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Challenges in Implementing Gamification for Teaching and Learning among Islamic Education Pre-Service Teachers: A Systematic Literature Review

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Abstract

Gamification has increasingly gained attention in global education as a pedagogical strategy capable of enhancing students' motivation, active engagement, and learning achievement. The rapid advancement of digital technology has introduced various innovative pedagogical approaches in education, one of which is gamification. Within the context of Islamic Education, gamification holds significant potential in fostering student engagement while facilitating the delivery of values-based learning in a more interactive manner. Nevertheless, its implementation among pre-service teachers continues to face numerous challenges, including issues related to readiness, pedagogical competency, and limitations in systemic support. This study conducted a Systematic Literature Review (SLR) involving 19 selected articles to examine the major challenges encountered by pre-service Islamic Education teachers in implementing gamification in teaching and learning processes. The article selection process adhered to the PRISMA approach and was screened based on several inclusion and exclusion criteria, including year of publication, article type, language, research findings, and study focus. The findings revealed three major themes: the level of readiness and competency among pre-service teachers, challenges in the implementation of gamification, and contextual as well as systemic support factors. The study highlights the need for structured training, appropriate instructional modules, and comprehensive systemic support to ensure that gamification can be implemented effectively while remaining aligned with the values and principles of Islamic Education.

Keywords: Gamification, Pre-Service Teachers, Islamic Education, 21st-Century Teaching and Learning, Challenges

Introduction

The rapid advancement of digital technology in the era of the Fourth Industrial Revolution (IR 4.0) has significantly transformed the educational landscape, particularly in teaching and learning approaches. In this context, gamification has emerged as an innovative pedagogical approach that incorporates game elements into teaching and learning processes to enhance students' motivation and engagement. Previous studies have demonstrated that the use of gamification is capable of creating a more interactive and enjoyable learning environment while simultaneously increasing students' motivation throughout the learning process (Hambali & Lubis, 2022). Furthermore, the integration of gamification within digital learning environments has also been found to contribute to higher levels of student engagement and satisfaction, particularly in the context of higher education (Cespón & Toyos, 2025).

As future educators, pre-service teachers play an essential role in determining the effectiveness of technology integration in classroom practices. Their readiness, pedagogical competencies, and exposure to innovative teaching approaches are crucial in ensuring that gamification can be implemented effectively and meaningfully within teaching and learning processes. In the context of teacher education, the ability of pre-service teachers to adapt to digital pedagogical innovations has become increasingly important in responding to the demands of 21st-century education and student-centred learning environments.

Nevertheless, the implementation of gamification in teaching and learning is not without challenges, particularly among pre-service Islamic Education teachers. Studies have indicated that although pre-service teachers demonstrate a high level of skills and readiness toward the use of gamification, significant challenges remain in its actual classroom implementation (Faudzi et al., 2024). Furthermore, the level of gamification usage among pre-service teachers has been found to be relatively low despite their considerable knowledge and understanding of the approach (Ahmad Farouq et al., 2024). In addition, challenges such as limited technological skills and insufficient teacher readiness in integrating technology into teaching and learning processes continue to hinder the effectiveness of gamification implementation (Sabilan et al., 2022). The transition from traditional pedagogical approaches to technology-based instruction also requires teachers to adapt to more flexible and student-centred teaching strategies (Zaidi & Othman, 2023).

Within the context of Islamic Education, these challenges become increasingly complex, as teachers are not only responsible for delivering knowledge but also serve as *murabbi* who nurture students' character, morality and values. Consequently, the implementation of gamification must be approached with caution to ensure that it remains aligned with the values and principles of Islamic Education (Mohd Noor et al., 2021). In addition, careful attention must be given to the development of Shariah-compliant gamification designs to ensure that learning content does not contradict Islamic values and teachings (Wan Abdullah, 2022). Although several studies have reported that gamification is capable of enhancing students' motivation, its effectiveness in improving academic achievement remains inconsistent (Mustapa & Ambo, 2025).

Previous studies have discussed gamification and digital pedagogy in general educational settings, limited systematic literature reviews specifically examine the challenges faced by pre-service Islamic Education teachers in implementing gamification within teaching

and learning processes. Existing studies also tend to focus more on students' motivation and technological effectiveness rather than exploring pedagogical, contextual, and value-based challenges from the perspective of Islamic Education teacher training. Therefore, this study contributes to the field of social sciences and Islamic Education by providing a comprehensive synthesis of the readiness, implementation challenges, and systemic support factors influencing gamification practices among pre-service teachers. The findings are expected to support teacher education institutions, curriculum developers, and policy makers in strengthening technology integration within Islamic Education.

Therefore, a systematic literature review is necessary to synthesise existing evidence regarding the challenges faced by pre-service Islamic Education teachers in implementing gamification, particularly in relation to pedagogical readiness, value-based implementation, and systemic support factors that remain underexplored in previous studies.

Problem Statement

The rapid advancement of digital technology has driven significant changes in teaching and learning (T&L) approaches, particularly toward more interactive and student-centred pedagogical practices. Nevertheless, the integration of technologies such as gamification in T&L has yet to be implemented comprehensively and consistently within the contemporary educational context (Ab Kadir et al., 2025). Although gamification has been widely acknowledged for its potential to enhance students' motivation and engagement, its application among school teachers remains at a moderate level (Iberahim & Md Noor, 2020). This situation indicates the existence of a gap between the potential of gamification as a pedagogical innovation and its actual implementation in classroom settings. Furthermore, 21st-century learning approaches require teachers to adopt more creative and innovative teaching practices; however, not all educators are able to adapt effectively to these educational transformations (Awi & Zulkifli, 2021).

Within the context of pre-service Islamic Education teachers, this issue becomes more pronounced due to the imbalance between their level of knowledge and the actual implementation of gamification in teaching and learning practices. Studies have shown that although pre-service teachers possess a high level of knowledge regarding gamification, the extent of its application in real classroom settings remains relatively low (Ahmad Farouq et al., 2024). Furthermore, the readiness of pre-service teachers in terms of technological skills and technology usage significantly influences the effectiveness of gamification implementation in teaching and learning processes (Faudzi et al., 2024). Limitations in technological competencies, coupled with a lack of practical experience in applying gamification, have been identified as among the primary challenges faced by pre-service teachers (Sabilan et al., 2022). In addition, the transition from traditional pedagogical approaches to technology-based instruction requires substantial pedagogical adaptation among pre-service teachers (Zaidi & Othman, 2023).

In Islamic Education, the challenges associated with the use of gamification become more complex, as its implementation must remain aligned with Shariah values and principles within the teaching and learning process. Islamic Education teachers are not only responsible for transmitting knowledge, but also for nurturing students' character and moral values holistically (Mohd Noor et al., 2021). Consequently, the application of gamification must be

carefully designed to ensure that it does not contradict Islamic values and is capable of supporting students' moral and character development (Wan Abdullah, 2022). Although several studies have indicated that gamification can enhance students' motivation, its effectiveness in improving academic achievement remains inconsistent and requires further investigation (Mustapa & Ambo, 2025). Therefore, there remains a need for a systematic investigation to identify the actual challenges faced by pre-service Islamic Education teachers in implementing gamification in teaching and learning processes, as well as to bridge the gap between theory and practice.

