Capítulo V

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Students' perceptions about gamified strategies on the development of reading skills using technology

Percepciones de los estudiantes sobre las estrategias gamificadas en el desarrollo de habilidades lectoras utilizando tecnología

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1. Introduction

The skills of reading are of great importance in the acquisition of language since they are used to acquire and interpret information from texts.

This ability is multifaceted and must be developed interactively to obtain favorable results. Grabe and Stoller (2011) define reading skills as the ability to understand and interpret information appropriately from a text, whether, in print or digitally. For this reason, there are a variety of methods and techniques to improve reading competence. For the present research gamification was used as a technique for developing this proficiency.

Several authors have mentioned that gamification is a strategy that makes use of games and dynamics to promote learning and solve educational problems (Kapp, 2012). Similarly, Matsumoto (2016) claims that this strategy influences people's behavior and improves motivation within classrooms. In accordance with Faiella and Ricciardi (2015), the use of gamified applications can also be implemented to complement teaching and help the teacher to turn a boring class into one with active and simultaneous participation of students where teachers can observe the variation in the behavior of their students.

Furthermore, it is important to point out that students can improve reading skills such as reading comprehension, vocabulary, phonics, phonics awareness, and fluency through gamified strategies like assign points, badges, challenges, and leaderboards. Additionally, it is worth mentioning the new strategies that teachers can implement in their classrooms and improve their teaching, thus gradually leaving traditionalist education.

Taking into consideration the aforementioned information, this study aims to find out the students' perceptions about using gamified activities in the development of reading skills among lower secondary education students at a public institution of Loja city. To carry out this research, the following question has been established:

What are students' perceptions about using gamified activities in the development of reading skills among lower secondary education at a Public Institution of Loja city?

In addition, the present research adopted a mixed action research method, in which quantitative and qualitative data were obtained. Furthermore, the instrument used was a questionnaire whose results revealed the students' perceptions about gamified strategies on the development reading skills.

Finally, this research paper is structured as follows: the title, abstract which summarises the content of the study, introduction, literature review with theory and concepts from the author and submissions from other authors about the topic, materials and methods, results, discussion, conclusion, and references.

2. Literature Review

In this section the theoretical description about the variables of the researched topic, is presented in detail. The first variable includes all the themes and subthemes about gamification; and the second defines the topics and subtopics regarding skills. The purpose is to go in a deeper analysis of each category that are involved in this study.

Gamification

Currently, educators are using the gamification technique to instruct their classes. As a result, it has been well accepted by students because it adds entertainment and energy to the classroom environment for both teachers and students.

What is gamification?

Gamification is a learning technique that functions best when the learner is actively involved. Additionally, this innovative strategy aims to improve student performance through factors that engage and motivate them to enhance. According to Kapp (2012),

gamification is the use of game-based mechanics, aesthetics, and game thinking to involve users, spur action, advance learning, and address issues.

Gamification is more than just using games for participants' pleasure. It is a tactic that must also be used to inspire and shape the students' behavior while they are learning. Gamification is a technique for influencing and motivating people's behavior, but it must be used properly in order to be effective in changing pupils' behavior (Matsumoto, 2016).

Gamification in Learning and Education

As reported Kim et al. (2018), gamification in learning and education is a "set of activities and processes to solve problems related to learning and education by using or applying game mechanics" (p. 29). That is to say, gamification in education will assist students in completing their assignments in a more enjoyable and engaging manner by incorporating games. Additionally, it eliminates monotony and boredom while encouraging and supporting students in the classroom.

Gamification in education uses a variety of games and tools to enhance students' learning. It is crucial to keep in mind that these activities should be used according to the age or academic level of the players within this framework. Moreover, Buck (2017), state that gamification seeks to improve learning by utilizing the motivating qualities of (digital) games and game-specific elements, such as experience points, leveling, quests, rankings, etc.

In order to encourage a desired type of behavior, Faiella and Ricciardi (2015) advise using gamification in areas of everyday life where boredom, repetition, and passivity are common; for this reason, this method is the best suited for being used in the classroom.

Gamification Strategies for Learning

There are different strategies within gamification which help to develop and enhance student learning in the educational environment. As stated in Buljan's (2021) study there are four strategies: the most popular in the field of teaching and learning.

- **Point Systems.–**Giving students points for finishing various tasks can motivate them to put in extra effort. Additionally, it accurately reflects their degree of effort demonstrating their growth throughout the lesson or course.

