

Technology-Based Islamic Religious Education Learning Innovation in the Independent Curriculum

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Abstract

It's very important for education to answer the challenges of the times to prepare a generation that is able to face global change and the complexity of the future. The challenges of this era include social, economic, technological, and environmental changes that are developing rapidly. Innovation in the use of learning media is very necessary as an effort to maximize the learning process in the classroom. This is more directed at the cognitive dimension, namely mastery and understanding of Islamic Religious Education material, plus the progress of information and communication technology is currently increasingly rapid. This study aims to analyze the effectiveness of innovative learning media in Islamic Religious Education, examine the impact of technology integration on student understanding, and develop recommendations for optimizing the use of learning media in responding to contemporary educational challenges. Additionally, it seeks to identify best practices in implementing technology-based learning media while maintaining the essence of Islamic education values. This research is a library research with a descriptive-analytical approach. In collecting data, it is carried out through sources related to the research subject, such as books, journals, and the internet, analyzed and concluded. The results of this study are: First, Use of Applications: Interactive applications such as Kahoot, Quizizz, and Google Forms, as well as the Canva platform can be used to create interactive quizzes related to Islamic Religious Education material, Second, Learning Videos and animations: Content that tells the story of the prophet, Islamic history, or Islamic moral values can convey messages visually well and videos like this can be uploaded on platforms such as YouTube, and Third, Educational games with Islamic themes: Games with Islamic themes, such as quizzes about Islamic morals or adventures about the story of the prophet, can make students learn in a fun way. and play videos with ablution practices and prayer procedures, adjusted to the theme of Islamic Religious Education lessons.

Keywords: Learning Innovation, Islamic Religious Education, Technology-Based, Independent Curriculum.

Introduction

The 4.0 revolution has brought many changes in human life and has affected the world of work as a whole. In S. Anwar, (2019) it is mentioned that Industry 4.0 has changed the way people do things and has a positive impact on the effectiveness and efficiency of resources as well as cheaper production costs. However, industry 4.0 also has negative effects, because it requires a qualified workforce.

Education 4.0 is a response to the needs of the industrial revolution 4.0 where technology and people are integrated to create new opportunities in innovative and creative ways (Lase, 2019). It is essential for education to answer the challenges of the times to prepare a generation capable of facing global changes and the complexities of the future. The challenges of this era include rapidly evolving social, economic, technological, and environmental changes.

Therefore, education, including an independent curriculum, must be designed to provide students with the knowledge and skills necessary to succeed in this era.

Innovation in the use of learning media needs to be done as an effort to maximize the learning process in the classroom. This leads more to the cognitive dimension, namely mastery and understanding of Islamic Religious Education materials, plus the advancement of information and communication technology is increasingly rapid today. The intention of this is so that students are more interested and motivated to participate in Islamic Religious Education learning in the classroom. Because the use of media can help and make it easier for teachers to package material to be more interactive, attract students' interest and motivation so that the material taught is easily absorbed and understood (Nurhidin, 2017).

Effective Islamic Religious Education learning innovations can improve students' understanding, instill religious values, and motivate students to apply Islamic teachings in their lives. Therefore, there are many innovations that must be made and used by teachers in learning Islamic Religious Education. Technology can be used to make Islamic Religious Education materials more interesting and more accessible. For example, e-educationnet/internet-based learning, the use of telematics, e-learning learning, blogs, multimedia resource centers, learning technology through comics, and video conferencing. One of the capabilities of technology is to make information presentations interesting and interactive. Islamic Religious Education subjects can be supplemented with Islamic Religious Education in a more interesting and entertaining way for students by using applications, educational games, learning videos, and various other digital platforms.

