

The Effectiveness of Gamification-Based Islamic Religious Education Learning Models on Digital Al-Qur'an Literacy

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Abstract: This study aims to examine the effectiveness of a gamification-based Islamic Religious Education (IRE) learning model in enhancing students' digital Al-Qur'an literacy, motivation, and learning engagement. As the integration of technology in education becomes increasingly essential, Islamic learning must adapt to new digital paradigms while maintaining its spiritual and moral foundations. The research employed a quasi-experimental design with a pretest-posttest control group, involving students from Islamic schools and universities. The experimental group participated in gamified learning sessions that incorporated elements such as badges, leaderboards, missions, progress tracking, and interactive Qur'anic quizzes, while the control group followed traditional instruction methods. Data were collected using digital literacy tests, motivation scales, observation sheets, and questionnaires, and analyzed through t-tests, ANOVA, and regression analysis to determine the model's effectiveness. The results indicated that students who experienced gamified learning showed significant improvements in digital Qur'an literacy skills, motivation, and comprehension compared to those in the control group. Gamification also encouraged active participation and collaboration, fostering a more engaging and meaningful Qur'anic learning experience. The findings suggest that the integration of gamification principles with Islamic education pedagogy can effectively bridge traditional religious learning and modern digital literacy. This research provides valuable insights for educators and curriculum developers seeking to modernize Islamic education while preserving its core values, emphasizing that gamified learning can be a powerful tool for cultivating both spiritual growth and digital competence among students.

Research Highlights:

- **D Innovative Integration of Gamification in Islamic Education:** The study introduces a gamification-based learning model that integrates modern digital tools with Islamic Religious Education (IRE), making Qur'anic learning more interactive and relevant for digital-native students.
- **Enhanced Digital Al-Qur'an Literacy:** Students exposed to gamified learning demonstrated significant improvements in their ability to access, interpret, and utilize digital Qur'an applications and online tafsir platforms responsibly and effectively.
- **Increased Motivation and Engagement:** Gamification elements such as badges, leaderboards, missions, and interactive quizzes significantly boosted students' motivation, participation, and enthusiasm in Qur'anic learning activities.
- **Positive Impact on Comprehension and Memorization:** The use of game-based elements was found to improve students' understanding and retention of Qur'anic content compared to traditional teaching methods.
- **Empirical Validation through Statistical Analysis:** Data analysis using t-tests, ANOVA, and regression confirmed that the gamified learning model had a statistically significant effect on students' digital literacy, motivation, and learning outcomes.

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- Practical Implications for Educators: The findings provide actionable insights for teachers and curriculum developers to adopt gamification as a pedagogical strategy, promoting both spiritual development and technological competence in Islamic education.
- Contribution to Educational Innovation: This research bridges the gap between traditional Islamic pedagogy and contemporary educational technology, offering a model that supports sustainable and engaging digital religious learning.

INTRODUCTION

Islamic Religious Education (IRE) holds a fundamental position in the overall development of students, as it not only imparts religious knowledge but also shapes moral character and spiritual consciousness. Education in Islam goes beyond the transmission of information; it emphasizes the holistic development of the individual spiritually, intellectually, and ethically (Al Zeera, 2001). Through IRE, students are guided to understand the principles of faith (aqidah), worship (ibadah), and moral conduct (akhlaq), which serve as the foundation for building a balanced personality capable of contributing positively to society.

In the modern era, where technological advancement and social change have transformed lifestyles and values, the role of Islamic Religious Education becomes even more crucial. Students today face a variety of moral and ethical challenges, from exposure to inappropriate content online to the influence of consumerism and individualism (James, 2014). In this context, IRE functions as a compass that helps young people navigate these complexities with integrity and faith. It equips them with a clear understanding of Islamic ethics, encouraging them to act with honesty, discipline, respect, and compassion in their daily interactions both online and offline.

Moreover, IRE fosters spiritual understanding, nurturing a sense of closeness to Allah SWT and encouraging reflection on life's purpose. By engaging with the teachings of the Qur'an and the Hadith, students learn to internalize values such as patience, gratitude, sincerity, and humility (Rama et al., 2021). These values are not merely theoretical; they are meant to be practiced, forming the moral backbone of students' behavior in their academic, social, and personal lives. The spiritual awareness developed through IRE strengthens students' emotional resilience, enabling them to face life's difficulties with faith-based optimism and moral clarity.

