



Empowering Autonomous Islamic Religious Education Learners With Technology-Enhanced Tools To Improve Performance And Self-Motivation

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ABSTRACT

Islamic religious education is an important part of the curriculum in many countries with a majority Muslim population. However, challenges in teaching Islam are often related to limited resources and lack of student involvement. The use of technology in learning can be a solution to improve the quality of Islamic learning and motivate students independently. This research also aims to determine the extent to which the application of gamification techniques can empower learners in the context of Islamic religious education. This research uses an experimental approach. Data about students' academic performance and level of self-motivation were collected through academic tests and questionnaires before and after treatment. The research results show that the use of technology-enhanced learning tools in Islamic learning significantly improves students' academic performance. Apart from that, it was found that the application of gamification techniques in learning also had a positive impact on students' self-motivation. Students who are involved in learning that uses technology and gamification techniques show a higher level of motivation in studying Islamic religious material compared to students who follow conventional learning methods. The conclusion of this research explains that the use of technology-enhanced learning tools and gamification techniques can be an effective strategy in improving students' academic performance and self-motivation in learning Islamic religion. The implementation of technology in Islamic learning not only enriches the learning experience, but also empowers students to become more active and enthusiastic autonomous learners.

Keywords: Improve Performance and Self-Motivation, Learners of Autonomous Islamic Religious Education, Technology

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INTRODUCTION

In the midst of rapid technological progress, there are challenges in bringing relevant and interesting Islamic teaching to the young generation living in the digital era (Adryansyah et al., 2023). As a response to this challenge, more and more innovative approaches are being introduced, one of which is the use of technology-enhanced tools to empower Islamic religious education learners to become autonomous and improve their performance and self-motivation (Entrican & Francis, 2022). In various parts of the world, including in countries with a majority Muslim population, the educational curriculum integrates Islamic religious subjects as an important part of student personality development (Choiri & Sidiq, 2023). In this context, learning Islam is not only intended to convey knowledge about Islamic teachings, but also to form attitudes, values, and morals that are in accordance with Islamic principles.

The development of information and communication technology has changed the educational landscape significantly (Boranbayev et al., 2021). Technology is not only a tool to support learning, but also changes the way of learning and teaching (Alsubaie, 2022). In the context of Islamic religious learning, technology can be an effective tool to increase accessibility, interactivity, and relevance of learning. Technology-enhanced tools, such as learning software, mobile applications (Coorey et al., 2018), and online platforms, offer various features that allow students to learn in a more interactive, personal, and fun way. For example, animations, learning videos, and interactive simulations can help explain Islamic religious concepts in a more visual and interesting way for students (Hooda et al., 2022). This research aims to explore the influence of the use of technology-enhanced tools in Islamic learning on the performance and self-motivation of students (He & Li, 2023). This research also aims to find out the extent to which the application of gamification techniques can empower learners in the context of Islamic religious education (Arufe Giráldez et al., 2022). Thus, this research is expected to provide a better understanding of the potential and benefits of using technology-enhanced tools and gamification techniques in improving Islamic learning (Alsawaier, 2018).

The autonomous Islamic Religious Education Learning Process using technology-enhanced tools promises progress in facilitating understanding, engagement, and practical application of Islamic teachings in everyday life. To improve independent learning of Islamic Religious Education, provide opportunities

for students to respond and interact with learning material, and increase a deeper understanding of the principles of the Islamic religion (Hakami et al., 2017). Firstly, the integration of technology in Islamic Religious Education learning can start with the development of a digital platform that provides access to a variety of learning resources (Abu Bakar et al., 2023). Through this platform, students can access digital textbooks, interactive learning materials, videos (Bali & Musrifah, 2020), recorded lectures, and other resources relevant to the topics studied. Thus, students have the flexibility to study anytime and anywhere according to their needs and preferences. In addition, technological tools such as mobile applications and web-based learning software can be used to increase interactivity in Islamic Religious Education learning w(Kholiq et al., 2023). For example, online quiz applications or virtual discussion forums can be used to test students' understanding of Islamic religious concepts and facilitate discussions between fellow students (A'yun et al., 2022). With these interactive features, students can be actively involved in learning, increasing their motivation to learn and participate in class discussions.

