



International Journal of Educational Methodology

Volume 8, Issue 4, 719 - 729.

ISSN: 2469-9632

<https://www.ijem.com/>

Game-Based Learning in Higher Education: The Pedagogical Effect of Genially Games in English as a Foreign Language Instruction

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Received: May 31, 2022 ▪ Revised: July 2, 2022 ▪ Accepted: October 28, 2022

Abstract: This study aimed to analyze the effect of game-based learning (GBL) through the use of Genially in English as a foreign language (EFL) online instruction. The participants were 61 EFL undergraduate students, who were distributed into an experimental group (32 students), and a control group (29 students). Their ages ranged from 22 to 56 years old, and their English proficiency level was B1, according to the Common European Framework of References (CEFR). The students were enrolled in two pre-intermediate courses that are part of an EFL Teaching program at a private university in southern Ecuador. The courses were delivered in an online remote learning environment due to the COVID-19 pandemic. The study followed a quasi-experimental approach and it took place over a sixteen-week period. The instruments included a diagnostic survey, a pre-test, a post-test, a students' perceptions survey, and a semi-structured interview. The main findings revealed that Genially games have the potential to enhance EFL learners' academic performance in online instruction, particularly in aspects related to students' knowledge of grammar and vocabulary in context. Besides, it was found that according to students' perceptions, the implementation of games based on their real learning needs increases their motivation, especially when feedback is effectively provided.

Keywords: EFL teaching, game-based learning, genially, grammar, vocabulary.

To cite this article: Cabrera-Solano, P. (2022). Game-based learning in higher education: The pedagogical effect of genially games in English as a foreign language instruction. *International Journal of Educational Methodology*, 8(4), 719-729. <https://doi.org/10.12973/ijem.8.4.719>

Introduction

The Coronavirus (COVID-19) pandemic has brought important challenges and implications in education around the world. In this context, Khatoony and Nezhadmehr (2020) assert that the integration of information and communication technologies (ICT) has played a significant role in the teaching and learning process during the pandemic, especially in developing countries in which online classes were implemented to give learners the opportunity to continue their studies. Certainly, online instruction through ICT was a fundamental aid to mitigate the difficult situation provoked by COVID-19, especially in distance education since it allowed the organization of a variety of internet-based courses that were addressed to large groups of students from different locations (Damayanti & Irwan, 2021). In this respect, Ali (2020), and Pradeep (2013) affirm that the implementation of technology reduces learning disruption by helping teachers and students work collaboratively through different virtual scenarios (Kiron & Vassileva, 2018). Consequently, EFL teachers should look for innovative resources using ICT as a strategy to enhance their students' communicative competence (Ortega-Auquilla et al., 2020). Besides, teachers should be skillful enough to adapt themselves to information technology in the globalization era (Syahroni et al., 2020).

One way to innovate in the EFL classroom is the implementation of GBL through ICT, which is increasing at a rapid pace in education. In this context, Shaffer et al. (2005) assert that GBL is a type of game play with specific learning outcomes. It refers to a teaching strategy that enhances students' engagement, stimulates positive attitudes, promotes learners' motivation, and allows the acquisition of all language skills (Asiri, 2019; Rueckert et al., 2020). In this regard, the effective use of games in the EFL classroom can be a helpful strategy to create meaningful learning environments so that students can acquire the skills and micro-skills that they need to be able to communicate effectively in the target language (Katemba & Sinuhaji, 2021).

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Concerning the acquisition of language skills in virtual settings, the present study will focus particularly on enhancing EFL grammar and vocabulary knowledge through online games in distance education. In this respect, Rueckert et al. (2020) assert that the micro-skills of grammar and vocabulary are considered two important areas in language instruction, which usually provoke some difficulties in the language acquisition process (Li et al., 2021), especially under the new teaching conditions caused by COVID-19. Due to the aforementioned reasons, the implementation of interactive Genially games through ICT can be a useful strategy to overcome the aforementioned challenges. It is necessary to remark that some of the most common tools that can be used to implement the GBL approach in the EFL classroom are Kahoot, Genially, Duolingo, Educaplay, ClassDojo, among others; however, Genially has been chosen to carry out the present study because it is a free and intuitive tool that engages the audience through an attractive visual appearance (Deris & Shukor, 2019). Besides, the use of Genially offers users the possibility to design, collaborate, personalize, share and analyze different types of gamified resources in an entertaining way (Kapp, 2012).

