

**The Utilization of Information and Communication Technology in
Islamic Religious Education Learning at State Elementary School
Manarap Tengah 2, Banjar Regency**

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Abstract

This study aims to describe the utilization of Information and Communication Technology (ICT) in Islamic Religious Education (IRE) learning at State Elementary School Manarap Tengah 2, Banjar Regency, identify the challenges faced by teachers and the strategies employed to overcome them, and analyze the impact of ICT integration on the learning process. This research employed a qualitative field research approach. The participants consisted of the fifth-grade Islamic Religious Education teacher and students. Data were collected through observation, interviews, and documentation and analyzed through data reduction, data presentation, and conclusion drawing. Data validity was ensured through source and technique triangulation. The findings indicate that ICT utilization, including laptops, LCD projectors, PowerPoint presentations, educational videos, and internet resources, enhances students' enthusiasm, participation, motivation, and understanding of learning materials. However, limited facilities, unstable internet connectivity, insufficient technical skills, and time constraints remain significant challenges. Teachers address these challenges through independent learning, advance preparation of teaching materials, and alternative instructional media. The novelty of this study lies in its contextual examination of ICT integration in elementary-level Islamic Religious Education in a local school setting, highlighting the interaction between technological resources, pedagogical adaptation, and students' learning engagement.

Keywords: Digital Learning, Elementary Education, Learning Motivation

Abstrak

Penelitian ini bertujuan untuk mendeskripsikan pemanfaatan Teknologi Informasi dan Komunikasi (TIK) dalam pembelajaran Pendidikan Agama Islam (PAI) di SDN Manarap Tengah 2 Kabupaten Banjar, mengidentifikasi tantangan yang dihadapi guru serta strategi yang digunakan untuk mengatasinya, dan menganalisis dampak integrasi TIK terhadap proses pembelajaran. Penelitian ini menggunakan pendekatan penelitian lapangan kualitatif. Partisipan penelitian terdiri atas guru Pendidikan Agama Islam kelas V dan para siswa. Data dikumpulkan melalui observasi, wawancara, dan dokumentasi, kemudian dianalisis melalui tahap reduksi data, penyajian data, dan penarikan kesimpulan. Keabsahan data dijamin melalui triangulasi sumber dan teknik. Hasil penelitian menunjukkan bahwa pemanfaatan TIK, yang meliputi laptop, proyektor LCD, presentasi PowerPoint, video pembelajaran, dan sumber belajar berbasis internet, mampu meningkatkan antusiasme, partisipasi, motivasi, serta pemahaman siswa terhadap materi

pembelajaran. Namun demikian, keterbatasan sarana dan prasarana, ketidakstabilan koneksi internet, kurangnya keterampilan teknis, serta keterbatasan waktu masih menjadi tantangan yang signifikan. Guru mengatasi tantangan tersebut melalui pembelajaran mandiri, persiapan bahan ajar secara matang sebelum pembelajaran, serta penggunaan media pembelajaran alternatif. Kebaruan penelitian ini terletak pada kajian kontekstual mengenai integrasi TIK dalam pembelajaran Pendidikan Agama Islam pada tingkat sekolah dasar di lingkungan sekolah lokal, dengan menyoroti interaksi antara ketersediaan sumber daya teknologi, adaptasi pedagogis, dan keterlibatan siswa dalam proses pembelajaran.

Kata Kunci: Pembelajaran Digital, Pendidikan Dasar, Motivasi Belajar.

Introduction

Information and Communication Technology (ICT) has become an increasingly important component of contemporary education. The rapid development of digital technologies has transformed the ways in which knowledge is accessed, processed, and communicated. In educational settings, technology provides opportunities to diversify instructional methods and improve the accessibility of learning resources.(Ghani et al., 2026) Teachers can use digital devices, multimedia applications, and internet-based materials to support classroom instruction. These developments have encouraged educational institutions to reconsider conventional teaching practices and explore more interactive approaches to learning (Bates, 2019; Munir, 2017). Consequently, ICT integration has become an important consideration in efforts to improve educational quality and respond to changing learning needs.

The utilization of ICT in education extends beyond the use of computers and digital devices. It also encompasses the integration of digital resources into instructional planning, classroom communication, learning activities, and assessment. Technology can support the presentation of information through visual, auditory, and interactive formats. Such resources may help teachers explain complex concepts and provide students with different ways of engaging with learning materials. However, the educational value of technology depends on how effectively it is integrated into teaching strategies and learning objectives (Bates, 2019; Mishra & Koehler, 2006). Therefore, ICT should be understood as a pedagogical resource rather than merely a collection of technological tools.

Communication is another essential dimension of ICT integration in education. Digital communication tools can facilitate the exchange of information between teachers, students, parents, and school administrators. These tools may support the distribution of assignments, the provision of feedback, and the coordination of learning activities.(Ghani et al., 2026) Effective communication can strengthen the relationship between classroom instruction and students' learning experiences outside school.(Aslamiah et al., 2026; Mufid et al., 2026) Nevertheless, the use of communication technology requires appropriate guidance, particularly when it involves elementary school students. In this regard, ICT integration should consider both instructional effectiveness and the responsible use of digital communication resources (Munir, 2017; Bates, 2019).

Islamic Religious Education (IRE) occupies a distinctive position within the educational system because it addresses not only the acquisition of knowledge but also the development of faith, moral conduct, and religious practices. At the elementary school level, IRE seeks to introduce students to Islamic teachings and encourage them to apply religious values in their daily lives. Learning activities therefore involve cognitive,

affective, and psychomotor dimensions. Students are expected to understand religious concepts, develop positive attitudes, and practice appropriate forms of religious behavior. These objectives require instructional approaches that combine conceptual understanding with meaningful learning experiences (Majid, 2014; Muhaimin, 2012).

The teaching of Islamic Religious Education presents particular pedagogical challenges because some learning materials involve abstract concepts or practical religious activities. Students may find it difficult to understand certain topics when instruction relies exclusively on verbal explanations and printed textbooks. (Arisandi et al., 2026) Visual and audiovisual resources can provide additional representations of religious concepts and practices. For example, educational videos may illustrate the procedures for performing ablution and prayer, while visual presentations may support the explanation of Islamic history and moral values. Such resources can complement teacher explanations and provide students with more concrete learning experiences (Munir, 2017; Roblyer & Doering, 2013).

