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Game-based Language Learning in the ESL  
classroom: Application to the study of  
irregular verbs

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**Abstract:**

As a response to the lack of empirical studies dealing with the application of game-based language learning to the study of irregular verbs, the following dissertation seeks to examine whether GBLL<sup>1</sup> is effective for reinforcing the knowledge of irregular verbs in L2 English learners from Catalunya. The dissertation reviews previous literature dealing with the application of GBL<sup>2</sup> for educational purposes and makes a differentiation between GBL and gamification. To test the effectivity of GBL for this purpose, a total of fifteen A2 English L2 students from a local English academy were divided into control and experiment group and tested through a pre-test/post-test methodology. The experiment group was taught through a game specifically designed with *Quizizz* for reinforcing the learning and contextualization of irregular verbs, whilst the control group was taught the same contents through the traditional method<sup>3</sup>. The tests' results show a clear improvement in the outcomes of the experiment group to the detriment of the control and suggest that GBL positively reinforces the knowledge of irregular verbs in Catalan students with English as L2.

**Keywords:** Game-based Language Learning, Gamification, Irregular verbs.

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<sup>1</sup> *GBLL* stands for “Game-based language learning”

<sup>2</sup> The abbreviation *GBL* stands for game-based learning

<sup>3</sup> In this dissertation, the term *traditional method* is used both to refer to unidirectional teaching in a classroom setting and to the study of irregular verbs through memorizing lists and doing periodical exams.

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## **1. Introduction:**

I originally decided to work on the field of game-based language learning because, in my experience as a private English teacher, I have realized that students spend a lot of time studying irregular verbs, and then they are not capable of understanding them in contextualized situations or resorting to them at the time of speaking. These students spend a substantial amount of time studying by heart endless lists of verbs of which they hardly know the meaning, something which, added to the fact that they do not put these verbs into practice, directly affects their confidence at the time of expressing themselves in English and considerably limits their speech capacity. Moreover, as a consequence of this lack of practice, these students also tend to forget these verbs after a couple of months and are not capable of applying them to their written compositions.

As August et al. (2005) report, “for instructors of young children, using their natural abilities to memorize, retain, and utilize English in a social setting seems the best way to approach irregular verbs and common English words”. For this reason, adducing to the fact that new techniques which adapt the contents to the current needs of new generations and motivate them to learn must be incorporated into the teaching of irregular verbs, this paper originally aimed to test whether using a game specifically designed to learn the irregular verbs provided better learning results than the other methods which were currently being used in the Catalan educational system. However, the survey conducted during the documentation process showed that the students’ main problem was not at the time of learning the irregular verbs, but at the time of applying them to real-life situations, something which changed the focus of the study into working on a game-based learning complement to the study of the irregular verbs that would really reinforce the learning of

irregular verbs in the long-term, and help students contextualize and include those verbs in their core vocabulary. Thus, this paper hypothesizes on the idea that using a game specifically designed to reinforce the learning of the different forms and uses of irregular verbs in contextualized situations might be a more appealing method that will motivate students to learn irregular verbs in an effortless and more accurate way; and hopefully, also help them to use these verbs in real-life situations correctly.

Therefore, the first objective of the project is to analyze the current necessities of Catalan students when it comes to learning irregular verbs and see what their perceptions are on the methods that they are currently using for studying them. Subsequently, their comments and experiences are considered to see which aspects of the methodology need to be either changed or reinforced. As it has already been mentioned, the second and main objective of the following dissertation is to design a game to complement and reinforce the learning of irregular verbs which makes their study more appealing and less tedious for students. That is to say, to design a game that helps students acquire irregular verbs in a way that they can later incorporate them into their core vocabulary and quickly resort to them in real-life/contextualized situations<sup>4</sup>. Finally, the last objective of this study is to test the effectiveness of the game designed for this purpose and analyze students' perceptions when using GBL<sup>5</sup> for language-learning purposes. To test the effectiveness of the game, a three-step methodology is implemented, and a perception survey is run.

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<sup>4</sup> *contextualized/real life situations* refer to being able to understand these verbs in a song, film, book or exercise; or use them fluently in a conversation with an English-speaking person.

## **2. Literature review**

### **2.1. Game-based Learning (GBL)**

As Plass et al. (2015) claim, “the uniqueness of game-based learning can hardly be defined at an epistemological level”, as game designers combine behaviorist, cognitivist and constructivist elements in the design of games for learning. Consequently, this concept can be understood in many different ways, and “a definition of game-based learning is complicated to achieve on an abstract, generalizable level” (Plass et al., 2015).

From a strict point of view, Whitton (2012) defines GBL as the “learning that is facilitated by the use of a game”. However, this concept is not restricted to a single definition, as according to De Freitas (2006) GBL consists of games containing learning content derived from the school curriculum which seek to enhance the learning experience. From a broader perspective, Falciani (2020) complements the previous definitions by adding that “Game-Based Learning is designed to balance subject matter with gameplay and the player’s ability to retain and apply this subject matter to the real world.” Moreover, this author also highlights GBL’s effectiveness for motivating and engaging students in reaching specific learning objectives related to knowledge, skills, or attitudes.

As for the main characteristics that define GBL, Plass et al. (2015) claim that the central characteristic of GBL lies in that game mechanics should be turned into learning mechanics aligned with the learning goals of the game. That is, the learning goal should be in line with the core tasks learners execute in the game. Other authors like de Freitas (2006), state that the main characteristics of GBL relate to the fact that that they allow learners to rehearse skills, explore open-ended spaces and develop higher cognitive skills.

On the whole, it must be considered that the majority of game-based learning definitions mainly emphasize that it is “a type of game play with defined learning outcomes” (Shaffer et al., 2005) that is often experience-based or exploratory, and therefore relies upon experiential, problem-based or exploratory learning approaches (de Freitas, 2006).

## **2.2. Gamification**

“What exactly is meant by gamification varies widely” (Plass et al., 2015). According to Seaborn et al. (2015), the term gamification is used to express those aspects of the interactive system that intend to motivate users to become involved in a task through the utilization of game mechanics and elements such as incentive systems (e.g., leaderboards). In similar terms, Deterding et al. (2011) link gamification to the use of design elements characteristic for games in non-game contexts and appeal to its potential to motivate and engage players in a task they otherwise would not find attractive.

The term gamification also appears in glossaries and dictionaries. It is defined as “the process of adding games or gamelike elements to something (such as a task) so as to encourage participation” (Merriam-Webster, n.d.) and as “the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals”. (Gartner, 2014). Moreover, this latter glossary also highlights that “it is important to distinguish gamification from video games and loyalty programs, as gamification uses techniques from behavioral science to “nudge” people into achieving their goals”. Concerning this idea, Nelson (2012) also comments on the possible origins of gamification by adding that “gamification is known since a long time ago, derived from marketing efforts such as point cards and rewards memberships”.

### **2.3. GBL vs Gamification**

The fact that some gamification elements are usually included in game-based learning activities makes the boundaries between GBL and gamification challenging to define. Thus, it is important to note that while the learning results from playing the game in GBL, the game mechanics used in gamification do not constitute the main tool for learning, but an extrinsic motivation to complement the traditional classroom activities. That is, as opposed to GBL, gamification consists in the application of game elements and mechanics to non-game problems. In order to make this differentiation clearer, Plass et al. (2015) propose an example with math homework. If the activity was gamified, students would be given points and stars for completing already existing activities. On the other hand, if a game-based learning strategy was applied, although it would still be possible to include points or stars in it, these homework activities would have to be redesigned by means of applying rules of play, with the intention of making them more interesting and engaging for the students.

According to Kapp (2014), while GBL employs real games to deliver skill and knowledge, gamification only employs a small number of game elements to achieve the desired purpose. Moreover, this author states that, as opposed to gamification, there is a start, a gameplay and an ending state in GBL. On the contrary, in the case of gamification, the learners do not interact with the whole game from start to the end, and they get involved in a session that consists of utilizing game elements such as being awarded for finishing a task, coping with obstacles or getting points. Finally, the last distinction this author makes between the two concepts is concerned with the setting in which they take place: “While GBL is used to give formal learning within the classroom, gamification does not always take place in class” (Kapp, 2014).

As for de Freitas (2006), GBL can correspond to a subset of serious games<sup>6</sup> in which a fully-fledged game is developed to deliver immersive and attractive learning experiences for giving a particular learning goal, experience, or result. On the other hand, this author allocates gamification outside the category of serious games, since it introduces game elements into non-game environments and can either be applied to school learning, software production, or sales management. In the same line, Perotta et al. (2013) also base their differentiation between GBL and gamification on that gamification is about taking elements from game design and implementing them in various contexts, and oppositely, GBL consists in using a complete game for the learning.

