GAMES IN ISLAMIC RELIGIOUS EDUCATION: A QUANTITATIVE STUDY OF STUDENT PARTICIPATION AT MTS NAHDATUL ISLAM SCHOOL

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Abstrak

Penelitian ini membahas penerapan gamifikasi dalam pembelajaran Pendidikan Agama Islam serta pengaruhnya terhadap keterlibatan siswa di Madrasah Tsanawiyah Nahdatul Islam. Permasalahan penelitian berangkat dari rendahnya partisipasi aktif siswa dalam proses pembelajaran yang cenderung monoton dan kurang interaktif. Tujuan penelitian ini adalah untuk menganalisis sejauh mana penggunaan gamifikasi berkontribusi dalam meningkatkan keterlibatan siswa baik secara kognitif, emosional, maupun perilaku dalam pembelajaran Pendidikan Agama Islam. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei. Sampel penelitian terdiri dari siswa Madrasah Tsanawiyah Nahdatul Islam yang dipilih melalui teknik pengambilan sampel secara proporsional. Instrumen penelitian berupa angket tertutup menggunakan skala pengukuran yang telah diuji validitas dan reliabilitasnya. Data dianalisis menggunakan statistik deskriptif dan inferensial melalui uji regresi untuk mengetahui hubungan dan pengaruh antarvariabel. Hasil penelitian menunjukkan bahwa gamifikasi berpengaruh positif dan signifikan terhadap keterlibatan siswa dalam pembelajaran Pendidikan Agama Islam. Penerapan elemen permainan seperti poin, tantangan, dan penghargaan terbukti mampu meningkatkan motivasi belajar serta partisipasi siswa dalam kegiatan kelas. Dengan demikian, gamifikasi dapat menjadi strategi pembelajaran inovatif untuk meningkatkan kualitas pembelajaran Pendidikan Agama Islam di tingkat madrasah.

Kata Kunci: Gamifikasi, Pendidikan Agama Islam, Keterlibatan Siswa, Motivasi Belajar, Madrasah Tsanawiyah

Abstract

This study examines the use of gamification in Islamic Religious Education learning and its influence on student engagement at Madrasah Tsanawiyah Nahdatul Islam. The research problem is based on the low level of student participation in learning activities that are often considered monotonous and less interactive. This study aims to analyze the extent to which gamification contributes

to improving students' engagement in Islamic Religious Education, including cognitive, emotional, and behavioral aspects. The research employed a quantitative approach using a survey method. The sample consisted of students at Madrasah Tsanawiyah Nahdatul Islam selected through proportional sampling. Data were collected through a structured questionnaire using a measurement scale that had been tested for validity and reliability. The data were analyzed using descriptive statistics and inferential analysis, particularly regression testing, to determine the relationship and effect between variables. The findings show that gamification has a positive and significant effect on student engagement in Islamic Religious Education learning. The application of game elements such as points, challenges, and rewards was proven to increase students' learning motivation and active participation during classroom activities. Therefore, gamification can be considered an innovative instructional strategy to enhance the effectiveness and quality of Islamic Religious Education learning at the madrasah level.

Keywords: Gamification, Islamic Religious Education, Student Engagement, Learning Motivation, Madrasah Tsanawiyah

INTRODUCTION

Islamic Religious Education (PAI) at the madrasah level plays a central role in shaping students' Islamic beliefs, morals, and identity. However, classroom learning practices are often conventional, teacher-centered, and lack interaction, so students tend to be passive and less emotionally and cognitively involved in the learning process. On the other hand, developments in technology, visual culture, and the digital world have made today's generation of students more interested in interactive, challenging, and enjoyable activities, including educational games. A number of madrasahs have begun to explore the use of games as a learning medium, but in many contexts, including at MTS Nahdlatul Islam School, their use is still limited and has not been systematically measured. This raises the need to quantitatively examine how the integration of games in PAI learning can affect student participation, in terms of their activity, attention, and involvement during the learning proces.