Recent research developments in the field of Islamic Religious Education learning innovation show a significant trend in technology integration. Recent studies reveal that the use of technology in PAI learning, such as learning apps, interactive videos, and e-learning platforms, has shown a positive impact on student learning outcomes (Agustina et al., 2023). Augmented Reality (AR) technology has been shown to provide strong motivation to students, especially for those with lower academic abilities. In addition, the use of AI technology in Islamic education has opened up new opportunities in personalization of learning and contextual analysis of Al-Quran texts using Natural Language Processing.

However, there are some significant gaps in existing research. From the empirical side, there are still limited studies that specifically measure the effectiveness of technology integration on the internalization of Islamic values, as well as the lack of research on the long-term impact of the use of digital technology in PAI learning. In addition, the technology-based PAI learning evaluation model has not been widely explored. From a theoretical perspective, there is no comprehensive framework explaining the integration of technology in PAI that considers pedagogical aspects and Islamic values, as well as a lack of conceptual models that explain the relationship between technological innovation and increased understanding and application of Islamic values.

Based on these gaps, this study raises several key questions: how effective is the integration of digital technology in improving the understanding and internalization of Islamic values in PAI learning; how to develop a technology-based PAI learning model that can maintain the essence of Islamic values; and what is the impact of the use of innovative learning media on student motivation and learning outcomes in PAI subjects.

To answer these questions, this study aims to analyze the effectiveness of the use of innovative technology-based learning media in improving the understanding and learning outcomes of PAI. In addition, this study also aims to develop a technology integration model in PAI learning that maintains Islamic values, identify best practices in the implementation of technology-based learning media, and formulate recommendations for optimizing the use of

learning media in answering contemporary educational challenges. Through the achievement of these goals, it is hoped that research can make a significant contribution to the development of PAI learning that is more effective and relevant to the demands of the times.

Therefore, the use of technological innovations in the independent curriculum, teachers are required to be more creative and innovative in the learning process of Islamic Religious Education, so that students have an interest in learning and liking Islamic Religious Education subjects, and students easily understand the material presented by teachers and can be applied in daily life.

Method

This research is a literature research with a descriptive-analytical approach, the data analysis process is carried out systematically and comprehensively. Once the data is collected from various sources such as books, journals, and the internet, the analysis is carried out through several stages.

First, the data that has been collected through literature studies is processed with data reduction techniques. At this stage, the researcher sorts and focuses on information that is relevant to the research objectives, especially those related to Islamic Religious Education. This process involves simplifying the rough data from the written records that have been collected.

Second, the researcher applies content analysis techniques to deeply examine various sources relevant to the research subject. In this stage, the researcher identifies key concepts and analyzes the relationships between them to gain a comprehensive understanding of the topic being studied.

Third, the data that has been analyzed is then systematically compiled in a descriptive form. This arrangement aims to provide a clear picture of the subject being studied. The results of this analysis are then adjusted to the research objectives to produce accurate and meaningful conclusions, especially in the context of Islamic Religious Education.

The final stage of the analysis process is the drawing of conclusions which is carried out by verifying the results of the analysis and ensuring that the research findings are in accordance with the goals that have been set. The conclusion is presented in the form of a comprehensive and systematic narrative, reflecting the results of the literature review that has been carried out.

Results

The study results highlight the crucial role of innovation in Islamic Religious Education (IRE). Innovation, driven by scientific advancements, plays a fundamental role in shaping effective learning experiences. A strong scientific foundation is necessary for fostering innovation, particularly in education. The integration of science and innovation within IRE promotes critical, creative, and innovative thinking skills among students. Findings indicate that innovation has influenced various sectors, including technology, education, and healthcare. In the field of education, the adoption of digital platforms, mobile applications, and online learning has enhanced accessibility and engagement, leading to more effective learning outcomes (Girsang et al., 2022). The integration of innovative approaches in IRE not only contributes to cognitive development but also influences students' psychological and spiritual growth. Research findings reveal that 83% of students engaged in an Islamic values-based approach showed significant improvement in character development, while IRE contributed 26.2% to the resilience of Muslim families during the pandemic. These findings confirm that religious education impacts not only individuals but also the broader educational and community environment (Pektorena et al., 2022; Solichin et al., 2023).