Finally, it is important to mention that several studies about the use of games in EFL teaching have been conducted in different educational settings around the world (Castillo-Cuesta, 2020; Deris & Shukor, 2019; Deterding et al., 2011; Ključević & Krumes, 2020); however, any of these research works have been carried out by using Genially games to enhance English grammar and vocabulary knowledge in the context of higher education. For this reason, this study attempts to answer the following research questions:

RQ1: What is the influence of Game-Based learning through the use of Genially in teaching EFL grammar and vocabulary?

RQ2: What are students' perceptions regarding the use of Genially for enhancing EFL grammar and vocabulary knowledge?

Literature Review

The Role of Technology in EFL Teaching

According to Cakici (2016), the use of technology in the EFL classroom has positive effects in the teaching and learning process. Technology promotes an active role in students since they can learn anywhere and anytime, and it is a factor that contributes to improving students' linguistic abilities (Mahdi & Al-Dera, 2013). In this respect, technology has gained increasing attention since it plays a fundamental role in reducing learning disruption by helping teachers and students to work through virtual scenarios (Li et al., 2021). However, even though technology has become an essential ally to support remote learning, distance education, or online learning (Al-Khasawneh, 2019), the pandemic revealed emerging vulnerabilities about its access.

With respect to the teachers' challenges regarding the use of ICTs in the complicated conditions caused by COVID-19, Khatoony and Nezhadmehr (2020) found out that some of the most common issues confronted by EFL teachers included the difficulty to have access to modern technological tools, interrupted or weak internet connection, students' lack of motivation, attention deficit, as well as the teacher's difficulty to design online materials, which is a factor that can be complicated and time-consuming. Similarly, other issues such as lack of teachers' preparation and planning, limitations regarding technological facilities, and sometimes poor internet connection are still critical aspects affecting EFL teaching (Apdy & Asrifan, 2019). Other limitations regarding the use of technology in the EFL classroom deal with a negative teacher's attitude towards the digital era, misuse of technologies, lack of resources, lack of funding, and lack of technological abilities (Apriani et al., 2022; Kalugina & Tarasevich, 2018).

Despite the aforementioned issues, the implementation of ICT provides diverse opportunities for teachers to adopt effective online applications and tools aimed at enhancing the students' proficiency level, which can be demanding in the difficult conditions provoked by the sanitary emergency (Li et al., 2021). For these reasons, it is necessary for EFL instructors to be well-prepared to overcome the new challenges incurred due to the pandemic, especially in aspects related to technology integration, knowledge, skills, and use of online resources (Khatoony & Nezhadmehr, 2020), which can be translated into more productive and responsible learners (Kalugina & Tarasevich, 2018).

Game-Based Learning in EFL Education

According to Noroozi et al. (2020), Game-Based Learning is an approach that involves the use of games to encourage students' engagement within the context of the play. Tang et al. (2009) assert that GBL takes advantage of ICT to design interactive and motivating virtual learning environments. Indeed, this approach involves the implementation of active learning experiences by integrating high-quality games in the educational process (Castillo-Cuesta, 2020; Ge & Ifenthaler, 2018). Similarly, Lim and Lee (2007) state that GBL is characterized by the use of game design to enhance the learning environment. In this context, several authors have addressed the benefits of implementing games in the learning process; for instance, Kulpa (2017) argues that the use of games in the classroom can foster a sense of control within the students, which enhances autonomous learning, and helps them to achieve educational goals (Asiri, 2019; Kapp, 2012; Michos, 2017).

In relation to EFL teaching, the use of games has become very important in recent years (Mikasyte, 2018); for this reason, many aspects should be considered to ensure that they are appropriate enough to reinforce any content knowledge

(Mohandas et al., 2020). Certainly, GBL has become a trend in recent studies in which several types of games have been employed to teach different skills in EFL classrooms (Cabrera-Solano et al., 2020; Rueckert et al., 2020;). In this respect, authors such as Hoshang et al. (2021); Sobocinski, (2018); as well as Atmojo, and Nugroho (2020) have conducted recent studies to demonstrate the effectiveness of GBL in improving EFL students' skills. Additionally, other researchers have revealed that games create a motivational atmosphere in which EFL students can feel greater control of their own learning process, which results in creating a sense of autonomous learning, especially in contexts where students do not have the opportunity to practice English on a daily basis (Şahin et al., 2017). Based on the aforementioned aspects, Phuong and Nguyen (2017) assert that EFL teachers should adopt technological tools to create meaningful learning experiences through educational games, which are useful to enhance the students' English language skills (Rahman et al., 2019).

