

Gamifying Grammar: Enhancing Students' Motivation Through Digital Game-Based Learning in EFL Classroom

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Abstract

This study investigates the impact of digital-based gamification on students' motivation and grammar comprehension in English as a Foreign Language (EFL) classroom. Grammar learning is often perceived as difficult and monotonous, which can reduce engagement and mastery. To address this challenge, Digital Game-Based Learning (DGBL) was implemented, integrating elements such as points, challenges, leaderboards, and instant feedback to create an interactive and motivating environment. A mixed-method design was employed, including pre-tests and post-tests to measure grammar comprehension, motivation questionnaires to assess engagement, semi-structured interviews to explore students' perceptions, and classroom observations to monitor participation. Findings reveal that DGBL significantly improved both grammar understanding and student motivation. Students reported that gamified activities were enjoyable, challenging, and supported independent learning, while quantitative data indicated higher post-test scores and increased motivation levels. These results suggest that digital-based gamification can be an effective instructional strategy to enhance active participation, comprehension, and learner autonomy in EFL grammar instruction. However, careful consideration is needed to ensure equitable access to technology and alignment of game elements with learning objectives. Overall, the study highlights the potential of gamification to transform grammar learning into a more engaging and effective educational experience.

Keywords: digital gamification, EFL grammar, game-based learning, learner engagement, motivation

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INTRODUCTION

The rapid development of the times until now has resulted in the position of English no longer being a tertiary need for students. In the past, English might have been considered just an additional subject or an optional skill. However, now, English has become a secondary, even primary, necessity in preparation for students' futures. The need for English language proficiency is increasingly urgent in various fields: numerous industries, education, including business, science, aviation, medicine, tourism, and worldwide communication, heavily rely on English (Ashrafuzzaman et al., 2021). English as an international language has played a major role in society, especially in the field of education (Imsa-Ard, 2020). This is due to the deepening globalization, where cross-cultural interaction and access to global information are becoming

increasingly important, even countries, which consider English as a foreign language, make it a required course in elementary school through upper secondary school, or even make it a foundational course in higher education (Rahman et al., 2021).

In addition, English has various skills that must be mastered by students, one of which is grammar. Proficiency in English grammar is a crucial foundation allowing students to communicate effectively and accurately (Brown, 2007). However, English grammar is often considered challenging for educators and less engaging for students. One of the causes might be traditional approaches that emphasize memorizing rules and written exercises. These approaches often fail to motivate students, which can hinder the development of their language competencies. Moreover, traditional learning methods that are monotonous and less interesting, cause difficulties in understanding and applying grammar rules, as well as a decrease in student motivation (Richards et al., 2014)

As technology has evolved, digital game-based learning (DGBL) has emerged as an innovative method to address the challenges of English grammar. Gamification in a non-gaming context, emerged as a potential solution to advance student motivation and engagement (Deterding et al., 2011). It seeks to boost student involvement and drive through a more interactive and interesting learning experience. DGBL offers an interactive and enjoyable learning experience, potentially making learning more engaging and effective (Plass et al., 2015) because it integrates gamified elements like points, badges, challenges, and leaderboards into learning, aiming to significantly boost student engagement and motivation.

Digital Game-Based Learning (DGBL) has been investigated by several researchers and shown promising results in increasing student motivation and engagement. Jusuf (2020) claimed that the application of game elements in learning can increase student participation and motivation by creating a more interactive and enjoyable learning environment, which in turn enhances engagement in the learning process. Similarly, Permata and Kristanto (2020) argued that, although their study focused on mathematics, DGBL effectively increases students' interest in the subject. Furthermore, research by Gani et al. (2024) demonstrated that integrating gamification technology in Indonesian language and literature learning improves students' understanding, suggesting that this approach can also be successfully applied in English language learning.

Although previous studies (Jusuf, 2020; Permata & Kristanto, 2020; Gani et al., 2024) have demonstrated the potential of Digital Game-Based Learning (DGBL) in enhancing student motivation, engagement, and understanding across different subjects, most of the research has focused on areas such as mathematics and Indonesian language learning, while limited attention has been given to its implementation in English language classrooms. Moreover, these studies primarily emphasize the general benefits of DGBL without exploring in depth how specific game elements influence learners' participation and performance in foreign language contexts. This gap highlights the need for further investigation into the application of DGBL in English language learning, particularly in grammar instruction, to examine its effectiveness in fostering students' motivation and comprehension within the context of English as a Foreign Language (EFL).

