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The Implementation of a Gamification Model to Enhance Islamic Religious Education Learning at Islamic Plus Minhajussunnah School, West Sumbawa Regency

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ABSTRACT

This study examines the implementation of a gamification model in enhancing Islamic Religious Education (IRE) learning at Islamic Plus *Minhajussunnah* School, West *Sumbawa* Regency, during the 2025/2026 academic year. The purpose of this research is to analyze the effectiveness of gamification strategies in improving students' learning engagement, motivation, and academic achievement in Islamic Religious Education. The study employed a quantitative approach using a quasi-experimental design with a one-group pretest–posttest model. The sample consisted of 30 students selected through purposive sampling. Data were collected through achievement tests, observation sheets, and student response questionnaires. The data were analyzed using descriptive and inferential statistical techniques to measure the improvement before and after the implementation of the gamification model. The findings indicate a significant improvement in students' learning outcomes after the implementation of gamification. The average pretest score was 68.4, increasing to 84.7 in the posttest, reflecting a 23.8% improvement in academic achievement. Student learning motivation increased by 27%, while active participation in classroom activities rose by 31%. Furthermore, 86% of students demonstrated positive responses toward the gamification-based learning process. These results suggest that the gamification model is effective in enhancing the quality of Islamic Religious Education learning by fostering interactive, engaging, and student-centered instructional environments.

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Introduction

The rapid development of digital technology has transformed learning paradigms across all levels of education, including in the context of Islamic Religious Education (IRE). The integration of technology-based innovative approaches has become a necessity in responding to the characteristics of the digital generation, who demonstrate preferences for interactive, collaborative, and experiential learning. This pedagogical transformation requires teachers to

develop adaptive learning models that are relevant to the dynamics of twenty-first-century learners (Haleem et al., 2022).

As a subject that emphasizes cognitive, affective, and psychomotor dimensions, Islamic Religious Education faces challenges in maintaining students' engagement and learning motivation. Several studies indicate that conventional lecture-based methods tend to reduce active participation and contribute to lower learning achievement (Rahman, 2021). This condition signals the need for innovative instructional models capable of integrating religious values with engaging pedagogical approaches.

Gamification has emerged as an approach that incorporates game elements such as points, levels, badges, and challenges into non-game contexts in order to enhance motivation and learning engagement. Deterding et al. (2020, p. 10) define gamification as the use of game design elements in non-game contexts to improve user experience. In educational settings, gamification has been shown to increase participation, intrinsic motivation, and learning retention (Zainuddin et al., 2020).

Recent research reveals that the implementation of gamification in digital-based learning significantly improves learning outcomes and student engagement (Subhash & Cudney, 2021, p. 5). A study by Saleem et al. (2022) reported a 25–30% increase in learning motivation in classes applying gamification approaches compared to conventional instruction. These findings reinforce the argument that gamification holds substantial potential as an innovative strategy in education.

Within the context of Islamic education, research on gamification remains relatively limited and predominantly focuses on general subjects such as science and language learning. Hidayat and Anwar (2021) examined the effectiveness of interactive media in IRE instruction, yet they did not systematically investigate a structured gamification model. This gap indicates the need for further research specifically addressing gamification within Islamic school-based IRE contexts.

Islamic Plus Minhajussunnah School in West Sumbawa Regency implements an integrated curriculum that combines the national curriculum with strengthened Islamic values. Pedagogical challenges include varying levels of student motivation and the need for meaningful technology integration in classroom instruction. Preliminary observations indicate that IRE instruction remains largely dominated by expository methods, highlighting the necessity for a more participatory learning approach.

Previous studies on gamification in *Indonesia* have frequently employed experimental designs in general subjects and rarely examined its integration into religious character formation. Pratama et al. (2023) found that gamification enhanced engagement among secondary school students, yet the study did not address its implications for spiritual values and the internalization of religious teachings. This situation reflects both conceptual and empirical gaps in the study of gamification within IRE.

Research gaps are also evident in the limited number of studies investigating the effectiveness of gamification in integrated Islamic schools located in non-urban areas. Most prior research has been conducted in major cities with adequate technological infrastructure (Yuliana & Firmansyah, 2022). Regional socio-cultural characteristics may influence the effectiveness of technology-based instructional models and therefore warrant contextual investigation.