At the elementary school level, students' learning engagement is an important consideration in instructional design. Children often benefit from learning environments that incorporate visual materials, interactive activities, and opportunities for active participation. When lessons are presented through varied instructional media, students may become more interested in the subject matter. (Yahya et al., 2025) However, the effectiveness of these approaches depends on the relevance of the materials, the teacher's instructional competence, and the students' learning needs. Technology should therefore be integrated with appropriate pedagogical strategies rather than used solely to make lessons visually appealing (Mishra & Koehler, 2006; Roblyer & Doering, 2013).

ICT can support the development of more engaging learning experiences in Islamic Religious Education. Digital presentations, educational videos, and online learning resources can help teachers organize information and communicate important concepts. These resources may also encourage students to ask questions, participate in discussions, and explore learning materials more actively. Such opportunities are particularly relevant when teachers seek to connect religious knowledge with practical experiences. Nevertheless, technology alone cannot ensure meaningful learning, and the teacher remains responsible for guiding students' understanding and interpreting the educational significance of the materials presented (Bates, 2019; Munir, 2017).

The integration of technology into Islamic Religious Education also requires attention to the ethical and moral dimensions of digital learning. Students need guidance in selecting reliable information, respecting others in digital communication, and using technological resources responsibly. (Moh Al Ayat & Saputera, 2026) These considerations are especially important in religious education, where learning objectives include the development of character and moral awareness. Teachers must therefore ensure that digital resources are consistent with the learning objectives and the values being taught. In this context, ICT integration should support both the development of digital competencies and the cultivation of responsible behavior (Muhaimin, 2012; Mishra & Koehler, 2006).

The development of ICT-based learning also places new demands on teachers. Teachers are expected to select appropriate digital resources, prepare instructional materials, manage classroom activities, and respond to technical challenges. (Wahyudi, Suraijiah, et al., 2026) These responsibilities require a combination of subject knowledge, pedagogical competence, and technological skills. The Technological Pedagogical Content Knowledge framework emphasizes the importance of integrating these three

dimensions in instructional practice (Mishra & Koehler, 2006). In Islamic Religious Education, this integration involves ensuring that technological resources support the accurate presentation of religious content and the achievement of learning objectives.

Digital literacy is an important factor in the successful integration of ICT into classroom instruction. Teachers need to be able to locate, evaluate, select, and use digital resources appropriately. They must also understand how to adapt digital materials to students' age, abilities, and learning contexts. Without adequate digital literacy, teachers may experience difficulties in preparing instructional media or responding to technical problems during lessons. Consequently, professional development and opportunities for independent learning can play an important role in strengthening teachers' readiness to integrate technology into their teaching practices (Bates, 2019; Mishra & Koehler, 2006).

Despite its potential benefits, ICT integration in schools is often constrained by limited infrastructure and unequal access to technological resources. Schools may face difficulties related to internet connectivity, the availability of devices, maintenance costs, and the reliability of electricity. (Husna et al., 2026) These challenges can affect the continuity of technology-supported learning activities. In addition, teachers may need to share available equipment or modify their lesson plans when technical problems arise. Such conditions demonstrate that successful ICT integration requires attention to both pedagogical preparation and the practical circumstances of the school environment (Bates, 2019; Munir, 2017).

The availability of technological resources does not automatically guarantee their effective use in learning. Teachers must determine whether a particular tool is suitable for the learning objectives and the characteristics of their students. (Yahya et al., 2025) The selection of digital media should consider the complexity of the material, the time available for instruction, and the accessibility of the resources. When technological tools are used without a clear pedagogical purpose, they may provide limited educational value. Therefore, ICT integration should be guided by instructional planning and continuous evaluation of its contribution to learning (Mishra & Koehler, 2006; Bates, 2019).

The relationship between technology and learning motivation is another important consideration in educational research. (Abdullah et al., 2025) Multimedia presentations and audiovisual materials may attract students' attention and encourage them to participate in classroom activities. However, increased enthusiasm does not necessarily indicate improved long-term learning outcomes. Students' understanding should also be assessed through appropriate learning activities and evaluations. Accordingly, research on ICT-based learning should examine not only students' immediate responses but also the ways in which technology supports comprehension, participation, and the achievement of instructional objectives (Munir, 2017; Roblyer & Doering, 2013).

In Islamic Religious Education, the use of technology can provide opportunities to connect religious knowledge with practical demonstrations. For instance, videos can illustrate the procedures for performing religious practices, while digital presentations can organize information about Islamic teachings and history. (Mukhlis, Yazid, et al., 2025) These resources may help students observe examples that would otherwise be difficult to demonstrate within the classroom. At the same time, practical activities and direct teacher guidance remain important for ensuring that students understand and appropriately apply the material. Thus, technology should complement, rather than replace, interpersonal interaction and experiential learning in religious education (Majid, 2014; Munir, 2017).

The integration of ICT also requires schools to consider the relationship between technological innovation and educational equity. Students may have different levels of

access to digital devices and varying degrees of familiarity with technology.(Fatikhah et al., 2026) Schools must therefore ensure that technology-supported learning does not disadvantage students who have limited access to digital resources. Teachers can respond to these differences by providing clear instructions, selecting accessible materials, and combining digital resources with conventional teaching methods. Such measures can help ensure that ICT integration remains inclusive and responsive to students' educational needs (Bates, 2019; Munir, 2017).

State Elementary School Manarap Tengah 2 in Banjar Regency provides a relevant context for examining the practical implementation of ICT in Islamic Religious Education. The thesis identifies the school as a setting in which teachers have begun to use technological resources to support classroom instruction.(Ghuni et al., 2026) The reported practices include the use of laptops, LCD projectors, PowerPoint presentations, educational videos, and internet-based learning materials. These resources are intended to make lessons more engaging and facilitate students' understanding of religious concepts. At the same time, the school's experience highlights the importance of examining the practical conditions under which technology is used in everyday teaching (Muslihah, 2026).