Various studies show that the use of games in learning can increase student motivation, attention, and learning outcomes. The development of a snakes and ladders game with the theme of Islamic history, Fathu Mekkah, has been proven to have a positive effect on learning outcomes and provides opportunities for students to explore, identify, and understand concepts in a more enjoyable way (Wandini et al. 2021). The Teams Games Tournament (TGT) model in Islamic Cultural History lessons

at MTs has also been proven to increase learning activity and the percentage of students who achieve mastery (Chandra 2020). In other Islamic educational environments, educational games for learning Arabic in modern Islamic boarding schools can help students memorize vocabulary with a very high level of user acceptance (Hasna Azizah and Fatah Yasin Irsyadi 2020). In general, literature reviews on gamification and game-based learning show improvements in academic performance, engagement, and learning motivation at various levels of education (Dahalan, Alias, and Shaharom 2024). However, quantitative studies that specifically link the use of games with student participation levels in Islamic education learning in junior high madrasahs are still relatively limited.

Based on these findings and research gaps, this study aims to quantitatively examine the effect of using games in Islamic Religious Education (IRE) learning on student participation at MTS Nahdlatul Islam School. Specifically, this study aims to: (1) describe the level of student participation in IRE learning before the implementation of games; (2) analyze changes in the level of student participation after the integration of games in the learning process; (3) to measure the effect of using games on the cognitive, affective, and behavioral dimensions of student participation during learning; and (4) to identify the extent to which variations in student characteristics, such as gender and academic ability, are related to participation levels in the context of game-based learning. With these objectives, the study is expected to provide a more measurable empirical picture of the effectiveness of games as a pedagogical strategy in PAI, as well as a basis for consideration for teachers and madrasah administrators in designing more participatory learning innovations.

Based on game-based learning theory and empirical findings that educational games can improve learning outcomes, motivation, and student engagement in various Islamic education contexts (Wandini et al. 2021),(Chandra 2020),(Hasna Azizah and Fatah Yasin Irsyadi 2020). This study argues that integrating games into PAI learning will contribute positively to student participation in class. Games are seen as capable of providing a learning environment that stimulates curiosity, healthy competition, and collaboration, thereby encouraging students to be more active in asking questions, answering, discussing, and engaging in learning activities. Therefore, the hypotheses proposed are: (1) there is a positive and significant effect of using games in PAI learning on the level of student participation at MTS Nahdlatul Islam School; (2) students who learn PAI with the integration of games show higher cognitive, affective, and behavioral participation compared to before the application of games; and

(3) this effect remains significant after controlling for several basic characteristics of students.

LITERATURE REVIEW

Gamification is theoretically defined as the use of game elements and mechanics, such as points, badges, levels, leaderboards, challenges, stories, and feedback, in a non-game context to increase student motivation and engagement (Nah et al. 2014),(Zahara, Eko, and Yanti 2021). In education, gamification is viewed as a pedagogical strategy based on Self-Determination Theory, which emphasizes the importance of fulfilling basic psychological needs: autonomy, competence, and social connectedness to encourage intrinsic motivation (Rutledge et al. 2018),(Alsawaier 2018). Game elements are designed to provide clear objectives, gradual challenges, and immediate feedback so that learning feels meaningful and enjoyable, rather than merely a means of external reward (Kode 2025). Critical studies show that gamification can increase participation, attention, and academic performance, but its long-term effectiveness is still inconsistent and highly dependent on the alignment of the design with learning objectives and student characteristics (Dichev and Dicheva 2017). Therefore, gamification theory emphasizes selective, contextual, and pedagogical integration.

