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Optimizing Gamification in EFL Classes: A Systematic Literature Review on Effective Practices, Challenges, and Solutions

تحسين التلعيب في فصول اللغة الإنجليزية كلغة أجنبية: مراجعة منهجية للأدبيات حول الممارسات والتحديات والحلول الفعّالة

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Abstract
Integrating gamification in English as a Foreign Language (EFL) education has garnered interest in the education field since it can enhance student engagement and learning outcomes. This study presents a systematic literature review based on the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) 2020 methodology to explore past research on employing gamification in EFL classes. This study investigates effective practices for its implementation, explores the challenges educators face, and proposes actionable solutions. The findings propose that although gamification displays benefits for innovative EFL teaching, its success is linked with user engagement strategies, technical support, integration with educational objectives, professional development and training, and feedback mechanisms, as hindrances could arise such as sustaining student engagement, technical issues, teacher training, and the integration with educational objectives. Thus, there is a need of more empirical studies to look into sustaining student engagement as a challenge to integrate gamification in EFL classrooms along with technical support as a solution. This study offers insights for educators, exposing gamification as a transformative tool for language education, ultimately contributing to innovative language teaching .
Keywords: Gamification, EFL, Language Acquisition, Motivation, Engagement]

المستخلص
اكتسب دمج التلعيب في تعليم اللغة الإنجليزية كلغة أجنبية (EFL) اهتمامًا كبيرًا في مجال التعليم، نظرًا لقدرته على تعزيز مشاركة الطلاب ونتائج التعلم. تقدم هذه الدراسة مراجعة منهجية للأدبيات، استنادًا إلى منهجية "عناصر التقارير المفضلة للمراجعة المنهجية والتحليل التلوي" (PRISMA) لعام 2020، لاستكشاف الأبحاث السابقة حول استخدام التلعيب في فصول اللغة الإنجليزية كلغة أجنبية. تبحث هذه الدراسة في الممارسات الفعالة لتطبيقه، وتستكشف التحديات التي يواجهها المعلمون، وتقترح حلولًا عملية. تشير النتائج إلى أنه على الرغم من فوائد التلعيب في التدريس المبتكر للغة الإنجليزية كلغة أجنبية، إلا أن نجاحه يرتبط باستراتيجيات إشراك المستخدم، والدعم الفني، والتكامل مع الأهداف التعليمية، والتطوير والتدريب المهني، وآليات التغذية الراجعة، حيث قد تظهر عوائق مثل الحفاظ على مشاركة الطلاب، والمشكلات التقنية، وتدريب المعلمين، والتكامل مع الأهداف التعليمية. وبالتالي، هناك حاجة إلى المزيد من الدراسات التجريبية للنظر في الحفاظ على مشاركة الطلاب كتحدٍّ لدمج التلعيب في فصول اللغة الإنجليزية كلغة أجنبية، إلى جانب الدعم الفني كحل. تُقدّم هذه الدراسة رؤىً للمعلمين، مُسلّطةً الضوء على التلعيب كأداةٍ تحويليةٍ في تعليم اللغات، تُسهم في نهاية المطاف في تعليم اللغات بطريقةٍ مبتكرة.
الكلمات المفتاحية: التلعيب، اللغة الإنجليزية كلغة أجنبية، اكتساب اللغة، التحفيز، المشاركة

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1. Introduction

Gamification, which refers to applying game design elements in non-game contexts, has progressively been embedded in education to enhance the motivation and engagement of students, specifically in the context of language learning (Zakian et al., 2022). The integration of gamification into English as a Foreign Language (EFL) classroom has gathered great interest as educators continuously aim to use innovative methods to intensify student engagement and learning outcomes (Lai, 2024; Zakian et al., 2022). In the context of EFL, sustaining student engagement is not an easy task as challenges can arise. Accordingly, it has been proven that gamification boosts participation and enables the development of positive environments (Demirbilek et al., 2022; Zhang & Crawford, 2022). Nevertheless, challenges are still found while integrating gamified strategies, which have the potential to hinder gamification effectiveness. As a consequence, gamification practices highly depend on vigilant designing that ensures that the game mechanics match the educational objectives. Although educators expect that employing gamification in their teaching will boost motivation and engagement, implementing it in classrooms could be difficult due to the challenges encountered. Previous systematic literature reviews have not addressed these challenges and their solutions. Consequently, this leads to hindrances in the incorporation of gamification into classrooms.

This systematic literature review investigates effective practices in gamification in EFL classes while recognizing the challenges educators face and proposes actionable solutions. By synthesizing research on gamification in EFL classes, this review aims to propose valuable insights for educators seeking to optimize their teaching methods through gamified approaches. Accordingly, this study will contribute to a deeper understanding of how gamification can be strategically employed to enhance language learning in EFL classes.

Background

This section presents an examination as to what gamification relates to by exploring past studies in the literature. By joining ideas from past research, this overview helps in understanding what gamification is and its relevance to EFL education.

Gamification

In education, gamification is a modern strategy used in EFL teaching and refers to employing game elements, such as points, bonuses, and challenges, into non-game environments to motivate students (Demirbilek et al., 2022; Lai, 2024). Gamification that is used in learning is the usage of game-like elements such as scoring, score tables, collaboration, and competition to enhance engagement, content acquisition, and knowledge evaluation (Demirbilek et al., 2022). Gamified learning tools and gamified EFL tools are not the same (Luo, 2024). They are frequently confused as one concept. The former is the educational website, systems, software, or applications that have game design elements to improve engagement and academic outputs while gamified EFL tools are the websites, systems, software, and applications that make use of the game design elements to abridge EFL learning (Luo, 2024). Nonetheless, both concepts are used interchangeably (Luo, 2024). Gamification is also used for assessment as it has a crucial role in learning, impacting happiness and developing novel skills to retain the knowledge acquired (Zhang & Crawford, 2024). Accordingly, gamified formative assessment (GFA) is being more omnipresent in classrooms, improving students' participation in English learning through inductive corrections in a pleasurable learning style (Zhang & Crawford, 2024).

EFL education

The modernization of EFL education is attributed to technological developments, regularly used to enhance learning and establish positive experiences (Pratiwi et al., 2024).

Gamification is an innovation that proved to intensify EFL teaching effectiveness (Yavuz et al., 2020). Specifically, EFL teaching focuses on teaching English to students whose first language is not English (Zhang & Crawford, 2024). In other contexts, EFL is explained as minimal exposure to the target language and limited opportunities to use the language (Zhang & Crawford, 2024). Contextualizing EFL education and gamification, there are common tools that are used in classrooms which include Duolingo, Kahoot, and Quizizz, among others. These tools are based on gamification in their design, leading to their practical use and success in EFL teaching. Despite the practical uses of gamification in EFL learning, educators face challenges in applying gamification into EFL instruction (Demirbilek et al., 2022) and seek solutions.