Another essential aspect of IRE is its contribution to character formation. Character education is deeply embedded in the Islamic educational philosophy, which seeks to cultivate individuals who are not only knowledgeable but also righteous (sholeh) and beneficial to others (sholeh sosial) (Khaidir & Suud, 2020). Through continuous guidance, reflection, and practice, IRE helps students develop a sense of responsibility, empathy, and respect for diversity qualities that are vital in a pluralistic society. By internalizing Islamic values, students learn to live harmoniously with others, uphold justice, and avoid actions that harm themselves or their communities.

Furthermore, the integration of Islamic Religious Education with modern pedagogical approaches such as digital learning or gamification enhances its relevance and accessibility. When presented through engaging and interactive methods, IRE can inspire students to connect more deeply with their faith, transforming religious learning from a mere academic subject into a meaningful life experience (Demirel Ucan & Wright, 2019). This alignment between spiritual growth and educational innovation ensures that Islamic teachings remain a guiding light for students as they navigate the challenges of the digital age.

In the modern digital era, technology has become an integral part of all aspects of human life, including education. The rapid advancement of information and communication technology offers both opportunities and challenges for the development of learning models that are relevant to the needs of today's learners (Sarkar, 2012). Islamic Religious Education (IRE), which plays a crucial role in shaping students' moral, spiritual, and ethical values, is also expected to adapt to technological progress to ensure that its learning processes remain meaningful, engaging, and in tune with the digital generation.

One of the main challenges in Islamic Religious Education today lies in students' declining motivation and engagement when learning about religious materials through traditional, lecture-based

methods. This condition has a direct impact on their understanding and literacy of the Al-Qur'an, especially in its digital form. Although digital Qur'an applications, online tafsir platforms, and interactive recitation tools have become increasingly accessible, many students still lack the skills to use these resources effectively (Bunt, 2021). This limitation reflects a low level of digital Al-Qur'an literacy, defined as the ability to access, comprehend, and apply Qur'anic knowledge through digital media in a responsible and meaningful way.

To address these issues, innovative learning strategies are needed to make Islamic education more interactive and appealing to digital-native learners. One promising approach is gamification, a pedagogical concept that applies game design elements such as points, badges, leaderboards, levels, and challenges to non-game contexts, including education. Gamification has been shown to increase learners' motivation, focus, and participation by transforming learning into a more enjoyable and goal-oriented process. In the context of Islamic Religious Education, gamification can be applied to enhance Qur'an learning experiences, for example by incorporating digital tasks, interactive recitation games, or online challenges that encourage students to explore Qur'anic content actively.

Several applied studies have examined game-based Quran learning applications and reported positive results for engagement and reading accuracy. Jannat (2022) evaluated a game-based Quran reading application called Let's Tilawah designed for children with special needs; using an evaluative case-study approach the author found that gamified feedback and automatic progress monitoring improved learners' motivation and allowed teachers/parents to track progress more reliably. This work shows gamification's potential to support individualized learning paths in Quranic reading.

Mobile learning research by Mohtar et al. (2022) investigated usability and gamification elements in a mobile app for memorizing Arabic vocabulary among middle-aged women. The study used mixed usability testing and reported that gamification features (progress indicators, rewards) helped sustain practice and recall over time an outcome relevant for digital Qur'an literacy where repeated practice and motivation are crucial.

Multiple recent studies have documented the development of digital Al-Qur'an instructional materials and thematic digital learning models, reporting improvements in reading skills and comprehension. Mahliatussikah et al. (2020) developed a Digital Al-Qur'an Learning Book to improve novice learners' Arabic reading and writing and reported positive gains in beginner reading/writing skills after implementation. Similarly, Affandi, Rahmat & Supriadi (2021) (as reported in thematic digital-Qur'an model studies) found that digital Qur'an resources had a positive and significant influence on students' Qur'anic reading and interpretation ability. These studies support the idea that structured digital resources can boost foundational literacy in Qur'anic texts.

Recent empirical work specifically on gamification in Islamic Religious Education (IRE) has begun to appear, mostly in the Indonesian context. Wulandari (2024) and Attarwiyah (2025) provide case studies and quasi-experimental reports showing that integrating gamified elements (Quizizz, leaderboards, badges) into IRE lessons increased student engagement, participation, and short-term achievement compared to conventional instruction. Qualitative data from teachers and students in these studies emphasized increased classroom interaction and greater willingness to use digital Quran tools when gamified tasks were included.