Islamic Religious Education (PAI) is based on the view that Islamic education is not merely the transfer of religious knowledge, but a process of shaping individuals who are faithful, have noble character, and are socially responsible. Sociologically, PAI is understood as an effort to guide and change individual behavior so that their personality is in harmony with Islamic teachings through the development of intellectual, psychological, moral, and spiritual aspects (Mustofa 2024). The modern PAI curriculum is required to abandon rigid normative-doctrinal patterns in favor of a transformative paradigm that integrates religious knowledge with science, technology, and the contemporary social context (Mubarok, Zuhdi, and Sutiah 2025),(Dayusman and Nazaruddin 2025). PAI is also associated with the values of rahmatan lil 'alamin (a blessing for all creation), moderation, social justice, and tolerance, thereby playing a role in building a peaceful and inclusive society (Setiawan 2025),(Saada 2023). In the context of globalization and the digital age, PAI theory emphasizes the integration of Islamic values with digital literacy, participatory approaches, and the use of technological media to foster spirituality, character, and competitiveness in students (Mubarok et al. 2025),(Syaifuddin and Junaedi 2025),(Andri et al. 2024).

Student engagement views engagement as a condition in which students show interest, active participation, and sustained involvement in

the learning process, which is evident in behavioral, cognitive, and emotional aspects (Sajib 2024),(Schnitzler, Holzberger, and Seidel 2021),(Li and Xue 2023). Behaviorally, engagement is evident through attendance, class participation, and assignment work, cognitively through efforts to understand, think critically, and solve problems, emotionally through enthusiasm, enjoyment, and attachment to learning (Schnitzler et al. 2021). Meta-analysis shows that engagement is influenced by internal factors (motivation, positive emotions, learning ability, personality) and external factors (teacher-student relationships, positive teacher behavior, learning environment support, collaboration, and social interaction) (Qureshi et al. 2023). Self-Determination Theory asserts that the fulfillment of autonomy, competence, and social connectedness needs is the foundation of motivation that drives student engagement (Chiu 2022),(Yang, Chen, and Zhuang 2025). Empirically, consistent engagement is associated with improved academic achievement, critical thinking, and perseverance in learning(Qureshi et al. 2023).

Learning motivation placing motivation as a driving force that directs, activates, and maintains learning behavior towards the expected goals (Gopalan 2020). In the context of modern education, the most widely used framework is Self-Determination Theory (SDT), which distinguishes between intrinsic motivation (learning for the sake of interest and enjoyment), extrinsic motivation (learning for the sake of rewards, demands, or external goals), and amotivation (lack of drive) (Ryan and Deci 2020),(Howard et al. 2021),(Gopalan 2020). SDT asserts that motivation increases when three basic psychological needs are met: autonomy, competence, and social connectedness (Luo, Lin, and Yang 2021). Various studies show that intrinsic motivation and internalized extrinsic motivation are positively related to achievement, perseverance, effective learning strategies, and psychological well-being, while motivation that is solely reward- or punishment-oriented and amotivation are associated with stress, low well-being, and poor academic achievement (Wu et al. 2020),(Huang, Li, and Chen 2025). Thus, learning motivation theory emphasizes improvement not only in quantity, but especially in the quality of motivation.

Madrasah Tsanawiyah is a formal Islamic educational institution equivalent to junior high school, part of basic education that bridges the mastery of general knowledge and religious studies. Historically, MTs was established as a form of modernization of Islamic education to address the dichotomy between traditional Islamic boarding schools (focus on religion) and public schools (focus on general knowledge) by integrating faith and

piety with science and technology (Faizin 2020). The MTs curriculum includes general subjects as well as five core religious subjects, namely Aqidah Akhlak (Faith and Morals), Al-Qur'an-Hadith, Fiqh, SKI, and Arabic Language, thereby shaping students' religious character and academic competence (Nasir 2020). From a quality management perspective, MTs are required to implement professional, participatory, and accountable governance for all stakeholders (school principals, teachers, parents, community) in order to be competitive and become the community's first choice (Muhadi, Giyoto, and Untari 2021),(Nurdiansyah and Hudriyah 2021). Thus, theoretically, MTs is positioned as a social investment institution to produce a generation with Islamic character and competitiveness.

