

Bridging Tradition and Technology: Gamification in Modern Islamic Boarding Schools

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ABSTRACT

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This study aims to analyze the implementation strategy of gamification in Islamic boarding school education as an innovative effort to increase students' learning motivation at the Al-Qodiri 02 Islamic Boarding School. This study uses a qualitative approach with a case study method, where data is collected through non-participant observation, in-depth interviews, and documentation. The data validation process was carried out through focus group discussions (FGD) involving several online and offline participants. The results of the study indicate that the implementation of gamification elements, such as the point system, levels, badges, and leaderboards, increased the involvement and motivation of students in the learning process. In addition, the gamification integration strategy, which involved the leadership of the boarding school as the main driver, succeeded in creating a more dynamic and engaging learning atmosphere. This study provides important implications on how gamification can be integrated with the Islamic boarding school education approach to support learning relevant to technological developments and improve the overall quality of learning.

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INTRODUCTION

Gamification in education has attracted significant attention recently as a strategy to improve student engagement, motivation, and academic performance (Da Silva Júnior et al., 2022; Giráldez et al., 2022; X. Li & Chu, 2021). The integration of game elements, such as point systems, levels, challenges, and rewards, into an educational context, is designed to transform traditional learning environments into more dynamic, interactive, and participatory experiences (Brauner & Ziefle, 2022; Hellín et al., 2023; Makri et al., 2021). This shift towards the implementation of gamification is particularly relevant in the context of formal education, where traditional teaching methods often struggle to maintain student interest and engagement (Aguiar-Castillo et al., 2021; Khaldi

et al., 2023; Zourmpakis et al., 2023). In particular, advances in digital technology have allowed for the broader application of these strategies, creating new opportunities to bridge the gap between traditional pedagogical approaches and the needs of contemporary students (Lewis et al., 2024; Mukul & Büyüközkan, 2023; Tan et al., 2021).

Previous research provides a theoretical basis that is relevant in studying the application of gamification in Islamic boarding school education, which is the main focus of this research. Zvereva (2023) stated that the integration of gamification as an effective pedagogical instrument significantly increases student motivation and engagement, which is undoubtedly in line with stimulating students' learning motivation in the Islamic boarding school environment. Gamification can trigger positive emotions and increase students' psychomotor activity, although they indicate that the influence of gamification on academic learning outcomes tends to be indirect (Lewis et al., 2024; Oda Abunamous et al., 2022; Rodríguez-Abitia & Bribiesca-Correa, 2021). Gamification can strengthen students' intrinsic motivation, especially in the context of learning in Islamic boarding schools that emphasize spiritual depth and collectivity. Saleem et al. (2022) reported that the implementation of gamification can increase student engagement, which can create a more participatory and enjoyable learning experience and is relevant to the characteristics of today's students accustomed to digital dynamics. Moseikina et al. (2022) revealed that with a planned and measurable gamification strategy, a more dynamic and student-centred learning environment can be created, which allows students to achieve their maximum potential in the learning process.

The novelty of this study lies in the gamification approach specifically applied in the context of Islamic boarding school education, focusing on increasing the learning motivation of students at the Al-Qodiri 02 Gumukmas Jember Islamic Boarding School. This study integrates gamification elements into a learning environment based on traditional Islamic boarding school values. This area is still rarely explored in the literature related to the application of gamification in Islamic education. Through a qualitative approach and case studies, this study seeks to explore how gamification can overcome the challenge of low learning motivation of students, as well as how game elements can be adjusted to the needs and characteristics of students in the digital era without reducing the essence of Islamic boarding school education based on spirituality and discipline. This study offers an important contribution to enriching the paradigm of Islamic boarding school education with an innovative pedagogical approach, which increases motivation and strengthens students' involvement in a more dynamic and contextual learning process.

This study aims to investigate the impact of gamification on student motivation and academic performance at Al-Qodiri 02 Islamic Boarding School. By examining the application of gamification elements such as point systems, badges, and leaderboards in the framework of religious education in Islamic boarding schools, this research will provide a deeper understanding of how gamification can be adapted to meet the needs of students in the context of religious education. The research will also explore how these game-based elements can improve academic achievement and non-academic behaviours, such as discipline and social interaction, within the framework of Islamic education. This research hopes to provide insights into integrating modern educational tools with traditional moral and spiritual teachings.