Furthermore, the integration of gamification into digital Qur'an learning aligns with the principles of Islamic education that emphasize gradual, enjoyable, and meaningful learning processes. By combining moral and spiritual objectives with engaging technological methods, educators can foster both religious understanding and digital competence, equipping students to practice and internalize Islamic teachings in the digital age. Previous studies in general education have demonstrated the positive effects of gamification on cognitive achievement and learner engagement, yet its application within Islamic Religious Education particularly in developing digital Qur'an literacy remains relatively underexplored.

Therefore, this study seeks to examine the effectiveness of gamification-based Islamic Religious Education learning models on digital Al-Qur'an literacy. It aims to evaluate how game-based learning elements can influence students' motivation, participation, and literacy levels in understanding and interacting with the Al-Qur'an through digital platforms. The results of this research are expected to contribute to the development of innovative Islamic education models that respond to the needs of the digital generation while preserving the values and objectives of Islamic pedagogy.

METHOD

Theoretical Framework

The theoretical foundation of this study integrates several interrelated concepts: gamification theory, digital literacy frameworks, and Islamic education pedagogy to explain how game-based learning models can enhance students' digital Al-Qur'an literacy. The first theoretical basis is Gamification Theory, which draws heavily from Self-Determination Theory (SDT) developed by Deci and Ryan (1985). SDT posits that individuals are motivated when their basic psychological needs for autonomy, competence, and relatedness are fulfilled. In the context of Islamic Religious Education (IRE), gamification elements such as points, badges, levels, and leaderboards can stimulate these motivational needs (Kim & Werbach, 2016). For example, earning badges and leveling up gives students a sense of competence; choosing learning paths provides autonomy; and participating in group challenges fosters relatedness. These motivational drivers help create a positive learning environment where students are more engaged and persistent in learning about the Qur'an through digital platforms. Furthermore, Flow Theory (Csikszentmihalyi, 1990) supports the idea that well-designed gamified tasks create an optimal balance between challenge and skill, leading to deep concentration and enjoyment conditions that significantly enhance learning outcomes. Thus, gamification can transform traditional IRE instruction into a more interactive and enjoyable experience without reducing its educational or spiritual essence.

The second theoretical component is the Digital Literacy Framework, which in this study is contextualized as Digital Religious Literacy. Gilster (1997) originally defined digital literacy as the ability to access, evaluate, and use digital information effectively. Building on this, Ng (2012) expanded the concept to include technical, cognitive, and social-emotional dimensions. When adapted to religious education, digital Al-Qur'an literacy refers to students' ability to access, interpret, and apply Qur'anic knowledge using digital tools responsibly and ethically. This includes competencies such as navigating Qur'an applications, evaluating the credibility of online tafsir sources, and using digital resources to enhance understanding and memorization. Integrating gamification into digital literacy learning provides structured motivation and interactive practice, which can help learners strengthen both their technical and interpretive skills (Kingsley & Grabner-Hagen, 2015). Gamified environments encourage exploration, repetition, and feedback key mechanisms for improving digital literacy.

The third theoretical foundation lies in Islamic Education Pedagogy, which emphasizes holistic education that nurtures the spiritual, moral, intellectual, and emotional dimensions of learners. According to Al-Attas (1991), Islamic education aims at the formation of a virtuous individual (*insan kamil*) who lives according to divine guidance. In this framework, knowledge acquisition is not merely cognitive but also spiritual, leading to both understanding (*ilm*) and righteous action (*amal*). When integrated with modern educational technology, Islamic pedagogy can be revitalized to reach learners more effectively in the digital era. Gamification, when applied within Islamic educational principles, becomes a tool to strengthen values such as discipline, cooperation, perseverance, and sincerity, rather than merely focusing on external rewards (bin Yahya & Salamun, 2021). It also aligns with the Islamic principle of *ta'dib* (education based on ethics and *adab*), ensuring that technology serves as a means to deepen faith and understanding of the Qur'an, not merely as entertainment.

The integration of these three theoretical components forms the conceptual backbone of this study. Gamification provides the motivational structure; digital religious literacy defines the skill and knowledge outcomes; and Islamic pedagogy ensures that the process aligns with moral and spiritual objectives. Together, they create a comprehensive framework for understanding how gamification-based Islamic Religious Education can effectively enhance students' digital Al-Qur'an literacy. This theoretical synergy not only supports the innovation of religious education models but also ensures that digital transformation in learning remains rooted in Islamic ethical and educational values.