The original research identifies several challenges associated with ICT utilization at the school. These include limited technological facilities, unstable internet connectivity, differences in technological skills, and constraints on instructional time.(Ghuni et al., 2025) Such challenges may affect the frequency and effectiveness of technology-supported learning activities. The teacher responds by preparing materials in advance, using alternative instructional media, and making the best possible use of available facilities. These practices illustrate how teachers adapt their instructional strategies to the technological and organizational conditions of their school (Muslihah, 2026).

Although ICT integration has received considerable attention in educational discussions, the practical experiences of teachers and students in specific school contexts remain important areas of investigation.(Husna et al., 2025; Mukhlis, Tarlam, et al., 2025) Understanding how technology is used in an actual classroom can reveal the relationship between available resources, teaching strategies, student engagement, and implementation challenges. A context-sensitive investigation can also identify practical approaches that teachers use to maintain instructional continuity when technological resources are limited. Such insights can contribute to a more realistic understanding of technology-supported Islamic Religious Education at the elementary school level (Bates, 2019; Muslihah, 2026).

Based on this background, the present study examines the utilization of Information and Communication Technology in Islamic Religious Education learning at State Elementary School Manarap Tengah 2, Banjar Regency. The study focuses on three principal issues: the forms of ICT utilization in classroom instruction, the challenges faced by teachers and the strategies employed to overcome them, and the impact of ICT utilization on the learning process. By addressing these issues, the research seeks to provide a contextual account of technology-supported Islamic Religious Education in an elementary school setting. The findings are expected to inform teachers, school administrators, and future researchers interested in developing effective and contextually appropriate ICT-based learning practices.

LITERATURE REVIEW

Information and Communication Technology in Education

Information and Communication Technology (ICT) has become an integral component of contemporary educational practices, transforming the ways teachers deliver information and students engage with learning materials.(Abdullah et al., 2025) ICT encompasses various technological tools, including computers, laptops, projectors, digital presentations, educational videos, and internet-based resources. These technologies provide opportunities to present learning materials in more interactive, accessible, and engaging formats. Bates (2019) emphasizes that technology can support teaching and learning when it is integrated with appropriate pedagogical strategies. This perspective highlights the importance of considering both technological resources and instructional objectives when designing learning activities. Therefore, ICT integration should be understood as a pedagogical process rather than merely the use of electronic devices in classrooms.

The utilization of ICT in education can facilitate the presentation of information through different media formats, including text, images, audio, and video. These formats allow teachers to communicate abstract concepts through more concrete and accessible representations. Munir (2017) explains that multimedia technology can support learning by combining different forms of information within an instructional environment. Such integration may help students follow explanations and connect new information with their existing knowledge.(Husna et al., 2025) In elementary education, multimedia presentations can be particularly relevant because students may benefit from visual and auditory representations of learning materials. However, the effectiveness of multimedia depends on the relevance of its content and its alignment with the learning objectives.

ICT also provides opportunities for teachers to develop instructional materials that respond to students' learning needs.(Ghuni et al., 2025) Digital presentations, educational videos, and visual illustrations can be selected according to the subject matter and the characteristics of the learners. Roblyer and Doering (2013) discuss the educational applications of technology in supporting instruction and facilitating students' engagement with learning activities. These applications allow teachers to organize information systematically and present it in different formats. In classroom practice, teachers can use digital resources to introduce topics, explain complex concepts, and reinforce students' understanding. Nevertheless, the selection of technological media should remain guided by instructional purposes rather than by the availability of technology alone.

ICT Integration and Pedagogical Approaches

The integration of ICT requires teachers to coordinate technological resources with appropriate pedagogical approaches. Technology cannot independently guarantee meaningful learning because students still need guidance, explanation, interaction, and opportunities to apply their knowledge. Mishra and Koehler (2006) introduced the Technological Pedagogical Content Knowledge framework, which emphasizes the relationship among technological knowledge, pedagogical knowledge, and subject-matter knowledge.(Mahmoud et al., 2026) This framework suggests that effective technology integration depends on teachers' ability to combine these three areas. In Islamic Religious Education, teachers need to understand the religious content, select suitable instructional methods, and use technology to support the intended learning outcomes. Consequently,



successful ICT integration involves professional judgment and thoughtful instructional planning.

The Technological Pedagogical Content Knowledge framework is particularly relevant to teachers who use digital media to explain religious concepts and practices. (Baiti et al., 2026) Teachers must consider whether a particular technological resource accurately represents the subject matter and supports students' understanding. For example, a video demonstrating the procedures of ablution or prayer should be selected according to its instructional relevance and the accuracy of its content. Mishra and Koehler (2006) explain that technology, pedagogy, and content knowledge are interconnected rather than independent components of teaching. This relationship requires teachers to evaluate digital resources before incorporating them into classroom activities. Therefore, ICT-supported religious education should combine technological competence with subject knowledge and pedagogical responsibility.

ICT can also support student-centered learning when teachers use digital resources to encourage active participation. Rather than relying exclusively on lectures, teachers can integrate presentations, videos, questions, discussions, and assignments into a single instructional sequence. Bates (2019) highlights the importance of aligning technology-supported learning with instructional design and learner engagement. Such an approach creates opportunities for students to respond to learning materials and clarify their understanding through classroom interaction. In elementary classrooms, teacher guidance remains essential to ensure that students interpret digital information appropriately. Accordingly, ICT should function as a means of facilitating learning activities rather than replacing the teacher's instructional role.

Religious Education in Elementary Schools

Islamic Religious Education aims to develop students' understanding of Islamic teachings and support the formation of religious attitudes and behavior. Its learning content may include faith, worship, morality, and the practical application of Islamic values in everyday life. Muhaimin (2012) discusses Islamic education in relation to the development of religious understanding and the formation of Muslim character. This perspective indicates that Islamic Religious Education involves more than the transmission of factual knowledge. Students are expected to understand religious teachings and gradually apply them in their daily conduct. (Afifah et al., 2026; Mukhlis et al., 2026) Therefore, instructional approaches should support cognitive understanding while also encouraging reflection and the practice of religious values.