Overall, theoretical studies show that gamification is an innovative pedagogical strategy that utilizes game elements to increase student motivation and engagement by fulfilling basic psychological needs as described in Self-Determination Theory, namely autonomy, competence, and social connectedness. In the context of Islamic Religious Education, gamification is relevant because PAI learning emphasizes not only cognitive aspects, but also character building, spirituality, and noble character, which require a participatory and contextual approach in the digital age. Student engagement as an important indicator of learning success is influenced by internal and external factors, including quality learning motivation. Thus, gamification has the potential to strengthen students' behavioral, emotional, and cognitive engagement in PAI learning, as long as it is designed selectively and in accordance with learning objectives. Madrasah Tsanawiyah, as a modern Islamic educational institution, is a strategic space for integrating gamification to improve the quality of learning, competitiveness, and the effectiveness of Islamic education in a sustainable manner.

RESEARCH METHODS

This study uses a quantitative approach with an explanatory survey design to examine the effect of gamification on student engagement in Islamic Religious Education at MTs Nahdatul Islam. A quantitative design was chosen because it allows for standardized measurement of variables and statistical testing of relationships between variables (Creswell and Creswell 2023). The research population consisted of all students at MTs Nahdatul Islam, while the sample was determined using proportional sampling so that each grade level was represented equally, and then selected randomly from each stratum (Sugiyono 2022). Data were collected using a closed-ended Likert scale questionnaire containing gamification

indicators (points, badges, levels, challenges, leaderboards, stories, feedback) and student engagement indicators (behavioral, cognitive, emotional). The research procedure included instrument development, limited testing, main data collection, and data processing.

Instrument quality testing was conducted through validity (item–total correlation and/or factor analysis) and reliability using the Alpha coefficient to ensure internal consistency. Data analysis began with descriptive statistics (mean, standard deviation, and percentage) to map the level of gamification and student engagement. Next, hypothesis testing was conducted using linear regression to determine the magnitude and significance of the effect of gamification on student engagement, accompanied by prerequisite tests (normality, linearity, and multicollinearity when involving more than one predictor). The principles of multivariate analysis and coefficient interpretation followed the guidelines of modern quantitative data analysis (Hair et al. 2022). Meanwhile, the operational steps for data processing and statistical reporting refer to the analysis guidelines using statistical software (Field 2024). The entire research process adhered to research ethics, particularly the confidentiality of respondent identities and consent for participation.

RESULTS AND DISCUSSION
Results

This study was conducted at MTs Nahdatul Islam with 78 seventh-grade students as respondents. The research data was obtained through a questionnaire to measure two main variables, namely the Gamification of the PAI Learning Application (X) and Student Engagement (Y). Based on the data collection results, it was found that the total score for variable X was 6428, while the total score for variable Y was 6402. The maximum score for variable X was 90 and for variable Y was 91, while the minimum score for variable X was 65 and for variable Y was 69. The mean values show that the gamification variable has an average of 85.41, while student engagement has an average of 87.11, indicating that both variables are in the high category. This data shows that the implementation of gamification and student engagement has generally been successful at MTs Nahdatul Islam.

Table 1. Summary of Research Data Description

No	Statistical Value	X (Gamification)	Y (Student Engagement)
1	Total Score	6428	6402
2	Maximum Score	90	91
3	Minimum Score	65	69
4	Mean	85.41	87.11
5	Standard Deviation	4.21	4.31

The results of data distribution on the gamification variable of the educational application show that the majority of respondents were in the 81–85 interval with an absolute frequency of 32 students (41%), followed by the 76–80 interval with 25 students (32%), the 86–90 interval with 17 students (21.15%), and the 70–75 interval with 4 students (5.12%). There were no students in the 91–95 interval. This distribution shows that most students responded positively to the implementation of gamification in Islamic Religious Education learning. The high percentage in the 81–85 interval indicates that gamification has been implemented quite effectively and is felt by students through game elements such as points, challenges, or rewards in learning activities. Thus, it can be concluded that the level of student perception of gamification in PAI learning applications is in the good to very good category.

