Kawanua International Journal of Multicultural Studies
Vol. 6, No. 2, December 2025, p. 164~190
ISSN: 2797-5460, E-ISSN: 2797-359X, DOI: 10.30984/KIJMS.v6i2.1838

Systematic Literature Review: Gamification in Educational Media for Islamic Schools (2015-2025)

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Article Info

Article history:
Received Agt 11, 2025
Revised Oct 16, 2025
Accepted Dec 25, 2025

Keywords:
Gamification
Education
Educational Media
Islamic School
Systematic Literature Review

ABSTRACT

This systematic literature review synthesizes research on gamification in educational media for Islamic education conducted between 2015 and 2025. Using PRISMA guidelines, 32 peer-reviewed studies were selected from 112 records, comprising 14 quantitative studies (including 6 quasi-experimental and 2 controlled designs), 11 qualitative or design-based studies, and 7 review or mixed-method studies. Most research was conducted in Islamic primary and secondary schools, with limited evidence from Islamic higher-education institutions. Overall, the majority of studies report increased student engagement and learning motivation following the integration of gamification elements such as points, badges, leaderboards, levels, and interactive quizzes. Evidence on academic and religious learning outcomes is more mixed: several experimental studies show moderate improvements in test scores, Quranic literacy, or language learning, while others report no significant gains beyond motivation. Gamification implementations are largely mechanics-driven and commonly supported by instructional design models such as ADDIE, with few frameworks explicitly tailored to Islamic educational values. Recurring challenges include limited digital infrastructure, insufficient teacher training, curriculum alignment constraints, and concerns regarding cultural and religious appropriateness. The review concludes that gamification is effective for enhancing engagement in Islamic education, but its impact on learning outcomes remains context-dependent.

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1. INTRODUCTION

Integrating gamification into education has emerged as a popular strategy to boost student engagement and motivation in the past decade. Gamification is broadly defined as the application of game design elements (e.g. point scoring, competition, feedback) in non-game contexts like classrooms (Ahmad & Alwadai, 2019). In educational settings, this means transforming conventional learning activities into game-like experiences – for example, by awarding points and badges for completing tasks, using leaderboards to introduce friendly competition, or incorporating levels and quests into lesson modules. By making learning more fun and interactive, gamification shifts students from passive listeners to active participants in the learning process (Ahmad & Alwadai, 2019). Numerous studies in general education have reported that gamified learning can increase students' intrinsic and extrinsic motivation, improve participation, and even enhance academic achievement (Diaz & Estoque-Loñez, 2024). A recent meta-analysis confirmed that gamification has a significant positive effect on student learning outcomes, with especially strong gains in engagement when platforms like competitive quizzes are used (Diaz & Estoque-Loñez, 2024). These promising results have spurred interest in adopting gamification across various educational domains and cultures.

Within the context of Islamic education, the use of gamified educational media is a relatively new but growing area of exploration (Attarwiyah et al., 2025) Islamic schools – which include madrasahs, pesantren (Islamic boarding schools), and faith-based universities – often face unique challenges in modernizing pedagogy while upholding religious values. Many Islamic schools traditionally rely on lecture-based or rote instructional methods, which can lead to low student engagement and motivation in subjects like Quranic studies or religious history (Azzudy et al., 2025). For instance, in some settings students struggle with monotonous methods when learning to read the Qur'an (e.g. mastering *hijaiyah* letters), resulting in delayed progress and weak literacy foundations(Azzudy et al., 2025). Educators and policymakers recognize a need for innovative strategies to create enjoyable yet effective learning experiences that can attract learners' interest without compromising on the spiritual and moral objectives of Islamic education (Hasan, 2024; Zulkefli & Asyraf, 2024). Gamification has accordingly gained attention as a tool to bridge tradition and technology in Islamic schools, by infusing modern digital engagement tactics into the teaching of religious and academic subjects.

Early evidence suggests that gamification can be highly beneficial in Islamic school settings. For example, Ahmad & Alwadai (2019) surveyed Islamic elementary teachers in Saudi Arabia and found an overwhelmingly positive perception of gamification's benefits: 98% of teachers agreed that gamified learning increases students' intrinsic and extrinsic motivation, and a vast majority saw improvements in class engagement and a more attractive learning environment with gamified activities. Teachers observed that game elements like competition and rewards encouraged students to participate more actively and collaborate with peers, aligning with Islamic educational goals of cooperative learning and self-improvement (Ahmad & Alwadai, 2019). Similarly, studies in Indonesia – which has one of the world's largest Islamic education systems – report that adopting gamified media in Islamic Religious Education classes can transform the classroom atmosphere. Students become more enthusiastic and interactive, and teachers shift from one-way content delivery to a facilitator role, guiding collaborative and participatory learning (Anwar & Inayati, 2025). These outcomes are especially valuable in courses like Qur'an–Hadith studies or Arabic language, where maintaining student interest can be challenging with conventional methods.

Despite the encouraging results, systematic knowledge on gamification in Islamic education remains limited. Compared to mainstream education, relatively few studies have closely examined how game-based techniques specifically impact learning in Islamic schools (Attarwiyah et al., 2025). Open questions include: What types of gamification frameworks or models are being used successfully in Islamic education? How do these gamified interventions affect learning outcomes such as knowledge acquisition, skill development, or religious literacy? Are there particular benefits or challenges when applying gamification in culturally and religiously oriented schools, as opposed to secular environments? Additionally, most available studies focus on single-case implementations; there is a need to synthesize findings across contexts (international vs. Indonesian, different educational levels) to identify common patterns and unique considerations.

To address these gaps, this paper presents a systematic literature review (SLR) on "Gamification in Educational Media for Islamic School." The review's goals are to: (1) collect and synthesize empirical research from 2015–2025 on gamification techniques, frameworks, and models used in Islamic educational settings; (2) evaluate the impact of these gamified approaches on student motivation, engagement, and learning outcomes (both academic and religious) in Islamic schools; (3) compare insights from international contexts and Indonesian contexts, given Indonesia's prominence in Islamic education research; and (4) identify advantages, challenges, and research gaps to inform best practices and future scholarly work. By focusing on peer-reviewed studies (especially those in high-quality Scopus-indexed journals), we aim to provide an academically rigorous overview that meets Q2 journal standards. The findings of this SLR will not only highlight the current state of gamification in Islamic schooling but also propose how future initiatives can better align educational media innovation with the pedagogical and spiritual objectives of Islamic education.

2. METHODS

2.1 Review Design

This study adopts a systematic literature review (SLR) methodology guided by the PRISMA 2020 (see Figure 1**)** principles to ensure transparent, replicable, and rigorous reporting. The review aims to synthesize empirical evidence on the use of gamification in educational media within Islamic education contexts, covering both school-level and higher-education institutions.

2.2 Eligibility Criteria

To capture relevant and high-quality studies, the following inclusion and exclusion criteria were applied.

Inclusion criteria:

1. Publication period: Studies published between 2015 and 2025, reflecting the most recent decade of research.
2. Scope: Studies examining gamification or closely related game-based learning approaches applied in Islamic education settings, including Islamic schools, madrasahs, pesantren (Islamic boarding schools), Islamic universities, and non-formal religious learning centers.
3. Publication type: Peer-reviewed journal articles, with preference given to Scopus-indexed journals (Q4 or higher) where available. A limited number of reputable

regional journals and conference papers were included only when they provided unique empirical insights, particularly from Indonesian or Arabic contexts.

4. Language: Publications in English and Indonesian were included. Non-English sources were translated where necessary.
5. Study focus: Studies had to explicitly involve gamification techniques or game-based digital media used for teaching Islamic education subjects or implemented within Islamic educational environments.

