



Research Paper

Online Games and English as a Foreign Language Vocabulary Learning Among Eighth-Grade Students

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Abstract

The limited vocabulary knowledge of eighth-grade students from a public institution in Loja inhibits the proper development of English skills. The present research aimed to increase vocabulary knowledge through the implementation of online games among eighth-grade students between 12 and 13 years old at a public institution in Loja, Ecuador. The investigation employed a mixed method following a practical action research model through five stages; initial reflection, planning, action, observation, and reflection, with the participation of 25 Ecuadorian eighth graders chosen by purposeful sampling. Pre- and post-tests, questionnaires, reflective journals, and peer observations collected both quantitative and qualitative data. The pretest and posttest measured students' knowledge about their vocabulary, whereas the other instruments attempted to describe students' perceptions regarding the use of online games to learn vocabulary. Quantitative information was analyzed through descriptive statistics and qualitative information through a thematic analysis. The results showed a difference of 3.07 points between the pretest and posttest, which denoted a significant increase in the knowledge of various aspects of vocabulary such as form, meaning, and use. Moreover, eighth graders perceived the online games; Educandy, Genially, Vocabulary Spelling City, Wordwall, and especially Blooket, as innovative and fun educational resources that increased their motivation and active participation while acquiring new vocabulary. Hence, it was concluded that online games were effective in improving vocabulary because they created a dynamic educational environment. This study contributes to the educational field by highlighting new digital tools to improve English language proficiency.

Keywords: *Blooket; Digital Tools; Lexical Practice; Online Games; Vocabulary Aspects*

INTRODUCTION

Prensky (2001) emphasized that “today’s students are no longer the people our educational system was designed to teach” (p. 1). For digital natives, the traditional methods used by digital immigrant instructors are uninteresting, monotonous, boring, and demotivating. This is because the current methodologies are not adapted to their way of learning. Digital learners are highly familiar with getting information quickly; they prefer graphics to written text; they can learn meaningfully by listening to music or watching TV series; and they love rewards and online games instead of serious work (Prensky, 2001).

In the English language, effective communication and achievement of learning objectives are determined by language proficiency (Hamdanat, 2023). Against this background, Katemba (2022) interprets vocabulary as “the component of language competence that enhances overall language skill” (p. 2); therefore, previous knowledge of vocabulary is a requirement (Dakhi & Fitria, 2019). Hence, up to the eighth year of lower secondary education, Ecuadorian students are expected to attain an A1.1 level, in which they must have a basic knowledge of the form, meaning, and use of vocabulary that helps them to write, speak, listen, and read simple information (Ministerio de Educación [MinEduc], 2016).

Unfortunately, eighth-grade students from a public institution in the city of Loja possess limited vocabulary knowledge, which inhibits the proper development of their language skills. Based on her experience as a preservice teacher, the researcher evidenced that eighth-graders did not know the meaning of words and made many mistakes in spelling, pronunciation, simple

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sentence formulation, and completion of fill-in activities using audios. Moreover, the lack of motivation among students was very noticeable because they qualified English as something quite complex and boring because their teachers rarely used technology and focused primarily on teaching grammatical rules for writing sentences. The aforementioned problems were also found in other studies, which indicated that students struggled to learn vocabulary because it is tied to passive teaching methods that are not interesting, do not increase motivation, and require translation, fill-in-the-blanks activities, and word memorization (Alnatour & Hijazi, 2018; Derbouche & Hamadouche, 2016; Hasram et al., 2021; Pintado-Peñaloza & Fajardo-Dack, 2022; Romero et al., 2023).

Because most previous studies have explored the effectiveness of online games on preschool, elementary school, and college students, there is a knowledge gap regarding adolescents, particularly eighth-grade students (Derbouche & Hamadouche, 2016; Hasram et al., 2021; Octaberlina & Rofiki, 2021; Utku & Dolgunsöz, 2018). Indeed, Katemba (2022) and Alnatour and Hijazi (2018) have suggested that future research should address other educational levels. Within this framework, the research increased vocabulary knowledge through the implementation of online games. On this basis, two research questions were posed:

RQ (1): *What is the effectiveness of online games in increasing English vocabulary among eighth-grade students at a public institution in Loja?*

RQ (2): *What are the students' perceptions of the implementation of online games to increase English vocabulary among eighth-grade students at a public institution in Loja?*

LITERATURE REVIEW

Online Games

According to Derbouche and Hamadouche (2016) "an online game is a digital, video or a computer game that is played over an online environment, that is, the internet", and these games can be played alone or by several players (p. 22). In this sense, Huizenga (2017) indicated that a digital game is one that is played on a computer, mobile device, or game console. Similarly, the authors Pintado-Peñaloza and Fajardo-Dack (2022) explain that online games employ the use of the Internet and can be played through a web browser or a program.