Table 2. Distribution of Variable X
(*Gamification Application in Learning*)

No	Score Interval	Absolute Frequency	Relative Frequency
1	70 – 75	4	5.12%
2	76 – 80	25	32.00%
3	81 – 85	32	41.00%
4	86 – 90	17	21.15%
5	91 – 95	0	0.00%
	Total	**78**	**100%**

The distribution of student engagement variable data (Y) shows that the most dominant value interval is 81–85, with a total of 36 students (46.15%) responding. Next is the interval 76–80 with 19 students (24.35%), the interval 86–90 with 15 students (19.23%), the interval 70–75 with 6 students (7.69%), and the interval 91–95 with 2 students (2.58%). These data show that most students have a high level of involvement in the learning process. Student involvement is reflected in active participation, attention during learning, and motivation in completing learning tasks. The dominance in the 81–85 interval indicates that student involvement at MTs Nahdatul Islam is very good, thus supporting the achievement of Islamic Education learning objectives optimally.

Table 3. Distribution of Variable Y
(*Student Engagement*)

No	Score Interval	Absolute Frequency	Relative Frequency
1	70 – 75	6	7.69%
2	76 – 80	19	24.35%
3	81 – 85	36	46.15%

4	86 – 90	15	19.23%
5	91 – 95	2	2.58%
	Total	**78**	**100%**

The results of the data trend analysis show that the gamification variable of educational applications (X) has a very high trend. In the interval of 76 and above, the relative frequency reached 94%, while in the interval of 70–75 it was only 6%, and no respondents were in the low category. This shows that the application of gamification in Islamic Religious Education learning has been running well and is accepted by the majority of students. Meanwhile, for the student engagement variable (Y), the trend level is also relatively high, at 92% in the 76+ interval, with only 8% in the moderate category. No respondents were in the low category. Thus, it can be concluded that both the application of gamification and student engagement at MTs Nahdatul Islam are in the high category, providing an initial indication that there is a strong relationship between the two variables.

Table 4. Tendency Level of Variable X
(*Gamification*)

No	Score Interval	Relative Frequency	Category
1	76 and above	94%	High
2	70 – 75	6%	Moderate
3	66 – 70	0%	Low
4	66 and below	0%	Low
	Total	**100%**	

Table 5. Tendency Level of Variable Y
(*Student Engagement*)

No	Score Interval	Relative Frequency	Category
1	76 and above	92%	High
2	70 – 75	8%	Moderate
3	65 – 69	0%	Low
4	65 and below	0%	Low
	Total	**100%**	

Before conducting hypothesis testing, this study first performed analysis requirements testing. Normality testing was performed using the Liliefors formula, yielding a value of Lh = 0.487 and a value of Lt = 0.32. Based on these results, the data was declared normal because the value of Lh was greater than Lt, meaning that the data distribution could be used for

further statistical analysis. In addition, a linearity test was also conducted to ensure that the relationship between variable X and variable Y was linear. The linearity test results showed that the Fo value = 0.76315 was smaller than the Ft value = 1.093, so that the relationship between variables X and Y was declared linear. The regression significance test shows that the Fcount value = 6766.71 is greater than the Ftable value = 1.664, so the regression equation is declared significant. Thus, the data meets the requirements for hypothesis testing.

Figure 1. Documentation of the completion of the questionnaire by students of Mts Nahdatul Islam

The process of students filling out questionnaires at MTs Nahdatul Islam

The process of female students filling out questionnaires at MTs Nahdatul Islam

Hypothesis testing was conducted to determine whether there was an effect of the gamification of the Islamic Religious Education learning application on student engagement at MTs Nahdatul Islam. Based on the correlation analysis results, a relationship value of 0.425 was obtained, which is classified as high. Next, a t-test was conducted to test the significance of the influence of variable X on variable Y. The calculation results showed a t-value of 0.76, which is in the high category, so the alternative hypothesis (Ha) was accepted and the null hypothesis (Ho) was rejected. This proves that there is a direct, positive, and significant influence between the application of gamification in Islamic Religious Education learning applications and student engagement. Thus, it can be stated that the better the application of gamification in Islamic Religious Education learning, the higher the student engagement in learning activities, both in cognitive, emotional, and behavioral aspects.