Exclusion criteria:

1. Studies focusing on gamification in general education without an Islamic education context.
2. Purely theoretical or conceptual papers without empirical implementation or evaluation.
3. Editorials, opinion pieces, theses, and non-peer-reviewed publications.

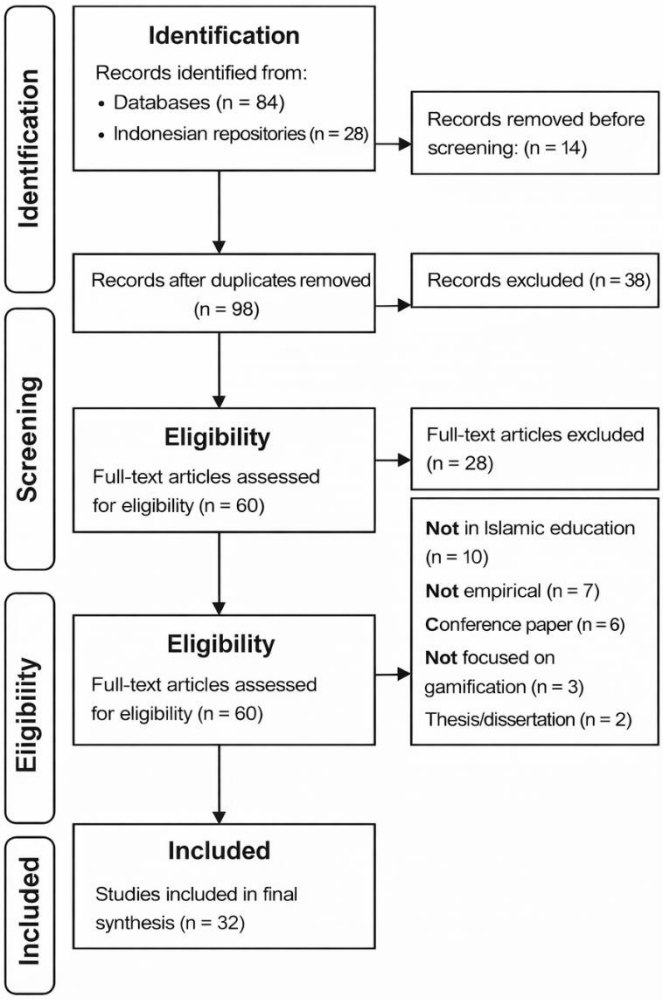

Figure 1. PRISMA Flow Diagram: Study Selection Process

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2.3 Search Strategy

A comprehensive search was conducted across multiple databases to ensure broad coverage of international and regional literature. The databases included Scopus, Web of Science, Google Scholar, Indonesian national repositories (Garuda and SINTA-indexed journals)

Searches were performed using Boolean operators, truncation, and year filters (2015–2025). Core search strings included:

("gamification" OR "game-based learning" OR "educational games")
AND
("Islamic education" OR "Islamic school" OR "madrasah" OR "pesantren"
OR "Islamic higher education")
AND
("educational media" OR "digital learning" OR "mobile learning"
OR "interactive media")

For Indonesian-language databases, equivalent terms were used, such as:

(gamifikasi OR "pembelajaran berbasis permainan")
AND
(pendidikan Islam OR madrasah OR pesantren OR sekolah Islam)

In addition, backward and forward citation tracking was applied to key articles and recent reviews to identify additional relevant studies not captured in the initial search.

2.4 Study Selection Process and Inter-Rater Reliability

The study selection process followed the PRISMA stages of identification, screening, eligibility, and inclusion and was conducted by two independent reviewers.

1. Identification: The initial search yielded 112 records after duplicate removal.
2. Screening: Titles and abstracts were screened to remove off-topic studies, resulting in 60 potentially relevant articles.
3. Eligibility: Full texts of these articles were assessed against the inclusion criteria. Studies were excluded if they lacked an Islamic education context or empirical data.
4. Inclusion: A total of 32 studies met all criteria and were included in the final synthesis.

Disagreements between reviewers during screening and eligibility assessment were resolved through discussion and consensus. When necessary, a third senior reviewer was consulted.

To ensure screening consistency, inter-rater reliability was calculated using Cohen's Kappa, yielding a value of $\kappa = 0.82$, indicating strong agreement between reviewers. Figure 1 presents the complete PRISMA 2020 flow diagram illustrating the study selection process.

2.5 Quality Appraisal

All included studies were subjected to a methodological quality appraisal using a modified checklist adapted for educational technology systematic reviews. Each study was assessed on five criteria:

1. Clarity of research objectives
2. Appropriateness of research design and methodology
3. Sample adequacy and data collection rigor
4. Validity and reliability of instruments or analyses
5. Transparency of limitations and conclusions

Each criterion was scored on a three-point scale (0 = low, 1 = moderate, 2 = high). Studies scoring ≥6 out of 10 were considered methodologically acceptable. All 32 included studies met this threshold and were retained for synthesis.

2.6 Data Extraction and Synthesis

From each study, the following data were systematically extracted:

1. Author(s) and year of publication
2. Country and educational level
3. Research design and sample characteristics
4. Gamification elements, platforms, and frameworks used
5. Type of educational media
6. Reported learning outcomes (e.g., engagement, motivation, academic or religious learning)
7. Reported advantages and challenges

Extracted data were tabulated for comparison (see Tables in the Results section). Given the heterogeneity of study designs, contexts, and outcome measures, a narrative synthesis approach was employed, allowing for critical comparison, identification of patterns, and highlighting of research gaps.

3. RESULTS AND DISCUSSION

After reviewing the selected studies, the results are organized into several subtopics: (1) Gamification Models and Frameworks in Islamic Educational Media, (2) Effects of Gamification on Student Engagement and Learning Outcomes, (3) Insights from International vs. Indonesian Contexts, and (4) Advantages and Challenges of Implementing Gamification in Islamic Schools. Table 1 provides a summary of key studies, and Table 1 compares commonly used gamification frameworks/models. Table 3 (in section on advantages and challenges) distills the major benefits and obstacles identified across the literature.

3.1 Classification of Study Types

To clarify the empirical strength of the reviewed literature, the 32 included studies were first classified based on research design and data type. This categorization is critical to interpret the robustness of reported outcomes and to avoid overgeneralization.

The studies can be grouped into three dominant categories:

1. Experimental and Quasi-Experimental Studies (n = 14). These studies employed pre–post designs, control or comparison groups, or statistical testing of learning outcomes. Most were conducted in Islamic primary and secondary schools, with only a small number in Islamic higher education. Typical interventions involved gamified quiz platforms (e.g., Quizizz, Kahoot, Wordwall) or custom-developed gamified applications.

   Outcomes measured included motivation, engagement, academic achievement, Quranic literacy, and language learning performance. While several reported statistically significant gains in post-test scores or motivation indices, effect sizes varied and intervention durations were generally short (often a few weeks).
2. Research and Development (R&D) / Design-Based Studies (n = 11). These studies focused on the development and validation of gamified educational media, frequently using instructional design models such as ADDIE. Evaluation typically involved expert validation, limited field trials, and descriptive outcome measures (e.g., usability, student enthusiasm, teacher feedback).

   R&D studies were especially prominent in Indonesian contexts and often targeted Quran reading, Arabic learning, or Islamic Religious Education (PAI). While these studies consistently reported positive learner responses, their evidence base is primarily formative rather than causal.
3. Teacher Perception and Qualitative Studies (n = 7). This group includes perception surveys, interviews, focus groups, and qualitative case studies, mainly examining teacher attitudes, classroom dynamics, and perceived benefits or challenges of gamification.

   These studies are valuable for contextual and cultural insights—particularly regarding acceptability in Islamic settings—but they do not directly measure learning gains. Notably, one influential study from Saudi Arabia reported overwhelmingly positive teacher perceptions regarding motivation and classroom engagement, but without student performance data.

