitates access to extensive learning resources, while using the learning management system and Quizizz modules supports interactive delivery of materials. In addition, using Wordwall for game-based learning and Canva as a visual learning medium shows creative adaptation of technology in teaching. The integration of digital tools in Islamic Religious Education (IRE) by teachers is critical in fostering digital literacy and promoting good digital citizenship among students. Islamic Religious Education educators increasingly utilize various technology platforms to enhance the educational experience, facilitating a more engaging and interactive learning environment. For example, using Quizizz, a gamification assessment tool, has significantly increased student engagement and motivation in the learning context. Studies show that Quizizz helps improve learning outcomes and reduces academic stress among students, making the learning process more enjoyable and effective (Pham, 2022; Yarida et al., 2024). Additionally, the integration of Google for Education tools, such as Google Classroom, allows teachers to create virtual classrooms where they can share resources, assign assignments, and foster communication with students. The platform supports a blended learning approach, which is essential in today's educational landscape, especially given the challenges posed by the COVID-19 pandemic (Adedoyin & Soykan, 2023).

Accessing various learning materials and resources through these digital platforms enhances the overall quality of education and prepares students for a digitally driven society. In addition to Quizizz and Google tools, the implementation of Canva in Islamic Religious Education instruction is a creative adaptation of technology that enhances visual learning. Canva has been recognized for its user-friendly interface and ability to stimulate student creativity, making it an effective tool for developing writing skills and other forms of expression (Faqihuddin et al., 2024; Nabillah & Tanjung, 2023). The interactive elements offered by Canva can motivate students to engage more deeply with the content, thus fostering a more participatory learning environment. Furthermore, the use of learning management systems (LMS) and other digital tools, such as Wordwall for game-based learning, are examples of the diverse methodologies used by Islamic Religious Education teachers to create dynamic educational experiences. These tools facilitate the delivery of educational content and encourage collaborative learning and peer interaction, which are essential components of effective teaching practices in the digital age (Gursoy & Goksun, 2019; Kurt et al., 2019), as shown in Figure 5.



Figure 5. IRE Learning Videos and Podcast Content to Support IRE Learning

The figure above depicts IRE learning videos and podcast content created to support IRE learning. On the digital content development side, Islamic Religious Education teachers actively create exciting and educational materials in digital format. This includes creating video content on YouTube related to Islamic practices, using the Smart Apps Creator application to create digital modules, and utilizing Instagram to share video content. This approach enriches students' learning experiences and expands the reach of Islamic Religious Education teaching to a larger digital space. Islamic Religious Education (IRE) teachers are increasingly utilizing digital platforms to create exciting and educational materials that enhance the learning experience for students. The use of YouTube for video content related to Islamic practices has become a prominent method for disseminating knowledge. As Novriyanto notes, many preachers have adopted YouTube as a medium for preaching, effectively reaching a wider audience with innovative and creative content that resonates with viewers (Khaerunnisa et al., 2024; Novriyanto et al., 2024). This is in line with Pratama's findings, which highlight the transformation in the delivery of da'wah through social media, where content creators strive to convey their messages in an exciting way to attract a broader community (Pratama et al., 2023). Furthermore, Hidayati emphasized that students find YouTube content, especially those related to Islamic English, helpful in improving their vocabulary, indicating the educational potential of the platform (Hidayati & Syafryadin, 2023).

Furthermore, Islamic Religious Education teachers provide digital literacy education, including training on digital ethics, online safety, and responsible use of social media. The program is designed to equip students with essential skills and knowledge on using information and communication technology ethically and effectively. For example, training on addressing misinformation and preparing to become a competent and ethical netizen is essential in today's digital society. In addition to YouTube, IRE teachers utilize applications such as Smart Apps Creator to develop digital modules that facilitate interactive learning. This approach is complemented by Instagram, which has been identified as a valuable tool for educational engagement. Research by Yudhiantara and Nuryantini shows that students in Islamic higher education often use mobile devices, including Instagram, for collaborative language learning, thus demonstrating the platform's effectiveness in supporting educational goals (Yudhiantara & Nuryantini, 2019). Furthermore, integrating Instagram into educational practices allows for disseminating Islamic teachings in a visually appealing format, as explored by Mawidha, who discusses the potential of digital media in transforming religious practices and increasing outreach (Mawidha et al., 2023). Digital literacy education is another critical component of the curriculum IRE teachers provide. This education includes training on digital ethics, online safety, and responsible use of social media. Kambali et al. highlighted the challenges Islamic educators face in navigating the moral implications of technology, emphasizing the need for students to use digital media wisely while adhering to Islamic values (Kambali et al., 2023). The importance of addressing misinformation and preparing students to become ethical netizens is underscored by the need to equip them with essential skills for the digital age. This is further supported by the work of Hasanah et al., who discussed the effectiveness of digital platforms in improving educational outcomes during the pandemic, reinforcing the need for comprehensive digital literacy programs (Hasanah et al., 2021; Purwanto et al., 2024).

D. CONCLUSION AND SUGGESTIONS

This study demonstrates how Islamic Religious Education (IRE) teachers proactively integrate digital literacy into teaching to enhance learning quality and foster constructive religious interactions in the digital era. The integration of technology into the IRE curriculum enriches teaching methods by utilizing various digital tools and platforms such as Google For Education, Quizizz, Canva, and YouTube. These tools create a dynamic, interactive, and engaging learning environment that supports both academic achievement and students' moral and spiritual development. Furthermore, the promotion of digital literacy through training on digital ethics, online safety, and responsible use of social media equips students with essential skills to navigate the digital world wisely. These efforts not only help students consume digital content responsibly but also empower them to become ethical and responsible content creators.

The development of digital content by IRE teachers, including videos, podcasts, and interactive modules, provides innovative and effective teaching approaches that resonate with the needs of the digital generation. These initiatives significantly enhance student engagement, making Islamic education more relevant and accessible while reinforcing Islamic values in contemporary contexts. As a result, the efforts of IRE teachers contribute to shaping a young generation that is both technologically proficient and deeply rooted in religious and moral principles. This integration of digital literacy into IRE marks an important step toward establishing Good Digital Citizenship, where students can interact productively and ethically in the digital space and actively contribute to building a more knowledgeable, inclusive, and tolerant society.

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