



The Use of ICT-Based Learning Media in Islamic Religious Education Instruction :An Analysis of the Effectiveness of Islamic Education Teachers at SMP Negeri 1 Idi Rayeuk

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ABSTRACT

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This study seeks to investigate the utilization of ICT-based learning media in Islamic Religious Education, evaluate its efficacy in enhancing student learning outcomes, and analyze student attitudes on its implementation at SMP Negeri 1 Idi Rayeuk. A qualitative field research design utilizing a case study methodology was implemented. Data were gathered by observations, interviews, and documentation, and subsequently analyzed descriptively. The results show that IRE teachers at SMP Negeri 1 Idi Rayeuk have used a variety of ICT-based media, such as interactive PowerPoint presentations and Islamic learning films, to make the classroom more interesting, communicative, and participative. Using ICT-based learning tools has been shown to improve both the quality of the learning process and the results for students by making it easier to see abstract ideas through films and animations, which in turn helps students understand and participate more. Additionally, students have very positive views on ICT integration, saying that it makes learning more interesting, fun, and useful in their daily lives. ICT-based media also pique students' attention and curiosity and promote autonomous learning by providing access to digital resources including instructional apps, Islamic websites, and video-sharing platforms.

1. Introduction

Learning in the classroom can be carried out successfully when supported by various factors, one of which is the use of ICT-based learning media during the delivery of lesson materials (Basri, 2025). The use of technology-based learning media in today's learning process is undeniable. Students' abilities in using digital tools are sometimes overlooked by teachers, even though these abilities can be very beneficial in the learning process (Fatimah et al., 2025). As we all know, there are now very few students who are willing to read material from textbooks at home on their own compared to playing with their mobile phones, which can be used at any time (Pendidikan et al., 2024).

The main purpose of education is to develop humans in intellectual, emotional, and spiritual aspects (Alfisma et al., 2025). Therefore, the outcome of the educational process should be able to produce human resources who excel in all three aspects (Widodo, 2024). The evaluation is a method

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to determine the extent to which learning objectives or expected competencies have been achieved by students (Sulaiman, 2023). In other words, assessment or evaluation functions as a tool to determine whether educational objectives have been met or not. It is also used to measure the extent to which student learning outcomes align with the established goals (Sani & Khairunnisa, 2025).

Based on preliminary observations at SMP Negeri 1 Idi Rayeuk, Islamic Religious Education (PAI), as one of the compulsory subjects in junior high school, holds a strategic role in shaping students' understanding of religious values such as creed ('aqidah), ethics ('akhlaq), jurisprudence (fiqh), and the history of Islamic civilization, while also instilling noble character (Sulastri et al., 2024). However, the PAI learning approach, which remains conventional such as relying on lectures or exclusive use of textbooks often fails to attract the interest of digital-generation students who are accustomed to technology (Ibrahim, 2021). As a result, students' learning motivation decreases, and their understanding of PAI material becomes less optimal (Hafizah & Januardi, 2025).

At SMP Negeri 1 Idi Rayeuk, East Aceh, the use of ICT-based learning media in PAI instruction has begun to be implemented by several teachers, but it is not yet widespread or optimal. Some PAI teachers have attempted to integrate technology, such as multimedia presentations, instructional videos, or online platforms, to make learning more varied and relevant to students' needs (Muzekki et al., 2025). For example, using animated videos about Islamic history or interactive simulations of worship procedures can help students understand the material visually and contextually (AGORMEDAH et al., 2020). However, based on initial observations, the effectiveness of ICT media utilization varies among teachers. Some teachers have succeeded in increasing student engagement, while others still face challenges such as limited technological skills, inadequate infrastructure such as unstable internet connections or insufficient devices at school and a lack of specialized training to optimize the use of ICT in PAI instruction (Yusuf et al., 2021).

In addition, the local context in Idi Rayeuk, which is an area with social characteristics and infrastructure that differ from urban regions, also affects the implementation of ICT (Madaling et al., 2023). For example, the availability of electricity that is not always stable, limited internet access, and minimal school budgets for procuring technological devices constitute real obstacle (Abubakari et al., 2023)s. On the other hand, PAI teachers also face challenges in adjusting ICT-based learning content to PAI material that is abstract in nature, such as concepts of creed ('aqidah) or moral values ('akhlaq), which require creative approaches to be understood deeply by students (Hikmah et al., 2023). The lack of continuous training for teachers in using educational technology is also a factor that complicates the effective implementation of ICT-based media (Abdillah et al., 2025).