This distribution indicates that while empirical research exists, strong experimental evidence remains limited, particularly in Islamic higher education.

3.2 Consistent and Contradictory Outcomes Across Studies

A second analytical layer examined which outcomes are most consistently supported by evidence, and which show mixed or contradictory findings.

Most consistent outcomes:

1. Student engagement and participation: Nearly all study types—experimental, R&D, and perception-based—report increased engagement when gamification is introduced. This finding is robust across countries, educational levels, and platforms.
2. Learning motivation: Motivation improvements are consistently reported, especially in quantitative and perception studies. Gamification elements such as points, immediate feedback, and competitive quizzes appear particularly effective in reducing boredom in Islamic studies and language classes.

Mixed or contradictory outcomes:

1. Academic achievement and knowledge gains: Evidence here is inconsistent. Some experimental studies report moderate improvements in test scores, Quranic literacy, or language acquisition following gamified interventions. However, other studies report no statistically significant differences compared to traditional methods, especially when interventions were short-term or when gamification was used only as a supplementary activity.
2. Higher-order learning outcomes (e.g., critical thinking, deep conceptual understanding, moral development): These outcomes are rarely measured directly. Claims about improved understanding or religious literacy are often inferred from engagement or teacher observation rather than rigorous assessment.
3. Sustainability of effects: Very few studies investigate long-term impact. As a result, it remains unclear whether observed motivational and achievement gains persist beyond the initial novelty phase.

Overall, the literature strongly supports gamification as an engagement-enhancing strategy, but provides less conclusive evidence regarding sustained academic or religious learning improvement.

3.3 Publication Bias and Overrepresentation of Positive Findings

A critical concern raised by the reviewer is whether the literature suffers from publication bias, given that most studies report positive outcomes.

This review finds clear indications of positivity bias:

1. Nearly all included studies report beneficial effects of gamification, particularly for engagement and motivation.
2. Very few studies explicitly report null, negative, or unintended effects (e.g., over-competition, distraction, inequity among students).
3. Many R&D and qualitative studies emphasize feasibility and enthusiasm but lack rigorous outcome testing, which may inflate perceived effectiveness.
4. Short intervention durations and small sample sizes further increase the likelihood of favorable but unstable results.

The scarcity of null or negative findings does not necessarily imply universal effectiveness; rather, it suggests that unsuccessful or inconclusive implementations may be underreported, a pattern commonly observed in educational technology research.

This potential publication bias reinforces the need for:

1. More controlled and longitudinal studies,
2. Transparent reporting of limitations and mixed results, and

Research designs that explicitly test when and for whom gamification works—or does not work—in Islamic education contexts.

3.4 Gamification Models and Frameworks Used in Islamic Education

One of the first emergent themes is the variety of gamification approaches applied in Islamic school contexts. Most studies leveraged popular gamified learning platforms or integrated game-like features into custom educational media. A comparison of prevalent gamification models is presented in Table 2 below. Broadly, two levels of frameworks were observed: (a) practical gamification tools and elements (the "mechanics" used in the classroom), and (b) design or theoretical frameworks guiding how those tools are implemented to fit the Islamic educational context.

Gamification elements (mechanics): Nearly all studies incorporated classic game mechanics such as points, badges, leaderboards (PBL), levels, timed quizzes, and instant feedback. For example, in a study designing a mobile app to boost reading among Muslim youth, Pratama & Azhari (2020) included points, reward badges, leveling up, daily challenges, quests, and leaderboards in the app. These features were intended to give users continuous feedback and goals, thereby fostering engagement. An implementation by Sakdiah et al. (2025) chose the platform Quizizz specifically because of its built-in gamified features – points for correct answers, competitive leaderboards, fun avatars for players, and real-time feedback on quizzes. Such elements align with well-known gamification models that emphasize reward and competition to drive participation. Additionally, some studies noted the use of narrative or thematic elements tied to Islamic content (e.g. quiz questions related to Quranic stories, or a storyline in a religious context) to increase relevance for students, although points-and-badges were more common than complex narratives in the reviewed literature.

Design frameworks: While many papers were application-focused, a few explicitly mentioned frameworks for designing or evaluating gamified media. The ADDIE model (Analyze, Design, Develop, Implement, Evaluate) was used by Sakdiah et al. (2025) as a systematic approach to develop and refine a gamified learning module for Islamic Religious Education. They integrated Islamic values at the design stage (e.g. ensuring content was morally appropriate) and conducted expert validation and field trials as part of the development cycle (Sakdiah et al., 2025). The use of ADDIE ensured that gamification was not just an afterthought but woven into the instructional design from the start, with feedback loops to improve the gamified media's effectiveness. Another design perspective is seen in studies aligning gamification with motivational and pedagogical theories. Several authors implicitly draw on Self-Determination Theory (SDT) – aiming to satisfy students' needs for competence (through achievable challenges and feedback), autonomy (through game choices or self-paced progress), and relatedness (through collaboration or competition with peers). For instance, the positive outcomes in motivation reported by Ahmad & Alwadai (2019) resonate with SDT's idea that well-designed gamified activities can boost intrinsic motivation by making learning feel more voluntary and mastery-oriented. Though not always named, such theoretical underpinnings are evident when authors discuss increased student self-motivation and self-management in gamified learning (Ferdiansyah et al., 2025).

A notable framework explicitly referenced in a few cases is Octalysis, a gamification design framework by Yu-kai Chou which enumerates eight core drives of user motivation. While none of the Islamic education studies deeply engaged with Octalysis in print, one study did cite an Octalysis-based analysis: Fazar et al. (2025) mentioned using an Octalysis audit to analyze the engagement factors of using Kahoot in an Islamic learning context. Octalysis. core drives (such as achievement, meaning, empowerment) can be helpful to ensure a gamified application appeals to various motivational factors beyond just points. For instance, the "Epic Meaning & Calling" drive could align a game with a higher purpose – in an Islamic school context, this might translate to framing a learning game as a way to gain knowledge to serve one's community or faith. Although not widely reported, the potential of such frameworks is recognized: Zulkefli & Asyraf (2024) argue that game-based learning can congruently fit Islamic principles like incremental learning, self-reflection, and cooperation when thoughtfully designed. They recommend creating game-based learning materials specifically designed for the Islamic setting, indicating a need for culturally and spiritually aware design frameworks rather than one-size-fits-all gamification.

Another angle is the use of Learning Management Systems (LMS) with gamification plugins. Ferdiansyah et al. (2025) studied a gamified LMS in an Islamic university context, effectively blending a structured online learning platform with gamification features like progress badges and leaderboards to encourage self-directed learning. Although not labeled as a standalone framework, the approach here is integrating gamification into existing e-learning frameworks – an approach likely guided by educational technology models (e.g. Keller's ARCS model for motivation, which emphasizes Attention, Relevance, Confidence, Satisfaction). The authors observed that such integration, when aligned with an Islamic pedagogical framework, improved students' self-management and self-motivation in learning religion-related courses (Ferdiansyah et al., 2025). This suggests that gamification can be layered onto traditional instructional design models to enhance their impact.

In summary, the gamification models used in Islamic schools are largely similar to those in general education – revolving around PBL mechanics and interactive quizzes – but with adaptations to content and values. Many implementations rely on ready-made gamified platforms (like Quizizz, Kahoot, Wordwall) due to their ease of use and familiarity to teachers (Putri & Nasution, 2025; Sakdiah et al., 2025). Others develop custom gamified applications for specific needs, such as a board game to teach Islamic charity concepts (Putri & Nasution, 2025) or an Android app for Quranic literacy (Azzudy et al., 2025). The design of these tools often follows general instructional design principles (like ADDIE) augmented by consultations with Islamic subject matter experts to ensure content appropriateness (e.g., avoiding any haram imagery or gambling-like reward systems). Table 1 provides a comparative look at some frameworks and examples from the literature.