On the whole, the main difference between game-based learning and gamification lies in that GBL uses game elements to teach a specific skill or achieve a specific learning outcome, and gamification consists of the application of game mechanics in non-game contexts to promote a desired behavior or drive learning outcomes. That is, GBL becomes the training itself, while gamification uses game elements such as a reward for completing already existing training. Thus, while GBL focuses on turning the learning objectives into something fun and engaging for the learners with the subject matter, gamification integrates engagement software with existing content to motivate and engage them. It must also be taken into account that, contrary to gamification, GBL usually empowers students to try out their new skills in a risk-free setting (without real-world implications) and provides them with accurate feedback to help them improve these skills before they have to put them into practice in the real world.

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<sup>6</sup> In her study, de Freitas (2006) uses the terms “*serious games*” and “educational games” as synonyms.

## **2.4. Game-based Learning in education**

The wider use of game technologies in the home is increasing the interest in the use of games in educational contexts, and in turn, is leading to increasing the use of games in schools, colleges and also in universities (de Freitas, 2006). Moreover, the possibility of modifying existing games for educational purposes increases the potential for learning with games up to a point in which they might promote greater opportunities for team and cross-disciplinary learning if correctly applied. This, added to the situation that in many societies these days people feel the need to prepare younger generations to adapt to different and fast-changing environments (Falciani, 2020), makes the use of educational games necessary for the learning of the coming generations. In relation to this, Pivec et al. (2021) also defend that using games for educational purposes encourages learners to combine knowledge from different areas and to interact with other team members, something which improves their social skills.

Regarding the efficacy of GBL in education, Connolly et al. (2012) reviewed more than a hundred studies to analyze the positive impacts of learning games on adolescent learners and confirmed that overall, games were an effective tool for learning. Four years later, Boyle et al. (2016) replicated the work done by Connolly et al. (2012) with slight modifications and noticed an update on the positive learning outcomes of gaming with regard to learners over the age of fourteen. Based on existing theory and previous research, Plass et al. (2015) also claim that GBL is believed as an effective learning method that can be used to implement almost any learning theory. Moreover, Plass et al. (2015) also state that, as games are able to facilitate learning engagement on a cognitive, affective, and sociocultural level, they promote learning in ways other media cannot.

However, using games for educational purposes is not as easy as it seems. Although psychologists have long acknowledged the importance of play in cognitive development and learning, and some of them have even described play as being integral to children's stages of cognitive development (Piaget 1962), games have been more widely resisted by tutors and parents alike due to their association with violence and leisure time activities. Furthermore, there has been a dominant perception of gaming as a leisure pursuit with no pedagogic value (de Freitas, 2006), and there is still a generalized perception that new methodologies for evaluating the efficacy and benefits of learning in these new ways are needed to support the use of GBL in education (de Freitas et al., 2010).

Back in the '70s, Coleman (1971) already claimed that the tendency of refusing the use of games in the educational setting was changing. However, although the dominant perception of gaming as a learning tool has changed over the past few years, a sector of the educational community is still reluctant to use games for educational purposes (de Freitas, 2006). Hence, games must be thoughtfully and methodically applied to education in order for this implementation to be effective, produce the expected academic outcome, and become accepted by the educational community. For all these reasons, the key points for implementing game-based learning (de Freitas, 2006) were considered for designing and applying the game used in the experiment of this dissertation.

## **2.5. Digital Game-based Learning (DGBL)**

Mapp's (2016) insights on the importance of family support for better performance in learning highlighted how vital the role of parents is for motivating students and showing them the importance of school. However, as family structures, working hours, economic

needs, and household routines have changed in the last few years, parents do not usually have time to work alongside their children in school matters at the end of the day. Furthermore, kids are also reluctant to devote this time to educational matters, as they prefer to spend this time playing video games, chatting online, or using social media. Hence, as it could be argued that technology and games are substituting the time parents devote to their children's education, the implementation of digital games in education appears to be a productive alternative to be used in favor of children's education.

In relation to this idea, Prensky (2001) introduces the concept of "Digital Game-based Learning", a term that refers to the utilization of educational game software for learning. According to Prensky, as the new generation of students (the so-called "Digital Natives") have grown up surrounded by computers, mobile phones, computer games, and a wide range of other digital devices, they are no longer appealed by the already existing learning approaches. Consequently, this generation, which is characterized by its lack of patience, and is used to multitasking and task-switching, requires multiple streams of information, prefers inductive reasoning, and wants quick interactions with content (Van Eck, 2006).

Therefore, as all these aspects are well supported by game-based learning approaches, GBL has become an essential tool for their education. However, Prensky (2001) also argues that as "digital immigrant" teachers know so little about the digital world, it is often impossible for them to design learning in the language and at the speed their students need, despite their best efforts. "This is why so many of our children find school so uselessly irrelevant: they no longer understand their teachers' outdated language, and their teachers no longer speak theirs", concludes Prensky (2001).

## **2.6. Mobile phone use in young generations**

In relation to this, smartphone's use is also a relevant factor to be considered for designing the experiment's game. According to Prensky (2001), "the amount of time today's young people spend playing computer and video games, is estimated at 10,000 hours by the time they are 21". However, the essential problem comes when this device is misused. According to Oxford Learning (2019), students check their phones in the classroom an average of more than 11 times a day (with some of them spending up to 20% of their in-class time texting and checking social media). As for Spanish students, "The 1<sup>st</sup> observatory of the X Generation through the smartphone" concluded that the average smartphone usage among young Spaniards is 5 hours and 15 minutes a day. If a focus is made on the smartphone use in class, this study revealed that nine out of ten students recognized having used their smartphone in class at some time, with just 7.97% of them having used it exclusively for educational purposes. However, there is reason for hope, as the study also shows that this trend is reverting in younger generations of students.

## **2.7. Mobile-assisted Learning**

Castañeda et al. (2016) argue that supplementing the classes with digital materials can keep the students interested in the class and encourage them to participate in the discussion. Moreover, they also claim that using educational learning apps can help students stay on top of their classwork, as well as teach them to develop better study habits (e.g., time management or organization skills). Similarly, Ott (2017) states that "students report positive attitudes toward usability, effectiveness, and satisfaction with mobile technologies as language learning tools". However, Castañeda et al. (2016) also mention the challenge that restricting mobile phone use to school-related tasks supposes

in a school, as the inappropriate use of mobile phones in class (e.g., checking social media or texting with friends) can produce an adverse effect and lead to distractions, class interruptions, and to the student's disconnection from face-to-face activities. Finally, the problem of cheating is also mentioned, as students might use their mobile phones to access information while taking a test (Oxford Learning, 2019). In the same line, Ott (2017) also argues that mobile phones can also be harmful to ordinary school practice, as cheating is a crucial issue inherently associated with the use of mobile phones in school. Nevertheless, alluding to the certainty that mobile technology is perceived as "an effective method for improving reading and grammar ability that is easily accessible and good for self-study" Ott (2017) finally advocates for the implementation of mobile-phone-assisted learning in the classroom.

As Ryder (2019) says, "Love them or hate them, smartphones have become an integral part of our daily lives". For this reason, intending to encourage students to incorporate the mobile phone into the range of tools available for their learning, this dissertation substitutes the traditional method for a game designed with the application *Quizizz*, which allows students to use it on their mobile devices.

## **2.8. (Digital) Game-based Language Learning (DGBLL)**

Cornillie et al. (2012) argue that the use of games for language learning can also be labeled as digital game-based language learning and state that "empirical studies on DGBLL<sup>7</sup> have largely increased in the past decade, demonstrating the growing interest in investigating the added value of digital games for language learning".

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<sup>7</sup> The abbreviation *DGBLL* stands for Digital Game-based Language Learning

Regarding some of these studies, their authors found that DGBLL was capable of enhancing language learners' self-efficacy (Castañeda et al., 2016), learner autonomy (Chik, 2014), and willingness to communicate in the target language (Reinders et al., 2015). Furthermore, Hung et al. (2018) produced an empirical scoping review of the different studies dealing with the use and impact of digital games in language teaching and concluded that “the majority of DGBLL studies featured positive outcomes in regard to the students learning”; results which suggested that “digital games are helpful for promoting language learning of both native and non-native speakers” (Hung et al., 2018). Likewise, Chiu et al. (2012) also examined more than fifty studies dealing with the effectiveness of digital games for learning English as a foreign language, and located fourteen studies that lent support to the use of digital games in EFL<sup>8</sup> settings.

## **2.9. Characteristics of games**

As the *Encyclopedia of the Sciences of Learning* claims, there is not a single accepted classification for the term “game”, and the different definitions of the concept depend on the disciplinary background of those who create them (Whitton, 2012). Consequently, one of the best ways to define games is to consider the main common characteristics most of them exhibit, which are the following ones: competition, challenge, exploration, goals, interaction, outcomes, people, rules and safety.