Research Questions

In conducting a Systematic Literature Review (SLR), the formulation of research questions constitutes one of the most crucial stages, as it determines the scope, direction, and process of selecting relevant sources of literature. The PICo framework, which consists of Population, Interest, and Context, was employed to construct research questions that are more systematic and focused. This framework enables researchers to formulate questions based on the target population, the area of interest, and the relevant contextual setting of the study.

In the present study, the population consists of pre-service Islamic Education teachers, while the research interest focuses on the use of gamification approaches. The context of the study is centred on the teaching and learning (T&L) of Islamic Education within teacher training institutions. Based on the themes identified through the literature analysis, three main research questions were developed as follows:

1. What extent do the readiness and competencies of pre-service Islamic Education teachers influence the feasibility of implementing gamification approaches in teaching and learning processes?
2. What are the main challenges faced by pre-service teachers in implementing gamification approaches within the context of Islamic Education teaching and learning?
3. What forms of systemic support and contextual factors influence the effectiveness of gamification implementation among pre-service teachers in Islamic Education teaching and learning?

Research Objectives

The primary objectives of this Systematic Literature Review (SLR) are as follows:

1. To identify the extent to which the readiness and competencies of pre-service Islamic Education teachers influence the feasibility of implementing gamification approaches in teaching and learning processes.
2. To analyse the main challenges faced by pre-service teachers in implementing gamification approaches within the context of Islamic Education teaching and learning.
3. To examine the factors that influence the effectiveness of gamification implementation among pre-service teachers in Islamic Education teaching and learning processes.

Significance of the Study

This study contributes significantly to enhancing the understanding of the challenges faced by pre-service Islamic Education teachers in implementing gamification within teaching and learning processes. It also highlights the need to strengthen the readiness and competencies of pre-service teachers, particularly in the aspect of educational technology integration. The findings of this study may serve as a valuable reference for the development of more effective

training strategies and instructional modules that are aligned with the principles and values of Islamic Education.

Literature Review

The challenges faced by pre-service Islamic Education teachers in implementing gamification in teaching and learning indicate that issues related to readiness and competency are among the primary factors influencing the effectiveness of this pedagogical innovation. A study conducted by Muhammad Fikri Mohd Faudzi et al. (2024) found that pre-service teachers demonstrated high levels of skills and readiness toward gamification; however, this does not necessarily guarantee effective implementation within actual teaching and learning contexts. This finding is consistent with the study by Ahmad Farouq Ahmad Nasri et al. (2024), which revealed the existence of a gap between knowledge and the actual application of gamification among pre-service teachers during their practicum experience. In addition, Auni Iwani Anuar and Fauziah Che Leh (2024) emphasised that although pre-service teachers possess an understanding of game-based approaches, the level of application in teaching practices remains moderate and inconsistent. This suggests that competency extends beyond theoretical knowledge and also encompasses practical capabilities as well as sufficient pedagogical experience.

From the perspective of gamification implementation within the context of Islamic Education, previous studies have demonstrated that this approach possesses significant potential in enhancing students' motivation and engagement. Nevertheless, its implementation requires careful adaptation to ensure alignment with Islamic values and principles. A study conducted by Kitikedizah binti Hambali and Maimun Aqsha Lubis (2022) found that gamification is capable of increasing students' interest and higher-order thinking skills in Islamic Education teaching and learning processes. Similarly, Mohammad Najib Jaffar et al. (2024) reported that the use of gamification in Arabic language learning improved students' vocabulary mastery and heightened their interest in the learning process.

However, Wan Ali Akbar Wan Abdullah (2022) emphasised that the design of gamification in Islamic Education must adhere to Shariah guidelines to ensure that both the content and pedagogical approaches employed do not contradict religious values. Furthermore, Tengku Sarina Aini Tengku Kasim et al. (2022) explained that challenges associated with e-learning in Islamic Education also affect students' character development, thereby requiring teachers to exercise greater caution when integrating technology into teaching and learning practices.

In addition, contextual factors and systemic support play a crucial role in determining the effectiveness of gamification implementation among pre-service teachers. A study by Sapie Sabilan et al. (2022) revealed that teachers' readiness in terms of technological skills remains at a moderately low level, thereby becoming a barrier to the implementation of technology-based learning. This finding is further supported by Mohd Shahrani Muhamad Zaidi and Mohamad Khairi Haji Othman (2023), who stated that challenges in teaching and learning processes, including differences in students' abilities, time constraints, and curriculum changes, require complex adjustments in instructional strategies. Furthermore, Muhammad Fitri Ab Kadir et al. (2025) emphasised that the integration of technology in collaborative learning requires strong systemic support to ensure effective implementation.

The role of teachers as facilitators within digital learning environments has also become increasingly demanding, particularly due to the need to master a wide range of technological applications and platforms (Suhaida Mohd Sukis et al., 2023).

At the same time, several studies have emphasised that although gamification demonstrates positive effects on students' motivation, its effectiveness in improving academic achievement remains inconsistent and is influenced by various external factors. A study by Masnih Mustapa and Nurilma Ambo (2025) found that the use of gamification did not show a significant relationship with students' academic achievement, despite the high rate of academic success reported among participants. This finding suggests that motivational elements alone are insufficient to ensure comprehensive learning outcomes. In addition, a study conducted by Nor Hadibah Hushaini et al. (2022) revealed that although students exhibited high levels of interest and acceptance toward gamification, its long-term effectiveness still requires further investigation. Similarly, Milagros Torrado Cespón and Patricia Bárcena Toyos (2025) stated that while gamification enhances students' satisfaction and learning experiences, the aspect of social interaction still needs to be strengthened in order to achieve a more holistic learning impact.

Overall, the literature review indicates that the primary challenges associated with the use of gamification among pre-service Islamic Education teachers encompass aspects of competency, pedagogical implementation, and systemic support factors. A study conducted by Mohd Faruze Iberahim and Norah Md Noor (2020) revealed that the level of gamification practices among teachers remains moderate despite their strong inclination toward its use. In addition, Nur Adibah Liyana Awi and Hafizhah Zulkifli (2021) emphasised that teachers' creativity in 21st-century learning environments constitutes an important factor in ensuring the effectiveness of teaching and learning processes. Furthermore, Noor Azli Mohamed Masrop et al. (2025) highlighted that the implementation of gamification-based pedagogical models requires systematic and structured planning to ensure effectiveness, particularly within the context of Arabic language learning. Therefore, it can be concluded that the challenges faced are multidimensional in nature and require a holistic approach to ensure that gamification can be implemented effectively within Islamic Education.

Methodology

This study employed a Systematic Literature Review (SLR) approach using the PRISMA framework to ensure a high level of transparency and analytical quality throughout the research process. This approach was selected due to its effectiveness in assisting researchers to systematically and transparently identify, screen, evaluate, and analyse previous studies (Halaman et al., 2020). To achieve the objectives of the study, the literature search process was conducted using four major databases, namely Scopus, Web of Science, ERIC, and Google Scholar

The study implemented the four stages of the PRISMA framework, namely identification, screening, eligibility assessment, and data abstraction. From a total of 431 articles initially identified, the preliminary screening process through title and abstract review resulted in 200 potentially relevant articles. Following the eligibility assessment based on full-text evaluation and the predetermined inclusion criteria which is that the studies must focus on gamification, involve pre-service teachers, and relate to the context of Islamic Education

and a final total of 23 articles was selected for analysis. The data extracted from these articles were subsequently analysed according to the main themes of the study, namely the readiness and competencies of pre-service teachers, challenges in the implementation of gamification, and factors related to support and contextual influences. This approach ensured that the literature review was focused, systematic, and capable of contributing to a comprehensive understanding of the research issue within the field of technology-based Islamic Education.