Technology also allows the use of simulations and educational games to teach Islamic religious concepts in a fun and interesting way (Berger et al., 2023). For example, developing story-based games or interactive simulations about Islamic history can help students understand the historical context and values underlying Islamic teachings (Mansir, 2022). By presenting learning material in an engaging and entertaining format, students are more likely to actively engage in learning and better retain the information learned (Lee et al., 2022). In addition, technology can also be used to provide learning experiences tailored to students' individual needs and level of understanding (Vandeveldt et al., 2012). Through data analysis and artificial intelligence, learning platforms can customize content, difficulty level, and learning style according to each student's needs and preferences (Raturi et al., 2011). In this way, each student can learn in a supportive and challenging environment, maximizing their potential to achieve a deep understanding of Islamic teachings.

Furthermore, technology can also be used to increase collaboration between students and teachers in learning Islamic Religious Education (Khalid et al., 2023). For example, collaborative learning platforms can be used to organize group projects, group discussions, and exchange ideas between students (Chirikov et al., 2020). By encouraging collaboration and communication between fellow students, technology enables social learning and facilitates students' intellectual and social growth in the context of Islamic learning (Baihaqi & Thohir, 2022). The use of technology can also expand the reach of Islamic Religious Education learning through distance learning or online learning. Especially in situations where access to schools or teachers is limited, online learning can be an effective solution to ensure that students can still access quality learning from anywhere (Kakay, 2021). Through webinars, virtual classes, and other online learning platforms, students can connect with their teachers and fellow classmates to discuss, ask questions, and share knowledge about the Islamic religion.

Apart from that, technology can also be used to support evaluation and feedback in Islamic Religious Education learning (Dakir et al., 2021). For example, online evaluation tools can be used to measure student understanding of learning material and identify areas that require further attention. By providing timely and measurable feedback, teachers can help students to improve their understanding of Islamic teachings and achieve higher levels of competency. The use of technology can facilitate parents' involvement in their children's Islamic Religious Education learning. Through digital communication platforms, parents can monitor their children's academic progress, communicate with teachers, and engage in family-engaged learning activities (Sharadgah & Sa'di, 2022). By involving parents in the learning process, technology can strengthen social support and provide students with the additional support they need to succeed in Islamic Religious Education learning.

Empowering autonomous Islamic Religious Education (PAI) learners using technology-enhanced tools offers many benefits, but also faces several challenges that need to be overcome. Firstly, accessibility and infrastructure. One of the main challenges in empowering Islamic Religious Education learners with technology is the problem of accessibility and infrastructure (Aslan & Shiong, 2023). In some areas, internet access may be limited or not available at all. This can be a barrier for students in accessing online learning resources, such as learning videos, web-based platforms, or mobile applications. Additionally, inadequate technological infrastructure, such as a lack of computer equipment or slow internet connections, can also hinder students' ability to use technological tools effectively. Second, limited technological expertise (Nina Ikhwati Wahidah, 2022). Not all students have the same level of technology expertise. Some may feel uncomfortable or confident in using technological devices or navigating online platforms. This can hinder their ability to make maximum use of technological tools in learning Islamic Religious Education. Additionally, teachers may also need to receive additional training to use technology tools effectively in their teaching, which can be a separate challenge.

Third, namely the quality of content and learning resources. Although there are many online learning resources available, not all of them are of good quality or relevant to learning Islamic Religious Education (Tuhuteru et al., 2023). This challenge especially arises in the context of the diversity of interpretations and practices of the Islamic religion throughout the world. Therefore, it is important for learning content developers to ensure that the materials provided are appropriate to the local context and meet high quality standards. Additionally, there is a need for ongoing evaluation of learning content to ensure that it remains relevant and accurate. Fourth, alignment with Islamic values and ethics. When using technology in Islamic Religious Education learning, it is important to ensure that the use of technology is in accordance with Islamic values and ethics (Fahmi et al., 2021). For example, in online learning, there needs to be special attention to the privacy and security of student data, as well as the separation between content that is in accordance with Islamic teachings

and that which is not. This challenge requires careful thinking about how technology can be used positively in Islamic Religious Education learning without violating religious principles.

