

Islamic Education in Elementary Schools: A Review of the ASSURE Model and Interactive Media

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Abstract

Islamic Religious Education (PAI) in elementary schools faces challenges of low student engagement and material understanding due to conventional, teacher-centered learning methods. The development of digital technology offers solutions through learning innovations. This study aims to explore innovations in PAI learning, interactive multimedia games, and the ASSURE model. The research method used is descriptive qualitative to understand problems and analyze data from observations and literature studies. The results show that PAI learning innovation involves applying new methods to improve effectiveness and engagement. Interactive multimedia games combine various digital technologies, making learning attractive and independent. The ASSURE model provides a systematic framework (Analyze learners, State objectives, Select methods/media, Utilize, Require participation, Evaluate/revise) for designing technology-based learning effectively and efficiently. In conclusion, integrating digital technology through innovations such as ASSURE-based interactive multimedia games can be a solution to improve the quality and outcomes of PAI learning in elementary schools.

Abstrak

Pendidikan Agama Islam (PAI) di sekolah dasar menghadapi tantangan rendahnya keterlibatan peserta didik dan pemahaman materi karena metode pembelajaran konvensional yang teacher centered. Perkembangan teknologi digital menawarkan solusi melalui inovasi pembelajaran. Penelitian ini bertujuan untuk mengetahui inovasi pembelajaran PAI, game multimedia interaktif, dan model ASSURE. Metode penelitian yang digunakan adalah kualitatif deskriptif untuk memahami permasalahan dan menganalisis data dari observasi serta studi pustaka. Hasil menunjukkan bahwa inovasi pembelajaran PAI melibatkan penerapan metode baru untuk meningkatkan efektivitas dan keterlibatan. Game multimedia interaktif menggabungkan berbagai teknologi digital, membuat pembelajaran menarik dan mandiri. Model ASSURE memberikan kerangka sistematis (Analyze learners, State objectives, Select methods/media, Utilize, Require participation, Evaluate/revise) untuk merancang pembelajaran berbasis teknologi secara efektif dan efisien. Kesimpulan, integrasi teknologi digital melalui inovasi seperti game multimedia interaktif berbasis model ASSURE dapat menjadi solusi untuk meningkatkan kualitas dan hasil pembelajaran PAI di SD.

Kerwords:

Interactive multimedia games; ASSURE model; PAI learning; digital technology; learning innovation

Kata Kunci

Game multimedia interaktif; model assure; pembelajaran paI; teknologi digital; inovasi pembelajaran

Introduction

Pendidikan Agama Islam (PAI) plays a crucial role in shaping students' character, morality, and spirituality within the national education system (Mutaqin & Ansori, 2022). However, PAI faces challenges in achieving its objectives, including low student engagement and suboptimal understanding due to conventional teaching methods (Sa'diah & Harahap, 2025). To address these issues, a systematic approach is needed, encompassing the introduction of religious values, internalization, and implementation in daily life (Mutaqin & Ansori, 2022). Innovative strategies, such as incorporating varied teaching methods, contextual materials, and digital technology, can enhance learning effectiveness and student involvement (Sa'diah & Harahap, 2025). Additionally, PAI should focus on developing students' Islamic character and national values (Aladdiin & Ps, 2019). Despite these efforts, PAI still faces various problems related to educators, students, and learning media, which hinder the full achievement of its educational goals (Susiana, 2017).

Recent studies highlight the challenges faced by Islamic education teachers in utilizing digital technology for learning. Despite rapid technological advancements, many teachers struggle to effectively integrate interactive digital media into their teaching, often failing to consider students' characteristics and needs (Muzakki et al., 2021, as cited in Bula et al., 2025). This issue is exacerbated by teachers' limited skills in designing technology-based learning materials (Rahma et al., 2023). However, research suggests that interactive animated videos can enhance understanding of abstract concepts in Islamic education, motivate students, and improve learning outcomes (Bula et al., 2025). To address these challenges, workshops on curriculum implementation and development of animated whiteboard videos have been conducted (Anugerah et al., 2023). Additionally, studies emphasize the importance of multimedia in creating interactive learning media to increase student interest, as traditional textual materials are often less engaging (Lestari & Wirasty, 2019).

