INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 14, Issue 01, (2025) E-ISSN: 2226-6348

The Impact of Digital Game-Based Learning Tools on Motivation, Engagement, and Performance in Language Education: A Systematic Literature Review

Aisyah Zakaria, Nur Yasmin Khairani Zakaria

Faculty of Education, Universiti Kebangsaan Malaysia

Email: p131843@siswa.ukm.edu.my, yasminzakaria@ukm.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARPED/v14-i1/24954 DOI:10.6007/IJARPED/v14-i1/24954

Published Online: 24 March 2025

Abstract

This paper is a systematic literature review of Digital Game-Based Learning (DGBL) and its impact on motivation, engagement, and performance in learning languages, specifically in EFL classrooms. The last five studies focus on how game-based tools such as Kahoot, Quizizz, and Lego Serious Play affect learner's attitudes, participation, and academic performance. The review of thirteen research studies under this category have been synthesized and it was found that DGBL in language studies positively affects learners' motivation through competition, interactions, and rewards. Such platforms get all learners to enjoy and willingly participate in language learning activities, making DGBL foster both intrinsic and extrinsic motivation. Moreover, the review highlights that game-based tools significantly improve engagement. Such tools encourage active, cooperative, and concentration within the learning tasks. Most studies show that language acquisition, grammar skills, and overall performance in DGBL motivated learners improved. However, the study also underscores the need to better integrate specific curriculum goals into game mechanics to improve learning retention and achievement. The findings provide useful insights for educators and policymakers who desire to effectively integrate DGBL in language education and improve engagement, motivation, and academic achievement in learners.

Keywords: Digital Game-Based Learning, Motivation, Engagement, Performance, Language Education, EFL, Academic Performance

Introduction

In recent years, the incorporation of digital technologies into education has initiated a paradigm change, especially in language acquisition. A significant advancement is the emergence of digital game-based learning (DGBL), which utilizes the captivating and interactive qualities of games to improve the educational experience. Digital game-based learning applications, such Kahoot, Quizizz, and Quizalize, have become increasingly popular as useful platforms for engaging students, boosting their motivation, and enhancing their learning outcomes (Delgado, 2023). These tools have demonstrated potential in

revolutionizing conventional learning settings by rendering language acquisition more interactive, entertaining, and motivating.

Game-based learning is regarded as an effective instrument in English as a Foreign Language (EFL) instruction. The swift transition to online education during the COVID-19 pandemic expedited the integration of digital learning technologies, rendering game-based learning a crucial component of numerous language learning programs. Delgado (2023) asserts that the implementation of game-based applications such as Kahoot, Quizizz, and Quizalize in English classes during online instruction not only enhanced students' enjoyment but also markedly elevated their engagement and motivation. These platforms offered prompt feedback, encouraged competition, and enabled students to monitor their progress, thereby augmenting their learning experience. Meccawy et al., (2023) similarly discovered that game-based learning (GBL) methodologies enhanced the performance and self-efficacy of EFL students, who reported increased confidence in their language skills following participation in game-based evaluations.

The significance of motivation in language acquisition is paramount. Motivation is frequently regarded as a pivotal aspect affecting the success of language learners. DGBL has had a substantial impact on augmenting student motivation. Hofmeyr (2023) emphasized the beneficial effect of digital game-based language learning (DGBLL) on the motivation of Japanese university students. The students indicated increased motivation and engagement in their studies when utilizing game-based learning tools, with several asserting that DGBLL was an excellent approach for learning English. This conclusion is supported by Chen (2023), who examined the use of a game-based application in translation instruction. The findings demonstrated that students' motivation, engagement, and performance markedly enhanced by interaction with the app, implying that game-based learning tools can influence both intrinsic and extrinsic incentives in diverse educational settings.

Besides motivation, engagement is crucial for learning outcomes. DGBL solutions have demonstrated the capacity to enhance student engagement by offering an interactive and immersive educational experience. Students that engage with educational games are more inclined to participate actively in lessons, cooperate with peers, and have a profound comprehension of the topic. Meletiadou (2023) showed that the implementation of novel tools such as Lego Serious Play (LSP) significantly enhanced students' engagement, motivation, and overall learning experience. Engaged learners are more likely to retain material and excel academically, making this significant. In the realm of EFL teaching, such tools can be especially efficacious in enhancing engagement and rendering the language acquisition process more dynamic.

Furthermore, scholastic achievement, especially in vocabulary development and general language proficiency, has shown a good correlation with DGBL. Research by Kazu and Kuvvetli (2023) indicates that game-based learning markedly enhances vocabulary retention, as children tend to retain words acquired through interactive approaches more effectively than through conventional rote memorization methods. The excitement and competitiveness of digital games foster an environment that motivates students to enhance their performance, hence improving their academic outcomes. Polyzi and Moussiades (2023) substantiated this assertion, revealing that DGBL applications in language instruction resulted

in superior vocabulary acquisition compared to conventional learning approaches, with students indicating elevated levels of enthusiasm and engagement in the subject matter.