The first of them, competition, stands for the player being able to win somehow (either by competing against other players or achieving the game’s objectives). This characteristic is central to the design of the game, because as Vandercruysse et al. (2013)

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<sup>8</sup> The abbreviation *EFL* stands for English as a foreign language

report, “students that have worked in a competitive environment out-perform the students in the non-competitive environments”. The second characteristic that defines games is challenge, entailing that achieving the marked goal must imply some kind of effort (either physical, mental or social) by part of the player. According to Pivec et al. (2021), “if the difficulty level of the activity is either is too high or too low, players lose interest”. Thus, using progressive difficulty levels and setting multiple goals might be a good way of designing challenge for players. The third characteristic, exploration, makes reference to the game taking place in a simulated environment, as well as the fourth, goals, refers to setting explicit objectives for the players to achieve in order to be able to progress in the game. The fifth characteristic is interaction, and it refers to the influence that players have on the game and how the game provides them with feedback on their actions. As Castañeda et al. (2016) suggest, “immediate feedback may help students internalize or reinforce previously learned conjugation rules”, something which is of great interest for the present dissertation. In relation to this, outcomes refer to the way of measuring the players’ progress. That is, the game must provide the players with a way of seeing their progress in relation to other player’s achievements or game goals. The interaction between players is also a central characteristic of games, as well as the set of rules or instructions that regulate it are also an essential characteristic that cannot be overlooked at the time of designing a game. Finally, safety<sup>9</sup> is presented as the main characteristic to be taken into account at the time of no overpassing the boundaries that separate game-based learning and gamification. As (Kapur, 2008) states, “rather than being an undesirable outcome, failure is by design an expected and sometimes even necessary step

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<sup>9</sup> Other authors also refer to this characteristic as “*graceful failure*” Plass et al. (2015) or “*productive failure*” (Kapur, 2008).

in the learning process”. Consequently, the games used for GBL must be consequence-free: no matter whether the players make mistakes or obtain the highest score possible for the test, there will be no reward or penalty for any of them. According to Prensky (2001), making a mistake is a primary way to learn, as failure is considered a point where users get some feedback and regarded as the motivation for learners to keep on trying GBL. Hoffman et al. (2010) also share this perspective and agree that “the lowered consequences of failure in games encourage exploration, risk taking and trying new things”. In parallel, Whiton (2012) finally mentions that the notion of “fun” is also commonly used to define games, although this definition is more problematic because “fun is something subjective in a player’s experience of the game and not in the game itself”.

However, as there is not a single definition for the concept of game, there is neither a homogeneous close set of characteristics to define them. Plass et al. (2015) argue that virtually all games appear to have a structure consisting of a challenge, a response and feedback; and that there are just four main arguments that support the effectiveness of games used for learning purposes: motivation, player engagement, adaptivity, and graceful failure. As for Prensky (2001), games must comprise the following structural elements to be considered games: rules, goals and objectives, outcomes and feedback, competition or challenge, interaction, and representation.

Nevertheless, despite all the options available, this study considered the characteristics exposed by Whiton (2012) to design the game used in the experiment.

## **2.10. Activities and techniques used for teaching irregular verbs**

As Fields and Marsh (2017) indicate, the students' confidence rises significantly when they have a firm base of the irregular verbs, and therefore, they feel then capable of participating in lessons possibly for the first time in their education careers once they have learned them properly. For this reason, the authors recommend a few activities and interactive techniques which have been conceived to solidify the knowledge of the most common used irregular verbs in the classroom setting. Firstly, they suggest creating a routine consisting of revising a delimited set of irregular verbs in the five first minutes of each English class. For this purpose, they divide a list of a hundred irregular verbs into five subsets, assign different colors to each of these subsets, and create color flashcards corresponding to each of the different verbs in the list. For the class review, students sit in pairs and have to tell their partner the translation of the different verbs appearing in the flashcards, as well as also conjugate these verbs into their past simple and participle forms. (Students work on a different color each day). When the students have a strong foundation of irregular verbs, Fields and Marsh (2017) also suggest including individual worksheets to this 5-minutes review. In these worksheets (the difficulty of which will increase gradually), students have to include the studied irregular verbs in full sentences so as to work on the contextualization of irregular verbs and enhance its inclusion into their core vocabulary. However, the offer of activities for working on irregular verbs has significantly increased in the recent years, and consequently, there are plenty of websites that offer educational game proposals for free nowadays. Among them, the offer that *teach-this.com* makes is particularly attractive, as it provides teachers with all the necessary materials to play the different games in the classroom setting, as well as it also includes interactive versions of some of them to be played online.

### **2.11. Results of the application of “Game-based Language Learning”**

Despite the fact that there is a wide range of studies dealing with the topic of game-based learning, that number is dramatically reduced when relating to the area of language learning. Furthermore, the result of the application of GBL to the study of irregular verbs is almost inexistent, and the only study which addressed a similar topic was the following one: “Game-Based Learning Platform and its Effects on Present Tense Mastery: Evidence from an ESL Classroom”. In this study, Idris et al. (2020) examine whether the application of the learning tool *Kahoot!* is useful to reinforce the learning of the present simple verbs in the English as a second language (ESL) classroom. In order to do so, they tested the tool in a classroom of 31 nine-year-old Malaysian students during a period of four weeks, and the results obtained showed that the students had significantly improved their knowledge of irregular verbs. Regarding these results, the authors of the research claim that the application of *Kahoot!* produced an increase in the learning motivation of the students and was proved to be an effective tool for language learning.

Similarly, Castañeda et al. (2016) determine that integrating a game-like application in a classroom through a mobile device enhances Spanish as a second Language students’ accuracy and confidence in conjugating Spanish verbs. Moreover, these authors also make reference to the “traditional method” described in this dissertation by mentioning that “typically, the conjugations are learned by writing a limited number of verbs on paper and repeating until learned” and state that “the current study suggests that the combination of a game-like application with intentionally designed learning activities provide an opportunity to learn complicated verb paradigms in a more engaging and enjoyable way”.

However, although Castañeda et al. (2016) claim that their study “provides empirical results that challenge current methods of teaching the Spanish verb conjugation paradigm”, these authors also acknowledge that the lack of a control group limited the main argument that students gained verb conjugation accuracy. Therefore, to ensure consistent outcomes, the experiment that drives the present study has divided the participants into control and experiment groups, respectively.

Likewise, de Freitas (2006) states that “the use of game-based learning can change not just what is learned but also significantly how we learn” and the main conclusions arising from her dissertation advocate for application of GBL in education. In relation to this application, De Freitas (2006) recommends testing the software tools before using them with the learners and highlights the importance of ensuring the alignment between learning objective, game, activities, and assessment “in order to support the most effective learning outcomes with game-based learning”. Moreover, de Freitas (2006) also emphasizes the importance of getting students to reflect upon real-life situations (so as to allow them to transfer their learning from rehearsal to real-life contexts) and highlights the need of fully integrating the game-based learning activities with face-to-face learning and feedback to ensure that the GBL activity remains relevant and effective in learning practice.

So, together with the aforementioned recommendations, the key points for the implementation of game-based learning in the classroom proposed by de Freitas (2006) have also been taken into account for designing the game and the GBL’s efficacy evaluation system used in this dissertation.

### **3. Methodology**

#### **3.1. How do Catalan students learn irregular verbs?**

In order to have specific data about Catalan students in the region and their learning of the irregular verbs, a survey was carried out prior to the design of the game. This first survey was designed with three main objectives in mind: analyze the students' perceptions of the different methods they had used to learn the irregular verbs, gather data of different age students belonging to different socio-economic backgrounds, and cover both compulsory and supplementary education. This survey was designed with Google Forms and delivered to a total of 104 people who had studied the irregular verbs in the Catalan educational system at some point in their lives. Half of the people who took part in the survey belonged to the Tarragonès region, and the vast majority of the other surveyed people were from Baix Camp, Baix Penedès, and Barcelonès regions, respectively. As for the age of the participants, they were all between 12 and 45 years old, with the majority of them (48%) being aged between 20 and 24.

Regarding the type of education, the survey showed no direct relationship between the different kinds of compulsory education (private, semi-private, and public) students had attended and the method they had used for learning irregular verbs. Also, no geographical criterion was applicable in this area, so the central hypothesis is that each school had its own preferences as to which was the best method for teaching irregular verbs to their students. However, there was a clear relationship between the age of the participants and the method they had used for learning irregular verbs: Of those older than 25, none of them had used games for learning irregular verbs, something which shows a relatively straightforward generational evolution in the methodologies used to teach them.

Although some students mentioned very innovative methods, this study only focuses on comparing the use of the traditional method, practical exercises and games. As far as compulsory education is concerned, 92.3% of the students reported that they had used the traditional method to study irregular verbs, 39.4% answered they had used practical exercises, and only 13.5% said they had used games for this purpose. On the other hand, only 67.2 % of students who had also studied the irregular verbs at an English academy said that they had used the traditional method consisting of memorizing lists of verbs and doing periodic exams for learning irregular verbs, and 34.4% of them reported having included games in their learning of the irregular verbs (something which represented a considerable 20.9% increase with respect to students in compulsory education).