The research further indicates that technology serves as an essential medium for enhancing education. Information technology enables efficient access to learning materials, ensuring that students are well-equipped for the digital age. Teachers play a vital role in integrating subject knowledge, learning strategies, and technology to improve the learning experience (Suryadi, 2015). Several technological innovations have been identified in IRE learning. The first is E-learning (Online Learning), where platforms such as Google Classroom, Edmodo, Moodle, and Canva are utilized to facilitate online education. Research shows that online learning has become increasingly popular among Indonesian students due to its flexibility and accessibility (Yuliana, 2019). The second innovation is Blended Learning, which combines face-to-face instruction with online resources tailored to students' needs, ensuring a balanced and effective learning experience (Rahayu et al., 2022). The third innovation is Mobile Learning, which allows students to access educational content anytime and anywhere through mobile devices, thus enhancing engagement and flexibility (Setiawati et al., 2012). (Fatmawati, 2015). Lastly, Canva as an Interactive Learning Tool has proven to be an effective digital learning aid, significantly improving student motivation and participation. The expert evaluation of Canva's feasibility and effectiveness reached 91.24%, confirming its role as a valuable educational tool (Maisarah & Yusnita, 2024).

Furthermore, the study findings reveal that the COVID-19 pandemic accelerated the integration of technology into IRE, demonstrating that digital tools can support learning continuity. However, younger students often struggle to adapt to technology-dependent learning, requiring teachers to creatively utilize digital media such as PowerPoint, Canva, and interactive applications (Arikarani, 2024). Islamic Religious Education plays a pivotal role in shaping students' moral and religious character. Technological innovations enhance student engagement and comprehension, making religious studies more interactive and meaningful. The study underscores the necessity for IRE teachers to develop competence in digital tools to align with modern educational frameworks (Piqriani & Amin, 2023). Additionally, technological innovations have significantly improved student motivation and learning effectiveness. Interactive media, such as Kahoot and Quizizz, have transformed conventional learning into engaging experiences, while digital videos have simplified the understanding of complex religious concepts (Nabillah & Tanjung, 2023). Research findings emphasize that the success of technological integration in IRE is influenced by teacher readiness, infrastructure availability, and students' adaptability to digital learning platforms.

Discussion

The study confirms that innovation plays a fundamental role in Islamic Religious Education (IRE), driving improvements in teaching methods and student learning experiences. Learning innovations, particularly those incorporating technology, promote critical and creative thinking while ensuring the relevance of religious education in the modern era. The integration of innovation in IRE enhances student engagement, increases accessibility to learning resources, and improves learning outcomes. Findings indicate that digital tools create interactive learning environments that maintain students' interest and participation. Additionally, the flexibility of online and mobile learning enables students to access educational materials anytime and anywhere, making religious studies more accessible. The use of interactive and technology-supported learning methods further enhances students' comprehension, motivation, and overall academic performance.

The study highlights that IRE influences not only individual learning but also broader educational communities. The systematic implementation of IRE contributes to character

development and resilience, shaping both students and their surrounding environments (Solichin et al., 2023). Moreover, the integration of technology in IRE fosters a more dynamic and engaging learning experience. The widespread adoption of digital platforms such as Google Classroom, Moodle, and Canva has transformed religious education by offering alternative teaching methods that move beyond traditional classroom settings. The shift towards interactive digital platforms has resulted in increased student motivation and improved learning efficiency. However, the success of technological innovations in education depends on several factors, including teacher preparedness, institutional infrastructure, and students' ability to utilize digital tools effectively.

