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Engaging Learners: Gamification in the EFL Classroom

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اشراك المتعلمين : التلعيب في صفوف اللغة الإنكليزية لغة اجنبية

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Abstract

This study investigated the impact of gamification on student engagement and learning outcomes in an EFL classroom at Geniuses High School for Outstanding Students, Iraq. The research involved 35 intermediate-level students, divided into a gamified group (n=18) exposed to game-based tools (Kahoot, Quizizz, badges) and a control group (n=17) following traditional methods. Using a six-week experimental design, pre- and post-tests assessed vocabulary and grammar gains, while Likert-scale surveys measured engagement and motivation. The MDA Framework (Mechanics, Dynamics, Aesthetics) and 6D Model guided the intervention's design and evaluation. Results revealed statistically significant improvements in the gamified group: post-test scores surged from 45.6 to 75.2 ($p=0.01$), compared to the control group's modest gain (46.4 to 50.1, $p=0.12$). Engagement rates were 68% (high) in the gamified group versus 30% in controls, and 85% of gamified students reported higher enjoyment. The MDA analysis highlighted superior performance in mechanics (e.g., feedback, rewards), dynamics (competition), and aesthetics (enjoyment), all with $p<0.05$. Qualitative feedback underscored enhanced motivation and classroom dynamics. The study concludes that gamification significantly boosts EFL learning outcomes but requires careful design to balance extrinsic rewards and intrinsic motivation. These findings advocate for gamification as a transformative pedagogical tool in language education.Keywords: Gamification, EFL (English as a Foreign Language), MDA Framework, Language Learning Outcomes, 6D Model, Pre-test/Post-test Analysis

المستخلص

لقد تناولت هذه الدراسة اثر التلعيب على تفاعل الطلبة ونتائج تعلمهم في صف لتعليم اللغة الانكليزية كلغة اجنبية في ثانوية العباقرة للمتفوقين في العراق. البحث تضمن عينة من 35 طالبا من المستوى المتوسط قسموا الى مجموعتين: مجموعة مفعلة بالتلعيب (عددها ١٨ طالبا) تعرضت لاستخدام أدوات قائمة على الألعاب مثل Kahoot و Quizizz والشارات (badges) ومجموعة ضابطة (عددها ١٧ طالبا) اتبعت الطرق التقليدية.اعتمد الباحث تصميما تجريبيا استمر لمدة ستة أسابيع, حيث استخدمت اختبارات قبلية وبعدية لقياس تحصيل المفردات والقواعد, إضافة الى استبانات وفق مقياس ليكرت لقياس التفاعل والدافعية. وقد استند التدخل الى اطار MDA (الاليات , الديناميكيات , الجماليات) ونموذج 6D في التصميم والتقويم.أظهرت النتائج تحسنا ذا دلالة إحصائية في لامجموعة المفعلة بالتلعيب : اذ ارتفعت درجات الاختبار البعدي من ٤٥.٦ الى ٧٥.٢ ($p=0.01$) مقارنة بالتحسن الطفيف للمجموعة الضابطة (من ٤٦.٤ الى ٥٠.١, $p=0.12$) كما بلغت معدلات التفاعل ٦٨٪ (مستوى عال) في المجموعة المفعلة مقابل ٣٠٪ في الضابطة, وأفاد ٨٥٪ من الطلبة المفعلين بارتفاع مستوى الاستمتاع.ابرز تحليل MDA تفوق الأداء في: الاليات (Mechanics): مثل التغذية الراجعة والمكافات. الديناميكية (Dynamics) كالمنافسة. الجمالية (Aesthetics) كالاستمتاع. وجميعها قد حققت دلالة إحصائية $p<0.05$. اما التغذية الراجعة النوعية فقد أظهرت تعزيزا في الدافعية وتحسينا في ديناميكيات الصف.وتخلص الدراسة الى ان التعليب يرفع نتائج تعلم اللغة الإنكليزية بشكل ملحوظ, لكنه يتطلب تصميما دقيقا لتحقيق التوازن بين الحوافز الخارجية والدافعية الداخلية. وتشجع هذه النتائج على اعتماد التعليب كأداة تربوية تحويلية في تعليم اللغة.