Advantages of Using Games in English learning

Analyzing various studies, Tebeweka (2021) identified the following positive effects of digital games on English learning:

Self-Learning Platform

Ellis (2005, as quoted in Aslanabadi and Rasouli, 2013) and Tebeweka (2021) stated that since most games can be played anywhere at any time, they encourage learners to practice the language outside the classroom. In other words, the games strengthen students' autonomous learning.

Motivation to Learn

"One of the foremost qualities of digital games is their capacity to motivate, to engage and to immerse players" (Felicia, 2009, p. 12).

First, the points, badges, trophies, and rewards obtained in the completion of tasks or challenges to achieve the goal of the game encourage students to perform well in playing and learning, as they show self-determination to achieve the objectives of the game. On the whole, learners are very excited to earn points for playing the game and making multiple attempts

(Hasram et al., 2020). Another reason why online games motivate students is that their levels significantly stimulate the intrinsic motivation of students. Moreover, the leaderboards create a healthy competition among students, which motivates them to win prizes and finish first in the game (Hasram et al., 2020). Digital tools increase motivation and participation through an exciting, interactive, and authentic educational environment (Caramay et al., 2023).

Reduced Boredom, Increased Interest, and Concentration

When playing, students are completely immersed in the game and their concentration is activated. Playful thinking and game mechanics, which are actions and activities that the learner performs within the game to advance in it, keep the learners more engaged and interested in the game (Hasram et al., 2020). Likewise, the different multimedia elements of online games, such as sound effects, personalized text, narrative, eye-catching graphics, and animation, help the teacher to present the content in a more fun, original, and creative way. These elements are included in online games with the aim of capturing students' attention (Talib et al., 2016 as cited in Hasram et al., 2020).

Memory Retention

Quoting the words of Aghlara and Tamjid (2011), the use of games to learn vocabulary helps the cognitive process of children. Consequently, students who learn through games succeed in learning a greater number of words than students who learn vocabulary through traditional activities.

Class Cooperation

Playing in pairs or groups allows students to mentor and cooperate with each other to win while not realizing that they are learning. At the same time, learners positively improve their social relationships and are not afraid of making mistakes. In this way, more knowledgeable learners can provide feedback or vocabulary corrections to less experienced learners (Sulistianingsih et al., 2019 as cited in Tebeweka, 2021).

Formative Assessment and Feedback Tool

Castillo-Cuesta (2020) indicated that online games help teachers determine their students' strengths and weaknesses in vocabulary and grammar. This author, through the use of the digital tool Educaplay, was able to notice in what type of vocabulary the students improved and in what areas of vocabulary they still had difficulty; therefore, games are useful when evaluating the students' knowledge. Similarly, students can receive information about their progress and performance, which encourages deep learning.

Online Games to Improve English Vocabulary

Castillo-Cuesta (2020) pointed out that language teachers can use various online educational tools to facilitate the acquisition of the English language. The following websites and platforms hold significant value in the English language teaching and learning process, enabling the creation and use of online educational games.

Educandy

This tool is a straightforward platform for creating interactive games for learners to practice vocabulary and take quick quizzes (Denby, 2019). Within this platform, there are eight different types of games: Word search, Crosswords, Spell it, Anagrams, Match up, Multiple choice, Memory, Noughts, and Crosses (LaFave, 2020). Therefore, Educandy is an entirely educational tool that

allows the practice and revision of vocabulary.

Vocabulary Spelling City

In his study, [Lista \(2021\)](#) indicated that Vocabulary Spelling City is an educational software program aimed at learning English spelling and vocabulary through the use of educational games. This website offers about forty word games that involve hearing, saying, writing, and breaking down words ([Lista, 2021](#)).

Blooket

[Tran \(2022\)](#) defined Blooket as a formative assessment tool that encourages students to answer questions using their devices. Therefore, this online game platform greatly strengthens teaching and learning by allowing teachers to evaluate, provide feedback, and motivate students in a practical and enjoyable way.