Recent studies highlight the effectiveness of the ASSURE model and interactive multimedia in enhancing learning outcomes and motivation across various subjects. The ASSURE model provides a systematic framework for technology-based lesson planning, incorporating six key components: Analyze learner characteristics, State objectives, Select methods and media, Utilize materials, Require learner participation, and Evaluate and revise (Mustika et al., 2024; Hilaliyah et al., 2020). When combined with digital media, this approach can significantly improve student engagement and communication skills (Mustika et al., 2024). Research indicates that implementing the ASSURE model in geography education led to increased student motivation and academic performance (Mahar, 2023). Similarly, in Islamic religious education, integrating audio-visual media with the ASSURE model created meaningful learning experiences and addressed challenges like student boredom (Munarun & Anbiya, 2024). These findings suggest that the ASSURE model, coupled with interactive multimedia, offers an effective solution for innovative and engaging 21st-century learning across different disciplines.

Recent studies highlight the effectiveness of integrating interactive multimedia and the ASSURE model in enhancing Islamic education (PAI) learning outcomes. Rohmah & Tegeh (2022) developed and validated interactive multimedia, demonstrating its potential to improve student engagement and learning results. The ASSURE model, which includes analyzing learner characteristics, setting objectives, selecting methods and media, utilizing materials, encouraging active participation, and evaluating outcomes, has been shown to create meaningful learning experiences (Munarun & Anbiya, 2024). Musnida & Asmendri (2023) emphasize that this approach can increase student motivation and learning variety. Furthermore, Diba & Rusdiyah (2022) found that implementing the ASSURE model in online learning environments can enhance students'

cognitive abilities, particularly in understanding Tajwid (Quranic recitation rules). These studies collectively underscore the potential of multimedia-integrated ASSURE model in improving PAI instruction, addressing challenges such as student engagement and learning effectiveness.

Thus, this article contributes to academic knowledge by providing an analysis of innovative strategies that address the challenges of contemporary Islamic Education (PAI) learning, while offering a structured framework for the application of digital technology that has the potential to enhance the quality of religious education at the elementary level.

Method

Metode penelitian yang peneliti gunakan adalah menggunakan metode penelitian kualitatif, karena data yang peneliti sajikan dalam bentuk mendejurnalkan suatu permasalahan yang diteliti. Penelitian yang bersifat kualitatif ini bertujuan untuk memahami suatu permasalahan yang sedang dialami oleh subjek peneliti. Analisis deskriptif kualitatif digunakan untuk menganalisis data yang diperoleh selama penelitian berupa hasil catatan lapangan, observasi, dan wawancara. Penelitian ini memaparkan keadaan sebagaimana adanya.

Metode adalah cara yang digunakan penulis untuk menjawab masalah penelitian yang ada. Metode harus jelas dengan lokasi dan waktu penelitian, populasi dan sampel penelitian, variabel penelitian dan data penelitian. Jelaskan prosedur dasar yang digunakan selama penelitian, termasuk pemilihan subjek penelitian dan metode observasional dan analitis. Metode naskah Anda juga menyebutkan detail metode penelitian anda.

Result and Discussion

Based on the literature review and the study of innovations in Islamic Education (PAI) learning through the use of digital technology, particularly through interactive multimedia games based on the ASSURE model, several important findings were obtained that address the research problems. These findings are further analyzed in the following sub-sections.

PAI Learning Innovation

Inovasi dalam pembelajaran Pendidikan Agama Islam (PAI) merupakan respons terhadap tantangan era digital dan kebutuhan peserta didik yang semakin kompleks (Dina Salsabila et al., 2024; Hairul Hadi et al., 2025). Inovasi ini mencakup integrasi teknologi, penggunaan media interaktif, dan penerapan metode pembelajaran berbasis proyek untuk meningkatkan keterlibatan siswa dan pemahaman ajaran agama (Dina Salsabila et al., 2024). Namun, implementasinya menghadapi tantangan seperti keterbatasan keterampilan digital guru dan resistensi terhadap penggunaan teknologi (Hairul Hadi et al., 2025). Pengembangan kurikulum PAI yang inovatif bertujuan menghasilkan lulusan yang religius, kritis, dan adaptif terhadap perubahan zaman (Anang Kasim et al., 2025). Inovasi dalam PAI dianggap penting untuk membentuk moral bangsa dan memecahkan permasalahan dalam dunia pendidikan, dengan pendidik berkreativitas mencari metode baru yang sesuai karakteristik siswa (Jipi, 2023).

