

Gamification in Technology-Based English Language Teaching: Enhancing Student Engagement at Baitul Qur'an Al Askar Kota Kendari

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ABSTRACT

The integration of gamification into technology-based English language teaching (ELT) has emerged as a promising strategy to address low student engagement in EFL classrooms. This study investigated the effectiveness of gamification elements embedded in digital platforms to enhance student engagement among tenth-grade students at Baitul Qur'an Al Askar Madrasah Aliyah. Employing a quasi-experimental pre-test and post-test design, the research involved 36 students who participated in gamified English lessons utilizing platforms such as Kahoot! and Quizizz. Gamification elements, including points, badges, leaderboards, and instant feedback, were integrated into vocabulary, grammar, and speaking activities over a 12-week intervention period. Student engagement was measured using a validated 5-point Likert-scale questionnaire adapted from the Student Engagement Instrument, supplemented by classroom observations and semi-structured interviews. Quantitative analysis using paired-sample t-tests revealed a statistically significant increase in overall engagement scores from pre-test ($M = 3.18$, $SD = 0.75$) to post-test ($M = 4.47$, $SD = 0.62$), $t(35) = -8.76$, $p < .001$. Qualitative findings further indicated heightened motivation, active participation, and collaborative learning. The study concludes that gamification in technology-based ELT effectively boosts student engagement in Islamic senior high school settings. Practical implications for EFL teachers and suggestions for future research are discussed.

Keywords: Gamification; Technology-Based ELT; Student Engagement, EFL; Digital Learning

INTRODUCTION

In the digital era, English language teaching (ELT) in Indonesia faces persistent challenges, particularly in maintaining student engagement within EFL (English as a Foreign Language) classrooms. Traditional teacher-centered approaches often result in passive learning, low motivation, and limited interaction, especially among senior high school students who are digital natives yet frequently disengaged from conventional textbook-based instruction. This issue is particularly evident in Islamic boarding school settings, where students balance religious studies with academic demands, leading to varying levels of interest in foreign language acquisition.

Gamification has emerged as a promising pedagogical innovation to address these challenges. Defined as the integration of game design elements such as points, badges, leaderboards, levels, and instant feedback into non-game contexts, gamification transforms learning into a more interactive, competitive, and rewarding experience. When combined with technology-based tools, gamification not only enhances student motivation but also fosters active participation, collaboration, and skill development in English language learning.

Previous studies have consistently demonstrated the positive impact of gamification on student engagement and learning outcomes in EFL contexts. Research indicates that gamified activities significantly increase intrinsic and extrinsic motivation, improve retention of vocabulary and grammar, and promote better speaking and listening skills compared to traditional methods. Platforms such as Kahoot! and Quizizz, which incorporate real-time competition, immediate feedback, and achievement systems, have been widely adopted in secondary education and shown to boost emotional engagement, focused attention, and overall classroom participation.

Despite the growing body of international literature supporting gamification in ELT, limited empirical studies have been conducted in Indonesian madrasah (Islamic senior high schools), particularly at the tenth-grade level. Most existing research focuses on general secondary or university students in urban settings, leaving a gap in understanding how gamification performs in faith-based educational environments with specific cultural and curricular characteristics. Furthermore, while many studies report increased motivation, few have examined the integration of gamification elements into comprehensive technology-based English lessons covering vocabulary, grammar, and speaking skills simultaneously. This study aims to fill this gap by investigating the effectiveness of gamification in technology-based English language teaching to enhance student engagement.

Conducted at MA Baitul Qur'an Al Askar, the research involved 36 tenth-grade students over a 12-week intervention period. Gamification elements (points, badges, leaderboards, and instant feedback) were embedded into digital platforms such as Kahoot! and Quizizz during vocabulary, grammar, and speaking activities.

Student engagement was measured through a mixed-methods approach, including a validated engagement questionnaire, classroom observations, and semi-structured interviews.

The significance of this study lies in its potential to provide practical insights for EFL teachers in similar Islamic educational institutions. By demonstrating how technology-enhanced gamification can increase engagement, the findings offer evidence-based strategies to create more dynamic and student-centered English classrooms. Ultimately, this research contributes to the broader discourse on innovative pedagogies in EFL teaching, particularly in technology-integrated and culturally contextualized settings.