The survey also included a self-assessment section on the knowledge of irregular verbs. In this section, the respondents were asked whether they would be able to correctly write the past simple form, the participle form, and the translation of the verbs "to be", "to do", "to eat", "to go", "to know", "to think", "to see" and "to read". Then, in order to test their actual knowledge of the topic, they were given two possible conjugations for each verb and asked to choose the correct one. After analyzing their responses, it was proved that there was no direct correlation between what they thought they knew and what they actually knew. These data also revealed that some of the students who learned the irregular verbs by heart presented problems at the time of spelling the different forms of the verbs correctly and demonstrated that the element of luck exists in the exercises in which the students have to choose between different options. Moreover, it was also seen that although some students did not know the different forms of a verb, they could identify them when they were put together in a sequence, as it is the way they had learned them.

In terms of effectiveness, an overall of 84.6% of the respondents reported that the method they had used for learning irregular verbs had been effective in the short term, but only 57.5 % of them identified this method as having been effective in the long term. However, if the data is analyzed in terms of the method students had used for studying these irregular verbs, the percentages vary. In order to mark this differentiation, all the students who had only used the traditional method were separated from the rest. Then, although 81.8 % of this group reported that the method they had used had been effective in the short term, this percentage dramatically fell to 52.7% when they were asked about the effectiveness of this method in the long term (causing a drop of 29.1%). On the other hand, all the students who had used games for learning the irregular verbs at some point in their academic life were also grouped together. From the resulting group, 89.3% of them agreed that the method they had used for learning irregular verbs (games) had been influential in the short term. However, as opposed to the previous group, 71.4% of them reported that this method had also had positive results in the long term. *See appendix 1 for a detailed graph on effectiveness perception.*

As far as the students' personal experience is concerned, it is worth noting that none of those who had used games to study irregular verbs assigned a 1 in response to whether they had enjoyed studying irregular verbs on a 1 to 5 scale<sup>10</sup>. Thus, together with the fact that 98.1% of the total survey respondents agreed that using games could help to study the irregular verbs, the survey showed that games were a generally accepted and appealing method for students to study irregular verbs, which in turn had very positive long-term effects compared to the traditional method.

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<sup>10</sup> See appendix 2

In its final part, the survey also had a space for personal comments which provided some valuable insight. In that section, both current and former English students explained that the techniques they had used for learning irregular verbs were mostly based on memorization, and that the systematic lack of practice lead to difficulties in remembering them in the long term and using them in real-life situations. It is important to highlight that many of the respondents also claimed that there was a need for more effective, entertaining, and motivating methods to be implemented in the study of irregular verbs. *See appendix 3 for original respondent's answers.*

### **3.2. Experiment preview**

The information gathered from this survey, together with the several interviews that were held with the personnel of the academy in which the game was applied, became an essential part of this research paper and constituted the basis for the design of the experiment in this dissertation. In one of those interviews, I was introduced to the different games the academy's teachers were using for teaching irregular verbs to their younger students, and among them, the ones which I found more interesting were: bingo (which was played with the past simple and participle forms of the verbs), memory (in which students had to match the bare infinitive form of the verb with its past simple form), and the hangman. I consider this information especially relevant, as it served me as a guide to see which activities were helpful for learning through games and helped me improve the game I was designing. All in all, this set of data allowed me to spot first-hand the problems English L2 learners were facing in the area of Catalunya and led to the hypothesis that a game which complemented the learning of irregular verbs and reinforced its understanding in contextualized situations would be a helpful tool students

would enjoy and be willing to apply. Hence, to verify whether this hypothesis was true or not, a three-week experiment consisting of three different phases (pre-application, application, and post-application) was designed, and a total of 15 students aged between 13 and 15 took part in it.

### **3.3. Pre-application**

As mentioned before, the key points for the implementation of game-based learning (de Freitas, 2006) were followed for the design of the GBL's efficacy evaluation system. In this case, the activity was planned as a whole consisting of a pre-test, a game, a post-test, and a perception survey. Then, the application context and the software needed for its implementation were considered, defining that the game would just be applied in the classroom setting and that its use at home would be optional for the students (so as to see if the game was appealing enough for the students to use it at home without being obliged to). Moreover, a free software was chosen to ensure the economic accessibility of all the students to the game, as well as the remote accessibility of the students who were working from home (as a consequence of the COVID-19 global pandemic) was also ensured through the election of *Quizizz*. As the main barrier to using games in schools was cited as a lack of access to equipment (de Freitas, 2006), this software was run on the institution's computers two times before being presented to the groups of students, so as to make sure there were no hardware or technological problems. Finally, several meetings were held with the academy staff, so as to become part of the community of practice and ensure their support during the application process. Furthermore, these meetings were also helpful for improving the original version of the game, as it was modified on the basis of the suggestions that the owner of the academy made.

### **3.3.1. Group formation and role assignation**

The two groups were formed out of students with the same level of ICT skills and with a current similar English level, which involved being familiar with irregular verbs and the present perfect tense. From the total of 15 students, 8 were 2<sup>nd</sup> ESO students and the other 7 were 4<sup>th</sup> ESO students. All of them were B1 level students who used the *English File Intermediate Fourth Edition* textbook in class. As for the role assignation, the seven 4<sup>th</sup> ESO students were included in the control group, and the eight 2<sup>nd</sup> ESO formed the experiment group. The main difference between the two groups consisted in that while the experiment group students used a game for reinforcing their learning of irregular verbs, the control group ones used the traditional method for the same purpose.

### **3.3.2. Pre-test design**

For the design of the pre-test, twenty-five of the most used English irregular verbs (according to Beckwith, S., n.d.) were selected at random. This pre-test consisted of twenty-six fill-in-the-gaps questions, in which the students were given the bare infinitive form of the irregular verbs mentioned above and had to conjugate them to complete three different contextualized conversations. *The final outcome can be seen in appendix 4.*

### **3.3.4. Game design**

As it has been mentioned, the game designed for the experiment tried to fit into the standards of competition, challenge, exploration, goals, interaction, outcomes, people, rules, and safety provided by Whitton (2012) in the *Encyclopedia of the Sciences of Learning*.

As for the competition factor, students were placed in pairs and encouraged to score the most points. However, as this activity constituted a GBL strategy, the main goal of the whole process was not beating other pairs but competing against themselves and achieving their best possible outcome. In the case of this game, the challenge consisted of adequately selecting and conjugating verbs according to their contextual meaning in the sentence. On the characteristic of exploration, the virtual environment in which the game occurred was generated with the web application *Quizizz*. The main reasons that supported the choice of this web application to the detriment of others were that it was free, allowed for synchronous and asynchronous learning, and most importantly, that students could see the questions in their MALL<sup>11</sup> devices without having to log in to an account. The game's goals were set in relation to the challenge characteristic, as the primary goal for the students was to achieve their best possible result.

As Castañeda et al. (2016) affirm, “learners perceive corrective feedback as beneficial when using educational games”. For this reason, the most central characteristic for the game's design was interaction. In this case, the game provided students with the correct answer and explained why this option was the correct one. Regarding the people taking part in the game, students worked in pairs when they were in the classroom setting and were offered the possibility of playing the game individually at home, something which allowed for collaboration between students and enhanced teamwork. Finally, as far as safety is concerned, there were no rewards or penalties for any student playing the game. Instead, a productive failure strategy was implemented.

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<sup>11</sup> The term *MALL devices* stands for any handheld mobile device (such as a tablets or smartphones) used for language-related learning activities.

All these things considered, the final game<sup>12</sup> designed for the experiment consisted of three different parts: The first one, which extended until the 39<sup>th</sup> slide, was made up of questions complemented by grammatical explanations displayed in feedback slides. This way, the students did not just receive right-wrong feedback, but a complete justification of the correct choice and the subsequent explanation of the verbal tense used in each sentence. In this first part of the game, students had 30'' to complete each multiple-choice question and 45'' to complete each fill-in-the-gaps question. So as to make the game more dynamic, these feedback slides were eliminated in the second part of the game, and the time available for choosing an answer was also reduced to 20'' for multiple-choice questions and to 30'' for fill-in the gaps questions. Finally, the third part of the game consisted in a contextualized story with the owner of the academy as the main character in which students had to recall to previous sentences and understand the context of the situation to be able to select the right option. On the whole, this constituted a gradual difficulty increase which sought to engage students and make the game more appealing for them.

Moreover, direct translation and repetition techniques were also implemented in the feedback slides with the intention of helping students retain some fixed grammatical structures and helping them understand the patterns which licensed for the use of one verbal tense or another. By doing this, the game sought to enhance students' concentration, force them to link those questions to their previous knowledge, and ensure that they reflected on the delivered content.

