



Universidad de Valladolid

Facultad de Filosofía y Letras

Grado en Estudios Ingleses

**Gamification in the Classroom for English
Language Vocabulary Acquisition and
Reinforcement**

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Curso: 2021-2022

ABSTRACT

The main objective of this Final Degree Project is to demonstrate the usefulness of gamified tools in English vocabulary acquisition. These benefits of the use of gamification in English language learning are discussed from two different points of view: teacher and student. In order to reach this objective, a methodology has been proposed to research these advantages of gamification in this aspect of the English language mentioned above. This investigation project employs Socrative, a tool introduced to the students of a language academy. Its innovation for the students and its appropriate planning contributed to successfully obtaining the results of the methodology.

Keywords: ICTs, Gamification, English language, Teaching, Vocabulary, Socrative

RESUMEN

El objetivo principal de este Trabajo de Fin de Grado (TFG) es demostrar la utilidad de las herramientas gamificadas en la adquisición de vocabulario en lengua inglesa. Estos beneficios de la utilización de la gamificación en el aprendizaje de la lengua inglesa se analizan desde dos puntos de vista diferentes: profesor y estudiante. Para poder lograr este objetivo, se ha propuesto una metodología para investigar estas ventajas de la gamificación sobre este aspecto de la lengua inglesa mencionado previamente. Este proyecto de investigación se lleva a cabo con Socrative, una herramienta presentada a los estudiantes de una academia de idiomas. Su novedad y planificación apropiada han contribuido a la obtención con éxito de los resultados metodológicos

Palabras clave: TICs, Gamificación, Lengua inglesa, Enseñanza, Vocabulario, Socrative

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1. INTRODUCTION

The introduction of Information and Communication Technologies (ICTs) in modern society has considerably influenced our lives. Likewise, lifestyle habits, jobs and social interactions have also changed as a consequence of these emerging technologies. Innovation in new developments and technological advances are largely responsible for these changes. On many occasions, the integration of ICTs has facilitated the development of numerous tasks and processes, thus becoming an indispensable element in current society.

Education has also been strongly impacted by the incorporation of ICTs into society. Due to the ongoing changes, it is understandable to observe that education would also be significantly involved in this technological transformation. In the educational field, ICTs manifested themselves in innovative teaching methodologies and alterations in the teaching-learning process. Furthermore, the transformations in the role of the teacher and the student have undergone a considerable twist with the inclusion of new technologies.

Within these novel teaching methodologies, gamification has emerged as a prominent one in the teaching of new learning content. Moreover, teachers use gamification in foreign language teaching as an efficient support element. Its application enables cooperative, interactive and fun learning, avoiding tedious and monotonous lessons that do not encourage students' learning.

In this Final Degree Project, we will focus on the role of gamified tools in English vocabulary acquisition. Their application in the teaching-learning process of a foreign language can be highly advantageous. The introduction of gamification to this learning process may not only enhance learning but also facilitate other aspects such as motivation to acquire new skills and content.

In order to develop this Final Degree Project and fulfil the objectives established on page 3, its structure will be divided into several sections. It will begin with a focus on the application of ICTs and educational innovation, providing information about the use of ICTs in Spanish and European Union (EU) education. Furthermore, this theoretical framework will contain an explanation of the meaning of gamification and some digital tools within this concept.

Subsequently, the second part of the theoretical framework will examine digital tools in English vocabulary acquisition. This section will address this topic from two different points of view: teacher and student. Through the vision of both perspectives, the benefits of the use of gamified tools for the acquisition of English vocabulary will be observed.

Finally, after the theoretical framework, a personal investigation project will be developed. This project consists of two procedures with the Socrative tool, conducted in an English language academy. After its explanation, the results will be displayed and discussed to observe how the use of gamified tools contributes to the learning of English vocabulary.

2. JUSTIFICATION

As mentioned previously, ICTs are constantly developing, and technological advances are emerging, hence the field of education continues to be affected by this progress. Moreover, the learning of foreign languages is a crucial issue at present. The European Parliament (2021) underlines the importance of learning foreign languages, and of English in particular; underscores the need for Member States to take action to support the development of linguistic competences at all levels, especially in primary and secondary education and to embrace the Council of Europe's goal of 'plurilingualism'. Therefore, English language is a common European language, and most schools include its teaching in their curriculum.

The reason for developing this Final Degree Project is to demonstrate the importance and usefulness of gamified tools in English language teaching. More specifically, to highlight the benefits of using gamification in English vocabulary acquisition. When learning a new foreign language, it is necessary to acquire a broad vocabulary, thus innovative methods and resources such as gamification have to become part of current education.

Another significant reason for developing this Final Degree Project is the purpose of conducting a pioneering research project. By searching through online repositories, it is possible to find several studies on English vocabulary learning using gamified tools such as Kahoot and Quizlet. Nevertheless, it is very complex to get any research that focuses on this specific topic using the Socrative tool. Thus, this research project introduces an innovative and helpful methodology for future research on this pedagogical aspect.

3. OBJECTIVES

To achieve the objectives of this project, a focus will be on the use and influence of the new gamified tools in the English teaching-learning process in schools. Its comprehension will contribute to acquiring a broader knowledge about the importance of these tools in modern education. Moreover, the achievement of the objectives established in this project will be exhibited in different sections: theoretical framework, methodology and conclusion. Concerning this previous background, the objectives will be the following:

- To demonstrate the importance and value of new Information and Communication Technologies (ICTs) in 21st Century education.
- To offer a detailed and comprehensible overview of the concept of gamification in the classroom, as well as some relevant digital tools.
- To analyze the role of digital gamification in the learning of vocabulary in English as a Foreign Language (EFL). This discussion will be developed according to both points of view: student and teacher.

- To develop a research project on the acquisition and reinforcement of English vocabulary through a gamified tool: Socrative.
- To interpret and reflect on the results and conclusions obtained in the research project on the use of gamification in English language learning.

4. THEORETICAL FRAMEWORK

4.1. ICTs in education

The development of new technologies has increased in the last decades to its current situation. People in contemporary society have adapted their lives to a modern technological background, avoiding stagnating themselves in the past. Also, the usage of the new technologies has changed the way people develop their daily life, dealing with different aspects such as work or social life. Different environments have included these technologies as a complementary element in their development or even have replaced their performance entirely. These new technologies are called Information and Communication Technologies (ICTs).

In the area of education, Information and Communication Technologies (ICTs) have evolved significantly. According to Amin (2018, 5), ICTs especially computers and Internet technologies enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn. Thus, new teaching methods have emerged in addition to traditional methodologies. An instance of classical methodology is a class where the teacher is the active speaker while the students are listening and taking notes. Regarding this issue, Amin (2018, 5) adds that,

‘the utilization of ICT learning settings and tools in educational processes, evidently leads to radical changes both in the role of teachers and learners and to the emergence of new teaching and learning environments and methodologies (e-Learning, Web-based Learning, Open and Distance Learning) as well as new training modalities (on-line training, on-site training, Blended-Learning, Instructor led Learning/Training, Classroom Training C-training-...)’.

Traditionally, teaching methods have been developed without the possibility of implementing ICTs in education. However, new technologies have led to an innovative form of education. In fact, teaching the four skills acquired by students (reading, listening, speaking and writing) has also changed with ICTs. These skills are linked to obtaining in-depth learning from new pedagogy that allows creating knowledge in the students related to the world using the potential offered by ICTs in the educational field (Liesa, Latorre, Vázquez and Sierra, 2020).

Nevertheless, in order to acquire or improve skills through ICTs, it is crucial to be aware of their use. Wise employment of ICTs is essential because new technological resources have become a key issue in recent years, especially with the Covid-19 pandemic. Being proficient in using these technologies is necessary for both teachers and students. With regard to the Covid-19 pandemic, several research studies stated that,

‘most countries responded to the pandemic by shutting down schools, which disrupted teaching and learning activities, examinations, assessments, grading and promotions. [...] Teaching methods were affected, as most schools attempted to embrace online teaching and learning. However, these attempts met with many difficulties, such as poor network connections and insufficient numbers of computers’ (Commonwealth Secretariat 2021, 56).