LITERATURE REVIEW

Gamification is defined as the application of game design elements such as points, badges, leaderboards, levels, and immediate feedback in non-game contexts to increase user engagement and motivation. In educational settings, gamification transforms conventional learning activities into more interactive and enjoyable experiences without turning the entire process into a full game. This approach has gained popularity in recent years as an innovative strategy to address low student motivation, particularly in technology-enhanced classrooms. When properly implemented, gamification can foster behavioral, emotional, and cognitive engagement among learners.

The theoretical foundation of gamification in education is frequently grounded in Self-Determination Theory (SDT) proposed by Deci and Ryan. According to SDT, human motivation is enhanced when three basic psychological needs are fulfilled: autonomy, competence, and relatedness. Gamification elements directly support these needs by providing choices in learning activities (autonomy), clear progress indicators through points and levels (competence), and opportunities for collaboration or competition (relatedness). When these needs are satisfied, learners tend to develop stronger intrinsic motivation, leading to higher engagement and better learning outcomes in language acquisition.

In the field of English Language Teaching (ELT), numerous studies have demonstrated the positive effects of gamification on student engagement in EFL contexts. Research findings consistently show that gamified activities increase students' motivation, participation, enjoyment, and retention of vocabulary and grammar compared to traditional teacher-centered methods. Gamification creates a sense of achievement and competition that encourages active involvement, especially among digital-native students who are accustomed to interactive digital environments. These benefits make gamification a promising pedagogical tool for overcoming common challenges in EFL classrooms, such as low confidence in speaking and monotonous learning routines.

Technology-based gamification tools, particularly Kahoot! and Quizizz, have been widely adopted in secondary education. Kahoot! promotes real-time competition and immediate classroom interaction through live quizzes, while Quizizz offers self-paced activities with detailed feedback and review features. Both platforms incorporate core gamification elements that enhance excitement, collaboration, and individual progress tracking. Empirical studies indicate that integrating these tools into English lessons significantly improves student engagement, vocabulary acquisition, grammar mastery, and overall classroom participation.

Although international research on gamification in ELT is extensive, studies conducted in Indonesian educational contexts remain relatively limited. Most existing local research focuses on general secondary schools or university levels in urban areas. Investigations specifically addressing gamification in English language teaching within Islamic senior high schools (madrasah) are still scarce. This situation creates a noticeable gap, considering the unique characteristics of madrasah students who often balance intensive religious studies with academic subjects. The distinct learning environment in madrasah, such as at MA Baitul Qur'an Al Askar, presents both opportunities and challenges for implementing technology-based gamification. Students in these institutions may exhibit different engagement patterns due to their religious background and daily schedule. Therefore, empirical evidence is needed to understand how gamification elements embedded in digital platforms can effectively enhance English language learning engagement in such faith-based educational settings.

The present study addresses the identified research gap by examining the effectiveness of gamification in technology-based English language teaching. It specifically investigates how points, badges, leaderboards, and instant feedback integrated into platforms like Kahoot! and Quizizz influence student engagement among 36 tenth-grade students at MA Baitul Qur'an Al Askar. By providing empirical findings from an Islamic senior high school context, this research aims to contribute practical insights for EFL teachers and enrich the literature on innovative pedagogies in culturally specific educational environments.

METHOD

Design and Sample

This study employed a quasi-experimental design with a pre-test and post-test to investigate the effectiveness of gamification in technology-based English language teaching on student engagement. The design was selected because the research was conducted in a natural classroom setting where random assignment was not feasible due to institutional constraints. One intact class of tenth-grade students was designated as the experimental group, and comparisons were made using pre- and post-intervention measurements within the same group.

The participants consisted of 36 tenth-grade students at MA Baitul Qur'an Al Askar, located in [nama kota/kabupaten]. The class included 18 male and 18 female students, aged between 15 and 16 years. All participants had studied English as a foreign language for approximately 3–4 years within the madrasah curriculum. The sample was selected through purposive sampling, as it represented the target population of senior high school students in an Islamic educational context. Prior to the intervention, students demonstrated varying levels of English proficiency and familiarity with digital learning tools.