Methods

As gamification has been addressed as a transformative tool in EFL contexts, educators face challenges in its implementation. Accordingly, the objectives of this study are:

- To explore effective practices for integrating gamification in EFL classes.
- To investigate the challenges educators face in implementing gamification in EFL classes.
- To propose practical solutions for educators to effectively and strategically integrate gamification into EFL classes.

The research questions of this study are:

1. What practices are most effective for integrating gamification into EFL education?
2. What challenges do educators face in implementing gamification in EFL classrooms?
3. What solutions can be proposed to address the identified challenges?

This systematic literature review used the PRISMA 2020 checklist as a framework and a four-phase flow diagram. Articles were examined and evaluated based on this methodology to address the three research questions. The four phases of the PRISMA methodology comprised of the identification phase, screening phase, eligibility phase, and inclusion phase.

Identification phase

The study used five criteria for identifying and selecting articles. The researchers used ERIC, Taylor & Francis Online, and Springer Nature Link, which were accessible and relevant to education. ERIC, Taylor & Francis Online, and Springer Nature Link were selected due to their strong relevance to education research in the field of EFL and gamification. ERIC, in particular, is a widely recognized education database, ensuring high-quality academic sources. Taylor & Francis Online and Springer Nature Link were chosen for their extensive collections of linguistics and educational technology research. The articles should have been published between 2014 and 2024 and written in English. Research articles and full open access availability was required. Table 1 displays the criteria used in the article selection process.

Table 1. **Inclusion and exclusion criteria in choosing the articles**

Criteria	Inclusion	Exclusion
Database	ERIC, Taylor & Francis Online, and Springer Nature Link	Other databases
Publication Year	2014-2024	Before 2014
Language	English	Other languages
Document Type	Research Articles	Books, book chapters, dissertation, conference papers, review papers, proceedings
Access to Full Article	Open access	Limited & no access

Besides the five criteria, the articles were determined by using search strings and keywords. Each search string was used in all three databases to find relevant articles to the topic.

Table 2. **Search strings used in all three databases to identify the articles**

Search Strings
Gamification AND EFL
Gamification AND EFL AND Practices
Gamification AND EFL AND Challenges
Gamification AND EFL AND Solutions

In accordance with the criteria and search strings presented in Tables 1 and 2, articles that met the inclusion and exclusion criteria were chosen and assembled, while those that did not meet the criteria were excluded.

Screening phase

The articles identified in Phase I underwent further screening based on their titles. Each title was checked to match the keywords. The article abstracts were revised to ensure they aligned with the inclusion and exclusion criteria. Articles whose titles and abstracts did not meet the criteria were omitted.

Eligibility phase

Articles underwent evaluation to find their eligibility for additional screening in Phase 3. Only articles that met all inclusion and exclusion criteria were considered in the final phase. This phase was to ensure the relevance of all articles to address the research questions.

Exclusion phase

Articles that satisfied the eligibility criteria were considered for review, while those failing to meet the criteria were omitted. The exclusion criteria included books, book chapters, dissertation, conference papers, review papers, and proceedings, in addition to articles with restricted or no access to full text, non-English publications, and prior to the year 2014.

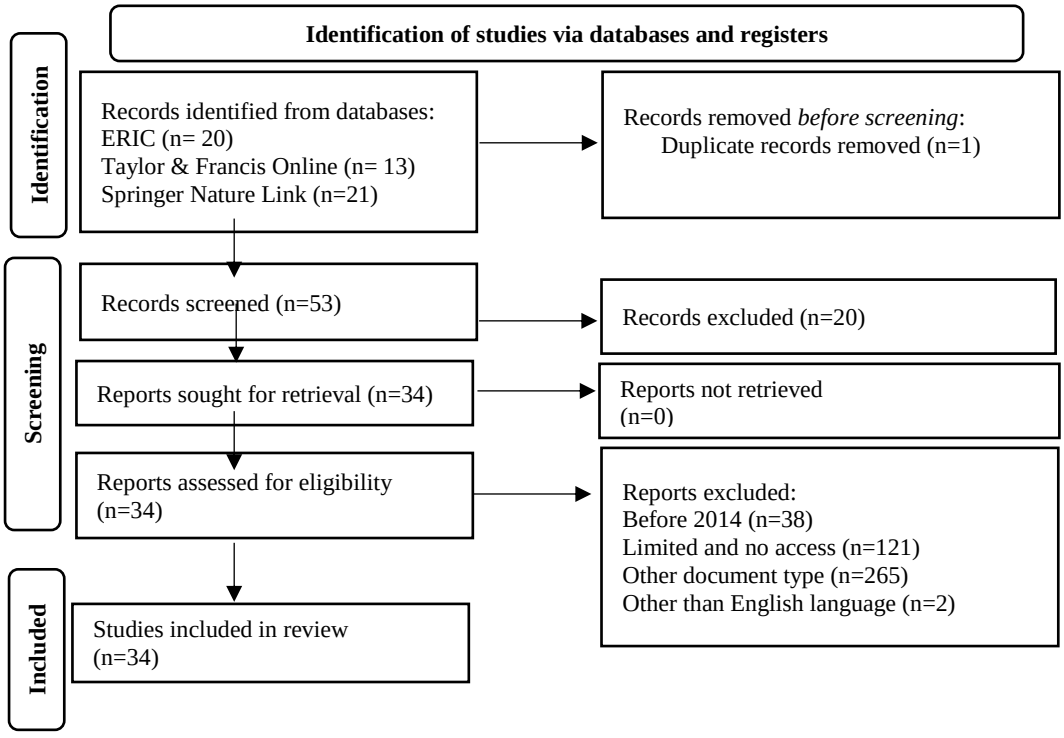


Figure 1. **Flowchart of the article screening and selection process**

After the four phases screening process, a total of 34 articles were selected. These articles included research papers employing different methodologies including qualitative, quantitative, and mixed methods. 7 articles used qualitative methodology, 9 employed quantitative methods, and the remaining 18 articles were mixed method research, presented in Table 3.

Table 3. **Number of articles based on the methodology employed**

Research Methodology	Quantity
Qualitative	7
Quantitative	9
Mixed Methods	18

Results

The researchers have collected, examined, and organized a total of 34 articles for the study. All of the articles were sourced from the years 2014 to 2024. This selection approach intends to address the research questions. Table 4 displays a summary of the 34 reviewed articles, research methodology, and the integration of gamification in EFL.