Undoubtedly, the lack of resources and inexperience with ICTs are two enormous disadvantages of the utilization of ICTs in education. There is a vast division between countries with broad access to technological resources for teaching and learning, while other countries have little or no access to these resources. Despite living in a globalized world, large-scale inequalities and technology divides are visible worldwide. According to the Internet portal World Stats as of December 2021, in Africa only 43.1% of its inhabitants had Internet access, compared to 88.4% of Europeans and 93.4% of Americans (Iberdrola, 2022). On the other hand, despite the inconveniences of ICTs access and inexperience with their usage, the employment of new technological resources has enabled and facilitated the acquisition and availability of new resources. Both teachers and students have benefited from the application of ICTs in education. In the teaching-learning process, the inclusion of new

technological elements allows teachers to use them to strengthen students' skills. For instance, access to multimedia elements to reinforce listening comprehension or electronic books to reinforce reading comprehension. Students innovatively benefit from these materials in their learning or as a support to other traditional resources.

4.1.1. Digital Immigrants and Digital Natives

At first glance, the concepts of Digital Native and Digital Immigrant can be easily defined. Understanding the meaning of both concepts is crucial when it comes to the application of ICTs in education. Through its accurate comprehension, both the positive and negative consequences of the inclusion of ICTs in the educational field will be simpler to understand.

The first person who used the terms Digital Native and Digital Immigrant was Marc Prensky, an American author who specialized in new technologies and the challenges they brought with them. As a starting point, Prensky (2001, 1) indicates that 'our students have changed radically. Today's students are no longer the people our educational system was designed to teach'. Due to the evolution of new technologies, education has adapted its resources to these changes. Thus, Prensky establishes a difference between the concepts of Digital Native and Digital Immigrant. The usage of both terms has been questioned by some researchers. However, many other studies have included the concepts created by Prensky as references in order to investigate the evolution of ICTs in the educational field.

On the one hand, the concept of Digital Immigrant refers to teachers (or even students) born when ICTs were not predominant or did not yet exist. Therefore, they had to adapt to their current usage and incorporate new digital resources into the classroom. Within Digital Immigrants, teachers born in the twentieth century could be included. Furthermore, some researchers analyze the accent of digital immigrant teachers as another element that evolved with ICTs application in education. Prensky (2001, 2) states that Digital Immigrant instructors who speak an outdated language (that of the pre-digital age) are struggling to teach a population that speaks an entirely new language. Digital Immigrants are required to

adapt their teaching methodologies and resources to the new digital era. Otherwise, their methodologies will not be fully efficient, and they will not have an adequate experience with ICTs for any future requirements.

On the other hand, Digital Natives refers to teachers or students who have lived in a digital environment, where technologies have a significant role in education. In this concept, both young teachers and students born in the twenty-first century are included. Unlike Digital Immigrants, Digital Natives are familiar with ICTs and their use throughout their lives. The experience of using new electronic devices, such as mobile phones, tablets and computers, has been applied to the educational field. So, if Digital Immigrant educators *really* want to reach Digital Natives – i.e. all their students – they will have to change. [...] They *will* succeed in the long run – and their successes will come that much sooner if their administrators support them (Prensky 2001, 6)

4.2. Innovation in education

As was mentioned in the previous section, educational innovation is a crucial element in the present era. Teaching methods have evolved, and innovative changes in the field of education have been introduced, such as online education and distance learning. Likewise, there are numerous emerging subjects to be taught and new knowledge to be acquired. Like other elements such as society or economy have developed through the decades, education has followed the same path. As a reference, a good instance is the United States of America. This country underwent many historical events that marked its economic and social situation. Nowadays, the United States is one of the most developed countries in several aspects: economy, politics, and education, among others. A quick and simple explanation might be its innovative evolution over time. Its adaptation and incorporation of new resources are essential factors in this progressively significant evolution. Dos Santos and Krause (2017, 4) state that,

‘The rapid evolution of ICTs has created opportunities for networking environments with enormous amounts of information. In this scenario, people can easily find everything that interests

them, favoring the use of these tools in several sectors, including teaching, research, and extension, thus recreating new models of interaction between humans’.

In order to further understand this innovation in the educational field, a brief historical context will be included in this section. Traditional teaching methods are a starting point in this evolution. In other words, teaching methods and materials such as textbooks were the only available resources before the inclusion of ICTs in education. The use of textbooks was the basis on which education relied throughout the twentieth century. Although currently it seems strange to believe, teachers only relied on these resources to support their classes and their students’ learning. Due to the unavailability of ICTs, the textbooks included the knowledge that students had to acquire in their subjects. Some researchers agree that for a long time, educational institutions such as schools defined books, or more precisely school textbooks, as the preferred medium for learning (Bock 2018, 2). However, despite teachers only having textbooks to support their explanations in the twentieth century, they were not exempt from several problems such as individualism in learning or the expensive costs of textbooks.

Consequently, the evolution of the digital era resulted in a wide variety of changes on the technological stage, such as new technological devices and the adaptation to these devices. These new developments brought a new pedagogical challenge for many teachers, as discussed in the previous section. Education has adapted these changes in its development, introducing innovative improvements and renewing and modernizing the learning system. According to Medina (2016, 213), the teacher ceases to be the principal source of all knowledge, becoming a guide for the students and facilitating the use of the resources and tools necessary to explore and elaborate new knowledge and skills. In addition, Calero (2019, 37) adds that

‘education is called to motivate its students and to incorporate media such as new technologies that contribute, on the one hand, to train students in the skills they will develop in the future as citizens and professionals – digital competence, critical spirit, teamwork, etc. – and, on the other hand, to favour the development of pedagogical innovations that improve learning’.

Furthermore, digital innovation brought new multimedia elements to educational environments. These elements can be physical, such as digital touch screens, among others. Their usage and inclusion in the classroom have contributed to accessing pedagogical content more easily. Moreover, digital touch screens enhance students' motivation and enthusiasm for the class. Additionally, multimedia elements are also available online. For instance, an interactive tool for education is Moodle, also called an "online platform". Using these online media, students are able to obtain without difficulty the resources provided by the teacher, and Moodle facilitates communication between teachers and students.

Nevertheless, although ICTs have been rapidly incorporated into education, their integration is not absolute. In other words, the new technologies have enriched the educational system broadly as they are supporting elements. Several traditional formats did not disappear, and they are either still in use or have been replaced by their electronic version. Regarding this issue, Bock (2018, 2) indicates that,

'Digital educational media can be divided into (1) digitalized textbooks, which in general are PDF copies of an already existing (historical) textbook; (2) a digital version of a (presented) textbook with additional content that is available online or delivered via DVD and (3) born-digital educational media that do not have a printed equivalent, but are specially produced to be used via digital hardware (computer, notebook, tablet computer or mobile phone).'

4.3. ICTs and learning in European Union (EU) education

Since its creation, the European Union has been one of the most influential and empowered global community. With its foundation in the Maastricht Treaty (1993), this community of countries where innovation has been continuous and admirable emerged. In the area of education, the European Union is a major technological innovator. Commission of the European Communities (2008) states that,

'the use of ICTs in the European classroom has increased dramatically since 2000 [...] 86% of teachers think that pupils are more motivated and attentive when computers and the internet are used in class. 80% see advantages in using ICT in school, in particular for exercises and practice. Also, ICT use is most widespread in higher education. Practically all universities now have websites and 9 out of 10 have intranets, so the basis for ICT is in place. This has been reflected in a steady growth of satisfaction among students'

However, the application of ICTs in education in the 27 member countries is highly varied. The lack of resources in schools and the propensity to use or disuse ICTs in the classroom are different from one country to another. In order to check this inequality, the data released by the European Commission in 2006 will be examined. Subsequently, the current use of these technologies will be verified, so as to determine their evolution over time. Dealing with the technological resources in the classroom, Korte and Hüsing (2006, 20) indicate that,

‘There are large variations in the number of computers per 100 pupils. The clear European leaders are Denmark (27 computers per 100 pupils), Norway (24), the Netherlands (21) and the UK and Luxembourg (20). The figures in these countries are significantly higher than the European average of 11 computers per 100 pupils. Almost all new member states belong to the group of laggards which include countries such as Latvia, Lithuania, and Poland; however Portugal and Greece also find themselves in this group of countries, with 100 pupils having to share only 6 computers’.

Moreover, the usage of ICTs and digital devices is varied depending on the European country. Korte and Hüsing (2006, 20) state that,

‘More than 80% of schools using computers use them in classrooms in the United Kingdom, Slovenia, the Netherlands, Cyprus, Ireland, Luxembourg, Sweden, Norway and Portugal. By contrast, in Greece, Hungary and Slovakia the figure is a very low 20%. This is less than a third – in some cases even only slightly more than a quarter – of the European average usage figure (61%)’.

