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The Impact of Game-Based Learning (GBL) on EFL Learners' Buoyancy, Directed Motivational Currents (DMCS), and Language Learning

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The teaching approach of game-based learning emphasizes the creation, improvement, and use of games for educational purposes and training to achieve specific learning goals. A quasi-experimental research study using quantitative methods was conducted to investigate the impact of Game-Based Learning on the academic resilience, Directed Motivational Currents, and language learning of English as Foreign Language (EFL) Learners. The study involved 30 pre-intermediate students from two classes at the Iran-Europe Language Institute in Tehran, with one class assigned to the experimental group and the other to the control group. To provide a baseline for comparison, the experimental group participated in game-based learning, while the control group received traditional education devoid of any game-based activities. In effect, the experimental group engaged in digital and non-digital games related to vocabulary, grammar, and other language components alongside with some real-time quizzes, whereas the control group adhered to traditional teaching procedure in instruction, revision, and mainstream quizzes, in a non-gamified context. Data were collected using the L2 Buoyancy Questionnaire and the Persian version of the Dynamic online DMC Disposition Questionnaire. Results indicated statistically significant improvements in the experimental group`s academic buoyancy, DMC, and language proficiency with effect sizes of 1.96, 0.71.272, and 0.585 respectively, compared to the control group. Derived from these findings, teachers are recommended to integrate game-based learning by incorporating interactive language tasks such as digital simulation or vocabulary games into their lesson plans, helping the students engage more with the material effectively. Furthermore, educational institutions and administrators can elevate students' knowledge quality by incorporating game-based instruction into curricula, by providing structured gamified tasks aligned with curriculum objectives to make learning more effective and engaging.

Keywords: buoyancy, directed motivational currents, game-based learning, language learning, EFL learners

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INTRODUCTION

The majority of teachers hold the view that traditional and mainstream materials and activities are seen as more reliable compared to innovative and personalized formats, which are viewed as less secure. They are inclined to adhere to established protocols across all courses and educational stages due to apprehensions regarding alterations and their potential outcomes. One of the most essential elements of teaching is to keep students engaged and motivated inside the classroom. Traditional teaching approaches, while effective in some situations, frequently fail to keep students interested and engaged, especially in language learning, where long-term motivation is critical (Jahedizadeh et al., 2019).

Game-Based Learning (GBL) is suited to address these challenges by fostering and encouraging engaging learning environment. Unlike traditional methods, GBL leverages the natural human inclination toward play, allow learners to actively participate and engage with the material in a way that promotes both enjoyment and deeper learning (Gee, 2003). Through its interactive nature, GBL can also enhance motivation and provide opportunities for authentic language use, which are often lacking in traditional settings. Using games and playing can be among the effective tools in engaging students (Muramatsu & Ackerman,1998). They will assist teachers in creating a learner-focused and motivated class. The needs, interests, joy, and motivation of all of the students is very crucial because people who have the proper to gain knowledge are important and inseparable bases of an educational system. Games normally permit the participant to restart or play again, making errors recoverable. This freedom to fail permits students to test without worry and will increase scholar engagement (Haleem et al., 2022).

While previous studies (Ahmed et al., 2022; Segarawati Ampry, 2022) have examined the function of GBL in improving motivation and language acquisition, many of these studies lack a thorough assessment of their limitations. For instance, most studies concentrate on immediate results or particular game interventions, ignoring long-term effects or contrasting GBL with other active learning techniques (Shirazi et al., 2016). Moreover, nothing is known about the simultaneous effects of GBL on academic buoyancy and dynamic motivational frameworks like Directed Motivational Currents (DMCs). Important gaps in the literature are the lack of coherence between these ideas and the scant attention paid to long-term motivation in language learning environments. Motivation, whether intrinsic or extrinsic, is arguably one of the most crucial notions in the process of learning (Eales et al., 2002). The regulating factors of reinforcement systems might also influence the absence of intrinsic motivation, for instance, various rewards linked to extrinsic motivation could gradually diminish intrinsic motivation (Hanus & Fox, 2015). Additionally, academic buoyancy, which refers to the ability to successfully cope with setbacks and academic challenges of the normal course of school and educational system, (Jahedizadehet al., 2019) can be another determining factor in academic efficiency. Nevertheless, there is a need for more research because previous studies have not often looked at how GBL might concurrently improve buoyancy and sustained motivational currents (DMCs), particularly in long term language learning cotext.

As stated previously, since the tasks and activities used in most of the classes are not interesting enough to motivate and engage the students, the up-to-date tools for teaching can be a beneficial way to decrease this disengaging phenomenon. The teachers should prioritize the students' desires and demands to design the tasks they want to bring into their classes (Xolmuroet al., 2023). The justification for using GBL in this study comes from its capacity to address motivational impairments while offering an interactive, feedback-rich learning experience. GBL provides a flexible, failure-tolerant environment in which students can experiment and succeed at their own speed, making it an effective tool for enhancing their intrinsic motivation and academic buoyancy.