The implementation of this research is motivated by the need to improve the quality of PAI learning, which has so far tended to be conventional, with teachers serving as the primary source of information and students acting passively as recipients of knowledge (Rohmadani et al., 2024). With the presence of information and communication technology (ICT), the learning process is expected to become more interactive, engaging, and student-centered (Santosa & Jazuli, 2022). Based on these issues, this research is relevant to conduct in order to analyze the effectiveness of ICT-based learning media used by PAI teachers at SMP Negeri 1 Idi Rayeuk in improving students' motivation, participation, and understanding of PAI material.

2. Methodology

The researcher employed a qualitative approach. Research on the use of ICT-based learning media in Islamic Religious Education (PAI) at SMP Negeri 1 Idi Rayeuk is highly relevant to a qualitative approach because its main focus is to gain an in-depth understanding of how PAI teachers utilize technology in the teaching and learning process, as well as how effective it is in improving the quality of learning. The type of research used by the researcher is a case study, as it focuses on a single phenomenon that is still ongoing, namely the Utilization of ICT-Based Learning Media in Islamic Religious Education (An Analysis of the Effectiveness of PAI Teachers at SMP Negeri 1 Idi Rayeuk). The reason the researcher uses a case study approach is because it is considered to facilitate answering the phenomena occurring in the field.

The research period lasted for approximately two (2) months from the date of issuance of the research permit one month for data collection and one month for data processing, which included presenting the findings in the form of thesis preparation. The supervision process was carried out from May 2025 to October 2025. The research site is SMP Negeri 1 Idi Rayeuk, located on Jl. Peutua Husen, Kampung Jawa, Idi Rayeuk Subdistrict, East Aceh Regency, Aceh Province. The informants supporting this research include: the school principal, PAI teachers at SMP Negeri 1 Idi Rayeuk as the key individuals directly involved in the PAI learning process in the classroom, and the students of SMP Negeri 1 Idi Rayeuk. The secondary data sources consist of supporting information obtained from other individuals or documents.

In this study, several data collection techniques were used, including observation, interviews, and documentation. In general, the data analysis consisted of three concurrent activities: data reduction, data presentation, and data verification (drawing conclusions). The data validity technique used in this study is methodological triangulation. Methodological triangulation is a way to test the validity of data by comparing and cross-checking data obtained through different data collection techniques such as interviews, observations, and documentation against the same source.

3. Results

3.1 The Utilization of ICT-Based Learning Media in Islamic Religious Education at SMP Negeri 1 Idi Rayeuk

In today's digital era, the use of information and communication technology (ICT) in education has become an unavoidable necessity. ICT-based media in learning functions to create a more interactive, engaging, and contextual learning environment. Based on research findings at SMP Negeri 1 Idi Rayeuk, the utilization of ICT media in Islamic Religious Education (PAI) learning has been carried out quite well. PAI teachers at SMP Negeri 1 Idi Rayeuk use media such as PowerPoint and instructional videos to enhance students' motivation, attention, and understanding of PAI material. These media are considered relevant to the goals of the PAI curriculum because they support student-centered learning and encourage the application of Islamic values.

The use of ICT-based learning media in PAI learning at SMP Negeri 1 Idi Rayeuk has been implemented effectively. PAI teachers routinely use PowerPoint and instructional videos to present material in the form of text, images, animations, and audio relevant to the lesson topics. The use of these ICT-based media helps teachers create a more engaging, interactive, and contextual learning atmosphere, enabling students to better understand PAI concepts that were previously perceived as abstract, such as creed (aqidah), ethics (akhlaq), and Islamic history. In addition, PowerPoint serves as a helpful tool that makes the delivery of material more systematic, structured, and well-organized from learning objectives and content to evaluation.

These findings align with the idea that learning is an active process in which students construct their own knowledge through experience and interaction with their environment (Gatot Pramono,

2018). The use of ICT media such as PowerPoint and videos allows students to engage in a more active learning process, as they do not only receive information verbally but also observe, listen to, and interpret visual and audio messages delivered by the teacher (Lafendry, 2022). Thus, ICT media function as constructive tools that help students build meaningful and contextual understanding of Islamic values.

Furthermore, the findings of this study also support the theory stating that learning becomes more effective when information is presented through a combination of text, images, and sound (Azhar, 2019). In the context of PAI learning at SMP Negeri 1 Idi Rayeuk, teachers use PowerPoint slides equipped with Qur'anic verses, illustrative images, and short videos that strengthen students' understanding of the material. This aligns with the principle that the human brain processes information more effectively through dual channels visual and auditory thereby increasing comprehension and learning retention.