Identification

In this study, the identification stage refers to the process of determining and diversifying appropriate keywords to be used in the article search process and reference selection for the implementation of the Systematic Literature Review (SLR). Keywords play a crucial role in the search process, as they enhance the accuracy and relevance of the references obtained for use in this study. This process began with the selection of keywords, which was carried out based on the formulated research questions. To diversify the range of keywords used, synonymous terms, related words, and variations of the main keywords were also identified. The search for these keywords was conducted through the use of online thesauruses, references to keywords employed in previous studies, consultation of the Scopus database, and expert opinions. The results of the identification process are presented in Table 1.

Table 1
Keywords Used for Article Search

DATABASE SEARCH STRING	
SCOPUS	("Islamic education" OR "Islamic pedagogy" OR "Islamic teaching") AND ("trainee teacher" OR "teacher training" OR "pre-service teacher" OR "student teacher") AND ("gamification" OR "game-based learning" OR "game mechanics" OR "playful learning") AND ("challenges" OR "issues" OR "barriers" OR "obstacles")
WOS	("gamification" OR "game-based learning") AND ("pre-service teacher" OR "teacher") AND ("challenges" OR "barriers" OR "issues")
ERIC	("Islamic Education" OR "religious education") AND ("pre-service teachers" OR "teacher trainees") AND (gamification OR "game-based learning") AND ("teaching and learning" OR instruction)
GOOGLE SCHOLAR	("gamifikasi" OR "pembelajaran berasaskan permainan") AND ("pendidikan Islam" OR "pengajian Islam") AND ("guru pelatih") AND ("cabaran" OR "isu" OR "kekangan")

Based on the selected keywords, the article search process was conducted across four major databases, namely Scopus, Web of Science, ERIC, and Google Scholar. These databases were selected based on several notable advantages. Firstly, according to a study conducted by Gusenbauer and Haddaway (2020), databases such as Scopus and ERIC possess strengths in terms of comprehensive search coverage, more stable search results, and a wider range of advanced search functions compared to other databases. Similarly, Martín-Martín et al. (2018) highlighted the advantages of Scopus and ERIC in relation to quality control and systematic indexing systems. This study also selected Google Scholar as one of the search

sources. Although Shaffril et al. (2020) identified several limitations of this database, particularly in terms of quality control, Haddaway et al. (2015) emphasised its strengths in terms of the large volume of articles available, broader language coverage, and wider disciplinary scope. Consequently, Google Scholar was utilised as a supplementary database to support the literature search process.

The search technique employed to retrieve articles from Scopus, Web of Science, and ERIC involved advanced searching using several fundamental search functions, including Boolean operators (AND, OR), phrase searching, truncation, wildcard symbols, and field code functions. In addition to these techniques, manual searching through the handpicking method in Google Scholar, as well as the snowballing technique applied to selected articles, was also utilised. Based on the selected keywords, databases, and search techniques employed, a total of 425 articles were successfully retrieved. All identified articles subsequently proceeded to the second stage of the systematic search strategy, namely the screening process.

Screening

A total of 425 articles obtained during the identification phase underwent the screening process. Screening refers to the process of establishing inclusion and exclusion criteria to ensure that only relevant articles are selected for the development of the Systematic Literature Review (SLR) (Shaffril et al., 2020). In this study, the first criterion applied was the year of publication, whereby only studies published within the most recent five-year period (2020–2026) were included. The selection of this timeframe is consistent with the concept of *study maturity*, which emphasises the importance of research development within a particular field (Kraus et al., 2020), while also ensuring that the findings remain relevant to current developments (Snyder, 2019). Furthermore, to ensure the quality of the review, only peer-reviewed journal articles were selected (Denyer & Tranfield, 2009). In terms of language, only articles published in Malay and English were included to ensure clarity of understanding and accuracy in the analytical process (Booth et al., 2016). Additionally, only articles containing empirical data were incorporated into this study, whereas review-based articles were excluded, as the purpose of this research was to analyse findings derived from previous empirical studies (Petticrew & Roberts, 2006).

Another inclusion criterion applied in this study was related to the focus of the research findings. The selected articles were required to specifically report findings associated with the use of gamification in teaching and learning sessions. Articles that merely indicated the use of technology or digital devices such as laptops, computers, or smartphones, without explicitly clarifying whether gamification elements were employed within the teaching and learning context, were excluded from the review. This screening process was essential to ensure that all selected articles genuinely contributed findings that were relevant and significant to the objectives of this Systematic Literature Review (SLR). Following the screening process, a total of 225 articles were excluded for failing to meet the established criteria and leaving 200 articles available for the subsequent stage of the review process.

Table 2
Screening Process Table

	Inclusion Criteria	**Exclusion Criteria**
Year of Publication	Articles published between 2020 and 2026	Articles published before 2020
Type of Publication	Journal articles	Publications other than journal articles, such as proceedings, technical reports, books, and theses
Language	Articles published in Malay and English	Articles published in languages other than Malay, English, or Indonesian
Type of Findings	Empirical studies	Non-Empirical Studies
Focus of Findings	Studies related to the challenges faced by pre-service Islamic Education teachers in the use of gamification in teaching and learning processes	Articles unrelated to the challenges faced by pre-service Islamic Education teachers in implementing gamification in teaching and learning processes

Eligibility Phase

All selected articles subsequently underwent a second screening process, commonly referred to as the eligibility phase. This phase was conducted to ensure that all selected articles were genuinely relevant and suitable for inclusion in this Systematic Literature Review (SLR). The process involved examining the titles and abstracts of the selected articles. In cases where the relevance of an article could not be clearly determined through its title and abstract alone, further evaluation was carried out by reviewing the methodology, findings, and discussion sections of the study. This step was undertaken to ensure that only articles closely aligned with the scope of the present SLR were selected for analysis. During this process, a total of 70 articles were assessed, of which 47 articles were excluded due to their lack of alignment with the study focus or because they had been published prior to 2020. As a result of this eligibility process, 23 articles were selected to proceed to the next stage, namely the quality assessment phase.