This study is based on the theoretical frameworks of self-determination theory (Deci & Ryan, 2000) and the L2 motivational self-system (Dörnyei, 2009), which emphasize the relevance of autonomy, competence, and relatedness in learning. According to these theories, enjoyable and favourable learning envoronments can improve autonomy by give learners options about how to approach tasks, competence by providing opportunities for skill development through instant feedback, and relatedness through collaborative games and peer interactions. GBL has the ability to satisfy these demands by engaging learners in meaningful tasks that boost intrinsic motivation, hence increasing resilience and long-term engagement (Peterson, 2016). This framework is expected to guide the investigation into how GBL affects EFL learners' buoyancy and DMCs, resulting in improved language learning results.

After examining the relevant literature, it was unlaced that plethora of studies have been conducted on the impact of GBL on English language acquisition (e.g., Ahmed et al., 2022), students' motivation (e.g., Segarawati Ampry, 2022), and EFL students' mastery of speech acts (such as requests and apologies) (e.g., Shirazi et al., 2016). However, the longer-term impacts of GBL and how it stacks up against other teaching styles in terms of encouraging sustained engagement tend to get left out of these research. Furthermore, not much research has been done on the interaction of academic buoyancy and DMCs in GBL environments, which leaves an extensive gap in the field's current understanding. More specifically, there has been a lack of research on how GBL influences the relationship between learners' academic buoyancy and dynamic frameworks of motivation such as DMCs, particularly in English as a Foreign Language (EFL) classes.

Hence, the current study aimed to explore the effects of GBL on EFL Learners' buoyancy, DMCs, and language learning. This investigation could offer significant insights to the academic community and present valuable suggestions for educators interested in integrating game-based approaches into their instructional practices.

Review of the Related Literature

Theoretical Background

The Theoretical Overview of Game-based learning (GBL)

GBL is generally a teaching method that offers teachers the opportunity to stimulate students' interest in different aspects of the game in order to learn and consolidate unique skills in real-world situations (Dimitra, 2020). When simulations first appeared in the 1950s, they were not entirely in line with trends in learning and education. Simulations and games were based on learning theories that emphasized understanding

the dynamics and processes underlying events rather than memorizing facts and principles.

However, incorporating game-based learning theories into the context of language acquisition requires a more concentrated approach. GBL is congruent with key features of language acquisition, such as input processing, interaction, and output generation, which may be seamlessly integrated into games (Reinders & Wattana, 2015). This allows EFL students to practise language in authentic and motivating environments. For example, role-playing games (RPGs) can enable sophisticated, meaningful exchanges in which students communicate in the target language (Peterson, 2016).

Incorporating game-based learning into the curriculum is feasible for educators, even in the face of financial constraints. Both traditional and virtual video games can be used to promote student engagement. Despite limited funds, educators and students can still make use of resources, apps, and websites. It is no longer necessary for educators to have a large budget in order to employ game-based learning as a means of engaging students (Lampropoulos, 2023; Nino & Evans, 2015). Studies pertaining to the utilisation of digital tools in language acquisition underscore the efficaciousness of platforms such as Kahoot! and Quizizz in augmenting student engagement and optimising learning outcomes within resource-constrained settings (Wang, 2021).

Buoyancy

Schools are places where facing challenges, setbacks, and stress is just a part of everyday life. Previous research has identified stress, disengagement, heavy workloads, lack of support, and high turnover among faculty members in this challenging environment. When it comes to students, evidence clearly shows the constant pressures and difficulties present within the academic realm (Martin & Marsh, 2009). To cope with these difficulties and complications, academic buoyancy or resilience can be a decisive factor.

Academic buoyancy reflects "students' everyday academic resilience within a positive context and can be defined as students' ability to successfully deal with academic failures and challenges" (Jahedizadeh, et al., 2019a, p. 162). In the process of language education, it is the ability to deal with prevelant challenges faced in the process of language learning (Martin & Marsh, 2006). Academic buoyancy is contextualized by considering two related areas: 'Everyday hassles' and 'coping'. 'Everyday hassles' refer to the stresses and frustrations that are part of daily life (Mackenzie et al., 2003).

Buoyancy is similar to resiliency, because it distracts students from the daily stresses and strains. Academic resilience is attributed to debilitation and anxiety in unpleasant situations of failure and devastating underachievement, while academic buoyancy is a common daily experience of stress and pressure as the result of poor performance (getting a low grade at school/university) (Jahedizadeh et al., 2021). In this study, it is presumed that academic buoyancy can be influenced by enjoyable and facilitative setting provided by games, in which pupils can pleasantly experience repeated loses and setbacks without negative consequences. According to research, learning in the favorable context promotes resilience by allowing students to experiment, receive

instant feedback, and adapt their techniques, resulting in better stress management in academic settings (Jahedizadeh et al., 2021).

Directed motivational currents (DMCs)

DMC is a recently conceptualized phenomenon that concerns rather long-term, continuous and increased motivational engagement (Dörnyei et al., 2014). DMCs organize and integrate the distinctive ideas of subtle psychology (consisting of happiness, engagement and flow) in a purposeful way that spans a powerful schedule of a few months or perhaps a year. Although DMCs have recently been best proposed as an unbiased theoretical framework, they have probably actually occurred in everyone's life.