The previous data illustrates the digital divide associated with ICTs in schools. In 2006, whereas some EU countries had an adequate number of computers per 100 students, other countries were below this average. Moreover, the utilization of computers in the classroom is also quite variable by country. As an explanation, a country can be linked to the investment in technology and its economy. For instance, the United Kingdom and Norway are outstanding in the integration of technological resources in their schools. Both countries have always been recognized as innovative and technologically advanced. Furthermore, the United Kingdom and Norway have strong and growing economies, thus influencing this technological increase in the classroom. On the other hand, countries such as Hungary and Greece do not reach this European average. Therefore, their application of ICTs in education could be related to their economy and their low investment in technological resources.

Fifteen years later, ICTs are a necessary resource in schools in the European Union. The digital divide continues nowadays, although at a lower rate than in 2006. Several countries have managed to expand technological devices in the classroom and improve the quality of education. In order to reduce further this technological inequality in education, the European Union adopted a new policy for technological integration in schools. According to European Commission (2020), the Digital Education Action Plan (2021-2027) is a renewed European Union (EU) policy initiative to support the sustainable and effective adaptation of the education and training systems of EU Member States to the digital age. [...] The Action Plan sets out 2 priority areas. 1. Fostering the development of a high-performing digital education ecosystem [...] 2. Enhancing digital skills and competences for the digital transformation.

4.3.1. The influence of new technologies in the Spanish Educational System

In the Spanish Educational System, the integration of ICTs is progressive and constant. A considerable number of Spanish schools have incorporated new technological resources and devices into their classrooms, modernizing the teaching-learning process. More specifically, this modernization increased in the 2010s as the number of schools with internet connections became increasingly higher. As a starting point, the Spanish government approved the School Program 2.0 in 2009. Its objectives were the incorporation of new technological resources in the classroom and teacher training using ICTs. As a result of this project, by December 2011, the number of computers available to students was 729,518, the number of digital classrooms was 29,897 and teachers trained to use ICTs for didactic purposes was 164,912 (INTEF 2017, 8)¹.

At the same time, the Spanish government introduced laws regarding the growing importance of ICTs in education. This section discusses educational ICTs from the 2010s onwards. However, there were educational legislations before this decade, such as the LOCE

¹ Translation by the author

(2002-2006). This legislation was LOE (Organic Law of Education), which contained several points highlighting the implementation of ICTs as didactic tools. For instance, in Article 23 (Objectives), item “e” indicates the objective ‘develop basic skills in the use of information sources to acquire new knowledge. Acquire basic training in the field of technology, especially in information and communication technologies’ (Secretaría General de Educación 2006, 52). Moreover, the legislation deals with teacher training using ICTs. In Article 102 (In-Service Training), the item 3 states that ‘the Education Administrations will foster the use of information and communication technology and foreign language learning for all teachers, regardless of their specialization, and set up specific training programmes in these areas. They will also be responsible for encouraging research and innovation programmes’ (Secretaría General de Educación 2006, 110).

In 2013, the Spanish government established a new education law called LOMCE (Organic Law for the Improvement of Education Quality). Article 11 states that

‘the widespread incorporation into the education system of Information and Communication Technologies (ICT) [...] will allow to customize education and adapting it to the needs and rhythm of every pupil. On the one hand, it will serve to strengthen and support in cases of poor performance and, on the other hand, it will allow to expand without limitations the knowledge transmitted in the classroom. [...] Information and Communication Technologies will be a key element in producing the methodological change that will lead to the goal of improving education quality’ (Jefatura del Estado 2013, 9-10).

A new educational law (LOMLOE) was not established until 2020. Nevertheless, regarding the educational laws during the decade of the 2010s, ICTs are a fundamental didactic element. With technological developments, the Spanish government highlights the acquisition and usage of electronic devices in schools. Furthermore, the government also emphasizes teacher training as required to apply ICTs in the teaching-learning process.

Nonetheless, despite the inclusion of ICTs in educational laws, the results achieved are not entirely satisfactory. In 2018, the Organization for Economic Co-operation and Development (OECD) released PISA 2018. This report analyzes data from different countries regarding ICTs in education. In data on Spain, PISA 2018 reports that

‘Only 11.5% of schools encourage teachers to integrate educational technologies into the teaching-learning process, compared to 56.7% on average in OECD countries. [...] More than half of the schools have online teaching-learning platforms (51.5%), close to the average of OECD countries (54.1%). [...] Also, only 18.6% of schools provide teachers with enough time to experience, evaluate and develop ICT-based educational materials, compared to an average of 43.6% in OECD countries.’ (OECD, 2020)².

Therefore, both schools and the Spanish government have to improve in this area. It is necessary to provide schools with enough technological resources in order to be applied to teaching. In addition, training teachers using ICTs is also required. In this way, a better quality of education in Spain will be guaranteed and results will improve.

4.4. Gamification in education

The term “gamification” is a new word introduced in the ICT era. In order to comprehend what this term refers to; it is important to know the morphological origin of the concept. Gamification originates from the word “game”, which is the basis of this term and its definition. Nevertheless, the concept of gamification does not have a particular definition, as different researchers give their own definitions. For instance, ‘gamification is using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems’ (Kapp 2012, 10). Another instance is the definition by Rebière and Rebière (2017), who indicates that

‘Gamification consists essentially for the teacher to apply game mechanics to the learning process, more or less thoroughly. Its goal is to increase the interest and motivation of learners by transforming the classical or “lecturing situation” of education into a genuine exploration of knowledge and skills. The teacher becomes a facilitator, a “game master” and the learner an explorer who is experiencing a real “adventure”.

Therefore, elements in a gamified class are added to make learning more enjoyable and varied and to motivate students. Gamification in education is support for student learning. Through the integration of gamified ICTs in the classroom, students will enter a more digital atmosphere. Nowadays, young learners are digital natives, so they will have no difficulty comprehending and using gamified tools.

² Translation by the author

However, there is another issue to consider: the difference between game-based learning and gamification. Although both concepts seem similar, they have some distinctions. According to Mierzejewski (2019),

‘Game-based learning (GBL), even though often confused with gamification, is a completely different concept. You might even call it the complete opposite of gamification. While gamification implements some elements of gaming into the learning process, game-based learning completely incorporates learning into a game scenario’

Game-based learning could be based on a current game like Minecraft. For instance, the teacher can establish learning outcomes by transforming the whole lesson into a videogame. Students may be given different characters or roles in order to achieve learning objectives, or they have to complete a virtual map with challenges in which knowledge is obtained. In other words, game-based learning does not complement the classroom: teaching methods are entirely ‘flipped’. Nonetheless, working to create game-based learning is hard and complex to manage. Conversely, gamification is easy, manageable and accessible. Several instances of gamified tools are Kahoot, Quizlet and Socrative. These tools will be discussed in subsequent sections.

4.4.1. Gamification in English as Foreign Language learning (EFL)

As mentioned previously, gamification is an element used for enhancing students’ competencies. Many young teachers decide to apply gamification in their classes, regardless of the subject. Through gamification, content and explanations are more fluent and enjoyable. The shift in training format engages learners, as they can use a computer and mobile phones in the classroom. As digital natives, students already have experience and knowledge in using electronic devices. Likewise, almost all of them have access to digital media at home.

Regarding English as a Foreign Language (EFL), gamification has also been integrated into its teaching. In the English teaching-learning process, gamification has a significant role. Gamified tools enable the creation of innovative content for English language learning. The reinforcement of the four skills (speaking, listening, reading and

writing) benefits from the use of gamification. Teachers can create and access resources, such as flashcards, multimedia resources or quizzes. The following section will focus on gamified tools and some of the most outstanding ones.

The application of gamified tools in English language teaching has been linked to an improvement in motivation. Some researchers state that

‘the use of technology in the teaching of English in school will give a lot of benefits to increase the students’ participation and motivation, especially during the e-learning classes [...] Therefore, the teacher needs to use several methods to deliver the materials to make the learning situation not monotonous and tedious’ (Ika Dhamayanti 2021, 71).

So, the enhancement of motivation has multiple connections with the integration of gamification in schools. Introducing new gamified resources to students influences their learning as they embrace an innovative way of education. The replacement or support of the traditional teaching methods, such as textbooks or worksheets, impacts positively students’ motivation. Likewise, there is experimentation with new formats, designs and shapes introduced by new gamified tools.

Moreover, several researchers have demonstrated that gamification influences two types of motivation: intrinsic and extrinsic. The knowledge of what both concepts refer to is necessary to comprehend the impacts of gamification on young learners. In Self-Determination Theory (SDT), Deci and Ryan (1985, 35) report that,

‘intrinsic motivation involves interest and enjoyment, assessing subjects’ interest and enjoyment allows us to infer intrinsic motivation. On the other hand, extrinsic motivation to behavior where the reason for doing it is something other than an interest in the activity itself. Such behavior may, however, to a greater or lesser extent, be something the person feels pressured to do versus genuinely wants to do. Extrinsically motivated behavior may range from being determined largely by controls to being determined more by choices based on one’s own values and desires’.