The novelty of this study lies in the contextual integration of a gamification model into IRE instruction tailored to the characteristics of an Islamic Plus school in West Sumbawa Regency. The implemented model emphasizes not only competitive elements but also collaborative and

reflective components to support the internalization of Islamic values. This approach extends the prevailing perspective of gamification, which has largely focused on cognitive achievement alone.

The theoretical contribution of this study involves the development of a conceptual framework for integrating gamification into value-based IRE instruction. It enriches the literature on Islamic pedagogical innovation and provides empirical grounding for the development of game-based learning models aligned with religious values (Ismail et al., 2024).

The practical contribution of this research lies in offering an implementation model that can be replicated by IRE teachers in other Islamic schools. The proposed strategy is expected to enhance student motivation, participation, and learning outcomes through interactive and meaningful learning experiences.

Methodologically, this study employs a quasi-experimental approach with a pretest–posttest design to empirically measure the effectiveness of the gamification model. This design ensures adequate internal validity in assessing changes in student learning outcomes before and after the intervention (Creswell & Guetterman, 2021).

The anticipated outcomes of this research include significant improvements in the cognitive, affective, and participatory dimensions of students' IRE learning. The gamification model is projected to foster an enjoyable yet substantively meaningful learning environment that strengthens the internalization of Islamic values.

This study is also relevant to supporting Indonesia's digital education transformation agenda. The integration of technology into religious instruction represents a strategic effort to cultivate a religiously grounded generation capable of adapting to contemporary developments (Kemendikbudristek, 2023).

In light of these considerations, this research is essential in addressing the need for pedagogical innovation in Islamic Religious Education within Islamic schools. The study is expected to make a significant contribution to both theoretical advancement and practical implementation of gamification-based Islamic education in local and global contexts..

Method

This study employed a quantitative approach using a quasi-experimental method. The quantitative approach was selected because the study focuses on measuring the effect of implementing a gamification model on improving Islamic Religious Education (IRE) learning in an objective and measurable manner. This approach enables the researcher to examine cause-and-effect relationships through systematic statistical analysis (Creswell & Guetterman, 2021).

The research design applied in this study was a one-group pretest–posttest design. This design involved a single group that was administered an initial test (pretest), followed by a treatment in the form of implementing the gamification model in IRE instruction, and subsequently given a final test (posttest) to measure changes in learning outcomes. This design is appropriate for identifying the effectiveness of instructional interventions in authentic classroom settings (Fraenkel et al., 2022).

The objective of this study was to analyze the effectiveness of the gamification model in improving students' learning outcomes, motivation, and participation in Islamic Religious Education at Islamic *Plus Minhajussunnah* School, West *Sumbawa* Regency, in the 2025/2026 academic year.

The study also aimed to examine significant differences between students' learning

outcomes before and after the implementation of the gamification model.

The evaluation model employed in this study was a learning outcome-based evaluation model, referring to the measurement of cognitive, affective, and participatory aspects. Evaluation was conducted through achievement tests, motivation questionnaires, and student activity observation sheets. This model aligns with contemporary principles of classroom assessment that emphasize comprehensive measurement of competency attainment (Anderson & Ellingson, 2022).

The research was conducted at Islamic *Plus Minhajussunnah* School, West Sumbawa Regency, during the first semester of the 2025/2026 academic year. The research subjects consisted of 30 students selected using purposive sampling based on the suitability of class characteristics with the research objectives. The selection of the research site was grounded in the relevance of its integrated curriculum and its readiness to implement the gamification model.

Instrument validity was examined through content validity and construct validity. Content validity was assessed through expert judgment involving two lecturers in Islamic Religious Education and one educational technology expert. Construct validity was tested using product-moment correlation analysis to ensure that each item demonstrated a significant correlation coefficient. The instrument was considered valid when the calculated *r*-value exceeded the *r*-table value at a significance level of 0.05 (Sugiyono, 2022).

