

Utilizing Digital Technology in Islamic Religious Education to Enhance Student Participation: Evidence from an Indonesian Elementary School

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ABSTRACT : The integration of digital technology has become increasingly important in promoting student engagement and improving learning outcomes in Islamic Religious Education (IRE). This study aimed to examine the utilization of digital technology in IRE learning, explore its contribution to students' active participation, and identify supporting and inhibiting factors influencing its implementation at SDN 74 Bolang, Enrekang Regency, Indonesia. A qualitative case study approach was employed involving 12 participants consisting of one principal, six classroom teachers, one Islamic Religious Education teacher, and four parents. Data were collected over a three-month period through observations, semi-structured interviews, and documentation. The data were analyzed using the interactive model of Miles, Huberman, and Saldaña, which includes data reduction, data display, and conclusion drawing. The findings revealed that digital technologies such as Smart TVs, Corombut, digital Qur'an applications, instructional videos, Google Classroom, and other e-learning platforms significantly increased students' participation, motivation, interaction, and understanding of Islamic Religious Education materials. Supporting factors included teacher commitment, technological availability, and administrative support, whereas inhibiting factors consisted of limited infrastructure, unequal access to devices, internet connectivity issues, and varying levels of digital literacy. The study concludes that digital technology creates more engaging, interactive, and student-centered learning environments. Practically, the findings provide guidance for schools and policymakers in designing effective technology-based Islamic Religious Education programs that foster active student participation and meaningful learning experiences.

Keywords: Digital Technology, Islamic Religious Education, Active Participation, Elementary School Students, Digital Learning.

INTRODUCTION

Education in the era of the Industrial Revolution 4.0 has undergone significant transformation as digital technology continues to influence every aspect of the learning process. Digital technology is no longer merely a complementary tool but has become an essential requirement in modern education, demanding that teachers

remain innovative, creative, and adaptable (Ally, 2019; Prensky, 2010). The integration of technology into Islamic Religious Education (IRE) creates opportunities for more interactive, engaging, and contextualized learning experiences, thereby increasing students' active participation. As digital natives who are accustomed to technological devices, students tend to engage more effectively when learning is supported by digital media. Technology enables students to learn independently, access interactive materials, and explore content according to their developmental needs, making the learning process more effective, enjoyable, and aligned with children's psychological and cognitive characteristics (Gardner, 1983; Bandura, 1986).

From an Islamic perspective, seeking knowledge and utilizing available resources are strongly encouraged. Qur'an Surah Al-Mujadalah (58:11) emphasizes the virtue of believers who possess knowledge, while Surah Ali 'Imran (3:190–191) encourages the use of reason to reflect upon Allah's creation (Ibn Kathir, 2004; Shihab, 2002). Furthermore, Surah Ar-Rahman (55:33) implies that knowledge and technology are gifts from Allah that empower humanity to explore the universe, including the development of educational media (Hamka, 2015; Nata, 2016). Therefore, the implementation of digital technology in Islamic Religious Education is not only educationally appropriate but also consistent with Islamic principles. Teachers and students are expected to utilize technology wisely and responsibly for beneficial purposes so that Islamic education can become more effective, interactive, and supportive of both character development and academic achievement.

The Prophet Muhammad (peace be upon him) emphasized the importance of seeking knowledge through a hadith narrated by Abu Dawud, which states that pursuing knowledge is a pathway to Paradise and holds greater merit than ordinary acts of worship. This hadith illustrates that efforts to acquire knowledge, including the use of technology as a learning medium, are highly valued in Islam (Hamalik, 2013; Bandura, 1977). Digital technology is permissible as long as it serves positive purposes and does not contradict Islamic teachings. The integration of technology into Islamic Religious Education is increasingly important for creating meaningful learning experiences. Teachers who possess technological competence can deliver Islamic education in creative and contextual ways, while students can participate actively, develop critical thinking skills, and utilize digital media to access religious information that is appropriate for their age and developmental level (Mulyasa, 2018; Koesoema, 2015).