METHOD

This research was conducted at the Al-Qodiri 02 Gumukmas Jember Islamic Boarding School using a qualitative approach with a case study type to explore the application of gamification as an innovative strategy in increasing students' learning motivation (Loose et al., 2023; Pyo et al., 2023; Thompson Burdine et al., 2021). This Islamic boarding school is an Islamic educational institution that emphasizes traditional values to integrate gamification elements into the learning process without sacrificing the religious and disciplinary aspects that are characteristic of Islamic boarding school education. This study focuses on understanding how gamification is applied in the context of Islamic boarding schools and its impact on student's level of involvement and intrinsic motivation.

Data were collected through participant observation, in-depth semi-structured interviews with Islamic boarding school administrators, teachers, and students, and document analysis related to learning materials using gamification. Interviews were conducted using the snowball sampling technique, where the first informant provided recommendations for the next informant, who had a deeper understanding of the gamification phenomenon in Islamic boarding school. This approach allows researchers to gain a more comprehensive perspective from various parties involved in the learning process, both from the side of Islamic boarding school administrators, teachers, and students (Barroga et al., 2023; Bastrygina et al., 2024; Borgstede & Scholz, 2021).

The data obtained were then analyzed using thematic analysis techniques by identifying patterns and themes related to learning motivation, student involvement, and the application of gamification in Islamic boarding school learning. To increase the validity of the findings, this study used data triangulation, which involved focus group discussions (FGD) both online and offline. Through this triangulation, it is hoped that the findings obtained will be more valid and can provide new insights into how gamification can contribute to increasing student learning motivation in Islamic boarding schools, as well as how this strategy can be adapted in the context of education based on traditional and spiritual values.

Table 1. Informants and FGD Participants

No	Informant Status	Amount	Description
1	Head of Islamic Boarding School	2 persons	Caretaker of the Islamic Boarding School and Manager of the Al-Qodiri 02 Gumukmas Islamic Boarding School
2	Teacher	10 people	Teacher at Al-Qodiri 02 Gumukmas Islamic Boarding School
3	Student	20 people	Students involved in learning with gamification at the Al-Qodiri 02 Islamic Boarding School
4	Education Staff	5 people	Administrative and technical staff involved in the implementation of gamification in the Islamic boarding school environment
5	Stakeholders	5 people	The Islamic boarding school committee, parents of students, and members of the Islamic boarding school community who are relevant to the research.

Based on information obtained from informants in the Islamic boarding school community, several important findings emerged, including: 1) Islamic boarding school leaders have a deep understanding of the application of traditional values in education and are committed to integrating innovative learning methods that are by the needs of the digital generation; 2) despite challenges in implementing gamification, teachers feel that gamification can be an effective tool to increase students' learning motivation and overcome boredom that often arises due to traditional pedagogical approaches; and 3) although gamification is presented as an innovative approach, training and strengthening of teacher capacity are still needed so that the use of gamification can be optimal in increasing student engagement and learning motivation.

RESULT AND DISCUSSION

Result

The Concept of Gamification in Education

The concept of gamification in education can be defined as the application of typical game elements such as point systems, levels, challenges, and rewards into the learning process to motivate and increase student engagement. This approach aims to transform learning into an interactive and competitive experience so that it does not only rely on the entertainment aspect but also enriches students' cognitive and affective processes. From a pedagogical perspective, gamification is an innovative strategy that can create a more contextual and dynamic learning space, which can also respond to the challenge of low learning motivation in formal educational environments, including Islamic boarding schools.

In an educational framework increasingly influenced by advances in digital technology, gamification connects traditional pedagogical approaches with the demands of modern developments. With elements that encourage students to participate in learning actively, gamification encourages increased intrinsic motivation and deeper cognitive engagement. The elements of competition and rewards in gamification also trigger positive emotions, strengthen focus, and stimulate critical thinking skills, which are very important in shaping students' character, including students in Islamic boarding schools who are faced with the challenge of adapting to global dynamics.

Implementing gamification allows the integration of digital technology into the teaching and learning process more effectively and enjoyably. The reward system, levels, and digital-based achievements can enrich students' learning experience, motivate them to explore the material more independently and provide faster and more measurable feedback. This approach allows for more personalized teaching and can be adjusted to each student's learning style, considering the differences in ability levels and speed in absorbing learning materials.

Implementation of Gamification in Al-Qodiri 02

Implementing gamification in Al-Qodiri 02 Islamic Boarding School includes several key elements to increase student engagement and motivation through a structured reward mechanism. One of the main elements implemented is a point system, where students are given points as a form of appreciation for certain achievements in learning, whether related to material progress, completion of assignments, or active involvement in class activities. Each point collected can take students to the next level, create a healthy competitive dynamic, and increase their enthusiasm to continue trying to achieve academic goals. For example, in the interpretation lesson, students who can explain verses well or show significant progress in understanding are given additional points. These points can then be exchanged for various awards, motivating students to continue learning and developing.