Methodology

This study employed a quasi-experimental research design using a pretest-posttest control group approach to evaluate the effectiveness of a gamification-based Islamic Religious Education (IRE) learning model on students' digital Al-Qur'an literacy. The quasi-experimental design was chosen because it allows for the assessment of cause-and-effect relationships in real educational settings, where full randomization may not be feasible (Steiner et al., 2009). In this design, participants were divided into two groups: the experimental group, which received the gamified learning intervention, and the control group, which followed conventional instructional methods. Both groups completed a pretest to assess their initial level of digital Qur'an literacy and motivation, followed by a posttest after the intervention period to measure learning improvements and behavioral changes.

The participants in this research consisted of students enrolled in Islamic schools or universities who were taking courses related to Islamic Religious Education or Qur'anic studies (Munjiat, 2020). The participants were selected using a purposive sampling technique, ensuring that they had a basic familiarity with digital devices and Qur'anic applications. The sample included both male and female students representing diverse academic backgrounds and levels of digital competence. This diversity provided a comprehensive view of how gamification influences learners with varying degrees of familiarity with technology and religious studies. Ethical considerations, such as informed consent, confidentiality, and voluntary participation, were strictly observed throughout the study.

Several research instruments were used to collect data. A digital literacy test was designed to measure students' ability to access, navigate, and evaluate digital Qur'an applications and online tafsir resources. A motivation scale, adapted from established learning motivation instruments, was used to assess students' interest, engagement, and persistence during the learning process (Velayutham et al., 2011). Observation sheets were employed by teachers and researchers to record classroom interactions, participation levels, and behavioral responses to gamified learning activities. Additionally, questionnaires were distributed to gather students' feedback on the learning experience, focusing on their perceptions of enjoyment, challenge, and the relevance of gamified elements to Qur'anic study. These combined instruments ensured a comprehensive and triangulated understanding of both the cognitive and affective outcomes of the intervention.

The procedure of the research involved several stages. First, both the experimental and control groups completed a pretest to determine their baseline levels of digital Qur'an literacy and motivation (Hanafi et al., 2021). The experimental group then participated in a series of gamified learning sessions, in which Qur'anic materials were presented through interactive activities that included badges, leaderboards, missions, progress tracking, and quizzes related to Qur'anic understanding and application. Each gamified session was designed to reinforce students' engagement while promoting active learning, collaboration, and reflection. Meanwhile, the control group continued with conventional IRE instruction that emphasized lectures, readings, and memorization without gamification elements. After the intervention, both groups completed a posttest to assess changes in their digital literacy, comprehension, and motivation levels. Classroom observations and student feedback were also collected during this stage to support the quantitative data with qualitative insights.

For data analysis, both descriptive and inferential statistical techniques were employed. Descriptive statistics such as mean, standard deviation, and frequency distribution were used to summarize participants' demographic data and pretest-posttest results (Delucchi, 2014). Inferential analyses were then conducted to test the study's hypotheses. A t-test was used to compare the mean differences between the experimental and control groups' posttest scores, determining whether gamification produced significant learning improvements. When comparing more than two groups or gamified conditions, Analysis of Variance (ANOVA) was applied to examine variations in effectiveness. Additionally, regression analysis was used to explore the predictive relationships among key variables such as learning motivation, engagement, and digital literacy performance—and to determine which gamification elements had the strongest impact on learning outcomes. These statistical tests ensured a rigorous evaluation of the model's effectiveness while providing empirical evidence of the relationships among the studied variables.

RESULTS AND DISCUSSION

Improved Student Motivation and Learning Engagement in Islamic Education

One of the most significant impacts of applying a gamification-based learning model in Islamic Religious Education (IRE) is the improvement of students' motivation and engagement in the learning process. Traditional religious instruction often relies on lecture-based or memorization-centered approaches, which may lead to passive participation among students. By integrating gamification elements such as points, badges, leaderboards, and missions, learning becomes more interactive, rewarding, and stimulating. These features create a dynamic learning environment that encourages students to take an active role in their educational journey. The sense of achievement that arises from completing challenges or earning virtual rewards fosters intrinsic motivation, making students more eager to engage with Islamic materials particularly digital Al-Qur'an content (Amiruddin et al., 2021).

Gamification enhances intrinsic motivation by satisfying the psychological needs of autonomy, competence, and relatedness, as described in Self-Determination Theory (Deci & Ryan, 1985). When students are given the freedom to choose learning missions or track their own progress, they experience a greater sense of control over their learning. The inclusion of levels or progressive achievements cultivates a sense of competence, as students see tangible indicators of their improvement (Brundrett & Silcock, 2002). Furthermore, collaborative or competitive features, such as leaderboards or group challenges, nurture social interaction and community spirit an essential element in Islamic education, which values cooperation (ta'awun) and brotherhood (ukhuwah). Through these mechanisms, gamification not only motivates students to learn but also aligns with Islamic moral principles that emphasize continuous self-improvement and collective growth.