Indonesia's legal framework also supports the use of technology in education. Law No. 20 of 2003, Article 31 Paragraph (2), encourages distance education, while

Minister of Education and Culture Regulation No. 65 of 2013 and Government Regulation No. 57 of 2021 emphasize the systematic and effective integration of technology into the teaching and learning process (Tilaar, 2012; Prensky, 2010). These policies provide legitimacy for teachers to develop digital learning media and facilitate students' learning activities. Schools can utilize technology to improve educational quality, foster teacher creativity, and increase student engagement. With clear regulatory support, integrating technology into Islamic Religious Education is not merely an innovation but a necessity for improving learning quality and preparing future generations to meet the demands of the digital age.

Various contemporary learning theories support the use of technology in education. Constructivist theory emphasizes that students construct knowledge through active interaction with their learning environment (Jonassen, 2011). The Multiple Intelligences theory suggests that digital technology can accommodate diverse learning styles, including visual, auditory, and kinesthetic learners (Gardner, 1983). Meanwhile, active learning theory highlights the importance of direct student engagement in achieving deeper understanding (Deci & Ryan, 1985; Durlak et al., 2011). Digital media enable students to explore content according to their individual learning preferences while enhancing creativity, collaboration, and critical thinking skills. Appropriate use of technology can create more effective, engaging, and enjoyable Islamic Religious Education, allowing students to learn actively and independently while internalizing religious values through meaningful learning experiences.

In practice, however, Islamic Religious Education in elementary schools remains largely dominated by conventional teaching methods, particularly lectures, with limited use of instructional media, resulting in low levels of student participation (Hurlock, 2013; Suyanto, 2015). Observations conducted at SDN 74 Bolang, Enrekang Regency, revealed insufficient utilization of digital technology despite students' familiarity with digital devices. This situation creates a gap between traditional instructional approaches and the characteristics of today's digital-native generation. Consequently, students' active participation remains limited, their understanding of learning materials is restricted, and learning experiences tend to be passive. These conditions highlight the need for research to identify effective strategies for optimizing digital media in Islamic Religious Education so that learning can become more interactive, motivating, and responsive to students' needs and characteristics.

Ideally, Islamic Religious Education teachers should possess digital competencies and be capable of utilizing interactive multimedia, gamification, and

digital learning platforms, while students should be able to explore educational content appropriate to their developmental stages (Kohlberg, 1981; Lickona, 2013). Such a digital learning environment is expected to enhance students' religious understanding, engagement, and learning motivation comprehensively (Nucci & Narvaez, 2008; Rogoff, 2003). Digital technology serves as a catalyst for fostering students' creativity, independence, collaboration, and character development. With adequate teacher competencies and engaging digital media, the learning process can become more effective, enjoyable, and supportive of broader educational goals. Therefore, technology integration plays a crucial role in improving educational quality and preparing students for the challenges of the digital era.

Based on the gap between the ideal and actual conditions, this study is important and necessary. Its primary objective is to explore and analyze how the utilization of digital technology can enhance students' active participation in Islamic Religious Education learning at SDN 74 Bolang, Enrekang Regency. This research is expected to align Islamic educational practices with the needs of the digital generation, encourage teachers to become more innovative in their use of digital media, and help students gain more meaningful, interactive, and effective learning experiences. Furthermore, the findings may serve as a reference for schools in designing technology-based Islamic Religious Education strategies that are appropriate to children's developmental characteristics (Ally, 2019; Prensky, 2010; Jonassen, 2011).

METHODS

Research Site and Type

This study employed a qualitative research method, an approach that focuses on understanding social phenomena within their natural settings. Qualitative research enables researchers to obtain in-depth information through observation, interviews, and documentation (Moleong, 2019; Sugiyono, 2017). The research was conducted at SDN 74 Bolang, Enrekang Regency, South Sulawesi, which was selected based on its uniqueness, relevance, and suitability to the research topic. The selection of this school also considered factors such as educational quality, student population, and a supportive learning environment. The study was conducted directly in the field to obtain a comprehensive understanding of the utilization of digital technology in Islamic Religious Education (IRE) learning.

This research was designed as a field study using a descriptive-analytical and case study approach. Field research allowed the researcher to examine real-life

conditions in the research setting, while the case study approach provided an in-depth focus on a specific phenomenon, namely the implementation of digital technology to enhance students' active participation in learning (Anggito & Setiawan, 2018; Kirk & Miller, 1986).