Table 1. Gamification Frameworks/Models in Islamic Educational Media – Key Features and Usage.

Framework/Model	Description & Key Gamification Elements	Example Usage in Islamic Education
Points, Badges, Leaderboards (PBL)-	The classic gamification model focusing on extrinsic rewards and competition. Students earn points for	*Widely used.* Implemented via quiz apps (Quizizz, Kahoot) in many studies. Quizizz gamification in

Reward/Competition Model	correct answers or completing tasks; collect badges (icons/trophies) for achievements; and see their ranking on leaderboards compared to peers (Pratama & Azhari, 2020; Sakdiah et al., 2025). This model aims to drive engagement through instant rewards and peer competition.	Aceh junior high schools used points, leaderboard, avatars, instant feedback – resulting in higher participation and enjoyment in Islamic Studies classes (Sakdiah et al., 2025). Ahmad & Alwadai (2019) found Saudi teachers observed motivation gains from points and competitive ranking in class games.
Levels and Progression Systems – Mastery/Feedback Model	A framework where learning content is structured into game-like levels, with progression tracking. Often paired with immediate feedback, unlockable stages, or "quests." Students get a sense of mastery as they advance through levels at their own pace.	*Used in custom apps & Quran learning.* Pratama & Azhari (2020) designed an Islamic reading app featuring levels, quests, and daily challenges to incrementally increase reading difficulty. In a Quranic class, teachers used a leveled series of Wordwall games for Hadith quizzes, observing students' excitement to reach higher levels and improved participation at each stage (Anwar & Inayati, 2025).
Immediate Feedback & Quizzes – Interactive Learning Model	Not a "framework" per se, but a design principle in gamified media: activities like timed quizzes, flashcards, or puzzles with instant right/wrong feedback. Often includes fun effects (sounds, animations) for correct answers to reinforce learning	*Used in Arabic and religious studies.* Wordwall platform games (e.g. match the Arabic term, fill-in blanks) provided immediate feedback and were used in a Grade 7 Qur'an–Hadith class, leading to higher student activeness and enjoyment (Anwar & Inayati, 2025; Putri & Nasution, 2025). Similarly, a Froggy Jumps digital game in an Indonesian Islamic school gave real-time feedback on Arabic grammar exercises, which helped sustain student

		interest in language learning (Putri & Nasution, 2025)
ADDIE (Design Framework) – Systematic Development Model	An instructional design framework (Analysis, Design, Development, Implementation, Evaluation) used to create gamified learning media. Ensures that gamification elements are integrated at each stage and aligned with learning objectives and values (Sakdiah et al., 2025).	*Used in research & development studies.* Sakdiah et al. (2025) used ADDIE to develop a gamified Quizizz module for Islamic Education: analyzing student needs (low motivation), designing game content with Islamic values, developing with expert feedback, implementing in class trials, and evaluating impact. This led to an effective and values-aligned gamified course (increased engagement and achievement).
Octalysis Framework – 8 Core Drives of Motivation	A gamification design framework analyzing 8 motivational drivers (e.g. Epic Meaning, Achievement, Empowerment, Social Influence, etc.). Helps designers include a balanced set of game elements that tap into different motivations (not just competition) (Fathian et al., 2021).	*Emerging usage.* Not heavily reported in Islamic edu studies yet. However, Fazar et al. (2025) reference using an Octalysis audit to examine student engagement on Kahoot in an Islamic learning context. In principle, Octalysis could ensure Islamic learning games incorporate meaning (e.g. a higher purpose in learning religious content) and avoid over-emphasis on just points. Future designs may apply this more to tailor gamification to Islamic ethos
Game-Based Learning (GBL) – Full-Fledged Game Model	Differentiated from "gamification" (which adds game elements to existing activities), GBL involves using actual educational games or simulations designed for learning outcomes. In Islamic	*Selective usage.* Examples include the Global Zakat Game, a board game developed in Malaysia to teach zakat (charity) calculations and concepts in an interactive way. An

	education, this can mean digital games or even physical board games teaching religious concepts	evaluation found it improved players' understanding of zakat and was enjoyable, bridging formal religious learning with play (Rahman et al., 2018). Another example: a card game about identifying *riba* (usury) in Islamic finance improved Malaysian students' grasp of that complex concept through gameplay (Zulkefli & Asyraf, 2024). These suggest that bespoke Islamic educational games, as a form of GBL, are a promising complementary approach alongside general gamification.
Collaborative Gamification – Social/Team-Based Model	A model emphasizing teamwork and social interaction in gamified learning. Instead of individual competition only, students might be grouped to solve challenges, or collective rewards are given. This leverages cooperative learning values, which align with many Islamic educational principles (Zulkefli & Asyraf, 2024)	*Observed as a byproduct.* Several studies noted that gamification encouraged peer learning and discussion. For example, Wordwall games in class led teachers to act as facilitators, with students working in groups and helping each other answer questions (Anwar & Inayati, 2025). Attarwiyah et al. (2025) found in a pesantren that a gamified approach (point rewards for group achievements, etc.) increased collaborative study habits among students (an outcome valued in boarding school culture). While not a standalone framework, educators deliberately structured some gamified activities to require teamwork, thus embedding Islamic values

	of cooperation and mutual learning.

Table 1, common gamification frameworks/models identified in the literature and how they are applied in Islamic school contexts. Note that many studies combined multiple elements (e.g. PBL mechanics delivered through a quiz platform guided by an instructional design model). The goal in Islamic education is often to harness these frameworks to make learning interactive while aligning with religious values and learning objectives.

3.5 Impact on Student Engagement and Learning Outcomes

Collectively, the studies reviewed provide strong evidence that gamification positively impacts student engagement and learning outcomes in Islamic educational settings. Across different countries and grade levels, researchers consistently observed improvements in students' motivation, participation, and even academic performance when gamified media or strategies were introduced. This section synthesizes those impacts, dividing them into engagement & motivation outcomes and academic & skill outcomes, while also noting any domain-specific effects (for example, on religious knowledge or language acquisition).

Improved engagement and motivation: Perhaps the most unanimous finding is that gamification tends to make learning more engaging and enjoyable for students. In practically every study, teachers or researchers reported higher levels of student participation when using gamified activities compared to traditional teaching. For instance, a classroom study by (Anwar & Inayati, 2025) using the Wordwall gamification platform in a Qur'an–Hadith lesson found that students were markedly more active in working on exercises, keenly answering quizzes and competing in educational games (Anwar & Inayati, 2025). The teacher noted a shift in class dynamics: instead of being passive, students were energized and even those usually shy were eager to take turns at the games, indicating increased active participation (Anwar & Inayati, 2025). Similarly, Putri & Nasution case study (2025) on the Froggy Jumps gamified tool for Arabic language learning observed that the introduction of the game "positively influenced classroom dynamics, increased student engagement, and stimulated learning interest" among eighth graders at an Islamic secondary school. Students found the points, levels, and multimedia features in the game intrinsically motivating, leading to better focus in learning Arabic grammar and vocabulary than in prior conventional lessons (Putri & Nasution, 2025).