4.4.2. Gamification tools in English teaching

This section deals with gamified tools and some of the most common and outstanding tools in the English teaching-learning process. This content will not include games, such as

computer games or mobile phone games, as they are not gamified tools. Concerning these tools, their influence and role are significant in English language learning. As mentioned above, gamified tools enhance students' motivation due to the attractiveness and innovation offered by these platforms. In addition to those aspects, gamified tools engage students through their design and interactive elements, such as shapes, colors, or sounds. An instance of this attractive design is the popular gamified tool Kahoot. This website is an online application where quizzes can be developed and presented in a "game" format [...] It is undeniable that the existence of technology can be an attractive learning media (Sudarsana et al. 2020, 64). Furthermore, students appreciate the use of Kahoot as they can complete quizzes through their mobile phones. Students perceive this application as a game, so its high popularity is not unexpected.

Regarding other gamified tools, Edpuzzle is another instance of gamification in English language learning. Through this online platform, teachers can reproduce a video for their students, for instance, a video about British culture. The novelty in comparison to Kahoot and other tools is the possibility of adding questions during the video playback. Therefore, students can improve their listening comprehension skills. Besides, Quizlet is another popular gamified tool with high success in schools. Unlike Kahoot and Edpuzzle, Quizlet allows the creation of flashcards with questions or vocabulary. The formats of the flashcards are varied, allowing the teacher to design diverse styles for the students. Additionally, another innovative gamified tool has enabled new formats and multiple options for English language learning. This tool is Socrative, which includes tests and quizzes but also introduced additional options such as the Space Race. Students imagine they are playing a videogame, encouraging fun and interactive learning.

The existence of numerous tools for gamification has been observed. Beyond those gamified tools mentioned, there are plenty more online platforms to employ in the English language learning classroom. Most of them are free to access and simple to use. But some issues must be considered in order to use gamified tools. Santos, Belfort and Mandarino (2020, 471-472) state that

‘It is important to emphasize that every time we decide to prepare a gamified class or course that focuses on language learning, we must remember that our planning has to promote interaction between the participants, so they have the opportunity to use the language and construct knowledge together. The main objective in adopting gamified practices should be to promote learning, taking as a starting point the productions which are observed when students are in contact with each other and not to offer a sequence of dynamic games to make the class enjoyable’.

5. Acquisition and reinforcement of English vocabulary through gamification tools

5.1. Impact on the role of the teacher

In order to improve the acquisition and reinforcement of English vocabulary, teachers can apply new gamified tools in the classroom. Through its usage and implementation in the EFL class, they can establish new teaching methods to enhance the quality of education. Moreover, gamification supports traditional ways of teaching, not necessarily substituted them. This point is an essential issue to consider when organizing lesson planning. If new gamified tools replace traditional methods entirely, the class will be based on digital technologies, and it could be monotonous and tedious. However, it is possible that gamification projects in institutions of learning may encounter resistance as the educators and other staff members fight to maintain the status quo, particularly in terms of ensuring that traditional teaching methods are not replaced with new technology-based concepts such as gamification (Barlow & Fleming, 2016; Kopcha, Ding, Newmann, & Choi, 2016). Thus, the appropriate combination of applying conventional techniques and gamified tools is crucial to developing a successful English language lesson.

Gamified tools are a valuable complement to increasing results obtained by students regarding English language vocabulary. Its inclusion is helpful as teachers are able to get instantaneous results from their students. Through these immediate results (real-time results), teachers can check their students’ improvement. The design of quizzes, online activities or flashcards enables the reinforcement of vocabulary in English language learning. Additionally, it is possible to save the results in several tools, such as Socrative. This storage of results will assist in establishing grades for their students and also choosing diverse methods and techniques to reinforce vocabulary lessons with the poorest results. To illustrate

these benefits, Socrative will serve as an instance. Kaya and Balta (2016, 7) conducted a project on applying this gamified tool to English language classes. They stated that

‘while the students are answering the questions they see the results on the smart board in real time and this motivates them to continue. When they finish answering the questions, they see their mistakes if they have any, and ask the instructors to explain the topic again or correct their mistakes. This method informs both the students and the instructors not to move to a new topic before covering the topic accurately, and at the same time, it enhances the students’ learning’.

Furthermore, another notable advantage of using gamified tools in the classroom is the feedback received by students. This quick feedback can be supplied by the online tool or even by the own teacher. Providing feedback to students is profitable since students can be conscious of their own progress while learning English language vocabulary. Besides that, feedback affects their motivation and participation. Positive feedback helps students continue to learn, as they can monitor their own learning and verify if their results are accurate. Also, positive feedback will motivate them to strengthen their English vocabulary skills. In Alonso’s words (2021, 14), ‘instantaneous and positive feedback is the main reason which makes users feel motivated, engaged and encouraged in their actions [...] Feedback can be used as a correction of students’ actions and can be a stimulus and motivator to their further activities in the learning system’. On the other hand, negative feedback is not necessarily a negative signal whatsoever. Through negative feedback, teaching-learning process is advantageous, as both students and teachers can work together to improve those results. In relation to vocabulary learning, teachers can motivate their students to keep learning and help them achieve improvement. In addition, students learned not to become disappointed if they do not successfully acquire the required vocabulary.

5.2. Impact on the role of the student

Previously, it has been observed how the integration of digital tools has positive effects on students. Their motivation enhances with the inclusion of gamification in the classroom. Increasing their intrinsic and extrinsic motivation, young students feel interested in using gamified tools in the classroom. Regarding the English teaching-learning process, gamification has broad benefits in learning vocabulary that will be shown in this epigraph.

First, gamified tools have a significant impact on students' memory. In other words, the capacity to memorize English vocabulary is benefited by the implementation of these digital tools during the lessons. Memory has a notable role in the acquisition of vocabulary in a target language as learners need to know a wide range of words to apply them. So, understanding how gamification helps to improve memory retention capacity is necessary. Through the development of long-term memory, the English vocabulary terms will remain in the memory longer. Using instances of tools that allow the use of flashcards, such as Memrise or Quizlet, Warren (2019, 71) investigated their importance on long-term memory. This research compares vocabulary acquisition to the growth of a flower, stating that,

‘Educational apps and websites such as Quizlet have been around for a while now. Students seem to really enjoy the competitive element and teachers are often able to easily track their progress. [...] Each vocabulary item is a seed that needs to be planted (learned), and then watered regularly (reviewed) in order for it to grow into a flower (stay in the long-term memory) [...] By prompting users to ‘water their plants’ repeatedly, the vocabulary is more likely to stay in the long-term memory’.

Moreover, Belkhir (2020, 79-80) adds,

‘By creating theme-based word lists and digital flashcards, the teacher can highlight and group the particular words that he/she wants the students to learn. Spaced repetition and rehearsal are also encouraged in a way that is not necessarily linear and sequential [...] In other words, the retrieval of words recently learned strengthens memory retention. So far, we have looked at the cognitive processes that can be fostered by the Quizlets program and that can, in turn, enhance vocabulary acquisition’

Secondly, the inclusion of gamified tools in the English classroom results in a more interactive and active learning experience. While acquiring new vocabulary words using traditional methods, students can feel apprehensive as they have to memorize English terms. Likewise, learners will not accurately learn new English vocabulary words, as they will do it anxiously. Thereby, the integration of gamification to acquire vocabulary is helpful for students learning. Whether they achieve a broader vocabulary through active and cooperative

learning, the results will increase significantly. Concerning this active and cooperative learning, flow theory is closely related. In Kapp's words (2012, 71-73),

'flow is a mental state of operation in which a person is fully immersed and focused in what he or she is doing; it involves full mental involvement and continual engagement in the process of the activity. It is ideal state between boredom and anxiety or frustration' [...] However, the concept of flow serves as a good guidepost for the gamification of learning. If a faculty member, trainer, or instructional designer can provide the environment that encourages flow in the learner, he or she can move closer to putting learners into a flow state'.

6. METHODOLOGY

6.1. Aims

The following research project with Socrative has two main aims to be fulfilled throughout its development. Both aims deal with how young students acquire and reinforce their vocabulary skills in English language learning.

The first aim consists of introducing students to the concept of gamification. Also, they will receive an overview of the tools involved in this context. Students will observe how the usage of gamified tools has a remarkable influence on the teaching-learning process.