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only

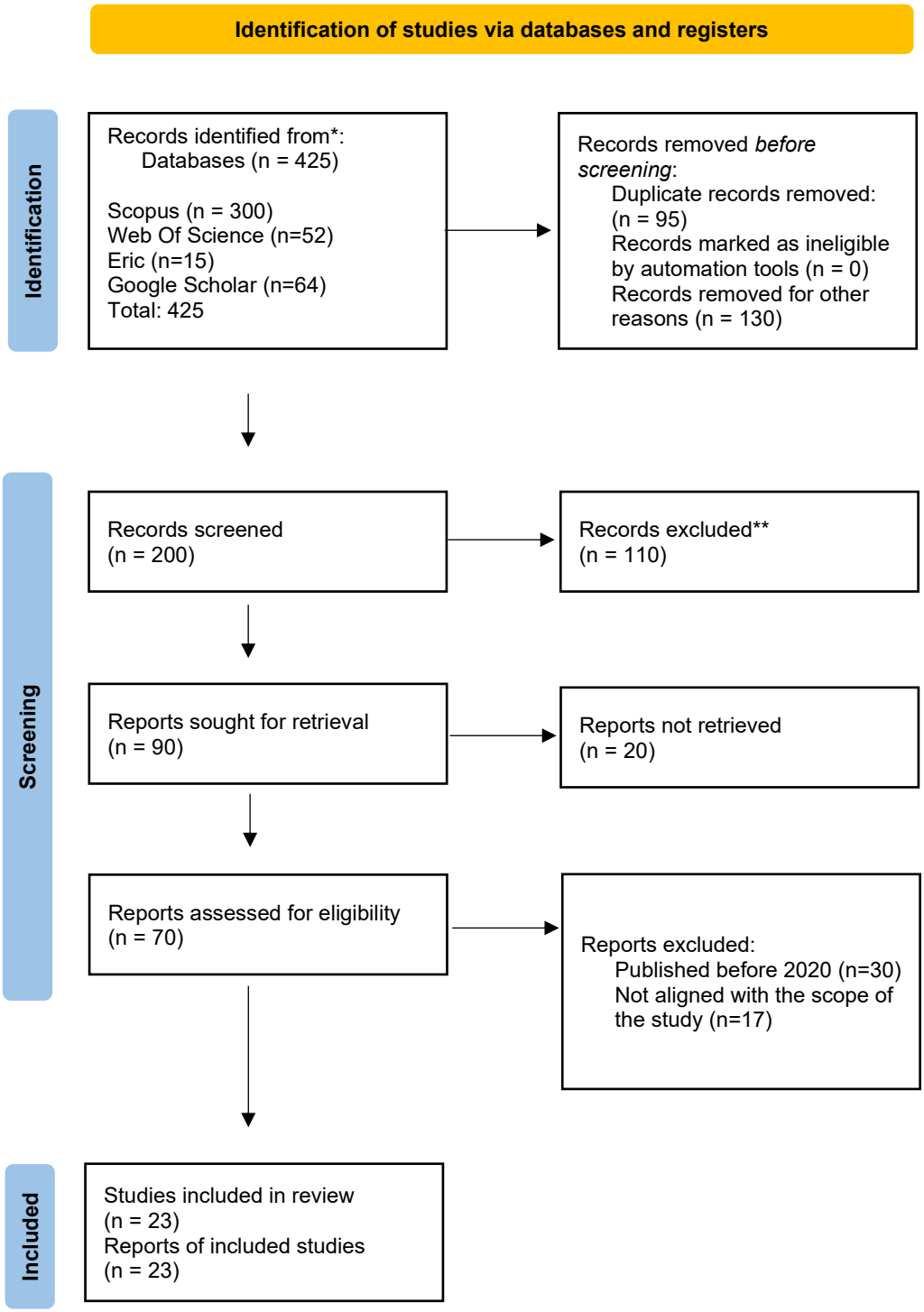

Figure 1: Proposed Study Search Flow Diagram

Article Quality Assessment

Each selected article or reference was first evaluated in terms of its quality prior to inclusion in the review. This step was essential to minimise the possibility of bias and to identify any methodological weaknesses that might affect the rigour and reliability of the study findings (Higgins et al., 2019). A total of two evaluators, selected from among the researchers, were involved in conducting the quality assessment process. As this Systematic Literature Review (SLR) involved articles employing various research designs, including quantitative, qualitative, and mixed-methods approaches, the quality assessment process was conducted using the *Mixed Methods Appraisal Tool* (MMAT) as a guiding framework to ensure systematic and consistent evaluation procedures (Hong et al., 2018).

Each selected article or reference was evaluated based on two fundamental criteria and five specific criteria determined according to the research design employed in the respective study. The assessment process began with two preliminary criteria. The first criterion examined whether the research questions were clearly stated, while the second criterion assessed whether the collected data were capable of adequately addressing the stated research questions. Only articles that fulfilled both of these preliminary criteria proceeded to the subsequent stage of evaluation. Thereafter, each article was classified according to its respective research design and assessed using five specific criteria. Each criterion was evaluated using three response options: *Yes*, *No*, or *Can't tell*, the latter being selected when the evaluators were uncertain or when insufficient information was available to make a clear judgement. To ensure consistency and reliability in the evaluation process, both evaluators were required to reach mutual agreement on every assessment conducted. In cases where agreement could not be achieved, a second opinion was sought. Only articles or references that fulfilled at least three out of the five specific criteria were considered to be of sufficient quality and were subsequently included in the Systematic Literature Review (SLR).

A total of 23 articles were evaluated in this study. Overall, all selected articles fulfilled the minimum criteria that had been established and were therefore included for analysis in the Systematic Literature Review (SLR). The evaluation process also involved discussions between the two evaluators to achieve consensus regarding the final assessment decisions. This approach indirectly enhanced the reliability and transparency of the study findings. Out of the 23 articles that was evaluated, 19 articles fulfilled at least three of the specified criteria and were therefore included in this Systematic Literature Review (SLR), while 4 articles were excluded for failing to meet the minimum criteria established for inclusion (Appendix 1).

Appendix 1: Article Evaluation Criteria Table

Basic Criteria	Mohd Noor et al., (2021)	Nur Adibah Liyana & Hafizhah Zulkifli (2021)	Tengku Sarina et al. (2022)	Wan Abdullah (2022)	Hamballi & Lubis (2022)	Sukis et al., (2023)	Zaidi & Othman (2023)	Christos Papakostas (2024)	Muhammad Fitri Ab Kadir et al., (2025)
Are the research	Y	Y	Y	Y	Y	Y	Y	Y	Y

questions clearly stated?									
Are the data obtained capable of addressing the stated research questions?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Qualitative Criteria									
Is the qualitative approach employed appropriate for addressing the research questions?	Y	Y	Y	Y	N	N	N	Y	Y
Is the qualitative data collection methodology employed adequate for addressing the research questions?	C	C	Y	Y	C	C	C	C	C
Are the findings derived from the data sufficiently substantiated?	Y	Y	Y	Y	N	N	N	Y	N
Are the interpretations of the findings supported by the data?	Y	Y	Y	Y	N	C	C	Y	N

Is there a coherence between the data sources, data collection, analysis, and interpretation of the qualitative data?	Y	Y	Y	Y	C	C	C	Y	C
Decision	Accepted	Accepted	Accepted	Accepted	Rejected	Rejected	Rejected	Accepted	Rejected

Basic criteria	Mohd Faruze Iberahim, Norah Md Noor (2020)	Sabilan et al., (2022)	Hushaini et al., (2022)	Muhammad Fikri Mohd Faudzi et al., (2024)	Ahmad Farouq et al., (2024)	Auni Iwani & Fauziah (2024)	Mohamed Asri (2024)	Masnih Mustapa, Nurilma Ambo (2025)	Milagros, Patricia (2025)
Are the research questions clearly stated?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Are the data obtained capable of addressing the stated research questions?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quantitative Criteria									
Is the sampling strategy employed appropriate for addressing the	Y	Y	Y	Y	Y	Y	Y	Y	Y

research questions?									
Is the selected sample representative of the population under study?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Are the measurement instruments employed appropriate?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is the risk of nonresponse bias low?	C	C	C	C	C	Y	C	Y	Y
Is the statistical analysis used appropriate for addressing the research questions?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Decision	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
Basic Criteria	Ariza Abdullah et al., (2024)								
Are the research questions clearly stated?	Y								