Despite the expanding corpus of research on DGBL, a comprehensive synthesis of the literature is still required to fully comprehend its impact on language acquisition. Although much research has investigated the impact of game-based learning on motivation, engagement, and performance, there is a scarcity of comprehensive reviews that encompass these findings across many contexts and educational environments. This systematic literature review seeks to address this gap by summarizing current research on the effects of digital game-based learning aids in EFL teaching, concentrating on their influence on motivation, engagement, and performance. This research will assess the perspectives of students and teachers about these technologies, offering essential insights for educators, curriculum developers, and policymakers aiming to effectively incorporate digital game-based learning into language teaching.

In conclusion, the incorporation of DGBL technologies has the capacity to transform language acquisition by improving motivation, engagement, and academic achievement. This paper will conduct a comprehensive assessment of the literature regarding the application of DGBL in EFL contexts to elucidate its impact and offer evidence-based recommendations for its future integration in language education. As technology advances, comprehending how to leverage its potential for effective language acquisition will be essential for educators aiming to address the requirements of 21st-century learners.

Research Objectives

The objectives of this study were:

1. To examine the impact of game-based learning tools on the motivation, engagement, and academic performance of language learners, specifically in English as a Foreign Language (EFL) education.
2. To explore the attitudes and perceptions of students and teachers towards the integration of digital game-based learning platforms and mobile apps in language education, particularly in enhancing motivation and learning outcomes.

Research Questions

The research questions of this study were:

1. How do digital game-based learning tools influence student motivation, engagement, and performance in language learning?
2. What are the perceptions of students and teachers regarding the use of mobile apps and game-based learning platforms in English language education?

Background of the Study

The swift incorporation of digital technologies into education has revolutionized teaching and learning methodologies. In recent years, digital game-based learning (DGBL) has garnered significant interest. Game-based learning tools have arisen as effective teaching instruments that integrate game elements—such as competition, prizes, and feedback—to captivate pupils, boost motivation, and elevate academic performance. Digital game-based learning tools are increasingly utilized throughout diverse educational settings, including

language acquisition, where they function as an innovative and successful method for enhancing student performance.

In the domain of English as a Foreign Language (EFL) education, digital game-based learning tools and gamified platforms have gained significant popularity. These technologies provide distinctive chances for language learners to engage in interactive, learner-centered activities that enhance motivation, involvement, and profound learning. With the increasing need for technology-enhanced education, it is crucial to comprehend the precise effects of digital game-based tools on language acquisition, especially concerning motivation, engagement, and academic achievement.

Definition of Digital Game-Based Learning (DGBL)

Digital game-based learning (DGBL) refers to the utilization of digital games as an educational instrument to facilitate and enhance the learning experience. DGBL is defined as the combination of game mechanics—challenges, goals, rules, and rewards—with educational content to enhance engagement and learning (Chen, 2023). In contrast to conventional educational approaches that frequently depend on passive learning strategies, DGBL engages students by delivering content through interactive and immersive experiences. Utilizing digital games in education fosters a motivating and stimulating environment, providing learners with a more engaging and dynamic alternative to conventional classroom settings.

The appeal of digital games lies in its capacity to deliver instantaneous feedback, promote competitiveness, and stimulate active engagement, all of which are crucial elements for enhancing students' educational results. Delgado (2023) says that game-based applications such as Kahoot, Quizizz, and Quizalize are among the most prevalent platforms utilized in language instruction to enhance student motivation and engagement. These technologies enable students to engage in interactive quizzes, challenges, and games, enhancing both the enjoyment of learning and the retention of knowledge as well as problem-solving abilities.

Importance of Motivation in Language Learning

Motivation is a critical determinant in the performance of language learners. In language education, motivation denotes the learners' readiness to participate in learning activities, endure difficulties, and eventually succeed in acquiring new language skills (Hofmeyr, 2023; Delgado, 2023). Motivation in language acquisition can be classified into intrinsic and extrinsic categories. Intrinsic motivation denotes the internal impetus to participate in an activity for the inherent gratification it offers, shown as the pleasure of learning or the challenge of acquiring a new language Vallerand, 2000). Extrinsic motivation is propelled by external incentives, such grades, recognition, or approbation (Vallerand, 2000).

The significance of motivation in language acquisition is extensively documented, with various research emphasizing its considerable influence on learners' academic outcomes and engagement (Hofmeyr, 2023). Game-based learning aids have demonstrated a beneficial impact on both internal and extrinsic motivation. Chen (2023) discovered that including a game-based application in translation instruction enhanced student motivation by rendering

the learning experience more entertaining and participatory. The application offered an enjoyable, competitive atmosphere in which students could monitor their advancement and obtain prompt feedback, thereby enhancing their intrinsic drive to participate in the learning process.

Deterding et al. (2021) argued that DGBL tools could enhance extrinsic motivation by offering students rewards, points, or certificates, which are often used to incentivize learning and track progress. Additionally, Hu (2024) highlighted that digital game-based platforms such as Kahoot and Quizizz increase students' extrinsic motivation by providing prizes and acknowledgment for their accomplishments. These platforms promote active engagement in the learning process, since students are incentivized by the prospect of accumulating points, acquiring badges, or competing with their peers. The findings from these studies underline the importance of motivation in language learning and demonstrate how DGBL can be a potent tool in increasing student engagement and improving academic outcomes.

