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# Play and Learn: The Role of Student-Designed Games in Language Skills and Motivation

## Jugar y Aprender: El Papel de los Juegos Diseñados por Estudiantes en las Habilidades Lingüísticas y la Motivación

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### ABSTRACT

This quasi-experimental investigation examines the obstacles encountered by Iranian junior high school students in their pursuit of English language proficiency and the subsequent effects of these challenges on their skills by the time they graduate. The primary difficulties identified include classroom anxiety, insufficient motivation, limited opportunities for practice, & an overreliance on traditional pedagogical approaches. Restricted access to language resources and minimal interaction with English outside the classroom intensify these challenges and hinder effective skill acquisition. In response to these issues, the study introduced an innovative strategy that involved students in creating and participating in gamified learning activities. A purposive sampling method was employed to choose 210 ninth-grade students, who were subsequently allocated into experimental and control groups. Data collection involved pre- & post-tests, as well as questionnaires. The results indicated that gamification significantly enhanced language proficiency & student motivation. Furthermore, interviews conducted with five participants from the experimental group highlighted the beneficial effects of gamified methodologies on enriching their educational experiences. This research offers important insights for educators, indicating that gamification can effectively mitigate the challenges faced by Iranian junior high school students when learning English, thereby promoting more engaging & productive educational environments.

**Keywords:** Game designing, gamification, language achievement, motivation

### RESUMEN

Esta investigación cuasiexperimental examina los obstáculos encontrados por estudiantes iraníes de secundaria básica en su búsqueda del dominio del idioma inglés y los efectos posteriores de estos desafíos en sus habilidades al momento de la graduación. Las principales dificultades identificadas incluyen ansiedad en el aula, motivación insuficiente, oportunidades limitadas de práctica y una dependencia excesiva de enfoques pedagógicos tradicionales. En respuesta a estos problemas, el estudio introdujo una estrategia innovadora que involucró a los estudiantes en la creación y participación en actividades de aprendizaje gamificadas. Se utilizó una técnica de muestreo intencional para seleccionar a 210 estudiantes de noveno grado, quienes luego se dividieron en grupos experimentales y de control. La recolección de datos involucró pruebas previas y posteriores, así como cuestionarios. Los resultados indicaron que la gamificación mejoró significativamente tanto la competencia lingüística como la motivación de los estudiantes. Además, las entrevistas con cinco participantes del grupo experimental resaltaron los efectos positivos de las metodologías gamificadas en la mejora de sus experiencias educativas. Esta investigación ofrece perspectivas importantes para los educadores, indicando que la gamificación puede mitigar efectivamente los desafíos que enfrentan los estudiantes iraníes de secundaria básica al aprender inglés, promoviendo así entornos educativos más atractivos y productivos.

**Palabras clave:** diseño de juegos, gamificación, logro lingüístico, motivación

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## Introduction

The integration of gamification into education has received growing scholarly attention because of its potential to enhance language proficiency and learner motivation among junior high school students (Naviantara et al., 2024; Yang et al., 2025). Gamification, which uses game-design elements in non-game contexts, improves learner engagement and educational outcomes (Adzmi et al., 2024; Fatah, 2025). In English language education, gamified learning environments have been found to significantly increase students' motivation to learn English, a vital skill in a globalized context (Adzmi et al., 2024; Fatah, 2025; Yang et al., 2025).

Empirical evidence supports the effectiveness of gamification in EFL classrooms. Studies conducted in Indonesia show that platforms such as Wayground enhance student engagement, participation, and academic performance (Inayati & Waloyo, 2022), while research with junior high school learners indicates increased motivation, interactivity, and enjoyment (Naviantara et al., 2024). These findings align with motivational research suggesting that gamified learning promotes intrinsic motivation by making learning more meaningful and enjoyable (Sun & Hsieh, 2018). Gamification has been demonstrated to enhance vocabulary acquisition and overall language proficiency, especially when learners are actively involved in the creation of gamified tasks, thereby promoting autonomy and ownership (Permata et al., 2024).

This study enhances the literature by offering empirical evidence from a non-Western context and by addressing deficiencies in existing research. Although prior studies report positive links between gamified instruction and learner engagement (Abdulbaki et al., 2025; Dorgham & Obiad, 2025; Liu et al., 2024b; Ma, 2025), the specific effects on language achievement remain underexplored. Moreover, psychological dimensions such as foreign language enjoyment and the Ideal L2 Self have received limited attention, particularly in learner-designed gamification contexts (Fathi, 2024; Liu et al., 2024a; Liu et al., 2024b). The absence of empirical research in Iranian public schools and the restricted emphasis on student-designed games underscore the necessity of this study. The research questions include:

RQ1: Does gamification impact ninth-grade junior high school students' language achievement?

RQ2: Does gamification impact EFL learners' motivation?