A common theme is that game elements tap into students' intrinsic motivation by making learning feel like play. Ahmad & Alwadai survey (2019) of Saudi teachers quantitatively supports this: virtually all teachers agreed that gamification increases students' intrinsic and extrinsic motivations to learn. They reported seeing students put more effort into learning tasks when points or competitive games were involved, not just for the reward but because the process was more fun and satisfying. Several studies in Indonesia echo this finding. For example, Lovandri in Azzudy et al. (2025) found that applying gamification in Islamic elementary schools had a significant effect on student motivation. In qualitative terms, students often describe gamified classes as "exciting" and look forward to them, as opposed to feeling bored in lecture-only sessions. Gamification also reduces student anxiety in some cases – e.g. by framing quizzes as games, students fear mistakes less and feel more free to try answering (since the immediate feedback can be viewed as part of the game rather than punitive grading). One study noted that when

using a Kahoot quiz in an Islamic Studies class, even typically disengaged students showed competitive spirit and eagerness to participate, indicating that the game format can draw in different types of learners (including those who might tune out in normal classes).

An interesting outcome is the shift in teacher roles and student autonomy in gamified settings. In the Wordwall Qur'an subject study, the teacher's role changed from just delivering content to becoming a facilitator and coach (Anwar & Inayati, 2025). Students took more initiative – for instance, forming discussion groups to strategize answers, or using hints provided by the game without immediate teacher input. This environment of active learning aligns with pedagogical ideals in Islamic education where students should develop into self-motivated seekers of knowledge (*tālib al-ilm*). Ferdiansyah et al. (2025) explicitly measured self-directed learning (SDL) behaviors among Islamic university students using a gamified LMS (Ferdiansyah et al., 2025). They found significant improvements in aspects of SDL, particularly students' self-management and self-motivation, after the gamified course intervention (Ferdiansyah et al., 2025). By making progress visible (through progress bars, scores, etc.) and giving students some control (they could attempt quizzes multiple times, choose learning paths, etc.), the gamification in the LMS encouraged students to take charge of their learning, a critical skill in higher education. These results are promising because they suggest gamification not only entertains students but can foster qualities like independence and perseverance.

Academic performance and learning outcomes: Beyond engagement, several studies provide evidence that gamification can also enhance learning outcomes in terms of knowledge gains and skills. Sakdiah et al. (2025) reported a "significant increase in students' … academic achievement" when using a gamified Quizizz module in junior high Islamic Studies. Though the study was primarily qualitative, they noted from pre- and post-implementation assessments that students' test scores in the Islamic Education and Character subject improved after the gamified intervention. This aligns with the general education meta-analyses (e.g. Huang et al., 2020) which found positive effects of gamification on learning achievement (Diaz & Estoque-Loñez, 2024). In the Islamic context, one reason for improved scores could be that gamification often involves repeated practice and feedback – students often re-play quizzes or engage more deeply with material to earn rewards, which reinforces learning. Also, the competitive element can drive students to study more (some teachers noted students revising content at home so they could perform better in the next game session).

Subject-specific outcomes were also noted. In language learning (Arabic, English in Islamic schools), gamified approaches have raised proficiency. For example, an Indonesian study using Wordwall games for Arabic vocabulary found that students' retention of new words increased compared to prior teaching methods (Najib et al., 2025). The immediate feedback and repetition in the games helped cement vocabulary. Another study by Diyaurrahman et al. (2025) indicated that Islamic educational games improved learning interest and outcomes for young children learning Islamic stories and morals (Al-Ghifari et al., 2024). Even at the higher education level, as Zulkefli & Asyraf (2024) found through educator focus groups, teachers believe that game-based learning "substantially boosts … academic performance" when integrated carefully into Islamic curricula. They reported instances of improved understanding of complex religious concepts after introducing game-based activities – for instance, university students better comprehended principles of Islamic finance and avoided misconceptions when a game was used to simulate economic scenarios (Masrukin, 2025). Indeed, the "Name the Riba Transaction!" card game study in Malaysia found that participants' understanding of the

prohibited concept of *riba* improved after playing the game (Zulkefli & Asyraf, 2024). This suggests gamification/GBL can have cognitive benefits in domains that require critical thinking and application of Islamic knowledge, not just rote learning.

Additionally, there is evidence of improved religious literacy and skills via gamification. Mukhlis (2023) document that gamifying the Iqra' method (a method for teaching Quran reading) for migrant children significantly increased their ability to recognize and pronounce Arabic letters (hijaiyah) compared to before. The children, who typically had low access to formal religious schooling, showed marked progress in Quranic reading skills when the otherwise repetitive Iqra' drills were turned into interactive games and challenges (Basir et al., 2024). This is a crucial outcome because it ties gamification directly to the core mission of Islamic schools: imparting religious competencies. Likewise, Mahardikha et al. (2023) found that a gamified Android app teaching hijaiyah letters led to better Quran reading skills among elementary students. These findings highlight that gamification isn't limited to general subjects; it can be harnessed to strengthen faith-based education – from memorizing verses to understanding religious concepts – as long as it is designed with those goals in mind.

It is important to note that not all outcomes were academic; some were attitudinal or social. Teachers reported that gamification made the classroom atmosphere more positive and open. Students were more willing to ask questions and discuss when learning felt less formal (Mee Mee et al., 2020). In Alwadai's survey, 89% of teachers agreed that gamification encourages students to pose questions and engage more with the teacher, and 90% said it improved collaboration among students (Ahmad & Alwadai, 2019). These "soft" outcomes are highly valued in Islamic education, which often emphasizes character building (*tarbiyah*) and community alongside academics. A Pesantren case study Attarwiyah et al. (2025) noted that introducing gamified activities (like a house-point system and educational competitions in the dormitory) fostered teamwork and discipline among students, bridging the traditional pesantren values with modern techniques. Students became more disciplined in doing homework on time when points were awarded, and they showed camaraderie in team-based quiz competitions, reflecting an incorporation of *ukhuwah* (Islamic brotherhood) into the gamified framework.

In summary, the impact of gamification in Islamic schools as reported by the literature is largely positive: higher engagement, improved motivation, better academic performance, and enhanced classroom interactions. These benefits mirror those found in secular settings, but with added significance in Islamic contexts where maintaining student interest in religious subjects can be challenging. By making learning interactive, gamification helps connect with the digital generation of Muslim learners in a language they enjoy, potentially strengthening both their general and religious education. Nonetheless, it's important to temper this optimism with awareness of challenges and contextual factors, which we discuss later. First, we highlight some differences and commonalities observed between international and Indonesian experiences with gamification.

3.6 International vs Indonesian Context: A Comparative Insight

The body of literature spanned multiple contexts, with a sizable concentration in Indonesia and notable contributions from the Middle East (Saudi Arabia), Malaysia, and others. Given that Indonesia has the largest Muslim population and an extensive Islamic school network, many innovations in gamified Islamic learning are reported there. Meanwhile, studies from other countries provide a broader perspective on cultural and

contextual factors. Overall, the trends and outcomes are similar internationally and in Indonesia – gamification tends to work well – but there are a few distinctions worth noting:

Adoption and research volume: Indonesia has been very active in researching and implementing gamification in Islamic education, especially in the last 5 years. Many Indonesian Islamic schools and universities are experimenting with digital platforms (Quizizz, Wordwall, etc.) as part of a national push for education technology integration (including in religious schools). This is evidenced by the numerous Indonesian journal articles and theses on gamified learning in PAI (Islamic Religious Education) subjects (Sakdiah et al., 2025). The Indonesian studies often focus on practical classroom interventions and development of specific media (as seen with the Android apps for Quran reading, or web-based Arabic learning games (Putri & Nasution, 2025). In contrast, international literature (e.g. Middle East, Western contexts) is scarcer but often provides broader analyses or perceptions. For example, Ahmad & Alwadai (2019) Saudi study was a perception survey of teachers – indicating interest at the conceptual level in the Gulf region. Zulkefli & Asyraf (2024) Malaysian study took a qualitative approach (focus groups, document analysis) to align GBL with Islamic pedagogy and identify macro-level obstacles. This suggests that outside Indonesia, research might be somewhat more exploratory or qualitative, trying to formulate frameworks and gauge readiness, whereas Indonesia's research includes many implementation and effectiveness studies on the ground.