Engagement in Digital Game-Based Learning

Engagement is an important part of the learning process since it displays students' attention, interest, and involvement in their studies. According to research, interested students are more likely to retain information, perform better, and enjoy their learning experience. According to Khaldi et al. (2023), game-based learning environments are excellent in maintaining high levels of student engagement because they are interactive and keep students engrossed in the topic. Competitive aspects, such as leaderboards, awards, and levels in games, have been demonstrated to pique students' attention and encourage long-term participation in the learning process.

Waluyo et al. (2023) discovered that using gamification and digital games in the classroom fostered a more fun and dynamic learning environment, hence dramatically enhancing student engagement levels. Their research indicated that students engaged in game-based language learning activities exhibited heightened excitement and participation in class. This degree of engagement is especially crucial in EFL contexts, where students may otherwise find it challenging to maintain motivation or lack sufficient opportunity to practice the language beyond the classroom.

Academic Performance and Learning Outcomes

The primary objective of every instructional instrument is to enhance students' learning results. Digital game-based learning in language education has demonstrated a beneficial effect on multiple facets of language competency, including vocabulary acquisition, grammatical comprehension, and reading comprehension. Sianturi and Hung (2023) conducted a study to evaluate the efficacy of DGBL tools in improving vocabulary learning and discovered that students utilizing game-based learning applications surpassed those employing conventional study techniques. The interactive and repetitive characteristics of the games enhanced long-term vocabulary retention, which is essential for language acquisition.

Additionally, Hussein et al. (2019) examined the impact of gamification on enhancing students' language competencies, specifically in writing and speaking. The research indicated that students utilizing game-based applications showed notable enhancements in their writing fluency and speaking confidence. The study participants experienced increased

comfort in expressing themselves in English owing to the encouraging and engaging atmosphere fostered by the activities. Meccawy et al. (2020) discovered that game-based learning aids improved students' self-efficacy, correlating with enhanced performance. As students achieved success in game-based activities, their confidence in learning English heightened, subsequently resulting in enhanced academic achievement.

These studies illustrate the beneficial effect of DGBL on academic achievement in language acquisition. DGBL technologies can substantially improve students' language proficiency and elevate their overall academic performance by offering opportunities for practice, feedback, and rewards.

Methodology

This systematic literature review employed the PRISMA 2020 checklist as a framework. Articles were evaluated and scored utilizing a 27-item checklist and a four-phase structure diagram to examine two research questions. The PRISMA approach consists of four phases: identification, screening, eligibility, and exclusion.

Phase I: Identification Phase

This research examined five established guidelines for identifying and selection of articles. The databases employed for the identification of relevant articles for this systematic literature review were ScienceDirect, ERIC, and SCOPUS. The three databases are accessible to researchers and contain articles relevant to the social sciences and humanities, published between 2019 and 2024, and written in English. This study identified research articles as the fourth criterion, while full open access was established as the fifth predefined criterion for article selection. Table 1 outlines the five criteria utilized for article identification.

Table 1
Table shows the inclusion and exclusion criteria in choosing the articles.

Criteria	Inclusion	Exclusion
Database	ScienceDirect, ERIC, and SCOPUS	Other databases
Publication year	2019-2024	Before 2019
Language	English	Other languages
Document type	Research Articles	Book, book chapters, literature reviews, seminar papers
Access to Full Article	Open access	Limited & No access

In addition to the five predefined criteria, the articles were identified through various search strings and keywords. Each search string was employed across all three databases to identify pertinent articles concerning the effects of digital game-based learning tools on motivation, engagement, and performance in language learning.

Table 2
Table shows the search strings used in all six databases to identify the articles

Search strings				
English	AND	(game-based learning)		
Impact	AND	(game-based learning)	AND	English
Motivation	AND	(game-based learning)	AND	English
Engagement	AND	(game-based learning)	AND	English
Performance	AND	(game-based learning)	AND	English
Language Learning	AND	(game-based learning)	AND	English

Based on the criteria and search strings outlined in Tables 1 and 2, all articles meeting the inclusion and exclusion criteria were selected and compiled, while those failing to meet the criteria were discarded and removed from the list.

Phase II: Screening Phase

Phase II identified articles that were subsequently screened according to their titles. The titles of each article were meticulously verified to ensure alignment with the designated keywords. The abstracts of each article were reviewed to verify adherence to the established inclusion and exclusion criteria. Articles that did not conform to the specified criteria in their titles and abstracts were excluded from further analysis.

Phase III: Eligibility Phase

The articles previously included were reviewed to assess the need for additional screening in the third round. Only participants who satisfied all inclusion and exclusion criteria proceeded to this final phase. This stage was essential for confirming the relevance of the chosen articles to the research questions outlined in the study.

Phase IV: Exclusion Phase

Articles that met the eligibility criteria were chosen for review and analysis in this study, while those that did not meet the criteria were excluded. Exclusion criteria included books, book chapters, seminar papers, articles with restricted or no access to full text, and publications not dated between 2019 and 2024. The flowchart in Figure 1 illustrates the identification of articles.