Based on the research findings, the use of PowerPoint and videos has proven effective in capturing students' attention through appealing visuals, increasing relevance by connecting the material to real-life situations, and fostering students' confidence and satisfaction in understanding the lessons. Thus, ICT functions not only as a tool for delivering information but also as a medium that fosters students' intrinsic motivation to learn PAI more actively and enthusiastically.

Furthermore, the use of PowerPoint and videos can also be explained through the theory that categorizes individual learning styles into visual, auditory, and kinesthetic. Based on interview results, students at SMP Negeri 1 Idi Rayeuk feel supported because the media used are able to accommodate their needs; visual learners can understand the material through images and animations, while auditory learners can absorb information more easily through narration or audio recordings. Therefore, ICT-based media play an important role in bridging individual differences among students, creating a more inclusive and adaptive learning environment suited to the characteristics of the learners.

The findings of this study are also relevant to the 21st-century learning framework, which emphasizes the integration of technology, collaboration, communication, and creativity in the learning process. PAI teachers at SMP Negeri 1 Idi Rayeuk have implemented these principles by incorporating digital media such as PowerPoint slides, Islamic educational videos, and interactive quizzes to enhance students' participation and critical thinking (Made Wena, 2019). This indicates that PAI learning today is no longer focused solely on the transfer of knowledge but also on developing 21st-century skills, such as digital literacy and reflective thinking about religious values.

Nevertheless, several technical challenges remain, such as limited technological facilities and the ability of PAI teachers at SMP Negeri 1 Idi Rayeuk to design interactive slides. However, according to theory, such conditions are part of the adaptation process toward new innovations, where the success of technology implementation in learning largely depends on organizational support, individual readiness, and the availability of adequate infrastructure. Therefore, continuous training is needed to improve teachers' digital literacy and pedagogical skills in optimally integrating ICT.

In conclusion, the findings of this study reinforce the view that the use of ICT-based learning media has a significant contribution to improving the effectiveness of PAI learning at SMP Negeri 1 Idi Rayeuk. PowerPoint and video serve not only as visual aids but also as pedagogical media that promote two-way interaction, strengthen conceptual understanding, and foster students' motivation and interest in learning. With adequate facilities and continuous improvement of teachers' competencies, ICT utilization is expected to continue developing into an integral part of modern, contextual, and enjoyable PAI learning.

3.2 The Effectiveness of ICT-Based Learning Media Utilization by Islamic Education Teachers in Improving Students' Learning Outcomes in Islamic Religious Education at SMP Negeri 1 Idi Rayeuk

The use of ICT-based learning media by Islamic Religious Education (PAI) teachers at SMP Negeri 1 Idi Rayeuk has proven effective in improving students' learning outcomes, both in terms of learning engagement and comprehension of the lesson material. Based on the research findings, the use of media such as interactive PowerPoint presentations and Islamic learning videos has made the learning process more engaging, participatory, and relevant to students' characteristics as digital natives. This effectiveness can be seen through two main indicators: (1) students' active participation in the learning process, and (2) improved understanding and learning outcomes.

The findings show that the use of ICT media has positively influenced the increase in student engagement in PAI learning at SMP Negeri 1 Idi Rayeuk. Prior to the integration of technology, learning tended to be teacher-centered, in which students acted as passive listeners. However, after PAI teachers integrated ICT-based media such as interactive PowerPoint slides, Islamic videos, and digital quizzes, there was a significant shift toward a learning model that is more active, participatory, and collaborative.

These findings are in line with the theory that knowledge is constructed by learners through experience and social interaction, rather than being passively transferred by the teacher. In this context, ICT media function as learning scaffolds that enable students to actively participate through digital exploration, discussions, and shared reflection. The use of videos or interactive quizzes encourages students to think critically and discover the meaning of Islamic values independently (Maskur, 2019).

Moreover, the effectiveness of ICT media in increasing student participation can also be explained through theories emphasizing the importance of student engagement in learning activities such as discussion and reflection. In PAI learning, teachers who use digital media create learning experiences that encourage students to interact directly with the material. For example, through videos about noble character (akhlakul karimah) or the exemplary stories of the Prophet, students not only watch them but are also invited to analyze the moral values contained within and relate them to their daily lives.