Genially

In 2019, Sanchez and Plumettaz-Sieber (as cited in [Hermita et al., 2022](#)) considered Genially as an online tool for creating engaging and interactive posters, stories, games, and infographics. At the same time, [Martín \(2022\)](#) explained that this platform emphasizes gaming through various templates that teachers can use in face-to-face, virtual, or blended classes to motivate and facilitate students to achieve established learning goals.

Wordwall

For [Az Zahrah and Anwar \(2023\)](#), Wordwall is a platform for developing the four language skills through online games, including maze cases, whack-a-mole, matching pairs, missing words, truth or false, among others. The manner of use is very simple; the teacher must register, select the game of interest, enter the content, adjust certain aspects of the game such as; time, revealing answers at the end of the game, and the leaderboard. Finally, the teacher can share the game with students via a link ([Rahmawati & Wijayanti, 2022](#)).

Vocabulary

According to [Lessard-Clouston \(2013\)](#), vocabulary comprises all lexical items of a language that hold one or more meanings; these items may appear either individually, as phrases, or as lexical sets. Similarly, [Nushi and Jenabzadeh \(2016\)](#) affirm that “vocabulary is much more than just single words, that is, vocabulary includes not only single words but also multiword phrases, idioms, and even sentences” (p. 52). In addition, there is no exact number of words for each language because vocabulary is constantly changing ([Derbouche & Hamadouche, 2016](#)).

Importance of Vocabulary

Harmer (1991, as cited in [Derbouche & Hamadouche, 2016, p. 34](#)) highlighted the great importance of vocabulary with the following well-known phrase: “if linguistic structures constitute the skeleton of a language, vocabulary provides the flesh and vital organs”. From this, it can be affirmed that vocabulary is the most crucial component of a language because, without a rich vocabulary, learners cannot comprehend English produced by others or effectively express and share their ideas ([Alnatour & Hijazi, 2018](#)). In brief, vocabulary enables effective communication across all four language skills.

Aspects of Vocabulary

Nation (2012) divides the knowledge of a word into three categories; form, meaning, and use. Within the “form”, it is considered the “spoken form”, the “written form”, and the “word parts”. Secondly, the “meaning” comprises “form and meaning”, “concepts and referents”, and “associations”. Finally, there is the “use” of the word where “grammatical functions”, “collocations” and “constraints on use” are noted.

Empirical Review

First, Alnatour and Hijazi (2018) conducted research with the aim of determining the effect of online games on vocabulary learning achievement. The results indicated that games are effective for teaching vocabulary to young learners because they considered games relaxing, motivating, and fun, which promotes their active participation in the teaching and learning process.

Furthermore, Derbouche and Hamadouche (2016) examined the effectiveness of online games in vocabulary learning, and their results revealed that online game features encourage discovery, practice, and enrichment of lexical knowledge.

An investigation on the effect of Wordwall (WOW) online games on English vocabulary was conducted by Hasram et al. (2021). This study showed that online games facilitated vocabulary understanding and spelling recall as well as provided a positive classroom environment because, through healthy competition within these games, the students’ intrinsic motivation and persistence to achieve desired goals and rankings increased.

In a similar manner, Pintado-Peñaloza and Fajardo-Dack (2022) and Katemba (2022) analyzed whether online games or educational videos are more effective than traditional methodologies for teaching vocabulary. Their conclusions explain that the use of online games strengthened short-term and long-term vocabulary learning, produced good attitudes in learners, increased interaction, and that the levels and challenges of the games kept learners engaged, excited to learn, and curious to play more games. In addition, the reward system drove students to improve their knowledge and achieve higher scores that outperformed their peers. These findings emphasize a better accuracy in vocabulary learning when using online games, and students prefer the use of these games over traditional strategies to learn English.

Octoberlina and Rofiki (2021) explored the use of “SpellingCity” to enrich vocabulary and found that this online game promoted vocabulary acquisition in a more interesting way. Although the interface of the game may seem old-fashioned to the students, it was very easy to handle.

Furthermore, Pede (2017) investigated the effectiveness of Kahoot on the vocabulary acquisition of students with learning disabilities, and the data collected demonstrated that online games are a valuable tool for increasing students’ vocabulary.

Last but not least, Utku and Dolgunsöz (2018) conducted a deep study to investigate the influence of online games when learning new vocabulary. The results demonstrated that games make vocabulary learning fun and motivating for both students and teachers because learners show great willingness to participate in online vocabulary games, thus taking an active part in the lessons. With these results, the researchers state that technology and the Internet create an English teaching and learning environment suitable for digital natives.