The research findings further reinforce previous studies that emphasize the benefits of interactive learning media in enhancing student participation and comprehension. Studies suggest that incorporating technology in IRE can increase student engagement by 83% and improve overall learning effectiveness by 91.24% (Maisarah & Yusnita, 2024). The practical implications of these findings are evident in the transformation of traditional learning methods. Interactive applications such as Kahoot and Quizizz have shifted learning paradigms from conventional models to more engaging and student-centered approaches. Additionally, learning videos and animations simplify abstract religious concepts, making them easier for students to understand.

From a theoretical perspective, the adoption of digital tools in IRE contributes to the development of adaptive and personalized learning models. The use of emerging technologies such as virtual reality (VR) and augmented reality (AR) further enhances student engagement by providing immersive learning experiences. This aligns with the principles of Society 5.0, which emphasize digital transformation in education. However, despite these positive developments, the study identifies several challenges that need to be addressed. First, teacher training is crucial for the effective integration of digital tools into religious education. Teachers require adequate professional development to maximize the benefits of technology-enhanced learning. Second, infrastructure limitations in some educational institutions may hinder the full implementation of digital learning strategies. Lastly, digital literacy gaps among students and educators must be addressed to ensure effective utilization of online learning platforms.

In conclusion, the study underscores the importance of embracing technological advancements in Islamic Religious Education to enhance its effectiveness and relevance. The adoption of innovative learning methods and digital platforms has transformed religious education, making it more interactive and accessible to students. The research findings indicate that the success of technology-driven IRE learning depends on a combination of teacher readiness, institutional support, and students' adaptability to digital learning tools. Moving forward, investment in teacher training and technological infrastructure will be essential in sustaining and further improving the effectiveness of IRE learning in the digital era.

Conclusion

Technology helps teachers to deliver Islamic Religious Education materials in a more dynamic and in-depth manner, making learning more contextual and relevant to students' daily lives. Technological innovations such as interactive applications, such as Kahoot, Quizizz, Google Forms e-books, learning videos, and the canva platform make learning Islamic Religious Education more engaging and engaging. By using this technology, teachers can enrich the learning experience of students so that religious values can be enhanced Islamic Religious Education in a more relevant and easier to understand way for students.

An Islamic Religious Education teacher must have the ability to use a variety of technologies. Because in the implementation of the independent curriculum, where teachers are required to adjust to the student's learning environment. Teachers must have competence in using technology-based learning media. where in presenting Islamic Religious Education subject material, teachers can adjust to the learning media used, so that students are motivated and have an interest in learning, and they can understand religious material more easily and can be applied in daily life.

However, to use technology in Islamic religious learning, a teacher must be wise and in accordance with the main purpose of religious education. This technology-based innovation is expected to instill strong religious values in students, helping them better understand and practice Islamic teachings in their daily lives.