Research Approach

This study adopted a qualitative approach and incorporated several perspectives. First, a pedagogical perspective was used to understand the implementation of digital technology in Islamic Religious Education learning. Second, a psychological perspective was employed to analyze students' motivation and participation in learning activities. Third, a theological perspective was utilized to examine the compatibility of technology use with Islamic principles and values.

The study also employed a qualitative survey orientation, in which data were collected through field observations, in-depth interviews, and documentation to gain a comprehensive understanding of the phenomenon under investigation (Van Dalen, 1979; Sugiyono, 2017).

Data Sources

The data sources in this study consisted of primary and secondary data.

Primary data were obtained through semi-structured interviews with the school principal, teachers, and students, as well as participant observation. Observations were conducted to gain a direct understanding of students' behaviors and interactions with digital media during the learning process.

Secondary data were collected from official school documents, archives, books, and scholarly journals related to the use of digital technology in Islamic Religious Education. These secondary sources served to support and validate the findings obtained from the primary data (Arikunto, 2013; Moleong, 2019).

Research Instruments

The primary research instrument in this study was the researcher, who was responsible for collecting, recording, interpreting, and analyzing the data. Additional instruments included observation guidelines, interview protocols, and documentation notes. Systematic observation and semi-structured interviews enabled the researcher to gather comprehensive and in-depth information regarding the implementation of digital technology and students' active participation in learning activities.

Data Collection Techniques

Data collection was carried out through observation, interviews, and documentation.

Observation was conducted to obtain a direct understanding of classroom learning conditions and the use of digital technology in Islamic Religious Education lessons. Interviews were conducted using both open-ended and closed-ended questions to gather detailed information from key informants regarding their experiences and perceptions of technology integration in learning. Documentation involved collecting and examining relevant records, reports, archives, and educational materials related to the implementation of digital technology in Islamic Religious Education.

These data collection techniques were integrated through triangulation to enhance the validity and reliability of the research findings (Sugiyono, 2017).

Data Analysis Techniques

Data analysis was conducted inductively through several interconnected stages. The first stage involved data collection through repeated observations, interviews, and documentation. The second stage was data reduction, which involved summarizing, selecting, and focusing on essential information relevant to the research objectives. The third stage was data display, where findings were organized and presented in descriptive narratives, charts, or diagrams to facilitate interpretation. The final stage involved drawing conclusions and verifying findings by interpreting the meaning of the collected data and identifying patterns that addressed the research questions (Miles & Huberman, 1994; Sugiyono, 2017).

This analytical process was dynamic and continuously developed throughout the research. Such flexibility allowed the qualitative approach to adapt to emerging situations and phenomena in the field, thereby providing a richer and more comprehensive understanding of the utilization of digital technology in enhancing students' active participation in Islamic Religious Education learning.

RESULT AND DISCUSSION

RESULTS

A. Utilization of Digital Technology in Islamic Religious Education Learning at SDN 74 Bolang, Enrekang Regency

1. Types of Technology and Applications Used

The interview results indicate that teachers and homeroom teachers at SDN 74 Bolang utilize various digital technologies to support Islamic Religious Education (IRE) learning. In lower grades, simple applications such as daily prayer apps, animated Qur'anic story videos, and interactive tablets are used to help students understand learning materials through visual and auditory approaches. In higher grades, teachers

employ digital Qur'an applications equipped with translations and tafsir (interpretation), e-learning platforms such as Google Classroom and Edmodo, as well as interactive quizzes and digital modules to enhance students' understanding. The selection of technology is adjusted to students' developmental levels and digital literacy skills, making learning more engaging, interactive, and flexible while encouraging independent learning and deeper comprehension of Islamic Religious Education materials.