Examples of DMC include following a strict diet over a period of time, or a group of activists passionately working on paintings for a common goal, where their shared electricity provides momentum. In second language (L2) learning, an example would probably be someone who for some time has been deeply concerned with improving their L2 skills in order to achieve positive proficiency.

Central to DMC is a vision. Vision has recently emerged as one of the most advanced motivational forces (Dörnyei & Ryan, 2015), thus being a unique source of motivation for long-term second-level knowledge acquisition. Through the development of DMCs in joyful contexts, language learners can become proficient in the language by focusing on long-term objectives and participating in activities that offer instant, satisfying feedback (Dörnyei & Ushioda, 2021). In this regard, games immersive quality can contributes to the persistence of their motivating intensity.

Empirical Background of the Study

In a recent study by El Mawas et al. (2022), the effects of a new educational computer game called Final Frontier on student motivation and learning were explored. The findings indicated that students who played the Final Frontier game showed greater improvement in understanding the subject compared to those who did not participate, showing increased motivation levels as well.

A study by Eltahir et al. (2021) focused on the impact of Game-Based Learning (GBL) on student motivation, engagement, and academic performance in an Arabic language grammar course at Ajman University. The use of the game-based online tool Kahoot! during classes led to improved understanding of the course material and boosted motivation among students.

In their research, Shahriarpour and Kafi (2014) investigated how digital games could affect the motivation of Iranian intermediate EFL learners in learning English vocabulary. Through interviews and observations, they found that the use of digital games increased learners' motivation and encouraged a more meaningful learning approach as opposed to simple memorization.

Based on the studies mentioned above and the gap in the related literature, this study attempted to explore the effects of GBL on EFL Learners' buoyancy, DMCs, and language earning. To meet the objectives of the study, this research aimed to answer the following research questions to fill the gaps in the research literature:

RQ1. Does GBL significantly influence EFL learners' language learning?

RQ2. Does GBL significantly influence EFL learners' buoyancy?

RQ3. Does GBL significantly influence EFL learners' DMC?

METHOD

Design

This quasi-experimental research was conducted among intermediate EFL learners in Iran-Europe Institute in Tehran. It used an intact-groups design wuth two groups of control and experimermntal. The study variables were GBL, learners' buoyancy, DMCs, and Language Learning. Cronbach's Alpha was used to test the internal reliability of the questionnaires.

Participants

This study was conducted with the participation of 15 male and 15 female language learners. The institute was selected based on credibility and feasibility criteria. The participants' age range was 17-21and they were at the intermediate level. Among all English learners, institute students were chosen for different reasons. Due to the Pandemic of COVID 19, most of the classes were held online in Iran, so the researcher had to choose the most accessible group of individuals who knew her and would participate in the best way to help voluntarily. All individuals gave their informed consent before participation. They received complete information about the study's goals, procedures, potential risks, and advantages. This ensured that everyone who consented to participate did so willingly and knew exactly what the research involved. Given that one of the researchers of the present study was the instructor of the two classes, the process of obtaining consent from participants went without difficulty.

There was also the issue of contacting the participants after the class, so the best and safest way was using Iran-Europe Messenger, which was a messenger designed by the institute, to share the questionnaires which all the students of each class were online during the day to ask and answer questions.

Instruments

In this experimental study, data for the project were collected by pre-test and post-test of language proficiency, buoyancy, and DMC questionnaires.

DMC Disposition Questionnaire

The study utilized the Persian version of the DMC Disposition Questionnaire, developed and validated by Muir (2016) and translated into Persian and revalidated by Ghanizadeh and Jahedizadeh (2017), to explore student Directed Motivational Currents. This questionnaire is an interactive online tool with 12 statements that assess easy flow and challenge aspects of DMC through a 5-point Likert scale. It demonstrated high internal consistency (Cronbach's Alpha = .84). The validity indices of the Persian version demonstrated acceptable fit indices: the Chi-square/df ratio (2.10), the RMSEA (0.06) and the NFI=.90, CFI=.91, and GFI= .90 (Ghanizadeh & Jahedizadeh, 2017). The study aimed to address three key questions: the prevalence of DMC experiences among students, the characteristics of those who have experienced DMCs, and the nature of their DMCs in terms of duration and reasons for initiation. Additionally,

participants were given the opportunity to share their DMC experiences through open-ended questions, offering valuable insights.

L2 Buoyancy Scale

To assess second language learners' resilience, Jahedizadeh et al. developed and validated a questionnaire. (2016) was made use of. The 27 items in this questionnaire evaluate four distinct aspects of L2 buoyancy: acceptance of academic life, regularity adaptation, sustainability, and positive personal eligibility. Each item must be rated by respondents on a five-point rating system, where one represents strong disagreement and five represents strong agreement. One item assesses sustainability, for example, by asking participants if they can overcome obstacles in their language learning process and grow from them. Another item evaluates learners' ability to push themselves to meet objectives, like learning a certain number of new words every week, in order to measure regularity adaptation. Positive personal eligibility is assessed using questions about the person's drive and capacity to finish assignments, including homework. Finally, items that assess learners' ability to see situations from multiple perspectives, emphasizing both positive and negative aspects, are used to measure their positive acceptance of academic life. An overview of the L2 buoyancy scale is given in Table 1.