Table 4. **Details of each article**

No.	Title & author (s)	Research Method	Research Participants	The integration of gamification in EFL
1	An examination of the factors and challenges to adopting gamification in English foreign language teaching. Demirbilek, M., Talan, T., & Alzouebi, K. (2022).	Qualitative	16 teachers in Ukraine and Turkey.	Effective practices and challenges during gamification in EFL contexts.
2	Factors contributing to teachers' acceptance intention to gamified EFL tools: A scale development study. Luo, Z. (2024).	Quantitative	361 and 512 secondary school teachers in China.	Key factors impacting teachers' reception of gamified learning tools.
3	EFL learners' motivation in a gamified formative assessment: The case of Quizizz. Zhang, Z., & Crawford, J. (2024).	Mixed methods	45 EFL students from elementary schools in China.	Gamified formative assessment's effects on the internalization of EFL, and its impact on engagement and language proficiency.
4	Leveraging Bamboozles and Quizziz to engage EFL students in online classes. Saud, S., Aeni, N., & Azizah, L. (2022).	Quantitative	42 college students in Indonesia.	The effect of gamification (Bamboozles and Quizziz) on student engagement, motivation, and English proficiency.
5	Digitalise and capitalise? Teachers' self-understanding in 21st-century teaching contexts. Fransson, G., Holmberg, J., Lindberg, O. J., & Olofsson, A. D. (2018).	Qualitative	2 EFL secondary teachers in Sweden.	Teachers' self-understanding changing pattern due to digitalization.
6	Time matters: A critical multimodal study of an English learning app for children in China. Tan, R., Djonov, E., & Chik, A. (2024).	Qualitative	Screenshots from the application. iHuman in China.	The administration of time in iHuman software and educational practices.
7	Impact of CALL in-house professional development training on teachers' pedagogy: An evaluative study. Sulaimani, A. O., Sarhandi, P. S. A., & Buledi, M. H. (2017).	Mixed methods	30 EFL instructors in Saudi Arabia.	The effect of trainings and informed institutional policy.

8	Gamifying language education: The impact of digital game-based learning on Chinese EFL learners. Zhuo, S. (2024).	Mixed methods	20 EFL learners in China.	Effect of game-based learning on enjoyment, ideal L2 self, and intrinsic motivation.
9	Out-of-the-classroom learning of English vocabulary by EFL learners: Investigating the effectiveness of mobile assisted learning with digital flashcards. Zakian, M., Xodabande, I., Valizadeh, M., &Yousefvand, M. (2022).	Quantitative	86 EFL university students in Iran.	Long-terms impacts of mobile-assisted vocabulary learning.
10	The use of augmented reality in a gamified CLIL lesson and students' achievements and attitudes: A quasi-experimental study. Çelik, F., & Ersanlı, C. (2022).	Quantitative	76 EFL high school students in Turkey.	The effects of augmented reality in gamified lessons for enhanced language success.
11	Enhancing self-regulation and learner engagement in L2 speaking: Exploring the potential of intelligent personal assistants within a learning-oriented feedback framework. Zhang, M. (2024).	Mixed methods	54 university EFL learners in China.	The benefits of Google Assistant in speaking performance of ELF and self-regulation.
12	Enhancing multimodal output in CLIL education: The impact of VR games on fourth-grade students' English poster designs and presentations in Taiwan. Lai, C. (2024).	Mixed methods	81 elementary students in Taiwan.	The benefits of Virtual Reality games and students' cognitive skills and engagement.
13	Flipped classroom with gamified technology and paper-based method for teaching vocabulary. Pratiwi, D., Fitriati, S., Yuliasri, I., Waluyo, B. (2024).	Mixed methods	144 university students in Indonesia.	The effectiveness of flipped classroom with gamified technology and paper-based method in vocabulary teaching.
14	Integrating augmented reality in language learning: Pre-service teachers' digital competence and attitudes through the TPACK framework. Belda-Medina, J. & Calvo-Ferrer, J. (2022).	Mixed methods	85 college students in Spain.	The integration of Augmented Reality in the foreign language classroom.
15	The effect of online gamification on EFL learners' writing anxiety levels: A process-based approach. Yavuz, F., Ozdemir, E., & Celik, O. (2020).	Quantitative	47 EFL students in Balikesir University in Turkey.	The impact of Edmodo on EFL learners' writing anxiety levels.
16	Implementing gamification to enhance reading engagement and reading comprehension of Thai EFL university students. Matyakhana, T., Chaowanakritsanakul, T., & Santos, J. A. L. (2024).	Mixed methods	70 EFL university students in Thailand.	Gamification impact on reading comprehension and engagement.
17	Conquering the iron throne: Using classcraft to foster students' motivation in the EFL classroom. Rivera-Trigueros, I., & Sánchez-Pérez, M. M. (2020).	Quantitative	43 EFL secondary students in Spain.	Gamification impact on student motivation and participation.
18	Leveraging gamification into EFL grammar class to boost student engagement. Ardi, P., & Rianita, E. (2022).	Qualitative	1 lecturer and 22 English-major students in Indonesia.	Kahoot in EFL and its impact on engagement.

19	Do teachers' attitudes, perception of usefulness, and perceived social influences predict their behavioral intentions to use gamification in EFL classrooms? Evidence from the Middle East. Asiri, M. (2019).	Quantitative	157 EFL teachers in Saudi Arabia.	Teachers' behavioral intentions and gamification.
20	Technology in action: Developing gamification handbook in English teaching and learning for the 21st century learners. Santosa, M., Harismayanti, I., & Putra, N. (2022).	Qualitative	15 secondary students and 10 English teachers in Indonesia.	Gamification handbook in English education.
21	Mobile-assisted language learning using task-based approach and gamification for enhancing writing skills in EFL students. Pingmuang, P., & Koraneekij, P. (2022).	Mixed methods	35 EFL secondary students in Thailand.	Gamification and enhancement of writing skills.
22	Digital game-based learning (DGBL): the voice of EFL university students and teachers. Umamah, A., & Saukah, A. (2022).	Mixed methods	86 EFL university students and 4 English teachers in Indonesia.	EFL student and teacher perceptions about game-based learning.
23	The effects of gamified daily awards on digital vocabulary flashcard learning: A case study. Lafleur, L. (2024).	Mixed methods	77 university EFL learners in Japan.	The positive impact of gamified daily awards in vocabulary tasks.
24	Speaking in worlds of adventure: Tabletop roleplaying games within the EFL classroom. Torres-Rodríguez, F., & Martínez-Granada, L. (2022).	Qualitative	18 students and 1 English language teacher in a Colombian school.	Motivation and environment opportunities for social interaction, collaboration, and scaffolding.
25	Assessing Kahoot's impact on EFL students' learning outcomes. Alharthi, S. (2020).	Mixed methods	36 EFL students in Saudi Arabia.	Kahoot for motivation and engagement.
26	EFL secondary education teachers' perceptions toward using online student response systems. Cancino, M., & Ibarra, P. (2023).	Mixed methods	30 EFL university teachers in Chile.	Online student response systems and student engagement.
27	Application for grammar skills: A case study of Thai EFL undergraduates. Kaosayapandhu, M. (2023).	Quantitative	128 EFL learners at Srinakharinwirot University in Thailand.	Duolingo as a useful supplement to learning.
28	Opening the "black box": how out-of-class use of Duolingo impacts Chinese junior high school students' intrinsic motivation for English. Zeng, C., & Fisher, L. (2024).	Qualitative	20 school students in China.	Learners' activity-specific intrinsic motivation (IM) enhancement.
29	Kahoot, Quizizz, and Quizalize in the English class and their impact on motivation. España-Delgado, J. (2023).	Mixed methods	27 EFL school students in Colombia.	Students' perceptions regarding Kahoot!, Quizizz, and Quizalize and their increased motivation and attainment.
30	Gamified lesson plan development with ELT pre-service teachers: A gamified google classroom experience. Güzel, S. (2023).	Mixed methods	36 English teachers in Turkey.	Gamified online modules and professional lives.