- **Badges.–**Giving badges to students as a recognition for their efforts is a great idea. A badge is an acknowledgment that can be given in a printed or virtually way. It is a fantastic way to show how much you value the time and effort put into the work. Educational badges are praised as a substitute for grades that can increase student incentives (Abramovich et al. 2013).

- **Leaderboards.–**Leaderboards work best to incite competition among students because they will push themselves harder to achieve success if they see their name at the top. Even greater competition can be achieved by the teacher by dividing students into smaller groups and creating distinct leaderboards based on various teams.

- **Challenges.–**These represent a challenge for pupils to meet. Challenges will support the student in using their own time and energy to complete the assigned job while working independently. It is also essential to note that if they are unsuccessful or performed incorrectly, there will be no negative consequences.

Platforms to develop gamification in the learning process

The following describes some applications which will help to develop gamification in the learning process. In light of this, Buljan (2021) suggests four effective applications which are:

Educaplay.- Teachers can make free instructional games online using the Educaplay tool. Teachers can make free educational games of all kinds (quizzes, matching, crosswords, etc.). Once they register, share teachers with their students, and get the rewards (Technology Edu, 2021).

Wordwall.- Activities that are printable and engaging can be made with Wordwall. The majority of our designs come in printable and interactive formats. Any internet-connected device, including a computer, smartphone, phone, or interactive whiteboard, can be made interactive. Students can play alone or under the teacher's guidance while taking turns directing the class in front of them.

Kahoot.- For both students and instructors, Kahoot is the perfect quiz platform. Since the game-based platform enables teachers to design quizzes from inception, it is also possible to be innovative and provide learners with customized learning options. According to Edwards (2022), Kahoot is a tool that can be accessed through a web browser on the majority of devices. This implies that both instructors and students can use it at home or in the classroom.

British Council.- This application can be found in over 100 countries. It aims to promote greater awareness of the UK and the English language around the world; promoting cultural, scientific, technological, and educational cooperation. On this platform, you can find a variety of games, readings, videos, audio, and other fun activities to arouse curiosity and increase the students' motivation (Putri & Francy 2022).

In this study, it is also important describe the second variable which is in relation to the problem that the research is focused. Reading is one of the four skills among speaking, listening and writing that intervene in the English language teaching learning process. It is a receptive skill that give learners of English as a Foreign language a lot of input and vocabulary before starting to produce the target language.

Reading skills

Reading is one of the four language skills in the English Language. This ability is multifaceted and it can be developed in different ways, but the most effective one is to develop it in stages: before, during, and after reading.

What are reading skills?

Reading is more than just picking up a book, starting it, and finishing it. In order to benefit from reading, it is necessary to take notes, underline the main ideas, and look up unfamiliar words. In addition, it is important to know and feel what you are reading. You have to put yourself in the writer's shoes and guess what will happen in the next chapter or even imagine a new beginning or end to the reading. Likewise, Stoller and Grabe (2011) proclaim that reading is the ability to draw meaning from the printed page and interpret this information appropriately.

Reading skills are not just about reading, it involves more than that. For instance, it helps the reader to comprehend and understand what is being read in a meaningful way. In addition, it should be noted that this skill is closely related to writing, speaking, and listening. Biçer and Can (2021), consider that reading is a crucial language skill for learning, interpreting, and applying knowledge in a variety of contexts.

Importance of Reading

Reading is not only important in the educational field but it is also imperative in several daily areas of life such as social, professional, cultural, political, and others. Davis (2021) suggests several important aspects about reading:

- Knowing today's culture, people must read.

- Finding a decent job, requires having strong reading skills.

- Intellect development as a result of reading.

- It is how we make fresh discoveries.

- The mind grows when people read.

- People's ability to be innovative is enhanced by reading.

- A positive self-image is developed through reading.

Elements of Reading

In this regard, Bonnie and Armbruster (2001) mention five elements to help develop reading skills are described below.