RQ3: What are students' perceptions of engagement and participation in gamified language-learning activities?

RQ4: What challenges do students face when designing and implementing their own gamified language-learning activities?

RQ5: What barriers do students encounter when participating in gamified language-learning activities?

## Literature review

### Gamification in Language Education

Recently, the integration of gamification into educational settings has received growing attention, particularly in English as a Foreign Language (EFL) classrooms (Alenazi, 2025; Bouzar & Idrissi, 2025; Dorgham & Obiad, 2025; Huseinović, 2023). Gamification, the use of game-design elements in non-game contexts, has been widely examined for its potential to enhance student engagement, motivation, and academic performance (Abdulbaki et al., 2025;

Farisca & Warni, 2025; Titania, 2024; Zuhri et al., 2025). This section reviews key studies examining the impact of educational gamification design on ninth-grade junior high school students' language achievement and motivation in EFL classrooms.

## **Theoretical Framework**

Gamification in education is commonly understood as the use of game-design elements such as points, badges, leaderboards, and competition to create engaging and motivating learning environments (Nurhayati & Fathurrohman, 2025; Rahmi et al., 2025). These components are intended to stimulate both intrinsic and extrinsic motivation by cultivating a sense of progress, accomplishment, and challenge among learners (Bharti, 2023; Rahayu et al., 2022). The motivational mechanisms underlying gamification are frequently explained through established theoretical models, particularly Self-Determination Theory (SDT) and the ARCS Model of Motivational Design, which emphasize autonomy, competence, relevance, and satisfaction as key drivers of learner engagement (Zhang & Crawford, 2023; Zhou & Wei, 2024). These frameworks collectively establish a robust theoretical basis for comprehending the impact of gamification on learner motivation and engagement within educational settings.

## **Impact on Language Achievement**

A significant corpus of research demonstrates that gamification positively influences language learning outcomes in EFL classrooms (Abdulbaki et al., 2025; Cheng et al., 2025; Dorgham & Obiad, 2025; Huseinović, 2023; Laksanasut, 2025; Qadri Tayeh & Malkawi, 2024). Studies consistently show that learners participating in gamified instruction outperform peers in traditional learning settings, demonstrating improved language proficiency and assessment performance (Liu et al., 2024a; Zhang & Hasim, 2023). For example, research using Wayground revealed higher task accuracy and greater language improvement among students exposed to gamified learning compared to control groups (Inayati & Waloyo, 2022; Zhang & Crawford, 2023). Similarly, tools such as Kahoot and Quizlet have been linked to significant gains in vocabulary and grammar learning (Alenazi, 2025; Hashim et al., 2025; Landázuri et al., 2025; Matsubara & Yoshida, 2018; Rofiah & Waluyo, 2024; Saha & Kanchana, 2025). These platforms offer immediate feedback and interactive practice, which are critical for effective language acquisition and confidence-building (Rofiah & Waluyo, 2024; Temel & Cesur, 2024).

## **Impact on Motivation**

Motivation plays a central role in language learning, and gamification has been shown to enhance both intrinsic and extrinsic motivation. Intrinsic motivation is fostered through autonomy, mastery, and meaningful learning experiences, while extrinsic motivation is supported through rewards, competition, and recognition (Ali, 2022; Tsai, 2024). Research also highlights gamification's role in reducing language learning anxiety. Studies using Duolingo, for instance, report lower speaking anxiety and higher enjoyment levels among learners, suggesting that gamified environments can be particularly supportive for EFL students (Ali, 2022; Zhao et al., 2023).

## **Engagement and Participation**

Studies have demonstrated that gamification significantly boosts learner engagement and participation in EFL classrooms (Titania, 2024). Platforms such as Kahoot and Wayground

promote real-time interaction, collaboration, and competition, leading to higher levels of active involvement (Inayati & Waloyo, 2022). Additionally, mobile-assisted language learning applications like Duolingo support independent and self-paced learning, encouraging learner autonomy and sustained engagement beyond the classroom (Ali, 2022; Zhao et al., 2023).

## **The Role of Specific Gamification Tools**

### ***Wayground***

Wayground (formerly Quizizz) is a widely used gamified quiz platform in EFL classrooms. Research indicates that it enhances learners' motivation, relevance, and satisfaction, largely due to its interactive and competitive features (Inayati & Waloyo, 2022; Zhang & Crawford, 2023; Zhang & Hasim, 2023).

### ***Kahoot***

Kahoot enables interactive quizzes that significantly increase student motivation and engagement in EFL learning. Studies report reduced language anxiety and improved vocabulary and grammar learning, contributing to a more positive classroom environment (Rofiah & Waluyo, 2024; Temel & Cesur, 2024).