Table 1. Interview Results: Types of Technology and Applications Used

No.	Informant	Interview Findings
1	Islamic Education Teacher	Uses digital Qur'an applications with translation and tafsir, interactive learning videos, and online discussion platforms.
2	Grade 2 Homeroom Teacher	Uses daily prayer applications and animated Qur'anic story videos; simple but engaging technologies for students.
3	Grade 3 Homeroom Teacher	Uses educational video applications and digital daily assignments.
4	Grade 4 Homeroom Teacher	Uses educational applications for prophetic history, hadith, and prayers; online platforms for quizzes and discussions.
5	Grade 5 Homeroom Teacher	Uses e-learning platforms with interactive modules and mobile Qur'an applications for reading and memorization activities.
6	Grade 6 Homeroom Teacher	Uses interactive quizzes and learning videos about the lives of the prophets, combining visual and audio elements to improve understanding.

2. Utilization of Technology to Enhance Understanding of Islamic Religious Education Materials

The interview findings reveal that digital technology is effectively used to deepen students' understanding of Islamic Religious Education materials, including prayers, Qur'anic chapters, fiqh, moral values (akhlaq), and prophetic history. Teachers and homeroom teachers reported that interactive media, educational videos, and animations make learning materials more engaging, understandable, and relevant to students' daily lives. In lower grades, students learn through animated videos and daily prayer applications, while in higher grades, e-learning platforms and

interactive modules facilitate the study of more complex topics. This approach promotes independent learning and encourages active interaction between students and learning materials. Furthermore, technology provides immediate feedback, enabling students to review and strengthen their understanding effectively.

Table 2. Interview Results: Technology Utilization for Understanding Learning Materials

No.	Informant	Interview Findings
1	Islamic Education Teacher	Interactive videos and digital Qur'an applications help students understand tafsir, fiqh, and moral teachings in practical ways.
2	Grade 2 Homeroom Teacher	Animated videos and daily prayer applications help students understand religious values from an early age.
3	Grade 4 Homeroom Teacher	Online learning platforms provide quizzes and videos on prophetic history, fiqh, and prayers; students learn independently and receive immediate feedback.
4	Grade 5 Homeroom Teacher	Digital Qur'an applications expand students' understanding of recitation and interpretation; students learn flexibly and independently.
5	Grade 6 Homeroom Teacher	Videos and interactive quizzes help students connect theoretical concepts with the practical application of Islamic teachings in daily life.

3. Utilization of Technology for Assignments, Assessment, and Access to Learning Materials

Interview results show that e-learning platforms and digital applications facilitate students' access to instructional materials, completion of assignments, and participation in assessments in a flexible manner. Teachers deliver materials through videos, interactive modules, and online quizzes, allowing students to learn anytime according to their needs. These technologies enable teachers to provide real-time feedback so that misunderstandings can be corrected immediately. In lower grades, simple applications are used for learning prayers and prophetic stories, whereas in higher grades, e-learning platforms support more complex assignments and assessments. This approach enhances students' learning independence and improves the effectiveness of Islamic Religious Education instruction.

Table 3. Interview Results: Assignments, Assessment, and Access to Learning Materials
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No.	Informant	Interview Findings
1	Islamic Education Teacher	E-learning platforms enable students to complete assignments, quizzes, and online examinations, while allowing teachers to monitor progress.
2	Grade 2 Homeroom Teacher	Simple applications help students complete prayer and Qur'anic story assignments interactively.
3	Grade 3 Homeroom Teacher	Video-based applications and digital daily assignments facilitate assignment submission and assessment.
4	Grade 5 Homeroom Teacher	Online assignments and examinations accelerate feedback and improve student understanding.

4. Utilization of Technology for Teacher–Student Communication

The interview findings indicate that digital technology facilitates communication between teachers and students in Islamic Religious Education learning. Platforms such as Google Classroom, WhatsApp, and other messaging applications allow teachers to distribute materials, answer questions, and monitor students' learning progress flexibly. These technologies also enable teachers to provide rapid and interactive feedback, increasing student engagement in the learning process. In lower grades, communication is generally conducted through messaging applications and parent updates, while in higher grades, online discussions and question-and-answer sessions through e-learning platforms enhance academic interaction. This approach strengthens student engagement, supports independent learning, and improves the overall effectiveness of Islamic Religious Education instruction.