Table 1

Five elements of reading

Elements of reading skills development	
Elements	**Meaning**
Phonemic Awareness	• It is the ability to hear, identify and manipulate individual units of sound. • It is focused on helping students understand the role that phonemic awareness plays in learning to read and write. • The smallest units making up spoken language combine to form syllables and words.
Phonics	• Phonics is the process of mapping the sounds in words to written letters. • Teaches students how to use these relationships to read and spell words. • Phonics also develops students' ability to read by sight, i.e., register whole words at a glance without sounding out each individual letter.
Fluency	• Fluency enables readers to jump from comprehending what it means as you state later. Fluent users don't have to focus on word-by-word decoding. That implies that they are free to quickly understand the meaning of the words they are reading. • Fluency is important because it bridges the gap between word recognition and comprehension.
Vocabulary	• Understanding is strongly related to vocabulary growth. It is simpler to understand the text if the reader has a larger vocabulary (oral or written). • Children who have a superior vocabulary can understand a text more quickly. • There are two main methods for introducing new vocabulary word., both for parents and teachers. The first method is explicit instruction, in which a parent or teacher explicitly explains to the pupils how to pronounce a word.

Comprehension	• The intricate brain process that readers use to understand what they have read is called comprehension. This understanding is greatly aided by instruction in and growth of vocabulary.
	• Understanding the main idea of a text requires comprehension where one puts various facts and informational pieces together.
	• Reading comprehension is the most difficult part of reading. This is due to the fact that it incorporates the other four elements of reading.

Note: Five elements to help learners develop reading skills.

The importance of teaching reading with technology

The use of digital devices in schools is increasing and students are using tablets and laptops in elementary school for reading, writing, and other skills. This is why, new teachers must make use of these tools, which are part of updated technology, to help students improve their reading skills. Using technology students are going to have access to information and resources which are part of databases, e-books, texts, articles which can help them to improve reading skills. Technology also offers a lot of applications to make learning more interactive through gamified activities. These applications often include features that highlight multimedia elements that awake students' interest which makes the class more students centered. Technology is extremely beneficial in teaching English reading skills, since the use of applications allow students to learn while having fun, which is motivating by making the class more interactive. In the same way, these tools can help with pronunciation, and the meaning of unknown words in the text. What is more, the games allow students to keep engaged in the reading by understanding the text and be able to answer the questions later. Likewise, technology makes reading more dynamic, fun, and easy for children, young people, and even adults who are gradually becoming more immersed in the use of technology (The education hub, 2019).

3. Methodology

This research work was carried out at a public educational institution in the city of Loja. Ecuador is located at latitude -3.99313 and longitude -79.20422. The tested population belonged to the lower secondary education at a public educational institution in the city of Loja. A sample was obtained from a group of ninth-grade students. The group shared similar characteristics in terms of English language proficiency. The participants were selected by convenience sampling, which is a type of non-probability or non-random sampling in which the members of the population are easily accessible for the researchers. Furthermore, these elements mean that the sample can be selected simply by being located spatially or administratively close to where researchers were collecting data or just by a willingness to participate in the study (Etikan et al., 2016).

The research was based on a mixed-action research approach in which quantitative and qualitative data were collected to meet the specific objective that guided the entire research process. Creswell (2012) concludes that the quantitative and qualitative methods to better understand research problems and questions that either method alone would not be able to understand.

For that reason, in the collection of data, the researchers used a questionnaire, which was used to find out the students' perceptions about using gamified activities in the development of reading skills among lower secondary education students at a Public Institution of Loja city.

This study was conducted by using the action research cycle model, which consists of systematic research that consists of collecting information on the functioning of schools, educators' teaching, and pupils' learning. The purpose of this study is to offer teachers a technique for handling common issues in classrooms, so they can enhance both student learning and teacher efficacy (Gay et al., 2012). As suggested by Gerald Suman (1983), this research was sequenced into three stages: diagnostic, planning, acting, evaluating, and reflecting which was adapted by the researchers in this study:

Diagnosing.– Through the observations made above, the researchers were able to recognize the problem that ninth-grade high school students at a public institution had in English reading skills. In addition, the researchers were able to collect more information about the problem in theoretical references. Also, the researchers concluded that a questionnaire was the most appropriate instrument to find out students' perceptions about using gamified activities in the development of reading skills.

Planning.– Once the main problem of reading deficiencies in the English language was identified, the researchers proposed gamification strategies such as leaderboards, challenges, badges, and assigned points; these address the problem concerning reading aspects like reading comprehension, fluency, vocabulary, phonics, and phonemic awareness.