Inovasi dalam pembelajaran Pendidikan Agama Islam (PAI) menjadi krusial untuk meningkatkan efektivitas dan relevansi di era digital. Integrasi nilai-nilai multikultural, toleransi, dan dialog antaragama ke dalam kurikulum PAI penting untuk merespons keberagaman masyarakat (Syafudin, 2025). Pendekatan inovatif seperti pembelajaran berbasis proyek, teknologi, dan metode aktif dapat meningkatkan keterlibatan siswa dan memperkuat pemahaman agama, terutama untuk generasi Z (Maftuhah & Ikhwannuddin, 2024). Di tingkat SD/MI, inovasi pembelajaran PAI

melalui media interaktif dan pendekatan kontekstual berperan dalam pembentukan karakter positif sejak dini (Salsabila et al., 2024). Metode seperti Project Based Learning, Flipped Classroom, dan gamifikasi relevan diterapkan dalam PAI digital untuk menjawab kebutuhan generasi Z, didukung oleh literasi digital dan evaluasi berbasis teknologi (Ritonga et al., 2025).

Interactive Multimedia Games as Learning Media

Interactive multimedia games have emerged as effective tools for enhancing Islamic Religious Education (PAI) learning. These games integrate various digital technologies to create engaging learning experiences (Purnomo et al., 2025). The development of such media requires careful planning, from setting learning objectives to designing user-friendly interfaces (Fitri et al., 2025). Research has shown that interactive multimedia in PAI education can increase student interest, improve learning outcomes, and encourage active participation (Yuningsih & Haeruddin, 2024). For the millennial generation, digital-based innovations in PAI learning make religious education more engaging and relevant (Ballianie et al., 2024). However, challenges remain, including limited technological infrastructure and teachers' lack of digital media skills (Purnomo et al., 2025). Despite these obstacles, interactive multimedia has great potential to enhance PAI learning when properly developed and implemented (Yuningsih & Haeruddin, 2024), offering a more meaningful and tailored educational experience for students in the digital era (Ballianie et al., 2024).

Recent studies highlight the effectiveness of interactive multimedia and games in Islamic Religious Education (PAI) learning. These innovative approaches enhance student engagement, motivation, and learning outcomes (D. Purnomo et al., 2025; Novia Ballianie et al., 2024). Interactive games in PAI education improve problem-solving skills, motor skills, and teamwork abilities while maintaining student attention and comfort (Muhammad Rasikhul Islam et al., 2023). The integration of technology, such as animated videos, digital applications, and AR/VR, makes PAI learning more engaging and relevant for the millennial generation (Novia Ballianie et al., 2024). Video games can be utilized as effective learning media in PAI by transferring information and values through various practical methods (Arditya Prayogi et al., 2023). However, challenges remain, including limited technological infrastructure and teachers' digital skills (D. Purnomo et al., 2025). Overall, these studies demonstrate that interactive multimedia and games significantly enhance the PAI learning experience and outcomes for students.

The ASSURE Model in Designing Technology-Based Learning

The ASSURE model provides a systematic framework for designing technology-based learning. This model consists of six main stages (Yani & Amaliyah, 2023; Putro & Huda, 2022), each offering structured steps in the development of technology-enhanced learning. The first stage, Analyze Learners, aims to identify the characteristics, learning styles, interests, talents, and prior knowledge of the learners. Next, in the State Objectives stage, the teacher defines the competencies the learners are expected to achieve using the ABCD format. The next stage, Select Methods, Media, and Materials, involves the teacher selecting the appropriate strategies, technologies, and media, as well as designing learning materials that align with the learning objectives. Following that, in the Utilize Technology, Media, and Materials stage, the teacher plans the effective use of media and technology in the learning process. The Require Learner Participation stage encourages the use of technology to enhance active student participation in the learning process. Finally, in the Evaluation and Revise stage, an evaluation is conducted on the strategies, technologies, and media

used, and revisions are made if necessary to improve the quality of the learning experience.