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<sup>12</sup> The final outcome of the game designed for the experiment can be retrieved from the following link: <https://quizizz.com/admin/presentation/6070974503c312001b43cfd9/the-irregular-verbs-game>

### 3.4. Application

With the aim of making the study of irregular verbs more appealing for the students, the learning process was adapted to the digital field and directed towards the use of mobile-assisted language learning. This sought to engage the students in the importance of learning irregular verbs and applying them correctly in contextualized situations, as well as also developing their critical thinking and improving their decision-making capacity at the time of choosing verbs in their speech. To test both the effectivity of GBLL against the traditional method for learning the irregular verbs, and the willingness of learners to play educational games at home, students were given a series of materials after the pre-test to have a look at home. The control group was given a list with twenty-five conjugated irregular verbs in English (*see appendix 5*), while the experiment group was provided with a link to play the same game asynchronously at home. However, with the aim of seeing how many of them actually revised the materials without being obliged to, they were not told they would have an exam in two weeks' time. Therefore, to discern how many of them had actually checked the materials and understand the reasons why they had or not checked on these materials, they were asked to fill in the survey in *appendix 6*. A more detailed day-by-day application is shown below:

**20<sup>th</sup> April:** The experiment group was given fifteen<sup>13</sup> minutes to complete the pre-test and they played the game one time in class afterward. They played it in pairs so as to make it more exciting and enhancing concentration and competitiveness. All the feedback slides were explained to them and commented on in class, as well as the uses of the

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<sup>13</sup> Students were given fifteen minutes to complete the test because it was twice the time it had taken the owner of the academy to finish it.

different verbal tenses which appeared were also discussed. Finally, these experiment group's students were given the link of the game and offered the possibility of playing it at home. It is worth mentioning that, as a consequence of the COVID-19 global pandemic, one student was attending the lesson remotely from home. In order to adapt the content for him, all the blanks in the pre-test were numbered, and he was sent a digital version of the test through the WhatsApp group of the class. When the fifteen minutes finished, he sent a photo of his answers back to the same WhatsApp group so that it could be checked afterward. Although we tried to completely integrate this student in the GBL activity and placed him in a pair with a student attending class, the delay in the responses and the impossibility for the other member of the pair to see the questions in his mobile device made this inclusion impossible. Therefore, both had to finally play the game individually.

It must be reminded that as the students were not informed in advance of the test on irregular verbs, none of them had checked the materials before doing the pre-test. At the time of doing this test, they were just provided with the basic instructions for working on it: no help to interpret sentences or translate words was dispensed to them. They were not warned that they would be doing a post-test in two weeks.

**21<sup>st</sup> April:** The control group was also given fifteen minutes to complete the pre-test, and, in this case, they were given (in paper format) and explained all the feedback slides appearing in the game. They were also given a list (*see appendix 5*) with all the verbs that appeared in the pre-test properly conjugated in their bare infinitive, past simple and past participle forms. They were not told that they would have to do a post-test in two weeks.

**4<sup>th</sup> May:** Although according to the “forgetting curve” hypothesis formulated by the German psychologist Hermann Ebbinghaus in 1885, the ideal time for the students to have forgotten the questions and answers of the pre-test in almost its entirety was four weeks (Gay et al., 2016), it was not possible to extend the experiment for that long. Failing this, and in order to avoid problems derived from the memorization of answers that could influence the final data, all the sentence subjects and complements from the pre-test were changed, while maintaining the same structure and verb conjugations. This time, the experiment group’s students were given ten minutes to complete the post-test (*see appendix 7*), as they were already familiar with the format and verbs of the test. Students were also asked to fill out a perception survey (*see appendix 6*).

**5<sup>th</sup> May:** On the last day of the experiment application, the members of the control group were asked to complete the same post-test and perception survey as the students in the experiment group. Finally, due to ethical considerations, the control group students also played the game in class, even though it was no longer part of the experiment.

### **3.5. Post-application**

As mentioned before, a survey was delivered to the students to see how many of them actually checked the materials that had been given to them (either the game to be played asynchronously or the paper-format explanations and the list of irregular verbs, depending on whether they belonged to the experiment or the control group). This was to test how likely the students were to look at these materials at home without being obliged to and to see if it was appealing enough for the students to review them without actually having been told that they would have to do a test (*appendix 6*).

#### **4. Results**

In order to apply the paired sample *t*-test strategy, all the pre-tests and post-test were corrected and marked by the researcher. Subsequently, all the data was introduced into an Excel document, and the results obtained by the students were tabulated (*see appendix 8*). A statistical analysis was later performed by the researcher with the aim of identifying the individual and group improvements in post-test scores in comparison to the pre-test scores. The final results, which were crucial for verifying the effectiveness of GBLL in reinforcing the learning of irregular verbs, showed that students who had been exposed to the game in the first session performed better in the post-test than the students who had used the traditional method for working on irregular verbs. On average, students from the experiment group showed an improvement of 4.9 points in respect to their pre-test, what supposed a percentual improvement of 18.7 % in their final scores. If the data is analyzed on an individual basis, seven of the eight students in this group improved their results with respect to the pre-test, and besides, all the students but one obtained a passing grade in the post-test (13/26 or more). Oppositely, the marks of the students in the control group did not improve with respect to their pre-tests. While two of the students in this group increased their marks in the post-test, other two lowered them. On average, the post-test results of this group showed neither an improvement nor a drop with respect to their pre-test scores. Being the average of right answers ten in this control group, only one student obtained a passing grade in the post-test (22/26). As for the students' preferences on the best method to study the irregular verbs, members from both groups mostly agreed on that they preferred using games for working on irregular verbs in class and using the traditional method for studying them at home. (*See appendix 9*).

## **5. Discussion**

As it was previously mentioned, one of the main objectives of this study was to analyze the effectiveness of GBLL compared to the traditional method at the time of reinforcing the learning of irregular verbs and its understanding in contextualized situations. Therefore, the foremost intention was to engage the students with the irregular verbs game in class and motivate them to practice with it at home, in order to compare their results with the ones of the students who had used the traditional method for working on irregular verbs. Moreover, this research also sought to unveil which method was more appealing and useful for the students to work on at home, either the traditional or the GBL method.

Tests results showed a trend of consistent improvement in the students of the experiment group in comparison to the students in the control group, something which might suggest that using games is more effective than applying the traditional method for reinforcing the knowledge of irregular verbs. Moreover, as post-test results revealed a statistically significant improvement in the scores of the experiment group students with respect to their scores in the pre-test, it could be argued that GBLL is a useful tool for improving the understanding and contextualization of irregular verbs. On average, students from the experiment group obtained 18.6 points in their post-test, which means that they did 71.6 % of their post-test well. Oppositely, students from the control group only did 38,5 % of their post-test right. In relation to the scores' improvement in the control group, it must be said that while four students failed the pre-test, only one did not achieve a passing grade in the post-test. Moreover, it must also be noted that all the experiment group students who passed the post-test improved their score by more than 15% with respect to the pre-test, with one of them improving his mark in eleven points (which is equivalent

to 42.3% of the total test score). As for the experiment group student who failed the post-test, it must be said that he was the only student in the experiment working online, and consequently, this fact might have had an influence on his results.

Despite the fact that more students from the control group reviewed the given materials at home, their results did not improve: six students failed the pre-test, and six failed the post-test. Although two students improved their scores with respect to the pre-test, another two did worse. This negative oscillation could be related to the fact that they had less time to complete the post-test (five minutes less) and that they did not have the verbs as internalized as the students in the experiment group. On top of that, the only student who passed the post-test got the same grade as in the pre-test.

All things considered, the significant difference observed between the results of the students in the experiment and control group might be explained in at least three ways:

The first one is that the semi-competitive environment that was generated fostered confidence among them. Being it something different and fun, students enjoyed using the game, as it provided them with a sense of competition that motivated them to learn and do better than their classmates. Moreover, as they were exposed to a game environment, they felt more optimistic and less anxious than in a normal class. Secondly, the immediate feedback provided by the game may have helped students internalize and reinforce previously learned conjugations of irregular verbs; actually, many students reported that they were engaged in learning the irregular verbs because they enjoyed the immediate feedback of the game. In the third place, it must also be mentioned that despite being older, students in the control group appeared to show a poorer command of the English

language than the students in the experiment group, something which led to unequal results between the two groups.

As de Freitas (2006) stated in her study, “some learners may welcome learning through games, but others may prefer other modes”. For this reason, the aforementioned perception survey was delivered to the students at the final stage of the experiments so as to see what the preferred method for reinforcing their knowledge of the irregular verbs was. This survey analyzed the students’ preferences both in the classroom and domestic setting, and the results were the following ones:

Regarding students’ preferences for working on the irregular verbs in class, the majority of students from both the control and the experiment group selected games as the most suitable option. These students alleged that the element of competing against other classmates motivated them to do their best in the game, and consequently, that the process of reviewing the irregular verbs was more fun and more dynamic this way. Other students who shared the same vision appealed to the ease with which the game could be played and praised the possibility of getting immediate feedback on their responses. In relation to this, one might wish to argue that the safe environment that was generated for the students (without penalties or negative outcomes for committing mistakes) was crucial in making the irregular verbs review fun for them. However, it should also be mentioned that some students reported preferring to use exercises and the traditional method to study irregular verbs in class, arguing that games were not serious for academic work and that it was, therefore, difficult for them to concentrate on the class.