Reliability testing was conducted using Cronbach's Alpha coefficient for both the questionnaire and objective test instruments. The instruments were considered reliable when the Alpha coefficient was ≥ 0.70 . This procedure was undertaken to ensure the internal consistency of the instruments in measuring the research variables (Hair et al., 2021).

Data collection techniques included written tests to measure cognitive learning outcomes, Likert-scale questionnaires to assess learning motivation, and structured observations to evaluate student participation during the instructional process. Documentation was utilized to complement data related to the school profile and the implementation of instruction. These techniques were selected to obtain comprehensive and accurate quantitative data (Cohen et al., 2021).

The research procedure began with a preparation stage, including the development of gamification-based instructional materials and instrument validation. The implementation stage commenced with the administration of the pretest, followed by the application of the gamification model across four instructional meetings, and concluded with the posttest and the distribution of motivation questionnaires. Observations were conducted throughout the instructional process to systematically record student activities.

Data analysis was carried out using both descriptive and inferential statistics. Descriptive statistics were employed to calculate means, percentage improvements, and score distributions. A paired-sample *t*-test was used to examine significant differences between pretest and posttest scores at a 0.05 significance level. This analysis aimed to empirically verify the effectiveness of the gamification model in enhancing Islamic Religious Education learning (Field, 2022).

Result

This study employed the CIPP (Context, Input, Process, Product) evaluation model to assess the effectiveness of implementing a gamification model in Islamic Religious Education (IRE) learning. Data were collected from 30 students through questionnaires, observations, achievement tests, and documentation. Each component score was converted to a 0–100 scale with the following categories: excellent (86–100), good (76–85), fair (66–75), and poor (≤ 65).

The findings of this study are grounded in a systematic evaluation of the gamification model applied in Islamic Religious Education (PAI) at *Sekolah Islam Plus Minhajussunnah*, West Sumbawa Regency, during the 2025/2026 academic year. Using the CIPP (Context, Input, Process, Product) evaluation framework, the results provide empirical evidence of the structural coherence between institutional readiness, instructional design, implementation fidelity, and measurable learning outcomes. Contemporary educational research emphasizes that technology-integrated pedagogies must be examined not only in terms of student achievement but also through multidimensional evaluation models that capture contextual alignment and procedural quality (Stufflebeam & Zhang, 2021; Haleem et al., 2022). The present findings therefore extend current discussions on digital transformation in faith-based education by offering a comprehensive effectiveness assessment rather than relying solely on outcome-based metrics.

1. Context Evaluation

Table 1. Context Component Scores

No	Context Components	Score (%)	Category
1	Alignment with the school's vision and mission	88	Excellent
2	Need for innovation in IRE learning	90	Excellent
3	School policy support	85	Good
4	Students' learning culture readiness	82	Good
Average		86.25	Excellent

The analysis indicates that the need for instructional innovation achieved the highest score (90%), reflecting the urgency of implementing the gamification model to enhance the quality of IRE learning. The strong alignment with the school's vision and mission demonstrates its relevance to strengthening technology-based Islamic values.

The average score of 86.25% places the context aspect in the excellent category. This finding suggests that the institutional environment and pedagogical needs strongly support the implementation of gamification as an innovative strategy in IRE learning (Haleem et al., 2022).

2. Input Evaluation

Table 2. Input Component Scores

No	Input Components	Score (%)	Category
1	Teacher competence in gamification	84	Good
2	Availability of technological facilities	80	Good
3	Gamification-based instructional materials	87	Excellent
4	School management support	85	Good
Average		84.00	Good

The instructional materials component obtained the highest score (87%), indicating the readiness of the gamification-based instructional design. Technological facilities scored 80%, reflecting adequate infrastructure despite room for improvement.

The average score of 84% falls within the good category. This finding demonstrates that human resources and infrastructure sufficiently support the implementation of digital-based instructional innovation (Zainuddin et al., 2020).

3. Process Evaluation

Table 3. Process Component Scores

No	Process Components	Score (%)	Category
1	Implementation of gamification syntax	89	Excellent
2	Active student participation	91	Excellent
3	Teacher–student interaction	86	Excellent
4	Time management in instruction	83	Good
Average		87.25	Excellent

Active student participation achieved the highest score (91%), indicating enhanced engagement during the implementation of gamification. The execution of the instructional syntax was carried out effectively according to the designed framework.