31	Gamified mobile-assisted formative assessment for reviving undergraduate learners' overall language proficiency: A quasi-experimental study. Yassin, B., & Abugohar, M. (2022).	Mixed methods	598 EFL university students in Saudi Arabia.	Mobile-assisted formative assessment and its positive influence on language proficiency.
32	Assessing the efficacy of augmented reality in enhancing EFL vocabulary. Khan, R., Ali, A., Kumar, T., & Venugopal, A. (2023).	Mixed methods	95 EFL university students in Saudi Arabia.	Augmented reality (AR) and improved vocabulary skills.
33	Effect of dramatic storytelling on emergent literacy in EFL: Evidence from the UAE kindergartens. Alkilani, G. Y., & Zhang, Q. (2024).	Quantitative	200 children from 10 classes of 3 kindergartens in Abu Dhabi, with 107 in intervention classes, and 93 in control classes.	Storytelling approach in EFL teaching.
34	The current status and development of pre-service language teachers' TLLT competence in a PjBL classroom. Zhang, D., & Wang, W. (2023).	Mixed methods	33 undergraduate students in China.	The effectiveness of a PjBL course for pre-service teachers' TLLT development and motivation.

Effective practices for integrating gamification in EFL classes

Integrating gamification into EFL classes enhances student engagement, motivation, and learning outcomes (Ardi & Rianita, 2022). The practices below show how gamification could be implemented in EFL classes with the employment of the four themes: engagement and motivation, interactive learning environment, immediate feedback, and alignment with learning objectives. Articles were classified under each theme based on explicit mentions of the topic in their research objectives, methodology, or findings. Studies that directly addressed the theme through theoretical discussion, empirical analysis, or pedagogical implications were marked with a checkmark (✓). If an article only briefly referenced a theme without substantial exploration, it was not included in the classification.

Table 5. **Effective practices for integrating gamification in EFL classes**

No.	Author (s)	Engagement and Motivation	Interactive Learning Environment	Immediate Feedback	Alignment with Learning Objectives
1	Demirbilek et al. (2022)	✓	✓	✓	✓
2	Luo (2024)	✓			
3	Zhang & Crawford (2024)	✓	✓	✓	
4	Saud et al. (2022)	✓	✓	✓	✓
5	Fransson et al. (2018)	✓	✓		
6	Tan et al. (2024)		✓		✓
7	Sulaimani et al. (2017)	✓	✓	✓	✓
8	Zhuo (2024)	✓	✓	✓	✓
9	Zakian et al. (2022)	✓			
10	Celik & Ersanli (2022)	✓	✓		✓
11	Zhang (2024)	✓	✓	✓	
12	Lai (2024)	✓	✓	✓	✓

13	Pratiwi et al. (2024)		✓		✓
14	Belda-Medina & Calvo-Ferrer (2022)	✓	✓		
15	Yavuz et al. (2020)	✓			
16	Matyakhana et al. (2024)	✓	✓	✓	
17	Rivera-Trigueros & Sanchez-Perez (2020)	✓	✓		
18	Ardi & Rianita (2022)	✓	✓	✓	
19	Asiri (2019)	✓		✓	
20	Santosa et al. (2022)	✓	✓	✓	
21	Pingmuang & Koraneekij (2022)	✓	✓	✓	✓
22	Umamah & Saukah (2022)	✓	✓		
23	Lafleur (2024)	✓			
24	Torres-Rodgriguez & Martinez-Granada (2022)	✓	✓		✓
25	Alharthi (2020)	✓	✓	✓	✓
26	Cancino & Ibarra (2023)	✓	✓	✓	
27	Kaosayapandhu (2023)	✓			
28	Zeng & Fisher (2024)	✓	✓	✓	
29	Espana-Delgado (2023)	✓	✓	✓	✓
30	Guzel (2023)	✓	✓	✓	✓
31	Yassin & Abugohar (2022)	✓	✓	✓	
32	Khan et al. (2023)	✓	✓		
33	Alkilani & Zhang (2024)	✓	✓		✓
34	Zhang & Wang (2023)	✓	✓	✓	✓