In addition to the point system, Al-Qodiri 02 Islamic Boarding School also integrates badge and leaderboard elements in the gamification process to add a more varied dimension of rewards. Badges are given to students as a symbol of recognition for specific academic and non-academic achievements, such as "Exemplary Student" or "Best Memorizer". This badge functions as a visual award and a symbol of achievement that can be proud of. Meanwhile, the leaderboard system is implemented to create a competitive atmosphere that encourages students to be more active in learning. In the leaderboard, students who succeed in achieving the highest points or completing specific challenges are placed in the top position, which can motivate other students to try harder. For example, in the annual exam, the student who gets the best score will occupy the top position on the leaderboard, which will then be announced in front of the entire Islamic boarding school as a form of appreciation for their hard work.

In an interview with the caretaker of Al-Qodiri 02 Islamic Boarding School, he explained, "We hope that gamification can have a positive impact on the students' motivation to learn. The point and badge system encourages them to always try hard to learn and compete healthily. The enthusiasm to achieve academic and non-academic goals is increasing. We believe that with gamification, students will not only compete in class, but also in their daily lives at the Islamic boarding school." Ustadz Ahmad, one of the administrators of the Islamic boarding school, added, "The leaderboard provides an opportunity for students to see their achievements directly and get recognition for their efforts. This creates a fun and challenging competitive climate. We feel that this has a big impact on improving their performance, both in lessons and in their social roles at the Islamic boarding school."

One of the students, Fadil, who has experienced the implementation of gamification in an Islamic boarding school, shared his experience, "Initially, I felt that this gamification was like an ordinary game, but after some time I realized that it made me more motivated to study and complete assignments. I feel more appreciated when I get badges and points, making me try harder to be the best among my friends."

Table 2. Gamification Elements in PP. AL-Qodiri 02

No	Gamification	Description
1	Point System	Every achievement in learning is rewarded in the form of points that can be collected.
2	Level	Students collect points to reach the next level, creating an element of competition.
3	Badge	Badges are awarded as a symbol of appreciation for academic and non-academic achievements.
4	Leaderboard	The leaderboard system is implemented to encourage a competitive spirit among students.

The implementation process of gamification in Al-Qodiri 02 begins with identifying the needs and characteristics of students who are the main focus of learning. The boarding school leaders and education managers then design a curriculum that integrates gamification elements while still considering pedagogical aspects and religious values. This system is integrated into various learning activities, both classical and extracurricular, to ensure that all students are actively involved. During the implementation, learning is based on theory and driven by direct interaction and reinforcement through progressive rewards and challenges. Evaluations are carried out periodically to assess the effectiveness of this gamification system in improving students' motivation and academic performance.

One main challenge in implementing gamification in Al-Qodiri 02 is resistance to change among some students and caregivers who are more accustomed to conventional learning approaches. Integrating technology into learning also requires adjustments related to existing facilities and infrastructure limitations. Another challenge is maintaining a balance between Islamic boarding school education, goals emphasizing the formation of morals and spiritual depth, and game elements with an entertainment character. Ensuring that gamification does not reduce the moral and religious values that are the basis of Islamic boarding school education is a challenging job. Therefore, a careful approach is needed in designing gamification elements that remain in line with the goals of Islamic boarding school education.

Integrating gamification in Al-Qodiri 02 focuses on creating a contextual learning experience relevant to the student's characteristics. One approach is to connect gamification elements with Islamic values and daily life in the Islamic boarding school. For example, awards and levels in gamification are based on academic achievement and social behaviour and activities that reflect Islamic values, such as caring for others, discipline, and responsibility. In addition, the involvement of parents and the community around the Islamic boarding school in this system is an important part of the gamification strategy to create an ecosystem that supports the development of students. Digital technology as a gamification tool is also adjusted to the availability of existing devices and infrastructure not to burden students or the Institution.