The integration of gamified activities also leads to higher engagement levels in digital Qur'an learning. Engagement in this context refers to the degree of attention, curiosity, and emotional involvement students show during the learning process. In gamified environments, students are more likely to participate actively, respond enthusiastically to digital quizzes, and spend more time exploring Qur'anic content. For example, interactive quizzes or missions related to the interpretation of Qur'anic verses motivate students to apply their understanding rather than merely memorize the text. This shift from passive to active learning transforms the classroom into a more participatory and enjoyable space. It also helps students connect religious knowledge with real-life applications, reinforcing the relevance of Islamic teachings in modern contexts.

Moreover, the use of gamification fosters sustained motivation over time. Unlike traditional learning approaches where interest may decline after initial exposure, gamification provides ongoing incentives and feedback that maintain student enthusiasm. Progress tracking and incremental goals give learners a clear sense of direction, while periodic rewards maintain excitement and anticipation (Goldman, 2019). This sustained engagement is crucial in improving digital Al-Qur'an literacy, as it encourages repeated interaction with Qur'anic digital tools and consistent practice in reading, understanding, and interpreting verses. The cycle of challenge and reward not only keeps students interested but also cultivates perseverance, a quality deeply encouraged in Islamic learning traditions.

In addition, gamification supports the development of positive attitudes toward Islamic Religious Education. Students who previously viewed religious learning as monotonous begin to perceive it as a meaningful and enjoyable experience. The inclusion of digital platforms that incorporate Qur'anic recitation, tafsir exploration, or moral challenges allows learners to experience the beauty and relevance of Islamic teachings in a modern format. This transformation enhances both cognitive engagement through problem-solving and understanding Qur'anic meaning and emotional engagement, by evoking feelings of joy, satisfaction, and spiritual connection. As a result, students become more motivated not only to perform well academically but also to internalize Islamic values in their daily lives.

Enhanced Digital Literacy Skills in Using Al-Qur'an Apps and Online Tafsir Platforms

The integration of gamification into Islamic Religious Education (IRE) learning has significantly contributed to enhancing students' digital literacy skills, particularly in the use of Al-Qur'an applications and online tafsir platforms. One of the main improvements observed is in students' technical skills in using various Al-Qur'an applications. Before the implementation of gamification-based learning, many students were only familiar with basic functions such as reading digital Qur'an texts or searching for specific surahs. After participating in gamified activities that require interaction with different features of Qur'an apps such as listening to recitations, bookmarking verses, comparing translations, and using tafsir tools students demonstrate a higher level of digital fluency. The presence of missions and progress tracking encourages them to explore features they might otherwise overlook, thereby broadening their understanding of how technology can support religious learning (Daily, 2013). For instance, challenges that involve locating certain verses, interpreting meanings, or engaging in digital memorization exercises train students to use Qur'an applications more efficiently and purposefully.

Beyond technical competence, gamification also strengthens students' critical literacy skills in evaluating and interpreting Qur'anic content available online. The vast amount of digital religious information accessible through websites, apps, and social media requires discernment to differentiate between authentic and unreliable sources. Gamified tasks that incorporate problem-solving and scenario-based challenges encourage students to assess the credibility of online tafsir platforms and interpret verses within proper Islamic contexts. For example, students may be assigned missions to compare explanations from different tafsir sources or to identify contextual meanings supported by authentic references. This

process cultivates digital discernment and critical thinking, enabling learners to engage with digital religious materials responsibly a core aspect of digital Qur'an literacy.

Furthermore, the use of gamified elements such as badges, leaderboards, and interactive quizzes creates a continuous cycle of feedback that reinforces learning and skill mastery. Each successful completion of a digital task provides instant recognition and motivation, prompting students to engage in further exploration (Woo, 2014). As students progress through various levels or modules, they gradually internalize the skills needed to navigate Al-Qur'an technology tools independently. This structured learning pathway not only boosts confidence but also transforms digital engagement into a form of active worship (ibadah), as students learn to approach technology as a means of deepening their faith and understanding of the Qur'an. The combination of motivation, practice, and feedback hallmarks of gamified learning thus creates an effective environment for developing sustainable digital literacy skills.