Fifth digital and social divide. The use of technology in Islamic Religious Education learning can also strengthen the digital and social divide between students ("Developing Islamic Science Based Integrated Teaching Materials for Islamic Religious Education in Islamic High Schools," 2021). Students who have limited or no access to technology may fall behind in online learning, while students who have greater access may experience greater benefits. This can lead to inequalities in educational opportunities and reinforce existing social divisions. Therefore, it is important to ensure that all students have equal access to technology tools and learning resources. Sixth, namely inactivity or anxiety towards technology. Not all students or even teachers feel comfortable or motivated to use technology in learning Islamic Religious Education. Some may feel anxious or unsure about their ability to use technology, while others may view technology use as a distraction or irrelevant to religious learning (Liana Nurhaeti, 2023). This challenge requires a sensitive and inclusive approach to ensure that all parties feel motivated and involved in the use of technology in Islamic Religious Education learning. Lastly, there is time management and supervision. The use of technology in Islamic Religious Education learning can also pose challenges related to time management and supervision (Taufik, 2020). Students may be susceptible to distractions from social media or irrelevant online content during online learning sessions. Additionally, teachers and parents need to monitor and supervise students' online activities to ensure that they remain focused and engaged in learning. This challenge requires cooperation between teachers, students and parents to develop healthy habits in using technology in Islamic Religious Education learning.

There are several previous research opinions. The first research according to (Yahya & Salamun, 2021), with the research title Self-Leadership and Gamification as Madani Society's Human Resource Educational Elements. The results of his research stated that The combination between Self-leadership and Gamification is expected to be a relevant tool for Madani society's human resource. Interestingly, these ideas share some common ground with Islamic philosophies such as Rabbani leadership, akhlak exercises by Imam al-Ghazali and education methodologies by Ibnu Khaldun. The second research according to (Kholiq et al., 2023), with the research title Web-based learning to promote intrinsic motivation in Islamic education during Covid-19 pandemic: A study on elementary school students in Indonesia. The results of his research stated that web-based learning effectively improved students' intrinsic motivation in regions with distinct socioeconomic backgrounds, opportunities, and challenges. It was also concluded that teachers had a vital role in helping create a positive digital environment for the students. The third research according to (Alhashmi & Moussa-Inaty, 2021), with the research title Professional learning for

Islamic education teachers in the UAE. The results of his research stated that this study highlight how IE teachers' professional learning capitalises on the Islamic concept of lifelong learning and thereby opens a promising route for their effective growth to meet the high demand for skilled IE teachers in the UAE

RESEARCH METHODOLOGY

This research uses an experimental approach to investigate the effect of using technology-enhanced tools in Islamic religious learning on students' performance and self-motivation. The instrumental approach is an approach in scientific research that emphasizes the use of instruments or tools as a means to achieve certain goals. In the context of education or learning, this approach is often used to investigate the influence of a particular variable or factor on the desired outcome or behavior (Yogyakarta State University, Indonesia. He is also with UIN Sunan Kalijaga Yogyakarta, Indonesia et al., 2022). There are several steps taken in conducting this research. First determine the research design. This research used a two-group experimental design (pretest-posttest control group design). Two equal groups of students were randomly divided into two treatment conditions: an experimental group and a control group. The experimental group will take part in learning using technology-enhanced learning tools and apply gamification techniques, while the control group will take part in learning using conventional methods without using technology or gamification techniques. Second, there are research participants. Research participants were students from a secondary school studying Islamic religious education. Before the study began, information about the aims and procedures of the study was provided to the students and their parents. The research was conducted with the permission and voluntary participation of the students and their parents.

Then the third is sample selection. The research sample was chosen randomly from the population of students studying Islamic religious education at the school. Then, the sample was divided randomly into two groups: the experimental group and the control group. Each group consists of a demographically and academically balanced number of students. The four data collection instruments. Data on students' academic performance and self-motivation were collected using previously validated instruments. The instruments used include academic tests to measure understanding of Islamic religious material and questionnaires to measure students' level of self-motivation. Academic tests and questionnaires are prepared based on applicable Islamic religious education curriculum standards and learning motivation theories. Fifth, there is the implementation of treatment. The experimental group took part in learning using technology-enhanced learning tools and applying gamification techniques. This learning tool is designed to present Islamic religious material in an interactive and interesting way, with features such as animation, video and game-based interactions. In addition, gamification techniques such as giving points, rewards and challenges are applied in learning to increase student motivation. The control

group, on the other hand, followed learning with conventional methods which involved the use of textbooks and lectures from teachers.