Games in Grammar and Vocabulary Teaching

According to Tsai et al. (2017), the COVID-19 pandemic provoked an important technological disruption in education. In this regard, teachers adopted flexible pedagogies for online, blended, and offline education to help EFL students master communicative competence in the target language, so games constitute an effective solution in EFL instruction (Simon & Taverniers, 2011), especially when teaching grammar and vocabulary because these linguistic aspects usually provoke some difficulties in the language acquisition process (Genially Academy, 2021a). With respect to vocabulary, Delgado-Algarra (2020) affirms that it is considered the building block of language learning because it has a direct relationship with the students' communicative competence. Furthermore, it plays a substantial role in the acquisition of receptive and productive skills (Apdy & Asrifan, 2019). In relation to grammar, Rahman et al. (2019) state that it constitutes an indispensable set of rules that are part of a language. For this reason, this micro-skill should not be neglected in EFL teaching because when students are proficient in grammar, they are more able to communicate in the target language correctly.

Considering the importance of grammar and vocabulary in EFL teaching, games have been broadly designed to develop students' motivation, making them feel engaged in their lessons (Cam & Tran, 2017). In fact, according to Cárdenas-Moncada et al. (2020), the use of games in grammar and vocabulary instruction is very useful not only to improve students' knowledge but also to promote active and dynamic learning in the EFL classroom. In the same line, Tsai et al. (2017) state that games have important implications for students' success, and they have the potential to increase cooperation and motivation. Therefore, games have a positive impact on the language acquisition process because they can reduce students' anxiety, they are entertaining, and they can give learners the opportunity to experience new ways of acquiring the target language, which are not common in a traditional lesson (Ali, 2020). In this respect, there are many tools that teachers can use to implement grammar and vocabulary games in their lessons. Some of the most common ones are Kahoot, Socrative, Educaplay, ClasDojo, Quizizz, Genially, among others. With respect to Genially, which is the tool that has been used to carry out this study, Deris and Shukor (2019) assert that it is an intuitive and free platform that offers an interesting visual appearance to the audience. Besides, it allows educators to design, collaborate, personalize, share and analyze different types of gamified resources (Genially Academy, 2021b).

Previous Studies

Several studies concerning the use of games in teaching EFL grammar and vocabulary have been conducted in recent years. For instance, Castillo-Cuesta (2020) analyzed the use of digital games to enhance English as a Foreign Language (EFL) grammar and vocabulary in a group of 68 B1 level students in Ecuador. The study was conducted for a five-month period in which learners had the opportunity to play digital games designed on the Educaplay platform. A mixed-method approach in which pre and post-questionnaires, as well as writing rubrics, were used as the instruments of this research. The findings revealed that digital games were useful to improve learners' grammar in aspects concerning the use of modals, gerunds, and infinitives. Besides, students enhanced their vocabulary knowledge, especially in topics related to jobs and education. It was also found that the use of digital games in Educaplay promoted students' active learning and it was a factor that contributed to increasing their interest in the target language.

In a study conducted by Fokides and Zampouli (2017), a contextual game-based learning approach was used to teach EFL grammar in a Taiwanese university. An experimental and a control group were organized to evaluate the effectiveness of the proposed learning approach as well as the learners' behaviors. The experimental group received instruction under the contextual Game-Based learning approach, while the control group learned with a traditional method. The main findings of this study evidenced that the experimental group's error rate was significantly lower than that of the control group. It is important to remark that after analyzing the students' opinions, there were differences in the high- and low-achievers behavior patterns based on Halliday's functions of language development. In addition, the students perceived that the use of a contextualized gamed-liked environment is an effective tool to enhance their learning results.

The effectiveness of student response systems (SRS) in an EFL class to assess students' understanding of grammar lessons was explored by Ebadi et al. (2021). The participants were 80 EFL university students who attended a grammar course accompanied by Kahoot online games. Open-ended surveys and interviews were employed to know the students' perspectives on the positive and negative aspects of the use of gamified instruction. The results showed that despite its

positive features, the majority of the participants were not willing to take part in the Kahoot game-based application due to aspects related to lack of Internet connection, the high pace of the game, its competitive nature, and the lack of clear instructions, which are some aspects that affected learners' motivation.