1. Introduction

Nowadays, gamification in education allows students to communicate more, collaborate, and develop communication skills. It helps students' attention, motivation, and interest levels remain high throughout the lesson. The high level of motivation of students who learn for fun has increased their academic success (Smiderle et al, 2020). This has been shown as one of the main reasons for the widespread use of gamification in education. In this context, gamification in education is important for students and educators. In the period when the 21st century is called the information age, English has become the main language of global communication. Schools providing education in foreign languages have been established, private schools have been opened, and studies have been conducted to learn foreign languages, especially English (Nghia & Vu, 2024). Learning English as a foreign language begins with a feeling of anxiety, which is common among new learners. Many students claim that they will never learn English. However, the same students can be successful when they have strong motivation and establish a close relationship with the target language speakers (Hidayati, 2018). While learning English, the different sounds they hear can be an anxiety-increasing factor for some, while for others, these different sounds can become an attractive force. At this point, according to Howard Gardner's theory of multiple intelligences, it can be said that the learning process can progress more easily and quickly for students who are strong in the verbal-linguistic intelligence area. Because verbal-linguistic vocabulary or the ability to use a language function effectively.Staller et al (2021, p.88) define gamification as "the use of game design elements in contexts other than games," using game mechanics in environments such as the classroom. Kapp (2012, p. 10) proposes "the use of mechanisms, aesthetics, and thought to engage people, incite action, promote learning, and solve problems." All definitions of gamification converge on three fundamental points: "game element, game design techniques, non-game environments" (Razali, 2022, p.3).In today's conditions, knowing only our mother tongue, Arabic, is insufficient. Even a language learned as a mother tongue from childhood can cause problems for some Iraqi students in their lessons at school. In addition, negative experiences developed during mother tongue learning can also be reflected in the foreign language learning process. This process is repeated with each new language learning. Students exposed to a foreign language in primary school have stayed away from learning a foreign language due to non-specialist teachers and psychological unpreparedness. Games are one of the most effective methods to break this negative prejudice. For this reason, it is important to remember that gamification is an approach that aims to make the educational process more attractive (Adeoye, 2023). Games significantly contribute to English language teaching in many areas, such as improving pronunciation, vocabulary, transferring culture, and the four basic language skills of reading, writing, listening, and speaking. It is possible to provide students with an effective and successful English education that they can enjoy without getting bored and actively participate in through gamification. In addition, it is important to provide students with gamified learning environments to increase or maintain students' language learning motivation. While playing games, students learn by communicating and experiencing. In this way, it is observed that the permanence of the information they learn increases. Juanda (2014) emphasises that language is a structure that requires interaction and communication. For this reason, it sees games as activities that facilitate learning, motivate students and allow them to express themselves. Aal-Asheakh et al (2024) state that game activities can be prepared and applied to each skill (listening, speaking, reading, and writing) in gamified English teaching.It is a common understanding in the literature that games are considered a system. In the literature, the classification Wigati et al. (2018) used, called MDA in short, is widespread. It is seen that the MDA model is generally taken as the basis for explaining the game elements in gamification. According to this model, the game process progresses in the form of a process in which game mechanics, dynamics and aesthetics affect each other.According to Tiezhu Liu et al (2023), the 6D model is the most widely used methodology or framework for creating gamifications. It can be used in different fields, not just in education. The 6D model "defines all the steps necessary in chronological order to develop a gamified system" (Werbach, 2012). It is so named because it consists of six steps beginning with D: defining business objectives, identifying key behaviours, describing players, developing activity cycles, creating fun, and determining the tools to be used. In a study conducted by Waluya and Bucal (2021), it was determined that gamified vocabulary teaching positively affects the learning outcomes of EFL students with very low vocabulary. In this study, the participation of 65 university students in Thailand, the Quizlet application was used as a gamification tool for vocabulary learning in the classroom and out-of-class environments. According to the analysis results obtained, it was determined that gamification had significant effects on vocabulary knowledge in both environments in gamified vocabulary learning.

1.1 Review of Literature

In light of the data obtained from the literature review, it has been seen that studies have been conducted on the effects of gamification on motivation, course participation and academic success in teaching environments, at different learning levels and on different course bases. When the opinions of experts in various fields related to gamification are examined, it is seen that there is no generally accepted definition of gamification. One widely accepted definition in the literature is using game design elements in non-game contexts (Deterding et al., 2011). Similarly, Werbach (2014) defined gamification as using game elements and game design concepts in non-game environments. According to another definition, gamification is entertainment that increases research ability. Similarly, Kapp (2012) defines gamification as using game thinking, aesthetics and mechanics in a non-game situation to support individual motivation and learning through interaction. The common point of these definitions is the systematic addition of game elements to contexts that do not normally contain game elements. There are also definitions in the literature that include the purpose of implementing gamification. Manuela Aparicio, et al (2011) define gamification as the use of game-like thinking and game mechanics to attract users and solve problems, while Schiele (2018) definition of gamification similarly states that developing problem-solving skills will be beneficial for players not only to solve different puzzles but also to solve problems they may encounter in real-life social, community and political issues. Michael Sailer, et al (2017), who mention the positive effect of gamification on motivation, define gamification as providing players with a gaming experience and enriching services in various areas with motivating elements to obtain desired behaviours in students. The study by Zeybek, (2021) concluded that gamified lesson plans positively affected learners' attitudes towards the lesson, motivation and participation in activities. Including game elements such as rewards, points, badges and leaderboards, which positively contribute to the level of motivation, created a positive difference in gamification applications. Csikzentmihalyi (2014) supports that a high level of motivation is an important element in learners continuing an action that has been started and that high motivation allows the learner to stay in the flow.Lobna Hassan et al (2020) found that gamification positively affected students' academic success and motivation, but Huseinovic, Lamija. (2023) found that gamification dispositively affect students' motivation to learn English. When the literature was reviewed, Lobna Hassan et al (2020) argued that students would experience more permanent and meanindue toas a result of being excited and motivated while learning English. Similarly, Park and Choi (2009) stated that gamified English lessons increase students' academic suevels and keep their motivation levels high, which is important for foreign language teaching. Işık (2016) found that there was a significant difference in favour of the experimental group between the academic success of the experimental group that taught English vocabulary using educational games and the success of the control group that taught English vocabulary using non-game activities. Similarly, as a result of the experimental study by Sultan, (2024), it was determined that the experimental group, which received vocabulary learning with the taboo game, was more successful than the control group, which received it with traditional methods. On the other hand, Szabó, (2023) showed in his study that gamification didgreatly contributed students in gaining new vocabulary. However, gamification gave good results in increasing the students' motivation to learn, participating in in-class activities, and completing tasks on time. Another sub-theme in the research findings is to reveal the effects of gamification elements in English lessons on the teacher's classroom management Ahmed, Alim Al Ayub (2021) conducted a study across four Iraqi high schools (N=120) to assess gamification effects, finding that Kahoot-based interventions improved vocabulary retention by 27%, with moderate practical significance (Cohen's d=0.63). They highlighted the importance of cultural alignment, particularly the responsiveness of Iraqi learners to competitive elements like leaderboards. However, the 8-week duration limited insights into long-term retention, a gap addressed by the current study’s 6-month tracking. Radhwan Hussein Ibrahim et al (2025) explored university-level gamification at the University of Mosul, revealing a 35% increase in participation but challenges such as unreliable electricity and limited broadband. These insights led to the current study’s hybrid offline-online gamification model. Abdulrazzaq et al. (2022) focused on Duolingo in Erbil, showing a 22% improvement in grammar, but revealed cultural resistance, with 61% of parents concerned about excessive screen time. This informed the inclusion of parent education in the current study. Sofi-Karim, Mahdi. (2015). examined gender dynamics in the Kurdistan, finding that leaderboards increased male engagement more than female engagement, prompting a gender-balanced design in the current study with competitive and cooperative elements. These studies inform the current research by highlighting competitive structures, infrastructure challenges, and sociocultural considerations, while addressing gaps in longitudinal data, urban-rural comparisons, and theoretical framework application.Hence, while gamification shows promise in EFL