Are the data obtained capable of addressing the stated research questions?	Y								
Quantitative Criteria									
Is the sampling strategy employed appropriate for addressing the research questions?	Y								
Is the selected sample representative of the population under study?	Y								
Are the measurement instruments employed appropriate?	Y								
Is the risk of nonresponse bias low?	Y								
Is the statistical analysis used appropriate for addressing the research questions?	Y								

Decision	Accepted								

Basic Criteria	Afsoon Asadzadeh et al., (2024)	Mohammad Najib Jaffar., (2024)	Mei-Shiu Chiu et al., (2025)	Noor Azli Mohamed Masrop et al., (2025)					
Are the research questions clearly stated?	Y	Y	Y	Y					
Are the data obtained capable of addressing the stated research questions?	Y	Y	Y	Y					
Mixed-Methods Criteria									
Is there a clear rationale for employing mixed methods to address the research questions?	Y	Y	Y	Y					
Are the different components of the study effectively integrated to address the research questions?	Y	Y	Y	Y					
Are the integrated qualitative and quantitative findings interpreted appropriately?	Y	Y	Y	Y					
Are the divergences and inconsistencies between the quantitative and qualitative findings	Y	Y	C	Y					

adequately addressed?									
Do the different components of the study comply with the quality criteria for each respective research design involved?	Y	Y	C	Y					
Decision	Accepted	Accepted	Accepted	Accepted					

Data Extraction and Analysis

The subsequent stage involved the process of extracting data from the articles that had successfully passed the quality assessment phase. This process was conducted by two researchers to ensure the accuracy and consistency of the information obtained. Since the focus of this Systematic Literature Review (SLR) concerns the challenges faced by pre-service Islamic Education teachers in implementing gamification within teaching and learning processes, the data extraction process concentrated on three main sections of each article, namely the abstract, findings, and discussion sections. In cases where relevant information was identified in other sections of the articles, further reading was undertaken to ensure that all necessary data were comprehensively obtained. All extracted data were subsequently organised in tabular form to facilitate the subsequent analytical process.

Once the relevant data had been successfully extracted, the next step involved conducting data analysis. As this Systematic Literature Review (SLR) was designed as an integrative review involving various research designs, including quantitative, qualitative, and mixed-methods studies, the most appropriate analytical approach was qualitative synthesis (Whittemore & Knafl, 2006). Within qualitative synthesis, several analytical approaches may be employed, and according to Flemming et al. (2018), thematic analysis is among the most effective techniques for examining findings derived from studies involving diverse research designs. The purpose of thematic analysis is to identify recurring patterns or themes within previous research findings based on the similarities and relationships identified among the extracted data. To identify appropriate themes, each extracted finding was examined carefully and systematically. Findings that demonstrated clear similarities or relationships were grouped into the same data category. Each group was subsequently assigned an appropriate theme based on the nature and content of the findings. As a result of this process, three major themes were identified, namely:

1. Readiness and Competencies of Pre-Service Teachers in Implementing Gamification
2. Implementation of Gamification within the Context of Islamic Education
3. Contextual Factors and Systemic Support Influencing the Effectiveness of Gamification

Subsequently, all identified themes underwent a validation process involving two experts, namely a specialist in the field of Systematic Literature Review (SLR) and another expert in module development. The evaluation conducted by both experts demonstrated consensus

that the three main themes developed were appropriate and relevant to the research questions established in this study.

Table 3
Themes

Study	Research Design	Themes		
		Teachers' Competency Readiness in Implementing Gamification	Implementation of Gamification in the Context of Islamic Education	Contextual Factors and Systemic Support for the Effectiveness of Gamification
1.	QL		/	
2.	QL		/	/
3.	QL		/	/
4.	QL		/	
5.	QL		/	/
6.	QN	/		
7.	QN	/		
8.	QN		/	
9.	QN		/	
10.	QN		/	
11.	QN	/	/	
12.	QN	/		
13.	QN	/		/
14.	QN		/	
15.	QN		/	
16.	MX	/	/	
17.	MX		/	/
18.	MX	/	/	/
19.	MX	/	/	

QL-Quanlitatif, QN-Quantitatif, MX- Mixed-Method

Findings

Background of the Articles

Before discussing the main findings, this section focuses on the background of the articles selected for inclusion in the Systematic Literature Review (SLR). Out of the 19 selected journal

articles, empat were published in 2025, lima in 2024, satu in 2023, tiga in 2022, satu in 2021, and one in 2020.

Main Findings

Readiness and Competencies of Pre-Service Teachers in Implementing Gamification

In general, the level of readiness among pre-service teachers can be considered satisfactory; however, a gap still exists between theoretical knowledge and practical implementation in classroom settings. A study conducted by Muhammad Fikri Mohd Faudzi et al. (2024) found that pre-service teachers possessed a high level of understanding regarding the concept of gamification, yet not all were able to apply it effectively in teaching and learning processes. This finding is consistent with the study by Ahmad Farouq Ahmad Nasri et al. (2024), which revealed that although pre-service teachers were exposed to gamification approaches during teacher training, the actual level of implementation during practicum remained low. In addition, Mohamed Asri (2024) emphasised that the mastery of technology-based pedagogical skills among pre-service teachers has yet to reach an optimal level, despite their relatively good level of knowledge. This situation illustrates that readiness is not solely dependent on theoretical understanding, but also involves practical skills and teaching experience within authentic classroom contexts.

Apart from knowledge-related factors, technical and pedagogical competencies also influence the ability of pre-service teachers to implement gamification effectively. A study conducted by Sapie Sabilan et al. (2022) revealed that the level of technological skills among Islamic Education teachers remains moderately low, consequently affecting their ability to integrate gamification elements into teaching and learning processes. This finding is further supported by Masnih Mustapa and Nurilma Ambo (2025), who found that although gamification is capable of enhancing students' motivation, the effectiveness of its implementation largely depends on teachers' competency in managing instructional strategies. Furthermore, Noor Azli Mohamed Masrop et al. (2025) explained that the development of gamification-based pedagogical models requires a clear understanding of teachers' needs, learning objectives, and appropriate assessment methods. Therefore, limitations in technical and pedagogical skills constitute a major challenge that prevents pre-service teachers from utilising gamification to its fullest potential.

Within the context of professional readiness, factors such as training and early exposure also play a significant role in shaping the competencies of pre-service teachers. A study by Nur Adibah Liyana Awi and Hafizhah Zulkifli (2021) emphasised that teachers must possess a high level of creativity in teaching and learning processes to meet the demands of 21st-century education. This finding is further supported by Auni Iwani Anuar and Fauziah Che Leh (2024), who found that the implementation of game-based learning among pre-service teachers still requires improvement, particularly in terms of pedagogical approaches and practical execution. In addition, Afsoon Asadzadeh et al. (2024) explained that the development of effective educational games requires a comprehensive understanding of design principles as well as students' learning needs. This indicates that the training provided to pre-service teachers should place greater emphasis on practical application and the development of authentic teaching competencies, rather than focusing solely on theoretical knowledge.

In addition, the analysis revealed that the readiness of pre-service teachers cannot be separated from factors related to attitudes and acceptance of technology. A study conducted by Nor Hadibah Hushaini et al. (2022) found that students demonstrated high levels of interest and acceptance toward gamification; however, the success of its implementation depends largely on teachers' readiness to adapt and apply such approaches. This finding is further associated with the study by Mohd Faruze Iberahim and Norah Md Noor (2020), which showed that although teachers exhibited a strong inclination toward gamification, the actual level of implementation remained moderate. Furthermore, a study by Milagros Torrado Cespón and Patricia Bárcena Toyos (2025) indicated that pre-service teachers require continuous support to enhance their confidence in applying gamification within teaching and learning processes. Therefore, factors such as attitudes, motivation, and self-confidence constitute essential components in determining the actual level of readiness among pre-service teachers.