On the other hand, contrary to what had been initially hypothesized, this final survey showed a students' general preference to use the traditional method to study irregular verbs at home. In this case, 87.5 % of students from both groups agreed on that the traditional method was better to work on the irregular verbs at home, claiming that it was easier and more comfortable to use. Some students stated that this preference for the traditional method in the home environment was triggered by the possibility of self-correcting and working at their own pace, something which helped them to be more concentrated and focused on the subject of study. Moreover, a couple of students also stated that they preferred using memorization and direct translation techniques for working on irregular verbs, since this was more similar to the technique they had used so far and was more useful to pass their school exams. Apart from the evidence in the perception survey, this preference is also demonstrated by the fact that, despite having obtained worse results on the post-test, students in the control group were more likely to check the given materials at home than the students in the experiment group (3 vs 1). All in all, this might be taken as evidence for stating that students prefer the traditional method to the use of games because it is faster and more comfortable to use, since they can avoid the verbs they already know and go directly to the verbs that are problematic for them, therefore investing less time in this process. Moreover, it must also be admitted that once the competition factor is taken away, the game loses half of its potential and is no longer attractive for the average student.

### **5.1. Limitations of the study**

It must be recognized that this study has some potential limitations which could be overcome in the future. First of all, it would be necessary to reach a larger audience (which would provide a base of students coming from different social and cultural backgrounds) in order to produce more contrasted results, since in this case, only two groups from a private English academy were able to participate in the experiment. Consequently, the English level of the students in the control group was lower than that of the experiment group, something that negatively influenced the results. For this reason, and with the intention to see if the game has the same effect in compulsory as in supplementary education, it would be necessary to implement this experiment in different high school classes of students of the same age. Unfortunately, this has not been possible in this study since the COVID-19 sanitary measures have restricted access to public educational facilities and the possibility of seeing first-hand how these contents were taught in the classroom environment.

Likewise, more prolonged exposure to the game would also be necessary, with more periodic tests to demonstrate whether there is a real evolution in the learning of irregular verbs thanks to the game or not. After meticulously analyzing the study's data, it can be assumed that two tests are not enough to categorically determine the game's effectiveness in reinforcing the knowledge and contextualization of irregular verbs, since several individual and external factors can significantly influence these tests' results. Concerning the analysis of these data, the need to redesign the game also became evident since the game used in the experiment turned out to be too long and unattractive for students to use at home.

## **6. Conclusions**

This study was designed to determine whether game-based language learning was effective for reinforcing the learning of irregular verbs and improving their contextualization in real-life situations. Therefore, the analysis of all the data has revealed that integrating games in the classroom context contributes to the improvement of both. However, caution is needed when interpreting the study results, as the lack of more experiment and control groups, together with the limited extension of the experiment somewhat limits the main argument that students improved their knowledge and contextualization of irregular verbs thanks to the use of GBLL. Moreover, it must also be taken into account that other variables, such as class exposure or study of traditional materials may have also affected student's natural acquisition of irregular verbs.

Nevertheless, the statistical analysis indicated a significant difference in terms of performance between the students in the experiment group and the ones in the control group, something which may prove that using the game designed for this experiment was useful for reinforcing the learning of irregular verbs. Consequently, this study initiates a discussion on the effectiveness of game-based language learning for working on irregular verbs in the ESL classrooms of Catalunya. Moreover, the empirical results of this study might also challenge the current teaching methods that are being used for working on irregular verbs in the classroom setting, as they prove that most of the methods that have been used for this purpose until now are not effective in the long term. Furthermore, taking into account that most textbooks are now in digital format and more students have access to mobile devices, the results of this research also suggest that mobile phone games and applications can be successfully integrated in the teaching of irregular verbs.

As for future research, this study seeks to solve the acceptance problems of the game by designing a new game that is simpler and easier to use. Because although the GBL strategy was the preferred option to be used in class, it was not appealing for the students to play at home without being obliged to. In order to improve the game and make it more useful for the students, a similar strategy to the one described by Fields and Marsh (2017) in their book would be used: instead of including all the verbs into a single game, irregular verbs would be divided into sets of twenty verbs, and a different mini-game would be designed for each set, so as to make it easier for students to work on the sets of irregular verbs that are problematic to them. Moreover, as a consequence of the limited length of the project, this study deals with how irregular verbs are conjugated, written, and used in contextualized situations, but does not deal with phonetic matters. Consequently, the pronunciation and phonetic aspects of irregular verbs are something the researcher reserves for future research.

Finally, this study wants to spotlight that more research is needed to provide empirical evidence for how game-based language learning can be used most effectively in the ESL classroom and encourage other researchers to produce more empirical studies which investigate the effectiveness of GBL for working on irregular verbs in the area of Catalunya.