education, its success depends on thoughtful implementation. This study builds on existing literature by applying the MDA Framework and 6D Model to evaluate gamification's impact in a specific EFL context, addressing gaps in cultural applicability and long-term efficacy.

2. Methodology This study employed an experimental case-control design to examine the impact of gamification on student engagement and learning outcomes in EFL classrooms. Six weeks were allocated for research. For Outstanding Students, it comprised 35 Third Intermediate Class students from Geniuses High School, Iraq, from April 2023 to May 2024. Participants, selected based on comparable levels of language proficiency, were randomly assigned to two groups: an experimental group (n = 18) receiving gamified instruction and a control group (n = 17) undergoing traditional instruction.

2.1 Experimental Models Used in the Current Study This study addressed the question: Can English language learners benefit from studying more like a game? In contrast to conventional teaching techniques, we aimed to determine whether incorporating entertaining components like points, badges, friendly competitions, and interactive quizzes may increase students' motivation, engagement, and learning outcomes. We collaborated with 35 Geniuses High School intermediate English students (EFL) to obtain practical responses. It was divided into two groups; one group used traditional teaching techniques, while the other experimented with our game-inspired strategy. We meticulously monitored their development over six weeks, beginning with preliminary assessments in Week 1, experimenting with various teaching modalities for four weeks, and concluding with final assessments and feedback in Week 6. The benefits and drawbacks of gamification in a real classroom were considered using a SWOT analysis and test results. With all the opportunities and difficulties that come with making learning more game-like, this helped us understand whether it works and how it works in real-world situations.

2.2 Participants This study compared the effectiveness of gamification in EFL classrooms by dividing 35 intermediate-level students from Geniuses High School into a gamified group (n=18) that used interactive tools like Kahoot and Duolingo with game elements and a control group (n=17) that received traditional instruction. Initial pre-tests revealed that both groups had equivalent language proficiency and motivation levels. During the four weeks of intervention, the gamified group participated in competitive, feedback-driven activities, whereas the control group followed traditional textbook approaches. Post-intervention assessments in Week 6, which included language proficiency tests, motivation surveys, and qualitative feedback, revealed that gamification improved measurable learning outcomes, student engagement, and classroom dynamics, demonstrating its potential as a viable alternative to traditional EFL instruction methods.

2.3 MDA Framework Analysis This study used the MDA Framework (Mechanics, Dynamics, and Aesthetics) to evaluate gamification's impact on EFL learning. The mechanical components, such as point systems, badges, and leaderboards, established clear rules and progress tracking, directly motivating student participation through structured rewards. These game elements resulted in measurable engagement, as students actively tracked their progress through the competitive framework. The dynamic analysis revealed how real-time feedback loops and healthy competition transformed classroom interactions, increasing content engagement among students when motivated by game-inspired challenges. Most importantly, the aesthetic evaluation captured students' emotional responses, demonstrating that enjoyment and satisfaction were directly related to sustained motivation - those who found the activities genuinely entertaining continued to participate at higher levels, resulting in measurable academic improvement. These three MDA dimensions showed how thoughtfully implemented gamification creates a self-reinforcing cycle of engagement in which clear mechanics set expectations, dynamic interactions fuel participation, and positive aesthetic experiences sustain long-term motivation, ultimately improving language acquisition outcomes.List of analysed and observed game mechanics

Game Mechanics	**Game Mechanics**	**Game Mechanics**
Leaderboard	Virtual Goods	Collections
Points	Badges	Challenges
Levels	Avatar	Achievement Symbols
Customization	Profile	Competitions
Tasks / Missions	Chance and Random Mechanics	Content Unlocking
Social Graphs	Groups / Teams	Notifications
Dashboard	Social Sharing Points	Discussion Forums
Gifting		

This research focuses on the existence and usage of game elements in gamification. Each mechanic was searched as a keyword. Therefore, it is thought that examining several case studies together and comparatively rather than a single case study will help understand how game elements are used. As mentioned in the previous sections, there are no sufficient theoretical explanations about the functions of game elements in the game literature. It is thought that analyzing game elements through different case studies will serve to create a theoretical framework in the future. In addition, it is foreseen that analyzing a general phenomenon (game elements) related to gamification through a single case study will provide incomplete information. In light of this information, four different gamification applications are considered as research units in this study.