RESEARCH METHOD

Design of the study

This research employed a mixed method defined by Creswell and Clark (2011) as the process of gathering, analyzing, and mixing qualitative and quantitative data in a single study. Because this research contained quantitative data involving students’ vocabulary scores and qualitative data comprising students’ perceptions, the mixed method was the most appropriate for this study.

Furthermore, [Creswell \(2012\)](#) emphasizes that conducting research with a single method (either quantitative or qualitative) is not sufficient to address and understand a research problem.

The aforementioned research method followed a practical action research model following the five stages proposed by [Richards and Lockhart \(1994, p. 27\)](#); initial reflection, planning, action, observation, and reflection. Based on this, the researcher implemented an intervention plan focused on improving students' English vocabulary learning ([Creswell, 2012](#)). This intervention spanned 8 weeks, involving 40 hours of instruction at a public institution in Loja, Ecuador.

Participants

The participants were chosen through purposeful sampling in which the researcher intentionally selected the place and people who would help to understand the core subject of the study ([Creswell, 2012](#)). The sample consisted of 25 eighth-grade Ecuadorian students (13 females and 12 males), whose average age was between 12 and 13 years, and all of whom attended the morning session. For these participants, the English level required by the EFL curriculum for lower secondary students was A1.1, which is aligned with the Common European Framework of Reference for Languages ([Ministerio de Educación \[MinEduc\], 2016](#)).

Data Collection Instruments

Pretest and Posttest

The first instrument used for quantitative data collection was a researcher-made test based on the paper and pencil method ([Gay et al., 2011, p. 154](#)). This test obtained a numerical score that indicated the cognitive characteristics or level of vocabulary knowledge that eighth graders possessed before and after the intervention ([Gay et al., 2011, p. 154](#); [Creswell, 2012, p. 297](#)). To fulfill the purpose of this instrument, aspects of vocabulary concerning the "form", "meaning," and "use" were evaluated through 10 selection questions ([Gay et al., 2011](#)). To evaluate the "form" of vocabulary; two questions were developed for the "spoken form" and two questions to evaluate the "written form", that is, the spelling rules. Likewise, one question was presented on "associations" where the students had to identify a lexical set and one question on synonyms, both of which covered the aspect of "meaning". With respect to the "use" of vocabulary; two questions related to "grammatical functions" and two questions related to "collocations" were realized. When grading this criterion-referenced test ([Gay et al., 2011](#)), the researcher appealed to the national grading scale established by the [Ministerio de Educación \(2015\)](#).

Mixed Questionnaire

The researcher obtained quantitative and qualitative information on the affective dimension of the participants through the survey technique using a mixed questionnaire applied immediately after the posttest; therefore, the postquestionnaire measured and explored the affective dimension of the participants ([Gay et al., 2011](#)), that is, their perceptions, attitudes, and interests regarding the use of online games to improve vocabulary. This instrument contained 12 closed-ended questions in which students had to choose among several response options ([Gay et al., 2011, p. 186](#)). For each closed question, attitude scales were provided ([Gay et al., 2011](#)). The Likert scale within this instrument indicated the participants' agreement or disagreement with different perceptions of online games. Moreover, a rating scale was used for the students to rank online games according to their preference. Within each closed-ended question, open-ended questions allowed participants to explain the reasons for their choices.

Reflective Journals and Peer Observations

The last instrument that collected qualitative information about the two variables was reflective journals and peer observations, which are part of the observation technique (Creswell, 2012, p. 214). The researcher, acting as a participant observer, used a reflective journal to record observations related to the students' attitudes and behaviors toward the use of online games for teaching and learning vocabulary. Likewise, the collaborator developed peer observations reporting everything that happened in the researcher's classroom. These qualitative data enabled the researcher to support the quantitative results of the topic under study.

Data Analysis

Quantitative data obtained from the pretest/posttest and questionnaire were analyzed using descriptive statistics (Creswell, 2012, p. 182). The results of the administered tests were organized and presented in a bar chart that showed the frequency and central tendency of the results based on the national rating scale established by the [Ministerio de Educación \(2015\)](#). Additionally, a table was used to indicate the average score that all participants obtained in each aspect of vocabulary and to visualize the range of variation between the results achieved in the pretest and the posttest. Meanwhile, the closed-ended questions of the questionnaire about students' perceptions were also depicted in tables and bar graphs to demonstrate which was the most common answer selected by students.