At the elementary-school level, Islamic Religious Education introduces students to foundational religious concepts and practices. The learning process needs to consider students' developmental characteristics and their capacity to understand abstract explanations. Majid (2014) emphasizes the importance of instructional planning and the selection of learning strategies that correspond to educational objectives and learner needs. In this context, teachers can use demonstrations, illustrations, storytelling, and guided practice to explain religious materials. Such approaches may help students connect religious concepts with observable actions and familiar experiences. (Wahyudi, Amin, et al., 2026) The integration of ICT can complement these methods by providing visual and auditory representations of religious practices.

The teaching of worship practices requires instructional methods that allow students to observe and understand the sequence of religious activities. Topics such as ablution and prayer involve practical procedures that may be difficult for some students

to understand through verbal explanation alone. Digital videos and visual presentations can illustrate the stages of these practices and provide students with opportunities to review the material. Munir (2017) explains that multimedia resources can combine different forms of information to support instructional communication.(Hutfhi et al., 2026; Nurhidayah & Handayani, 2025) In Islamic Religious Education, these resources may help teachers demonstrate procedures before students practice them directly. However, digital demonstrations should be accompanied by teacher explanation, correction, and practical activities to ensure accurate understanding.

The Role of Digital Media in Islamic Religious Education

Digital media can support the teaching of Islamic Religious Education by presenting religious content in visual, auditory, and textual formats. PowerPoint presentations, educational videos, and digital images can help teachers organize explanations and highlight important concepts. Munir (2017) identifies multimedia as a means of integrating different information formats in educational contexts. In Islamic Religious Education, such integration can be used to explain religious practices, illustrate moral situations, and introduce concepts related to faith and worship. The relevance of digital media depends on its accuracy, suitability, and connection with the learning objectives.(Nabriz, Knudstad, et al., 2026) Therefore, teachers need to evaluate both the educational value and the religious appropriateness of the materials they use.

Educational videos offer opportunities to demonstrate processes and situations that may be difficult to reproduce directly in the classroom. For example, videos can illustrate the sequence of ablution, the movements of prayer, or examples of appropriate social behavior. Roblyer and Doering (2013) discuss the use of educational technology to support instructional presentation and learning activities. In the context of Islamic Religious Education, video-based materials can provide students with visual references that complement teachers' explanations. Students may also revisit important information when teachers make the materials available for repeated viewing.(Hanafiah, 2024a; Hatmiah, 2026) Nevertheless, videos should be selected carefully and accompanied by discussion to prevent students from receiving information without sufficient explanation.

Digital presentations can help teachers structure lessons and emphasize essential information. PowerPoint slides may include key concepts, images, short explanations, and questions that guide students through the learning process. Bates (2019) emphasizes the importance of designing technology-supported instruction around clear educational purposes. In Islamic Religious Education, digital presentations can be used to introduce topics, summarize religious principles, and reinforce students' understanding of instructional content. Their effectiveness depends on the clarity of the material and the teacher's ability to explain it meaningfully. Excessive text or irrelevant visual elements may distract students from the central learning objectives.

Student Motivation and Classroom Participation

Student motivation is an important consideration in the implementation of ICT-supported learning. Digital media may attract students' attention by presenting information in formats that differ from conventional verbal instruction. Bates (2019) explains that technology can contribute to learning when it is incorporated into purposeful instructional design. In elementary classrooms, visual presentations and educational videos may encourage students to focus on the lesson and become more interested in the material.(Mujani et al., 2024; Mukhlis, 2024) However, initial interest does not

necessarily indicate deep understanding or long-term learning. Teachers should therefore combine engaging media with questions, explanations, and activities that encourage students to process the information.

Classroom participation is another aspect of learning that may be supported by ICT integration. Digital presentations and videos can serve as starting points for questions, discussions, and teacher-guided reflection. Roblyer and Doering (2013) describe educational technology as a resource that can support instructional activities and student engagement. In Islamic Religious Education, teachers can ask students to identify the stages of a religious practice, explain the meaning of a concept, or discuss the moral lessons presented in a video. These activities create opportunities for students to express their understanding and clarify misconceptions. Nevertheless, participation depends on classroom management, the quality of instructional prompts, and the teacher's ability to encourage students to contribute.

ICT-supported instruction may also provide opportunities for students to develop a clearer understanding of learning materials. Visual and auditory representations can complement verbal explanations and help students connect different aspects of a topic. Munir (2017) discusses the role of multimedia in presenting information through multiple formats. In lessons concerning worship practices, students may observe demonstrations before discussing or practicing the procedures themselves. This combination of observation, explanation, and practice can support the learning process. (Hanafiah, 2024b; Khairiyah et al., 2024) However, students' actual understanding should be assessed through questions, demonstrations, and other relevant forms of evaluation rather than inferred solely from their attention to digital media.

Teachers' Competence and Instructional Planning

Teachers' competence in using ICT is an important factor in determining how technology is incorporated into classroom instruction. Competence involves not only operating digital devices but also selecting appropriate materials, organizing lessons, and responding to technical difficulties. Mishra and Koehler (2006) emphasize the importance of integrating technological knowledge with pedagogical and content knowledge. This framework indicates that teachers need to understand how technology supports particular learning objectives. In Islamic Religious Education, teachers must also ensure that digital materials are consistent with the subject's religious content and educational purposes. (Nabriz, Azmi, et al., 2026) Consequently, ICT competence should include technical, pedagogical, and subject-specific considerations.

Instructional planning is necessary to ensure that technology supports the intended learning outcomes. Teachers need to prepare digital materials, check equipment, organize classroom activities, and anticipate possible technical problems. Majid (2014) highlights the role of instructional planning in organizing teaching activities around learning objectives. In ICT-supported Islamic Religious Education, preparation may involve selecting videos, arranging presentation slides, testing audiovisual equipment, and planning alternative activities. Such preparation can reduce interruptions and help teachers maintain the continuity of the lesson. (Hushin et al., 2025) Therefore, effective technology integration depends partly on the teacher's ability to anticipate classroom conditions and organize instructional resources.

Teachers also need to maintain flexibility when technological resources are unavailable or malfunction. A lesson that depends entirely on digital equipment may be disrupted by power outages, unstable internet connections, or device failures. Bates

(2019) emphasizes the importance of aligning technology with broader instructional design rather than treating it as an isolated component. In practice, teachers can prepare alternative explanations, printed images, storytelling activities, or direct demonstrations. (Nabriz et al., 2025) These alternatives allow the learning process to continue when digital media cannot be used. Thus, flexibility and contingency planning are important elements of classroom-based ICT integration.