Another study carried out by Katemba and Sinuhaji (2021) applied the ESA (engage, study, and activate) approach through the use of Quizizz to enhance students' EFL vocabulary knowledge. The study was conducted with a sample of 65 students from a public high school. The research followed a quantitative approach. The participants were classified into experimental and control groups. The findings evidenced that both groups enhanced their vocabulary knowledge. In fact, the students in the experimental group liked the model, enjoyed their lessons, and were very excited to learn through this approach. There was a significant difference between the experimental and the control group. In addition, the use of ESA through Quizizz games was effective for teaching EFL vocabulary since this model can be applied at different academic levels. Besides, the participants were always excited about using games.

Similarly, Fithriani (2021) investigated the impact of a game-based vocabulary learning application (APP) on vocabulary learning achievement, motivation, and self-confidence among EFL learners. The participants were 70 college students who were divided into an experimental and control group. The experimental group (35 students) received Game-Based vocabulary teaching, while the control group (35 learners) received traditional classes under paper-based wordlist learning. Besides, the influence of motivation and self-confidence on vocabulary achievement was examined through regression analysis. Results showed that the game-based vocabulary learning APP enhanced EFL students' vocabulary knowledge, as well as their motivation and self-confidence. It is important to mention that learning self-confidence and motivation did not predict learners' achievement in this study. Furthermore, the findings also confirmed that mobile-assisted gamification had a big impact on vocabulary acquisition, especially in aspects related to learning goals, enjoyment, and motivation.

Methodology

Setting and Participants

This study was conducted at a private university located in southern Ecuador. The participants were 61 EFL distance students who were enrolled in two Communicative Grammar distance courses that are part of an English as a Foreign Language Teaching program. The students were divided into an experimental group (32 students), and a control group (29 students). Both groups showed a normal distribution curve, which means that their grammar and vocabulary abilities were evenly distributed and there was not any bias factor in the student selection process. Besides, their ages ranged from 22 to 56 years old, and their English proficiency level was B1, according to the Common European Framework of References (CEFR).

Instruments

The instruments that were administered in this research study are described below:

- A diagnostic survey was used to identify the students' previous experience in relation to the use of games in other courses of their major. In addition, this instrument aimed to identify learners' needs regarding the grammar and vocabulary topics that they needed to reinforce through the course.
- A pre-test was applied to determine the students' grammar and vocabulary knowledge at the beginning of the course. This test was administered to both, the control and experimental group.
- A post-test was administered to both the experimental and control group at the end of the intervention. The purpose of this instrument was to determine if the students from the experimental group had improved their grammatical and vocabulary knowledge after being exposed to gamified activities designed on the Genially tool, in comparison to the students from the control group.
- A students' perceptions survey was administered after the intervention to gather the experimental group's perceptions in relation to the grammar and vocabulary games they used. A 5-point Likert scale (1=agree, 2=somewhat agree, 3=neither agree or disagree, 4=somewhat disagree, 5=disagree) was used for this purpose.
- A semi-structured interview that consisted of a questionnaire was administered to a small sample of participants from the experimental group.

Procedure

This study was conducted through a quasi-experimental design, which according to Williams (2007) involves a nonrandom selection of participants. This type of design involves the application of pre and post-tests, and allows the researchers to conduct rigorous studies (Miller et al., 2020). Regarding the step-by-step procedure of this study (see Fig 1), at the first stage, a total of 61 EFL participants were administered an online diagnostic survey to identify their previous knowledge about the use of Genially for academic purposes. Due to practical constraints that did not allow random sampling, the study purposely selected 32 students who participated in an experimental group as volunteers. Similarly, 29 students were part of the control group. It should be pointed out that both, the experimental group and the control group were part of two Communicative Grammar courses (B1 proficiency level), which were offered through the institutional Canvas platform for a period of sixteen weeks (one semester). It is necessary to mention that during this period of time the students received permanent academic support and virtual tutoring sessions via Zoom, which were established to help them overcome any learning difficulty.