The second aim intends to demonstrate how the application of gamified tools in the English language classroom supports vocabulary skills. Their vocabulary learning will benefit from applying these gamified tools in several aspects.

6.2. Participants

The development place for this research project with Socrative is an academy specialized in teaching languages, such as English, French or Russian. This language academy prepares students for Cambridge exams by helping them develop their skills by several methods. Also, the academy includes electronic devices and an internet connection. These resources enable the application of ICTs in the management of its activities.

The participants are A2 students preparing for Cambridge exams. Their English skills are basic competencies. The students understand adequately the language skills adapted to their English level, according to the Common European Framework of Reference for Languages (CEFR). The age range of the students is between 11 and 14 years old. Data from all participants were obtained in the third week of March 2022.

The number of participants is 34 students divided into several classes with different class schedules. To ensure a higher quality of the tables, the names of the students have been omitted. Each percentage below “Score” on the left side of the table represents the results obtained by each student individually. The students belong to five separated classes; hence the division and exhibition of results will be the following:

- Class 1: 6 participants
- Class 2: 5 participants
- Class 3: 7 participants
- Class 4: 11 participants
- Class 5: 5 participants

6.3. Materials

In this section, the two procedures employed in this research project with Socrative will be carefully described. The first procedure consists of a Socrative Quiz, while the second procedure consists of a Socrative pool, which will be explained below. The accurate comprehension of the materials will be helpful for the subsequent explanation of their development. Furthermore, these materials are appropriate to the English level and age of each student.

To develop this research project, the interactive tool employed is Socrative. Socrative is an interactive website intended to incorporate gamification in the classroom. Likewise, Socrative enables technological integration in an educational and communicative environment.

The first procedure (Appendix 1) will consist of a quiz developed through the gamified tool Socrative. The quiz includes ten questions dealing with A2 English vocabulary. To do so, the academy provided the list of vocabulary according to the English level (KET Cambridge). Students learnt this vocabulary in their English classes previously. Also, the quiz questions include vocabulary that belongs to different categories. The categories will be the following:

- Question 1: clothes vocabulary
- Question 2: furniture vocabulary
- Question 3: condition adjectives vocabulary
- Question 4: nationalities vocabulary
- Question 5: places and buildings vocabulary
- Question 6: travel vocabulary
- Question 7: cooking and food vocabulary
- Question 8: emotion adjectives vocabulary
- Question 9: sports vocabulary
- Question 10: family vocabulary

Also, some questions include a short explanation after them. This explanation indicates why that is the right answer and not the other ones.

The second procedure (Appendix 2) involves a questionnaire, also developed in Socrative. This questionnaire has a short length, also including four answers for students. Unlike the previous procedure, this part does not include vocabulary questions. The poll pretends to receive some feedback from students. For instance, some questions deal with whether gamified tools should be included in the teaching-learning process, among others.

6.4. Development

For this research project, students had to use their mobile phones to access to the materials. Also, they needed to have an efficient internet connection in their electronic devices. Before starting the research project, a brief explanation of its function and aims was necessary. Furthermore, the introduction provided some background on the notions of

gamification and gamified tools were provided in the classroom. Taking into account these two noteworthy points, students understood the importance of the accurate development of the research project. The Socrative launcher appeared on the large digital screen. The participants had to enter the Socrative website and enter 'Student Login'. Then, the students had to introduce the code 'TFGPROJECT'. Each procedure must be concluded within two minutes. The time limit ensured the fluidity of the procedures and prevented disruption of the ongoing activity of the academy.

In the first procedure, students had to choose a name that will be displayed on the results for the teacher. Thereafter, they started doing the Socrative while their results appeared on the large digital screen. The procedure was in real-time, so participants could see the classroom answers on the digital screen. In order to prevent cheating, both the names and the answers were hidden. Thus, the veracity of the answers is assured.

In the second procedure, the participants had to introduce the code, as in the first procedure. Unlike the first procedure, the answers given in this questionnaire were anonymous. Students had to state their points of view on the topic, so anonymous responses were preferable to ensure their privacy.

6.5. Data analysis

6.5.1. Results

This section of the methodology illustrates the results obtained by the 34 participants in the research project. The results show the answers given by the students in the first procedure and their responses to the second procedure. As previously mentioned, the participants belong to five separate classes, but they all have an English level of A2 Level (KET Cambridge). Therefore, the results will be divided and displayed into independent partitions. Moreover, the two procedures will be presented separately: first, the results of the first procedure (Socrative quiz) and afterwards, the responses of the second procedure (Socrative poll). Once the results are exposed, their interpretations will be discussed in the subsequent section.

In the first procedure, the answers display individual data divided into tables. Their answers appear in different colors. Green represents correct answers, and red indicates incorrect answers, while gray indicates responses that participants did not have time to complete. Through these data tables, individual results and class results overall are available.

SCORE % ↓	1	2	3	4	5	6	7	8	9	10
✓ 80%	✓ B	✗ D	✓ True	✓ A	✓ False	✓ D	✗ A	✓ A	✓ skiing	✓ D
80%	✓ B	✗ A	✓ True	✓ A	✓ False	✓ D	✓ B	✓ A	✓ skiing	
✓ 100%	✓ B	✓ C	✓ True	✓ A	✓ False	✓ D	✓ B	✓ A	✓ skiing	✓ D
✓ 70%	✓ B	✗ D	✓ True	✓ A	✓ False	✗ B	✓ B	✓ A	✗ Ski	✓ D
✓ 70%	✓ B	✓ C	✓ True	✓ A	✓ False	✓ D	✗ D	✓ A	✗ ice skating	✗ B
✓ 80%	✓ B	✗ A	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✓ skiing	✓ D
	100%	33%	100%	83%	100%	83%	67%	100%	67%	67%

Table 1. Socrative quiz results Class 1

In Class 1, the overall results do not have huge differences. Concerning the general score, all the participants had 70% or more correct answers. Only one student got a mark of 100%, while only one student did not have time to complete the quiz. On the other hand, dealing with the questions, there is a score of 67% or higher on nine questions. While all the participants scored 100% on four questions (1, 3, 5 and 8), 33% of the class failed question 2 (furniture vocabulary).

SCORE % ↓	1	2	3	4	5	6	7	8	9	10
✓ 90%	✓ B	✓ C	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✓ Skiing	✓ D
✓ 70%	✓ B	✗ A	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✓ skiing	✗ A
90%	✓ B	✓ C	✓ True	✓ A	✓ False	✓ D	✓ B	✓ A	✓ skiing	
80%	✓ B	✗ A	✓ True	✓ A	✓ False	✓ D	✓ B	✓ A	✓ skiing	
70%	✓ B	✗ A	✓ True	✓ A	✗ True	✓ D	✓ B	✓ A	✓ Skiing	
	100%	40%	100%	60%	80%	100%	100%	100%	100%	20%

Table 2. Socrative quiz results Class 2

Regarding the results in Class 1 (see Table 1), Class 2 did not have a significant number of failed answers overall (all the participants scored 70% or higher). No participant got a mark of 100%, and three of the students did not complete question 10. Above the answers, all participants obtained less than 50% of correct answers in question 2 (furniture vocabulary) and question 10 (family vocabulary). Nevertheless, 100% of the students scored 100% on questions 1, 3, 6, 7, 8 and 9.

SCORE % †	1	2	3	4	5	6	7	8	9	10
✓ 60%	✓ B	✗ D	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✗ ski	✗ B
✓ 40%	✓ B	✗ D	✓ True	✗ D	✓ False	✗ C	✗ A	✓ A	✗ ice skating	✗ A
✓ 80%	✓ B	✓ C	✓ True	✗ B	✓ False	✗ C	✓ B	✓ A	✓ Skating	✓ D
✓ 60%	✓ B	✗ D	✓ True	✗ B	✓ False	✓ D	✗ A	✓ A	✓ Skiing	✗ B
✓ 40%	✓ B	✗ D	✓ True	✗ B	✗ True	✗ A	✗ C	✓ A	✓ skating	✗ B
✓ 50%	✓ B	✗ A	✓ True	✗ B	✓ False	✓ D	✗ A	✗ B	✗ Hockey	✓ D
✓ 80%	✓ B	✗ A	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✓ snowboarding	✓ D
	100%	14%	100%	0%	86%	57%	43%	86%	57%	43%

Table 3. Socrative quiz results Class 3

Unlike the previous two classes (See Table 1 and Table 2), the results in Class 3 are considerably varied. All the participants had enough time to complete the whole quiz. However, no one was able to score 100%, as in Class 2 (See Table 2). Four participants scored 60% on the answers, while the rest of the participants scored 50% or less. About the questions, there were only 100% successful answers to question 1 (clothes vocabulary) and question 3 (condition adjectives vocabulary). Also, more than 85% of the students got questions 5 and 8 right. Nevertheless, no participant succeeded in question 4 (nationalities vocabulary), and less than 15% succeeded in question 2 (furniture vocabulary).