Building upon the identified research gap, this study sets out to investigate the impact of digital-based gamification in grammar instruction on EFL students' motivation and comprehension. Specifically, it aims to identify which game elements (e.g., points, badges, leaderboards, levels, immediate feedback) most effectively enhance learners' engagement and facilitate accurate understanding and retention of grammar rules. It also seeks to compare gamified and non-gamified approaches to determine measurable differences in motivation and learning gains. The expected outcomes are (1) increased intrinsic and extrinsic motivation toward grammar learning, (2) improved grammar comprehension and long-term retention, and (3) practical design guidelines for educators to implement evidence-based gamified grammar activities in EFL classrooms.

METHODS

This study employed a quantitative quasi-experimental one-group pretest–posttest design, supplemented by brief open-ended items to capture students’ immediate reactions (Fraenkel, Wallen, & Hyun, 2019). One intact EFL class participated in a sequence of digital game–based grammar activities featuring points, challenges, leaderboards, and immediate feedback. Grammar comprehension was measured using the same instrument administered before and after the intervention, while motivation was assessed at both times with a 5-point Likert questionnaire. Quantitative analyses included descriptive statistics (means, standard deviations), percentage comparisons for categorical shifts in motivational responses, and paired t-tests ($\alpha = .05$) to examine pre–post differences; Cohen’s *d* was calculated to indicate effect size. Short open-ended responses were analyzed by simple content categorization to summarize students’ perceptions of interest, enjoyment, and perceived effectiveness (Creswell & Creswell, 2018).

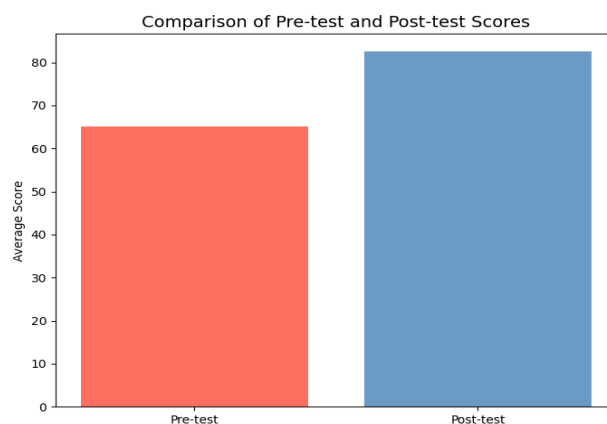
Quantitative data were analyzed using descriptive statistics (means, standard deviations), percentage comparisons for categorical shifts in motivational responses, and paired-samples t-tests ($\alpha = .05$) to examine pre–post differences. Effect sizes were calculated using Cohen’s *d*. Responses to open-ended questions were analyzed by simple content categorization to summarize emerging themes related to student engagement and perceived benefits (Creswell & Creswell, 2018).

RESULTS

The findings of this study indicated a significant improvement in both students’ grammar comprehension and motivation after the implementation of digital game-based learning (DGBL). The increased motivation was reflected in higher questionnaire scores, suggesting that students experienced greater enjoyment, interest, and confidence in grammar learning. Similarly, grammar comprehension improved, as demonstrated by higher test scores. Students also responded positively to the use of gamification, describing the activities as engaging and effective. Game elements such as points, leaderboards, and constructive feedback appeared to play a central role in enhancing both motivation and understanding.

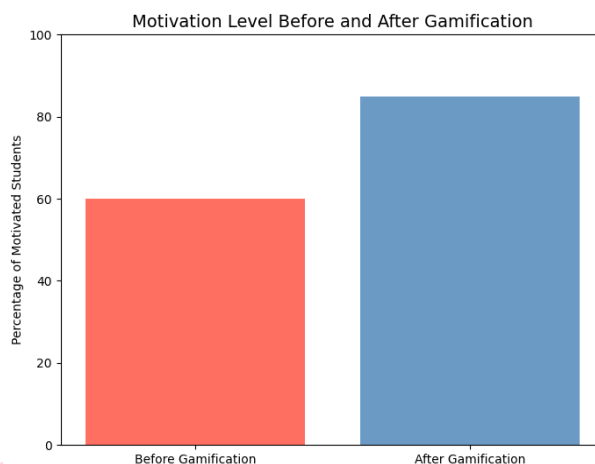
Improved Grammar Comprehension

The results of the pre-test and post-test revealed a substantial improvement in students’ grammar understanding following the DGBL intervention. The average pre-test score was 65.2, while the average post-test score increased to 82.5. These results suggest that incorporating gamification elements such as points, challenges, and immediate feedback within digital games facilitated better comprehension of grammar rules.