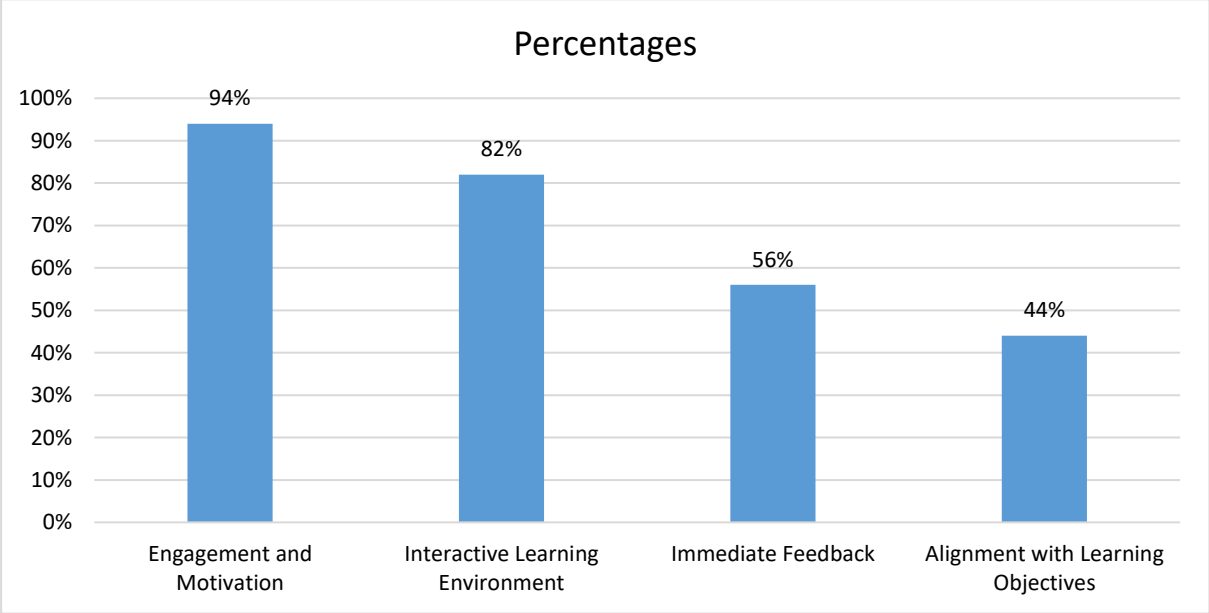


Figure 2. Percentages of studies discussing the effective practices

The bar graph displays the percentages of articles across the four themes that were identified as effective practices: Engagement and Motivation (94%), Interactive Learning Environment (82%), Immediate Feedback (56%), and Alignment with Learning Objectives (44%). There is an overlap in the themes across the articles where the articles cover more than one theme. Engagement and Motivation has the largest percentage, followed by Interactive Learning Environment and Immediate Feedback. Alignment with Learning Objectives makes up the smallest percentage.

Challenges of gamification in EFL classes

Although gamification holds opportunities for enhancing engagement and motivation in EFL classes, several challenges were identified. These challenges, including sustaining student engagement, technical issues, teacher training, and integration with educational objectives, can hinder the gamification implementation and influence learning outcomes. Articles were classified under each theme based on explicit mentions of the topic in their research objectives, methodology, or findings. Studies that directly addressed the theme through theoretical discussion, empirical analysis, or pedagogical implications were marked with a checkmark (✓). If an article only briefly referenced a theme without substantial exploration, it was not included in the classification.

Table 6. **Challenges of gamification in EFL classes**

No.	Author (s)	Sustaining Student Engagement	Technical Issues	Teacher Training	Integration with Educational Objectives
1	Demirbilek et al. (2022)	✓	✓	✓	✓
2	Luo (2024)	✓		✓	
3	Zhang & Crawford (2024)	✓			
4	Saud et al. (2022)	✓	✓		
5	Fransson et al. (2018)		✓	✓	
6	Tan et al. (2024)		✓	✓	✓
7	Sulaimani et al. (2017)		✓	✓	
8	Zhuo (2024)	✓			
9	Zakian et al. (2022)	✓		✓	
10	Celik & Ersanli (2022)	✓	✓		
11	Zhang (2024)	✓	✓	✓	✓
12	Lai (2024)	✓	✓		✓
13	Pratiwi et al. (2024)	✓	✓	✓	✓
14	Belda-Medina & Calvo-Ferrer (2022)		✓	✓	✓
15	Yavuz et al. (2020)				✓
16	Matyakhana et al. (2024)		✓		✓
17	Rivera-Trigueros & Sanchez-Perez (2020)	✓			
18	Ardi & Rianita (2022)				
19	Asiri (2019)				
20	Santosa et al. (2022)		✓	✓	✓
21	Pingmuang & Koraneekij (2022)	✓			✓

22	Umamah & Saukah (2022)		✓	✓	
23	Lafleur (2024)				
24	Torres-Rodgriguez & Martinez-Granada (2022)			✓	✓
25	Alharthi (2020)				
26	Cancino & Ibarra (2023)		✓	✓	✓
27	Kaosayapandhu (2023)				
28	Zeng & Fisher (2024)				
29	Espana-Delgado (2023)	✓	✓	✓	✓
30	Guzel (2023)			✓	✓
31	Yassin & Abugohar (2022)		✓		
32	Khan et al. (2023)	✓			
33	Alkilani & Zhang (2024)			✓	✓
34	Zhang & Wang (2023)		✓	✓	✓

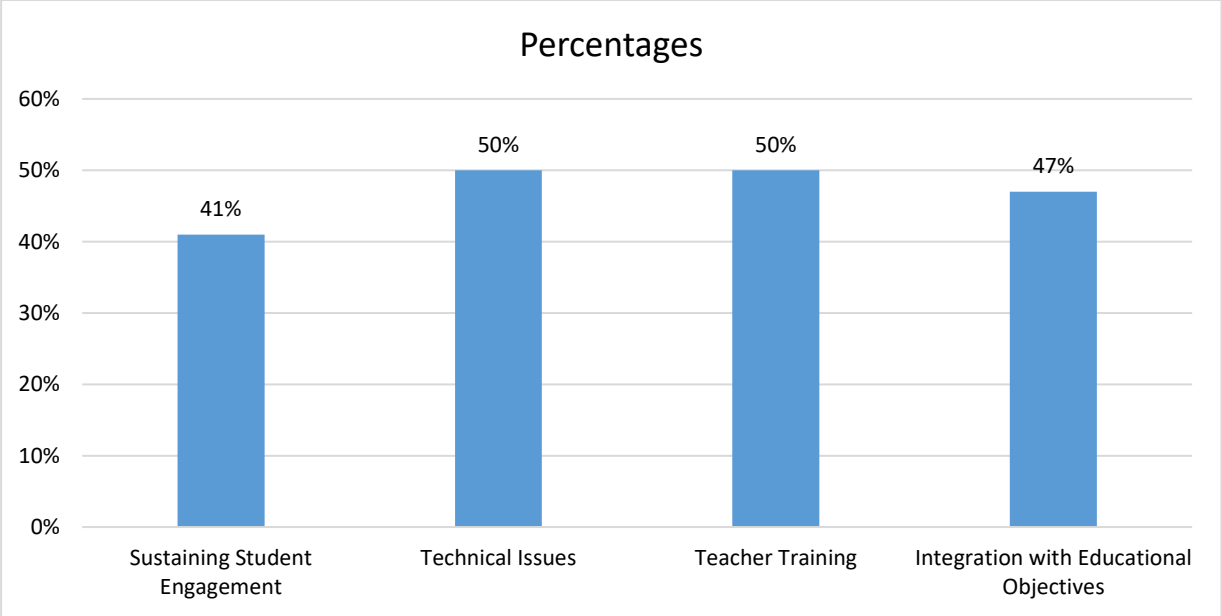


Figure 3. **Percentages of studies discussing the challenges**

The bar graph displays the percentages of articles across four themes that were identified as challenges: Sustaining Student Engagement (41%), Technical Issues (50%), Teacher Training (50%), and Integration with Educational Objectives (47%). There is an overlap in the themes across the articles where the articles cover more than one theme. Technical Issues and Teacher Training have the highest percentage, followed by Integration with Educational Objectives. Sustaining Student Engagement makes up the smallest percentage.