During the aforementioned intervention, the students in the experimental group used a variety of grammar and vocabulary games that were based on the contents established in the course syllabus. The activities were neither graded nor mandatory; however, students were asked to post their perceptions through Canvas forums in which they shared their perceptions after playing a total of 5 grammar and 5 vocabulary games designed on the Genially tool (see Figure 2). At the end of the course, all the participants took the post-test. In addition, the students in the experimental group answered a perceptions survey, and 10 students who belonged to the same group also participated in the semi-structured interview. All the instruments employed in this study were administered online and were piloted with a group of 6 EFL students before their final administration. It is important to mention that the SPSS software was used to determine the statistical differences in the pre-test and post-test scores between the control and experimental group.

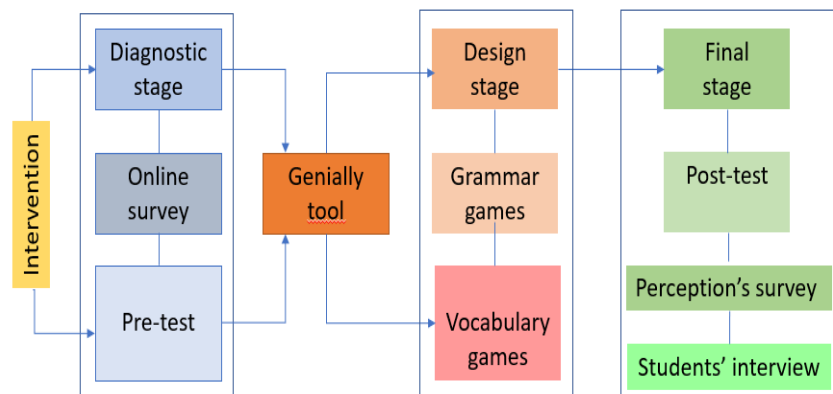


Figure. 1. Implementation of Genially Games



Figure. 2. Genially Game Sample

Results

At the beginning of this study, the students in the experimental group were administered a diagnostic survey to identify their previous experience in relation to the use of Genially games for learning grammar and vocabulary. The results revealed that 55.20% of the participants did not have previous experience in using games in any course of their major. Besides, 41.4% of them affirmed that they had very good technological skills for using ICT tools in EFL learning.

The participants also asserted that online games should be interesting (44.8%), motivating (20.7%), competitive (17.2%), and challenging (10.3%). Certainly, these are important features that should be considered when implementing

games for academic purposes. Besides, 27.6% of the students needed to practice the grammatical structures of the future and future progressive, the passive (17.2%), modals (13.8%), and conditional sentences (13.8%). Similarly, 17.2% of the participants were interested in practicing EFL vocabulary through online games. These results were very important for planning the pedagogical intervention of this study, which had the added value of considering students' learning needs when designing Genially games.

The results of the pre-test administered to both groups demonstrated the students' performance in terms of grammar and vocabulary use before being exposed to the pedagogical intervention with Genially games. Thus, a t-test for independent samples was used to compare the mean scores of students in the two groups (control and experimental). The results in Table 1 show that no significant differences were found between the mean scores of the students in both groups.

Table 1. Pre-Test Results

Group	Control group	Experimental group	t-test	Two-tailed p-value
Mean	76.566	88.456		
SD	16.865	0.8333	0.1314	.8959
SEM	0.3132	0.1473		
N	29	32		Non-significant

With respect to the post-test, the results indicate that the students who were part of the experimental group significantly increased their scores with a medium effect size, which means that the implementation of the Game-Based Learning approach through Genially games was effective to help students accomplish their learning goals in terms of using grammar and vocabulary in distance education. (see Table 2).

Table 2. Post-Test Results

Group	Control group	Experimental group	t-test	Two-tailed p-value	Effect size
Mean	78.352	88.456			
SD	16.780	0.8333	30.218	.0037	0.35
SEM	0.3116	0.1473			
N	29	32		Significant	

In relation to the students' views on the impact of grammar and vocabulary Genially games, Table 3 presents the results gathered from the perceptions' survey.