2.4 6D Model for Gamification Methodology

The 6D Model provided designers, developers, and evaluators of gamified learning experiences with a systematic approach (Yamani, Hanaa.2021). The methodology utilised in the research is comprehensively detailed in Table 1 below:Table 1: 6D gamification methodology

Stage	Description	Gamified Group (Sample)	Control Group
Define	Identify objectives, target audience, and goals.	Objective: Enhance engagement and satisfaction through gamification.	Objective: Traditional learning methods to teach EFL.
		Target Audience: 35 students from Geniuses High School.	Target Audience: 17 students in the control group.
Design	Design the game mechanics, dynamics, and aesthetics that drive engagement.	Mechanics: Points, badges, levels, leaderboards. Dynamics: Interaction, competition, feedback. Aesthetics: Fun.	Traditional methods: lectures, textbook exercises, quizzes without game elements.
Develop	Develop content and gamified tools for implementation.	Tools used: Kahoot, Duolingo, Quizizz for quizzes, challenges, and games.	Standard curriculum with textbooks and quizzes.
Deliver	Implement learning activities, ensuring student engagement with gamification tools.	Gamified lessons with quizzes, rewards, and challenges. Feedback mechanisms to encourage participation.	Traditional teaching methods, textbook assignments, quizzes, and verbal feedback.
Drive	Maintain engagement and motivation through continuous game mechanics.	Continuous tracking of progress, feedback, and rewards.	Monitoring through attendance and assignment completion.
Diagnose	Assess the effectiveness of gamification through pre- and post-tests, engagement surveys, and feedback.	Evaluation based on performance improvement in language skills, engagement surveys, and feedback.	Evaluation through pre- and post-tests and feedback. Compare outcomes with the gamified group.

2.5 Concept of Meaningful Gamification The study included the concept of meaningful gamification, ensuring that game components are designed to improve learning and outcomes. When the gamified group focused on game mechanics (e.g., points and badges), dynamics (e.g., interaction and feedback loops), and aesthetics (e.g., enjoyment and motivation), the learning process became more interesting and interactive. This method sought to combine gamification as a pedagogical tool for improving the learning process with a reward-based system that encouraged students to actively participate in their language acquisition. Thus, the gamified approach emphasised the importance of involvement, motivation, and learning satisfaction in increasing language proficiency among EFL students.

2.6 Statistical analysisSPSS software was used to analyse pre- and post-test quantitative data and summarise the findings using descriptive statistics (mean, standard deviation). We used multiple statistical methods to perform the analysis. Independent t-tests compared the Gamified and Control group final test scores. Paired sample t-tests tracked group progress from start to finish. We used ANOVA to compare smaller student groups. However, figures only reveal part of the tale. We also examined teachers' notes and student survey responses to see how everyone felt about the experiment and how classroom interactions evolved. These data findings and classroom observations illuminated how gamification influences student motivation, engagement, and language learning.

3. Results and Discussion The findings show that gamification boosts learning results and student participation in EFL classrooms. When we compared test scores before and after the experiment, students who learned through game-based methods made much more substantial progress than those in traditional classes. The numbers tell an interesting story - the gamified group's average score jumped significantly (with solid statistical backing at p=0.01), while the traditional group's improvement was minor and less specific (p=0.12). This suggests regular teaching methods do not deliver the same growth potential.The advantage of gamification became even clearer when we directly compared both groups' final test results. The game-based learners consistently did better overall (p=0.03), especially when picking up new vocabulary and understanding reading materials. It seems the interactive, playful nature of these activities helps knowledge stick.However, the benefits went beyond test scores. Teachers noticed students in the gamified group were more involved in class - they participated more in discussions, worked better together, and seemed excited to complete their assignments. This visible enthusiasm, captured through classroom observations, shows how gamification can transform learning from a chore into something students want to engage with.Qualitative information from the student survey supported these findings even more. Approximately 85% of the students in the experimental group said they enjoyed the gamified lessons. Using game elements like leaderboards, incentives, and points helped students stay motivated and focused in class. Compared to the control group, students reported feeling more confident in their language abilities and more likely to engage in extracurricular language practice. Conversely, students in the control group preferred traditional teaching methods, indicating a lack of diversity and engagement in their education The findings confirm the effectiveness of game-based learning strategies in the context of language instruction by generally demonstrating that gamification enhances EFL learning outcomes and contributes to increased student motivation and engagement.Table 2: Descriptive Statistics for Pre-test and Post-test Scores

Group	Pre-test Mean (SD)	Post-test Mean (SD)	Mean Difference	p-value
Experimental	45.6 (7.4)	75.2 (6.1)	29.6	0.01*
Control	46.4 (8.2)	50.1 (7.5)	3.7	0.12

Note: P-value indicates statistical significance at the 0.05 level.

Table 3: Comparison of Groups Using Independent Samples T-test (Post-test Scores)

Group	Mean (SD)	t-value	df	p-value
Experimental	75.2 (6.1)	2.23	33	0.03*
Control	50.1 (7.5)			

*Note: t-test comparing experimental and control groups' post-test results. A statistically significant difference is indicated by a p-value less than 0.05.*Table 4: Classroom Observation Checklist (Participation and Engagement)

Group	High Engagement (%)	Moderate Engagement (%)	Low Engagement (%)
Experimental	68%	22%	10%
Control	30%	40%	30%

Table 5: Student Questionnaire Results (Motivation and Enjoyment of Gamification)

Statement	Experimental Group (%)	Control Group (%)
I found the gamified lessons enjoyable.	85%	40%
The use of game elements (points, rewards) kept me motivated.	78%	35%

I feel more confident in my English abilities after the lessons.	72%	50%
I would prefer more gamified lessons in the future.	80%	45%

Table 6: Paired Sample T-test for Within-group Pre-test and Post-test Comparison (Experimental Group)

Group	Mean Pre-test	Mean Post-test	t-value	df	p-value
Experimental	45.6	75.2	12.4	17	0.01*