In other matters, the qualitative information generated by the students in the open-ended questions and the researcher's reflective journals were described through thematic analysis, in which the investigator grouped similar responses provided by the students in each open-ended question into six broad themes (Creswell, 2012, p. 248); Motivation through online games, Cooperation and competition, Self-learning platform, Facilitate learning, Classification of online games, and Willingness to continue learning English through online games. This method allowed for a systematic exploration of the qualitative data and comparison with the notes taken in the reflective journals and peer observations, providing deeper insights into students' experiences and perceptions.

FINDINGS AND DISCUSSION

Pretest and Posttest

The first specific question was as follows: "What is the effectiveness of online games in increasing English vocabulary among eighth-grade students at a public institution in Loja?"

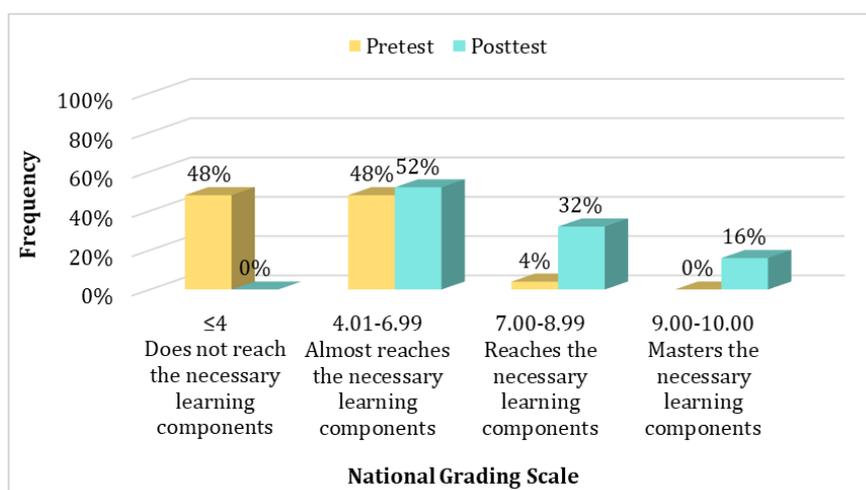


Figure 1. Willingness to continue learning English through online games

Figure 1 displays the results that eighth-grade students obtained in the pretest and posttest. As a general trend, pretest grades indicate that a large portion of the participants (96%) scored below the average, and only a tiny fraction of them (4%) reached the necessary learning components in relation to vocabulary. Concerning the posttest, just over half of the students (52%) almost achieved the necessary learning components, and nearly half of the students (48%) scored above 7 on the posttest. These results suggest a significant improvement in vocabulary knowledge among students after the implementation of online games as an educational strategy.

Table 2. Mean Score Differences Between Vocabulary Pretest and Posttest

	Number of Students	Form (4/4)	Meaning (2/2)	Use (4/4)	Total (10/10)
Pretest	25	1.14	1.06	1.83	4.03
Posttest	25	2.42	1.65	3.03	7.1
Difference	na	1.28	0.59	1.2	3.07

At first glance, the students obtained a very low average score of 4.03/10 in the pretest. This outcome is attributed to the students' performance in different aspects of vocabulary. Specifically, in the "form" aspect, students scored 1.14/4, which means that they did not demonstrate knowledge of the "pronunciation" and "written form" (spelling rules) of words. In the "meaning" aspect, students scored 1.06/2, showing an intermediate knowledge of synonyms and associations. In the last aspect of vocabulary, that is "use", students scored 1.83/4, reflecting multiple errors in forming collocations and identifying grammatical functions.

After implementing online games to address the aforementioned vocabulary difficulties, students' knowledge significantly increased. In comparison to the pretest, vocabulary "form" increased by 1.28 in the posttest. It is worth noting that most of the enhanced knowledge pertained to the "written form" of words, as "pronunciation" remained the most challenging aspect for students. Furthermore, the "meaning" aspect, encompassing synonyms and associations, exhibited an improvement of 0.59 points, while the "use" aspect of vocabulary gained 1.2 points. In summary, eighth graders made a remarkable gain of 3.07 points, resulting in an average score of 7.1/10 on the posttest.