Acting.– The intervention plan was carried out in face-to-face classes at a public educational institution located in the city of Loja, with a group of students that belongs to the ninth year of Superior Basic Education. The intervention was carried out in a period of forty minutes per class, with a duration of forty hours, which were conducted over a period of ten weeks during the 2022-2023 school year. The classes were conducted using various gamification strategies which focused on improving reading skills in the English language.

Evaluating & reflecting.– In this stage, the results obtained from the questionnaire were analyzed through the interpretation of quantitative and qualitative data. In the same way, a report was made on the general results. Conclusions and recommendations helped to answer the specific objective proposed in this study, as well as to develop further research on the topic. Additionally, some limitations were presented in the study such as the lack of internet connection, students' low levels of reading skills, extracurricular activities, deficient infrastructure, and among others. Moreover, it is important to report the results because they can be used by future educators who are constantly looking for ways to improve their practices in teaching English as a foreign language (EFL).

Once the intervention plan was finished, a questionnaire was provided to know the students' perceptions of gamification strategies such as leaderboards, challenges, assigned points, and badges. Moreover, some applications like Wordwall, Educaplay, British Council, and Kahoot were applied to develop reading skills, as well as students' motivation, enthusiasm, enjoyment, and entertainment (Gay et. al., 2012). Furthermore, the instrument was a kind of mixed-questioned instrument because it was possible to obtain both qualitative and quantitative data (Creswell, 2012). In this sense, the researchers designed nine closed, multiple questions followed by an open-ended question that allowed research participants to justify their answers.

4. Results

In this section, the results of the questionnaire applied to the students after the intervention period of time, is presented. They include the specific questions that it included with the obtained data and their frequency represented in percentage.

Table 2

Students' perceptions of gamified strategies

N°	Questions	Yes	%	No	%	T. P.	%
1	Do you think reading is more entertaining when the teacher assigned points?	19	86	3	14	22	100
2	Do you think that the challenges you were given by the teacher helped you to improve your reading skills?	21	95	1	5	22	100
3	Did you feel more motivated when the teacher used badges to congratulate you for completing your homework?	21	95	1	5	22	100
4	Did you feel more motivated when you saw your name at the top of the leaderboards?	18	82	4	18	22	100

Note: N= Number of questions, % Percentage, T. P= Total of participants

As data presented in Table 2 shows, students' perceptions about gamification strategies were positive and beneficial for improving reading skills. First, the majority of the students, 86% indicated that they were more entertained when the teacher "assigned points" to the activities that were done after the reading. They found it exciting to do since they knew that they would get a grade, and they tried to do their best. However, 14% of them mentioned that they did not find this enjoyable because when they knew that the activity had a grade, they felt nervous and more worried about how long it would take to them do the activities.

Furthermore, 95 % of the students claimed that "challenges" and "badges" motivated them to continue improving their reading skills and to complete all the tasks assigned by the teacher. This is due to the fact that by receiving challenges, students were more competitive and therefore more dedicated to their activities. Similarly, when students received badges, they felt pleased because the teacher rewarded their effort and work in an enjoyable way. Nevertheless, 5% of students stated that the challenges and badges made them feel sad because they did not always meet the challenges and therefore did not receive a badge. They felt demotivated and a little sad to see that other classmates met the challenges and therefore they received a badge.

On the other hand, 82% of the students mentioned that they found the "leaderboards" interesting and motivating, as it was the first time the teacher used them to show the rest of the class their effort during the week. Moreover, 18% of students stated that they were not motivated by these leaderboards because, during the entire intervention, they did not see their names at the top of the table, which discouraged them from completing the rest of the activities.

Table 3

Students' motivation on games and dynamics

N°	Questions	Yes	%	No	%	T. P.	%
5	Did you feel more motivated when the reading was presented through games and dynamics?	21	95	1	5	22	100

Note: N= Number of questions, %=Percentage, T. P.= Total of participants

Table 3 shows data on students' motivation toward games and dynamics. First, 95% of the students stated that the dynamics and games that took place during the whole intervention plan were enjoyable and very important, as they helped them to relax and become more confident in their own reading abilities. Additionally, these dynamics helped them to de-stress from the previous classes and be fully prepared to learn the new topics that the teacher had prepared beforehand. However, 5% of students mentioned that they found these games a bit overwhelming and even childish.

