

Enhancing English Pronunciation through Gamification: A Study of Minimal Pairs with
First Semester Students at Universidad Industrial de Santander

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Dedication

In the first place, we would like to express our gratitude to God for giving us a lot of strength and determination during the challenging periods that we faced while doing this project. Also, we are thankful for being favored with the essential abilities to successfully conduct this research.

We are also extremely grateful to our parents who have supported all our process since we started our studies until now that we have finished this project. Besides, we really appreciate their constant presence, supporting us, and giving us the necessary strength during our toughest moments. Finally, I, María Angélica, would like to thank Sonia Marcela Osorio who supports me and has trusted in all my academic development.

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Abstract

Title: Enhancing English Pronunciation through Gamification: A Study of Minimal Pairs with First Semester Students at Universidad Industrial de Santander.*

Author(s): Angye Cathalina Barrios Estévez, María Fernanda Rodríguez Gómez y María Angélica Vera Osorio. **

Key words: Gamification, Minimal pairs, English pronunciation.

Description: This study aimed to explore how gamification could improve the English pronunciation of vocalic minimal pairs of first semester pre-service English teachers of the Licenciatura en Lenguas Extranjeras con Énfasis en Inglés program at Universidad Industrial de Santander. To achieve this, an action research project was carried out, incorporating some instruments to achieve the desired objective. Before introducing gamified interventions, the performance of students was assessed with a pre-test, revealing a lack of understanding and production of minimal pairs. During the six different classes, it was evident that elements such as competition and cooperation motivated and improved students' performance, although other elements also contributed positively. Then, a questionnaire was conducted where students expressed their perceptions about the impact of gamification on the production process of minimal pairs. The learners manifested that it was an engaging and motivating strategy that helped them to practice a lot. Finally, in the post-test, it was confirmed that students' knowledge of minimal pairs improved compared to their pre-test performance. All in all, it can be concluded that gamification is a pertinent strategy for explicitly teaching the production of English minimal pairs, enhancing student's engagement, motivation, and proficiency.

*Bachelor Thesis

**Human Sciences Faculty. Language's school. Director: Sol Smith Fuentes.

Resumen

Título: Enhancing English Pronunciation through Gamification: A Study of Minimal Pairs with First Semester Students at Universidad Industrial de Santander.*

Autor(s): Angye Cathalina Barrios Estevez, María Fernanda Rodríguez Gómez y María Angelica Vera Osorio.**

Palabras clave: Gamificación, Pares Mínimos, Pronunciación en inglés.

Descripción: Este estudio tuvo como objetivo explorar cómo la gamificación podría mejorar la pronunciación en inglés de los pares mínimos vocálicos de los estudiantes de primer semestre de la Licenciatura en Lenguas Extranjeras con Énfasis en Inglés de la Universidad Industrial de Santander. Para lograr esto, se llevó a cabo un proyecto de investigación-acción, incorporando algunos instrumentos para lograr el objetivo deseado. Antes de implementar las intervenciones gamificadas, el desempeño de los estudiantes fue evaluado con un pretest, revelando una falta de comprensión y producción de los pares mínimos. Durante las seis diferentes clases, fue evidente que elementos como la competencia y la cooperación motivaron y mejoraron el desempeño de los estudiantes, aunque otros elementos también contribuyeron de manera positiva. Después de esto, se realizó un cuestionario donde los estudiantes expresaron sus percepciones sobre el impacto de la gamificación en el proceso de producción de los pares mínimos. Los alumnos manifestaron que fue una estrategia divertida y motivadora que les ayudó a practicar mucho. Finalmente, en el post-test se confirmó que el conocimiento y producción de los pares mínimos de los estudiantes mejoró en comparación con su desempeño en el pre-test. En resumen, se puede concluir que la gamificación es una estrategia pertinente para enseñar de manera explícita la producción de pares mínimos en inglés mejorando la participación, la motivación y la competencia de los estudiantes.

*Trabajo de Grado

**Facultad de Ciencias Humanas. Escuela de Lenguas. Directora Sol Smith Fuentes

Introduction

The importance of English nowadays is unquestionable since it promotes the development of different fields such as science, technology, power, education, and much more (Putra, 2020). For that reason, English has become very popular in the world. According to Luján-García (2012), this is primarily because “English [is] the main vehicle of communication among speakers who do not share a common tongue”. As a result, English has spread throughout the world, becoming a lingua franca in the majority of the countries, and having applicability in different domains of society. Within Educational scenarios, for instance, curricular plans seek to develop the four fundamental English Skills - reading, writing, listening, and speaking-in their students so that they can become competent members of society. However, when it comes to teaching English as a Foreign Language (EFL), the focus is usually on teaching grammar, reducing the amount of explicit instruction in pronunciation. In the words of Pourhosein and Sabouri (2016), pronunciation plays a very important role in communication; nevertheless, most EFL teachers tend to ignore teaching pronunciation in their classes, and they prefer to focus their lessons on the lexical part.