Table 4. Interview Results: Teacher–Student Communication

No.	Informant	Interview Findings
1	Islamic Education Teacher	Google Classroom and messaging applications facilitate the distribution of materials and provide prompt feedback.
2	Grade 2 Homeroom Teacher	ClassDojo supports communication with both parents and students, although there are challenges in technology use among young learners.
3	Grade 5	Google Classroom allows students to ask questions and

	Homeroom Teacher	receive additional explanations quickly.
4	Grade 6 Homeroom Teacher	Zoom and Google Meet are used for discussions and question-and-answer sessions after class, strengthening student engagement.

5. Impact of Digital Technology on Student Engagement and Learning Outcomes

The interview results demonstrate that the use of digital technology has a positive impact on Islamic Religious Education learning outcomes. Technology increases students' enthusiasm, motivation, and active participation in learning activities. Interactive media, videos, animations, and e-learning applications help students understand learning materials, memorize prayers and Qur'anic chapters, and study independently outside classroom hours. Students can review learning materials repeatedly and receive real-time feedback, resulting in deeper conceptual understanding. The integration of technology also promotes independent learning and digital literacy skills while making the learning process more engaging. These impacts are reflected in improved academic performance, greater participation in classroom discussions, and enhanced ability to apply Islamic values in daily life.

Table 5. Interview Results: Impact on Student Engagement and Learning Outcomes

No.	Informant	Interview Findings
1	Islamic Education Teacher	Students access learning materials more flexibly, understand content better, and develop independent learning habits.
2	Grade 3 Homeroom Teacher	Video applications and interactive quizzes increase students' enthusiasm and motivation.
3	Grade 4 Homeroom Teacher	Interactive platforms improve understanding of Islamic Religious Education concepts and encourage active participation.
4	Grade 5 Homeroom Teacher	The use of digital applications accelerates the memorization of prayers and Qur'anic chapters, leading to improved learning outcomes.

B. Student Engagement in Islamic Religious Education Learning through Digital Technology Utilization at SDN 74 Bolang, Enrekang Regency

1. Active Student Participation through Interactive Quizzes and Educational Games

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The interview findings indicate that the use of Corombut has been highly effective in increasing student participation through interactive quizzes and educational games. Students in lower and middle grades actively engage in quizzes related to prayers, prophetic stories, and fiqh, making the learning process more enjoyable and challenging. These activities encourage students to participate actively, engage in healthy competition, and enhance their understanding of Islamic Religious Education (IRE) materials.

Table 6. Active Student Participation through Interactive Quizzes and Educational Games

No.	Informant	Interview Findings
1	Islamic Education Teacher	Corombut improves students' understanding of prayers, Qur'anic chapters, fiqh, and prophetic stories through interactive quizzes.
2	Grade 3 Homeroom Teacher	Students demonstrate high enthusiasm during quizzes on daily prayers and Qur'anic stories and actively participate in discussions afterward.
3	Grade 4 Homeroom Teacher	Corombut-based quizzes motivate students to learn prophetic history and fiqh in an interactive manner.
4	Grade 5 Homeroom Teacher	Students engage in healthy competition, which increases their participation and understanding of Islamic Religious Education materials.

2. Active Student Participation through Learning Videos on Smart TVs

Smart TVs are utilized to display animated videos and visual stories that clarify Islamic Religious Education concepts. These videos enhance students' understanding and encourage discussion, reflection, and interaction between students and teachers. Students actively answer questions, discuss moral values presented in the videos, and relate the lessons to their daily lives.

Table 7. Active Student Participation through Smart TVs

No.	Informant	Interview Findings
1	Islamic Education Teacher	Smart TVs facilitate the visualization of learning materials and encourage students to participate in discussions and ask questions.
2	Grade 4 Homeroom	Students actively respond to videos about the lives of the prophets and Islamic values, deepening their understanding

	Teacher	of religious teachings.
3	Grade 5 Homeroom Teacher	Learning videos accelerate conceptual understanding, and students actively engage in question-and-answer sessions and reflective discussions.
4	Grade 6 Homeroom Teacher	Video presentations motivate students to participate in discussions and increase active engagement in the classroom.