SCORE % ↓	1	2	3	4	5	6	7	8	9	10
✓ 60%	✓ B	✗ D	✓ True	✗ B	✓ False	✓ D	✗ A	✓ A	✗ sky	✓ D
20%	✓ B	✓ C	✗ False							
✓ 70%	✓ B	✓ C	✓ True	✗ B	✓ False	✓ D	✓ B	✗ B	✗ ice skating	✓ D
✓ 60%	✓ B	✗ A	✓ True	✗ B	✓ False	✗ A	✗ A	✓ A	✓ snowboarding	✓ D
✓ 30%	✓ B	✗ A	✓ True	✗ C	✓ False	✗ C	✗ A	✗ B	✗ sky	✗ C
✓ 70%	✓ B	✓ C	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✗ Skii	✗ A
✓ 60%	✓ B	✓ C	✗ False	✓ A	✗ True	✓ D	✓ B	✗ D	✗ ice skating	✓ D
✓ 60%	✓ B	✓ C	✗ False	✗ B	✓ False	✓ D	✓ B	✓ A	✗ ice skating	✗ C
✓ 50%	✓ B	✗ A	✓ True	✗ B	✓ False	✗ A	✓ B	✓ A	✗ ice skating	✗ A
✓ 40%	✓ B	✗ A	✓ True	✗ B	✓ False	✗ A	✗ A	✓ A	✗ skying	✗ C
✓ 70%	✓ B	✗ D	✓ True	✓ A	✗ True	✗ C	✓ B	✓ A	✓ Skiing	✓ D
	100%	45%	73%	18%	73%	45%	55%	64%	18%	45%

Table 4. Socrative quiz results Class 4

The results in Class 4 have a certain similarity with the results in Class 3 (see Table 3). No participant obtained a score higher than 70%. Only four students scored less than 50%, so most of the participants did not do the quiz badly. All the participants completed the quiz on time, although one student only completed three questions. On the other hand, the class overall scored 100% in question 1 (clothes vocabulary), and more than 70% scored in questions 3 and 5. On the contrary, less than 20% of the participants had success in question 4 (nationalities vocabulary), and question 9 (sports vocabulary). Questions 2, 6 and 10 obtained correct answers from 45% of the participants.

SCORE % ↓	1	2	3	4	5	6	7	8	9	10
✓ 70%	✓ B	✗ A	✓ True	✗ D	✓ False	✓ D	✓ B	✓ A	✗ ski	✓ D
✓ 60%	✓ B	✓ C	✓ True	✗ B	✓ False	✗ B	✓ B	✗ B	✗ sky	✓ D
✓ 60%	✓ B	✗ D	✓ True	✓ A	✓ False	✓ D	✗ A	✓ A	✗ snowboard	✗ A
✓ 70%	✓ B	✗ A	✓ True	✗ B	✓ False	✓ D	✓ B	✓ A	✗ ski	✓ D
✓ 80%	✓ B	✓ C	✓ True	✗ B	✓ False	✓ D	✗ A	✓ A	✓ Skiing	✓ D
	100%	40%	100%	20%	100%	80%	60%	80%	20%	80%

Table 5. Socrative quiz results Class 5

In general, the results of Class 5 are varied, but all the students had enough time to complete the whole quiz. No participant scored 100%, but all scored 60% or higher. Also,

one person scored more than 80%. Regarding the questions and their results, the lower scores appear in question 4 (nationalities vocabulary) and question 9 (sports vocabulary). Only 20% of the participants gave a correct answer to these questions. Furthermore, between 20% and 50% of the students failed question 2 (furniture vocabulary). On the other hand, more than 80% of the students got the answer right to questions 1, 3, 5, 6, 8, and 10.

In the second procedure, the results will be divided into three graphic figures. In order to make the information more comprehensible and formal, the results have been transformed from a Socrative poll to graphic figures. The data from the 34 participants will be exposed in percentages according to their responses. However, the results of question 3 have not been transformed, as those results are individual points of view about the use of gamified tools in the classroom (Appendix 3). For this reason, the results are not convertible to graphic figures.

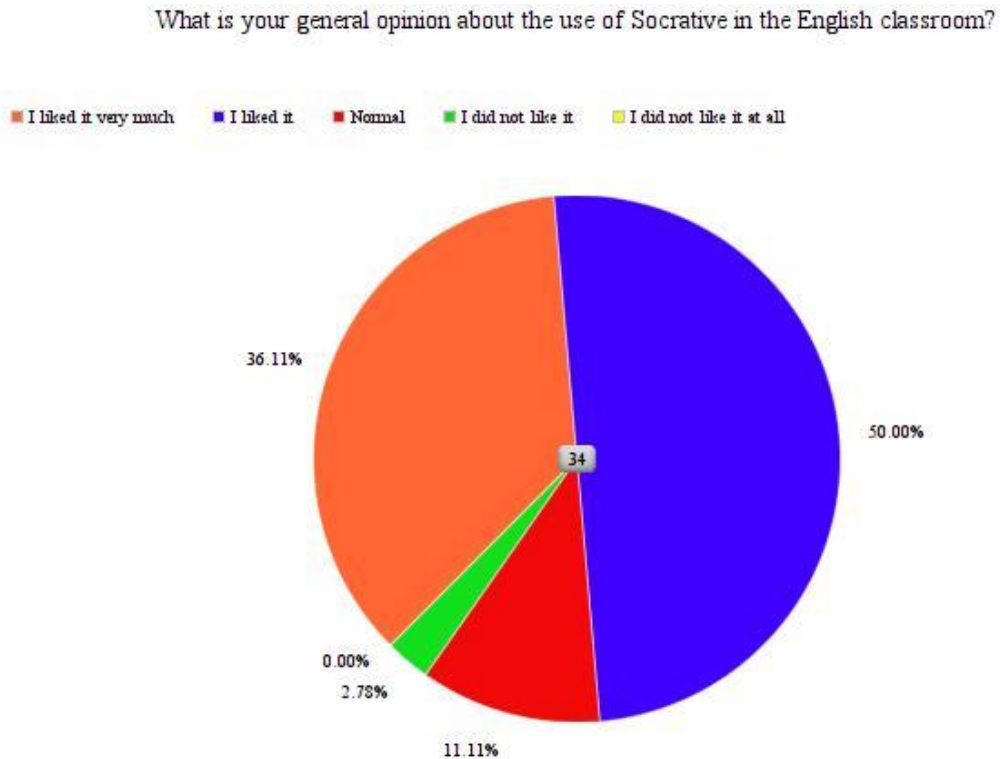


Figure 1. Socrative poll first question results

The results presented in Figure 1 indicate the general opinion about the use of Socrative in the English language classroom. According to these data, 86,11% of the participants in this research project enjoyed Socrative or liked it very much. The opinion of 11,11% of the participants is ‘normal’ (either they do not dislike Socrative, or they do not have a specific position). On the other hand, only 2,78% of the students did not like this gamified tool.