Jahedizadeh et al. conducted a confirmatory factor analysis (CFA) using the LISREL 8.50 statistical package to ascertain the validity of the questionnaire in the Iranian context. (2019). The model was composed of four components: positive acceptance of academic life (eight items), regularity adaptation (four items), sustainability (seven items), and positive personal eligibility (eight items). The results showed that the $\chi 2$ value (1982.64), the $\chi 2$/df ratio (718.23), the RMSEA (0.062), and the NFI (0.0) were all within acceptable bounds. Next, the four-factor model's convergent validity was calculated using the factor correlation. PPE and REG had the highest correlation (r¼0.56, $p<0.05$), according to the report that the model with the best fit showed inter-correlation between the scales or latent factors. Put differently, learners who possess favorable personal eligibility can also adjust on a regular basis.

Cronbach's α was used to estimate the questionnaire's reliability, and the result was 0 points 83. The subscales with the highest reliability were sustainability (0 points), regularity adaptation (0 points67), positive acceptance of academic life (0 points69), and positive personal eligibility (0 points79). Overall, it can be said that the validity and reliability indices of the L2 buoyancy scale in Persian are acceptable.

Procedure

The participants were randomly assigned to experimental and control groups. Both groups had a pre-test which were Buoyancy and DMCs questionnaires. After that the students of the experimental group were given tasks and instructions that the researcher gamified them in order to see the differences. The specific tasks included some vocabulary games such as picture and definition matching, spelling and miming, sentence construction using gamified prompt, and short gamified grammar quizzes in addition to some role-play games in the dialogue sections of the source book.

At the same time, the control group was supposed to receive the ordinary way of teaching without any gamified task. In the control group, the syllabus went without any

games for any of the steps or tasks in teaching and it was completely normal way of regular teaching. In the experimental group, delivered instruction and tasks were all through games and in some of the steps of teaching each session as well. The gamified activities were conducted once a week on Mondays as it was the first session of the week in the whole term (8 weeks), with each session lasted for 90 minutes.

The Big Blue Button platform was used for holding online classes because it was suitable to share different formats of files including PDF and PowerPoint games, whiteboard for some teacher-made games, and the teacher was also able to share the screen of her laptop for playing some online games with the students. These kinds of games were selected according to the subject of the lesson. In addition to the PowerPoint games, there were some online games that were interesting for the students because of the fantastic graphics. Example of these online games included Kahoot, Bamboozle, and ESL games plus interactive instruction, revision, and assessment. The gamified content was mostly added to the last 30 minutes of the sessions in the experimental class; nevertheless, in some sessions dynamic schedule was followed. For instance, occasionally, the warm-up was meant to be gamified while in some other sessions the instruction or the revision section were game-bsed. There were also some gamified quizzes every two weeks.

There were plenty of games done simply using the feature of "chat box" in the platform to avoid any difficulty for the students and in this way, all of the learners were able to play. The control group classes were also held on the same days online via Big Blue Button platform two hours before the experimental one, and they received the mainstream instruction with no gamified content in any section of the class. At the end of the term, the participants of both groups were sent the link to the buoyancy and DMCs questionnaires, and they were supposed to answer them again as the post-test. They did not have any time limit to answer the questionnaire, but a deadline was set for them to deliver the answers to the researcher so that she could analyze their answers as quickly as possible. The score that they got at the end of this term was also compared with the last term they had to see whether the way of teaching and learning had any effect on the language achievement of both groups or not.

FINDINGS

Pre-test on Language Proficiency

An independent samples *t*-test was used to determine whether the language proficiency levels of the control and experimental groups were significantly different prior to the study. The descriptive results of proficiency in the two groups are summarized in Table 1.

Table 1
Descriptive statistics of language proficiency across control and experimentalgroups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Language Achievement 1	Control	15	91.26	8.13	2.10
	Experimental	15	94.40	5.93	1.53

The experimental group's mean proficiency score (*M*=94.40, *SD*=5.93) was slightly higher than the control group's (*M*=91.26, *SD*=2.10). This difference can be seen in

Table 1. An independent samples *t*-test was used to determine whether this observed difference was statistically significant. The findings indicated that, in terms of the two groups' respective levels of English proficiency, there was no statistically significant difference (*t*=-1.20, p= 0.23).

Pretest on L2 Buoyancy

An independent samples *t*-test was performed to see if there was a significant difference in the control and experimental groups' levels of buoyancy prior to the study's conduct. The descriptive results of buoyancy are compiled in Table 2.