The analysis of Theme 1 demonstrates that the readiness and competencies of pre-service teachers in implementing gamification are multidimensional in nature, encompassing aspects of knowledge, skills, attitudes and experience. Although the level of readiness appears to be high in terms of theoretical knowledge, limitations related to technical skills, practical experience and self-confidence continue to represent major challenges. This situation highlights the need to strengthen teacher training programmes through a more practice-oriented approach, as well as the provision of continuous support to ensure that pre-service teachers are capable of implementing gamification effectively within Islamic Education teaching and learning processes.

Implementation of Gamification within the Context of Islamic Education

The use of gamification in teaching and learning processes possesses significant potential in enhancing students' engagement and motivation; however, its implementation requires careful adaptation to the context of Islamic Education. A study conducted by Kitikedizah binti Hambali and Maimun Aqsha Lubis (2022) found that gamification elements such as rewards, challenges, and interaction are capable of stimulating students' interest in Islamic Education teaching and learning processes. This finding is consistent with the study by Tengku Sarina Aini Tengku Kasim et al. (2022), which explained that the use of technology in Islamic learning can support students' character development when implemented in a systematic and well-planned manner. In addition, Mohammad Najib Jaffar et al. (2024) demonstrated that the gamification approach in Arabic language learning successfully improved students' vocabulary mastery and levels of engagement. These findings indicate that the implementation of gamification in Islamic Education offers distinct advantages when pedagogical and technological elements are integrated in a balanced and meaningful manner.

Nevertheless, the implementation of gamification in Islamic Education cannot be carried out in a generalised manner without considering religious values and principles. A study conducted by Wan Ali Akbar Wan Abdullah (2022) emphasised that gamification design must adhere to Shariah guidelines to ensure that the content delivered does not contradict Islamic teachings. In addition, Mohd Noor et al. (2021) stated that Islamic Education teachers function as *murabbi*, whose role extends beyond the transmission of knowledge to include the moral and character development of students through appropriate pedagogical approaches. Furthermore, a study by Sukis et al. (2023) highlighted that the use of digital

assessment in Islamic Education must consider the balance between technological elements and spiritual values. Therefore, the implementation of gamification within this context requires a careful integration of entertainment elements and Islamic educational values to ensure that the objective of character formation is not compromised.

In addition, challenges in the implementation of gamification are closely associated with teachers' ability to adapt instructional strategies within digital learning environments. A study conducted by Mohd Shahrani Muhamad Zaidi and Mohamad Khairi Haji Othman (2023) revealed that Islamic Education teachers face various challenges in teaching and learning processes, including time constraints, differences in students' proficiency levels, and curriculum changes. This finding is further supported by Ab Kadir et al. (2025), who stated that the integration of technology in collaborative learning requires systematic planning to ensure effective implementation. Furthermore, Papakostas (2024) explained that game-based learning requires a clearly structured pedagogical design to ensure alignment between learning objectives and gameplay activities. Therefore, the implementation of gamification depends not only on the availability of technology, but also on teachers' ability to plan and execute appropriate instructional strategies effectively.

Within the context of implementation effectiveness, the findings indicate that gamification is capable of enhancing the learning experience; however, its impact on academic achievement is not always consistent. A study conducted by Masnih Mustapa and Nurilma Ambo (2025) found that although gamification increased students' motivation, its effect on academic achievement did not demonstrate a significant relationship. This finding is consistent with the study by Nor Hadibah Hushaini et al. (2022), which revealed that students' level of interest in gamification was high, yet its long-term effectiveness still requires further investigation. Furthermore, Milagros Torrado Cespón and Patricia Bárcena Toyos (2025) explained that the implementation of gamification in higher education enhances students' satisfaction, but requires stronger social interaction support in order to achieve optimal learning outcomes. Therefore, the effectiveness of gamification implementation in Islamic Education should be evaluated holistically, rather than being assessed solely on the basis of motivational aspects.

Overall, the implementation of gamification within the context of Islamic Education demonstrates considerable potential in enhancing the quality of teaching and learning processes. Nevertheless, its implementation requires a balanced approach that integrates technology, pedagogy, and Islamic values. The findings indicate that the success of gamification implementation depends on teachers' ability to integrate game elements with learning objectives while ensuring alignment with Shariah principles. In addition, challenges in implementation involve factors such as pedagogical planning, time constraints, and variations in students' proficiency levels, all of which require continuous adaptation. Therefore, the implementation of gamification in Islamic Education should be carried out systematically and guided by clear principles to ensure its long-term effectiveness.

Contextual Factors and Systemic Support Influencing the Effectiveness of Gamification

The effectiveness of gamification implementation does not depend solely on the individual capabilities of teachers, but is also influenced by the educational environment and the availability of systemic support. A study conducted by Sapie Sabilan et al. (2022) found that

teachers' readiness in terms of technological skills remains at a moderately low level, which indirectly affects the implementation of technology-based approaches such as gamification. This finding is consistent with the study by Mohd Shahrani Muhamad Zaidi and Mohamad Khairi Haji Othman (2023), who emphasised that challenges in teaching and learning processes, including time constraints, variations in students' proficiency levels, and curriculum changes, affect teachers' ability to adapt to new pedagogical approaches. Furthermore, Muhammad Fitri Ab Kadir et al. (2025) stated that the implementation of technology-based learning requires strong systemic support, including adequate infrastructure, training, and effective management. These findings indicate that contextual factors play a significant role in determining the successful implementation of gamification in teaching and learning processes.

Apart from infrastructural aspects, institutional support and educational policies also influence the effectiveness of gamification implementation in Islamic Education. A study conducted by Suhaida Mohd Sukis et al. (2023) revealed that the use of technology in digital assessment requires continuous support from educational administrators, as well as the provision of appropriate technological platforms. This finding is further supported by Noor Azli Mohamed Masrop et al. (2025), who emphasised that the development of gamification-based learning applications requires collaboration among multiple stakeholders, including technology experts, educators, and policy makers. In addition, Afsoon Asadzadeh et al. (2024) explained that the development of effective educational games requires systematic planning involving multiple components such as content, design, and user needs. Therefore, the effectiveness of gamification depends not only on teachers, but also on comprehensive support from the broader educational system.

In addition, learning environments and school culture also influence the level of acceptance and effectiveness of gamification implementation. A study conducted by Nor Hadibah Hushaini et al. (2022) found that students demonstrated high levels of interest and acceptance toward gamification; however, its successful implementation depends on the availability of a conducive learning environment. This finding is further associated with the study by Mohd Faruze Iberahim and Norah Md Noor (2020), which revealed that although teachers showed a strong inclination toward using gamification, the actual level of practice remained moderate due to environmental constraints. Furthermore, Milagros Torrado Cespón and Patricia Bárcena Toyos (2025) explained that the implementation of gamification requires active social interaction support to ensure effective learning outcomes. Therefore, school culture and the learning environment play a significant role in determining the success of gamification implementation in teaching and learning processes.