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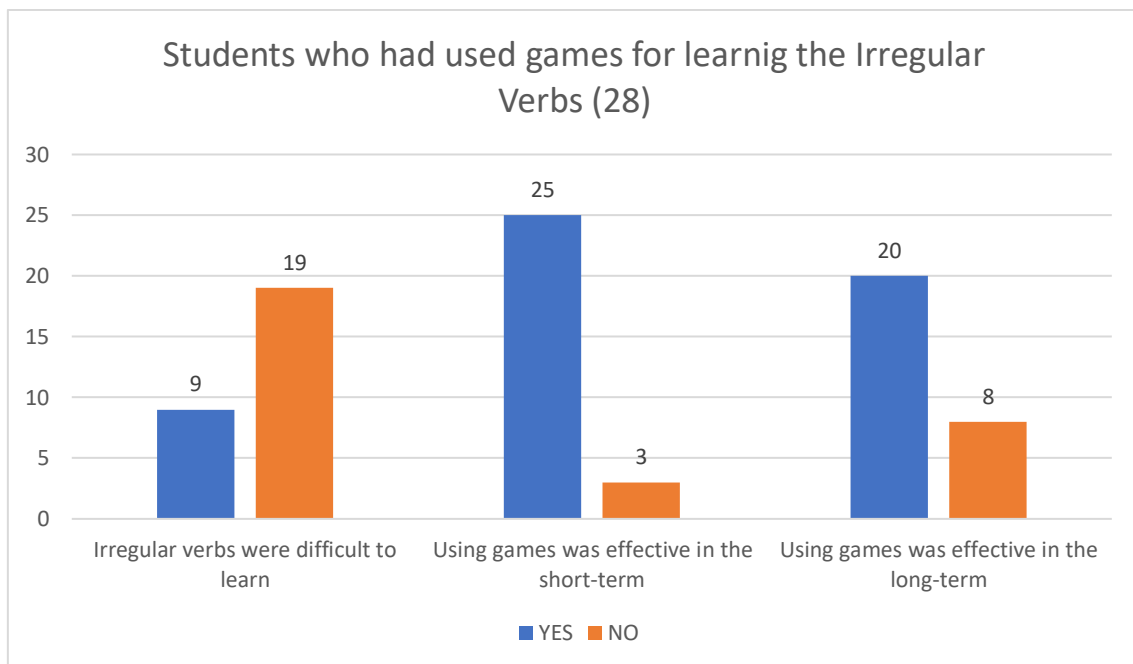
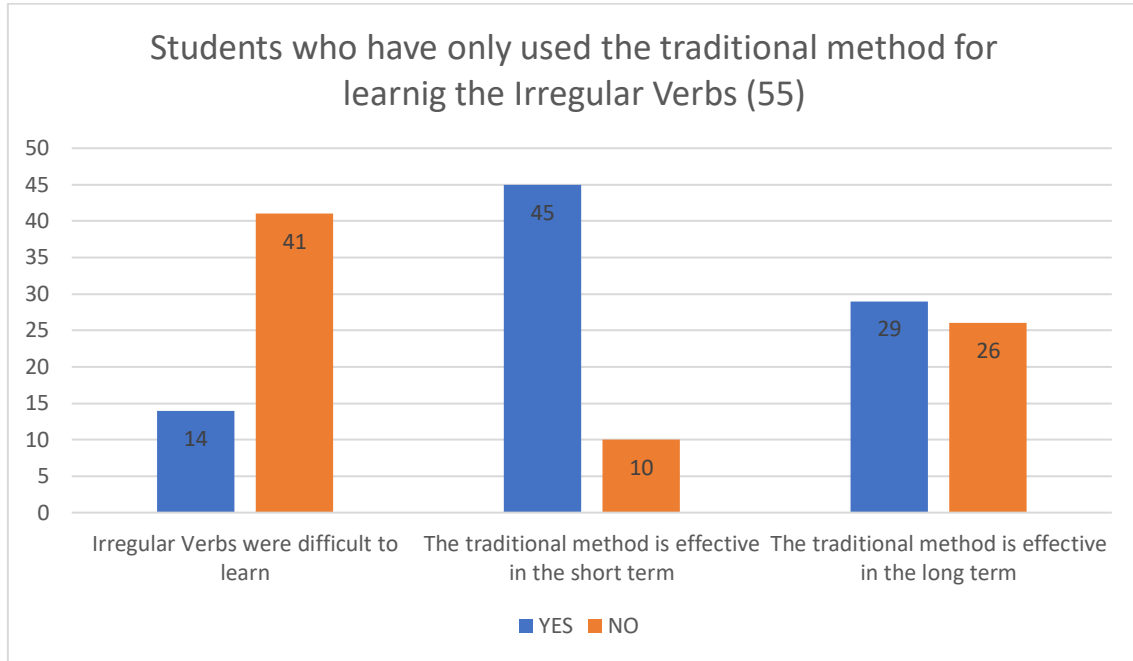
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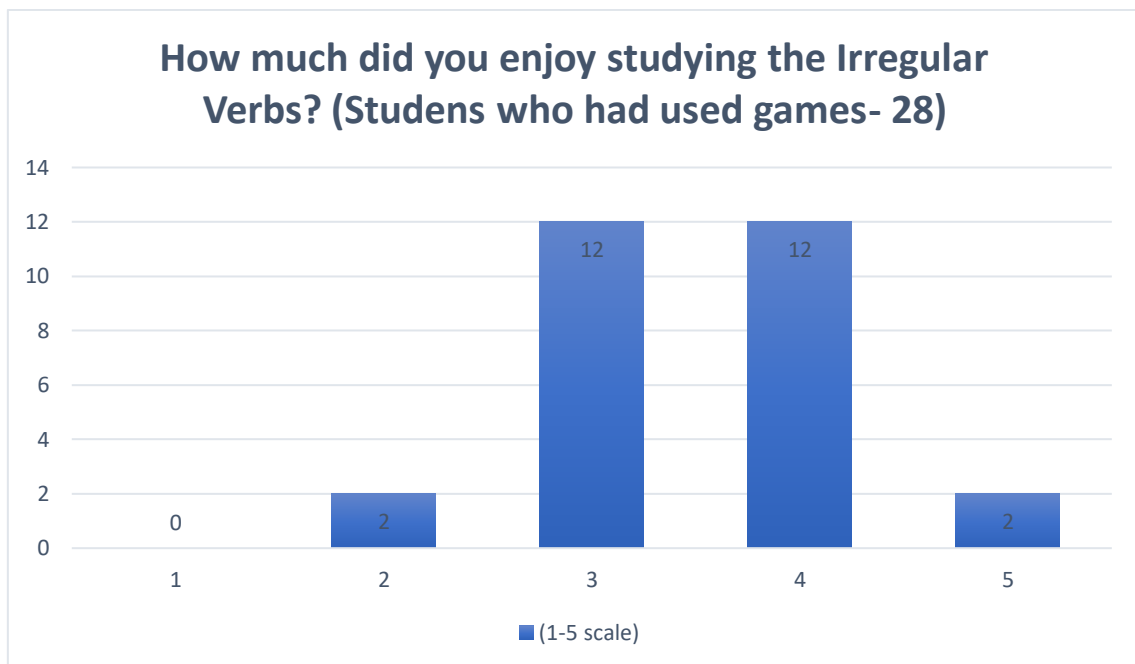
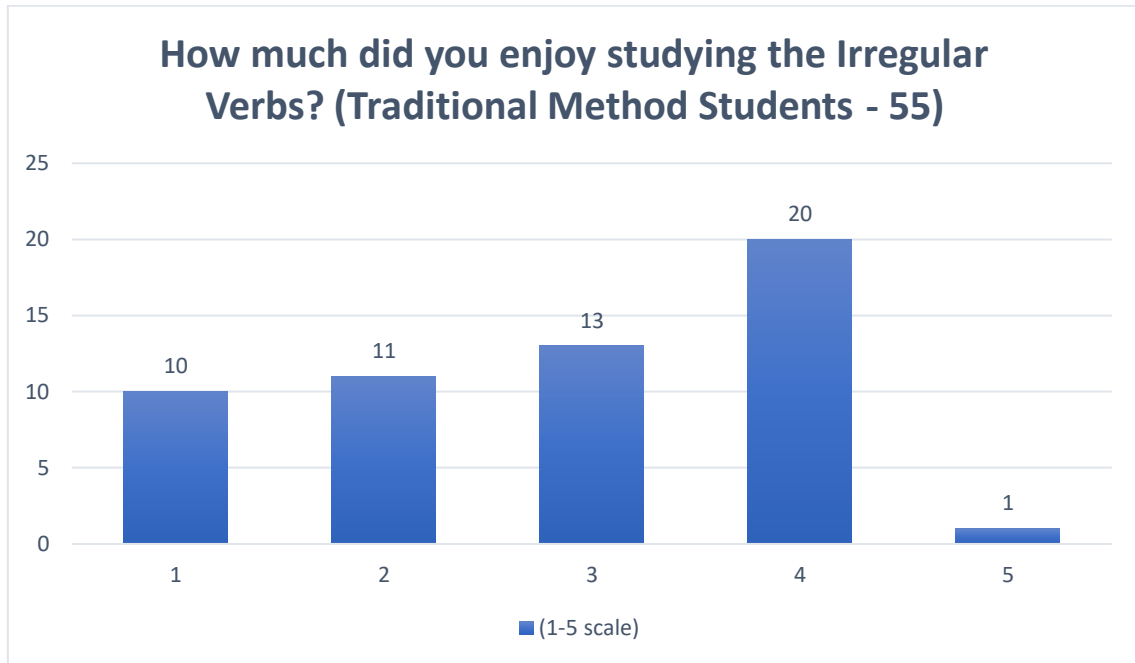


## Appendices

### **Appendix 1: Perceptions on the learning of irregular verbs (Documentation Survey)**



**Appendix 2: Perception on the method used for learning irregular verbs  
(Documentation Survey)**



### **Appendix 3: Personal comments (Translated) – (Documentation survey)**

1-“When I studied the "irregulars verbs," I learned them by memorizing and doing several individual practice exercises. I think that being able to practice accompanied can be much more effective and at the same time more entertaining, which can increase your motivation to learn”.

2-“I think that English is poorly taught, and that is why many people, including myself, do not know how to speak English properly. On the other hand, irregular verbs are tricky because there are many and some are similar, but the fact of memorizing them and taking a test you do not really learn them because then you stop studying them and they are forgotten as in my case, for example”.

3-“English is poorly taught in our educational system: my partner studied in an American school in Barcelona (that is, he has a native level of English), and when he changed to my school in high school, he got 4 and 5 in English because he did not study it that way in his school, the grammar and all that, in a school with an English base is not studied that way”.

4-“In my opinion, studying them in a dynamic way always helps more in the long term; however, it is true that some of them are harder to remember”.

5-“The method used in my school is basically to take exams every year so that you memorize them every year and at the end, you learn them, obviously I think it is very inefficient and I would love to learn languages in some other way than memorizing them”.

6- “I know the columns in order, but I don't know which is the past simple or the past participle or what they are for”.

7- “I only learned how they were written, and I don't know how to differentiate them when I hear them spoken”.

8-“The teacher only made us recite them out loud, so I often didn't know how they were written afterward”.

9- “I know them pretty well, but not using them in sentences. So, it doesn't do me any good to know them by heart”.

## Appendix 4: Pre-test

Name:

### Irregular Verbs Test

#### 1. Complete the following conversations with an appropriate form of the verbs in the box.

Be (x2) – become – buy – come – do – drink – eat – feel – find – forget – go – have – hear – keep – know – leave – loose – meet – pay – read – run – see – sleep – speak – write

##### Conversation 1:

A: Have you ever (1) \_\_\_\_\_ to an Indian restaurant?

B: No, the truth is that I have never (2) \_\_\_\_\_ Indian food.

A: Really? My mother (3) \_\_\_\_\_ to a new Indian restaurant yesterday and she says everything was delicious.

B: Yes! I've (4) \_\_\_\_\_ about that restaurant on the news, everyone says it is amazing.

A: Yes, my mother told me that the owner is an Indian chef who (5) \_\_\_\_\_ very famous after appearing on a TV show.

B: Really? Is he a rich person?

A: No, when the programme finished, he (6) \_\_\_\_\_ all his money at the casino.

B: Then, is his restaurant expensive or not? How much did your mother (7) \_\_\_\_\_ for the meal?

A: I don't (8) \_\_\_\_\_, let me ask her.

##### (5 minutes later)

A: I have (9) \_\_\_\_\_ to her and she says everything was fantastic. And the best thing is that the menu only cost her 15 €!

B: That's fantastic! Come on, let's (10) \_\_\_\_\_ on Friday and have dinner there.

A: Good idea, (11) \_\_\_\_\_ you then!

## Conversation 2

A: Have you (12) \_\_\_\_\_ the homework?