### ***Duolingo***

Duolingo is an effective gamified language learning application that improves speaking skills while reducing speaking anxiety. Research indicates higher enjoyment, improved proficiency, and lower anxiety levels among EFL learners using the app (Ali, 2022; Zhao et al., 2023).

### ***HMH Classcraft***

HMH Classcraft supports collaborative and problem-based learning in EFL contexts. Studies show it enhances motivation, engagement, and learner involvement while fostering persistence, creativity, and resilience (Membrive & Armie, 2020; Zhou & Wei, 2024).

## **Comparative Analysis of Gamified Scaffolding Approaches**

Research indicates that different gamified scaffolding approaches influence learner engagement and performance in virtual language learning environments. Gamified exploration (self-regulated learning) was determined to be the most effective method for improving student engagement and language performance among linear, gamified linear, and gamified exploration approaches (Jiang et al., 2023).

## **Challenges and Constraints**

Despite its benefits, gamification presents several challenges in EFL contexts. Teachers require adequate technical skills and resources to design effective gamified activities, and careful curriculum alignment is essential to ensure learning objectives are met (Titania, 2024). More research is needed to look into the long-term effects of gamification, how it is used in different settings, and the problems that teachers face (Supasa et al., 2024; Zhang & Hasim, 2023).

Overall, educational gamification has a positive impact on ninth-grade students' language achievement, motivation, and engagement in EFL classrooms, while also reducing language learning anxiety. However, its effectiveness depends on thoughtful design and pedagogical alignment. Addressing the role of student-designed games, this study contributes to the literature by highlighting the value of learner participation and offering practical insights for educators and curriculum developers (Titania, 2024).

## **Methodology**

### **Research Design**

This study employed a quasi-experimental design, appropriate for educational contexts where random assignment is not feasible. Two groups were compared: an experimental group receiving gamified instruction and a control group receiving traditional teaching. The experimental group engaged in activities incorporating game elements such as points, badges, and collaboration, while the control group followed conventional instruction. This design enabled a clear comparison of language achievement and motivation outcomes.

### **Participants**

The participants comprised 210 ninth-grade students (aged 12–15) from junior high schools in Khaf City, Iran, selected through purposive sampling. The sample included 120 boys and 90 girls, ensuring balanced representation. All participants were enrolled in English language courses, making them suitable for examining language achievement and motivation at a critical stage of language development.

### **Materials and Instruments**

Language achievement was measured using a standardized proficiency test administered before and after the intervention, assessing reading, writing, listening, and speaking skills. Motivation was measured using the L2 Motivational Self-System questionnaire, which evaluates learners' attitudes, ideal L2 self, and motivational influences. The questionnaire was validated through back-translation and reliability testing to ensure contextual suitability.

### **Ethical Consideration**

Ethical approval was obtained from the school authority. Informed consent was secured from all participants and their parents or guardians. Participation was voluntary, and anonymity and confidentiality were maintained throughout the study.

### **Data Collection**

Data were collected over two months (April–May 2025). Pre-tests established baseline proficiency, followed by weekly gamified activities for the experimental group and traditional instruction for the control group. Post-tests and motivational questionnaires were administered after the intervention. Additionally, follow-up interviews with five experimental-group students offered qualitative reflections about their experiences with gamified learning.

## Results

### Quantitative Research

RQ 1: Does gamification impact ninth-grade junior high school students' language achievement?

#### *Students' Language Achievement*

Analysis of language achievement scores evaluated the impact of the gamification intervention (RQ1). Pre-test scores confirmed baseline equivalence between the experimental and control groups ( $p = .296$ ). Following the intervention, post-test results showed a statistically significant difference between the experimental group ( $M = 15.26, SD = 1.89$ ) and the control group ( $M = 11.30, SD = 2.29$ ), with  $p = .000$ . This represents a substantial improvement within the experimental group from pre-test ( $M = 11.58$ ) to post-test, as confirmed by a paired-sample t-test ( $p = .000$ ). The distribution of scores, illustrated in Figure 1, indicates both higher performance and greater homogeneity in the experimental group post-intervention.

#### *Theoretical Interpretation*

The pronounced gains in language achievement align with the core tenets of Self-Determination Theory. The intervention's design likely enhanced learners' autonomy (through agency in game creation), competence (via scaffolded challenges and feedback), and relatedness (through collaborative tasks). This supportive motivational environment, coupled with heightened motivation captured by the L2 Motivational Self-System survey, appears to have facilitated deeper cognitive engagement and more effective language processing than the traditional, teacher-centered methodology.