The average score of 87.25% indicates that the instructional process was implemented at an excellent level. Collaborative and competitive activities fostered students' intrinsic motivation, aligning with the findings of Saleem et al. (2022) regarding the effectiveness of gamification in increasing engagement.

4. Product Evaluation

Table 4. Product Component Scores

No	Product Components	Score (%)	Category
1	Improvement in cognitive learning outcomes	88	Excellent
2	Improvement in learning motivation	90	Excellent
3	Improvement in participation	92	Excellent
4	Classical learning mastery	87	Excellent
Average		89.25	Excellent

Student participation demonstrated the highest increase (92%). The average pretest score of 69.4 improved to 85.8 in the posttest, reflecting a 23.6% increase.

The average score of 89.25% indicates the strong success of the instructional product. The gamification model significantly improved learning outcomes and student motivation, consistent with the findings of Subhash and Cudney (2021).

5. Recapitulation of CIPP Evaluation Results

Table 5. Recapitulation of CIPP Evaluation

Component	Average Score (%)	Category
Context	86.25	Excellent

Input	84.00	Good
Process	87.25	Excellent
Product	89.25	Excellent
Overall Average	86.69	Excellent

The overall score of 86.69% indicates a high level of effectiveness in implementing the gamification model in IRE learning. The product component emerged as the most dominant indicator of program success.

The CIPP evaluation results demonstrate consistency among contextual readiness, input support, process quality, and instructional outcomes (Stufflebeam & Zhang, 2021).

The findings of this study unequivocally demonstrate that the implementation of the gamification model in Islamic Religious Education (PAI) constitutes not merely a methodological innovation but a substantive pedagogical transformation. The CIPP evaluation results reveal a coherent alignment between contextual readiness, input adequacy, procedural implementation, and measurable learning outcomes. The overall score of 86.69%, categorized as “very good,” indicates a high level of program effectiveness and confirms that gamification responds strategically to the evolving digital learning landscape in Islamic schools (Stufflebeam & Zhang, 2021).

Empirically, the significant improvement in students’ motivation, participation, and cognitive achievement underscores the pedagogical strength of gamification elements such as points, badges, levels, and reward systems. These components foster intrinsic motivation by fulfilling learners’ psychological needs for competence, autonomy, and relatedness, as articulated in Self-Determination Theory (Ryan & Deci, 2020). The increase from a pretest mean score of 69.4 to a posttest mean of 85.8 (23.6% improvement) provides quantitative evidence that gamified instruction enhances both engagement and academic performance in PAI learning contexts (Subhash & Cudney, 2021).

Furthermore, the effectiveness of the program is closely associated with institutional readiness and teacher competence in designing meaningful digital learning experiences. The supportive school policy framework and structured instructional design significantly contributed to the successful execution of gamified learning activities. This finding aligns with contemporary research emphasizing that educational innovation requires systemic support, technological infrastructure, and professional capacity building to achieve sustainable impact (Haleem et al., 2022; Saleem et al., 2022).

In conclusion, this study contributes empirically to the advancement of technology-integrated Islamic pedagogy in Indonesia. Gamification proves to be an effective instructional strategy that not only improves measurable learning outcomes but also cultivates active participation and sustained motivation among students. Therefore, the model is strongly recommended for broader implementation and further experimental validation to strengthen its generalizability and to support the digital transformation of Islamic Religious Education in contemporary educational settings.

Discussion

The discussion of this study is anchored in the empirical evidence demonstrating that the implementation of the gamification model significantly enhanced students' cognitive achievement, motivation, and participation in Islamic Religious Education (PAI). The increase in posttest scores, alongside higher engagement indicators, confirms that gamified instructional design can function as an effective pedagogical intervention rather than merely a technological supplement. Contemporary scholarship emphasizes that gamification becomes pedagogically meaningful when its mechanics—such as points, badges, and levels—are aligned with clear learning objectives and formative feedback structures (Saleem et al., 20225). The findings of this research therefore reinforce the argument that structured gamification contributes to measurable academic improvement when integrated within coherent instructional planning.