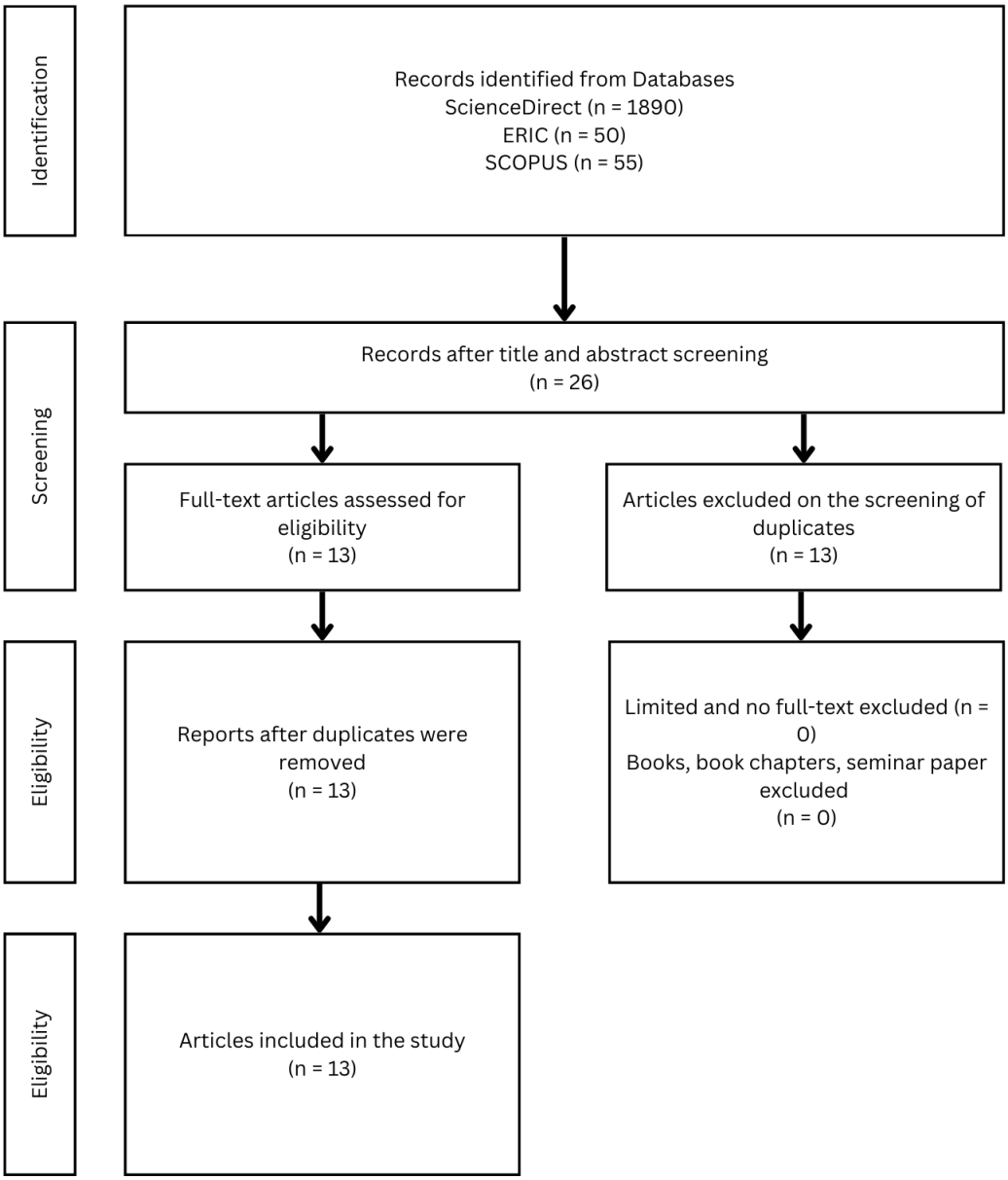

Figure 1 Figure shows the flowchart of the article screening and selection process.

Thirteen articles were selected through a four-phase screening process. The articles encompassed research papers employing various methodologies, including quantitative and mixed methods. Three articles utilized quantitative methods, while the other ten were classified as mixed-method research, as outlined in Table 3.

Table 3

Table shows the number of articles based on the research methodology employed.

Research Methodology	Quantity
Quantitative	3
Mixed method	10

Findings and Discussions

This study systematically reviews and analyzes the impact of Digital Game-Based Learning (DGBL) tools on motivation, engagement, and performance in language education, particularly English language learning. A systematic review included 13 articles published from 2019 to 2024 that investigated the effects of DGBL platforms on student outcomes. This section outlines the principal findings from the studies, followed by a discussion on their contribution to understanding the effects of game-based learning in language education.