**Table 1.** The Kolmogorov-Smirnov Test Results

Groups	Experimental_1	Control_1	Experimental_2	Control_2
p-value	0.051	0.251	0.06	0.249

The Kolmogorov–Smirnov test showed that the samples met the normality condition. After confirming normality, independent-samples t-tests were used. Comparison of Experimental\_1 and Control\_1 (Table 2) yielded  $p = .296$ , indicating no significant difference at baseline. Comparison of Experimental\_2 and Control\_2 (Table 3) yielded  $p = .000$ , indicating a significant post-intervention difference. Paired-sample t-tests comparing Experimental\_1 and Experimental\_2 also produced  $p = .000$ , confirming significant improvement within the experimental group. Box plots (Figure 1) illustrate the superiority of Experimental\_2 in mean performance and reduced variability.

**Table 2.** The Results of Comparing Control\_1 and Experimental\_1

	Groups	n	Mean	Std dev	Std error	Significance
Initial Scores	Control_1	100	11.21	2.62	0.262	F=0.4
	Experimental_1	100	11.58	2.36	0.236	p-value=0.296

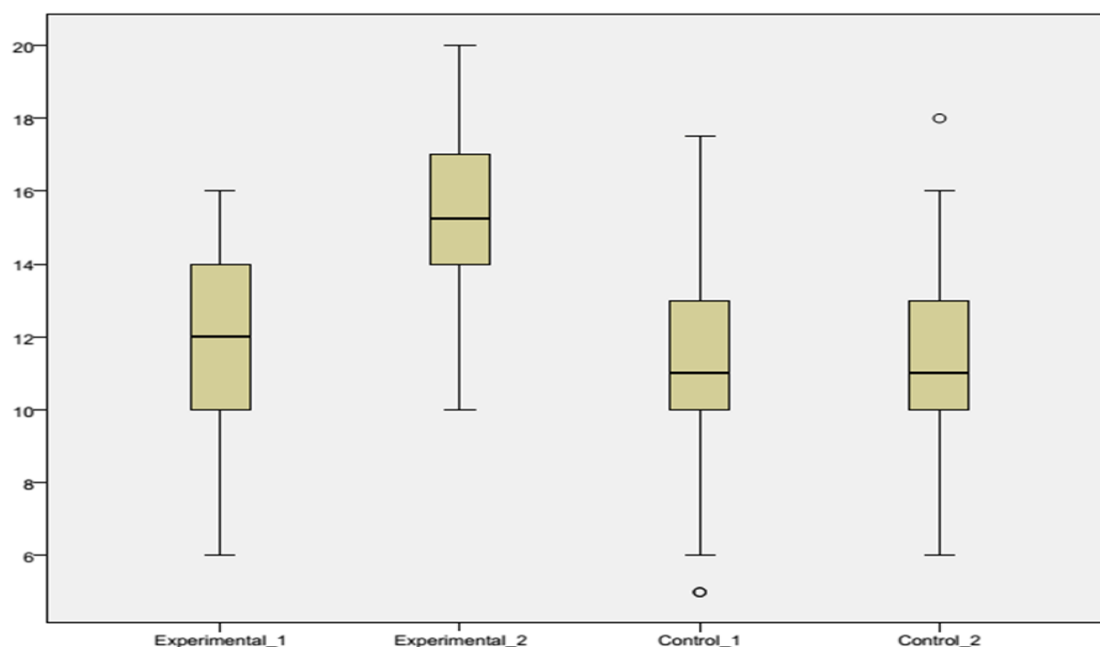
**Table 3.** The Results of Comparing Control\_2 and Experimental\_2

	Groups	n	Mean	Std dev	Std error	Significance
Final Scores	Control_2	100	11.30	2.29	0.229	F=2.84
	Experimental_2	100	15.26	1.89	0.189	p-value=0.000

**Table 4.** The Results of Comparing Experimental\_1 and Experimental\_2

	Groups	n	Mean	Std dev	Std error	Significance
Paired-sample-test	Experimental_1	100	11.58	2.36	0.236	T=20.68
	Experimental_2	100	15.26	1.89	0.189	p-value=0.000

**Figure 1.** Box Plots of Language Achievement Scores for Experimental and Control Groups Across Pre-test and Post-test



**Note.** The figure displays the distribution of language achievement scores (scale 0-20) for the experimental (n = 100) and control (n = 100) groups on the pre-test (Experimental\_1, Control\_1) and post-test (Experimental\_2, Control\_2). The post-test scores for the experimental group (Experimental\_2) are markedly higher, indicating a significant improvement in language achievement following the gamification intervention.

**Interpretation of Box Plots**

Pre-intervention scores (Experimental\_1 and Control\_1) exhibited comparable medians around 11.5, indicating similar baseline performance. Post-intervention, the experimental group (Experimental\_2) demonstrated a markedly higher median (approximately 16–17), while the control group (Control\_2) showed minimal gains, maintaining a median near 11.5. The interquartile range (IQR) for Experimental\_2 shows that the post-intervention scores are more similar, and the fact that there are no outliers in Experimental\_2 supports the idea that gamification has a positive effect on language achievement.