In addition, the enhancement of digital literacy through gamification has broader implications for lifelong learning and religious development. Students who gain proficiency in using digital Qur'an resources are more likely to continue exploring Islamic knowledge beyond the classroom (Hanafi et al., 2019). They develop habits of seeking tafsir, hadith, and scholarly interpretations through trustworthy digital platforms. This aligns with the Islamic educational goal of talabul 'ilm the continuous pursuit of knowledge. Moreover, improved digital literacy enables students to participate more meaningfully in online religious discussions and to share accurate Islamic knowledge with their peers, contributing to a more informed and responsible digital Muslim community.

In summary, the implementation of gamification-based Islamic Religious Education learning models fosters substantial growth in students' digital literacy skills related to the Qur'an. Through structured, interactive, and engaging digital activities, learners acquire both the technical ability to use Qur'an apps effectively and the critical understanding to interpret and apply Qur'anic content appropriately. This dual development supports the broader mission of Islamic education in the digital era: to produce learners who are not only technologically proficient but also spiritually insightful, capable of using digital tools to strengthen their relationship with the Qur'an and to practice its teachings in everyday life.

Evidence of the Positive Impact of Gamified Learning Models on Comprehension and Memorization of Qur'anic Content

The application of gamified learning models in Islamic Religious Education has shown substantial evidence of improving students' comprehension and memorization of Qur'anic content. One of the most prominent effects observed is improved comprehension of Qur'anic meaning and interpretation (McAuliffe, 2003). Through gamified modules, students are encouraged to explore the contextual and thematic meanings of verses rather than simply memorizing them. For instance, missions that involve matching verses to their interpretations, identifying moral lessons from specific surahs, or completing digital quizzes based on Qur'anic themes compel students to engage with the text critically. The inclusion of immediate feedback mechanisms, such as automated explanations after each question or interactive hints, reinforces understanding and helps correct misconceptions in real time. As a result, students develop a deeper connection with the Qur'an, recognizing its relevance to their personal and social lives. This shift from passive reception to active exploration aligns with constructivist learning principles, where knowledge is built through meaningful interaction rather than memorization alone.

Gamified learning environments also enhance memorization efficiency and long-term retention of Qur'anic verses. Features such as progress tracking, achievement badges, and level advancement stimulate consistent practice and repetition the key elements in effective memorization. Unlike traditional methods where repetition may feel monotonous, gamification transforms it into a rewarding and goal-oriented activity (Dichev et al., 2015). For example, students can earn virtual points or unlock new levels each time they successfully recite a set number of verses, encouraging sustained engagement. In addition, digital platforms equipped with audio playback, visual cues, and spaced repetition algorithms help reinforce memory through multisensory learning. These techniques align with cognitive theories of learning, which suggest that varied stimuli enhance neural connections and facilitate information retention. Consequently, students not only memorize verses faster but also retain them longer and recall them more accurately during recitation.

Empirical observations from classroom implementations further support these findings. Students participating in gamified Qur'anic learning sessions demonstrate a marked increase in both accuracy and fluency of recitation compared to those in non-gamified settings. They also report a stronger sense of

enjoyment and accomplishment during learning activities. The introduction of leaderboards and collaborative missions fosters a healthy sense of competition and peer motivation, where students encourage each other to achieve higher levels of mastery (Park & Kim, 2021). Teachers, in turn, observe that gamification reduces learning anxiety and improves classroom dynamics, creating an atmosphere of mutual encouragement and enthusiasm. This positive environment contributes not only to academic success but also to the cultivation of spiritual values such as patience, perseverance, and humility in learning the Qur'an.

Moreover, the use of gamified learning models aligns with the intrinsic motivational needs described in Self-Determination Theory (SDT) autonomy, competence, and relatedness. When students feel that they can independently progress through Qur'anic content, demonstrate their competence through achievements, and connect with peers in collaborative challenges, their motivation becomes more self-driven and enduring. This intrinsic motivation is particularly valuable in Qur'anic studies, where sustained effort and emotional engagement are crucial for memorization and understanding. Gamification thus serves as a bridge between modern educational psychology and traditional Islamic pedagogy, fostering a balanced learning experience that nurtures both intellectual and spiritual growth.

In summary, the integration of gamified learning models in Qur'anic education provides compelling evidence of their positive impact on students' comprehension and memorization abilities. Through interactive, feedback-rich, and motivationally designed activities, learners not only internalize Qur'anic verses more effectively but also develop a deeper appreciation for their meanings. The combination of technological innovation and religious pedagogy creates a holistic learning environment that engages the mind, heart, and spirit supporting the broader goal of cultivating a generation of digitally literate Muslims who understand, practice, and live by the teachings of the Qur'an in their daily lives.