Infrastructure and Challenges of ICT Integration

The availability of technological infrastructure influences the implementation of ICT-supported learning. Schools may differ in their access to laptops, projectors, speakers, internet connections, and other instructional resources. Roblyer and Doering (2013) discuss the role of technological resources in educational practice, while Bates (2019) emphasizes the need to consider the conditions under which technology is used. In schools with limited equipment, teachers may need to share devices or adjust lesson schedules. Such conditions can affect the frequency and continuity of technology-supported instruction. Therefore, the implementation of ICT should be examined in relation to the actual resources available in the school environment.

Internet connectivity can create additional challenges for teachers who rely on online educational materials. Unstable connections may interrupt video playback, prevent access to online resources, or delay the beginning of a lesson. Bates (2019) underscores the importance of considering the practical conditions that shape technology-supported learning. In response, teachers can download educational videos in advance and prepare offline materials that can be accessed without an internet connection. (Begum et al., 2025) This strategy can reduce dependence on continuous connectivity during classroom instruction. Nevertheless, offline resources still require careful selection and preparation to ensure that they remain relevant to the lesson.

Technical problems involving audiovisual equipment can also affect classroom activities. Projectors may require additional setup time, speakers may produce unclear sound, and power interruptions may prevent teachers from using digital media. (Bakr et al., 2025) These challenges can reduce the time available for instruction and require teachers to adjust their teaching strategies. Roblyer and Doering (2013) discuss the practical role of educational technology in instructional environments, highlighting the importance of appropriate implementation. In classrooms with limited resources, teachers may need to coordinate equipment use with colleagues and prepare alternative teaching materials. Such adaptations demonstrate that the successful use of ICT depends on both technological availability and classroom-level problem-solving.

Previous Studies and the Research Gap

Previous discussions of educational technology emphasize the potential of digital resources to support instructional presentation, student engagement, and the organization of learning activities. Bates (2019) examines technology-supported learning in relation to instructional design, while Munir (2017) discusses multimedia as a means of presenting educational information through different formats. These perspectives provide a conceptual foundation for examining ICT use in Islamic Religious Education. However, broad discussions of educational technology do not necessarily explain how teachers implement digital resources under the specific conditions of individual elementary schools. Further investigation is therefore needed to understand the relationship between technology, classroom practices, and local infrastructure.

Research on technology integration also highlights the importance of teachers' knowledge and instructional decision-making. Mishra and Koehler (2006) explain that effective integration requires the coordination of technological, pedagogical, and content knowledge. (Susanti et al., 2025) This framework is relevant to Islamic Religious Education because teachers must ensure that digital materials support both subject understanding and appropriate instructional practices. Nevertheless, a conceptual framework alone cannot fully describe how teachers respond to practical challenges in a particular school. Classroom-based investigation can provide additional information about teachers' preparation, instructional strategies, and adaptation to available resources. Such an approach helps connect theoretical perspectives on ICT integration with everyday teaching practices.

The present study focuses on the utilization of ICT in Islamic Religious Education learning at State Elementary School Manarap Tengah 2, Banjar Regency. It examines the technological resources used by the Grade V teacher, the ways those resources are incorporated into classroom instruction, and students' responses to technology-supported learning. It also investigates challenges related to facilities, internet connectivity, and the operation of audiovisual equipment. (Susanti et al., 2025) In addition, the study explores the strategies used by the teacher to maintain instructional continuity when technological resources are unavailable or malfunction. By concentrating on a specific elementary-school context, the research provides a descriptive account of ICT implementation in Islamic Religious Education and the practical conditions that shape its use.

METHOD

This study employed a qualitative field research design to investigate the utilization of Information and Communication Technology (ICT) in Islamic Religious Education learning at State Elementary School Manarap Tengah 2, Banjar Regency. A qualitative approach was selected because the study aimed to understand classroom practices, teacher experiences, student responses, and challenges associated with the use of educational technology. Rather than measuring the effectiveness of ICT through numerical indicators, the research focused on describing how technological resources were incorporated into teaching and learning activities. The field research design enabled the researcher to examine the implementation of ICT within its natural educational setting. Data were collected directly from the school environment through observation, interviews, and documentation. This approach provided a contextual understanding of the practical conditions influencing ICT integration in Islamic Religious Education.

The research focused on Grade V Islamic Religious Education learning, with particular attention to the teacher's instructional practices and students' experiences. The study examined the types of technological media used during lessons, the ways teachers incorporated these resources into instructional activities, and the responses observed among students. It also investigated the practical challenges encountered during technology-supported learning. These challenges included limitations in school facilities, internet connectivity, and the operation of audiovisual equipment. The research further explored the teacher's strategies for addressing these constraints and maintaining the continuity of instruction. Through this focus, the study sought to describe both the educational opportunities and the practical limitations of ICT utilization in the school.

The research was conducted at State Elementary School Manarap Tengah 2 in Banjar Regency, South Kalimantan, Indonesia. The participants consisted of the Grade V Islamic Religious Education teacher and students who participated in the learning

activities examined in the study. The teacher served as a key informant because of direct involvement in planning and implementing ICT-supported lessons. Students provided information about their experiences, attention, participation, and understanding during classroom instruction. Their perspectives helped the researcher describe how digital media was received by learners. The school setting also provided the context for examining the availability and use of technological resources.

The participants were selected based on their direct involvement in the Islamic Religious Education learning process under investigation. The teacher's experiences were relevant to understanding instructional preparation, media selection, classroom implementation, and responses to technical difficulties. Students' experiences were relevant to understanding how digital presentations and educational videos were incorporated into their learning activities. The research considered classroom interactions and the use of available facilities as part of the broader instructional context. The study did not aim to establish statistical representativeness or generalize findings to all elementary schools. Instead, it sought to develop a contextual description of ICT utilization at the selected school.