The Impact of Gamification on Students' Motivation to Learn

The impact of gamification on students' learning motivation at Al-Qodiri 02 Islamic Boarding School can be seen from two main aspects: increasing intrinsic and extrinsic motivation. In this context, gamification is a driving element that encourages students to participate in learning actively. Applying a point system, level, badge, and leaderboard provides positive encouragement that strengthens the sense of competition and achievement. Every step or progress in the learning process, whether completing assignments, understanding the material, or other achievements, is awarded points or badges. This award serves as a form of recognition of the student's efforts and achievements, increasing their satisfaction and prestige. Thus, gamification increases students' learning motivation and strengthens their sense of competence in facing academic challenges. The impact of gamification on student learning motivation is as follows:

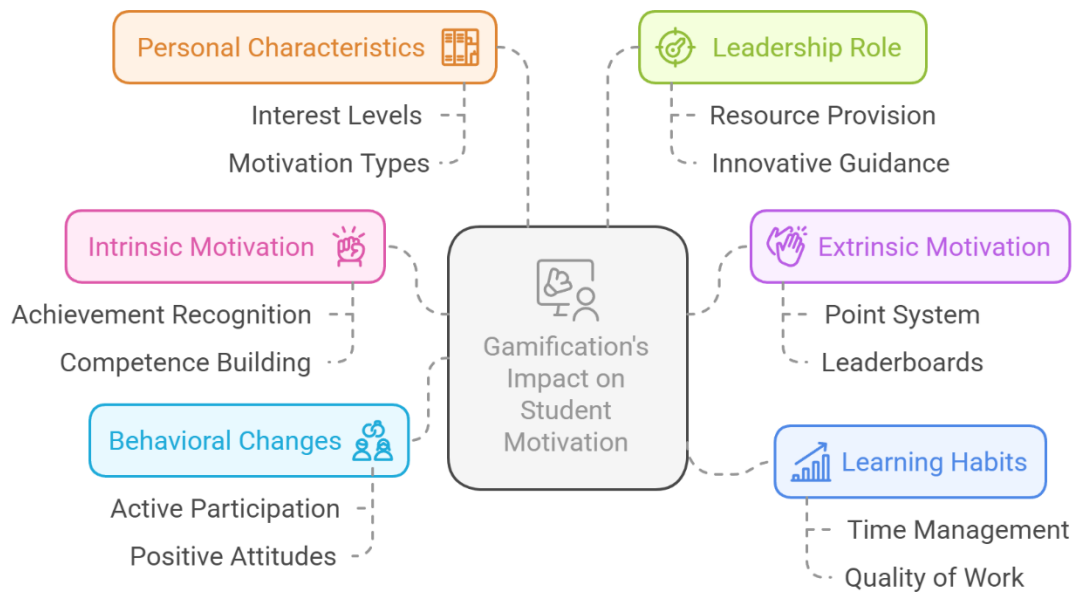


Figure 1. The Impact of Gamification on Students' Motivation to Learn

Implementing gamification also caused significant behavioural changes in how students interact with learning. Before the implementation of gamification, many students tended to be passive and less enthusiastic in participating in learning activities. However, with elements such as the leaderboard system and achievement-based competitions, they began to show positive changes in attitudes and behaviour. Students who were previously less motivated to participate in class activities now feel encouraged to be more active in following lessons, discussing, and completing assignments given. This shows that gamification can create a more dynamic and participatory learning environment where students feel more involved and motivated to achieve.

The gamification process at Al-Qodiri 02 Islamic Boarding School has also resulted in changes in the students' learning habits. For example, students who were previously less disciplined in completing assignments now pay more attention to the time and quality of their work because they realize that every achievement will affect their position in the points system and leaderboard. Time discipline and perseverance in learning are added values that are formed indirectly from the implementation of gamification. In addition, gamification teaches students to appreciate the learning process and the small achievements they achieve, strengthening their positive habits. The learning process is no longer a monotonous routine but a challenge that must be faced with enthusiasm and strategy.

Several important elements greatly influence factors that influence the impact of gamification on students' learning motivation. One of them is students' personal characteristics, including their interests, initial motivation, and readiness to accept challenges. Students with a high tendency for intrinsic motivation tend to respond better to challenging gamification elements, such as achievement-based challenges or recognition. On the other hand, students who rely more on extrinsic motivation are more easily influenced by reward and prize systems. Therefore, it is important to design balanced gamification elements that can accommodate both types of motivation, so that the positive impact of gamification can be felt comprehensively by all students.

In addition to individual characteristics, the role of the boarding school leader is also vital in supporting the implementation of effective gamification. Visionary and innovative leaders will be able to direct the learning process with gamification based on the values of the boarding school while paying attention to the balance between traditional and modern elements in education. Support from the boarding school leader in providing resources, developing materials, and training for caregivers is very much needed so that gamification can run smoothly. With strong support from the leader, gamification can be an effective strategy in increasing the motivation of students to learn and creating a learning experience that is more relevant to the development of the times while still maintaining the characteristics of boarding school education, which is based on spiritual and moral values.

