



## UTILIZING GAMIFICATION STRATEGIES TO IMPROVE LEARNING OUTCOMES AND STUDENTS' ENGAGEMENT

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### Abstract

This study investigates the impact of gamification on learning outcomes and student engagement in English language learning among first-semester students of the Islamic Family Law Department at UIN Raden Intan Lampung. A quasi-experimental design was employed, utilizing gamification platforms such as *Kahoot!*, *Duolingo*, and *Quizizz* over one semester. The sample included 40 randomly selected students who participated in pre- and post-tests assessing English proficiency and engagement. Findings indicate significant improvements in both learning outcomes and engagement. The mean score for learning outcomes increased from 65.4182 (pre-test) to 84.3821 (post-test), and the mean engagement level rose from 71.0212 to 85.2760. Gamification elements, such as challenges, rewards, and competition, enhanced motivation and active participation. The study concludes that gamification is an effective pedagogical strategy to improve student engagement and learning outcomes in English language education. Future research should explore long-term effects and additional factors influencing gamification's effectiveness. The findings support gamification as a promising tool for fostering motivation and collaborative learning in educational settings.

**Keywords:** *Experimental Class, Gamification, Students' Engagement*

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## INTRODUCTION

Education is an ever-evolving field that adjusts to contemporary trends. In endeavors to augment pedagogical effectiveness and student involvement within educational settings, educators and curriculum developers persistently seek novel and efficacious methodologies (Barata et al., 2013). An increasingly favored approach is the integration of gamification in educational practices. Gamification entails the incorporation of ludic elements and mechanisms into non-game domains, notably education (Lo & Hew, 2020). By harnessing facets inherent to gaming, such as challenges, rewards, competition, and fulfillment of achievements, gamification holds the potential to amplify students' motivation and engagement in the pedagogical process.

Within classroom contexts, gamification can manifest diversely. For example, educators can implement point or tier systems to incentivize students who attain predefined learning objectives. Additionally, interactive educational games can be devised to actively involve students in the learning journey. Furthermore, digital technologies and online learning platforms facilitate the application of gamification through features like leaderboards, virtual incentives, and other reward structures (Wang, 2015).

The term "gamification" was first introduced by Nick Pelling in 2002 during a TED presentation (Alsawaier, 2018). It encompasses the infusion of gaming elements into non-game contexts, notably education, amalgamating pedagogical and ludic components. Numerous domains have begun embracing gamification to augment user engagement. In the educational milieu, gamification entails the utilization of elements such as challenges, points, levels, competition, and rewards to bolster student engagement and motivation. The objective of gamification is to engender gratifying learning experiences, spur students to accomplish educational goals, and cultivate active participation in the learning process (Azmi et al., 2017). Educators must continuously innovate in devising effective pedagogical methodologies to motivate students and enhance their involvement. The integration of gamification stands out as a promising and innovative pedagogical strategy.

An effective technique for improving students' engagement is the integration of gamification. This approach utilizes gaming elements to motivate students during the learning process. Additionally, media can captivate students' interests and sustain their motivation for learning. Game-based learning imbues students with a sense of enjoyment during educational activities. Gamification fosters inclusivity among students, fostering critical thinking, responsibility, cooperation, and healthy competition (Sari et al., 2023). Implementing gamification fosters students' enthusiasm for learning, as it enables them to engage in playful learning experiences anytime and anywhere. Consequently, educators find it expedient to monitor students' activities and learning inclinations through features such as scoreboards and students' enthusiasm while participating in gamified activities.

Achieving educational objectives necessitates the adoption of appropriate pedagogical techniques. Learning is optimized when complemented by suitable methodologies, adequate resources, media, and tools, thereby fostering active learning, especially in the prevailing landscape of online education (Hastomo et al., 2021). Therefore, the adoption of interactive methodologies, including gamification, is instrumental in rendering learning meaningful. The utilization of gamification is rooted in the propensity of primary school students to derive enjoyment from play.