Data Collection Techniques

Data were collected through observation, interviews, and documentation. Observation was used to examine the implementation of ICT during Islamic Religious Education lessons, including the use of laptops, projectors, presentations, and educational videos. It also enabled the researcher to observe students' attention, participation, and interactions during classroom activities. Interviews were conducted with the teacher and students to obtain information about their experiences and perceptions of technology-supported learning. Documentation was used to support the description of instructional materials and relevant research records. The combination of these techniques provided different perspectives on the classroom practices being investigated.

Observation focused on the relationship between technological media and teaching activities. The researcher examined how the teacher introduced learning materials, presented digital content, explained concepts, and encouraged student participation. Attention was also given to practical issues such as equipment preparation, internet access, and interruptions during instruction. Interviews provided additional information about the teacher's instructional decisions and students' experiences with digital learning materials. Documentation helped contextualize the observed activities and support the interpretation of the collected data. Together, these techniques enabled the study to describe ICT utilization in relation to actual classroom conditions.

The collected data were analyzed through three stages: data reduction, data presentation, and conclusion drawing. Data reduction involved selecting, organizing, and focusing the information relevant to the research objectives. Information concerning technological resources, instructional practices, student responses, and implementation challenges was grouped into related categories. Data presentation involved organizing the findings into descriptive narratives and a summary table to make the patterns more understandable. Conclusion drawing involved interpreting the organized information in relation to the research questions. These stages were applied to develop a coherent description of ICT utilization in Islamic Religious Education learning.

The trustworthiness of the research was supported through source triangulation and technique triangulation. Source triangulation involved comparing information obtained from the teacher and students to identify areas of agreement and differences in

their accounts. Technique triangulation involved comparing observations, interview information, and documentation. This process helped the researcher examine the findings from multiple perspectives rather than relying on a single source of information. Information that appeared inconsistent could be considered in relation to the context in which it was collected. The use of triangulation supported a more comprehensive interpretation of the classroom practices and challenges documented in the study.

RESULTS AND DISCUSSION

ICT Resources Used in Islamic Religious Education Learning

The findings indicate that several forms of Information and Communication Technology were used in Grade V Islamic Religious Education learning at State Elementary School Manarap Tengah 2. The technological resources included a laptop, an LCD projector, PowerPoint presentations, educational videos, and internet-based materials. These resources were used to present instructional content and support the teacher's explanations. The use of digital media provided alternatives to instruction based exclusively on verbal explanation and printed materials. (Bolat et al., 2025) The teacher incorporated technological resources according to the needs of the lesson and the availability of equipment. This pattern demonstrates that ICT utilization in the school involved a combination of digital tools and conventional teaching practices.

The laptop functioned as the primary device for preparing and displaying digital instructional materials. It enabled the teacher to access presentations, play educational videos, and organize relevant learning content. The LCD projector allowed the materials to be displayed to the entire class, making the content visible to students during instruction. (Abdullah et al., 2025; Mukhlis, 2026) PowerPoint presentations were used to organize information into a structured visual format. Educational videos provided demonstrations and illustrations that complemented the teacher's explanations. The combination of these resources supported the presentation of Islamic Religious Education content through multiple forms of media.

The teacher integrated ICT into the instructional process by presenting digital materials alongside verbal explanations. Lessons could include the introduction of a topic, the presentation of slides or videos, teacher explanations, and opportunities for students to ask questions. This sequence allowed digital resources to function as supporting materials rather than as substitutes for direct teaching. (Desyulita et al., 2025) The teacher continued to guide students through the content and clarify information presented in the media. Classroom interaction remained an important component of the learning process. Thus, ICT utilization was characterized by the combination of technology-supported presentation and teacher-led instruction.

PowerPoint presentations helped the teacher organize the content and emphasize important information. Visual materials could be used to introduce concepts, highlight key points, and support explanations during the lesson. The projected slides allowed students to follow the material collectively. The teacher supplemented the presentation with explanations and questions to encourage students to engage with the content. This approach provided a structured format for delivering instructional information. However, the educational value of the presentation depended on how the teacher connected the displayed material with the lesson objectives.

Educational videos were used to illustrate concepts and demonstrate religious practices. In lessons concerning ablution and prayer, audiovisual demonstrations helped students observe the sequence of actions associated with the practices being discussed.

The teacher could pause or supplement the presentation with explanations to emphasize important details. Students were able to observe the displayed procedures and relate them to the teacher's verbal guidance. (Bolat et al., 2025; Mukhlis, Knudstad, et al., 2025) This method provided a visual reference for topics that involve practical actions. The findings suggest that video-based instruction served as a supplementary resource for explaining religious practices.

The classroom observations and participant accounts indicated that students showed interest in lessons involving digital media. The use of projected presentations and educational videos appeared to attract students' attention during instruction. Students were observed to be more attentive and enthusiastic when audiovisual materials were incorporated into learning activities. These responses suggest that digital resources contributed to the classroom learning environment. However, attention and enthusiasm should not be interpreted as direct evidence of long-term learning gains. The findings describe students' observed responses within the specific instructional context of the study.

Students also demonstrated participation through questions and classroom discussions during ICT-supported lessons. Digital materials provided concrete points of reference that the teacher could use to invite students to respond. Students could ask for clarification, discuss the information presented, and engage with the teacher's explanations. These interactions helped connect the presentation of digital content with classroom communication. The teacher's role in encouraging questions and discussion remained important. Therefore, student participation appeared to be associated with the combination of digital media and interactive teaching practices.

The findings further indicate that audiovisual demonstrations helped some students follow explanations of practical religious topics. The visual presentation of ablution and prayer procedures provided an observable sequence that complemented verbal instruction. Students could compare the actions shown in the videos with the teacher's explanations. This form of presentation may have made the material easier for students to follow during the lesson. Nevertheless, the study does not establish that all students achieved the same level of understanding. Students' comprehension still requires assessment through explanation, demonstration, and other appropriate learning activities.

The implementation of ICT was affected by limitations in the availability of school facilities and technological equipment. The teacher could not always rely on having unrestricted access to the devices needed for every lesson. Equipment sometimes had to be shared or used in rotation with other teachers. These conditions could affect the scheduling and preparation of technology-supported activities. The findings indicate that the availability of digital resources was an important practical consideration in lesson planning. Consequently, ICT utilization depended not only on the teacher's willingness to use technology but also on access to functioning equipment.