Students who previously tended to be passive have now become more confident in asking questions, answering, and expressing opinions. This also indicates a paradigm shift from teacher-centered learning toward student-centered learning, which is one of the core principles of 21st-century education. ICT-based learning encourages students to become independent learners, enabling them to seek additional learning resources online and collaborate on digital assignments.

These findings are reinforced by theories explaining that interesting stimuli can trigger positive learning responses. In this context, media such as videos and animations serve as stimuli that spark curiosity and interest among students. The responses that emerge include active questioning, enthusiasm for discussions, and strong participation in learning activities (Sain Hanafy, 2018).

Thus, it can be concluded that the use of ICT-based learning media significantly increases student engagement in the PAI learning process. Through interactive media, teachers are able to create an engaging and contextual learning environment, allowing students to become not merely listeners but active participants in the learning process.

The use of ICT-based media also has a positive influence on improving students' understanding and learning outcomes. Through visual presentations such as PowerPoint and Islamic videos, students can more easily understand abstract PAI concepts such as faith (iman), ethics (akhlaq), and worship ('ibadah). They do not merely memorize theories but are also able to relate the material to real-life situations.

These findings are consistent with the theory which explains that learning becomes more effective when information is presented through a combination of words, images, and sound. The use of PowerPoint media and videos enables students to process information through two main cognitive channels—the visual and auditory channels—so their understanding of the material becomes stronger and more enduring (M. Yaumi, 2018). In the context of Islamic Religious Education, videos on how to perform wudu or stories of the Prophet's struggles help students understand Islamic values in a concrete and applicable manner.

The results of this study also support the theory that concrete learning experiences involving multiple senses lead to deeper understanding (M. Ramli, 2020). Through video presentations, students can “see directly” the practices of worship or exemplary behavior, making learning more meaningful and not merely verbal.

This improvement in learning outcomes also aligns with theories emphasizing the importance of authentic and meaningful learning environments. ICT-based media create a contextual learning environment closely related to students' real lives, as they learn through visual and digital experiences familiar to their everyday routines. As a result, learning becomes more effective and sustainable.

Thus, it can be concluded that the use of ICT-based learning media by PAI teachers at SMP Negeri 1 Idi Rayeuk has proven effective in increasing student engagement, understanding, and learning outcomes. Through PowerPoint and video media, students not only acquire cognitive knowledge but also develop deeper spiritual and moral awareness. PAI learning becomes more lively, interactive, and capable of touching the students' affective domain.

3.3 Students' Perceptions of the Use of ICT-Based Learning Media in Islamic Religious Education at SMP Negeri 1 Idi Rayeuk

Students' perceptions of the use of ICT-based learning media are an important aspect in assessing the effectiveness of technology integration in the PAI learning process. These perceptions not only reflect the level of acceptance toward instructional innovation but also illustrate the extent to which technology is able to create meaningful, enjoyable, and relevant learning experiences for students in their daily lives.

In this study, students' perceptions were focused on two main indicators: (1) the level of students' interest in ICT-based media, and (2) the level of ease students felt in understanding PAI material through ICT media. These two indicators represent two important aspects of the learning process, namely the affective aspect (interest and motivation) and the cognitive aspect (understanding and absorption of the material).

Based on interview and observation results, it was found that students' interest in ICT-based learning media at SMP Negeri 1 Idi Rayeuk was relatively high. Students showed strong enthusiasm when teachers used media such as Islamic educational videos, interactive PowerPoint slides, Islamic animations, and digital infographics. They felt that learning became more engaging, less monotonous, and easier to understand compared to conventional lecture-based methods.

This is consistent with theories stating that students' interest and attention are crucial factors in successful learning. When instructional media are able to capture attention and evoke positive emotions, students become more focused, motivated, and engaged in the learning process (Maskur, 2019). ICT media that combine visual, auditory, and interactive elements can stimulate curiosity and positive emotions, thereby encouraging students to participate actively in learning.

PAI teachers at SMP Negeri 1 Idi Rayeuk also mentioned that students appear more focused and enthusiastic when lessons involve videos or animations. Some students even show initiative to seek additional learning resources independently through YouTube or Islamic learning applications.

This phenomenon indicates a transition from passive learning to active learning, in which students not only receive information but also explore and construct knowledge on their own.