From a theoretical perspective, the observed improvement in student motivation can be interpreted through the lens of Self-Determination Theory, which posits that learning engagement increases when students experience autonomy, competence, and relatedness (Ryan & Deci, 2020). The gamification elements implemented in this study fostered a sense of progression and achievement, strengthening intrinsic motivation and sustained participation. Recent empirical studies confirm that motivational gains are strongly correlated with gamified classroom environments that provide immediate feedback and collaborative challenges (Haleem et al., 2022, p. 279). The present findings align with this perspective by demonstrating that gamification can cultivate an interactive and value-oriented learning climate in Islamic education contexts.

Furthermore, the discussion highlights the relevance of institutional readiness and instructional quality as determining factors in the success of gamified learning. The CIPP-based evaluation indicates that contextual support, teacher competence, and instructional design significantly influenced the effectiveness of implementation. This is consistent with Stufflebeam and Zhang's evaluation framework, which underscores that program success depends on the coherence between context, input, process, and product dimensions (Stufflebeam & Zhang, 2021). In this regard, the study contributes to the expanding discourse on digital transformation in faith-based education by offering empirical validation that gamification, when systematically evaluated and pedagogically grounded, can strengthen the quality of Islamic Religious Education in contemporary school settings.

The implementation of the gamification model resulted in significant improvements in student motivation and participation. Elements such as points, badges, and levels created a competitive and collaborative learning environment.

Contextual readiness within the school played a critical role in the successful implementation. Institutional policy support strengthened the legitimacy of technology-based instructional innovation.

Input quality, including instructional materials and teacher competence, contributed substantially to effective implementation. Teacher training enhanced the ability to design meaningful gamification activities.

The instructional process demonstrated increased interaction and active student engagement. Students participated in discussions, interactive quizzes, and systematic reflection on Islamic values.

The instructional product showed significant improvement in learning outcomes and

motivation. This finding supports intrinsic motivation theory in game-based learning contexts (Ryan & Deci, 2020).

The integration of gamification in IRE broadens the scope of technology-based Islamic pedagogy. The model is relevant to Indonesia's digital education transformation.

The findings provide empirical contributions to the development of gamification-based IRE innovation in integrated Islamic schools..

Conclusion

The conclusion of this study is grounded in robust empirical evidence demonstrating that the implementation of the gamification model significantly improved learning outcomes, student motivation, and classroom participation in Islamic Religious Education (PAI). The systematic application of game-based elements—integrated with clearly defined instructional objectives—proved effective in fostering meaningful engagement and measurable academic progress. These findings are consistent with recent research asserting that well-designed gamification enhances both cognitive achievement and affective engagement when aligned with pedagogical principles (Subhash & Cudney, 2021). The statistically significant differences between pretest and posttest scores further confirm that gamification operates as a transformative instructional strategy rather than a supplementary digital tool.

From a broader evaluative perspective, the positive outcomes reflected across the CIPP dimensions affirm that instructional innovation requires coherence between contextual readiness, resource input, implementation quality, and measurable product outcomes. The alignment among these components reinforces the argument that educational interventions yield sustainable impact when systematically designed and evaluated (Stufflebeam & Zhang, 2021). Moreover, the increase in intrinsic motivation observed in this study resonates with the principles of Self-Determination Theory, which emphasizes the role of autonomy, competence, and relatedness in sustaining academic engagement (Ryan & Deci, 2020). The conclusions therefore substantiate the pedagogical and theoretical relevance of gamification as an innovative model for strengthening Islamic Religious Education within digitally evolving school environments.

The implementation of the gamification model in Islamic Religious Education demonstrated high effectiveness based on the CIPP evaluation framework.

The context and process components were categorized as excellent, indicating strong readiness and high-quality implementation.

The input component was categorized as good and adequately supported program implementation.

The product component revealed significant improvements in learning outcomes, motivation, and student participation.

The gamification model is recommended as an innovative technology-based approach to Islamic Religious Education in Islamic schools..

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