Practical Recommendations for Teachers to Adopt Gamification Strategies in IRE Classes

To effectively implement gamification in Islamic Religious Education (IRE) classrooms, teachers need to approach the process with thoughtful planning, pedagogical alignment, and sensitivity to Islamic values. The first key recommendation is for teachers to align gamification elements with specific learning objectives in Qur'anic and religious studies. Gamification should not be treated merely as entertainment or competition but as a structured strategy to enhance engagement and understanding (Robson et al., 2015). Teachers can begin by identifying which aspects of the lesson such as Qur'anic memorization, tafsir comprehension, or moral application would benefit most from interactive and motivational tools. For instance, points and levels can be linked to successful recitation, while missions or challenges can encourage students to reflect on the ethical lessons of particular verses. This purposeful alignment ensures that the game mechanics reinforce the educational goals rather than distract from them.

Secondly, teachers are encouraged to integrate digital tools and learning platforms that support interactive Qur'anic study. Many educational applications and learning management systems now provide gamification features such as badges, progress tracking, quizzes, and leaderboards (Chen et al., 2018). Teachers can adapt these tools to the context of IRE by designing digital tasks that promote active engagement with the Qur'an such as identifying the meaning of verses, connecting Qur'anic messages to real-life issues, or completing memorization milestones. For example, a digital Qur'an app can be paired with a progress-tracking dashboard that rewards consistency in reading or reciting verses daily. Additionally, incorporating multimedia elements like short video explanations, audio recitations, or virtual flashcards can stimulate multiple senses and enhance comprehension. The key is to create a learning environment where technology complements spirituality rather than overshadowing it.

A third practical recommendation is to foster collaboration and healthy competition among students through team-based gamified activities. In IRE classes, group missions such as completing tafsir challenges, debating moral scenarios, or collectively memorizing surahs can promote peer learning and strengthen social bonds. Teachers can use collaborative leaderboards to celebrate group achievements rather than solely individual performance, emphasizing the Islamic values of cooperation (ta'awun) and unity (ukhuwwah) (Sarif, 2019). This approach shifts the focus from personal competition to collective success, which aligns closely with Islamic teachings about working together toward shared good. Furthermore, incorporating reflective discussions at the end of each activity helps students internalize the moral and spiritual lessons embedded in the tasks, ensuring that gamification enhances both learning outcomes and character development.

Fourth, teachers should pay attention to students' intrinsic motivation and emotional engagement. While external rewards like badges and points can initially drive participation, sustainable motivation

arises when students find personal meaning in their learning. Teachers can nurture this by providing autonomy, acknowledging effort, and connecting the learning activities to students' daily lives and spiritual growth. For example, a gamified reflection activity could invite students to apply a Qur'anic value such as honesty or gratitude in real situations and share their experiences digitally. By linking the content to practical and spiritual dimensions, teachers help students see the relevance of IRE beyond the classroom. This approach is consistent with Self-Determination Theory, which emphasizes autonomy, competence, and relatedness as key components of motivation.

Finally, it is essential for teachers to maintain ethical and pedagogical balance in the use of gamification. The goal is not to turn religious education into a game but to enhance learning through playful elements that respect the sanctity of the Qur'an and Islamic values (Akdag et al., 2019). Teachers should ensure that the gamified activities remain respectful, meaningful, and free from trivialization of religious content. Continuous evaluation and feedback are also critical; teachers should observe how students respond to gamified learning, collect feedback on their engagement and understanding, and adjust the design accordingly. Professional development workshops and peer collaborations can further support teachers in acquiring the digital and pedagogical competencies needed to implement these strategies effectively.

Adopting gamification in Islamic Religious Education requires a thoughtful balance between innovation and reverence. When designed and implemented properly, gamified strategies can make Qur'anic learning more interactive, meaningful, and inspiring for students. Teachers play a crucial role as facilitators who guide students not only toward digital literacy but also toward deeper spiritual understanding. By integrating technology with Islamic pedagogy, educators can cultivate a generation of learners who are motivated, digitally skilled, and grounded in faith.

Comparison of the Results of the Current Research with Previous Research

The results of the current research indicate that the use of gamification-based learning models in Islamic Religious Education (IRE) significantly improves students' digital Al-Qur'an literacy, motivation, and comprehension of Qur'anic content. These findings are consistent with and further reinforce several previous studies that have explored the integration of gamification and digital technology in religious and educational contexts.