Table 4
Shows the details of each article, the digital-based learning platforms used in each research, and the impacts of DGBL in English language learning

No.	Title & Author (s)	Country	Research Method	Research Participants	Technology-based platforms	Relevant impacts
1.	Integrating a Game-Based App to Enhance Translation Learners' Engagement, Motivation, and Performance (Chen, 2023)	Taiwan	Mixed method	75 undergraduates	CHEN-slate	Helps to increase students' motivation, encourages them to participate actively, and improvement in overall course performance
2.	Kahoot, Quizizz, and Quizalize in the English Class and their Impact on Motivation (España-Delgado, 2023)	Colombia	Mixed method	27 sixth-grade students	Kahoot, Quizizz, and Quizalize	Improves students' interaction, motivations and higher level of student attainment
3.	Attitudes towards digital game-based language learning among Japanese university students (Hofmeyr, 2023)	Japan	Mixed method	112 undergraduate students	No specific platforms	Positive impact on students' motivation, engagement, and stronger positive attitudes after intervention
4.	A triangulation method on the effectiveness of digital game-based	Turkey	Mixed method (Triangulation method)	69 eighth-grade students	Minecraft, Open-Sim, and Second Life	Positive impact on students' motivation,

	language learning for vocabulary acquisition (Kazu & Kuvvetli, 2023)					encourages active participation, and better performance in vocabulary retention
5.	The attitudes of high school students and teachers toward mobile apps for learning English: AQ methodology study (Lu & Xiong, 2023)	China	Mixed method (Q method)	30 highschoolers 14 teachers	Youdao Dictionary, Hello Talk, Duolingo, and Baicizhan	Encourages self-regulated learning and increase students' motivation
6.	Assessing EFL Students' Performance and Self-Efficacy Using a Game-Based Learning Approach (Meccawy et al., 2023)	Saudi Arabia	Quantitative method (Quasi-experimental design)	12 school students	Self-developed role-playing game	Positive effect on students' self-efficacy, motivation, and high engagement from the students

Table 4 summarizes the research methodologies employed in each article and the participants involved in the respective studies. The research demonstrates the implementation of various types of game-based platforms. Game-based learning, across various platforms, has demonstrated a positive impact on student engagement and motivation to learn English in several ways (Hofmeyr, 2023; Dorji, 2022; Kocadere & Çağlar, 2018). Game-based learning has become significant in English language education because it effectively engages and motivates students, providing opportunities to improve their language skills.

Impact of Digital Game-Based Learning on Motivation

Motivation plays a vital role in language acquisition, affecting students' willingness to engage in learning activities, persevere through challenges, and achieve academic goals. This study presents evidence that DGBL tools enhance intrinsic and extrinsic motivation in learners. Game-based learning, irrespective of the platforms utilized, has demonstrated a positive impact on students' perceptions of education and has enhanced their motivation to learn English in various ways (Hofmeyr, 2023; Dorji, 2022; Kocadere & Çağlar, 2018; Nadeem et al., 2023). The analyzed studies indicate that these technologies enhance intrinsic motivation by rendering learning fun and participatory. Muralei et al. (2024) examined the impact of Kahoot! on the motivation of Malaysian university students studying English. Their findings indicated that Kahoot! cultivated significant intrinsic motivation by establishing an enjoyable, engaging environment that enhanced students' willingness to engage in learning activities. The research indicated that students were driven by the prompt feedback provided by the platform, which reinforced their language acquisition and maintained their engagement.

Delgado (2023) also discovered that platforms such as Kahoot, Quizizz, and Quizalize markedly enhanced student motivation in EFL environments, rendering learning both enjoyable and efficacious. This is especially crucial in language acquisition, when maintaining motivation can occasionally prove difficult. In a similar vein, Chen (2023) examined the CHEN-slate app and discovered that it markedly enhanced students' motivation to participate in language learning activities. The application offered prompt feedback and a competitive environment that motivated students to engage more actively in their academic pursuits. Hofmeyr (2023) highlighted that game-based learning systems frequently incorporate awards, points, and certificates, which augment students' motivation by providing concrete incentives for their academic advancement.

Impact on Engagement

Engagement, described as the measure of active engagement, attention, and interest in educational activities, is a crucial determinant of student performance. The reviewed studies consistently demonstrate that DGBL tools enhance student engagement. Meletiadou (2023) investigated the application of Lego Serious Play in language acquisition and determined that the tool effectively improved both motivation and engagement. Students indicated increased involvement and enjoyment when utilizing this tool in classroom activities, enhancing the learning experience's dynamism and interactivity. A study by Ardi and Rianita (2022) demonstrated that students engaged in gamified lessons displayed markedly greater levels of engagement than their counterparts in traditional lessons. The incorporation of interactive game elements, including team-based challenges and leaderboards, enhanced students' active participation and enthusiasm. The opportunity for students to compete and receive real-time feedback fostered a sense of achievement, contributing to increased engagement during language learning tasks.

Moreover, Meccawy et al. (2023) in Saudi Arabia discovered that including a role-playing game into a game-based learning intervention resulted in increased student involvement levels. The study demonstrated that students exhibited greater engagement in language learning tasks when provided with role-playing opportunities, which also enhanced collaboration and communication skills. Polyzi and Moussiades (2023) similarly noted that pupils who utilized digital games for vocabulary acquisition had a more proactive attitude to developing new language skills.

Impact on Academic Performance

Academic performance is the third major area affected by DGBL. Research demonstrates that game-based learning enhances motivation and engagement while also improving students' performance in language acquisition. Kazu and Kuvvetli (2023) demonstrated that utilizing Minecraft, Open-Sim, and Second Life as digital game-based learning platforms significantly enhances vocabulary retention, a crucial aspect of language acquisition. The experimental group utilizing these platforms demonstrated enhanced vocabulary acquisition relative to the control group employing conventional memorization techniques.