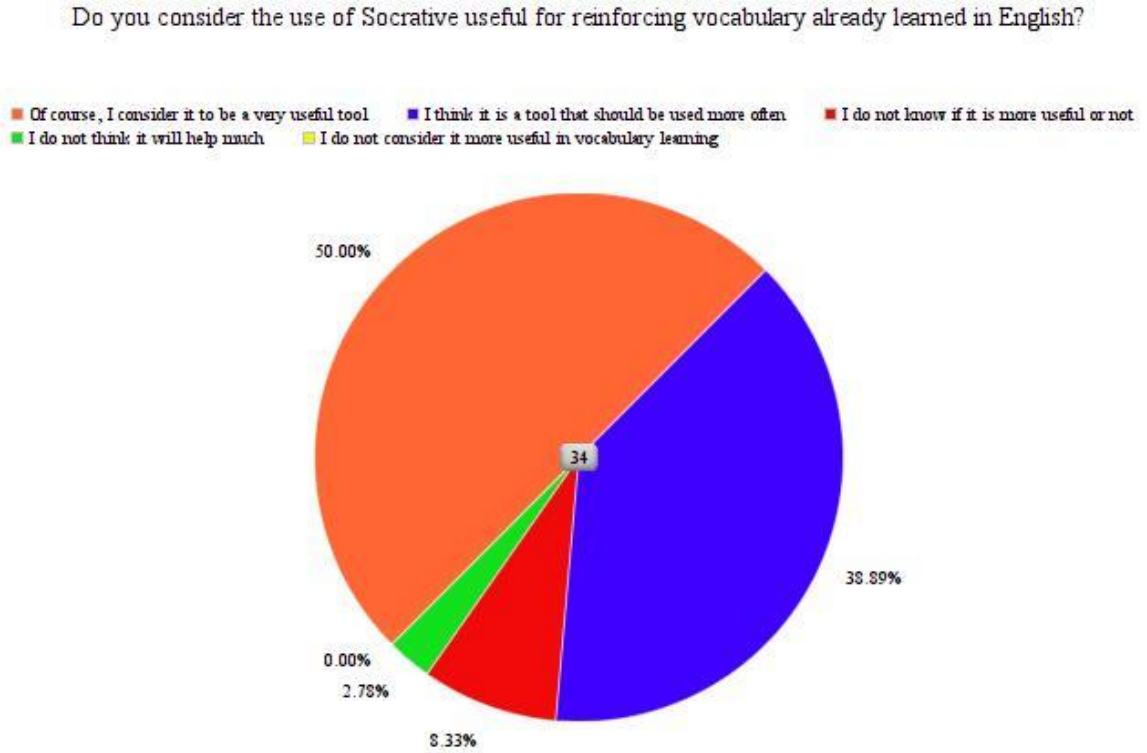


Figure 2. Socrative poll second question results

According to the results exposed in Figure 2, 88,89% of the participants gave positive feedback about using Socrative. These participants consider Socrative helpful as a support for reinforcing their vocabulary already learned in their previous English classes. Within this percentage, 50% of the students consider Socrative a very useful tool, while 38,89% of the participants would include its usage in the English classroom more often. Conversely, 8,33% of the surveyed students do not have a specific point of view on whether or not Socrative is more effective. The rest of the participants (2,78%) considers that Socrative will not be too much helpful in their English vocabulary reinforcement.

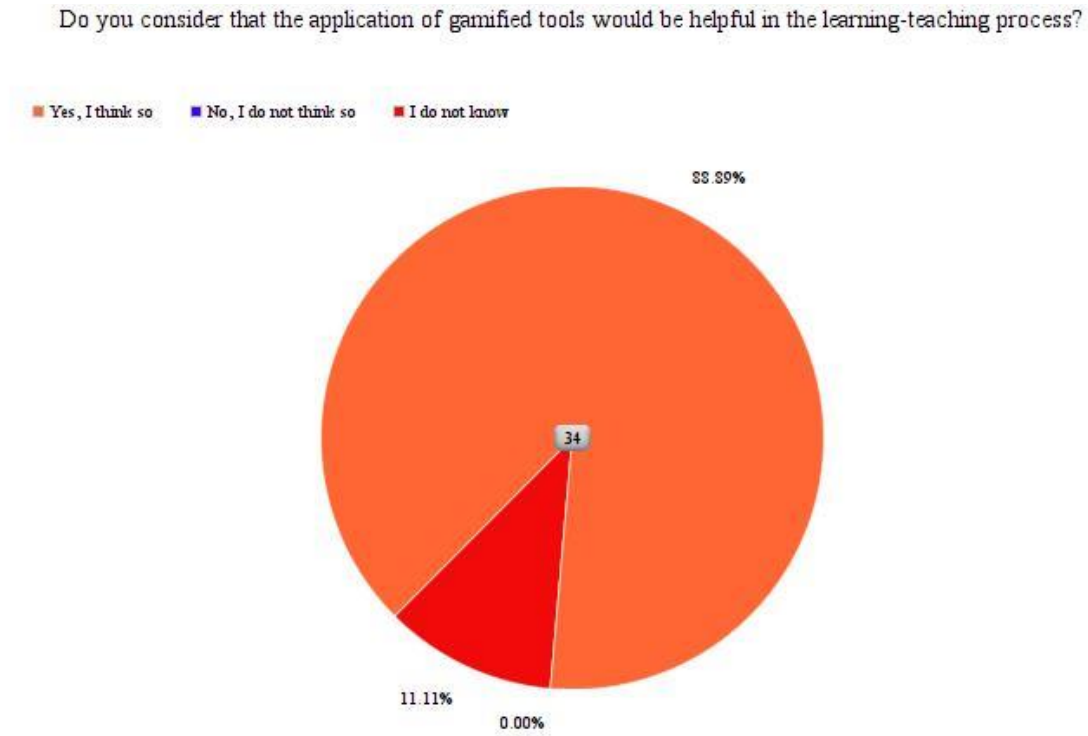


Figure 3. Socrative poll fourth question results

Concerning Figure 3, 88,89% of the participants consider gamified tools effective in the learning-teaching process (instant feedback, enhanced motivation and communication, among others). On the other hand, the rest of the participants (11,11%) do not know whether gamified tools are more useful.

6.5.2. Discussion

As mentioned above, this project pretends to have a focus on how gamification has a role in the English teaching-learning process in schools. More specifically, the usage and impact of new gamified tools in the English language vocabulary acquisition. In order to reach the objectives established in this project, previous broad bibliographic research was necessary. This bibliographic compilation is organized based on the subject matter of the different authors and their points of view on the new gamified tools in education. Within this specialized bibliography on language teaching and education, an instance is Calero (2019)

and her investigation of digital competence and technological education, among other researchers.

To perform this interpretation of the previous results, the analysis of errors produced in procedure 1 (See Tables 1 to 5) will be the main point of reference. Through this analysis of the errors made by the participants with Socrative, the role of gamified tools in vocabulary learning will be visualized. Gamification will support the subsequent reinforcement of English vocabulary in the classroom. Gutiérrez (2019, 56) indicates that all the tools serve to generate doubts that encourage students to discover new knowledge, help them to review content and allow them to learn through a positive vision of error.

On the one hand, the results obtained by Socrative allow tutors and teachers to monitor the progress of the students. The gamified tool allows doing two types of monitoring of students in the classroom: either an individual or overall results. Through the results collected by gamification, teachers can analyze where their students have a higher rate of errors. Thus, the teacher can make a judgment about how to solve these vocabulary errors by using other approaches. Regarding this issue, another study states that teacher reported that Socrative allowed them to monitor student progress and encouraged active listening and daily teacher-student interaction (Cosi et al. 2020). For a better comprehension of this issue, a previous table will serve as an instance. Dealing with the results obtained by Class 3 (See Table 3), most of the participants failed question 2 (furniture vocabulary), and 0% gave a right answer in question 4 (nationalities vocabulary). The interpretation and analysis of these errors will assist teachers to choose how to solve these problems. The results indicate that a large percentage of the class fails in these vocabulary topics. To reinforce both furniture and nationalities, the teacher could consider different strategies to strengthen that vocabulary. For instance, another activity to reinforce it, explaining those topics again, among others. Therefore, the results and analysis of errors obtained by Socrative will help teachers to monitor their students' progress in learning English vocabulary.

Regarding monitoring students' progress, through the usage of Socrative, teachers can give some feedback to their students. Throughout the first procedure, students received feedback after completing some questions (see Appendix 1). This feedback is helpful to get a quick and brief explanation of why those answers are right. In support of this issue, a study performed by Areed et al. (2021) indicates that gamified e-quizzes help students to evaluate academic performance in formative assessment, provide feedback to students, improve their knowledge, and support enjoyable and competition-based learning. Thereby, monitoring students' progress with gamified tools is highly effective whether complemented with constant feedback to improve their vocabulary learning.

On the other hand, not only the feedback to the students is relevant. Also, the feedback received by students is crucial for improvement and learning vocabulary. Considering the previous results, 86,11% of the surveyed students gave positive feedback to the use of Socrative in the English classroom (see Figure 1). Moreover, 88,89% considered Socrative a powerful and useful tool for reinforcing vocabulary (see Figure 2). Students' perceptions indicate how they perceive the advantages of using gamified tools in their learning. In other words, the teaching-learning process receives a significant influence from gamification and gamified tools. Students realize the multiple benefits influencing this teaching-learning process: the inclusion of electronic devices, changes in the teaching methods, and an innovative way of reinforcing knowledge and error correction (see Figure 3). According to research developed by Martin et al. (2017, 8833), more than 85% of students indicated that Socrative improved their learning process (level 4 or 5) and a similar percentage of students answered that Socrative stimulated their active participation. Furthermore, Méndez and Slisko (2013, 23) argue that Socrative is a useful tool, as it supports the learning and increases the motivation. In addition, it helped them to be aware of their knowledge and their way of thinking.