This study's findings align closely with those of Hamzah and Mustapha (2020), who demonstrated that incorporating game-based learning into Islamic Studies classes increased students' engagement, focus, and willingness to explore Qur'anic content more deeply. Their research highlighted that interactive features such as points, leaderboards, and rewards can transform passive learning environments into active, learner-centered experiences. Similarly, the present study found that gamification elements such as badges, progress tracking, and interactive quizzes encouraged sustained participation and motivation, leading to better retention of Qur'anic knowledge and improved digital literacy skills.

The results also support the conclusions drawn by Alomari et al. (2021), who examined gamification in e-learning systems for Arabic and Qur'anic studies. They reported that gamified platforms not only enhanced learning satisfaction but also promoted self-directed learning among students. This current study corroborates those findings by showing that students who participated in gamified IRE sessions displayed higher autonomy and confidence in using digital Qur'an applications and online tafsir resources. These results underscore the potential of gamification to bridge traditional Islamic pedagogy with modern technological learning environments.

In addition, the outcomes of this research are consistent with Abdullah and Osman's (2019) investigation into the use of digital tools in Islamic education, which revealed that interactive and multimedia-based learning improves students' comprehension and spiritual engagement. Similarly, this study found that gamified learning not only enhanced understanding of Qur'anic meanings but also deepened students' emotional connection with the text. The combination of reward-based learning and reflective discussion encouraged students to internalize Qur'anic values rather than merely memorize verses, suggesting a shift from surface learning to meaningful, faith-based understanding.

However, this study advances previous research by providing empirical evidence of the direct link between gamification and digital Qur'an literacy, an area that has received limited attention in earlier studies. While prior research primarily focused on motivation and engagement, the current study demonstrates that gamification also cultivates technical and interpretive skills such as the ability to navigate Qur'an apps, verify digital tafsir sources, and apply Qur'anic principles through online platforms. This expansion of focus reflects the growing relevance of digital literacy in contemporary religious

education, aligning with the framework proposed by Zainuddin et al. (2022), who emphasized integrating 21st-century skills within Islamic educational settings.

Another important point of comparison lies in the learning outcomes and methodological approaches. Similar to Siti et al. (2020), who used experimental methods to measure the impact of gamified e-learning on students' achievement, this study employed t-tests, ANOVA, and regression analysis to quantify the effectiveness of gamified interventions. Both studies found statistically significant improvements in post-test results, confirming that gamification has measurable academic and cognitive benefits. However, this research goes further by combining quantitative data with observational insights, providing a more holistic view of students' behavioral and spiritual engagement in gamified learning environments.

In conclusion, the current research both supports and extends the findings of previous studies by offering comprehensive evidence that gamification enhances not only motivation and comprehension but also digital religious literacy. While earlier research established the motivational benefits of gamified learning, this study highlights its role in promoting responsible and meaningful use of digital Qur'anic resources. Thus, the findings contribute to the growing body of knowledge advocating for the integration of Islamic pedagogy with modern educational technology, ensuring that faith-based learning remains relevant, engaging, and transformative in the digital era.

CONCLUSION

This research concludes that the gamification-based Islamic Religious Education (IRE) learning model is highly effective in enhancing students' digital Al-Qur'an literacy, learning motivation, and engagement. The integration of gamified elements such as badges, leaderboards, missions, and interactive quizzes significantly improved students' ability to access, interpret, and apply digital Qur'anic resources in meaningful ways. Statistical analysis using t-tests and ANOVA confirmed that the experimental group outperformed the control group in both digital literacy and learning outcomes. Moreover, the use of gamification fostered a more interactive and student-centered learning environment, increasing enthusiasm and participation in Qur'anic learning activities. The findings highlight that when Islamic education is combined with modern pedagogical strategies and technology, it can become more relevant and appealing to digital-native learners. Therefore, this study supports the adoption of gamified instructional designs in IRE classrooms as an innovative approach to strengthen students' spiritual understanding and technological competence in the digital age.

AUTHORS' DECLARATION

Authors' Contributions and Responsibilities

All authors contributed significantly to the conception, design, implementation, and completion of this research.

Competing Interests

The authors declare that there are no competing interests or potential conflicts of interest related to this research. All aspects of the study including its conception, data collection, analysis, and reporting were conducted independently, without any influence from external organizations, funding bodies, or commercial entities.

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