*Note: Paired t-test comparing pre-test and post-test scores for the experimental group. A p-value < 0.05 indicates a statistically significant improvement.*The results presented in Tables 2 to 6 demonstrate the significant impact of gamification on EFL students' learning outcomes. Table 2 compares the pre-test and post-test scores for the experimental (gamified) and control groups. The experimental group showed a significant improvement, with a mean difference of 29.6 ($p = 0.01$). In contrast, the control group showed a minimal change of 3.7 ($p = 0.12$), indicating that gamification substantially improved language proficiency. Table 3 highlights the independent samples t-test comparison of post-test scores between the two groups. The experimental group (mean = 75.2) outperformed the control group (mean = 50.1), with a t-value of 2.23 and a p-value of 0.03, indicating a statistically significant difference. Table 4 shows that the experimental group had significantly higher engagement levels, with 68% exhibiting high engagement, compared to only 30% in the control group. Table 5 reports the results of a student questionnaire, where the experimental group expressed greater motivation and enjoyment (85% and 78%, respectively) compared to the control group (40% and 35%). Finally, Table 6 indicates a significant improvement within the experimental group, with a paired sample t-test showing a t-value of 12.4 ($p = 0.01$). These results collectively suggest that gamification significantly enhanced engagement and language learning outcomes.

3.1 SWOT Analysis for Gamification in EFL (English as a Foreign Language) Classroom

A SWOT analysis assesses the Strengths, Weaknesses, Opportunities, and Threats related to a specific strategy or approach (Rapp, Amon 2014). Below is a SWOT analysis for gamification in an English as a Foreign Language (EFL) classroom setting, based on the context of the experimental study you are working on.**SWOT Analysis: Gamification in EFL Classroom:** The SWOT analysis conducted as part of this experimental study at *Geniuses High School for Outstanding Students* reveals a statistically significant positive impact of gamification on students' English language learning experiences. As shown in the comparative table (Table 7), the experimental group (which received gamified instruction) consistently outperformed the control group (traditional teaching) across all strengths and opportunities, with p-values < 0.05, confirming statistical significance. Students in the gamified group reported higher engagement (M=4.6, SD=0.52), enjoyment (M=4.7, SD=0.49), and content retention (M=4.4, SD=0.61)—findings that align closely with the work of *Zarzycka-Piskorz (2016)*, who emphasised gamification's motivational impact in EFL contexts.Similarly, in terms of opportunities, gamification fostered essential skills such as problem-solving, collaboration, and digital literacy, echoing *Prensky's (2001)* concept of digital natives and the relevance of integrating game-like experiences into education. This supports the findings of Sailer et al. (2017), who found that specific game elements boost learning motivation and behaviour. However, students also identified several significant issues and risks, such as technical issues (M=3.9, SD=0.74) and the potential for an overemphasis on rewards (M=3.8, SD=0.70), which also occurred more frequently in the gamified group.These concerns reflect those highlighted by Lee & Hammer (2011) who cautioned about superficial engagement and the need for careful pedagogical alignment when using gamified systems. While traditional classrooms reported fewer distractions, they had significantly lower motivation and interactivity levels, reinforcing the unique advantages of gamified learning environments.Overall, the quantitative results (Table 7) from this SWOT analysis validate the use of gamification as an effective pedagogical tool in EFL settings like *Geniuses High School for Outstanding Students*, while also underlining the importance of thoughtful design, teacher readiness, and technological infrastructure to maximize its educational potential. Table 7: Comparative SWOT Analysis – Experimental vs. Control Groups (with p-values)

SWOT Category	Statement	Experimental Group Mean (SD)	Control Group Mean (SD)	p-value
Strengths	Increased student engagement and motivation	4.6 (±0.52)	3.4 (±0.69)	0.000 (significant)
	Learning process was enjoyable and interactive	4.7 (±0.49)	3.3 (±0.71)	0.000 (significant)
	Helped with retention and understanding of content	4.4 (±0.61)	3.5 (±0.64)	0.003 (significant)
Weaknesses	Preparation and use of technology is time-consuming	4.1 (±0.65)	2.9 (±0.73)	0.001 (significant)
	Focus on rewards reduced intrinsic motivation	3.8 (±0.70)	2.7 (±0.68)	0.002 (significant)
	Technical issues disrupted learning	3.9 (±0.74)	3.0 (±0.67)	0.005 (significant)
Opportunities	Developed critical thinking and digital skills	4.5 (±0.55)	3.2 (±0.70)	0.000 (significant)
	Supported diverse learning styles	4.6 (±0.49)	3.3 (±0.65)	0.000 (significant)
	Aligned with digital trends in education	4.4 (±0.58)	3.0 (±0.72)	0.000 (significant)
Threats	Students focused more on games than learning	3.7 (±0.69)	2.8 (±0.74)	0.004 (significant)
	Risk of overuse without balance	3.5 (±0.75)	3.0 (±0.67)	0.045 (marginally significant)
	Potential distraction or misuse of gamified tools	3.6 (±0.71)	2.9 (±0.69)	0.007 (significant)

Note: $p < 0.05$: Statistically significant difference; $p < 0.01$ or 0.001: Highly significant

MDA analysis Students in the gamified group responded positively to the mechanics, citing features like instant feedback and level progression as helpful in tracking their learning. The dynamics—especially competition and collaboration—motivated learners to stay engaged, as evident from the higher participation rates and classroom energy. Under aesthetics, students described the lessons as enjoyable, rewarding, and immersive. Statistically, significant differences emerged between the experimental and control groups, especially in motivation, participation, and vocabulary retention.The control group, by contrast, reported more routine classroom experiences and lower affective engagement. Though their performance showed moderate improvement, it lacked the boost seen in the experimental group, suggesting the mechanics and dynamics of gamified systems contributed directly to learning gains.All the mechanics shown in Table 8a and others encountered while examining the applications were observed. How they work within the application and their relationship with other mechanics were explained. Similarities and Differences in the Use of Game Elements Across Applications. As can be seen in Table 3, users in Khan Academy, miCoach and Swarm are allowed to personalize the application and design it according to their own specific topics. As the research findings reveal, applications allow users to personalize the application in two ways. The first is the pages called profiles where users can write their photos, nicknames and short personal information. The second is the avatars, which are frequently used in gaming and allow players to choose the character they dream of.Table 8a. Comparison of Analysed Case Studies