3. Active Student Participation in Discussions and Questioning

Digital technology encourages students to become more active in asking questions and participating in discussions. Corombut stimulates follow-up questions through interactive quizzes, while Smart TVs promote deeper discussions after students watch educational videos. These activities enhance students' curiosity, engagement, and understanding of Islamic Religious Education materials.

Table 8. Active Student Participation in Discussions and Questioning

No.	Informant	Interview Findings
1	Islamic Education Teacher	Students become more active in asking questions and participating in discussions through Corombut and Smart TV activities, thereby deepening their understanding of Islamic Religious Education.
2	Grade 4 Homeroom Teacher	Corombut and educational videos facilitate students' questions regarding prophetic character traits and the application of Islamic teachings.
3	Grade 5 Homeroom Teacher	Technology encourages students to discuss relevant and engaging topics, thereby improving classroom interaction.
4	Grade 6 Homeroom Teacher	Students ask more critical and reflective questions related to fiqh and moral education (akhlaq).

4. Increased Student Learning Motivation

The interview results reveal that the utilization of Corombut and Smart TVs significantly increases students' motivation to learn. Competitive elements, visual presentations, and animated content make the learning process more engaging and enjoyable. As a result, students become more enthusiastic, active, and motivated to explore Islamic Religious Education materials independently and collaboratively.

Table 9. Increased Student Learning Motivation

No.	Informant	Interview Findings
1	Islamic Education Teacher	Technology enhances student motivation through interactive quizzes and visual learning videos.
2	Grade 4 Homeroom Teacher	Smart TVs and Corombut make learning more engaging and interactive, motivating students to participate actively.
3	Grade 5 Homeroom Teacher	Corombut-based quiz competitions encourage students to improve their understanding of prayers and Qur'anic chapters.
4	Grade 6 Homeroom Teacher	Visually rich learning videos increase students' interest and active involvement in classroom activities.

C. Supporting and Inhibiting Factors in the Utilization of Digital Technology to Enhance Students' Active Participation in Islamic Religious Education Learning at SDN 74 Bolang, Enrekang Regency

The utilization of digital technology in Islamic Religious Education (IRE) learning at SDN 74 Bolang provides opportunities for students to engage in interactive learning and increase their active participation. The use of technological tools such as Smart TVs and interactive learning platforms, including Corombut, enables students to access learning materials in more engaging and diverse ways. However, the effectiveness of technology integration is influenced by various supporting and inhibiting factors.

Supporting factors include the availability of technological devices and internet access at school, teachers' technological competencies, the diversity of learning platforms, and support from parents and the school community. These factors contribute to greater student engagement, deeper understanding of learning materials, and more effective use of digital media in the learning process.

On the other hand, several challenges hinder the optimal use of digital technology. These include limited technological infrastructure and internet connectivity, varying levels of digital literacy among students and teachers, insufficient professional development opportunities related to specific applications and devices, and socioeconomic barriers that restrict students' access to technology at home. Such challenges affect students' active participation and the overall effectiveness of technology-based learning.

Based on interviews with Islamic Education teachers and homeroom teachers, the supporting and inhibiting factors are presented as follows.

1. Inhibiting Factors

Table 10. Inhibiting Factors in the Utilization of Digital Technology

Informants	Inhibiting Factors	Description
Islamic Education Teacher and Grade 3, 5, and 6 Homeroom Teachers	Limited infrastructure and technological devices	Smart TVs are available but in limited numbers. Internet connectivity issues occasionally occur, requiring scheduled use of available devices.
Islamic Education Teacher and Grade 4, 5, and 6 Homeroom Teachers	Low levels of digital literacy	Students and some teachers possess basic technological skills but still encounter difficulties when using more advanced applications such as Corombut, requiring additional guidance and support.
Islamic Education Teacher and Grade 3, 4, and 6 Homeroom Teachers	Insufficient training and professional development for teachers	Basic training has been provided; however, more comprehensive training on the use of Corombut and Smart TVs is needed. Limited time and facilities remain significant constraints.
Islamic Education Teacher and Grade 3, 5, and 6 Homeroom Teachers	Students' social and economic challenges	Some students do not have personal devices or reliable internet access at home, limiting their active participation in digital learning activities.