Table 4

Students' perception of gamified applications

N°	Questions	Yes	%	No	%	T. P.	%
6	Did you enjoy using the Educaplay application in order to reinforce your knowledge?	22	100	0	0%	22	100
7	When the reading was presented through the "British Council Website," did you feel more enthusiastic when doing the activities related to the reading?	19	86	3	14	22	100
8	Did you like being evaluated using the Kahoot application?	22	100	0	0	22	100
9	Did you enjoy the WordWall application when the teacher used it to evaluate your knowledge?	22	100	0	0	22	100

Note: N= Number of questions, %=Percentage, T. P.= Total of participants

As can be clearly seen in Table 4, students' perceptions showed that gamified applications were useful for improving reading skills. For this reason, 100% of the students selected that they enjoyed "Educaplay", "Kahoot" and "WordWall" applications for learning. In addition, some of the students' responses were that it was the first time they had learned English through applications or any other type of technology as they say that "Most classes are boring, but the English class is enjoyable" (ST-05). Eventually, these applications reinforced their knowledge and prepared them for future activities that the teacher would present them.

Similarly, 86% of students mentioned that the "British Council website" made them feel enthusiastic when doing their activities. Through this application, they receive immediate feedback by giving them a grade. They could see where they had failed and where they had to be more careful in the next activities. One student commented, "it was exciting because we have more opportunities to give the answer" (ST-12). On the contrary, 14% of the participants expressed that they felt frustrated with this application as it had too many activities that were related to the previous reading, and this made them feel a bit anxious as they feared that they would not finish all the activities on time. A student mentioned "I feel desperate trying to finish the reading task, but in the end, I finished the task" (ST-07).

5. Discussion

The general question for this research was "What are students' perceptions about using gamified activities in the development of reading skills among students in lower secondary education at a public institution in Loja city? Through a questionnaire that was given to the students during the study, it was possible to obtain their perceptions on the use of gamified activities in the development of reading skills. Taking into consideration the answers that students gave in the questionnaire, all the gamified strategies, such as leaderboards, badges, challenges, and assigned points, which are part of gamification, helped them to improve their behavior, motivation, and participation. Many even mentioned that these activities were enjoyable and

entertaining. Finally, these strategies were applied to improve elements of reading such as reading comprehension, vocabulary, phonics, phonemic awareness, and fluency.

The most interesting finding was that the gamified strategies positively impacted students' perceptions of activities based on reading skills. Moreover, students indicated that the applications used during the intervention plan were attractive, amusing, and more interesting to complete.

This corroborates with previous research made by Ling (2018) who mentions that the application of games within classes improves reading skills significantly, and even they help to clarify misconceptions. As stated in the literature review, Kim et al. (2018) argued that gamification within the educational environment is like having a set of activities and processes that will serve to solve problems related to learning by using games or applications.

Similarly, Kim et al. (2018) remark that the use of gamification in education will help students to solve tasks in a more enjoyable and dynamic way through the implementation of games. Furthermore, it increases learners' motivation and encouragement in class and minimizes boredom and monotony (Sanchez et. Al., 2021).

Nevertheless, it is necessary to mention that some limitations were presented during the intervention process such as the lack of internet in the classrooms, and the time that the application of the intervention plan lasted. Therefore, it is suggested that future researchers take into consideration the connectivity beforehand. Additionally, they should make sure that the time of the intervention will last enough to obtain more reliable outcomes.

6. Conclusions

The students' perceptions of gamified activities were positive, favorable, and satisfactory because they showed a meaningful improvement in the development of English reading skills at the end of the research. Moreover, active participation was observed in the classrooms, when students were eager to learn, to read while they have

fun. They were also satisfied, participative, motivated, relaxed, and enthusiastic. The researchers found that gamified strategies, such as challenges and badges, were the most effective because they pushed students to complete tasks that enhanced their knowledge in reading skills. In addition, by completing these tasks, students received badges that increased their self-esteem and motivated them to keep practicing.

The use of gamification in the class is an excellent way to help students improve their reading skills in the following elements reading comprehension, fluency, phonics, fluency and phonics awareness this was notable because students' involvement, enthusiasm, and interaction improved significantly in the classroom. In addition, it transforms monotonous readings into engaging activities in which students can participate in an entertaining way, without worrying about being judged and without caring if they make mistakes because they will be corrected in class.

The use of technology in the classroom is a favorable tool for teachers as it helps to create more interactive, dynamic, and interesting classes for students. In addition, teachers can find a variety of platforms in which they can create and use different games for students to learn not only reading skills but also many other components of English language learning.

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