Within a broader context, the integration of gamification in education is also influenced by the alignment between technology, pedagogy, and learning content. A study conducted by Christos Papakostas (2024) demonstrated that game-based learning requires a clearly structured pedagogical design to ensure alignment between learning objectives and the activities implemented. This finding is consistent with the study by Mei-Shiu Chiu et al. (2025), which emphasised that the effectiveness of technology integration in teaching and learning processes depends on achieving a balance between cognitive, affective, and social dimensions. Furthermore, Wan Ali Akbar Wan Abdullah (2022) asserted that within the context of Islamic Education, the use of gamification must comply with Shariah guidelines to

ensure that learning content does not contradict religious values. Therefore, systemic factors involving the alignment of technology, pedagogy, and values constitute essential elements in ensuring the effectiveness of gamification implementation. The analysis of Theme 3 demonstrates that the effectiveness of gamification in Islamic Education teaching and learning processes is influenced by various interrelated contextual factors and forms of systemic support. Constraints related to infrastructure, teacher training, institutional support, and school culture constitute major challenges that require serious attention. In addition, the need for systematic pedagogical planning and alignment with Islamic values also emerges as an important factor in ensuring effective implementation. Therefore, a holistic approach involving all stakeholders within the educational system is necessary to ensure that gamification can be implemented effectively and sustainably within the context of Islamic Education

list Of Selected Articles

No.	Author(s) & Year	Title of the Study	Purpose of the Study	Methodology / Sample	Findings
1	Milagros & Patricia (2025)	An example of gamification for pre-service teachers in online higher education	To analyse pre-service teachers' perceptions of the use of gamification in online teaching and learning.	Qualitative study involving pre-service teachers in higher education institutions in Spain.	Gamification enhanced the motivation and engagement of pre-service teachers.
2	Tengku Sarina Aini et al., (2022)	Challenges Faced by Teachers in Character Development Through E-Learning in Islamic Education	To identify the challenges faced by teachers in developing students' character through e-learning.	Thematic analysis based on interviews with Islamic Education teachers.	Teachers encountered challenges related to ICT skills, time constraints, and limited teaching resources.
3	Mohd Shahrani & Mohamad Khairi (2023)	Challenges Faced by Islamic Education Teachers in Implementing the Secondary School Standard Curriculum (KSSM)	To examine the challenges encountered by Islamic Education teachers in implementing effective teaching practices.	Qualitative study involving Islamic Education teachers.	Curriculum pressure and insufficient training were identified as major challenges for Islamic Education teachers.
4	Ariza Abdullah et al., (2024)	Innovation of Traditional Games in the Teaching and Learning of Foreign Languages	To explore innovations in traditional games for strengthening teaching and learning processes in foreign language education.	Case study involving language teachers and students.	Traditional game innovations increased students' enjoyment and comprehension.

5	Auni Iwani Anuar & Fauziah Che Leh (2024)	Understanding, Approaches, and the Impact of Teaching Practices Among UPSI Geography Pre-Service Teachers Through Game-Based Learning (GBL)	To evaluate teachers' understanding of instructional approaches and their impact on teaching practices.	Survey involving pre-service geography teachers at UPSI.	Teachers demonstrated clear understanding of the approaches, although implementation barriers remained present.
6	Sapie Sabilan et al., (2022)	The Readiness Level of Islamic Education Teachers in Implementing Blended Learning Based on Technological Skills	To examine teachers' level of readiness in implementing technology-based integrated teaching and learning.	Survey involving Islamic Education teachers from various states.	Teachers were prepared to implement integrated teaching and learning approaches; however, limitations in specific technological skills were identified.
7	Mohd Faruze Iberahim, Norah Md Noor (2020)	Gamification Practices in Teaching and Facilitation Among Primary School Teachers in the State of Johor	To investigate gamification practices among teachers in lower secondary schools.	Survey involving lower secondary school teachers in Johor.	Gamification practices were implemented, although the level of implementation remained inconsistent and not yet comprehensive.
8	Afsoon et al., (2024)	Serious educational games for children: A comprehensive framework	To develop a framework for the construction of serious educational games.	Literature review and conceptual framework analysis.	The framework demonstrated that educational games are more effective when designed systematically.
9	Mei-Shiu et al., (2025)	Valuing pedagogy in implementing an affect-focused mathematics teaching with technology support: Valuing playful teaching vs. game technology	To examine pedagogical values in the implementation of affect-focused mathematics teaching using technology-supported game elements.	Action research and reflective practice analysis.	Games emphasising emotional engagement contributed to more effective learning experiences.
10	Nur Adibah Liyana & Hafizhah Zulkifli (2021)	Creative Practices of Islamic Education Teachers in 21st-Century Learning	To analyse the creativity of Islamic Education teachers in 21st-century teaching and learning practices.	Qualitative study involving Islamic Education teachers.	Teachers demonstrated a high level of creativity; however, formal training opportunities remained limited.
11	Muhammad Fikri et al., (2024)	Skills and Readiness of Pre-Service Islamic Education Teachers Towards Gamification During Teaching Practicum	To evaluate the skills and readiness of pre-service Islamic Education teachers in implementing gamification.	Survey involving pre-service Islamic Education teachers.	Pre-service teachers were prepared to implement gamification, although they lacked practical experience and adequate support.

12	Mohammad Najib et al., (2024)	Development of a Gamification Model for Arabic Vocabulary Learning Among Higher Education Students	To develop and evaluate a gamification-based Arabic vocabulary learning model.	Design and development study involving university students.	The Arabic vocabulary gamification model effectively enhanced students' vocabulary mastery.
13	Ahmad Farouq et al., (2024)	Gamification Approaches in Teaching and Learning Among Teacher Education Institute Students During Practicum: Evaluating Professional Practice	To describe the gamification approaches employed by Teacher Education Institute students during practicum.	Structured interviews with Teacher Education Institute students during practicum.	Teacher trainees utilised various gamification techniques despite limited available resources.
14	Nur Eliza et al., (2021)	The Role of Teachers in Implementing E-Learning in Islamic Education from Al-Ghazali's Perspective	To examine the role of teachers in implementing e-learning in Islamic Education.	Interview analysis involving Islamic Education teachers.	Teachers functioned as facilitators in implementing virtual teaching and learning practices.
15	Nor Hadibah et al., (2022)	Students' Interest and Acceptance Towards Gamification-Based Teaching and Learning Materials in Malay Language Learning at the Lower Secondary Level	To evaluate students' levels of interest and acceptance toward gamification-based learning materials in Malay language education.	Survey involving lower secondary school students.	Students demonstrated a high level of interest in gamification-based learning materials that were appropriate to their educational level.
16	Izzaty Mohamed Asri & Zulina Ahmad Zawawi (2024)	The Level of Knowledge and Use of i-Think Mind Maps Among Islamic Education Teacher Trainees	To examine the level of knowledge and usage of i-Think mind maps among Islamic Education teacher trainees, as well as the relationship between the two variables.	Quantitative survey involving 111 Islamic Education teacher trainees at IPGKPI.	The findings indicated high levels of knowledge and usage, with a positive relationship identified between both variables.
17	Masnih Mustapa & Nurilma Ambo (2025)	The Effectiveness of Gamification on Students' Motivation and Academic Achievement at UCT101	To evaluate the effectiveness of gamification in enhancing students' motivation and academic achievement.	Quantitative study involving surveys and achievement analysis of 67 UiTM students.	Gamification was found to be less effective in improving motivation and showed no significant relationship with academic achievement.
18	Wan Ali Akbar Wan Abdullah (2022)	Guidelines for Shariah-Compliant Gamification Design	To explore guidelines for gamification design within the context	Qualitative case study involving eight participants.	The study identified ten Shariah-compliant gamification guidelines for

			of Islamic Education		innovation in Islamic Education.
19	Noor Azli Mohamed Masrop et al. (2025)	Development of Pedagogical Design Elements for the My Arabic Game-X Gamification Model in Arabic Language Learning	To develop a gamification-based pedagogical model for Arabic language learning.	Fuzzy Delphi method involving 22 experts.	The model demonstrated strong potential in enhancing students' motivation and the effectiveness of Arabic language learning.