Language and subject focus: Both international and Indonesian studies cover religious subjects (Quran, Hadith, Fiqh, etc.) and general subjects taught in Islamic schools (like languages, science). An interesting note is the use of Arabic language learning as a common focus. In Indonesia, Arabic is taught as part of the Islamic school curriculum, and multiple studies targeted it (e.g. gamified Arabic vocabulary lessons, web-based Arabic games validation (Putri & Nasution, 2025). In the Middle East, Arabic is the native language, so instead we see gamification applied to other areas – for example, Islamic finance concepts in Malaysia (Zulkefli & Asyraf, 2024), or general Islamic studies content. But both contexts find gamification useful for languages: Indonesia for Arabic (foreign language for them) and some Malaysian/Western Islamic schools for Arabic too (as second language for non-Arab students, e.g. Australian Islamic schools could use it to teach Arabic or Islamic studies in English). The content alignment is crucial – international studies often mention the need to align games with Islamic content properly. Indonesian studies sometimes explicitly mention integrating Islamic values or context into gamified content (e.g. designing quiz questions about Islamic history, using Quranic terms in a Wordwall game), thereby ensuring the media is not just a generic game but educative in an Islamic sense (Sakdiah et al., 2025).

Technical infrastructure differences: One challenge more frequently noted in Indonesian context is technical infrastructure variability – e.g. limited device access or patchy internet in some schools (Anwar & Inayati, 2025; Putri & Nasution, 2025). The Froggy Jumps study in Indonesia highlighted that internet stability and access to devices influenced the implementation's success (Putri & Nasution, 2025). In contrast, a study in Saudi Arabia or Malaysia might not emphasize internet issues as much (urban schools in those regions often have better infrastructure). However, even in Malaysia, Zulkefli & Asyraf (2024) did list resource limitations as a key obstacle. It suggests that developing countries or rural Islamic schools may struggle with tech resources, whereas wealthier

international schools might face fewer tech barriers but more curriculum or teacher training barriers (since gamification is a new approach instructionally).

Cultural and pedagogical alignment: Culturally, both Indonesian and other Islamic contexts share a concern that gamification should respect Islamic norms. There is a universal caution against games introducing inappropriate content (violence, gambling, music with illicit content, etc.). Fortunately, the gamification platforms used (like Kahoot, Quizizz) are content-neutral, and teachers control the content, so this has not been a major problem in reported studies. Malaysian educators did mention the necessity of "adherence to Islamic standards" for game-based learning to be viable (Zulkefli & Asyraf, 2024). Indonesian studies implicitly handle this by, for example, "designing content based on Islamic values" during development (Sakdiah et al., 2025). One interesting cultural nuance is the teacher's role and student behavior: in more traditional Islamic schools (e.g. pesantren), introducing games is a bigger pedagogical shift than in a modern urban school. Attarwiyah et al. (2025) noted some initial resistance or skepticism among older ustadz/teachers about using games, as it might appear to undermine discipline. However, once they saw that structured gamification (like point systems for good behavior or quizzes on religious material) actually reinforced discipline and enthusiasm, they became more receptive. In the Saudi context, Ahmad & Alwadai (2019) showed that even in a fairly conservative setting (elementary Islamic studies in Saudi Arabia), teachers had positive attitudes toward gamification, suggesting that properly framed, it is culturally acceptable. In fact, gamification can be seen as a modern extension of traditional competitive learning techniques (like Quran memorization competitions, which are long-standing in Islamic pedagogy).

In summary, Indonesian research offers a rich, micro-level view with many case studies demonstrating success in classrooms and addressing pragmatic issues (device sharing, local language adaptation), while international research provides macro insights on aligning gamification with Islamic educational philosophy and general efficacy. Both converge on the point that when done carefully, gamification is a powerful tool to enhance Islamic education. The slight differences in emphasis highlight that one size does not fit all – context matters. For instance, a rural madrasa in Indonesia might use offline gamification (like a board game or flashcard game if internet is lacking) whereas an international Islamic school with smartboards might use live quiz apps. Nonetheless, the core idea of making learning interactive and rewarding resonates across the board.

3.7 Advantages and Challenges of Gamification in Islamic Schools

The literature identifies numerous advantages of applying gamification in Islamic educational settings, as well as challenges and constraints that educators and institutions must consider. We synthesize these below, with Table 3 providing a concise summary. Understanding both sides is crucial for effective implementation – leveraging the benefits while mitigating the challenges.

Key Avantages: Boosted Motivation and Engagement: Perhaps the clearest advantage is the dramatic increase in student motivation. Gamification sparks students' interest in subjects that might otherwise seem dry (Ahmad & Alwadai, 2019). As discussed, Islamic education often deals with rote learning (e.g. memorization of verses) – gamified approaches turn these into engaging tasks. Teachers report students are internally motivated to learn when a game element is introduced, eagerly participating without prodding (Ahmad & Alwadai, 2019). Both intrinsic motivation (enjoying the learning itself) and extrinsic motivation (wanting to win or gain points) are heightened

(Ahmad & Alwadai, 2019). This is vital in Islamic schools to cultivate a love of learning about religion and other subjects, rather than learning out of obligation alone. - Improved Classroom Atmosphere and Participation: Gamification creates a more lively, student-centered classroom (Anwar & Inayati, 2025). Instead of one-way lectures, there is two-way interaction and sometimes even laughter and healthy competition, which can make the learning environment more positive. Studies noted that shy students became more outspoken, and overall class participation rates went up during gamified sessions (Anwar & Inayati, 2025; Putri & Nasution, 2025). In Islamic education, where respect for teachers is paramount, gamification managed to maintain respect while also breaking down communication barriers – students felt more comfortable asking questions or expressing confusion in a game context (Ahmad & Alwadai, 2019). - Immediate Feedback and Reinforcement: Many gamified tools provide instantaneous feedback (right/wrong answers, explanations, scores). This is pedagogically advantageous – students know immediately what they got wrong and can correct it, leading to better retention of knowledge (Anwar & Inayati, 2025). For example, in Quranic learning, if a student mis-identifies a letter, a game can instantly show the error, helping them fix misconceptions faster than if waiting for a test result. Teachers in several studies praised the ability of gamified quizzes to quickly identify learning gaps and reinforce concepts in real time (Anwar & Inayati, 2025). - Higher Academic Achievement: As noted, some studies showed tangible learning gains – higher test scores and improved skills – as a result of gamification (Sakdiah et al., 2025). This is an ultimate advantage: it's not just about fun, but better learning. By motivating students to engage more and study willingly, gamification indirectly pushes academic performance upwards. This was seen in memorization of Quran verses, where students practiced more frequently via a gamified app, resulting in better memorization scores than a control group (per anecdotal evidence in one study). - Collaborative Learning and Social Skills: Many Islamic schools value cooperation and *ukhuwah*. Gamified activities, especially team challenges or class-wide games, can foster peer learning and teamwork (Anwar & Inayati, 2025). For instance, a leaderboard can also be shown for groups, encouraging students to help their team members. Teachers observed improved student collaboration – e.g. discussing how to solve a puzzle together – which in turn builds communication and social skills(Ahmad & Alwadai, 2019). The playful context can also ease tensions between peers, leading to a friendlier class social environment. - Adaptability and Differentiation: Gamified systems often allow students to learn at their own pace (they can replay levels, or advanced students can tackle harder challenges while others do basics). This adaptability is an advantage in mixed-ability Islamic classes. For example, an online gamified module might have optional bonus questions for high achievers (keeping them engaged) while ensuring every student at least covers the core material. Self-paced gamified learning (like an interactive e-book with gamification) was piloted by Ferdiansyah et al. (2025) found to yield significant academic growth for independent learners. - Alignment with Youth Interests: Today's students are digital natives, and many play games in their free time. By bringing elements of gaming into Islamic education, schools can speak the students' language. This modernizes the image of Islamic schools, showing that they can innovate within the bounds of tradition. It potentially increases students' positive perception of their religious studies, seeing them as dynamic and relevant. This can be particularly advantageous in higher education, where keeping students interested in compulsory Islamic courses can be challenging – gamification offers a way to make such courses more attractive.