The primary inhibiting factors include limited technological infrastructure and internet connectivity, varying levels of digital literacy, insufficient teacher training, and students' socioeconomic conditions. These challenges reduce the effectiveness of digital technology utilization in promoting active student participation.

2. Supporting Factors

Table 11. Supporting Factors in the Utilization of Digital Technology

Informants	Supporting Factors	Description
Islamic Education	Availability of	Smart TVs and internet access are available

Teacher and Grade 3, 4, and 6 Homeroom Teachers	technological devices and internet access	in classrooms, supporting learning activities through Corombut and other digital media, although some students experience difficulties accessing technology at home.
Islamic Education Teacher and Grade 4, 5, and 6 Homeroom Teachers	Teachers' technological competence	Teachers are capable of operating Corombut and Smart TVs. Basic training has been provided, although additional professional development is necessary to maximize more advanced applications.
Islamic Education Teacher and Grade 3, 4, and 5 Homeroom Teachers	Diversity of learning platforms	The use of Corombut, educational videos, and animations through Smart TVs accommodates visual, auditory, and kinesthetic learning styles, thereby enhancing students' active participation.
Islamic Education Teacher and Grade 3, 4, and 6 Homeroom Teachers	Support from parents and the school community	Collaboration between the school and parents through meetings, training programs, and continuous communication supports students in utilizing technology both at school and at home.

The supporting factors consist of the availability of technological devices and internet access, teachers' technological competencies, the diversity of learning platforms, and strong support from parents and the school community. These factors enable students to participate more actively in learning activities, engage with instructional materials interactively, and develop a deeper understanding of Islamic Religious Education content.

DISCUSSION

The utilization of digital technology in Islamic Religious Education (IRE) learning at SD Negeri 74 Bolang, Enrekang Regency, has demonstrated a positive impact on students' active participation. Widyastuti (2023) emphasized that interactive and contextual digital learning media can enhance student engagement and learning motivation. The use of Smart TVs and interactive applications such as Corombut enables students to access instructional materials in more engaging and diverse ways, making the learning experience enjoyable and encouraging active participation. However, Widyastuti also noted that limitations in digital literacy, infrastructure, and

the readiness of both teachers and students may reduce the effectiveness of technology integration. Therefore, strengthening digital literacy and improving technological infrastructure are essential to optimizing the use of digital media in elementary schools.

The findings of this study indicate that the integration of digital technology can strengthen teacher–student interaction. Andriyani et al. (2025) found that instructional videos displayed through Smart TVs, particularly those visualizing prophetic stories and fiqh teachings, facilitate students’ understanding of learning materials. Students construct knowledge through social interaction, consistent with the constructivist perspectives of Piaget and Vygotsky. Digital media also enable teachers to provide immediate feedback, making the learning process more interactive and collaborative. These findings suggest that technology serves not only as a medium for delivering information but also as a tool for deepening student engagement with abstract concepts, enhancing comprehension of Islamic Religious Education content, and increasing learning motivation.

One of the major challenges in implementing technology-based learning is the limited availability of devices and internet connectivity. Ratnawati and Siregar (2025) reported that inadequate infrastructure and uneven internet access are among the primary barriers to digital learning in elementary schools. At SD Negeri 74 Bolang, several classrooms are equipped with Smart TVs; however, the availability of laptops and tablets remains limited, requiring students to share devices. In addition, unstable internet connections at home often reduce students’ participation in online discussions and interactive quizzes. These findings highlight the importance of expanding access to technological devices and improving internet infrastructure to ensure the effectiveness and continuity of technology-supported learning while maintaining high levels of student participation.

Another significant challenge is the relatively low level of digital literacy among both students and teachers. Imansyah and Silviana (2025) argued that insufficient digital literacy reduces the effectiveness of technology-based learning because students are unable to utilize digital media optimally. In the present study, some students experienced difficulties operating more advanced applications, while several teachers still required assistance in effectively using Corombut and Smart TVs. Consequently, strengthening digital literacy across all stakeholders is crucial to enabling students to access learning materials effectively and empowering teachers to facilitate engaging and interactive learning experiences. Improved digital literacy can

enhance active participation, deepen students' understanding of learning materials, and contribute to more effective Islamic Religious Education instruction.