Hussein et al. (2019) reported that the use of Ecoship Endeavour, a game aimed at enhancing critical thinking in science, indirectly improved students' motivation and self-efficacy, which are associated with enhanced learning performance. The primary focus was

on science; however, the approach illustrated the potential of DGBL tools to enhance academic performance across various subjects, including language learning.

It is essential to recognize that the impact of DGBL on performance varies across different contexts. Meccawy et al. (2023) observed that while students indicated higher self-efficacy and engagement, the academic performance of the experimental group did not demonstrate significant enhancement when evaluated using conventional testing methods. This discrepancy suggests a need for further investigation into the alignment of game-based tools with curriculum objectives to improve performance outcomes. This finding is consistent with previous studies by Kiili (2005), Chen and Tu (2021), Erhel and Jamet (2019), and Qian and Clark (2016). The findings underscore the substantial influence of game-based learning on student motivation and favorable attitudes toward learning English, thus validating its efficacy as a pedagogical strategy in English language education for diverse learner levels.

The 13 articles delineated several themes in classifying the effects of game-based learning on students. Themes denote recurring topics or concepts discerned through the analysis of the articles. Themes outline the central emphasis on the advantages and effects of adopting the game-based learning method. The general concepts of motivation, engagement, and performance were documented, along with the frequency of their occurrence in each article.

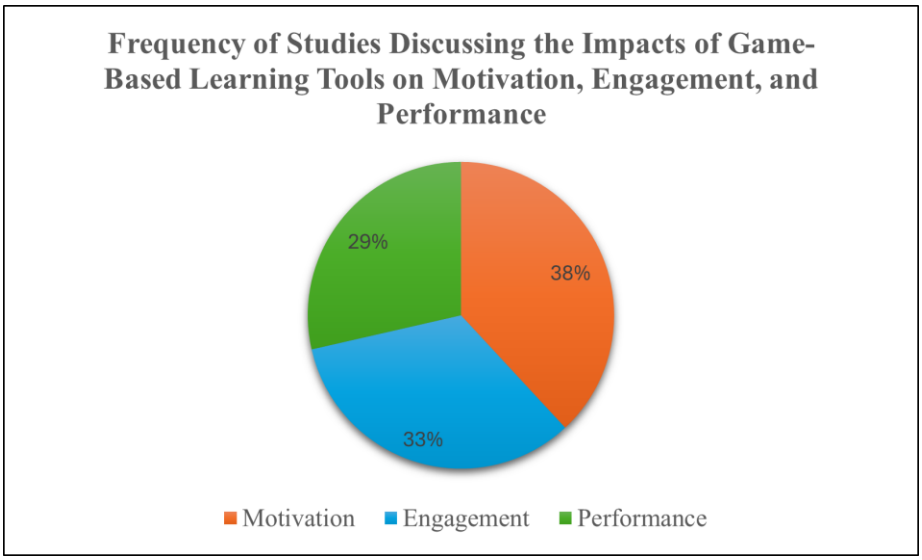

Figure 2 shows the frequency of the articles discussing the impacts of DGBL

Table 5
Shows the impacts of digital game-based learning in language tool

No.	Author (s)	Motivation	Engagement	Performance
1.	Chen (2023)	/	/	/
2.	España-Delgado (2023)	/	/	/
3.	Hofmeyr (2023)	/	/	/
4.	Kazu & Kuvvetli (2023)	/	/	/
5.	Lu & Xiong (2023)	/	/	
6.	Meccawy et al. (2023)	/	/	/
7.	Meletiadou (2023)	/	/	
8.	Nozhovnik et al. (2023)	/	/	/
9.	Polyzi & Moussiades (2023)		/	/
10.	Tatli, Gülay & Mert (2023)	/	/	/
11.	Hu (2024)	/	/	/
12.	Khaldi et al., (2023)	/	/	
13.	Hussein et al., (2019)	/	/	/

Figure 2 and Table 5 presented above illustrate the relevant data, they summarise the impacts of Game-Based Learning (GBL) on language learning, organized into three primary themes: motivation, engagement, and performance. The studies presented in Articles 1 to 13 demonstrate that GBL positively impacts these aspects, markedly improving the learning experience for students. Motivation emerges as a central theme across the majority of the articles, with 12 of the 13 studies indicating that game-based learning tools positively influence both intrinsic and extrinsic motivation among students. Tools such as Kahoot, Quizizz, and Quizalize, frequently utilized in research, offer immediate feedback, incentives, and competitive features that enhance student engagement in language learning. The enjoyment and satisfaction derived from gaming, along with the sense of achievement associated with game progression, contribute to maintaining students' motivation to engage with learning materials, as evidenced by studies such as Chen (2023) and Hofmeyr (2023).

Secondly, engagement represents a significant impact of game-based learning (GBL), as all studies indicate that game-based tools enhance student engagement. These tools facilitate interactive and dynamic learning environments that engage students, foster collaboration, and enhance active participation. Students are more likely to engage actively in their lessons through quizzes, challenges, or role-playing games. Meletiadou (2023) and Meccawy et al. (2023) observed that the implementation of these tools led to increased student participation and enthusiasm in language learning tasks, indicating that students are more likely to remain engaged when the learning process is enjoyable and competitive.