These findings are consistent with those reported by [Alnatour and Hijazi \(2018\)](#), [Octaberlina and Rofiki \(2021\)](#), and [Pede \(2017\)](#), who indicated that online games are an effective strategy for vocabulary teaching, growth, and acquisition. In addition, [Derbouche and Hamadouche \(2016\)](#) attributed the increase in vocabulary to the fact that online games encourage discovery, practice, and enrichment of lexical knowledge.

Questionnaire

The second specific research question was, "What are the students' perceptions about the implementation of online games to increase English vocabulary, among eighth-grade students at a public institution in Loja?"

Table 3. Motivation Through Online Games

Statement	Number of Students		
	Agree	Neutral	Disagree
1. The points, prizes, power-ups, and rewards obtained in the online games made me feel excited and motivated to continue improving my vocabulary knowledge.	96%	4%	0%
9. I had fun playing online games in the English class.	96%	4%	0%
8. Online games have encouraged me to be a more active	96%	4%	0%

Statement	Number of Students		
	Agree	Neutral	Disagree
learner in class.			
10. Online games awakened or increased my interest in learning English.	92%	4%	4%

Upon analyzing the responses to the open-ended questions, students expressed that they felt motivated while playing online games given that if they answered correctly to the activities within the games, they could win a prize or a power-up to take gold from the other teams. This excitement and motivation encouraged the students to enhance their vocabulary knowledge. As part of these perceptions, student 9 highlighted that the aforementioned online game elements encouraged her to keep playing and learn new words. Associated with motivation is the fun factor of games. In this regard, students pointed out that online games provided a different and fun way to learn English because they love to play and these educational resources were quite similar to those games they play in their free time. In addition, it is interesting to note the response of student 15, who indicated that within online games there was action, competition, and fun at the same time that she improved her vocabulary.

From the reflective journals and peer observations, the active participation of the students is significant. When the teacher presented a game that contained interactive characters such as those in the "Maze Chase" game from "Wordwall", most of the students quickly raised their hands to solve the game, and they were excited to participate when they won prizes.

Similarly, as reported by [Utku and Dolgunsöz \(2018\)](#) and [Alnatour and Hijazi \(2018\)](#), the use of such resources creates a relaxing, fun, and motivating environment for vocabulary learning, encouraging active participation in lessons.

Table 4. Cooperation and Competition

Statement	Number of Students		
	Agree	Neutral	Disagree
2. Playing in teams allowed me to work cooperatively with my classmates to achieve the goal of the game and learn English in a better way.	84%	8%	8%
7. The sense of competition within online games increased my interest and engagement in the learning process.	96%	4%	0%

The responses from a significant majority of students indicated that playing in teams fostered cooperation, while the competitive aspect of online games heightened their interest and engagement in the learning process. According to the students' explanations in the open-ended questions, playing in teams strengthened friendships and facilitated discussions, interactions, and mutual assistance to successfully complete game activities. In contrast, a small minority indicated that some students did not help with the activities or, in another case, teammates did not allow him to participate in the game. With regard to competitiveness, students described that they hated to lose and enjoyed beating their peers; therefore, they made more effort to learn the words taught in class with the aim of winning.

From the reflective journals and peer observations, the teacher-researcher applied the group game due to the limited number of devices; nevertheless, by working in teams, students had the opportunity to socialize, exchange opinions, strengthen the bonds of partnership, and help each other by contributing with their vocabulary knowledge to solve the game activities more quickly and defeat the opposing teams. Considering this result, [Hasram et al. \(2021\)](#) agreed that competition within games increases motivation and persistence to achieve the goals of the game.

Table 5. Self-Learning Platform

Statement	Number of Students		
	Agree	Neutral	Disagree
3. Online games helped me realize my mistakes and successes in relation to vocabulary.	92%	8%	0%
4. Online games allowed me to review and practice vocabulary both inside and outside the classroom.	96%	4%	0%

Although almost all students agreed that online games helped them practice vocabulary, in the open-ended questions, some of them stated that they were not able to play “Blooket” at home because of a lack of access to a computer. Generally speaking, students said that through online games they assessed their vocabulary knowledge because it let them know if their answers were correct or incorrect and, if they made any mistakes, it provided them with feedback. In fact, student 24 expressed that this game-based assessment helped her realize which vocabulary areas she needed to emphasize more when studying. In this sense, [Hasram et al. \(2020\)](#) explained that online games prompt learners to reflect on their performance and thereby construct their own knowledge.