Solutions to overcome the challenges

To overcome these challenges, a strategic approach to gamification in EFL education is needed. The literature proposes actionable solutions to help educators deal with the struggles of gamification implementation, making sure that it improves the learning experience and outcomes. These proposed solutions include user engagement strategies, technical support, integration with educational objectives, professional development and training, and feedback

mechanisms. Articles were classified under each theme based on explicit mentions of the topic in their research objectives, methodology, or findings. Studies that directly addressed the theme through theoretical discussion, empirical analysis, or pedagogical implications were marked with a checkmark (✓). If an article only briefly referenced a theme without substantial exploration, it was not included in the classification.

Table 7. **Solutions to overcome the challenges**

No.	Author (s)	User Engagement Strategies	Technical Support	Integration with Educational Objectives	Professional Development and Training	Feedback Mechanisms
1	Demirbilek et al. (2022)	✓	✓	✓	✓	✓
2	Luo (2024)	✓	✓			
3	Zhang & Crawford (2024)	✓				✓
4	Saud et al. (2022)	✓				
5	Fransson et al. (2018)		✓		✓	
6	Tan et al. (2024)	✓	✓	✓		
7	Sulaimani et al. (2017)		✓	✓	✓	✓
8	Zhuo (2024)	✓				
9	Zakian et al. (2022)	✓				
10	Celik & Ersanli (2022)	✓				
11	Zhang (2024)	✓	✓			✓
12	Lai (2024)	✓			✓	
13	Pratiwi et al. (2024)	✓		✓	✓	✓
14	Belda-Medina & Calvo-Ferrer (2022)		✓	✓	✓	
15	Yavuz et al. (2020)			✓		
16	Matyakhana et al. (2024)	✓		✓		✓
17	Rivera-Trigueros & Sanchez-Perez (2020)	✓				
18	Ardi & Rianita (2022)	✓		✓		✓
19	Asiri (2019)				✓	✓
20	Santosa et al. (2022)	✓		✓	✓	✓
21	Pingmuang & Koraneekij (2022)	✓		✓		✓
22	Umamah & Saukah (2022)	✓	✓	✓	✓	✓
23	Lafleur (2024)	✓				✓
24	Torres-Rodgriguez & Martinez-Granada (2022)	✓				
25	Alharthi (2020)	✓		✓	✓	✓
26	Cancino & Ibarra (2023)	✓	✓	✓		✓
27	Kaosayapandhu (2023)			✓		
28	Zeng & Fisher (2024)	✓				✓
29	Espana-Delgado (2023)	✓		✓		✓
30	Guzel (2023)	✓		✓	✓	✓
31	Yassin & Abugohar (2022)			✓		
32	Khan et al. (2023)	✓				
33	Alkilani & Zhang (2024)	✓				
34	Zhang & Wang (2023)	✓	✓	✓	✓	✓

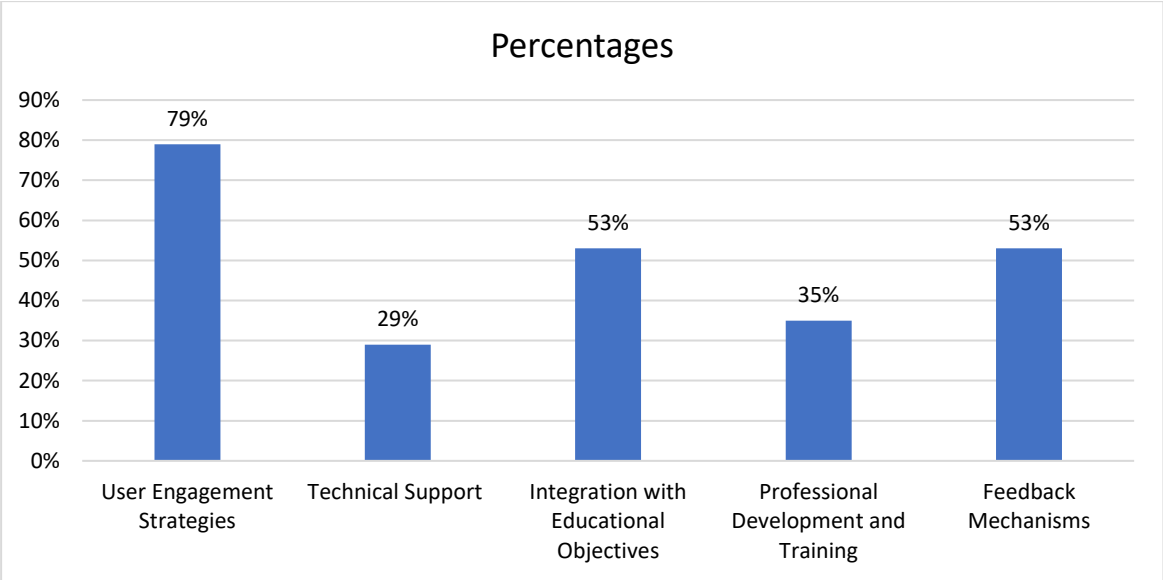


Figure 4. **Percentages of studies discussing the solutions**

The bar graph displays the percentages of articles across five themes that were identified as solutions to the challenges: User Engagement Strategies (79%), Technical Support (29%), Integration with Educational Objectives (53%), Professional Development and Training (35%) and Feedback Mechanisms (53%). There is an overlap in the themes across the articles where the articles cover more than one theme. User Engagement Strategies has the largest percentage, followed by Integration with Educational Objectives and Feedback Mechanisms. Professional Development and Training and Technical Support make up the smallest percentages.