Table 2
Descriptive statistics of buoyancy across control and experimental groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Buoyancy1	Control	15	107.93	8.67	2.23
	Experimental	15	107.86	12.50	3.22

As Table 2 shows, the mean scores of buoyancy in the control and experimental groups were different: control (*M*=107.93, *SD*=8.67), experimental (*M*=107.86, *SD*=12.50). To see whether this observed difference was statistically significant, an independent samples *t*-test was run, which demonstrated there was not a statistically significant difference between the two groups regarding the level of their buoyancy (*t*= .02, *p*=.98).

Pretest on DMCs

To ensure that the participants of the two groups were homogenous in the level of their DMCs, an independent samples *t*-test was run. Table 3 summarizes the descriptive results of DMC.

Table 3
Descriptive statistics of DMCS across control and experimental groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
DMC1	Control	15	47.93	4.04	1.04
	Experimental	15	49.26	3.69	.95

The results of an independent samples t-test, which was used to determine whether the observed difference is statistically significant, showed that the level of DMC did not differ statistically between the two groups (*t*= -. 94, *p*= 0.35).

The Results of the Posttest

The Results of Posttest on Language Achievement

To examine whether GBL has any significant impact on LA, an independent samples *t-test* was run. Table 8 summarizes the descriptive results of LA in two groups.

Table 4
Descriptive statistics of posttest on language achievement

	Group	N	Mean	Std. Deviation	Std. Error Mean
Language Achievement 2	Control	15	91.53	8.35	2.15
	Experimental	15	97.26	4.62	1.19

The English test mean scores for participants in the control and experimental groups differed, as Table 4 illustrates: control (*M*=91.53, *SD*=8.35) and experimental (*M*=9.26,

SD=4.62). An independent samples t-test was used to determine the statistical significance of the observed difference. The results of the *t*-test showed that the degree of the LA differed statistically significantly between the two groups (*t*=-2.32, *p*=. 028). Stated differently, the intervention imposed on the experimental group had an impact on the language acquisition of EFL students. The effect size, estimated via Cohen's *d*, was 0.85.

The Results of Posttest on Buoyancy

An independent samples t-test was performed to see if there was a significant difference in the level of buoyancy between the control and experimental groups following the study. The descriptive results of buoyancy are compiled in Table 5.

Table 5
Descriptive statistics of posttest on buoyancy

	Group	N	Mean	Std. Deviation	Std. Error Mean
Buoyancy2	Control	15	104.86	6.27	1.62
	Experimental	15	115.33	4.20	1.08

The participants in the control and experimental groups had different mean buoyancy scores, as Table 5 demonstrates: control (*M*= 104.86, *SD*= 6.27), experimental (*M*=115.33, *SD*= 4.20). An independent samples *t*-test was performed to determine if the observed difference was statistically meaningful. According to the results, there was a statistically significant difference (*t*=-5.36, *p*=0.05) in the two groups' buoyancy level. A.T. Put differently, the degree of buoyancy varies considerably between the two groups. The effect size, estimated via Cohen's *d*, was 1.96.

The Results of Posttest on DMCs

The post-test differences between the two groups' DMCs were computed in order to examine the impact of the GBL technique on students' DMCs. In the post-test, the means of the two groups were found to differ. The descriptive statistics of the post-test on DMCs are shown in Table 6. the experimental group's DMC means differ from the control group'

Table 6
Descriptive Statistics of Posttest on DMCs

	Group	N	Mean	Std. Deviation	Std. Error Mean
DMC2	Control	15	45.06	5.93	1.53
	Experimental	15	51.53	4.12	1.06

An independent samples *t*-test was used to determine whether this observed difference was statistically significant. The results indicated that there was a statistically significant difference (*t*=-3.46, *p*=0.05) in the two groups' DMC level. 00). Stated differently, there is a substantial difference between the two groups' DMC levels. The effect size, estimated via Cohen's *d*, was 1.27.

DISCUSSION

This study looked at how game-based learning (GBL) affected English as a Foreign Language (EFL) learners' buoyancy, directed motivational currents (DMCs), and language acquisition. Effect sizes (Cohen's d) of 0.72 for language achievement, 1.96

for buoyancy, and 1.27 for DMCs were demonstrations of robust influence of GBL on the variables under study.

Based on a quantitative study, the first research question sought to determine how GBL affected the language acquisition of EFL learners. The results of the data analysis showed that the experimental group's treatment had a favorable impact on the language proficiency of the EFL students. Stated differently, students who were exposed to game-based methods and exercises like board games, online games, interactive worksheets, etc. showed a greater comprehension of language acquisition.

Digital video games (DVGs) are now a billion-dollar industry, and sales have increased dramatically (Newzoo, 2015). Al-Obaydi and associates. conducted a study in 2022 to investigate the effect of digital games that learners play for leisure at home on their unintentional acquisition of a second language (L2). The three primary games that the players played were Among Us, Free Fire, and Minecraft. The results showed that digital gaming had a substantial impact on the subjects' increased vocabulary, demonstrating the value of gaming as a tool for second language acquisition. These results validate the original research question by showing that games have a beneficial impact on participants' language learning. Assapun and Thummaphan (2023) examined the use of board game-based learning to enhance students' problem-solving skills. Their findings corroborate the current study's results, showing that game-based learning fosters greater engagement, improving both cognitive and motivational aspects of learning. This strengthens the argument that games have a positive impact on language learning.