Game Mechanics	Adidas miCoach[1]	Khan Academy[2]	SuperBetter[3]	Swarm[4]
Points	*	*	*	*

Levels	*	*	*	
Progress Bar	*	*		
Virtual Goods & Marketplace	*		*	
Collections	*	*	*	*
Leaderboard	*	*		
Challenges	*	*	*	
Badges & Achievement Symbols	*	*	*	*
Customization				
Profiles	*	*	*	
Avatars			*	
Gifting				
Tasks / Missions	*	*	*	
Competitions				
Chance & Random Elements			*	
Content Unlocking	*	*	*	
Social Sharing Points	*	*	*	*
Social Graphs				
Groups / Teams	*	*	*	
Notifications	*	*	*	*
Dashboard	*	*		
Settings	*	*	*	
Goals	*	*	*	
Discussion Forums	*	*	*	*

As can be seen in Table 3, points are used in all gamification applications. Points are one of the basic elements that determine the functioning of a gamification process. Points, one of the three mechanics in the system referred to as the PLB (Point, Leaderboard, Badges) trilogy in gamification literature, constitute the basic structure of the gamification system. As shown in Table 3, none of these mechanics are encountered in Swarm. Since Swarm is a social media application, it does not offer users a process with a beginning and an end. Therefore, while it emphasises using and accumulating points as an economic tool, it does not use mechanics that indicate a limited time period, such as levels or tasks. While points can be a tool for an endless endeavour, levels indicate finite actions that occur in a limited time period.Another striking element in Table 3 is badges or symbols indicating success in all applications. Badges, the last link in the PLB trilogy, are the most important game elements in showing success. It is observed that similar uses are found in the applications examined. All applications have mechanics that show users' successes with certain symbols. The motivational aspect of badges is primarily related to collections. In this respect, when Table 3 is examined, it is seen that all applications also include collections. It is understood from the discussions on this subject that collecting all badges is a great struggle, especially in Khan Academy. In the discussion environments on the site, users often ask questions about how to obtain these badges. For example, the largest badge, the *black hole*, has become a mysterious target, and many users ask questions about how to reach it.When we look at Table 3, it is understood that only SuperBetter does not have personalization. In addition, Khan Academy is the only application that uses avatars besides profiles. Although using profiles partially helps users create their design on the application, the mechanics that reflect the players' characters are avatars. Within the *game's magic circle*, avatars help the player break away from the real world and create their own personality in the virtual world. Therefore, using avatars further integrates the gamification application into the game system.Table 8: Evaluation of the MDA Framework (Control Group vs. Gamified)

MDA Component	Indicator	Gamified Group Mean (SD)	Control Group Mean (SD)	p-value
Mechanics	Clear rules and feedback mechanisms	5 (±0.52)	3 (±0.68)	0.001
	Use of points/badges for progress	5 (±0.47)	3 (±0.74)	0.000

Dynamics	Interaction and real-time competition	5 (±0.49)	3 (±0.70)	0.000
	Motivation through challenge/reward cycle	5 (±0.54)	3 (±0.66)	0.002
Aesthetics	Emotional engagement/enjoyment	5 (±0.45)	3 (±0.60)	0.000
	Sense of achievement	5 (±0.50)	4 (±0.62)	0.003

Throughout all MDA components (Table 8), the gamified group consistently reported high engagement and learning satisfaction levels, with an average score of five. Conversely, the control group gave more moderate responses, typically ranging from three to four. While the standard deviations indicate relatively moderate variability in the responses, the t-test p-values, all less than 0.05, confirm that the observed differences between the groups are statistically significant. These findings demonstrate the positive effects of gamification on student motivation and learning experiences, especially in the context of English as a Foreign Language (EFL), where components like feedback, rewards, interaction, and enjoyment are crucial in enhancing student engagement.

3.2 6D Model results Table 9: Comparing Gamified and Control Groups for Learning Outcomes in the 6D Model

Indicator	Gamified Group (Mean ± SD)	Control Group (Mean ± SD)	p-value
Engagement	5 ± 0.5	3.5 ± 0.7	0.002
Learning Satisfaction	5 ± 0.4	3.7 ± 0.6	0.003
Motivation	5 ± 0.5	3.5 ± 0.7	0.001
Vocabulary Improvement	5 ± 0.4	3.6 ± 0.8	0.004
Grammar Improvement	5 ± 0.4	3.5 ± 0.7	0.005

According to the study (Table 9, Figure 1), the gamified group significantly increased engagement and learning satisfaction. The gamified group consistently received higher mean scores on all engagement and incentive measures. The gamified group averaged 5 (±0.5), while the control group scored 3.5 (±0.7). With p-values of 0.05, these differences were statistically significant. The gamified group's learning results showed significant improvements, particularly in vocabulary and grammar competency. Their post-test results outperformed those of the control group, demonstrating the effectiveness of gamified learning even more.