Internet connectivity was another challenge encountered during the use of digital instructional materials. An unstable connection could interfere with accessing online resources or playing content that required internet access. Such interruptions could delay instruction and reduce the time available for classroom activities. The teacher therefore needed to consider whether digital materials could be accessed reliably during the lesson. This situation highlighted the importance of preparing instructional resources in advance. Offline materials provided a practical alternative when internet access was unreliable.

Technical difficulties involving audiovisual equipment also affected classroom implementation. Projector setup could require additional time before the lesson began,

while speaker problems could make audio content difficult to hear. Power outages could prevent the use of electronic devices altogether. These problems could interrupt the planned sequence of instructional activities. The teacher needed to adapt the lesson when equipment could not function as expected. Such experiences demonstrate that ICT-supported learning requires practical preparation and flexibility.

Differences in students' familiarity with technology also formed part of the classroom context. Students may vary in their previous exposure to digital devices and their ability to follow technology-supported activities. Such differences can influence how quickly students become comfortable with digital learning materials. The teacher therefore needed to provide guidance and ensure that the use of technology did not become an additional obstacle to understanding the lesson. This consideration was particularly relevant in an elementary-school setting. The findings suggest that technology integration should take account of students' differing experiences and learning needs.

The teacher used advance preparation to reduce the risk of interruptions during technology-supported lessons. Educational videos could be downloaded before class so that they remained accessible without a continuous internet connection. Digital presentations and other materials were also prepared in advance to support the planned instructional sequence. This preparation helped reduce dependence on real-time online access. It also allowed the teacher to focus more directly on explaining the material and guiding classroom activities. Advance preparation therefore served as a practical strategy for managing technological limitations.

When digital equipment was unavailable or malfunctioned, the teacher could use alternative instructional methods. These alternatives included pictures, storytelling, direct explanation, and other conventional teaching resources. Such methods allowed the teacher to continue presenting the lesson even when audiovisual media could not be used. The ability to shift between digital and non-digital approaches helped maintain instructional continuity. This strategy also demonstrated that technology was treated as a supporting resource rather than as the sole means of teaching. The findings highlight the importance of maintaining pedagogical flexibility in classrooms with limited infrastructure.

The teacher also used interactive activities to complement technology-supported presentations. Questions, discussions, and assignments provided opportunities for students to respond to the content and demonstrate their understanding. (Salsabila et al., 2026) These activities helped maintain communication between the teacher and students during the lesson. They also provided alternatives when digital media could not fully address students' learning needs. The integration of digital resources with classroom interaction created a more varied instructional process. Thus, the teacher's approach involved combining technology with direct guidance and student participation.

Coordination with other teachers was another practical strategy for managing shared equipment. When technological devices were used by multiple teachers, access needed to be arranged according to classroom requirements and availability. Such coordination could help reduce conflicts over the use of limited resources. It also required teachers to plan their lessons in relation to the school's equipment schedule. Although this strategy did not eliminate the limitations of infrastructure, it helped manage the available resources. The findings indicate that ICT implementation was influenced by both individual teaching practices and the school's broader organizational conditions. The following table summarizes the main findings concerning ICT resources, classroom

implementation, student responses, challenges, and teacher strategies at State Elementary School Manarap Tengah 2.

Table 1. Summary of Research Findings on ICT Utilization in Islamic Religious Education Learning at State Elementary School Manarap Tengah 2, Banjar Regency

Research aspect	Findings
ICT resources	Laptop, LCD projector, PowerPoint presentations, educational videos, and internet-based materials
Instructional implementation	Digital presentations and videos combined with teacher explanations, questions, and discussions
Student responses	Greater observed attention and enthusiasm, participation in questions and discussions, and improved ease of following some practical demonstrations
Infrastructure challenges	Limited equipment, shared devices, and restricted access to facilities
Technical challenges	Unstable internet, power outages, projector setup difficulties, and speaker problems
Student-related considerations	Differences in familiarity with technology
Teacher strategies	Advance preparation, downloading videos for offline use, alternative media, direct explanation, and coordination over equipment
Instructional approach	Combination of digital media, teacher guidance, discussion, questions, and assignments

The table shows that ICT utilization involved both instructional opportunities and practical constraints. The teacher used available digital resources to support the presentation of learning materials and demonstrations of religious practices. Students displayed positive classroom responses, including attention, enthusiasm, and participation. At the same time, the implementation of technology was affected by limited facilities and technical difficulties. The teacher responded through advance preparation, alternative teaching methods, and coordination with colleagues. These findings indicate that ICT integration was shaped by the interaction between instructional choices and the school's available resources.

ICT as a Supporting Resource in Islamic Religious Education

The findings indicate that ICT functioned as a supporting resource for the delivery of Islamic Religious Education at State Elementary School Manarap Tengah 2. The use of laptops, projectors, presentations, and educational videos enabled the teacher to present information through multiple media formats. This practice is consistent with the general educational perspective that technology can support instructional communication when it is aligned with teaching objectives (Bates, 2019; Munir, 2017). In the observed classroom, technology complemented rather than replaced the teacher's explanations. This distinction is important because religious education involves the communication of knowledge, the development of understanding, and the cultivation of religious values.



Accordingly, the findings suggest that the educational contribution of ICT depended on how it was integrated into the broader instructional process.

Audiovisual media played a meaningful role in presenting practical religious content. Videos illustrating ablution and prayer provided students with visual examples that supplemented verbal explanations. This use of multimedia is consistent with Munir's (2017) discussion of combining different forms of information to support instructional communication. The visual sequence of actions offered students a concrete reference for following the procedures being explained. (Aditya et al., 2026; Hasnan et al., 2026) However, observing a video does not necessarily demonstrate that students can independently perform the practices correctly. Teachers therefore need to combine audiovisual demonstrations with guided practice, feedback, and opportunities for students to demonstrate their understanding.