Overall, this study contributes to the existing literature by providing evidence of the positive impact of GBL on EFL learners' language learning. It suggests that incorporating game-based techniques and activities into language learning classrooms can enhance students' understanding and acquisition of the target language. Furthermore, the study highlights the potential of digital gaming as a valuable resource for unintentional language acquisition, emphasizing the importance of incorporating recreational games into language learning environments. These findings have implications for language educators and curriculum developers, as they provide insights into effective strategies for promoting language learning through game-based approaches. This discovery holds substantial importance, particularly in recognizing that English serves as the predominant language for all technological advancements (Alzeebaree & Hasan, 2020), establishing English as the primary mode of global communication through media platforms. De Wilde et al. (2020) discovered that the majority of children exhibited enhancements in their language abilities, although there existed notable discrepancies on an individual level in this aspect. Chen and Hsu (2020) employed a simulation known as Slave Trade to determine the feasibility of attaining vocabulary and language proficiency concurrently. The results indicated that engaging in gaming led to statistically significant advancements in both vocabulary and language proficiency. Furthermore, the students expressed satisfaction with a favorable educational encounter facilitated by the simulation. These studies are in the same direction as the results obtained from the first research question confirming that educators who are responsible for curricula development must be aware of the fact that

the element of gaming is an important impetus that improves learning and motivation and can bring about higher levels of satisfaction during the learning process for learners.

The second research question, based on the quantitative study, sought the impact of GBL on students' academic buoyancy, the results indicated that the experimental group's academic buoyancy enhanced after using game-based learning. As it is easy to understand if the teacher uses a method which is based on the games, which are the learners` favorite, the level of cheerfulness and happiness for learning will increase and learners will be more encouraged to come to the class and listen to the teacher while teaching (Mackenzie et al., 2006). Al-majd and Belton (2024) examined the impact of vocabulary acquisition, with and without the use of technological games, on the academic achievement (AA), creativity, and academic buoyancy (AB) of Saudi Arabian EFL learners. The findings of the study demonstrated that the experimental group (EG) outperformed the control group across three subsequent assessments. Essentially, the utilization of technology in the intervention facilitated the enhancement of AA, AB, and creativity among the EG. This study carries implications for various stakeholders such as English educators, students, and researchers. Consequently, the outcomes of this research may prompt EFL teachers to integrate technology into their English instructional practices. They are in the same direction as the results of the present study.

The third research question, based on the quantitative study asked whether the GBL technique can have effects on students' DMCs, the results indicated that resilience significantly and positively influenced language achievement. Motivation is an important factor in forming the interest of something in human beings. It is obvious that if a person stays motivated by different factors such as material, tasks, and methods, he/she can learn easier and faster. This is also an inseparable part of a successful education which has a crucial effect on different dimensions of people`s lives (Ghanizadeh et al., 2020). Games have the potential to enhance motivation for learning because they stimulate curiosity and interest by presenting learning activities in meaningful contexts in which the learner is in control (Kirriemuir and McFarlane, 2004; as cited in Vos et al., 2011).

Zhang and Hasim (2023) highlighted the advantages of gamification in English as a Foreign Language (EFL) instruction in their systematic study, emphasizing how game features can raise learner motivation and engagement. This is consistent with research by Jia et al. (2024), who found that digital game-based learning (DGBL) greatly improved EFL learners' receptive and productive vocabulary knowledge. According to this research, adding game-based components to language classes might encourage more engaging and participatory learning environments, which will eventually increase student performance and satisfaction.

Huang (2023) explained the scope of the emergence and educational developments of digital learning and summarized how digital learning can benefit language learning in the EFL context. It is pointed out that digital game-based learning can help the new generation improve English language learning and develop other teaching methods.

Game-based digital learning has been considered a stimulating subsystem that, when used correctly, provides an interactive learning context, increases student satisfaction,

and improves English language skills. Based on its advantages, the attitude of students towards digital games cannot be ignored, and there are enough guidelines and rules for using digital games classes. This study concluded that game-based digital learning should be more effective in promoting language skills and motivating language acquisition.

Sadeghpour et al. (2021) investigated the effect of using game-based tasks on Iranian students' virtual communication in EFL classes and their motivation. The subjects included 35 female students in the seventh grade of a middle school in Tabriz, Iran, who were selected through convenience sampling. Classroom action research was conducted in four stages: planning, action, observation, and reflection. Innovative game-based activities such as Roleplay, This or That, Café Owner and Let's Make Salad were used to improve student communication. Interviews, tests, and classroom observations were used to collect and triangulate data. The results showed that the use of games can improve students' communication in online language classes. This can have a positive effect on students' motivation in language learning. The findings may have useful implications for language teachers and material developers to improve EFL learners' virtual communication through various game-based techniques. These studies are in the same vein as the results of the third research question of this study that indicated the influential role of games on students' motivation on language learning.