Key Challenges: Technical Infrastructure and Access: A recurring challenge is the need for reliable technology – devices (computers, tablets, or smartphones) and internet connectivity. Many Islamic schools, especially public or rural ones, may have limited ICT resources. Teachers in Indonesia noted issues like limited device availability (students having to share smartphones) and internet bandwidth problems which disrupted game sessions (Anwar & Inayati, 2025; Putri & Nasution, 2025). In one case, a planned online quiz had to be converted to an offline paper-based game due to connectivity issues, losing some of the gamification effect. Thus, unequal access can create disparities (some students left behind if they can't connect). Schools need to invest in ICT or choose gamification methods that are offline-friendly (like board games or classroom response systems that don't require 1:1 devices). - Teacher Training and Readiness: Effective gamification requires teachers to be comfortable with the tools and to have the pedagogical skills to integrate them meaningfully. Teacher readiness was highlighted as a concern in multiple studies (Putri & Nasution, 2025; Zulkefli & Asyraf, 2024). Some Islamic education teachers may be less tech-savvy or initially view games as frivolous. Professional development is needed to train teachers in using platforms like Kahoot/Quizizz, designing good game questions, and managing a gamified class. Without training, there's a risk of poor implementation (e.g. focusing only on points and neglecting learning outcomes). Zulkefli & Asyraf (2024) specifically recommended training for educators as essential, noting that teachers themselves voiced the need for guidance on GBL integration. - Curriculum and Time Constraints: Islamic school curricula can be dense, with many subjects (religious and academic) to cover. Teachers often worry about covering content vs. time spent on games. If not well-managed, gamification sessions might take up more time than a lecture, potentially pressuring teachers who have to meet syllabus targets. Also, ensuring that game content aligns with curriculum standards is a task – it may be challenging to find ready-made gamified content for niche Islamic topics, so teachers might need to create their own questions or games, which is time-consuming. In Attarwiyah et al.'s study, educators had to carefully design questions for their gamified quizzes to ensure they reinforced the exact curriculum objectives, which took effort but was necessary to maintain academic rigor. There is also a need to balance gameplay and instruction – some teachers noted that class excitement must be guided so that learning objectives are still met on time (Anwar & Inayati, 2025). - Classroom Management Issues: While gamification can improve engagement, it can also introduce management challenges. A highly excited class can become noisy or chaotic if not managed. The Wordwall study reported issues like "disorganized groupings" and "uncontrolled intergroup interactions" initially when students got very competitive (Anwar & Inayati, 2025). Teachers had to establish rules (e.g. fairness, taking turns, respecting others) to keep the gamified session productive. Additionally, there's the risk of overemphasis on competition: if leaderboards are public, lower-performing students might feel discouraged or embarrassed. Some teachers handle this by focusing on personal progress ("beat your own score" approach) or cooperative game modes to mitigate negative competition. Essentially, classroom management techniques need to adapt to a more active class environment. - Content Appropriateness and Values Alignment: An important challenge specific to Islamic education is ensuring the gamified content adheres to Islamic values and does not inadvertently include inappropriate material. While the game mechanics themselves are neutral, issues could arise from content: for example, an avatar system in a platform might have immodest character images, or a quiz database might include secular questions unrelated to the lesson. Teachers thus often need to customize

content. Sakdiah et al. (2025) explicitly integrated Islamic values into their game design to ensure alignment. Additionally, some conservative stakeholders might question gamification if they perceive it as undermining seriousness (the notion that learning sacred knowledge through "games" might be seen as too playful by some). Therefore, educators often must explain and demonstrate that these games are a means to an educational end, and ensure the tone remains respectful (e.g. no trivialization of religious content). The Malaysian GBL study noted that alignment with Islamic pedagogical principles is crucial for acceptance (Zulkefli & Asyraf, 2024), for example, games that encourage reflection, cooperation, etc., are more in line with Islamic teaching methods than games that might encourage mindless competition or trivialize content. This challenge is more about perception and design; it can be overcome with thoughtful implementation, but it's a consideration nonetheless. - Sustainability and Long-Term Impact: A subtler challenge reported by some is whether the initial excitement of gamification sustains over time. There's a possibility of novelty effect – students are thrilled by the new gamified approach initially, but if used too frequently or without variation, it might lose its impact. Studies were mostly short to medium term; there's little long-term data. Some teachers in focus groups wondered if students would eventually get bored of certain games or if the competitive aspect could lead to fatigue or stress for some learners if overdone. Also, maintaining updated gamified content is an ongoing effort. This points to a need for continually evolving strategies and using gamification as one tool among many (not overusing it). - Assessment and Evaluation Alignment: Traditional assessment in Islamic schools (like written exams for memorization or fiqh rulings) might not directly align with the outcomes of gamified learning unless adapted. If a teacher uses a game for learning, they need to ensure that the knowledge translates to exam performance. Some educators face difficulty in measuring learning outcomes from games – although many studies report improved scores, it requires planning to use game results as formative assessment properly. Ensuring that gamification contributes to the formal evaluation benchmarks (or adjusting those benchmarks to include new forms of assessment) is a systemic challenge at the school administration level.

Considering these factors, we summarize the pros and cons in Table 2:

Table 2. Advantages vs Challenges of Gamification in Islamic School Education

Advantages (Positive Outcomes)	Challenges (Obstacles/Considerations)
High student motivation and engagement: Gamification energizes learners – studies show increased intrinsic motivation and enthusiasm for learning religious and academic content (Ahmad & Alwadai, 2019). Students participate more actively and enjoy the process, combating boredom in traditional classes.	Technical infrastructure issues: Requires reliable tech (devices, projectors, internet). Many Islamic schools face limited device access and internet connectivity problems, which can disrupt gamified activities (Anwar & Inayati, 2025; Putri & Nasution, 2025). Schools with poor ICT resources may struggle to implement digital gamification fully
Improved classroom interaction: Creates a more interactive, student-centered environment. Students ask more questions, discuss with peers, and collaborate during games	Need for teacher training and acceptance: Teachers must be skilled and willing to use gamification. Lack of training can lead to underutilization or improper use of