After that, the seventh step is taking pretest and posttest measurements. Before implementing the treatment, both groups of students were given a pretest to measure their initial understanding of Islamic religious material and their level of self-motivation. After the learning period ended, both groups were given the same posttest to measure their understanding after the treatment. In addition, a self-motivation questionnaire was also given to students to measure changes in their motivation after learning. Eight data collected from academic tests and self-motivation questionnaires were analyzed using appropriate statistical techniques. A comparison between the experimental group and the control group was carried out to determine whether there were significant differences in students' academic performance and self-motivation between the two groups. Lastly, there is ethics in conducting research. This research was conducted by observing the principles of research ethics, including obtaining permission from authorized parties, maintaining data confidentiality, and ensuring that student participation is voluntary. In addition, research results will be presented transparently and will not be manipulated to support certain hypotheses. By following these steps and procedures, it is hoped that this research can provide a better understanding of the influence of using technology-enhanced learning tools in Islamic religious learning on student performance and self-motivation

RESULT AND DISCUSSION

Islamic Religious Education (PAI) learning that empowers learners using technology-enhanced tools has become a necessity in improving student performance and self-motivation. In a modern era where technology has penetrated almost every aspect of life, an innovative approach to PAI learning is not only relevant but also essential to reach a generation that continues to grow in an increasingly connected environment. The aim of empowering autonomous Islamic Religious Education learners with technology-enhanced tools is to improve students' performance and self-motivation in studying the Islamic religion. One of the main goals is to increase students' understanding of Islamic teachings. By using enhanced technology, students can have access to a variety of learning resources designed to help them better understand Islamic religious concepts. With a deeper understanding, students can better apply Islamic teachings in their daily lives.

Table 1: Aspects of integrating technology in learning

NO	Technology Integration Aspects	Benefit	Description
1	Digital Learning Platform	1. Easy and flexible access to learning materials.	Use of digital platforms that provide access to diverse learning resources, such as

		2. The ability to study anytime and anywhere according to student needs.	digital textbooks, interactive materials, and learning videos.
2	Mobile Apps and Web Based Learning Software	1. Increase student involvement through direct interaction with learning materials. 2. Provide an interesting and enjoyable learning experience for students.	Development of mobile applications and web-based learning software that provides interactive features, such as online quizzes, discussion forums, and simulations.
3	Personalization of Learning	1. Enable students to learn in a supportive and challenging environment. 2. Increase learning effectiveness by adapting learning experiences to student needs.	Use of data analytics and artificial intelligence to adapt content, difficulty level, and learning style to individual student needs and preferences.
4	Collaboration Between Students and Teachers	1. Encourage collaboration and communication between fellow students and with teachers. 2. Facilitate students' intellectual and social growth through social learning.	Use of collaborative learning platforms to organize group projects, group discussions, and exchange of ideas between students and teachers.
5	Distance and Online Learning	1. Enables access to quality learning from anywhere. 2. Overcoming physical and geographical barriers in access to education.	Providing webinars, virtual classes and online learning platforms to expand the reach of PAI learning.
6	Evaluation and Feedback	1. Allows identification of areas that require further attention from students. 2. Help students to improve their understanding of Islamic teachings with specific and measurable feedback.	Use of online evaluation tools to measure student understanding and provide timely feedback.