Overall, these findings suggest that gamification positively influences language achievement by fostering increased engagement and cognitive development among students. The notable enhancements observed underscore the necessity of integrating innovative pedagogical approaches and technology to cultivate a more efficacious educational setting. This research contributes valuable insights into the role of gamification in language education, particularly in TEFL contexts, and emphasizes the importance of such strategies in enhancing student performance and motivation.

### Motivational Survey

RQ2: Does gamification impact EFL learners’ motivation?

Descriptive statistics addressed the second research question. The results of a questionnaire focusing on nine subfactors of Dörnyei's L2 Motivational Self-System are presented. These subfactors include criterion measures, ideal L2 self, family influence, instrumentality-promotion, instrumentality-prevention, attitudes to L2 culture, attitudes to L2 community, and ought-to L2 self. The questionnaire used a six-point Likert scale. The subfactors assess students' planned attempts to acquire English, their ideal self in using the language, their motivation for future success, their views on L2 culture, their reasons for learning English to pass a test, the influence of family on their English learning, and their attitudes toward the L2 community.

A questionnaire was administered to a control group and an experimental group, each consisting of 100 participants. The reliability of the questionnaire was confirmed using Cronbach's alpha. Because the data are ordinal, the Mann–Whitney test was used to compare groups. The mode of each student's responses across items loading on a factor was selected to create a 1 × 100 vector for each factor. For example, the criterion measure factor included questions 8, 16, 24, 32, 40, 50, and 71. This procedure was applied to all nine factors for both groups. Mann–Whitney tests comparing each factor between groups yielded p = .000 for all nine factors, indicating significant differences. Box plots of the modal vectors (Figure 2) illustrate higher median motivation scores in the experimental group across all factors.

**Table 5.** The number of questions for all factors

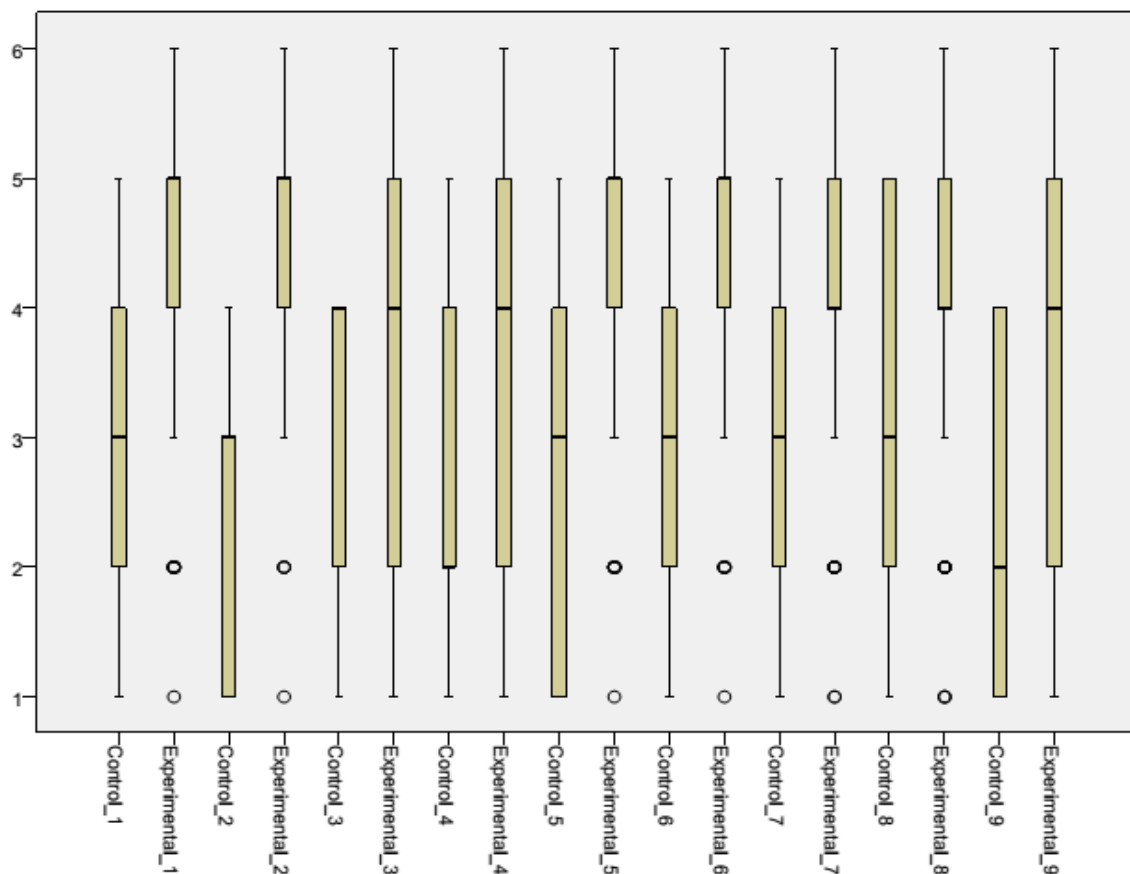
Factor	Criterion measures	Ideal L2 self	Ought-to L2 self	Family influence	Instrumentality-promotion	Instrumentality-prevention	Attitudes to L2 L	Attitudes to L2 culture	Attitudes to the L2 community
Items	8,16,24,32,40,50,71	9,17,25,30,33,41,51	1,10,18,26,34,42,54	2,11,19,27,35,43,55	3,5,12,20,28,36,44,52,60,68,76	4,13,29,36,42,48,53,21,55,60,64,68,72,76	73,54,59,63,67	7,15,47,57,58,61,62,65,66,69,70,74	6,14,22,23,31,38,39,46,49,52,56