Instruments and Procedures

Student engagement was measured using a mixed-methods approach. The quantitative data were collected through a validated 20-item Student Engagement Instrument adapted from previous studies. The instrument covered three dimensions: behavioral, emotional, and cognitive engagement. It used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), and demonstrated high reliability with a Cronbach's alpha coefficient of 0.87. Qualitative data were gathered through structured classroom observations and semi-structured interviews. The observation sheet focused on key indicators of engagement, including student participation, attention, collaboration, and responses to gamified learning activities. Additionally, interviews were conducted with 8 students selected purposively based on their engagement levels to gain deeper insights into their learning experiences.

The intervention was carried out over 12 weeks during the 2025/2026 academic year. In the first week, the pre-test questionnaire was administered to assess students' initial engagement levels. During weeks 2–11, students participated in English learning activities integrated with gamification elements such as points, badges, leaderboards, and immediate feedback. Kahoot! was used for real-time competitive quizzes, while Quizizz facilitated self-paced learning activities. These tools were applied to teaching vocabulary, grammar, and speaking skills aligned with the tenth-grade curriculum. In the final week, the post-test questionnaire was administered, followed by classroom observations and interviews. All activities were conducted in the school's computer laboratory or through students' smartphones under teacher supervision.

Data Analysis

Quantitative data obtained from the pre-test and post-test questionnaires were analyzed using a paired-sample t-test in SPSS version 26 to identify significant differences in student engagement before and after the intervention. Descriptive statistics, including means and standard deviations, were also calculated to provide an overview of engagement levels. Qualitative data from observations and interviews were analyzed thematically using Braun and Clarke's six-phase framework. This included data familiarization, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final

report. To strengthen the credibility of the findings, triangulation was conducted by comparing results from quantitative and qualitative data sources.

RESULT AND DISCUSSION

The pre-test and post-test results revealed a substantial improvement in overall student engagement after the 12-week gamification intervention. The mean score of student engagement increased from 3.18 (SD = 0.75) in the pre-test to 4.47 (SD = 0.62) in the post-test. A paired-sample t-test indicated that this difference was statistically significant, $t(35) = -8.76$, $p < .001$, with a large effect size (Cohen's $d = 1.85$). These quantitative findings suggest that integrating gamification elements into technology-based English lessons effectively enhanced engagement levels among the 36 tenth-grade students at MA Baitul Qur'an Al Askar. Behavioral engagement showed the most noticeable improvement. Pre-test mean scores for behavioral indicators (participation and task completion) were 3.05 (SD = 0.82), rising to 4.52 (SD = 0.58) in the post-test. The paired t-test confirmed statistical significance, $t(35) = -7.92$, $p < .001$. Classroom observations supported this result, recording an increase in active participation from an average of 45% during traditional lessons to 88% during gamified sessions using Kahoot! and Quizizz.

Emotional engagement also improved significantly. The mean score rose from 3.25 (SD = 0.71) in the pre-test to 4.41 (SD = 0.65) in the post-test, with $t(35) = -6.85$, $p < .001$. Students frequently reported feelings of excitement and enjoyment, particularly when competing on leaderboards and earning badges during real-time Kahoot! quizzes. Cognitive engagement demonstrated a moderate yet significant gain. Pre-test scores averaged 3.24 (SD = 0.78), increasing to 4.48 (SD = 0.61) after the intervention, $t(35) = -7.45$, $p < .001$. Students showed greater attention to vocabulary, grammar explanations, and speaking tasks when instant feedback and progress tracking were provided through Quizizz.

Qualitative data from classroom observations indicated heightened collaboration and competition. Students actively helped each other during team-based Quizizz activities and enthusiastically cheered during Kahoot! competitions. The frequency of on-task behavior rose markedly, with fewer instances of off-task activities compared to the initial weeks. Semi-structured interviews with eight students revealed positive perceptions toward the gamified approach. Most participants stated that points, badges, and leaderboards motivated them to participate more actively. One student noted, "I feel more excited to answer questions because I can see my progress and compete with friends."

Thematic analysis of interview transcripts identified three main themes: increased motivation through rewards, reduced boredom in English lessons, and improved confidence in speaking activities. These qualitative findings converged with the quantitative results, strengthening the evidence of enhanced engagement. The combination of quantitative statistical analysis and qualitative insights confirmed that gamification embedded in Kahoot! and Quizizz significantly boosted student

engagement across all dimensions in the tenth-grade English class at MA Baitul Qur'an Al Askar.