Increased Student Motivation

Analysis of motivational questionnaires administered before and after the intervention also demonstrated a notable improvement. Prior to the implementation of gamification, 60% of students reported low interest in grammar learning. After the intervention, 85% of students indicated higher levels of motivation, with the majority highlighting that the gamified activities made learning more enjoyable and less monotonous.



DISCUSSION

The results of this research show that the application of digital-based gamification in grammar learning in EFL classrooms is able to have a impact on improving students' understanding and motivation to learn. The increase in average scores from pre-test to post-test shows that the use of game elements in the learning process helps students to better understand grammatical concepts. This is in line with findings from previous research which highlight that a learning environment that supports exploration and provides direct feedback is able to improve students' understanding of the material being taught (Rivera-Trigueros & Del Mar Sánchez-Pérez, 2023).

One of the key elements in gamification is the provision of measurable challenges, where students are encouraged to achieve specific goals by completing various game-based tasks. In the context of this study, students are given access to digital games that integrate grammar rules into the challenges they must complete to earn points or reach a certain level. This challenge motivates students to keep trying until they succeed, without fear of punishment for mistakes. Instead, mistakes are part of the learning process because each mistake provides instant feedback that allows students to improve their understanding directly.

Additionally, the existence of reward systems such as virtual leaderboards and badges creates a healthy competitive atmosphere in the classroom. Students are encouraged to compete positively with their peers, which ultimately increases their participation in learning activities. In interviews, some students revealed that they felt more challenged to achieve the highest scores, which encouraged them to study grammar more hard. These findings are supported by research conducted by (Dichev & Dicheva, 2017), which mentions that elements of the game such as points and leaderboards can strengthen students' intrinsic motivation, especially when they feel rewarded for their efforts in the learning process.

In terms of the learning process, the use of digital games creates a more inclusive learning environment and supports various learning styles. Students who are visually inclined are helped by the attractive interface appearance, while kinesthetic students prefer learning experiences that involve direct interaction through digital devices. In addition, digital games allow students to learn at their own pace. Those who take longer to understand a particular grammar concept can repeat the

game without pressure, while students who understand the material faster can move on to the next challenge.

The significant increase in student motivation after the implementation of gamification suggests that this approach successfully overcomes the saturation that often arises in grammar learning using traditional methods. Before the intervention, most students considered grammar to be the most boring part of learning English because of its tendency to be rigid and repetitive. However, once gamification was implemented, students reported that they felt more enthusiastic and excited to take the lessons. In fact, some students admitted that they started practicing the grammar they learned outside of the classroom because they felt more confident after successfully completing challenges in digital games.

The findings consistent with the theory of self-determination put forward by (Deci, 2000) and (Dunn & Zimmer, 2020) which states that students' motivation will increase when students' feel empowered in their learning process and are given the opportunity to achieve success through their own efforts. Gamification provides space for students to control their progress, by providing instant feedback that helps them measure achievement and correct mistakes independently.

However, although the results of this research show the positive impact of gamification, there are several challenges that need to be considered. Some students report that they feel so focused on the game aspect that they sometimes forget the main purpose of the learning itself. Additionally, not all students have equal access to digital devices at home, which has the potential to create gaps in the learning process if gamification is implemented sustainably. Therefore, it is important for teachers to design gamification activities with the inclusivity aspect in mind and ensure that the games used remain in line with the learning objectives to be achieved.

Despite these challenges, the study provides valuable implications for EFL instruction. Gamification can transform grammar learning—often perceived as monotonous—into an engaging and motivating experience. Teachers are encouraged to integrate game-based elements strategically, ensuring that the entertainment aspects remain aligned with learning objectives. Furthermore, gamification can serve as a tool to cultivate learner autonomy, foster healthy competition, and support differentiated instruction. Ultimately, this approach offers promising potential for enhancing both the effectiveness and enjoyment of grammar teaching in EFL classrooms.

CONCLUSION

This study examined the impact of digital-based gamification on students' grammar comprehension and motivation in EFL classrooms. The results show that integrating gamification elements such as points, challenges, leaderboards, and instant feedback significantly enhanced both students' understanding of English grammar and their engagement in learning. These findings support self-determination theory, demonstrating that autonomy, competence, and relatedness foster motivation in language learning, and suggest that gamified activities can create a more interactive, supportive, and inclusive learning environment. Nevertheless, the study's single-class, one-group quasi-experimental design, short intervention duration, and reliance on self-reported motivation measures limit generalizability, while unequal access to digital devices may affect participation. Future research should adopt larger, more diverse samples, consider comparative or randomized designs, examine long-term retention, and integrate richer qualitative and behavioral data to further explore how specific gamification elements influence both learning outcomes and student motivation.

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