B: Yes, we (13) \_\_\_\_\_ a reading on *Don Quijote*.

A: Really? Have you (14) \_\_\_\_\_ the book?

B: Of course! What about you?

A: Not yet, I (15) \_\_\_\_\_ it on Amazon a month ago, but it hasn't arrived yet. Where did you buy yours?

B: I (16) \_\_\_\_\_ it at a local bookshop and I bought it there.

A: Who is the author? I mean, who (17) \_\_\_\_\_ the book?

B: It's Cervantes.

A: Ahhh, now I remember! The book arrived two weeks ago, but I (18) \_\_\_\_\_ it on the drawer and I completely forgot about it.

B: Hahahaha... well, at least don't (19) \_\_\_\_\_ to study for the test... It is next Monday!

## Conversation 3

A: Hey, how (20) \_\_\_\_\_ you today?

B: Well, I am better than yesterday. I didn't (21) \_\_\_\_\_ very well yesterday.

A: What happened to you? Your classmates told me that you (22) \_\_\_\_\_ school early in the morning and then didn't (23) \_\_\_\_\_ back in the afternoon.

B: Well, it was just that I (24) \_\_\_\_\_ very fast during P.E. class and then I was a little bit dizzy.

A: And what did you do?

B: I (25) \_\_\_\_\_ an Aquarius and I (26) \_\_\_\_\_ for ten hours, and then I felt better again.

## Appendix 5: List of control's group irregular verbs

Present	Past Simple	Past Participle	Translation
Be	was / were	been	Ser/estar
Become	became	become	Convertirse
Buy	bought	bought	Comprar
Come	came	come	Venir
Do	did	done	Hacer
Drink	drank	drunk	Beber
Eat	ate	eaten	Comer
Feel	felt	felt	Sentir
Find	found	found	Encontrar
Forget	forgot	forgotten	Olvidar
Go	went	gone	Ir
Have	had	had	Tener
Hear	heard	heard	Oír
Keep	kept	kept	Guardar
Know	knew	known	Saber
Leave	left	left	Salir de
Lose	lost	lost	Perder
Meet	met	met	Conocer/encontrarse
Pay	paid	paid	Pagar
Read	read	read	Leer
Run	ran	run	Correr
See	saw	seen	Ver
Sleep	slept	slept	Dormir
Speak	spoke	spoken	Hablar
Write	wrote	written	Escribir

## **Appendix 6: Perception survey**

Name:

### **Satisfaction survey**

Did you check the materials (game/ list of verbs) at home?

Why?

Which method do you think is better to study the irregular verbs in class? Why?  
(game/ list of verbs)

Which method do you prefer to study the irregular verbs at home? Why?  
(game/ list of verbs)

## Appendix 7: Post-test

Name:

### Irregular Verbs Test

#### 1. Complete the following conversations with an appropriate form of the verbs in the box.

Be (x2) – become – buy – come – do – drink – eat – feel – find – forget – go – have – hear – keep – know – leave – loose – meet – pay – read – run – see – sleep – speak – write

##### Conversation 1:

A: Have you ever (1) \_\_\_\_\_ to a Chinese restaurant?

B: No, the truth is that I have never (2) \_\_\_\_\_ Chinese food.

A: Really? My father (3) \_\_\_\_\_ to a new Chinese restaurant yesterday and he says everything was delicious.

B: Yes! I've (4) \_\_\_\_\_ about that restaurant on the news, everyone says it is good.

A: Yes, my father told me that the owner is a Chinese chef who (5) \_\_\_\_\_ very famous after writing a book on traditional Chinese cuisine.

B: Really? Is he rich?

A: No. He was very rich, but he (6) \_\_\_\_\_ nearly all his money at the casino.

B: Then, is his restaurant expensive or not? How much did your father (7) \_\_\_\_\_ for the meal?

A: I don't (8) \_\_\_\_\_, let me ask him.

##### (5 minutes later)

A: I have (9) \_\_\_\_\_ to him and he says it is a bit expensive. The menu cost him 30 \$!

B: That's quite expensive! However, I want to try it. Let's (10) \_\_\_\_\_ on Saturday and have lunch there.

A: Good idea, (11) \_\_\_\_\_ you then.

## Conversation 2

A: Have you (12) \_\_\_\_\_ the homework?

B: Yes, we (13) \_\_\_\_\_ a reading on *Hamlet*.

A: Really? Have you (14) \_\_\_\_\_ the book?

B: Of course! What about you?

A: Not yet, I (15) \_\_\_\_\_ it on Amazon a month ago, but it hasn't arrived yet. Where did you buy yours?

B: I (16) \_\_\_\_\_ it at the library and I borrowed it from there.

A: Who is the author? I mean, who (17) \_\_\_\_\_ the book?

B: It's Shakespeare.

A: Ahhh, now I remember! The book arrived three weeks ago, but I (18) \_\_\_\_\_ it on the drawer and I completely forgot about it.

B: Hahahaha... well, at least don't (19) \_\_\_\_\_ to study for the test... It is next Tuesday!

## Conversation 3

A: Hey, how (20) \_\_\_\_\_ you today?

B: Well, I am better than yesterday. I didn't (21) \_\_\_\_\_ very well yesterday.

A: What happened to you? Your classmates told me that you (22) \_\_\_\_\_ school early in the morning and then didn't (23) \_\_\_\_\_ back in the afternoon.

B: Well, it was just that I (24) \_\_\_\_\_ very fast during P.E. class and then I was a little bit dizzy.

A: And what did you do?

B: I (25) \_\_\_\_\_ an Aquarius and I (26) \_\_\_\_\_ for ten hours, and then I felt better again.

## Appendix 8: Students' results

EXPERIMENT GROUP				
STUDENT	PRE-TEST	POST-TEST	IMP	IMP %
Tomás L.	17	21	4	15,3846154
Hugo T.	11	22	11	42,3076923
Leyre S.	7	15	8	30,7692308
Abel P.	9	14	5	19,2307692
Alex G.	25	25	0	0
Miquel G.	8	9	1	3,84615385
Leyre R.	15	20	5	19,2307692
Pol M.	18	23	5	19,2307692
<b>AVERAGE</b>	13,75	18,625	4,875	
<b>%</b>	52,8846154	71,6346154	18,75	

CONTROL GROUP				
STUDENT	PRE-TEST	POST-TEST	IMP	IMP %
Jose L.	22	22	0	0
Cristian C.	12	12	0	0
Aitor F.	8	9	1	3,84615385
Alan A.	9	7	-2	-7,6923077
Iris M.	4	8	4	15,3846154
Iván Q.	9	6	-3	-11,538462
Miriam L.	6	6	0	0
<b>AVERAGE</b>	10	10	0	
<b>%</b>	38,4615385	38,4615385	0	

## Appendix 9: Perception Survey results

EXPERIMENT GROUP							
STUDENT	CHEK AT HOME	BEST METHOD STUDY IN CLASS			BEST METHOD STUDY AT HOME		
Tomás L.	NO. Forgot	TRADITIONAL			TRADITIONAL + EXERCISES		
Hugo T.	NO. I knew them	GAMES			TRADITIONAL + EXAM		
Leyre S.	NO. Forgot	GAMES			EXERCISES		
Abel P.	YES. School Homework	EXERCISES			TRADITIONAL (MEMORIZE)		
Alex G.	NO. I did well in Game	EXERCISES			TRADITIONAL (MEMORIZE)		
Miquel G.	NO. Forgot	GAMES			GAMES + TRADITIONAL		
Leyre R.	NO. No time	GAMES			GAMES + TRADITIONAL		
Pol M.	NO. Forgot	GAMES			TRADITIONAL + EXAM		
<b>TOTAL</b>	<b>1 YES</b>	<b>5 GAMES</b>	<b>2 EXS</b>	<b>1 TRADI</b>	<b>0 GAMES</b>	<b>1 EXS</b>	<b>7 TRADI</b>
%	12,5	62,5	25	12,5	0	12,5	87,5

CONTROL GROUP							
STUDENT	CHEK AT HOME	BEST METHOD STUDY IN CLASS			BEST METHOD STUDY AT HOME		
Jose L.	YES.	GAMES			GAMES		
Cristian C.	NO. Busy	GAMES			TRADITIONAL		
Aitor F.	NO. Busy	TRADITIONAL			TRADITIONAL		
Alan A.	NO. Busy	TRADITIONAL			TRADITIONAL		
Iris M.	NO. Busy	GAMES			TRADITIONAL		
Iván Q.	YES	GAMES			TRADITIONAL		
Miriam L.	YES	EXERCISES			TRADITIONAL		
<b>TOTAL</b>	<b>3 YES</b>	<b>4 GAMES</b>	<b>1 EXS</b>	<b>2 TRADI</b>	<b>1 GAMES</b>	<b>0 EXS</b>	<b>6 TRADI</b>
%	42,9	57,1	14,3	28,6	14,3	0	85,7