Based on previous studies on gamification, the results of this research project have proven truthful and realistic. The inclusion of this element to support vocabulary learning assists both students and teachers to improve. The numerous benefits achieved by using

Socrative and other gamified tools are crucial in the teaching-learning process. Besides its contribution to student motivation and interest, their role in the teaching of English as a foreign language (EFL) is also noteworthy. The use of error analysis to support the interpretation of the results has been a valuable input for this research project. Nevertheless, the information available nowadays is probably limited in comparison to the near future. Technologies keep evolving and providing new tools for education. Therefore, broader research into the benefits of these gamified tools in English language learning will need to be progressively conducted.

7.CONCLUSIONS

To finalize this Final Degree Project, this section will present the conclusions obtained after its procedure. The objectives established initially have been fulfilled throughout the development of the project. Nevertheless, certain of these objectives may have been reached more successfully. Therefore, a distinction between the benefits obtained in this Final Degree Project and the areas to be improved is relevant for future research on this issue.

The theoretical framework of this Final Degree Project has contributed to demonstrate and justify the relevance of ICTs in education in the 21st century. Their significance and presence have been reflected both in Spanish education and European Union education. Likewise, real data on the use and availability of new technologies in several countries, including Spain, have been displayed. Additionally, the theoretical framework has also included a comprehensive explanation of the concept of gamification, as well as an overview of the most popular gamified tools at present. To conclude the theoretical framework, the relevance of these digital tools in the acquisition of English vocabulary has been discussed. This section has appropriately highlighted the positive effects of their inclusion in vocabulary learning; thus, this objective has also been fulfilled.

Moreover, the methodology has also proved to be effective, and the discussion of the results has demonstrated its relevance in this Final Degree Project. This methodology has enabled an investigation into the acquisition of English language vocabulary. The selection of Socrative was appropriate as this tool is relatively unknown and innovative for students. Furthermore, the use of this methodology could be applied to other subjects in the curriculum or even to strengthen other areas of the English language.

On the other hand, certain issues of this Final Degree Project have not been so successful and are worth mentioning. The lack of previous research or data on particular areas has hampered this project on certain occasions. Regarding vocabulary acquisition with gamified tools, methodologies with Socrative were scarce, being Kahoot and Quizlet the most researched tools. Therefore, this Final Degree Project provides innovative research previously scarcely investigated. Furthermore, the specific search for these gamified tools was arduous. The concept of gamification was broad to investigate, so a very specific search was conducted. Nevertheless, despite these obstacles during the research, this Final Degree Project will be valuable for future investigations into English vocabulary learning.

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9.APPENDIXES

APPENDIX 1: SOCRATIVE QUIZ

1. What is the name of the object shown in the picture?

- A Blouse
- B Sweater
- C Shorts
- D Trainers



2. Which of the following words is not a piece of furniture?

- A Cooker
 - B Armchair
 - C Floor
 - D Carpet
- i* The floor is a part of the house, but not a piece of furniture.



3. If you are "thirsty", does that mean you need to have a drink?

True



4. What is the nationality of the inhabitants of the Netherlands?

- A Dutch
- B Nether
- C Belgian
- D Danish

- i* The correct answer is "Dutch".
 "Belgian" and "Danish" are nationalities of other countries, while "nether" is an adjective meaning "lower."



5. Is this building a grocery store?

False

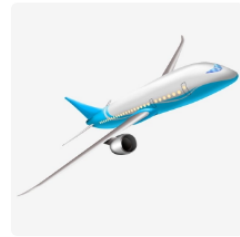
i It is a bookstore



6. When you go on a trip, how do you name the things you take with you?

- A Roundabout
- B Coach
- C Journey
- D Luggage

i "Luggage" includes everything you take with you on your trip: clothes, shoes, electronic devices, etc.



7. At Christmas, in some countries it is typical to eat _____ chicken.

- A Toast
- B Roast
- C Salty
- D Cheese



8. Which of the following adjectives is not a positive feeling?

- A Worried
- B Pleasant
- C Interesting
- D Friendly



9. Name one winter sport

- Skating
- Ice Hockey
- Snowboarding
- Skiing



10. Your partner's brother is your _____

- A Nephew
- B Father-in-law
- C Grandson
- D Brother-in-law

- i Your "father-in-law" is your partner's father
Your "nephew" is your brother's or sister's son
Your "grandson" is your son's or daughter's son



APPENDIX 2: SOCRATIVE POLL

1. What is your general opinion about the use of Socrative in the English classroom?

- A I liked it very much
- B I liked it
- C Normal
- D I did not like it
- E I did not like it at all



2. Do you consider the use of Socrative useful for reinforcing vocabulary already learned in English?

- A Of course, I consider it to be a very useful tool
- B I think it is a tool that should be used more often
- C I do not know if it is more useful or not
- D I do not think it will help much
- E I do not consider it more useful in vocabulary learning



3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?



4. Do you consider that the application of gamified tools would be helpful in the learning-teaching process (instant feedback, use of devices in the classroom, enhanced motivation and development of the class, etc.)?



- A Yes, I think so
- B No, I do not think so
- C I do not know

APPENDIX 3: SOCRATIVE POLL (RESPONSES QUESTION 3)

3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?

- Anon anonb6d991cc44eb45bb
6/6 | Yes, because things like these can help you to remember better the vocabulary you learn
- Anon anon3799ac248bed4df1
| well, i think yes, because is a good form to learn.
- Anon anonf82abc2599e34a31
| Yes. Because always the best way to learn is the funnier.
- Anon anon6cf73610aef3450f
| Yes,because the classes they well be fun and more easy to understand
- Anon anon9b30778494754115
| yes because the classes are more funny
- Anon anone7001a0db0de4fe5
| Yes. Because learning with games is better for students

3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?

🗳️ Anon anonae82f3b7d644616

5/5 | Yes, because it is more entertaining and The pupils don't feel bored like when you are explaining all the time

Anon anonec07cc57ccd74969

| yes, i think the class we can be more funny

Anon anon038dac116b848e4

| yes , because i think that are more funnis

Anon anonaad37a3302724ea8

| Yes, because when we are playing we are learning at the same time.

Anon anonabbe9c75992147be

| i think if we used more we will ha e more fun

3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?

🗳️ Anon anon319c7ef8e6234e3a

7/7 | Yes, because I learn very much and fast

Anon anon748cb7a951c64167

| Yes because they are interesting and fun

Anon anon7b3e243862f44efc

| yes, i like it and you learn and enjoy it

Anon anonc81d5094b23e4ef5

| i think the use of these tools can be useful but i don't know

Anon anoncb66e210c96487c

| yes, because its veru funny

Anon anon8c3204f181e742c9

| Yes because you can have vocabulary

Anon anon6f4a430a9af14721

| Yes, because its funny and you learn.

3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?

- 13/13 | **Anon anon5f6ad7c8ffe634511**
I think is funny, it's okay.
- Anon anon46f9122cee624d3f**
I think they are a bit difficult to use.
- Anon anon3aa98bbc42594fdf**
yes because i like it
- Anon anonc76ff7f63e4c4850**
Its very funny
- Anon anonc5d66e13056142bb**
yes because we learn more vocabulary
- Anon anonf336e87ac7b74e64**
Yes. Because it's funny
- Anon anonc251888b8ca14dee**
Yes, because I think is funny and interesting.
- Anon anonfc879c409d34486a**
It is funny
- Anon anon30b2361745da4809**
yes. Those tools help students in their learning because they are easy to understand
- Anon anon2b86225986084f82**
Yes, because is very interesting and funny
- Anon anon8823a6695a674384**
Yes, because like this you learn.
- Anon anonc01b4477c3704f8e**
yes because it was funny
- Anon anon389181cf9e9348d5**
yes. Because is very funny and interesting.

3. Do you think the use of gamified tools should be used more often in the classroom to support learning? Why?

- 5/5 | **Anon anon6b222faa8e784258**
Yes, cause is usefull to us. It helps a lot. It is a funny form to lern english vocabulary.
- Anon anonc78e3944c4a4905**
Yes, I think, because its very fun and interesting, and like this, learn its more fun and you learn more fast and the English is more easy like this.
- Anon anon6a660f7267574df5**
Yes, because at the same time whe stay with the mobile and is a differen way to learn
- Anon anon1d9513c31ae5493a**
Yes i think is very funny and you learnt lots of things
- Anon anon77805844be044a4d**
yes because its fun