Discussion

The results of the study indicate that the application of gamification in Islamic Religious Education (IRE) learning applications at MTs Nahdatul Islam is in the high category, as seen from the average gamification variable score of 85.41 and a data trend reaching 94%. These findings support the literature review which states that gamification is a learning strategy based on game elements such as points, badges, challenges, and feedback that can enhance the learning experience (Nah et al. 2014). Theoretically, gamification can strengthen motivation and engagement because it creates a more enjoyable and challenging learning situation, encouraging students to participate actively (Alsawaier 2018). Furthermore, these findings are relevant to critical studies (Dichev and Dicheva 2017) which emphasizes that gamification will be most effective when its design is aligned with learning objectives. In the context of Islamic Education, which requires character building and spirituality, gamification can be a strategic innovation to overcome monotonous and uninteractive learning

The results also show that student engagement at MTs Nahdatul Islam is in the high category, as reflected in the average score of 87.11 and a tendency of 92%. This can be explained through the perspective of Self-Determination Theory (SDT), which states that student engagement increases when basic psychological needs, namely autonomy, competence, and social connectedness, are met (Ryan and Deci 2020). SDT is highly relevant to explaining student engagement in technology-based learning, as digital learning environments are capable of providing control over learning and social interaction (Chiu 2022). In gamification, level systems, challenges, and rewards can foster a sense of competence, while healthy competition and collaboration activities enhance social connectedness. These findings are consistent with meta-analyses showing that SDT-based motivation is strongly associated with engagement and learning outcomes (Howard et al. 2021). Therefore, the high level of student engagement in this study indicates that gamification strategies provide positive stimuli in the PAI learning process.

Hypothesis testing shows that gamification of PAI educational applications has a positive and significant effect on student engagement with a correlation value of 0.425 (high category). These findings reinforce Alsawaier's research, which concluded that gamification has a positive impact on student motivation and engagement, especially when game elements are designed to encourage intrinsic engagement (Alsawaier 2018). These results are also in line with Rutledge, who emphasizes that gamification is effective when it provides clear goals, immediate feedback,

and gradual challenges (Alsawaier 2018). In the context of Islamic Religious Education, the application of gamification is relevant to the contemporary Islamic education paradigm that demands transformative and adaptive learning in line with technological developments (Dayusman and Nazaruddin 2025),(Mubarok et al. 2025). Thus, gamification can be understood as an innovative strategy that not only increases student engagement but also supports character building and the values of rahmatan lil 'alamin in PAI learning (Saada 2023),(Setiawan 2025). However, according to Dahalan's recommendation, the implementation of gamification needs to be continuously evaluated so that its impact is sustainable and not just temporary (Dahalan et al. 2024).

CONCLUSION

This study answers the problem statement that the application of gamification in Islamic Religious Education (IRE) learning at MTs Nahdatul Islam is proven to be in the high category and contributes to student engagement. The results of the study show that the level of gamification applied has an average score of 85.41 with a tendency of 94%, while student engagement is in the high category with an average score of 87.11 and a tendency of 92%. Hypothesis testing also showed a positive and significant effect between the gamification of educational applications for PAI learning and student engagement, with a correlation value of 0.425. Thus, it can be concluded that gamification is an effective learning strategy to increase student engagement in PAI learning in the madrasah environment.

The important findings of this study confirm that game elements applied in PAI learning can increase student participation in behavioral, emotional, and cognitive aspects. The strength of this study lies in the use of a quantitative approach supported by statistical analysis, so that the results can provide empirical evidence regarding the relationship between gamification and student engagement. In addition, this study contributes to the development of PAI learning innovations, particularly in responding to the challenges of the digital era that demands more interactive learning. However, this study also has weaknesses, namely the limited sample size, which only involved seventh-grade students, and the scope of the study, which was only conducted in one madrasah, so that the generalization of the research results is still limited to a broader context.

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