Waluyo et al., (2023) assert that the incorporation of digital games in educational settings promotes a more dynamic and immersive environment, resulting in increased student engagement. Liu and Zhang (2024) emphasize that game-based activities engage students' attention more effectively than conventional teaching methods. It is argued that games, through the provision of real-time feedback and rewards, promote active engagement of students with the content. This is consistent with the findings of the impact on performance is demonstrated in 9 of 13 studies, suggesting that GBL enhances student motivation and engagement while also improving academic outcomes. Game-based tools have demonstrated effectiveness in enhancing vocabulary retention, improving grammar comprehension, and increasing overall language proficiency. Research conducted by Kazu and Kuvvetli (2023) and Meccawy et al. (2023) identified notable enhancements in students' language performance, especially in vocabulary acquisition and self-efficacy, which were associated with improved academic outcomes. The prompt feedback and reinforcement mechanisms offered by these tools enhance learning, resulting in improved performance over time. Furthermore, Polyzi and Moussiades (2023) discovered that game-based learning aids significantly enhanced students' vocabulary acquisition, an essential element of language competency. Their research indicated that pupils utilizing game-based vocabulary applications retained new words more efficiently than those employing conventional techniques such as rote memorization. The enhanced vocabulary acquisition directly impacted their overall language performance.

Ruziyeva (2024) performed a meta-analysis that validated the efficacy of game-based learning aids in enhancing language ability. The research determined that students employing game-based techniques for language acquisition surpassed their counterparts in grammar, listening comprehension, and speaking proficiency. The research emphasized the dynamic learning atmosphere fostered by digital games, which encouraged students to interact with linguistic material in a more engaging and significant manner.

The results from these studies collectively emphasize the efficacy of Game-Based Learning as a powerful instrument in language education. Furthermore, the findings of Plump and LaRosa (2017), Zhang and Crawford (2023), and Pitoyo and Asib (2020) indicate that game-based learning significantly boosts motivation, enhances engagement, and elevates performance, contributing to a more interactive and effective educational setting. The consistent positive outcomes observed across various educational environments suggest that incorporating game-based learning tools into language education significantly boosts the engagement, enjoyment, and overall effectiveness of student learning experiences.

Conclusion

The systematic review of 13 articles highlighted that Digital Game-Based Learning (DGBL) provides substantial advantages in language instruction, especially in improving motivation, engagement, and academic performance. The results from various research examined in this study demonstrate that game-based learning tools, including Kahoot, Quizizz, and Lego Serious Play, are helpful in enhancing both intrinsic and extrinsic motivation in students. These tools foster interesting and interactive learning environments that not only captivate students' attention but also promote sustained involvement in language learning activities. Students' active participation in game-based activities enhances their enthusiasm

to study and improves their academic performance, especially in vocabulary retention, grammatical comprehension, and language competency.

The review emphasizes the necessity for additional research to investigate the more effective integration of game-based tools into various educational settings. The study indicates that, although the beneficial effects of DGBL on student engagement and performance are well-established, it is essential to link game mechanics with particular curriculum objectives and language learning goals to optimize its effectiveness. As technology advances, it is essential for educators and curriculum developers to utilize game-based learning to provide more dynamic and effective language acquisition experiences. By doing so, they may provide students with the motivation, engagement, and linguistic competencies essential for success in an increasingly digital landscape.

This study contributes to existing literature by providing a comprehensive synthesis of digital game-based learning (DGBL) tools' impact on motivation, engagement, and performance in language education. The findings reinforce the Self-Determination Theory (Ryan & Deci, 2000) by demonstrating how game-based elements enhance intrinsic and extrinsic motivation. Additionally, it extends the Gamification Framework (Deterding et al., 2011) by illustrating how game-based learning fosters competitive, interactive, and immersive experiences that improve educational outcomes.

Contextually, this study is significant for educators and policymakers aiming to integrate digital learning tools into English as a Foreign Language (EFL) instruction. The review provides empirical evidence supporting the adoption of platforms such as Kahoot and Quizizz to enhance classroom engagement. Furthermore, it offers insights for curriculum designers on aligning game mechanics with specific learning goals to improve language acquisition. Future research should explore the long-term effects of DGBL and its adaptability in blended learning environments.

Recommendations

Future research in this domain should incorporate these recommendations and suggestions to enhance findings. This study could be improved by utilizing a larger set of databases to enhance reliability, validity, and accuracy of results. The inclusion criteria for the year of publication should extend to five years prior to the current year to analyze the evolving trends of game-based platforms utilized in educational settings, in addition to employing larger databases. Further empirical research is necessary to explore the effects of game-based learning on ESL learners, particularly regarding learner independence, the long-term impacts on language acquisition, and the integration of these tools within blended learning environments that combine online and offline activities. Furthermore, it is important to consider various factors, including language skills and teachers' perceptions.

Limitations

While this study successfully addressed both research questions, this study has several limitations. Most of the reviewed studies concentrated on a limited sample size, thereby restricting the generalizability of the findings to diverse populations. The effectiveness of game-based learning tools varies according to specific contexts and learning environments, influenced by cultural differences and access to technology. A further limitation is the brief

duration of numerous studies, which complicates the evaluation of the long-term effects of game-based learning on language proficiency. In conclusion, this study underscores the beneficial effects of game-based tools; however, it is crucial to recognize that student responses to these methods may vary. Additional research is necessary to identify the specific factors that facilitate effective game-based learning implementations.