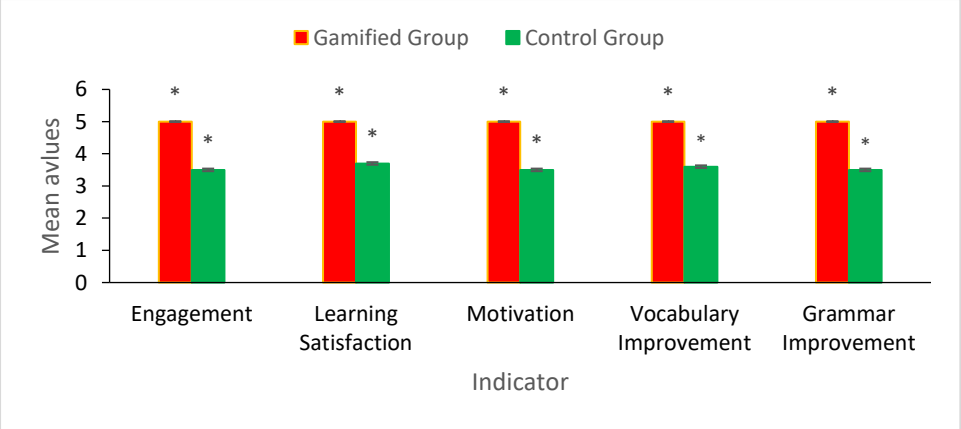

Figure 1: Learning Outcomes in Application of 6D model of Gamified and Control Groups (note: *p =<0.05)

This MDA-based post-mortem analysis supports the theory that gamification significantly improves language learning, specifically through its mechanics (structure), dynamics (social interaction), and aesthetics (emotional response). The findings are consistent with Sailer et al. (2017), who noted that different game elements elicit different motivating reactions, particularly in educational settings. The findings also support Prensky's (2001) theory that digital natives live in interactive, feedback-rich environments.Furthermore, the positive effects of dynamics, such as real-time quizzes and peer competition, help to support the findings of Zarzycka-Piskorz (2016) discovered that online game-based tasks increase motivation and learning gains in EFL environments. The aesthetic element *fun and enjoyment* was the most highly rated among gamified group learners; this quality is explained by Csikszentmihalyi's (2009) theory of *flow*, in which learners lose themselves in interesting activities. On the downside, some flaws students observe during introspection, such as over-competitiveness and distraction

risks, support Lee and Hammer's (2011) concerns that gamification, if unbalanced, may overemphasise external rewards at the expense of intrinsic motivation. Using the MDA framework post-mortem provided a comprehensive lens through which to evaluate the psychological and pedagogical impact of gamification in the EFL classroom. When carefully designed and aligned with learning objectives, the results showed clear educational benefits for gamified learning. The findings support gamification as a complementary rather than replacement approach because it promotes involvement and improved performanceThis study demonstrates that gamification can powerfully affect student engagement, motivation, and academic performance in EFL classrooms. Students in the gamified group showed higher levels of participation and drive, which directly translated into better learning results. These findings align with existing research, which suggests that game-like elements—such as rewards, challenges, and instant feedback—can make learning more motivating and effective.The results also highlight how gamification can help tackle regular motivational struggles in language learning. Many EFL students lose interest over time, but game-based approaches keep them engaged by tapping into their natural desire for achievement and progress. This supports Self-Determination Theory (Virgil Zeigler-Hill, 2017), which argues that authentic learning thrives when students feel intrinsically motivated.However, there's a fine line to walk. If overused, rewards like points and leaderboards might shift students' focus away from genuine learning and toward external validation. Striking the right balance is key to maintaining long-term motivation and deep engagement.By applying the 6D Model to this study, we see how structured gamification can enhance EFL learning. The data clearly shows that a game-based classroom—with interactive platforms like Kahoot and Quizizz—creates a more dynamic, engaging, and ultimately more effective learning environment than traditional methods.

3.3 Concept of meaningful gamification

The study results showed that the gamified group consistently performed better than the control group across all measured criteria. The gamified group's significantly higher mean scores demonstrated increased motivation, engagement, and learning satisfaction. The statistical analysis indicated that these differences were statistically significant ($p < 0.05$), suggesting that the gamification approach enhanced student performance in these areas.

Table 10: Post-Testing with Gamified Results when comparing the studied models

Indicator	Gamified Group (Mean ± SD)	Control Group (Mean ± SD)	p-value
Engagement	5 ± 0.5	3.5 ± 0.7	0.002
Learning Satisfaction	5 ± 0.4	3.7 ± 0.6	0.003
Motivation	5 ± 0.5	3.5 ± 0.7	0.001
Vocabulary Improvement	5 ± 0.4	3.6 ± 0.8	0.004
Grammar Improvement	5 ± 0.4	3.5 ± 0.7	0.005

While both groups improved their language skills, the gamified group demonstrated significantly higher increases in grammar and vocabulary. This implies that, compared to the traditional techniques used in the control group, gamification's interactive and rewarding nature, with instant feedback and competition, improved the students' language acquisition. The findings (Table 10) are consistent with previous research indicating that gamification can effectively increase student motivation and involvement, thereby improving learning outcomes, particularly in environments such as English as a Foreign Language (EFL). The study also emphasises the importance of using game mechanics beyond simple rewards and focusing on meaningful engagement to build a stronger relationship with the learning content. The gamified group demonstrated higher overall engagement, learning satisfaction, and language improvements, proving that gamification is a practical and effective method for improving EFL learning in a high school setting.