So, we use the following representation for them:

$X_{1,8} \quad X_{1,16} \quad X_{1,24} \quad X_{1,32} \quad X_{1,40} \quad X_{1,50} \quad X_{1,71}$   
 $X_{2,8} \quad X_{2,16} \quad X_{2,24} \quad X_{2,32} \quad X_{2,40} \quad X_{2,50} \quad X_{2,71}$   
 $\vdots \quad \vdots \quad \vdots \quad \vdots \quad \vdots \quad \vdots \quad \vdots$   
 $X_{100,24} X_{100,32} X_{100,40} X_{100,50} X_{100,71}$  Choose the Mode of each row →  $Y_{1,1} Y_{2,1} \vdots Y_{100,1}$  ,

Each row in matrix X corresponds to one student, and each column corresponds to one question. For example, X<sub>2, 32</sub> represents the response of the second student to the thirty-second question. This procedure is applied to nine factors across two groups, resulting in nine paired mode vectors. Using the Mann–Whitney test, we compare each factor between the two groups separately. The p-value for all nine factors is 0.000, indicating that the two groups differ significantly. The box plots of vector Y for the nine paired vectors are shown in Figure 2, where the number at the end of each label corresponds to the factor listed in the top row of Table 5.

**Figure 2.** Boxplots Comparing Motivational Factors between Control and Experimental Groups



**Note.** The figure illustrates the distribution of motivation scores across nine sub-factors of the L2 Motivational Self-System for the control group (n = 100) and the experimental group (n = 100). Higher median scores in the experimental group indicate increased motivation across all factors.

Figure 2 presents boxplots comparing motivational responses between the control and experimental groups across nine domains related to learning English as a Foreign Language (EFL). The vertical axis displays motivation scores ranging from 1 to 6, while the horizontal axis labels the control group as “Control\_1” through “Control\_9” and the experimental group as “Experimental\_1” through “Experimental\_9.”

The boxplots show that the experimental group consistently demonstrates higher median motivation scores across all domains, indicating that gamification contributes to increased student motivation. The narrower boxes for the experimental group suggest greater consistency in motivational responses. Outliers in both groups reflect individual variability. Overall, the

results indicate that gamification effectively enhances motivation in language learning contexts. Table 6 presents the mode of vector Y for all factors in both groups. For every factor, the experimental group’s mean was not lower than that of the control group, and it showed a higher frequency for five of the nine factors.

**Table 6.** Modes and Frequencies for Motivational Factors in Control and Experimental Groups

	Factors	Criterion measure	Ideal L2 self	Ought-to L2 self	Family influence	Instrumental promotion	Instrumental prevention	Attitudes to L2 L	Attitudes to L2 culture	Attitudes to the L2 community
Mode	Control	4 (39%)	3 (57%)	4 (54%)	4 (38%)	3 (31%)	2 (37%)	4 (31%)	5 (27%)	4 (37%)
	Experimental	5 (43%)	5 (43%)	5 (37%)	5 (31)	5 (41%)	5 (47%)	4 (41%)	5 (34%)	4 (28%)

**Note.** The table presents the modal values and their corresponding frequencies (as percentages) for the nine motivational factors derived from the L2 Motivational Self-System questionnaire. Responses were collected on a 6-point Likert scale. The "Pair-Vectors Y" represent the average of each participant's responses across the items associated with each specific factor.

**Interpretation**

Statistical analysis via the Mann–Whitney test revealed a significant difference between groups ( $p = .000$ ), indicating that gamification substantially influences learners' motivational factors. The experimental group consistently demonstrated superior modal responses across motivational dimensions compared to the control group. The increase in motivation was particularly pronounced in criterion measures, ideal L2 self, ought-to L2 self, and instrumentality-prevention; for example, the ideal L2 self-modal response rose from 3 (57%) in the control group to 5 (43%) in the experimental group.