References

Ardi, P., & Rianita, E. (2022). Leveraging gamification into EFL grammar class to boost student engagement. *Teaching English with Technology, 22*(2), 90-114.

Chen, C. C., & Tu, H. Y. (2021). The effect of digital game-based learning on learning motivation and performance under social cognitive theory and entrepreneurial thinking. *Frontiers in Psychology, 12*, 750711.

Chen, Y. (2023). Integrating a game-based app to enhance translation learners' engagement, motivation, and performance. *International Journal of Instruction, 16*(2), 1-16.

Delgado, J. A. E. (2023). Kahoot, Quizizz, and Quizalize in the English class and their impact on motivation. *How, 30*(1), 65-84.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9-15). ACM.

Dorji, T. (2022). The effect of game simulation in improving secondary students' academic performance. *International Journal of Social Learning (IJSL), 3*(1), 48-64.

Erhel, S., & Jamet, E. (2019). Improving instructions in educational computer games: Exploring the relations between goal specificity, flow experience, and learning outcomes. *Computers in Human Behavior, 91*, 106-114.

Hofmeyr, M. (2023). Attitudes towards digital game-based language learning among Japanese university students. *The JALT CALL Journal, 19*(1), 26-52.

Hussein, M. H., Ow, S. H., Cheong, L. S., & Thong, M. K. (2019). A digital game-based learning method to improve students' critical thinking skills in elementary science. *IEEE Access, 7*, 96309-96318.

Hu, Y. (2024). Kahoot! in the classroom: Examining the impact of a game-based student response system on pre-service teachers' academic achievement and perceptions. *Innovations in Education and Teaching International, 61*(5), 960-971.

Kazu, I. Y., & Kuvvetli, M. (2023). A triangulation method on the effectiveness of digital game-based language learning for vocabulary acquisition. *Education and Information Technologies, 28*(10), 13541-13567.

Khaldi, A., Bouzidi, R., & Nader, F. (2023). Gamification of e-learning in higher education: A systematic literature review. *Smart Learning Environments, 10*(1), 10.

Kiili, K. (2005). Digital game-based learning: Towards an experiential gaming model. *The Internet and Higher Education, 8*(1), 13–24.

Kocadere, S. A., & Çağlar, Ş. (2018). Gamification from a player-type perspective: A case study. *Journal of Educational Technology & Society, 21*(3), 12-22.

Liu, H., & Zhang, Y. (2024). Digital game-based learning on historical and cultural heritage in China: A systematic review. In *Asian Histories and Heritages in Video Games* (pp. 187-208). Springer.

Meccawy, M., Alzahrani, A., Mattar, Z., Almohammadi, R., Alzahrani, S., Aljizani, G., & Meccawy, Z. (2023). Assessing EFL students' performance and self-efficacy using a game-based learning approach. *Education Sciences, 13*(12), 1228.

Meletiadou, E. (2023). Transforming multilingual students' learning experience through the use of Lego Serious Play. *IAFOR Journal of Education, 11*(1), 1-24.

Muralei, D., George, P., Selvaraju, V., & Yunus, M. M. (2024). Gamified writing: Enhancing ESL learners' skills through Padlet and Kahoot. In *Innovating Today for a Sustainable Tomorrow* (pp. 46-57). Springer.

Nadeem, M., Oroszlanyova, M., & Farag, W. (2023). Effect of digital game-based learning on student engagement and motivation. *Computers, 12*(9), 177.

Pitoyo, M. D., & Asib, A. (2020). Gamification-based assessment: The washback effect of Quizizz on students' learning in higher education. *International Journal of Language Education, 4*(1), 1-10.

Plump, C. M., & LaRosa, J. (2017). Using Kahoot! in the classroom to create engagement and active learning: A game-based technology solution for eLearning novices. *Management Teaching Review, 2*(2), 151-158.

Polyzi, P., & Moussiades, L. (2023). An artificial vocabulary learning assistant. *Education and Information Technologies, 1-25*.

Qian, M., & Clark, K. R. (2016). Game-based learning and 21st-century skills: A review of recent research. *Computers in Human Behavior, 63*, 50-58.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.

Ruziyeva, M. A. K. (2024). The role of game-based learning in improving English language learners' speaking skills. *Academic Research in Educational Sciences, 5*(5), 141-147.

Sianturi, A. D., & Hung, R. T. (2023). A comparison between digital-game-based and paper-based learning for EFL undergraduate students' vocabulary learning. *Engineering Proceedings, 38*(1), 78.

Vallerand, R. J. (2000). Deci and Ryan's self-determination theory: A view from the hierarchical model of intrinsic and extrinsic motivation. *Psychological Inquiry, 11*(4), 312-318.

Waluyo, B., Phanrangsee, S., & Whanchit, W. (2023). Gamified grammar learning in online English courses in Thai higher education. *Online Journal of Communication and Media Technologies, 13*(4), e202354.

Zhang, Z., & Crawford, J. (2023). EFL learners' motivation in a gamified formative assessment: The case of Quizizz. *Education and Information Technologies, 1-23*.