Discussion of Findings

The discussion of the findings in this study reveals three major themes related to pre-service Islamic Education teachers in implementing gamification, namely the level of readiness and competency, challenges in gamification implementation, and contextual factors alongside systemic support influencing the effectiveness of gamification. The findings indicate that the readiness and competencies of pre-service teachers constitute fundamental factors influencing the effectiveness of gamification implementation in Islamic Education teaching and learning processes. Although most studies reported that pre-service teachers possess a high level of knowledge regarding gamification, their ability to apply such approaches consistently within classroom settings remains at a moderate level. Findings by Muhammad Fikri Mohd Faudzi et al. (2024) and Ahmad Farouq Ahmad Nasri et al. (2024) revealed a clear gap between theoretical knowledge and actual implementation during teaching practicum. In addition, Sapie Sabilan et al. (2022) emphasised that moderate levels of technological skills also serve as constraints for pre-service teachers in implementing gamification-based teaching and learning practices. These findings illustrate that the competencies of pre-service teachers are not solely dependent on theoretical knowledge, but also encompass practical skills, teaching experience, and confidence in managing technology-based teaching and learning environments.

From the perspective of gamification implementation within the context of Islamic Education, the findings indicate that this approach possesses considerable potential in enhancing students' motivation and engagement. Nevertheless, its implementation must be carefully aligned with Islamic values and principles. Studies conducted by Hambali and Lubis (2022), as well as Mohammad Najib Jaffar et al. (2024), demonstrated that gamification is capable of increasing students' interest and participation in the learning process. However, Wan Ali Akbar Wan Abdullah (2022) emphasised that gamification elements must be designed in accordance with Shariah principles to ensure their compatibility with religious values. Furthermore, Mohd Noor et al. (2021) highlighted the role of teachers as *murabbi* in shaping students' character development, which requires a balanced pedagogical approach that integrates both technological and moral dimensions. Therefore, the implementation of gamification in Islamic Education should not merely be viewed as a pedagogical innovation, but rather as an approach that must be integrated with the broader objective of nurturing students' moral character and values.

In addition, contextual factors and systemic support also play a crucial role in determining the effectiveness of gamification implementation. A study conducted by Ab Kadir et al. (2025) demonstrated that the effective integration of technology in learning requires strong systemic support, including adequate infrastructure and sufficient training. This finding

is further supported by Sukis et al. (2023), who emphasised the importance of institutional support in ensuring the smooth implementation of educational technology. Furthermore, Mohd Shahrani Muhamad Zaidi and Mohamad Khairi Haji Othman (2023) explained that challenges such as time constraints, variations in students' proficiency levels, and curriculum changes also affect teachers' ability to implement gamification effectively. Therefore, the successful implementation of gamification does not depend solely on individual teachers, but is also influenced by environmental factors, educational policies, and organisational support.

The findings of the study also indicate that although gamification is capable of enhancing students' motivation and interest, its effectiveness in improving academic achievement remains inconsistent. A study conducted by Masnih Mustapa and Nurilma Ambo (2025) found that the use of gamification did not demonstrate a significant relationship with academic achievement, despite students exhibiting high levels of motivation. This finding is consistent with the study by Nor Hadibah Hushaini et al. (2022), which revealed that students' acceptance of gamification was generally positive; however, its long-term impact on learning outcomes has yet to be conclusively determined. Furthermore, Milagros Torrado Cespón and Patricia Bárcena Toyos (2025) also emphasised that while gamification enhances the overall learning experience, it requires stronger pedagogical support to achieve optimal learning outcomes. These findings suggest that the effectiveness of gamification should be evaluated comprehensively by taking into account cognitive, affective, and social dimensions of learning.

The discussion of the findings indicates that the primary challenges associated with the use of gamification among pre-service Islamic Education teachers are multidimensional and interrelated in nature. Factors such as teachers' readiness and competencies, implementation aligned with Islamic values, and the availability of systemic support emerge as the main determinants influencing the effectiveness of gamification in teaching and learning processes. Although gamification possesses considerable potential to enhance the quality of learning, its implementation requires a more systematic approach, continuous professional training, and sustained support from various stakeholders within the educational system. Therefore, improvement efforts should focus on the development of pre-service teachers' competencies, the strengthening of systemic support, and the alignment between technology and Islamic values in education to ensure the long-term effectiveness of gamification implementation.

Recommendations for Future Research

The recommendations of this study emphasise the need to strengthen the training and professional development of pre-service Islamic Education teachers in the use of gamification through a more systematic approach. Teacher education programmes should place greater emphasis on practical skills and the authentic application of gamification in teaching and learning processes, rather than focusing solely on theoretical exposure. In addition, specialised training modules related to gamification that are aligned with the values and principles of Islamic Education should be developed to assist pre-service teachers in understanding this approach holistically. Further research is also recommended to examine the long-term effectiveness of gamification on students' academic achievement and character development. Experimental research may be conducted to measure the actual impact of gamification implementation within classroom settings. The role of institutional

support, including that provided by schools, administrators, and policy makers, should also be examined more extensively to ensure the effectiveness of implementation. Future studies may further focus on the development of a gamification pedagogical framework specifically designed for the context of Islamic Education.

The integration of technology and religious values should be further explored to ensure a balanced relationship between innovation and Shariah principles. Future studies may also be expanded across different educational levels to obtain a more comprehensive understanding of gamification implementation within Islamic Education. The use of a mixed-methods approach is recommended to generate more comprehensive and in-depth findings. In addition, cross-institutional studies may be conducted to compare the level of readiness among pre-service teachers across different educational institutions. Research focusing on the actual challenges encountered during teaching practicum should also be given greater attention. Future studies may further evaluate the effectiveness of technological support and infrastructure in facilitating the implementation of gamification. Moreover, research examining students' perceptions toward the use of gamification in Islamic Education is also worthy of exploration. Ultimately, these research recommendations are expected to contribute toward strengthening the implementation of gamification more effectively within the context of Islamic Education.

Conclusion

This study conducted a systematic analysis of 13 selected articles examining the use of gamification in teaching and learning processes. The analysis successfully identified three major themes, namely the level of readiness and competency, challenges of implementation within the framework of Islamic values, and factors related to systemic support. Nevertheless, this study also possesses several limitations. Among these limitations is the restricted scope of the analysed articles, which were confined to a specific time frame and predominantly focused on the local context, thereby limiting the broader generalisability of the findings. Despite these limitations, the study contributes to strengthening the understanding of the need to develop training approaches that integrate both technological and value-based dimensions. Furthermore, it provides a solid foundation for future research that is more intervention-oriented and contextually grounded.

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