Box plots confirmed these results, showing that the experimental group was more motivated and that their motivation trends were more stable. The experimental group recorded higher modal frequencies across five of nine factors, underscoring gamification's widespread positive influence. Improvements spanned family influence, attitudes toward L2 culture, and community engagement, suggesting that gamification fosters a more holistic language learning experience.

In conclusion, the results provide compelling evidence that gamification significantly enhances the motivation of EFL learners, influencing various psychological and learning dimensions. The motivational findings demonstrate the ability of gamified approaches to create engaging and effective language learning environments. Students reported a more enjoyable experience, and quantitative data indicated improved motivation, reduced anxiety, and facilitated language acquisition. Furthermore, gamification enhanced self-confidence, creativity, communication skills, and teamwork, contributing to a positive educational atmosphere.

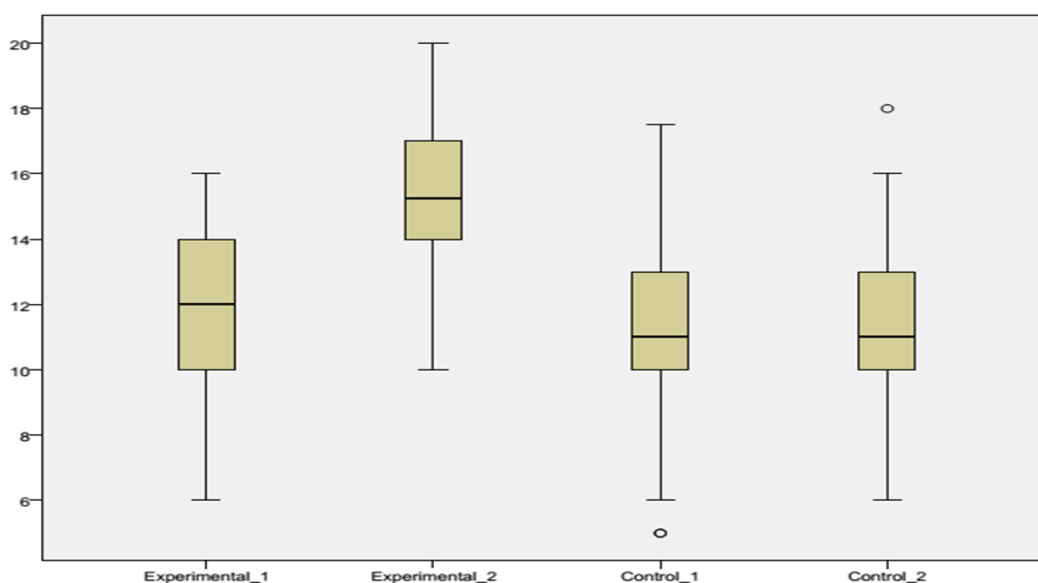
### Qualitative Research

This qualitative quasi-experimental investigation examined the effects of student-created gamified language learning activities on language acquisition and motivation. Analysis of student feedback revealed several prominent themes. Regarding the influence of student-designed games (RQ3), participants reported increased engagement attributed to the enjoyment and personalization afforded by the game-creation process. This environment contributed to a more comfortable learning atmosphere, enhancing fluency and confidence as students customized game components to align with their learning preferences. Working together to design games helped people be more creative, solve problems, and learn about other cultures.

The study found that game mechanics like points and leaderboards increased both intrinsic and extrinsic motivation, which led to more profound engagement with educational materials. This was in response to the question of how gamification increases engagement and participation (RQ4). Gamification also alleviated anxiety related to making errors, thereby promoting active participation and facilitating improvements in grammar and vocabulary acquisition. The capacity to personalize game design further contributed to increased engagement and motivation.

However, the study identified implementation challenges (RQ5). Some students experienced difficulty maintaining focus on learning objectives while engaged in gameplay, and varying levels of difficulty sometimes resulted in boredom or frustration. The research also highlighted discrepancies between gamification elements (such as badges and points) and actual learning progress, indicating a need for careful alignment of game mechanics with educational objectives. The qualitative findings are subject to limitations, including a small and potentially non-representative sample, possible response bias, context-specific applicability, and a focus on immediate rather than long-term outcomes. Future research should address these limitations to enhance generalizability.

**Figure 3.** Comparison of Language Achievement Scores Between Experimental and Control Groups



**Note:** The box plots compare the pre-test and post-test scores (0–20 scale). The experimental group's post-test results (Experimental\_2) show markedly higher performance following the gamification intervention.

A box-plot analysis of Figure 3 reveals a substantial disparity in language achievement scores between the experimental and control groups. Pre-intervention scores exhibited comparable medians around 11.5, indicating similar baseline performance. Post-intervention, the experimental group demonstrated a markedly higher median (approximately 16–17), suggesting a significant improvement attributable to the gamified intervention. Conversely, the control group showed minimal gains, maintaining a median near 11.5. The IQR for the experimental group indicates more homogeneous post-intervention scores, further supporting the positive impact of gamification on language achievement.