CONCLUSIONS & IMPLICATIONS

A group of Iranian EFL students at the language institute participated in the current study in an effort to determine how employing game-based learning affected their language learning. Based on the noteworthy distinction in the average scores of the two cohorts, it was determined that the intervention had been effective in augmenting language acquisition while also cultivating students' academic buoyancy and positive mental attitudes. Although in this study particular language areas and skills were not measured, it is expecected that the enhancement of students' motivation and The lack of particular measurements, including vocabulary retention and speaking fluency, that are used to measure language proficiency in this conclusion may have strengthened the case. The method utilized in this study also has applications for students. Additionally, they will be in charge of their education and capable of meeting their own educational needs. Also, students can review previous lessons or pick up new information pertaining to the lessons they are studying by playing games that are available on various websites outside of class.

Subsequent research endeavours may aim to investigate the function of game-based education in additional facets of learners` language education. Future studies should consider employing a variety of assessment tools to measure different aspects of language acquisition more precisely, such as listening comprehension and written expression. The impact of game-based learning on other student-related factors, such as self-efficacy and engagement, should be examined in other research studies in order to develop efficient strategies and work effectively. Since the current study was limited to pre-intermediate EFL students, research may be done in the future for students at the intermediate or advanced levels of language proficiency. Investigating the potential effects of GBL on these higher proficiency levels may shed light on the adaptability and

efficacy of the method for a wider range of language learners. Further research into GBL's long-term impacts on language application and retention would help to provide a more complete picture of its advantages.

REFERENCES

Ahmed, Al., Sayed, B. , Wekke, I., Widodo, M., Rostikawati, D., Ali, M., Hussein, H., & Azizian, M. (2022). An empirical study on the effects of using kahoot as a game-based learning tool on EFL learners' vocabulary recall and retention. *Education Research International*, 1-10. http://doi.org/10.1155/2022/9739147.

Al-majd, O. A. ,& Belton, B. (2024). Which one? Technology or non-technology-assisted vocabulary learning: a probe into the state of academic buoyancy, creativity, and academic achievement. *Asian-Pacific Journal of Second and Foreign Language Education, 9(41)* (2024). https://doi.org/10.1186/s40862-024-00262-4.

Al-Obaydi, L. H., Pikhart, M., & Derakhshan, A. (2022). A qualitative exploration of emotional intelligence in English as foreign language learning and teaching: Evidence from Iraq and the Czech Republic. *Appl. Res. Eng. Lang. 11*, 93–124. http://doi.org/ 10.22108/ARE.2022.132551.1850.

Assapun, S., & Thummaphan, P. (2023). Assessing the effectiveness of board game-based learning for enhancing problem-solving competency of lower secondary students. *International Journal of Instruction, 16*(2), 511–532. https://doi.org/10.29333/iji.2023.16229

Alzeebaree, Y., & Ali Hasan, I. (2020). What makes an effective EFL teacher: High school students' perceptions. *The Asian ESP Journal, 16*(1.2), 169-183.

Brysbaert, M., De Wilde, V.,& Eyckmans, J.. (2018). Learning English through out-of-school exposure. Which levels of language proficiency are attained and which types of input are important? *Bilingualism, 23*(1), http://doi.org/10.1017/S1366728918001062.

Chen, Y.-L., & Hsu, C.-C. (2020). Self-regulated mobile game-based English learning in a virtual reality environment. *Computers & Education, 154*, 103-110. https://doi.org/https://doi.org/10.1016/j.compedu.2020.103910

Dimitra, K., Konstantinos, K., Christina, Z., & Katerina, T. (2020). Types of game-based learning in education: a brief state of the art and the implementation in Greece. *European Educational Researcher*, 3(2), 87-100.

Dörnyei, Z., Ibrahim, Z., & Muir, C. (2014). 10.'Directed Motivational Currents': Regulating *Complex Dynamic Systems through Motivational Surges*. In Motivational dynamics in language learning (pp. 95-105). Multilingual Matters.

Dörnyei, Z., & Ryan, S. (2015). L2 motivation research 2005-2014: Understanding a publication surge and a changing landscape. *System, 55*, 145-157. https://doi.org/10.1016/j.system.2015.10.006.

Dörnyei, Z., & Ushioda, E. (2021). *Motivation, language identity and the L2 self* (2nd ed.). Multilingual Matters.

Eales, R. J., Hall, T., & Bannon, L. J. (2002). *The motivation is the message: comparing*

CSCL in different settings. In CSCL (pp. 310-317).

Gaillet, L. L. (1994). An historical perspective on collaborative learning. *Journal of Advanced Composition*, 93-11.

Eltahir, M., Alsalhi, N. R., Al-Qatawneh, S., AlQudah, H. A., & Jaradat, M. (2021). The impact of game-based learning (GBL) on students' motivation, engagement and academic performance on an Arabic language grammar course in higher education. *Education and Information Technologies, 26*(3), 3251-3278. https://doi.org/10.1007/s10639-020-10396-w

Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. Palgrave Macmillan.