The observed enthusiasm and attention of students suggest that digital media contributed to their immediate classroom engagement. Presentations and videos introduced visual and auditory elements into the lesson, creating opportunities for students to interact with content in different ways. Bates (2019) emphasizes that technology-supported learning should be designed around meaningful educational activities rather than the mere presence of digital tools. In this study, students' responses were observed in lessons where technology was combined with teacher explanations and classroom interaction. Therefore, the findings should be interpreted as evidence of positive classroom responses rather than definitive proof of increased academic achievement. Further assessment would be needed to determine whether these responses were associated with sustained motivation or improved learning outcomes.

Classroom Interaction and Active Participation

The use of ICT created opportunities for the teacher to encourage questions and discussions. Digital materials provided shared visual references that could be used to clarify concepts and invite students to express their understanding. Roblyer and Doering (2013) discuss educational technology as a resource that can support instructional activities and learner engagement. In the observed classroom, the teacher remained responsible for facilitating discussion and connecting the digital content with the lesson objectives. This suggests that active participation was supported by the interaction between media and teaching strategies. Consequently, the instructional value of ICT depended partly on the teacher's ability to turn digital presentations into opportunities for dialogue and reflection.

The findings demonstrate that the teacher's role extended beyond operating technological devices. The teacher needed to select suitable materials, organize presentations, explain digital content, and respond to students' questions. Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge framework provides a useful conceptual perspective for understanding this relationship. The framework emphasizes the integration of technological knowledge, pedagogical knowledge, and subject-matter knowledge. In Islamic Religious Education, this integration is particularly relevant because the teacher must ensure that digital materials accurately represent religious practices and concepts. The findings therefore highlight the importance of teacher competence in using technology purposefully and responsibly.

Limited facilities and shared equipment influenced the availability of ICT-supported instruction. When technological resources were not readily accessible, the teacher needed to adjust the lesson plan or use alternative instructional methods. Bates

(2019) emphasizes the importance of considering the practical conditions in which technology-supported learning takes place. The findings suggest that the availability of devices and supporting infrastructure shaped the extent to which digital media could be used in the classroom. These limitations should not be interpreted as a lack of instructional commitment on the teacher's part. Rather, they demonstrate that technology integration is partly dependent on institutional resources and the organization of equipment use.

Unstable internet connectivity created a practical need for offline instructional materials. The teacher's strategy of downloading videos in advance reduced dependence on continuous internet access during lessons. This approach allowed digital content to remain available even when online resources could not be accessed reliably. (Ashfiya' et al., 2026; Nabil et al., 2026) The practice also illustrates the importance of adapting technology-supported instruction to local infrastructure. Although offline materials can help maintain continuity, they still require careful preparation and evaluation. Teachers must ensure that downloaded resources are relevant, accurate, and appropriate for the intended learning objectives.

Flexibility and Alternative Teaching Strategies

The teacher's use of pictures, storytelling, direct explanations, and other non-digital methods demonstrated flexibility in responding to technical problems. This combination of approaches helped maintain the continuity of instruction when equipment was unavailable or malfunctioning. Majid (2014) emphasizes the importance of instructional planning and the selection of methods suited to educational objectives. In this context, alternative teaching strategies provided a practical means of continuing the lesson without relying entirely on electronic devices. The findings suggest that effective ICT integration should include contingency planning. Technology can support teaching, but the learning process should remain possible when technological resources cannot be used.

The use of digital media in Islamic Religious Education should be understood in relation to the subject's broader educational objectives. These objectives include helping students understand religious teachings and encouraging the application of Islamic values in everyday life. Muhaimin (2012) discusses Islamic education in relation to religious understanding and character formation. Digital presentations and videos can support the explanation of religious concepts, but they cannot independently ensure the development of religious attitudes or moral behavior. Such development requires teacher guidance, reflection, habituation, and opportunities to practice the values being taught. Therefore, ICT should be integrated as a supporting component of a broader educational process.

The findings have practical implications for planning ICT-supported learning at the school level. The availability of shared equipment, internet access, and functioning audiovisual devices should be considered when teachers prepare their lessons. Coordination among teachers can help organize access to limited resources and reduce scheduling difficulties. School-level planning may also include maintaining equipment, preparing offline learning materials, and supporting teachers in developing appropriate digital instructional content. These measures are consistent with the principle that technology integration requires attention to both instructional design and practical implementation (Bates, 2019). The findings suggest that improving ICT utilization involves not only acquiring devices but also organizing their use in ways that support classroom learning. Overall, the findings portray ICT utilization at State Elementary School Manarap Tengah 2 as a combination of digital media, teacher guidance, student

interaction, and adaptive instructional practices. Digital resources supported the presentation of Islamic Religious Education content and provided visual demonstrations of selected religious practices. Students showed positive classroom responses, including attention, enthusiasm, and participation in questions and discussions. However, the study also identified limitations involving equipment availability, internet connectivity, and technical difficulties. The teacher addressed these challenges through advance preparation, offline resources, alternative methods, and coordination with colleagues. Taken together, the findings indicate that ICT can serve as a useful instructional support when its implementation is adapted to educational objectives and the realities of the school environment.

CONCLUSION

This study examined the utilization of Information and Communication Technology in Islamic Religious Education learning at State Elementary School Manarap Tengah 2, Banjar Regency. The findings show that the Grade V teacher used laptops, LCD projectors, PowerPoint presentations, educational videos, and internet-based materials to support classroom instruction. These resources were integrated with verbal explanations, questions, discussions, and assignments. Students displayed positive classroom responses, including greater attention, enthusiasm, and participation. Audiovisual demonstrations also helped students follow explanations of practical religious topics, such as ablution and prayer. These findings indicate that ICT served as a supplementary instructional resource within the observed learning environment. The study also identified several challenges, including limited technological facilities, shared equipment, unstable internet connectivity, power interruptions, and audiovisual equipment problems. The teacher responded by preparing materials in advance, downloading videos for offline use, using alternative instructional methods, and coordinating equipment access with other teachers. These practices helped maintain the continuity of classroom instruction despite technological limitations. The findings suggest that effective ICT utilization requires appropriate instructional planning, teacher competence, adequate infrastructure, and flexibility in responding to technical difficulties. Because the research was conducted in one school using a qualitative approach, its findings should be understood as context-specific rather than generalized to all elementary schools. Further research involving multiple schools and additional measures of student learning could provide a broader understanding of ICT integration in Islamic Religious Education.



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