These findings are reinforced by theories that emphasize that knowledge is constructed through social interaction and meaningful learning experiences. ICT-based media serves as a bridge that connects students' learning experiences with real-life contexts (Maskur, 2019). For example, when students watch videos about the stories of the Prophets, they not only understand the narrative but also interpret the moral and spiritual values within the context of their daily lives as teenagers in the digital era. Thus, students' interest in ICT media does not merely reflect an emotional response but also indicates an increase in sustained learning motivation. Students feel that Islamic Education (PAI) learning becomes more "alive" and "closely connected to their world" because digital media is already a part of their everyday lives. ICT is able to bridge the gap between the school environment and students' real-life experiences as a generation growing up in a digital setting.

ICT-based learning media also significantly contributes to students' ease in understanding PAI materials. Most students stated that topics previously perceived as difficult or abstract became easier to understand when explained through digital media such as videos and interactive PowerPoint presentations. These findings are in line with theories stating that humans learn more effectively when information is presented through a combination of text, images, and sound. In PAI learning, for instance, videos demonstrating the procedures of wudu and prayer allow students to process information both visually and auditorily at the same time. This helps strengthen memory retention and deepen their understanding of Islamic teachings in a concrete manner.

PAI teachers at SMP Negeri 1 Idi Rayeuk also emphasized that with the use of digital media, students understand the material more quickly due to the clear and engaging visualizations. For example, explanations of noble character (akhlakul karimah) or the stories of the Prophets become more vivid and easier to comprehend through animations and short videos. Affectively, students show empathy and feel inspired after watching visuals that portray Islamic values in a realistic way.

This ease of understanding is also associated with experiential learning theories, which state that learning involving multiple senses such as seeing and hearing leads to deeper comprehension. In this regard, the videos and animations used by PAI teachers provide concrete learning experiences that help students understand Islamic teachings not only through text but also through real-life demonstrations. Observations also show that the classroom atmosphere becomes more lively and interactive. Students are not only listening but also actively participating in discussions after watching the videos. They analyze the moral values presented and relate them to their own life experiences. This indicates that the use of ICT media not only enhances cognitive understanding but also develops students' critical and reflective thinking regarding Islamic values.

Based on the above discussion, it can be concluded that students' perceptions of the use of ICT-based learning media in PAI learning at SMP Negeri 1 Idi Rayeuk are highly positive. Students show strong interest, find it easier to understand the material, and feel encouraged to learn independently through digital exploration. ICT-based media successfully creates a learning environment that is engaging, interactive, and relevant to the characteristics of today's young generation. Therefore, the implementation of ICT media in PAI learning not only improves learning outcomes but also nurtures students' interest, motivation, and spiritual awareness in a deeper way.

4. Conclusions

1. The utilization of ICT-based learning media by Islamic Education (PAI) teachers at SMP Negeri 1 Idi Rayeuk has been implemented well and in a structured manner. Teachers routinely use digital media such as interactive PowerPoint presentations and Islamic educational videos to support the teaching and learning process. PowerPoint helps teachers present material in a systematic, visual, and engaging way, while instructional videos strengthen students' understanding through concrete and inspiring visualizations. Although there are challenges such as limited technological facilities and uneven digital competencies among teachers, overall ICT has successfully improved the quality of PAI learning by making the material easier to understand, increasing learning motivation, and creating a more interactive and enjoyable classroom environment.
2. The use of ICT-based media by PAI teachers has proven effective in increasing students' engagement, motivation, and learning outcomes. Following the implementation of ICT media, a noticeable shift has occurred toward active and collaborative learning (student-centered learning). Students have become more willing to ask questions, participate in discussions, respond to quizzes, and seek additional information through the internet. In terms of learning outcomes, the use of interactive PowerPoint presentations and Islamic videos helps students comprehend abstract concepts such as creed (akidah), ethics (akhlak), and Islamic jurisprudence (fiqh) in a more concrete and accessible manner. ICT also facilitates diverse learning styles visual, auditory, and kinesthetic making the learning process more inclusive. Thus, ICT not only increases student participation but also enhances their comprehension and competency attainment in PAI learning.
3. Students' perceptions of the use of ICT-based learning media are highly positive. The majority of students stated that PAI learning becomes more engaging, interactive, and relevant to their technology-oriented daily lives. ICT media such as videos, animations, and interactive PowerPoint presentations are perceived as helpful in simplifying the understanding of the material and fostering enthusiasm for learning. In addition, ICT-based media stimulates curiosity and supports students' learning independence. They are encouraged to explore further materials through digital sources such as YouTube, Islamic websites, and educational applications. This indicates that ICT serves not only as a teaching aid for teachers but also as a catalyst for autonomous and continuous learning.

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