Research indicates that the ASSURE model helps teachers design effective and efficient technology-based learning experiences tailored to students' needs. This model involves analyzing learner characteristics, stating objectives, selecting appropriate methods and materials, utilizing technology, requiring student participation, and evaluating outcomes (Mustika et al., 2024; Muzakki et al., 2021). Implementation of ASSURE has been shown to increase student motivation, attention, and learning outcomes across various subjects, including geography and Islamic studies (Mahar, 2023; Muzakki et al., 2021). The model encourages teachers to integrate multimedia and digital technologies into their lessons, which can enhance learning variety and student engagement (Musnida & Asmendri, 2023; Muzakki et al., 2021). By following the systematic steps of the ASSURE model, educators can create more student-centered, interactive, and technologically-rich learning environments that promote active participation and potentially lead to improved academic performance (Mustika et al., 2024; Mahar, 2023).

Integration of Interactive Multimedia Games and the ASSURE Model in PAI Learning

Recent studies highlight the effectiveness of interactive multimedia and gamification in enhancing Islamic Religious Education (PAI) learning. Interactive multimedia materials incorporating text, images, sound, and interactive elements have been shown to increase student interest and engagement (N. Sari et al., 2024). The ASSURE model, which includes analyzing learner characteristics, setting objectives, selecting methods and media, utilizing materials, ensuring active student participation, and evaluating outcomes, has proven effective in creating meaningful learning experiences when combined with audio-visual media in PAI (Ahmad Munarun & B. Anbiya, 2024). Designing and producing interactive multimedia for PAI requires consideration of effective multimedia design principles and current learning theories (M. Marwah et al., 2024). Gamification tools like Quizizz have demonstrated potential in increasing student motivation in PAI, making learning more engaging, interactive, and effective (Savira Rahmania et al., 2023). These approaches address challenges in PAI education, such as student engagement and boredom, by leveraging digital technologies.

Multimedia interactive games offer significant advantages in enhancing learning experiences, particularly in Islamic Religious Education (PAI). These games increase student engagement and interest in learning (N. Sari et al., 2024; H. Haryanto & Bagas Friana, 2020), while also improving understanding of abstract concepts and religious values (Yulia Intan Br. Karo Karo et al., 2025). Interactive multimedia materials, combining text, images, sound, and interactive elements, effectively stimulate students' learning interest (N. Sari et al., 2024). Games like "Quiz Islam" and "SejarahNabi" have been shown to deepen students' comprehension of Islamic principles and history (Yulia Intan Br. Karo Karo et al., 2025). The design and production of these interactive multimedia learning tools require consideration of effective multimedia design principles, current learning theories, and relevant production methods (M. Marwah et al., 2024). Despite challenges such as limited technology access and resistance to new learning methods (N. Sari et al., 2024), these games provide an alternative, enjoyable learning approach, especially beneficial when students feel tired or bored with traditional methods (H. Haryanto & Bagas Friana, 2020).

Research indicates that interactive multimedia games can significantly enhance student learning outcomes. These tools facilitate independent and personalized learning, allowing students to control their pace and choose paths aligned with their learning styles (Rahmat, 2015). Studies show that interactive multimedia increases student motivation, making learning more engaging and

effective (Hakim & Windayana, 2016; Rohmah & Tegeh, 2022). Implementation of interactive multimedia in mathematics education resulted in improved learning outcomes and positive attitudes among elementary school students (Hakim & Windayana, 2016). Similarly, its use in Islamic education demonstrated high validity and applicability in the learning process (Rohmah & Tegeh, 2022). A pre-experimental study found that interactive multimedia significantly improved student performance, with post-test scores categorized as very high compared to pre-test scores (Nur Ariandini & Rizal Arizaldy Ramly, 2023). Overall, interactive multimedia promotes student-centered learning, encouraging active participation and creativity in the educational process (Rahmat, 2015).