Discussion

Effective practices for integrating gamification in EFL classes

While reviewing the literature, it was apparent that the aspects of engagement and motivation are significant elements of effective gamification in education, constituting the largest percentage of the articles (94%). Effective practices for integrating gamification into EFL classes put much emphasis on fostering engagement and motivation through the use of competition, rewards, and real time feedback (Matyakhana et al., 2024; Rivera-Trigueros & Sánchez-Pérez, 2020; Yavuz et al., 2020). Zhang and Crawford (2024) recommend the use of gamified formative assessments through the use of different tools, such as Quizizz, to enhance the motivation aspect and allow for the tracking of student progress in real time. Moreover, competition in friendly environments is crucial as they influence intrinsic and extrinsic motivation (Lai, 2024). Similarly, Demirbilek et al. (2022) explains that motivation can be attained effectively through the employment of interactive games as it requires students to participate more and helps lessen language learning anxiety. The tools including Duolingo, among others, have features that allow to track progress and give rewards for engagement and completion, fostering achievement. This aligns with self-determination theory, as meeting the students' needs in terms of autonomy, competence, and relatedness leads to sustained engagement (Demirbilek et al., 2022; Zhang & Crawford, 2024). Furthermore, Umamah and Saukah (2022) presents a correlation between Gamification Perceived Usefulness (GPU) and Gamification Ease of Use (GEOU), displaying a link between the attitude that the student holds regarding gamification and its effect on their engagement throughout the tasks. Hence, effective gamification is highly linked with the aspects of a motivating and supportive environment.

Interactive learning comes as a second prevalent theme in the reviewed articles (82%). In accordance to the social learning theory, using gamification in EFL classes is shown to create

an interactive atmosphere where students feel that they want to actively participate, enhancing social interaction in the classroom among the students and the language content (Santosa et al., 2022). Using tools, such as Quizizz, allows for minimizing the use of traditional assessments and using more interactive ways to assess learning where students can participate in tasks that are game-like, creating a dynamic classroom filled with fun and meaningful activities (Zhang & Crawford, 2024). In addition, being in an interactive place helps create a sense of belonging with others, which plays a role in nurturing intrinsic motivation (Zhang & Crawford, 2024). Demirbilek et al. (2022) explains that interaction is gained through the game features as they encourage collaborative problem-solving and skill development, which are important in learning a language (Demirbilek et al., 2022). Thus, it becomes apparent that the interactivity aspect that is gained through the gamified tools aligns with pedagogical practices and also provides students in-depth learning experiences in comparison to traditional teaching (Tan et al., 2024). To attain this result, gamification must be carefully designed to ensure that the game elements complement the language learning objectives in order to meet the objectives intended.

Immediate feedback comes third in the reviewed articles (56%). Research reveals that immediate feedback allows students to quickly notice and correct their errors, enhancing learning outcomes, motivation, and self-regulation (Lai, 2024; Zhang, 2024). Using applications or tools, such as Quizizz, allow students to receive immediate feedback on their answers, which helps learners adjust their learning strategies, ultimately establishing an engaged approach to language acquisition (Zhang & Crawford, 2024). This real-time feedback helps maintain motivation as students feel are involved and their errors are being addressed immediately (Matyakhana et al., 2024). Immediate feedback in gamified contexts results in building confidence as learners could correct the places where they have answered incorrectly on spot, enhancing the agency aspect as they are in charge of their learning, reducing delayed corrections and further misunderstandings (Demirbilek et al., 2022).

Aligning game elements with learning objectives is critical to maximize educational outcomes and enhance language acquisition. 44% of the reviewed articles have addressed this practice. Demirbilek et al. (2022) explain that although gamification is effective in motivating learners, the way it is adapted should be in an attentive way in order to match the curriculum and avoid establishing a negative competitive environment that could play a role in detracting students from mastering the language. Sulaimani et al. (2017) bring into conversation the fact that technology integration can only be effective if it supports specific learning outcomes and not vague and general ones. Tan et al. (2024) aligns with Sulaimani et al. (2017) as they explain that to maintain a learning objective focus, the selected tools must join constructivism and instructivist conceptualization for learners to engage with complex learning.

Challenges of gamification in EFL classes

Technical issues are barriers to successfully integrate gamification in EFL classrooms, a prevalent theme among the reviewed articles (50%). EFL educators find difficulties with unstable internet connections (Pratiwi et al., 2024) and other technical issues, including challenges with digital games and lack of technology (Demirbilek et al., 2022), as well as unstable internet (Saud et al., 2022), affecting the way they implement gamification tools successfully without interruptions. Technical challenges can distract the flow of teaching and learning and can weaken the motivation throughout the gamification activity as students and teachers can have feelings of frustration due to the instability. In some classrooms, technology infrastructure is inadequate and this effects its ability in supporting interactive platforms as the internet availability and overhead projector hinders the teachers' ability to make use of technology, in addition to the lack of administrative support (Sulaimani et al., 2017). The updating system can also result in less motivation since the system changes in terms of structure

frequently, where learners should be able to keep up with all the updates and changes that are taking place (Zhang & Crawford, 2024). The challenge of keeping up with technological changes and developments interferes with how students and teachers perceive the tasks (Fransson et al., 2018).

Living in a time where there are rapid and continuous technological developments and educational trends, gamification is used in multiple contexts where learning takes place (Demirbilek et al., 2022). Language teachers reported a lack of adequate training to support gamified learning, a theme that appears in 50% of the reviewed articles. Although many educators are given the chances to be involved with the digitalization of education (Fransson et al. 2018), not all teachers are able to cope with this system and its logical thinking (Fransson et al., 2018). As a result, digital technologies are sometime mistakenly approached in the literature as indicators of teacher professionalism (Fransson et al., 2018). This is to say, professionalism does not equate to proficiency and knowledge in digital technologies and their implementation. It is critical that trainings are structured as studies revealed that numerous trainings were being done, however were irrelevant to the educators (Sulaimani et al., 2017). The difficulties encountered by educators arise because the trainings that are being given put much emphasis on the content and instructional strategies that are being presented rather than on the application of different technologies, which are transformative tools that should be used more frequently as results show their positive outcomes (Zhang & Wang, 2023).

Integration with educational objectives is another prominent theme in the reviewed articles, appearing second in the challenges (50%). Integrating gamification with educational objectives requires a balance in the way the selected games match specific learning goals. In order for the games to be used effectively throughout the lessons and activities, studies suggest focusing on the aspect of preference while being aligned with the curriculum, entertaining and educational, relevant to the students' level, and aimed at skills development (Demirbilek et al., 2022). As for the educators that integrate gamified tools, such as Edmodo, they should be attentively choosing which games to integrate in order to avoid the learning experience from becoming isolated with no educational depth (Zhang & Crawford, 2024). Research has shown that a great challenge that language educators encounter is in the selection of the appropriate tools that match with the lessons they are teaching (Zhang & Wang, 2023).

Sustaining student engagement comes third in the reviewed articles (41%) and is the least challenge encountered. Although it is shown that gamification enhances motivation, maintaining this engagement has a lot of challenges. Zhang and Crawford (2024) explain that even though gamified tools influence engagement, making sure that this engagement is kept and is continuous requires careful administration of students' intrinsic and extrinsic motivations to avoid excessive dependence on rewards and points. Similarly, negative aspects of gamification are connected to the non-alignment with the goal or topic, leading to student disengagement (Demirbilek et al., 2022). Consequently, educators encounter hard times in being able to align the activities with specific curriculum goals, resulting in motivation that only lasts for a short period of time and one that declines as soon as the game elements vanish. Khan et al. (2023) recommend that some learners find some tools challenging to use, which influences their motivation. Similarly, Matyakhana et al. (2024) agrees that the difficulty of using some tools can be demotivating, as student need some orientation to be able to uphold their active engagement.