Ghanizadeh, A., & Jahedizadeh, S. (2017). Validating the Persian version of reflective thinking questionnaire and probing Iranian university students' reflective thinking and academic achievement. *International Journal of Instruction*, *10*(3), 209-226.

Ghanizadeh, A., Al-Hoorieh, A., &, Jahedzadeh, S. (2020). *Higher-order thinking skills in the language classroom: A concise guide*. Springer

Haleem, A., Javaid, M., Qadri, M.,& Suman, R. (2022). Understanding the Role of Digital Technologies in Education: A review. *Sustainable Operations and Computers, 3*(4) http://doi.org/10.1016/j.susoc.2022.05.004.

Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education*, *80*, 152-161.

Huang, T. H. (2023). Collaborative guessing game for EFL learning with kinesthetic recognition. *Thinking Skills and Creativity*, *48*(Article 101297). https://doi.org/10.1016/j.tsc.2023.101297.

Jahedizadeh, S., Ghanizadeh, A., & Ghonsooly, B. (2016). The role of EFL learners' demotivation, perceptions of classroom activities, and mastery goal in predicting their language achievement and burnout. *Asian-Pacific Journal of Second and Foreign Language Education*, *1*(1), 1-17.

Jahedizadeh, S., Ghonsooly, B., and Ghanizadeh, A. (2019). Academic buoyancy in higher education: Developing sustainability in language learning through encouraging buoyant EFL students. *J. Appl. Res. High. Educ*, 11, 162–177. http://doi.org/ 10.1108/JARHE-04-2018-0067.

Jia, W., Zhang, L., Pack, A., Guan, Y., & Zou, B. (2024). Digital game-based learning's effectiveness on EFL learners' receptive and productive vocabulary knowledge. *Language Learning & Technology, 10*(2), 1-9.

Lampropoulos, G. (2023). Augmented Reality and Artificial Intelligence in Education: Toward Immersive Intelligent Tutoring Systems. In, V., Geroimenko (eds): *Augmented Reality and Artificial Intelligence: The Fusion of Advanced Technologies* (137-146). Switzerland AG: Springer Nature.

Mackenzie, C. S., Poulin, P. A., & Seidman-Carlson, R. (2006). A brief mindfulness-

based stress reduction intervention for nurses and nurse aides. *Applied Nursing Research, 19*(2), 105- 109.

Martin, A. J., & Marsh, H. W. (2009). Academic resilience and academic buoyancy: Multidimensional and hierarchical conceptual framing of causes, correlates and cognate constructs. *Oxford Review of Education, 35*(3), 353-370.

Muramatsu, J., & Ackerman, M. S. (1998). Computing, social activity, and entertainment: A field study of a game MUD. *Computer Supported Cooperative Work (CSCW), 7*(1), 87-122.

Newzoo. (2015). *Global report: US and China take half of $113bn games market in 2018*. Retrieved November 18, 2016, from https://newzoo.com/insights/articles/us-and-china-take-half-of-113bn-games-market-in2018/.

Nino, M., & Evans, M. A. (2015). Fostering 21st-century skills in constructivist engineering classrooms with digital game-based learning. *IEEE Revista Iberoamericana de Tecnologias del* Aprendizaje, 10(3), 143-149.

Peterson, M. (2016). The use of massively multiplayer online role-playing games (MMORPGs) in the foreign language classroom. *Interactive Learning Environments, 24(*3), 523-538.

Reinders, H., & Wattana, S. (2015). Affect and willingness to communicate in digital game-based learning. *ReCALL, 27*(1), 38-57.

Sadeghpour, M., Mohammadi, S., & Ghazanfari, S. (2022). On the improvement of EFL students' virtual interaction via Game-based tasks. *Journal of Research in Technobased Language Education, 2*(1), 1-21. 10.22034/JRTLE.2022.320454.1019.

Segarawati, A., Komariah, A. , Hassan, I., Thahir, I. , Hussein Ali, M. , Fawzi, A., & **Z,** P. (2022). Investigating the Effect of Using Game-Based Learning on EFL Learners' Motivation and Anxiety. *Education Research International*. https://doi.org/10.1155/2022/6503139.

Shahriarpour, N. (2014). On the effect of playing digital games on Iranian intermediate EFL learners' motivation toward learning English vocabularies. *Procedia-Social and Behavioral Sciences, 98*, 1738-1743. https://doi.org/10.1016/j.sbspro.2014.03.601.

Shirazi, M., Ahmadi, D., & Gholami Mehrdad, A. (2016). The effect of using video games on EFL learners' acquisition of speech acts of apology and request. *Theory and Practice in Language Studies, 6(*5), 1019-1025. http://doi.org/10.17507/tpls.0605.16.

Wang, A. I. (2021). The effect of using Kahoot! for learning – A literature review. *Computers & Education, 149*, 103818.

Xolmurod Qizi, D. & Xolmuradova D. X. (2023). The Role of Educational Games in EFL Learning. *International Scientific Journal,4*(2),749-752. https://doi.org/10.17605/OSF.IO/34YVC

Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology, 40*(2). 1-12.