## Discussion

This study provides strong evidence that gamification enhances both language proficiency and motivation among ninth-grade EFL learners. The significant post-intervention gains in achievement support previous findings on the cognitive benefits of gamified learning environments (Huseinović, 2023; Legaki et al., 2020). These results can be interpreted through Self-Determination Theory, as gamified activities appear to support learners' autonomy, competence, and relatedness, thereby strengthening intrinsic motivation. Improvements in the L2 Motivational Self-System, particularly the ideal L2 self, suggest that gamification helps learners form clearer future identities as English users, increasing goal-directed effort. Qualitative findings further indicate higher engagement and reduced anxiety, suggesting that gamification lowers affective barriers and creates more supportive conditions for language acquisition. This aligns with research highlighting gamification as a psychologically engaging and motivating learning approach (Hashim et al., 2025).

## Contextual Analysis

This study is situated within the broader scholarly dialogue concerning gamification in education, particularly in language acquisition. It is consistent with the literature emphasizing the significance of engagement and motivation for successful language learning. Recent research indicates that gamification can mitigate challenges such as diminished motivation and anxiety associated with language study, positioning it as a transformative tool within educational frameworks (Adzmi et al., 2024; Supasa et al., 2024). The implications of these findings advocate for educators to consider incorporating gamified elements into curricula to cultivate a more stimulating learning atmosphere. Furthermore, the study underscores the necessity for meticulous design to ensure that gamification aligns with educational goals (Hashim et al., 2025; Yazid et al., 2024).

## Critical Evaluation

The research's strengths lie in its mixed-methods approach, which combines quantitative and qualitative data to provide a comprehensive perspective on the effects of gamification. Nonetheless, limitations include the study's specific socio-cultural context and the limited duration of the intervention, which constrain generalizability. Response bias stemming from the novelty of gamification may have influenced student feedback (Shen et al., 2024; Zhang & Hasim, 2023). Recent work also indicates that while gamification can boost motivation, it risks producing transient engagement if not designed with foresight (Kumar & Hashim, 2024). Technological challenges and competitive dynamics in gamified settings may occasionally detract from the educational experience (Di Nardo et al., 2024; Duisenova, 2024).

## **Connections to Other Works**

This study relates to existing literature on gamification, including studies by Bai et al. (2020) and Xi and Hamari (2019), which report positive effects of gamified learning. However, it addresses gaps in understanding the long-term impacts of gamification and the specific features that bolster student engagement. Recent systematic reviews emphasize the need for further research into the enduring impact of gamification on language proficiency and the influence of cultural diversity on its effectiveness (Jun & Lucas, 2024; Supasa et al., 2024). The study raises new questions regarding the optimization of various game mechanics for educational applications (Duisenova, 2024; Imron et al., 2024).

In other words, the research provides robust evidence for the advantages of gamification in language education, especially in improving student motivation and performance. Although it offers important insights, the limitations and challenges linked to gamified learning highlight the necessity for additional investigation. The article is significant within its discipline, as it corroborates existing literature and sets the stage for further inquiries into the successful incorporation of gamification in educational settings. By addressing challenges and refining the design of gamified learning experiences, educators can enhance the efficacy of language education and promote a more stimulating learning environment.

## **Conclusion**

This study provides empirical validation for the efficacy of student-designed gamified activities in augmenting language achievement and strengthening L2 motivation among ninth-grade EFL learners in Iran. The findings affirm that such interactive methodologies transform the learning environment and address prevalent issues of low motivation and limited engagement.

## **Pedagogical Implications**

The results show that teachers can use the information in real life. Teachers should consider integrating gamification frameworks into language curricula, shifting from traditional, teacher-centered instruction to models that empower students as active co-creators of their learning experiences. This can be achieved by leveraging established gamified platforms for routine practice and by providing structured opportunities for students to design their own learning games, thereby fostering learner autonomy, collaboration, and metacognitive skills.

## **Limitations and Avenues for Future Research**

This investigation is bounded by its specific socio-cultural context and the limited duration of the intervention, which constrains generalizability and leaves the long-term sustainability of observed benefits an open question. Future research should prioritize longitudinal studies to assess the enduring impact of gamification on language retention. Further inquiry is warranted to disaggregate the effects. This research aims to examine individual game mechanics and explore the cross-cultural applicability of these pedagogical strategies in diverse educational ecosystems.

In conclusion, this research substantiates gamification as a potent pedagogical instrument and advocates for its informed adoption to create more engaging and effective language learning environments. By strategically embedding these innovative approaches, educators can

enhance linguistic proficiency and cultivate the intrinsic motivation that underpins lifelong learning.

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