Solutions to overcome the challenges

To address the challenge of sustaining engagement in gamified EFL contexts, identified as the most prevalent in the articles (79%), some practical and actionable solutions focus on promoting of a long-term interest in learning. Demirbilek et al. (2022) suggests that when

gamification is being employed in the classroom, it should encompass fun aspects such as having scoring and competition, in addition to collaboration with their peers in order to boost engagement. Based on the User Engagement Scale (UES) which measures engagement, perceived enjoyment and engagement have a relationship, and perceived enjoyment results in improved engagement (Luo, 2024). Zhang and Crawford (2024) similarly present a relationship between motivation and student performance and engagement, attained through friendly competitions and challenges (Zhang & Crawford, 2024). The tool's layout is also a critical aspect to consider as it plays a role in how users engage with game (Tan et al., 2024). Additionally, the timers that are in the games impact motivation as they create the sense of challenge and thrill since the student observes a tracking time or countdown (Tan et al., 2024).

The second most common appearing theme in the articles is the integration of gamification with clear educational objectives, identified in 53% of the reviewed articles. When the games are aligned with curriculum goals, educators can ensure that the engagement that is attained through gamification contributes to language acquisition. Since the effective use of games creates positive results, negative situations should be controlled and eliminated (Demirbilek et al., 2022). In the light of negative situations and their elimination, Demirbilek et al. (2022) explain that educators should be able to choose selective games that are appropriate for the curriculum, in addition to games that are user friendly and easy to use. Another proposed solution by Sulaimani et al. (2017) is that curriculum should include technology-based activities with clear instructions in order for educators to understand well the content and to be able to deliver it with competence rather than considering it as a burden.

Effective feedback mechanisms, apparent in 50% of the reviewed articles, was a valuable solution for improving gamification in EFL contexts. Feedback mechanisms allow students to gain immediate comments on their performance, supporting learning and motivation (Zhang & Wang, 2023). As Demirbilek et al. (2022) discussed, games have rules, interactivity, and feedback, which all influence the motivational factor. Thus, for gamification to be effective, it should provide immediate feedback and student agency (Demirbilek et al., 2022). Feedback mechanisms are fundamental as they allow students to track their performance, resulting in an enhanced learning drive (Sulaimani et al., 2017) and self-assessment (Espana-Delgado, 2023). In the light of Virtual Reality games, feedback for correct and incorrect responses showed to have enhanced learning and retention due to the structured feedback mechanisms and the consistent multimodal input (Lai, 2024).

Professional development and training for teachers is an operational solution, helping in equipping with the skills and confidence needed to integrate gamification into educational contexts. This solution was identified in 35% of the reviewed articles. Educators could make use of gamification in their instructions by choosing suitable gamification tools that align with the lesson (Demirbilek et al., 2022). Fransson et al. (2018) highlight the relationship between self-image, self-esteem, job motivation, task perception, and future perspective (Fransson et al., 2018), revealing that when the teachers' self-esteem is enhanced, they engage more in professional activities beyond school contexts (Fransson et al., 2018). Studies presented that educators prefer trainings that go beyond the operational aspects of technology and more on pedagogical aspects, including syllabus, pacing, and technological assessment (Sulaimani et al., 2017). It was reported that the trainings should avoid irrelevant and decontextualized teachings in order to be beneficial for educators. Sulaimani et al. (2017) add that the trainings should focus on the teachers' needs, pedagogical aspects, and follow-up plans to assess the trainings on teachers' pedagogy using a proper assessment system.

Although many articles highlighted technical issues as a challenge, only 29% of the reviewed articles discussed technical support as a solution. Having a robust hardware

infrastructure in classrooms is essential for successful navigation (Demirbilek et al., 2022). Luo (2024) recommends that technical support facilitates many issues as it tackles needed resources and knowledge for the work flow. Consequently, inadequate investments in technical support create a barrier in terms of how the teachers can implement gamification effectively (Luo, 2024). Fransson et al. (2018) emphasize having regular support from the ICT support team at schools as the school management can provide guidance into the use of digital technologies, including Learning Management System (LMS). Tan et al. (2024) explain that digital technology can be a remedy to many educational problems but also the reason of the problems. Accordingly, some tools, such as iHuman, have integrated a self-learning aspect in the Help tab of the platform to help the user manage the time and sequence, an effective way to support technical issues through a self-learning experience.

Limitations and conclusion

While this study successfully addressed the three research questions, it encountered several limitations. Firstly, the exploration of three databases placed some limits on the breadth of research articles considered. Additional databases like Wiley, JSTOR, SAGE journals, and ProQuest could offer a more comprehensive pool of literature. However, accessibility constraints hindered the inclusion of a larger dataset for review and analysis. Secondly, the study could be affected by publication bias, since studies that lack statistical significance might not be published. This omission could overlook valuable insights important for a systematic literature review. Despite the study's accomplishments in addressing its research objectives, its scope was controlled by the limited databases investigated and accessibility issues.

The systematic review of 34 articles highlighted the potential of implementation of gamification in EFL classrooms, focusing on the effective practices, challenges, and solutions associated with this pedagogical approach. Integrating gamification into EFL education offered opportunities to enhance student engagement, motivation, and language acquisition, but also presented challenges. The integration of gamification in EFL education holds potential to reshape language learning by enhancing student engagement, motivation, and learning outcomes. However, the effectiveness of gamification relies heavily on overcoming challenges, such as sustaining engagement, navigating technical limitations, teacher training, and ensuring alignment with pedagogical objectives. This study emphasized the need for well-structured gamification strategies. Addressing these challenges requires effort toward user engagement strategies, technical support, professional training, feedback mechanisms, and considerate integration with educational objectives. By adopting a strategic approach to gamification, educators can harness its profits to nurture enriched language learning experiences.

Recommendations

Future research seeking to explore a similar area as this study should consider these recommendations to result in an improved finding. This study could further be refined by using a larger set of databases to have higher reliability, validity, and results accuracy. Other than using larger databases, the inclusion criteria for the year of publication should range from ten years before the current year to see the changing trends of the impact caused gamification used in the classroom setting. Based on the findings, more empirical studies need to be conducted to examine sustaining student engagement as a challenge to integrate gamification in EFL classroom along with technical support as a solution to such integration.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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