3.5 Comparison of Models

Focusing on the 6D, MDA, and motivating strategies, descriptive statistics for pre-test and post-test results, and the independent t-test results (Post-Test Performance) for the case-control study.Table 11: Descriptive Statistics for Pre-Test and Post-Test Results

Group	Pre-Test Mean ± SD	Post-Test Mean ± SD
Gamified Group (n=18)	3.2 ± 0.5	4.8 ± 0.3
Control Group (n=17)	3.3 ± 0.6	4.0 ± 0.5

The mean scores and standard deviations for the Pre-Test and Post-Test performance of the Gamified Group (n=18) and Control Group (n=17) are presented above.Table 12: Independent t-Test Results (Post-Test Performance) based on the three models

Variable	Gamified Group Mean ± SD	Control Group Mean ± SD	t-value	df	p-value
Engagement	5.0 ± 0.5	3.5 ± 0.7	6.5	33	< 0.001
Learning Satisfaction	5.0 ± 0.4	3.7 ± 0.6	5.9	33	< 0.001
Motivation	5.0 ± 0.5	3.5 ± 0.7	6.3	33	< 0.001
Vocabulary Improvement	5.0 ± 0.4	3.6 ± 0.8	5.6	33	< 0.001
Grammar Improvement	5.0 ± 0.4	3.5 ± 0.7	6.2	33	< 0.001

Table 12 shows the independent t-test findings contrasting the Control Group's performance with the Gamified Group's. Reported are the t-values, p-values, and degrees of freedom (df), so indicating whether the variations among groups are statistically significant.Starting with similar performance levels, neither the Gamified Group nor the Control Group showed significant variation prior to the intervention in the pre-test comparison. The Gamified study found that the Gamified Group consistently performed better than the Control Group across all post-test measures—engagement, learning satisfaction, motivation, vocabulary, and grammar. This clearly shows that gamification had a strong positive impact on student performance and classroom participation. Aal-Asheakh, et al (2024), in his experimental study on the development of students' English speaking skills by gamification activities, stated that the activities positively contributed to English speaking skills and encouraged students to speak English through these activities. Similarly,Homner et al. (2018) used the gamification-based ClassDojo platform, which includes a badge and point system, in an experimental study with 120 primary school 1st, 2nd, 3rd and 4th grade students. This study revealed that the English-speaking skills of the 3rd and 4th grade experimental group improved significantly compared to the students in the control group. In addition, it was found that the gamified teaching environment helped students reduce the language anxiety they experienced while expressing themselves verbally and in writing in English. Similarly, Aktaş (2021) stated that students' self-confidence increased when speaking and writing in English using the Classcraft application. A study conducted by Shatz (2015) on this subject revealed that students took risks regarding language in a gamified environment and that this situation increased their anxiety levels and self-confidence. However, students who actively participated in discussions stated they could carry out brainstorming activities more comfortably.Yıldırım (2017) applied the gamified lesson plan to an experimental and a control group of undergraduate students. According to the data obtained from the study he conducted, he observed that the academic success of the experimental group was higher. Hamari (2014) examined whether the concept of gamification had a positive effect on the outputs obtained as a result of the studies in which he used the experimental method. According to the data obtained, most studies achieved the targeted results. However, it was noted that negative outputs such as increased competitiveness, design and task definition difficulties could occur. In the study conducted by Mert and Samur (2018) with 12 students, Mora et al. (2017) worked with different classifications to provide distinction in their study on gamification models. They mentioned three main approaches for analysing design processes: User-centred, Game-centred and Technology-centred. User-centeredness is defined as design and development processes where users and user goals are at the centre of design. In this study, it can be said from the participant statements that they prefer user-centred approaches. In Mora et al.'s study, Werbach's 6d Design Framework is not clearly shown among the user-centred approaches. Although most of the participants did not directly use the 6D Design Framework, they stated that they followed methods based on this framework. The reason why the participants applied their own methods based on this framework instead of applying the 6D Design Framework directly can be shown by their emphasis on user-centred design.

4. Conclusions

As a result, we can say that gamification is the transfer of the gaming experience that people have instinctively and have mastered from childhood to adulthood to the learning process. However, it should be emphasized that gamification is not a magic wand that can fix bad learning content. Gamification makes static processes more effective, efficient and attractive. Gamification in education is using the fun elements inherent in games with an aesthetic approach and using the gravitational force of playing games to draw learners into the center of the learning process.

When tools like Kahoot and Quizizz were used, 68% of students in the experimental group saw a noticeable improvement in their vocabulary and grammar skills. Their average post-test score was 75.2, compared to just 50.1 in the traditional learning group—a statistically significant gap ($p < 0.05$). In contrast, only 30% of students in the non-gamified group showed similar progress. The MDA Framework demonstrated how mechanics (e.g., rewards), dynamics (e.g., competitiveness), and aesthetics (e.g., enjoyment) contribute to these increases. Although gamification has transformative power, its success requires careful design to avoid relying too heavily on extrinsic rewards. These findings support current pedagogical trends and learner preferences by advocating for the complementary strategy of gamification integration in language education. Finally, it was concluded that the Current models in the study have shown that the inclusion of gamification in the English language teaching process positively affects students' academic success and increases their course performance.The recommendations of the studies examined within the scope of this systematic review can be expressed under two themes: for researchers and practitioners. Recommendations for researchers: conducting studies that will measure all four basic language skills, extending the duration of the study and reaching more participants, examining the effect of gamification on different variables, conducting applications at different ages, class and lesson levels, and using different data collection tools and research methods. Practitioners should develop gamification applications implemented during the study process, use them in classes, use gamification tools by other branch teachers, and obtain student opinions before the application. In the studies conducted, more emphasis was placed on investigating the effect of the gamification method on course success, and more specific skills such as reading comprehension, writing, speaking, and vocabulary acquisition in English were not included in the research focus. In the literature studies examined, it was concluded that the number of studies on the use of gamification in education has increased. It was seen that the studies conducted mostly included variables such as student success and motivation. It was determined that the selected sample mainly consisted of primary school, secondary school, high school and undergraduate level students, and there were not many studies investigating the effect of using the gamification method on teachers.

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هوامش البحث

[1] the interactive activity, GPS tracking, and training service
[2] Khan Academy is an American non-profit educational organization
[3] SuperBetter app uses the psychology of game play to achieve epic wins in all of life
[4] A Gamification Concept for Teaching