Discussion

This study investigates the impact of gamification in an Islamic boarding school context, focusing on Al-Qodiri 02 Islamic Boarding School. The research was conducted in response to the growing interest in utilizing gamification as an educational tool, which has been shown to improve student engagement, motivation, and performance in various educational settings. Gamification, using game-like elements such as points, levels, challenges, and rewards in non-game contexts, is increasingly being considered for its potential to enhance learning in formal and informal educational environments.

Islamic boarding schools, traditionally known for emphasizing religious education and moral development, often face challenges keeping students motivated and engaged in academic activities. This study aims to explore whether the integration of gamification strategies can address these challenges by fostering a more dynamic and participatory learning environment. By focusing on the implementation of gamification at Al-Qodiri 02, this study aims to assess its effects on student motivation and academic performance. It offers insights into how traditional educational settings can adapt modern pedagogical strategies without compromising their core values.

The study's primary objective was to assess gamification's effectiveness in increasing student motivation to learn within the specific context of an Islamic boarding school. This includes evaluating how game elements like point systems, badges, and leaderboards affect academic and non-academic achievements. The significance of the study lies in its contribution to the growing body of literature on gamification in education, particularly within religious and culturally specific educational environments. While previous research has demonstrated the positive impact of gamification in conventional schools (Lampropoulos et al., 2022; X. Li & Chu, 2021; Ng & Lo, 2022), there is limited research on its application in Islamic boarding schools, which makes this study particularly valuable.

The study found that gamification had a significant positive impact on students' intrinsic and extrinsic motivation. Students were more engaged and motivated to participate in class activities, complete assignments, and improve their academic performance. Key elements, such as the point system, levels, badges, and leaderboards, created a competitive atmosphere that encouraged students to participate actively in their learning. Most notably, students who previously showed little enthusiasm for academic tasks began to exhibit increased effort and perseverance, directly impacting their academic progress.

However, some weaknesses were identified. Resistance to the gamification system was noted among a small group of students and staff accustomed to more traditional pedagogical methods. This resistance was particularly evident in the early stages of the implementation process. Additionally, the study found that integrating technology in the gamification system faced challenges due to limited infrastructure and resources. Despite these obstacles, the overall impact on student motivation was positive.

The findings of this study align with previous research on gamification, particularly those that suggest that gamification can increase motivation and engagement by providing immediate feedback and rewards (Hu et al., 2023; Miri & Macke, 2022; Saleem et al., 2022). The increased competition through the leaderboard and the tangible rewards such as badges and points were instrumental in motivating students, similar to the findings of scholars (El-Sabagh, 2021; Tong et al., 2022; Wu & Yu, 2024) that demonstrated that these elements can significantly enhance students' learning experiences.

Unexpectedly, the study revealed that the students' extrinsic motivation, driven by rewards and recognition, was more pronounced than expected. While previous studies, such as those by (L. Li et al., 2024), have noted the importance of intrinsic motivation in gamified settings, the results suggest that extrinsic factors like the reward system in gamification played a substantial role in motivating students. This indicates that the students in this specific setting may have been more responsive to external rewards, possibly due to their contextual environment or age group.

This study offers practical and theoretical contributions to the use of gamification in education, especially in pesantren settings. From a practical perspective, the research shows that adding gamification elements like point systems, badges, and leaderboards can boost student motivation and engagement in learning. It also helps create a more dynamic and competitive learning environment. This finding gives practical guidance to educators in pesantren and other educational institutions on incorporating gamification elements into their curricula while staying true to cultural and moral values. Theoretically, the study adds to the literature on gamification by providing empirical evidence of its impact in a specific educational context rich in religious values. Furthermore, the results support motivation theories, such as the competence theory and reinforcement theory, highlighting how recognition and rewards play a key role in enhancing intrinsic and extrinsic motivation in students.

CONCLUSION

Implementing gamification at Al-Qodiri 02 Islamic Boarding School proves that integrating elements such as point systems, levels, badges, and leaderboards can effectively increase students' motivation and involvement in learning. With this approach, students gain objective recognition for their achievements, strengthening their competitive spirit and encouraging their academic and character development. Badges given as a form of appreciation for students' efforts further strengthen the sense of achievement, while the leaderboard creates a healthy competitive environment, stimulating them to continue to excel.

The impact of gamification implementation is visible in changes in learning patterns and increased motivation of students. They are more active in the learning process and show increased discipline and more structured learning habits. Despite challenges, such as resistance to changes in learning methods and limited resources, the results show that gamification can be a transformative strategy in the Islamic boarding school education system. With proper integration and full support from the leadership of the Islamic boarding school, gamification becomes a bridge connecting tradition and technology, allowing Islamic boarding schools to remain relevant in the digital era without abandoning Islamic values, which are the main foundation of Islamic boarding school education.

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