Table 3. Students' Perceptions on Genially Games

Statements	Agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Disagree
Genially games were useful to enhance my EFL grammar knowledge.	75.00%	12.50%	6.24%	3.13%	3.13%
Genially games were useful to enhance my vocabulary knowledge.	78.13%	6.24%	12.50%	3.13%	0.00%
Genially games were attractive and they had a friendly and easy-to-use interface.	81.4%	6.14%	6.2%	3.13%	3.13%
Genially games allowed me to effectively use the grammatical structures of the target language in diverse contexts.	84.38%	6.23%	3.13%	3.13%	3.13%
Games allowed me to acquire new vocabulary so that I was able to express my ideas in a variety of contexts.	81.24%	9.38%	6.25%	3.13%	0.00%
Games allowed me to improve my concentration and my ability to recognize and use new words and grammar structures.	75.00%	9.37%	6.25%	6.25%	3.13%
Games were really motivating for improving my EFL grammar and vocabulary knowledge.	87.50%	3.13%	3.13%	3.12%	3.12%
Feedback was an essential aspect for enhancing my grammar and vocabulary knowledge after playing Genially games.	78.13%	12.50%	3.13%	3.12%	3.12%

With respect to the results of the interview, Table 4 shows an extract of the most significant students' perceptions in relation to the use of Genially games.

Table 4. Interview Results

Student 1: "The practice of grammar and vocabulary through Genially games allowed me to understand new structures and words in context".
Student 4: "I liked Genially games because they were easy to use. I could play many times until I got the correct answer".
Student 6: "The games were motivating and they helped me to practice some grammar structures that were difficult for me to understand before taking this course".
Student 9: "The use of Genially games was a nice experience because I enjoyed learning by playing, and they were not stressful at all".

Discussion

This research was designed to determine the influence of the game-based learning approach through the use of Genially in teaching EFL grammar and vocabulary, as well as to identify the students' perceptions in relation to this process. The study started with a diagnostic survey, which revealed the students' learning needs and preferences with respect to different grammar and vocabulary topics at a B1 level. The results gathered at the first stage allowed the researcher to implement an intervention process based on the use of games. As mentioned in the results section, the findings of the intervention revealed that the students who belonged to the experimental group significantly increased their academic performance after using Genially games, in comparison to learners who were part of the control group. These results are similar to the ones obtained by Şahin et al. (2017), who found that the use of games in distance education has the potential to contribute to the sustainability of the learning process.

With respect to students' perceptions of the usefulness of Genially games, 75% of the participants agreed that they allowed them to enhance their grammatical knowledge. Similarly, 84.37% of them agreed on the usefulness of these games to improve their vocabulary knowledge. These findings are in line with previous research conducted by Łodzikowski and Jekiel (2019), who also determined that games are perceived as a useful resource because they can increase learners' engagement in class and post-class, in comparison with classes without the use of games. On the other hand, only a few students had neutral positions or expressed disagreement in relation to the usefulness of the GBL approach through Genially. It is important to remark that these findings were evident in the post-test results, in which learners had a good academic performance in using grammar structures such as the future and future progressive, the passive, modals, and conditional sentences. Besides, they demonstrated better results in using EFL vocabulary at a B1 proficiency level, which implies that they were better able to recognize and use formal and informal lexicon related to social situations. These results are similar to the ones obtained by Delgado-Algarra (2020), who found that the use of EFL games not only creates a better classroom environment but also fosters students' academic performance in the target language. Certainly, Yang (2016) asserts that the effective implementation of games plays a significant role in improving learning performance.

In relation to the aspects of usability and attractiveness, the majority of the students (81.4%) affirmed that Genially games were easy to use and attractive. It is important to mention that game usability refers to the degree to which any user can learn, administer, and comprehend a game (Pinelle et al., 2008). In the same regard, Şahin et al. (2017) suggest that game usability plays a fundamental role in the overall experience of the player. However, the participants' positive perceptions in this study referred to the pedagogical usability of the games, which addresses some elements dealing with the learning process, the user's needs, the learning experience, or the learning outcomes (Gee, 2003).

Another aspect in which 84.38% of learners had a positive view referred to their ability to use new grammatical structures in context after practicing a variety of contents through Genially games. These findings are in line with Yavuz et al. (2020) who suggest that the use of language games promotes students' engagement and exposure to using grammar in context and developing their fluency in creating different types of sentences in the target language. Regarding the effectiveness of Genially games to enhance their ability to use vocabulary in context, 90.62% of the participants agreed with this statement. These results are similar to those obtained by Atmojo and Nugroho (2020), in which it was found that online games proved to be effective in EFL vocabulary learning.