Based on prior research, gamification has been extensively employed in English language learning. Gamification techniques have been used to enhance students' vocabulary (Sari et al., 2023; Waluyo & Tran, 2023). Related to vocabulary, other studies discuss the use of gamification to improve students' learning achievement and motivation (Durrani, 2019; Yu, 2023). Gamification has also been widely integrated with the flipped classroom as a method of learning English at various levels (Durrani, 2019; Matsumoto, 2016; Zainuddin, 2018). Students' perceptions and efficiency in using gamification have also been researched in foreign language learning (Anane, 2022). However, there is limited research addressing the use of gamification to enhance students' learning outcomes and engagement in English language learning, particularly at the university level in Indonesia. Therefore, this research explores whether gamification could enhance students' learning outcomes and engagement.

## **RESEARCH METHOD**

In this study, the researcher employed a quantitative approach, chosen due to its focus on implementing gamification techniques to better direct students towards increased engagement in the classroom. The research design utilized was quasi-experimental. The gamification implementation in the classroom was conducted over one semester. In this research, the researcher utilized gamification platforms such as *Kahoot!*, *Duolingo*, and *Quizizz*. These platforms were employed to support the classroom learning process by presenting lecture materials and assigning students to complete quizzes, tasks, and exercises through the platforms. Students were provided with opportunities to work on assignments both during and outside of class hours.

The participants of this study were first-year students majoring in Islamic Family Law at UIN Raden Intan Lampung. The sampling method employed by the researcher was random cluster sampling, chosen due to the homogeneity of the internal student groups forming a representative population. This approach allows for the grouping of data into smaller, more efficient units than sampling the entire population. The researcher then selected one class with 40 students as the research subjects through a lottery draw.

The research instruments consisted of an English language test tailored to the university semester curriculum and a questionnaire on student engagement, adapted from a questionnaire used in previous research (Al-Obaydi et al., 2023). Data were collected through a pre-test at the beginning of the semester and a post-test at the end of the semester. The academic semester spanned from August to December 2023. Before commencing the research, the researcher provided participants with an informed consent form detailing the research objectives, duration, and data protection measures. Additionally, the research instruments used were approved by the Ethics Commission of the Research and Community Service Institution (LPPM) at UIN Raden Intan Lampung.

In analyzing the research data, the researcher utilized SPSS software version 27 employing paired sample statistics. This analysis aimed to evaluate whether there was an improvement between the data collected before the intervention obtained from the pre-test and the data collected after the intervention obtained from the post-test. Both sets of data provide information regarding the enhancement of learning outcomes and student engagement, which are the focal points of the research questions.

**FINDINGS AND DISCUSSION*****Impact of Students' Learning Outcome*****Table 1. Result of Students' Learning Outcome**

<b>Data</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>
Pre-Test	65.4182	40	6.12098	1.100981
Post-Test	84.3821	40	3.62091	.65718

Table 1 presents the descriptive statistics for students' learning outcomes before and after the intervention. Prior to the intervention, the mean score on the pre-test was 65.4182 with a standard deviation of 6.12098, based on a sample size of 40 students. Following the intervention, the mean score on the post-test increased substantially to 84.3821, accompanied by a smaller standard deviation of 3.62091. This indicates a notable improvement in students' learning outcomes after the implementation of the intervention. Moreover, the standard error of the mean decreased from 1.100981 in the pre-test to 0.65718 in the post-test, suggesting increased precision in the post-test scores. These descriptive statistics highlight the effectiveness of the intervention in enhancing students' learning outcomes within the sample group.

Based on the aforementioned study, the utilization of gamification has been demonstrated to enhance students' learning outcomes. This finding aligns with previous research that regards gamification as an effective technique in improving students' English language proficiency. There are reasons why gamification is deemed key to this enhancement, namely experiential learning. In this research, the data obtained indicate that gamification enables students to learn through real-life experiences or simulations, allowing them to apply knowledge in relevant contexts. Additionally, gamification also provides challenges and problems that require critical and strategic thinking, thereby aiding in the enhancement of students' thinking skills (Matsumoto, 2016). On the other hand, collaboration and competition are game elements that encourage students to collaborate and compete, thereby improving their English language abilities (Waluyo & Tran, 2023). Lastly, gamification systems often provide instant feedback to students regarding their performance, enabling them to track their progress and identify areas where they need improvement (Yu, 2023). Hence, gamification not only makes learning more enjoyable but also proves to be effective in enhancing students' learning outcomes in the context of English language learning as well as other fields.