After analyzing the reflective journals and peer observation, it became evident that “Blooket” was an extremely useful tool for assessing spelling, listening skills, meaning, and associations because it instantly let the students know their mistakes and correct answers. At the end of the game, it provided the teacher with a record of the students’ scores and answers. Similar to “Blooket”, “Wordwall” enabled review and feedback on the same vocabulary components but included certain types of games like “Unjumble” where students practiced the grammatical function of words by forming sentences. Afterwards, “Vocabulary Spelling City” provided instant feedback to students while they practiced their listening skills and word spelling. In “Educandy”, students played “pair games” in which they practiced the meaning, synonyms, and spelling rules of words. In contrast to the previously mentioned resources, certain “Genially” games, particularly “board games,” lacked direct feedback mechanisms. However, these games incorporated oral and spelling challenges designed by the teacher, requiring students to overcome these challenges to progress in the game. Thus, the practice of oral production, pronunciation, and spelling was strengthened.

Table 6. Facilitate Learning

Statement	Number of Students		
	Agree	Neutral	Disagree
6. The game mechanics, narrative, and multimedia elements such as sound effects, graphics, and animation of online games increased my attention when learning vocabulary.	100%	0%	0%
5. In contrast to the activities done without the use of technology, online games facilitated memorization of new words.	96%	4%	0%

All students considered that the different elements and mechanics of online games increased their attention and their rationale in the open-ended questions indicated that the story behind the game, characters, colors, how the questions and answers appeared, graphics, background sound, and game mechanics caught their total attention and kept them concentrated on the development of the game.

The information collected in the reflective journals and peer observations evidenced that when the teacher started the class with a game, the students remained silent, attentive to how the game was played and what they had to do to win. For instance, in the “Quizshow” from “Wordwall”, the teacher-researcher conducted reviews in the form of a quiz, and after certain questions, cards

with points and penalties appeared that were flipped over and moved quickly. Here the students kept their full attention on the movement of the point cards and were very excited about not losing sight of the one with the most points. Such game elements and mechanics increased students' engagement and attention during vocabulary practice, leading to faster word memorization and avoiding mistakes during gameplay.

These findings align with the study conducted by Talib et al. (2016, as cited in [Hasram et al., 2020](#)), which also highlights the effectiveness of audiovisual elements and online game mechanics in capturing students' attention and maintaining their focus during lessons, ultimately leading to faster word memorization. In line with this result, [Katemba \(2022\)](#) found that online games strengthen short-term and long-term vocabulary memory, or, as stated by [Aghlara and Tamjid \(2011\)](#), games help young learners' cognitive processes. Thus, online games facilitated language learning.

Table 7. Classification of Online Games

11. How much did you like the online games used by your teacher to learn vocabulary? Rank 1 to 5 according to your preference (being 1 your favorite and 5 your least favorite).					
Online Games	#1	#2	#3	#4	#5
Educandy	8%	52%	8%	4%	28%
Vocabulary Spelling City	0%	0%	8%	52%	36%
Blooket	68%	12%	8%	4%	8%
Genially	4%	4%	52%	24%	20%
Wordwall	20%	32%	24%	16%	8%
Total	100%	100%	100%	100%	100%

In their responses to the open-ended questions, the students expressed a strong preference for "Blooket". Among the reasons for the preference of this game, they pointed out that it was easy to play, corrected vocabulary mistakes, allowed interaction between classmates, let them choose an avatar, the animations were eye-catching, encouraged team play, included power-ups that allowed them to earn and steal gold from other classmates, they learned more words very easily, and it included audios that enhanced pronunciation and motivated them to keep learning in order to earn gold or get a power-up.

As noted in the reflective journals, when playing "Blooket", students were attracted to the colors and liked being identified with an avatar in the game. Additionally, the presence of a beaverboard that displayed their positions and tracked their teams' activities kept students engaged and motivated to perform well in order to finish first. Moreover, playing "Gold Quest" from "Blooket", students became highly competitive, since, if they answered correctly, they obtained power-ups that allowed them to win or steal gold from the opposing teams.

In contrast, students expressed their least preference for "Vocabulary Spelling City". They found it unengaging due to the lack of interactive and eye-catching elements, which made it boring. In addition, practicing listening and spelling vocabulary simultaneously was a complex task because it was difficult for them to understand spoken words. This online game was useful for practicing spelling and listening skills, and although some students were willing to participate, there was not much interest in the game.