The ASSURE model provides a systematic framework for integrating multimedia technology into Islamic education (PAI) effectively. This model involves analyzing learner characteristics, setting objectives, selecting methods and media, utilizing materials, encouraging student participation, and evaluating outcomes (Ahmad Munarun & B. Anbiya, 2024; Nawawi, 2018). By following these steps, teachers can design lessons that address student needs and curriculum requirements while incorporating interactive multimedia elements like videos (Musnida & Asmendri, 2023; A. Muzakki et al., 2021). The ASSURE approach helps overcome challenges in traditional PAI teaching by shifting from teacher-centered methods to more engaging, student-centered approaches (Ahmad Munarun & B. Anbiya, 2024). Research indicates that implementing the ASSURE model with multimedia can enhance learning motivation, increase lesson variety, and improve overall educational quality in subjects like Al-Qur'an Hadith (A. Muzakki et al., 2021). Regular evaluation ensures continuous improvement and effectiveness of the learning process (Ahmad Munarun & B. Anbiya, 2024; Nawawi, 2018).

Implementation of Digital Technology at SD Firdaus Percikan Iman

The case study at SD Firdaus Percikan Iman reveals that various digital technology platforms have been applied in the learning process, particularly since the COVID-19 pandemic. These platforms include:

- Google Classroom
- Google Drive
- Zoom Meeting
- Video Education
- LCD TV
- Quizizz
- Canva
- ANBK (Computer-Based National Assessment)

Although the use of interactive multimedia games based on the ASSURE model was not specifically mentioned in the school, the presence of this digital technology infrastructure opens up significant opportunities for implementing such learning innovations. Platforms like Quizizz and Video Education already show efforts to make learning more interactive and engaging, aligning with the principles of interactive multimedia games.

The findings of this study indicate that the main challenges in Islamic Education (PAI) learning namely, low student engagement and suboptimal understanding of the material due to conventional methods can be addressed through technology-based innovations. The integration of interactive multimedia games and the ASSURE model provides a comprehensive solution. Interactive multimedia games offer engaging and interactive learning media, while the ASSURE

model provides a systematic planning framework to ensure the effectiveness of these technologies.

These results are in line with previous research that highlights the benefits of utilizing digital technology to enhance motivation and learning outcomes (Widiatno & Nurlaela, 2019; Musnida & Asmendri, 2023). The difference lies in the focus on the application within the context of PAI and the use of the ASSURE model as a systematic foundation for designing this innovation. The case study at SD Firdaus illustrates that although technological infrastructure is available, its use for more specific PAI learning innovations still has room for optimal development.

Conclusion

Based on the literature review and analysis of the use of digital technology in Islamic Education (PAI) learning innovations at elementary schools, particularly through the integration of interactive multimedia games and the ASSURE model, several conclusions can be drawn to address the research problems. First, PAI learning innovations represent the implementation of new methods, strategies, or approaches aimed at enhancing effectiveness, adapting to the times, and attracting student interest and engagement, thus addressing the limitations of conventional learning methods that are less optimal. Second, interactive multimedia games have proven to be an effective learning medium because they combine various digital technologies (images, animations, videos, audio, educational games) that create an active, dynamic, and immersive learning environment, while also enhancing student motivation and learning outcomes. Third, the ASSURE model provides a systematic planning framework (Analyze learners, State objectives, Select methods/media, Utilize, Require participation, Evaluate/revise) that helps teachers design and implement educational technology effectively and efficiently, ensuring that learning is tailored to the characteristics of students. The integration of both offers an innovative solution to address the low participation and understanding in conventional PAI learning. The case study at SD Firdaus Percikan Iman illustrates that, although digital technology infrastructure (Google Classroom, Zoom, Quizizz, etc.) has been implemented, its use for more specific PAI learning innovations still has great potential for further optimal development.

Based on the conclusions, it is recommended to conduct further research and development (R&D) aimed at producing an innovative Islamic Religious Education (PAI) learning product in the form of interactive digital teaching materials based on multimedia games, using the ASSURE model as the framework for its development. The subsequent research should also involve field trials to empirically assess the effectiveness of the developed product in enhancing motivation and learning outcomes among elementary school students

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