Teacher training emerged as another critical factor supporting the successful integration of technology into classroom instruction. Kartika and Arifudin (2025) found that continuous professional development improves teachers' ability to design interactive learning experiences and manage digital media effectively. At SD Negeri 74 Bolang, several teachers have participated in basic technology training; however, opportunities for advanced training on integrating digital applications into Islamic Religious Education instruction remain limited. Adequate professional development enables teachers to create more engaging learning environments, encourage active student participation, and facilitate deeper understanding of learning materials. These findings indicate that enhancing teachers' technological competencies is a strategic step toward maximizing the educational benefits of digital technology.

The diversity of digital learning platforms also contributes significantly to student engagement. Corombut provides interactive quizzes, while Smart TVs present visual and auditory learning materials that accommodate different learning styles. Ahmad et al. (2025) reported that the use of diverse digital media can enhance students' understanding, increase engagement, and support more comprehensive learning experiences. Through multiple platforms, students can learn according to their individual preferences and abilities. These findings support the concept of adaptive learning, in which technology enables flexible access to educational content, thereby increasing motivation, participation, and learning outcomes in Islamic Religious Education.

Parental and school community support also plays an important role in the successful implementation of educational technology. Awwaliyah (2025) argued that parental involvement strengthens the effectiveness of digital media, particularly in supporting students' learning at home. At SD Negeri 74 Bolang, the school provides guidance and educational programs for parents to help them assist their children during digital learning activities. This support increases student participation, helps learners overcome challenges related to accessing instructional materials, and strengthens collaboration among teachers, students, and parents. These findings suggest that effective partnerships between schools, families, and the broader educational community are essential for maximizing the benefits of technology integration in Islamic Religious Education.

Overall, this study confirms that digital technology can significantly promote students' active participation in Islamic Religious Education learning at SD Negeri 74

Bolang. Herawati Sinaga (2024) emphasized that digital media provide comprehensive and interactive learning experiences, although challenges such as limited technological resources, uneven digital literacy, and unstable internet connectivity remain. Strategies aimed at improving infrastructure, enhancing teacher training, strengthening students' digital literacy, and increasing parental support are essential for optimizing the use of technology in education. The findings demonstrate that the integration of digital media holds considerable potential for preparing young learners to meet the demands of modern education and an increasingly technology-driven society.

CONCLUSION

Based on the findings of this study, the utilization of digital technology in Islamic Religious Education (IRE) learning at SD Negeri 74 Bolang, Enrekang Regency, has had a positive impact on students' understanding and active participation. The use of digital tools such as Qur'an applications, interactive learning videos, Smart TVs, and e-learning platforms enables students to learn in more flexible, engaging, and contextual ways. Digital media facilitate independent learning, support deeper understanding of instructional materials, and contribute to improved learning outcomes overall. Nevertheless, limitations in digital literacy and unequal access to technological facilities remain challenges that affect the effectiveness of technology-based learning.

The use of digital technologies such as Corombut and Smart TVs significantly increases students' active engagement in Islamic Religious Education learning. Interactive media, including quizzes, educational videos, and visual discussions, encourage students to participate more actively, ask questions, and engage in classroom discussions. These activities not only strengthen students' understanding of learning materials but also enhance their overall learning motivation. Such interactive learning experiences align with constructivist learning principles, in which students actively construct knowledge through interaction with media and their learning environment. When technology is utilized effectively, Islamic Religious Education becomes more engaging and meaningful, leading to greater student participation and highlighting the important role of digital media in supporting effective and collaborative learning in elementary schools.

Various supporting and inhibiting factors influence the effectiveness of digital technology utilization in promoting student participation. Limited infrastructure, unstable internet connectivity, and insufficient technological devices remain major

obstacles. In addition, variations in digital literacy levels among students and teachers, as well as limited opportunities for advanced teacher training, affect the quality of technology-based instruction. Parental support also plays a critical role, as active parental involvement can reinforce students' learning experiences at home. Therefore, strategies focused on improving technological infrastructure, providing continuous professional development for teachers, and empowering parents are essential for maximizing the benefits of digital technology in Islamic Religious Education and enhancing both student participation and learning outcomes.

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