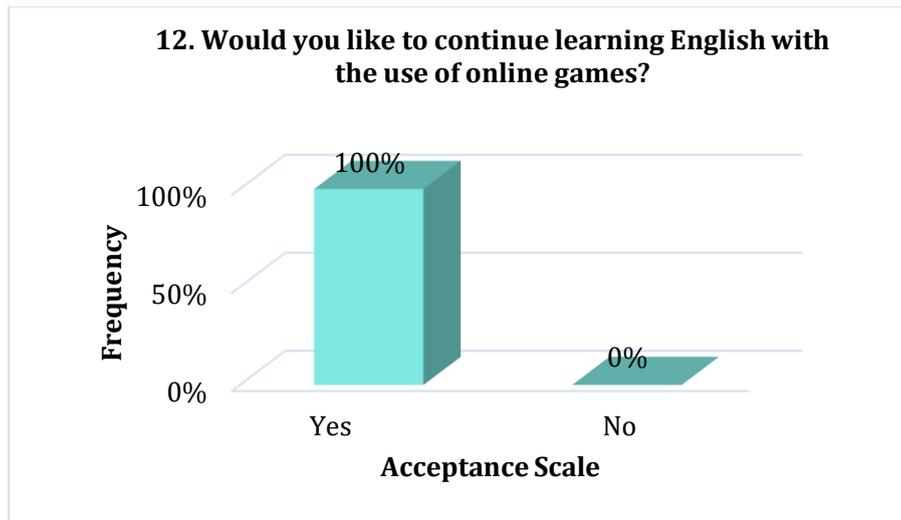


Figure 2. Willingness to continue learning English through online games

Due to the aforementioned positive perceptions, figure 2 sketches out that all students would like to continue learning English through the use of online games. As stated by the students in the open-ended questions, the main reason for this response was that they love to play games using devices and the implementation of online games is something completely innovative since no other teacher has done it before. In addition, they pointed out that online games facilitated the practice and improvement of their vocabulary.

Reflective journals corroborate this acceptability. At the beginning of each English class, the students were enthusiastic and curious about which game they were going to play and showed much more willingness to participate when the content of the class was practiced through online games.

CONCLUSIONS

The online games; Educandy, Vocabulary Spelling City, Blooket, Genially, and Wordwall stimulated lexical learning as students increased their knowledge of various aspects of vocabulary that are marked within form, meaning, and use. By practicing and assessing vocabulary through online games, students considerably improved their written form, knowledge of associations, grammatical structure of words, and collocations. Nonetheless, the spoken form remains the aspect in which students struggle the most.

The findings of this study concluded that students had favorable attitudes toward technology and online games, making fun and entertainment their most remarkable features. More specifically, "Blooket" was established as the favorite online game for learning vocabulary because it contains highly attractive qualities and gameplay elements that drive vocabulary improvement and assessment through competition among learners. In view of these perceptions, students completely agreed with the integration of these digital resources into their educational process.

These findings align with the concept of "digital natives" proposed by [Prensky \(2001\)](#), which suggests that today's students are highly accustomed to technology. Therefore, the present investigation, as well as previous studies, promote its implementation to create a teaching and learning environment suitable for 21st century students ([Pintado-Peñaloza & Fajardo-Dack, 2022](#); [Sadiku et al., 2017](#); [Utku & Dolgunsöz, 2018](#)).

LIMITATION & FURTHER RESEARCH

Despite the scope of this study, several limitations were found regarding the methodology. First, the action research approach used in this study, which considers the teacher as the researcher, made it a time-consuming task to simultaneously conduct research and teaching. Second, the findings cannot be generalized to larger populations because the research was conducted with only one experimental group. Furthermore, because of the short duration of the intervention, it cannot be concluded with certainty that only online games influenced vocabulary improvement. Moreover, by applying a pretest, students were conditioned and alerted about what their responses to the posttest would be. Consequently, to achieve accurate results, it is recommended to conduct further research using a more practical approach for research, involving at least two research groups (a control group and an experimental group), to extend the intervention time, and, instead of applying a pretest, to analyze their performance in English tasks, in order to determine their vocabulary knowledge before the treatment.

This study demonstrated that online games positively influence eighth-grade students' vocabulary learning. Nevertheless, future research is needed to determine whether the same acceptability of online games exists for higher-grade students or if these resources can effectively improve other areas of the English language, such as grammar or listening skills.

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