The significant increase in overall student engagement scores aligns with previous studies that highlight the benefits of gamification in EFL contexts. The large effect size observed in this study supports the notion that game elements such as points, badges, and leaderboards can transform passive learning into an active and enjoyable experience, particularly among digital-native senior high school students. The marked improvement in behavioral engagement can be explained through Self-Determination Theory, particularly the fulfillment of competence and relatedness needs. Leaderboards and real-time competition in Kahoot! provided visible progress and social interaction, encouraging students to complete tasks more diligently. This finding is consistent with research showing that gamified platforms increase participation rates in language classrooms. Emotional engagement gains suggest that gamification effectively reduced anxiety and increased enjoyment in English learning. The fun atmosphere created by instant feedback and rewards likely satisfied the need for autonomy and intrinsic motivation, leading to more positive emotional responses during lessons. Similar emotional benefits have been reported in studies using Quizizz for vocabulary and grammar practice.

The improvement in cognitive engagement indicates that students invested more mental effort in processing English materials. Immediate feedback from both platforms allowed learners to monitor their understanding and correct mistakes quickly, promoting deeper cognitive involvement. This result reinforces the role of technology-based gamification in enhancing attention and retention in EFL settings. Qualitative findings further illuminate the mechanisms behind the quantitative improvements. Students' enthusiasm during collaborative activities and their expressed confidence in speaking tasks demonstrate how gamification fosters a supportive learning environment. These perceptions align with earlier research conducted in Indonesian educational contexts, where gamified tools were found to boost motivation among EFL learners.

The study's results in a madrasah setting contribute to filling the research gap regarding gamification in Islamic senior high schools. Despite the unique schedule balancing religious and academic studies, students responded positively to the intervention, suggesting that gamification is adaptable to faith-based educational environments with appropriate cultural sensitivity. Several limitations should be acknowledged. This study used a one-group pretest-posttest design with a relatively small sample of 36 students, which limits generalizability. Additionally, the intervention duration of 12 weeks may not capture long-term effects of gamification on sustained engagement.

Future research should employ a control group design and involve larger samples across multiple madrasah to strengthen the evidence. Longitudinal studies could also examine whether the enhanced engagement translates into better English proficiency over time. Overall, the findings provide practical implications for EFL

teachers in similar institutions to integrate Kahoot! and Quizizz as effective tools for increasing student engagement in technology-based English language teaching.

CONCLUSION

This study investigated the effectiveness of gamification in technology-based English language teaching to enhance student engagement among tenth-grade students at MA Baitul Qur'an Al Askar. The findings demonstrated a statistically significant improvement in overall student engagement after a 12-week intervention using gamification elements (points, badges, leaderboards, and instant feedback) integrated into Kahoot! and Quizizz platforms. Both quantitative and qualitative data confirmed substantial increases across behavioral, emotional, and cognitive dimensions of engagement. These results indicate that gamification can effectively transform traditional EFL classrooms into more dynamic and motivating learning environments, particularly in Islamic senior high school settings.

The study contributes to the existing literature by providing empirical evidence from a madrasah context, where research on technology-enhanced gamification in English language teaching remains limited. By fulfilling students' psychological needs for autonomy, competence, and relatedness as proposed by Self-Determination Theory, the gamified approach successfully boosted motivation and active participation. Practically, the findings offer EFL teachers in similar institutions practical strategies to integrate digital gamification tools into vocabulary, grammar, and speaking lessons, thereby increasing student involvement and reducing learning monotony. Despite its contributions, this study has several limitations. The use of a one-group pretest-posttest quasi-experimental design and a relatively small sample size of 36 students limits the generalizability of the results. Additionally, the 12-week intervention period may not fully capture the long-term sustainability of engagement gains. Future research should employ a true experimental design with a control group and involve larger, more diverse samples across multiple madrasah institutions.

Gamification embedded in technology-based English language teaching proves to be a promising pedagogical innovation for enhancing student engagement in EFL contexts. English teachers are encouraged to adopt Kahoot! and Quizizz with well-designed gamification elements to create more engaging and student-centered classrooms. Further studies are recommended to explore the long-term effects on English proficiency and to investigate optimal ways of integrating gamification while respecting the unique cultural and curricular characteristics of Islamic education. Ultimately, this research supports the broader shift toward innovative, technology-driven approaches in ELT that prioritize student motivation and active learning.

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