***Impact of Students' Engagement*****Table 2. Result of Students' Engagement**

<b>Data</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>
Pre-Test	71.0212	40	3.49141	.63404
Post-Test	85.2760	40	3.73081	.67728

Table 2 presents descriptive statistics regarding students' engagement levels before and after intervention implementation. Before the intervention, the mean engagement level, as measured by the pre-test, was recorded at 71.0212, with a standard deviation of 3.49141, based on a sample size of 40 students. Following the intervention, there was a noticeable increase in students' engagement levels, as evidenced by a higher mean score of 85.2760 on the post-test. However, it's worth noting a slight increase in both the standard deviation (3.73081) and the standard error of the mean (0.67728) in the post-test compared to the pre-test, indicating a slightly higher variability in engagement levels post-intervention. These descriptive statistics suggest that the intervention positively influenced students' engagement, leading to increased involvement in the learning process.

Based on the finding above, gamification is an effective method of developing student engagement. This is consistent with previous research which revealed that students show a very positive attitude towards using gamification in the classroom because it provides a fresh and innovative learning environment (Alsawaier, 2018). As many as 92% of students agree that gamification technology is easy to use and 96% of students feel that gamification helps them increase engagement. The findings of this research demonstrate an increase in student engagement and provide clues about the reasons behind the effectiveness of gamification.

The findings of this study support prior research endorsing the use of *Kahoot!* in enhancing our understanding of improved teacher-student engagement and more constructive peer discussions (Plump & LaRosa, 2017). These findings can be elucidated by the fact that *Kahoot!* provides ample space for students to engage and interact with the instructor and classmates, especially when students are motivated to see their names at the top of the leaderboard. This results in more attention, engagement, and motivation. These findings align with previous findings indicating the positive effects of gamified techniques on increased attention and healthy competition (Wang, 2015). Gamification application represents a new generation of student response systems focused on

student motivation and engagement through gamification. This platform is suitable for enhancing motivation and engagement and for assessing students' understanding of a lesson.

Gamification can make the learning process more enjoyable and engaging. The healthy competitive element introduced by game elements such as points, levels, and leaderboards can ignite students' learning enthusiasm and intrinsic motivation (Azmi et al., 2017). Additionally, gamification provides a clear and immediate reward system for students' achievements. This is different from conventional assessment systems which sometimes take a long time to yield results. With direct reward systems, students will feel satisfied and motivated to continue learning and mastering the subject matter.

The implementation of gamification also has the potential to transform learning into a more interactive and collaborative process. Some game elements such as group missions and collective challenges, can encourage students to work together and help each other achieve learning goals (Da Rocha Seixas et al., 2016). This positive social interaction can reduce boredom and enhance understanding of the subject. Thus, gamification can be seen as one of the beneficial innovative learning strategies for both students and teachers. Students can experience a more enjoyable and meaningful learning process, while teachers have an additional tool to enhance learning effectiveness in the classroom. Therefore, gamification is an effective method for enhancing student engagement, supported by previous research indicating positive attitudes towards gamification due to its ability to create a fresh and innovative learning environment, increase engagement, provide immediate rewards, and foster interactive and collaborative learning experiences

## CONCLUSION

In summary, the research findings elucidate a notable enhancement in both students' learning outcome and levels of engagement facilitated by the integration of gamification. The statistical analysis demonstrates considerable elevations in mean scores for both academic outcomes and engagement subsequent to the intervention, indicative of the constructive influence of gamification on student aptitude and active participation in the educational process. Nonetheless, it is imperative to acknowledge the constraints inherent in this study, including its reliance on a singular intervention approach and a relatively limited sample size. Nevertheless, the results of this investigation underscore the efficacy of gamification in augmenting student learning experiences, fostering collaborative endeavors, and nurturing intrinsic motivation. Subsequent research endeavors could delve into the enduring repercussions of gamification across varied educational contexts and disciplinary domains, alongside scrutinizing supplementary factors that may impact its effectiveness, such as pedagogical training and individual student attributes. In summation, gamification emerges as a propitious instrument for educators to optimize student engagement and academic attainment within the educational setting.

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