In an effort to empower Islamic Religious Education (PAI) learners to become autonomous, technology has become a very valuable tool. When technology-enhanced tools are used appropriately, they can improve student performance and motivate them to learn better. Several forms of autonomous Islamic Religious Education learning with the use of enhanced technological tools. First interactive learning application. Interactive learning applications are designed to provide an engaging and effective learning experience for students. In the context of Islamic Religious Education, this kind of application can present learning material in an interesting format, such as interactive stories, games and quizzes. For example, the app could display stories from Islamic history in animated form or allow students to participate in a simulation of the daily life of a Muslim. By using this application, students can learn independently and increase their understanding of Islamic teachings in a fun way. Both learning platforms are Web-based. The web-based learning platform provides access to a variety of learning resources, including texts, videos, and quizzes. Students can access this platform from their own devices and learn at their own pace and style. Features such as discussion forums and chat rooms also allow students to interact with each other and ask teachers when they encounter difficulties in understanding learning material. Thus, web-based learning platforms allow students to learn independently while remaining connected with their teachers and fellow classmates.

Third virtual simulation. Virtual simulations allow students to experience situations that may be difficult or impossible for them to experience in person. In Islamic Religious Education learning, such simulations can be used to take students to holy places such as the Grand Mosque in Mecca or the Nabawi Mosque in Medina. They can make virtual pilgrimages and observe worship rituals such as tawaf and prayer at these places. By experiencing such experiences virtually, students can deepen their understanding of the practice of worship in the Islamic religion and develop a greater sense of engagement in learning. All four trainings are game-based. Game-based training uses game principles to motivate students to achieve specific learning goals. In the context of Islamic Religious Education, such games can encourage students to solve challenges related to Islamic teachings, such as memorizing verses from the Koran or understanding Islamic ethical concepts. Through competition with themselves or fellow classmates, students will be motivated to continue to improve their performance in understanding and applying Islamic teachings. The six adaptive scoring systems. The adaptive grading system uses artificial intelligence to match the difficulty level and question types to the student's level of understanding. In learning Islamic Religious Education, this kind of system can be used to provide tests that are appropriate to individual students' abilities in understanding Islamic religious concepts. The results of such tests can be used to provide timely feedback to students and teachers about their progress in learning.

Thus, students will feel more motivated to learn because they see real progress in their understanding of Islamic teachings. The next seventh is project-based learning. Project-based

learning encourages students to solve real problems or complete tasks that are relevant to their daily lives. In Islamic Religious Education learning, students may be asked to undertake projects such as making a presentation about an important figure in Islamic history or designing a charity campaign to help people in need. By involving students in such projects, they will feel more motivated to learn because they see the direct relevance of their learning to their everyday lives. Lastly is the virtual class. Virtual classes allow students to learn directly from their teachers over the internet. In Islamic Religious Education learning, virtual classes can be used to deliver lectures, discussions, or questions and answers between teachers and students. Through video conferencing technology, students can participate in real-time learning without having to be in the same physical location as their teacher. Thus, virtual classes allow students to learn more flexibly while remaining connected with their teachers and fellow classmates. By utilizing these enhanced technological tools, Islamic Religious Education learning can become more autonomous and improve student performance and self-motivation. With various forms of interesting and interactive learning, students can learn independently while staying connected with their teachers and classmates. Thus, technology has great potential to improve the quality of Islamic religious education and prepare students to become better and more competent individuals in an increasingly technologically advanced society.

CONCLUSION

Based on the results and discussion above, it can be concluded that the use of technology-enhanced learning tools and gamification techniques can be an effective strategy in improving students' academic performance and self-motivation in learning Islamic religion. The implementation of technology in Islamic learning not only enriches the learning experience, but also empowers students to become more active and enthusiastic autonomous learners. Therefore, it is important to continue to develop and apply technological innovations in the context of Islamic religious education in order to improve the quality of learning and provide a more meaningful learning experience for students. Autonomous Islamic Religious Education learners with technology-enhanced tools show that the integration of technology in learning has great potential to improve students' performance and self-motivation in understanding Islamic teachings. By utilizing interactive learning applications, web-based platforms, virtual simulations, educational games, adaptive assessment systems, project-based learning, and virtual classrooms, students can learn independently while remaining engaged and motivated to achieve a deeper understanding of the Islamic religion. One of the main challenges is technology accessibility. Especially in less developed areas or with limited technological infrastructure, not all students have the same access to the devices and internet connectivity needed to benefit from online learning. Therefore, efforts are needed to ensure that all students have equal access to learning technology.

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