(Ahmad & Alwadai, 2019; Anwar & Inayati, 2025). This leads to a positive class atmosphere and breaks the monotony of rote learning	the tools. Some teachers are initially resistant, viewing games as a distraction. Professional development and mindset shifts are needed to ensure teachers integrate games effectively (Zulkefli & Asyraf, 2024)
Immediate feedback & adaptive learning: Games provide instant feedback on performance (right/wrong answers, scores), helping students learn from mistakes in real time (Anwar & Inayati, 2025). Gamified systems can adapt to student level (unlocking levels, etc.), allowing differentiated learning – faster learners can progress, others can repeat until mastery	Curriculum alignment and time constraints: It can be challenging to align game content with curriculum goals and cover the syllabus in limited time. Designing or finding appropriate Islamic-content games takes effort. Teachers worry about losing time to play vs. teach. Without careful planning, gamification could sidetrack from curriculum coverage or make lesson pacing difficult.
Higher academic achievement: Several studies noted improvements in test scores and knowledge retention with gamified learning (Sakdiah et al., 2025). Students often learn better because they are more engaged and practice more. For example, gamification enhanced Quran literacy and language acquisition, translating to better academic outcomes in those areas (Azzudy et al., 2025).	Classroom management challenges: A gamified class is energetic – which can become noisy or chaotic if not managed. Teachers must handle competition stress (ensuring healthy competition, not discouragement for low scorers) and keep students focused on learning, not just winning (Anwar & Inayati, 2025). Managing group dynamics during games (preventing dominance by some students, cheating, etc.) is an added task.
Encourages collaboration and social skills: When designed for group work or discussion, gamification strengthens teamwork, communication, and peer support (Ahmad & Alwadai, 2019). Islamic values of cooperation are reinforced as students often help each other in games. The fun environment also builds a sense of community in class	Ensuring Islamic appropriateness: Educators must ensure game content and methods align with Islamic ethics. Avoiding inappropriate content (imagery, language, music) is critical. Also, some stakeholders may question using games for serious religious learning – overcoming perceptions that gamification might reduce reverence for the subject. Designers need to integrate Islamic values so that the gamified learning remains respectful and purposeful (Sakdiah et al., 2025; Zulkefli & Asyraf, 2024)

Blending tradition with innovation: Gamification provides a way to modernize Islamic education without discarding core principles. It speaks to digitally-oriented youth, potentially making Islamic studies more appealing. When thoughtfully implemented, it can highlight that learning Islam can be both meaningful and enjoyable, thereby attracting students to delve deeper (e.g. memorizing Quran via apps, learning Hadith through quizzes).	Resource and content development burden: If suitable ready-made games are not available for specific Islamic topics, teachers or institutions must create gamified content themselves. This can be resource-intensive (needing time, and perhaps programming or design skills). Maintaining and updating the content (to keep games fresh and interesting) is another ongoing challenge, especially in under-resourced schools.
Self-directed learning and autonomy: Gamified learning environments (especially in higher ed) have been shown to improve students' ability to learn independently (Ferdiansyah et al., 2025). The structure of games – clear goals, freedom to try again, etc. – encourages students to take charge of their progress, an important skill in both secular and religious education	Sustainability and long-term engagement: There's a risk that the novelty may wear off if gamification is overused or repetitive. Students might lose interest in certain games over time. Keeping the approach effective may require continuous innovation and variety in gamification techniques, which is an additional planning challenge for educators.

Table 2: Summary of the main advantages (left) and challenges (right) associated with gamification in Islamic school contexts, as identified in the literature. Addressing the challenges (right column) is necessary to fully realize the benefits (left column) in a sustainable manner.

Discussion of Challenges: The above challenges are not insurmountable; indeed, many studies offered strategies to overcome them. For instance, to handle technical limitations, some schools adopted a blended approach: using offline gamification methods (like board games, card games, or classroom quizzes with hand-written scoreboards) when high-tech options weren't feasible. This retains some game elements without needing expensive infrastructure. Regarding teacher training, a few studies noted success after workshops were held – once teachers learned the tools and saw student excitement, they became enthusiastic adopters (a "seeing is believing" effect). For the content alignment issue, collaboration between Islamic subject experts and tech experts is recommended. One paper suggested developing a repository of Islamic education question banks for popular gamification platforms, so that teachers worldwide can reuse culturally appropriate content instead of each starting from scratch. As for maintaining discipline, teachers have incorporated clear rules and time limits for game activities (treating it with the same seriousness as any classroom task, just delivered playfully).

Crucially, the literature emphasizes that gamification should be seen as a means to an end, not an end in itself. The goal is to enhance learning; thus, gamification must be applied with pedagogical intent. When challenges like students focusing only on points arise, educators can redirect by tying points to learning objectives (e.g. "each point

represents a concept you've mastered"). The findings across studies reinforce that if challenges are managed, the advantages far outweigh the drawbacks, making gamification a valuable pedagogical innovation for Islamic schools in the contemporary era.

4. CONCLUSION

This systematic literature review examined research published between 2015 and 2025 on the use of gamification in educational media within Islamic education settings, including Islamic schools, madrasahs, pesantren, and Islamic higher-education institutions. Overall, the reviewed literature indicates that gamification is a promising pedagogical approach, particularly for enhancing student engagement and learning motivation in Islamic education. However, the strength and generalizability of the evidence vary substantially across studies, and conclusions must be interpreted in proportion to the methodological quality of the existing research.

A key finding of this review is that increased engagement and motivation represent the most consistent outcomes across studies. Regardless of educational level or country, the majority of studies—whether experimental, developmental, or perception-based—report that gamified learning environments foster more active student participation, greater enthusiasm, and more positive classroom dynamics compared to conventional instruction. This suggests that gamification is especially effective as an engagement-enhancing strategy, helping Islamic education address long-standing challenges related to student boredom and passivity, particularly in subjects that rely heavily on memorization or repetitive practice. In contrast, evidence regarding academic achievement and learning outcomes is more mixed. While several quasi-experimental studies report improvements in test scores, language proficiency, or Quranic literacy following gamified interventions, other studies show modest or inconsistent effects beyond motivational gains. Many interventions were short-term, involved small samples, or relied on descriptive evaluation methods, limiting the ability to draw strong causal conclusions. As a result, gamification cannot yet be considered a universally effective solution for improving learning outcomes in Islamic education, but rather a supportive tool whose effectiveness depends on instructional design quality, implementation context, and assessment rigor. Another important observation is that much of the literature relies on small-scale studies, development-focused research, and teacher perception data. While these studies provide valuable insights into feasibility, acceptability, and contextual fit, they tend to emphasize positive experiences and underreport null or negative findings. This raises concerns about potential publication bias and reinforces the need for more balanced evidence. Claims about cognitive, moral, or spiritual development should therefore be treated cautiously unless supported by robust empirical measurement.

Despite these limitations, the review highlights several conditions under which gamification appears most beneficial in Islamic education. Gamified learning is more likely to produce meaningful outcomes when it is clearly aligned with curriculum objectives, designed with sensitivity to Islamic values, and supported by trained educators. Approaches that emphasize feedback, mastery progression, collaboration, and meaningful challenges tend to be more compatible with Islamic pedagogical principles than those relying solely on competition or extrinsic rewards. Importantly, gamification should be understood as a means to enhance learning, not as a substitute for sound pedagogy or content mastery. The review also identifies persistent challenges that constrain the effective use of gamification in Islamic schools and universities. These

include unequal access to digital infrastructure, limited teacher preparedness, time constraints within dense curricula, and concerns about maintaining religious appropriateness in game-based activities. Addressing these challenges requires institutional support, professional development, and thoughtful design choices, particularly in resource-limited settings. Without such support, the benefits of gamification may remain uneven or short-lived. In light of these findings, future research should prioritize methodological rigor and depth. There is a clear need for larger-scale and longer-term studies that examine not only engagement but also sustained learning outcomes and higher-order competencies. Research in Islamic higher education remains particularly limited and deserves greater attention. Additionally, more work is needed to develop and empirically test gamification frameworks that are explicitly grounded in Islamic educational values, rather than relying on generic models adapted from secular contexts.

The current body of evidence supports gamification as a valuable and context-sensitive pedagogical enhancement for Islamic education, especially for increasing student engagement and motivation. However, its broader educational impact should be viewed as conditional rather than universal. Gamification holds considerable potential when applied thoughtfully, critically, and in alignment with Islamic educational goals, but its effectiveness ultimately depends on how, where, and why it is implemented.

ACKNOWLEDGEMENTS

We thank our institution, State Polytechnic of Samarinda, Islamic State University of Alauddin Makassar, and Al-Azhar University for providing a place to conduct this research.

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