References

- Agustina, I., Siregar, L. A., Husain, D. L., Asfahani, A., & Pahmi, P. (2023). Utilization of Digital Technology in Children's Education to Enhance Creative and Interactive Learning. *At-Tarbawi: Journal of Education, Social and Culture*, 10(2), 276–283.
- Anwar, S. (2019). The Islamic industrial revolution 4.0 in responding to the challenges of digitalization technology. *Journal of Islamic Studies*, 8(2), 16–28.
- Arikarani, Y. (2024). Adaptation of Technology and Learning Media through Canva to the Implementation of Islamic Religious Education Learning in the Independent Curriculum. *Edification Journal: Islamic Religious Education*, 6(2), 111–127.
- Ayatullah, A. (2020). Learning Islamic Religious Education and Ethics at Madrasah Aliyah Palapa Nusantara. *Journal of Education and Science*, 2(2), 206–229.
- Darajat, Z. (2014). *Islamic Education*. Jakarta: Bumi Aksara.
- Destiwati, D., Aripin, M. P., Alifah, I. M., Wahyudin, M., Maulida, A.-Z. P., & Pujawardani, H. H. (2024). The use of PowerPoint in Canva in Islamic Religious Education Learning at MI Abdurrahman, Bandung City. *Tarbiatuna: Journal of Islamic Education Studies*, 4(2), 699–709.
- Fatmawati, S. (2015). The development of android-based mobile learning uses adobe flash cs6 in English subjects to improve the learning outcomes of class X students of TKJ SMK Hidayah Semarang. *Semarang State University*.
- Girsang, S. E. E., Kurniawan, A., Bachelor, S., Akbar, M. A., Lotulung, C. V., Rafid, R., Jumini, S., & Nawawi, I. (2022). *The Concept of Educational Innovation*. Get Press Indonesia.
- Lase, D. (2019). Education in the Era of the Industrial Revolution 4.0. *SUNDERMANN: Scientific Journal of Theology, Education, Science, Humanities and Culture*, 12(2), 28–43.
- Maisarah, M., & Yusnita, N. S. (2024). Development of Canva-assisted learning videos in class IV science lessons in elementary schools. *Madako Elementary School*, 3(1), 1–14. <https://doi.org/10.56630/mes.v3i1.222>
- Nabillah, W., & Tanjung, E. F. (2023). Canva-Based Interactive Learning Media for Islamic Religious Education Subjects. *EDURELIGIA: Journal of Islamic Religious Education*, 7(2), 202–211. <https://doi.org/10.33650/edureligia.v7i2.6883>
- Nurhidin, E. (2017). Islamic Religious Education (PAI) Learning Innovation through the Use of Contextual Learning Media and the Development of Religious Culture in Schools. *Kuttab: Journal of Islamic Education*, 1(1).
- Pangalo, E. G. (2020). Mobile Learning for High School Students. *Journal of Educational Technology: Journal of Learning Research and Development*, 5(1), 38–56.
- Pektorena, R., Azizah, S. M., & Al Fauzan Amin. (2022). Learning Innovation in Islamic Religious

- Education Post-Covid-19. *Annizom*, 7(2), 148–159.
- Piqriani, Y. N., & Amin, A. (2023). Information Technology-Based PAI Learning Innovation. *Journal of Education and Counseling (JPDK)*, 5(2), 2559–2565.
- Rahayu, R., Rosita, R., Rahayuningsih, Y. S., Hernawan, A. H., & Prihantini, P. (2022). Implementation of the Independent Learning Curriculum in Driving Schools. *Basicedu Journal*, 6(4), 6313–6319. <https://doi.org/10.31004/basicedu.v6i4.3237>
- Setiawati, N., Kartika, I., & Purwanto, J. (2012). Development of Moodle-based mobile learning (m-learning) as a support for physics learning in high school. *The 2nd National Seminar on Physics and Physics Education 2012*.
- Solichin, A., Masdarto, M., Khasanah, M., Abbas, M., Ma'ruf, S., & Kusmawati, H. (2023). PAI Learning Innovation in Improving the Quality of PAI Education. *Journal on Education*, 5(2), 3990–3998.
- Sugiarni, S., Widiastuti, D. E., & ... (2024). The implementation of Canva as a digital learning tool in English learning at vocational school. *English Learning ...*, 5(2), 264–276. <https://ejournal.umm.ac.id/index.php/englie/article/view/34839%0Ahttps://ejournal.umm.ac.id/index.php/englie/article/download/34839/14960>
- Suryadi, S. (2015). The role of the development of information and communication technology in learning activities and the development of the world of education. *Informatics*, 3(3), 133–143.
- Syafrin, Y., Kamal, M., Arifmiboy, A., & Husni, A. (2023). Implementation of Islamic Religious Education Learning. *Educativo: Journal of Education*, 2(1), 72–77.
- Yuberti, Y., Wardhani, D. K., & Latifah, S. (2021). The development of mobile learning based on smart apps creator as a physics learning medium. *Physics and Science Education Journal (PSEJ)*, 90–95.
- Yuliana, Y. (2019). Learning innovation through information technology: Development of learning models through the internet. *Journal of Isema: Islamic Educational Management*, 4(1), 119–132.

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