Likewise, 75% of the students perceived that the use of the GBL approach through Genially was very useful to improve their concentration and ability to recognize and use new words and grammar structures in the target language. This is consistent with the results found in a study conducted by Fithriani (2021), who also reported that online games have a positive impact on students' concentration in language learning. With respect to students' motivation, 87.50% of them affirmed that the use of games was essentially helpful to improve their grammar and vocabulary knowledge, which is an interesting aspect of foreign language acquisition. It is important to remark that one of the most significant advantages of using online games is that they can enhance students' interest and encourage them to take certain risks.

Another aspect in which the participants had a positive view was the one related to the impact of feedback on enhancing their grammar and vocabulary knowledge after playing Genially games. In fact, 90.63% agreed with this aspect. It seems that students valued the way teachers supported them with clear instructions and positive feedback, especially when

they carried out writing activities in which they were asked to use the new structures and lexicon that they learned through online games.

With respect to the interview, the students had positive perceptions about the use of Genially games since all of them asserted that they felt relaxed while playing games aimed at enhancing their grammar and vocabulary knowledge. Besides, the interviewees affirmed that they had the possibility to practice these linguistic components in context, which was evident in their level of satisfaction and academic performance. In this regard, Hajji and Kim (2019) emphasize that the main goal of using games should be to build learning environments that promote meaningful learning.

Conclusions

The implementation of the GBL approach through Genially has the potential to enhance EFL students' grammar and vocabulary knowledge. In fact, the results of the post-test revealed that the participants who were part of the experimental group significantly increased their academic performance, particularly in aspects dealing with the use of grammatical structures such as the future, the passive, modals, and conditionals. Besides, they were able to use vocabulary words about social situations in context.

The usability and attractiveness of interactive Genially games highly increased students' motivation to practice EFL grammar and vocabulary in order to meet the learning outcomes established in the course. Certainly, an effective design and implementation of Genially games based on EFL students' learning needs, create a motivational atmosphere in which they can control their own learning process, which is a fundamental aspect of foreign language acquisition.

During the intervention, the implementation of Genially games allowed the participants to improve their concentration and ability to use new words and grammatical constructions in context. This was a meaningful factor that contributed to improving the students' teaching and learning competencies since it was found that the implementation of the GBL approach through the use of ICT allows the participants to be actively involved in the educational process, promotes significant learning, and increases their interest and creativity.

Playing online Genially games strengthens the teaching and learning of EFL grammar and vocabulary, and they have the potential to be adapted to any kind of content. The process of using games also activates students' prior knowledge and teaches them the importance of being ready to overcome different types of challenges, especially when the use of online games is accompanied by positive feedback and clear instructions.

Recommendations

The implementation of interactive Genially games in the classroom requires permanent feedback and support from EFL teachers. In this way, students can receive timely instructions, and they can have the opportunity to solve their doubts before, during, or after playing games. Certainly, providing high-quality feedback can help EFL teachers to provide a comprehensive understanding of any linguistic aspects that students should master, which ensures effective communication in the target language.

It is suggested that future studies focus on identifying teachers' perceptions regarding the use of genially-based games in the EFL classroom. Actually, future research can evaluate to which extent teachers have the digital competencies needed to design pertinent gamified activities aimed at enhancing listening, speaking, reading, and writing skills among EFL students.

Limitations

The COVID-19 pandemic provoked several difficulties in terms of students' access to an internet connection and technological resources, especially in the Latin-American context. This situation affected some of the participants who were part of this study because they were not able to participate in all the gamified activities that were planned as part of the intervention. In this regard, further research studies about the relationship between online Genially games and students' academic performance should be conducted in EFL teaching and learning settings, especially in the post-pandemic era.

Ethics Statements

The research involving human participants underwent thorough review and approval by the Human Research Ethics Committee at the Universidad Técnica Particular de Loja. Prior to participating in the study, all participants provided written informed consent, indicating their voluntary agreement to participate.

Acknowledgements

I would like to acknowledge the academic authorities of Universidad Técnica Particular de Loja and the "EFL Learning, Teaching, and Technology" research group for promoting and funding this research work.

Funding

This research study was supported by Universidad Tecnica Particular de Loja through the innovation project "Gamification through the use of Genially tool to enhance language skills in the Teaching English as a Foreign Language (TEFL) Major".

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