What is more, according to Calvo Benzies (2013), the role of pronunciation in EFL classes is insufficient. This is due to the fact that teachers usually focus their classes on learning vocabulary and grammar but leave aside activities where pronunciation and phonetics can be learned. Following their study, the vision of the students regarding the number of activities to practice pronunciation in classes was not very positive. Around 28% of the participants answered *hardly ever* and around 30% answered that only *sometimes* they did activities in order to practice pronunciation explicitly.

However, teaching or acquiring pronunciation skills can be a complex process, especially for Spanish speakers learning English. This can be attributed to three main factors that hinder pronunciation, particularly phonetics.

First, it is evident the influence of Spanish as a mother tongue in English pronunciation. Calvo (2013) and Vera (2014) affirm that schwa presents a particular challenge for Spanish speakers since it is an absent sound in the Spanish language. In our experience learning English as a foreign language, we faced considerable difficulties mainly with the sound “schwa” which is a frequently unstressed phoneme in the English language that is essential for the proper pronunciation of numerous words. Additionally, it is found a tendency in the mispronunciation of vocalic minimal pairs since in Spanish there exist only one vowel for each sound. As an illustration, the vowel sound /i/ in Spanish is always denoted by a single grapheme, as exemplified in the word "tío". In contrast, in English there is not a direct phoneme-grapheme relationship, which creates a challenge for Spanish learners of English in distinguishing between various ways of producing what they perceive as the same vowel sound in Spanish. For instance, it can be perceived in words such as *seat* and *sit*, which have two different ways of producing the vowel sound /i/.

Secondly, Phonetics classes are predominant book-centered when pronunciation is taught explicitly. Zhong, B., & Kang, Y. (2021) state that phonetics as the field in charge of the study of sounds, is greatly influenced by the use of different textbooks, but this limits the design and implementation of other resources. Teachers are used to following what the textbook says and do not execute authentic and meaningful activities even though there are different available resources. As a result, this leads to a decrease in students’ motivation, and it makes their learning pronunciation process more difficult. To illustrate the above, we experienced that with Peter Roach's book. We were exposed to a lot of theory and our classes were mainly book-centered, almost all the activities proposed were taken from the book, so we did not have the opportunity to learn with other resources such as pronunciation games, webpages, online pronunciation tools, Youtube channels, speech recognition software, etc.

In the third place, it was noticeable that there was a decontextualized and isolated input

of sounds since during our Phonetics and Phonology lessons, we learnt Phonetics in isolation and not in real contexts. English lessons are typically taught using British and American pronunciation varieties due to the influence of what Kachru's (1985) explains in his concentric circles. That is, varieties of English from the UK and the USA as a hypercentral language holding prestige and power, which creates a limitation in students. As a consequence, they are required to use those accents (from the inner circle) excluding other possibilities that can be easier for them to pronounce considering their L1. Furthermore, sounds in isolation are not a significant practice when it comes to proficient pronunciation. For example, when studying minimal pairs, the focus relies on the difference of one isolated sound in two different words such as the vowel sound /ʌ/ in 'cut'/kʌt/ and the vowel sound /æ/ in 'cat'/kæt/. In this way, teachers leave aside the production of these (and more) sounds in real context or even in complete sentences. So, learners tend to mispronounce vowel sounds more frequently because they are not used to practicing them in combination with other sounds as we do in day-to-day speech. All in all, decontextualization, while learning, makes pronunciation more difficult for non-native speakers. This is because of the narrow input provided in lessons that does not provide different practicable settings where students can exercise their speaking skills.

Considering all the factors previously mentioned, this paper attempts to propose a didactic strategy and to answer the following question: To what extent does Gamification enhance the pronunciation of sounds in English, particularly minimal pairs, of first semester students in the foreign language teaching program at Universidad Industrial de Santander

1 Justification

English pronunciation plays a crucial role when it comes to effective communication. As language learners and future educators of English, it is essential to prioritize intelligibility. One of the primary aspects to address when starting to learn a new language is mastering the

vowel sounds. It is vital to recognize that vowels serve as the initial point of focus when beginning the language learning process. However, the English vowel sounds are difficult for Spanish learners since a vowel phoneme in English can be orthographically expressed in different ways (Jeske, 2012). For instance, “English /i:/ is represented orthographically in a number of ways: *heal, beet, yield, conceive, key*, [...] but never by the single grapheme “i”. On the other hand, in Spanish, there are only five vowels in which the pronunciation is not different from the grapheme. To a greater extent, Morrison (2009, as cited in Jeske, 2012) brings up the difficulty for Spanish speakers to differentiate minimal pairs due to the huge variety of graphemes that a single phoneme can have. That is why it is problematic for native Spanish speakers to achieve an accurate word pronunciation in English, as this language lacks a direct correspondence between phonemes and graphemes, unlike Spanish.

Technology has brought many positive aspects that have directly affected learning environments. According to Al-Dosakee and Ozdamli (2021), one of these positive aspects has been the implementation of gamification in teaching. Gamification has proven to be an effective tool in the educational process of students. This is due to the fact that gamification generates settings of integration and competitiveness among the apprentices, which motivates them to be active participants during the classes. Likewise, this kind of methodology is particularly appealing for the new generations as they have grown up in the digital era and possess a natural inclination towards social interaction, collaborative work and competition. This is evidenced in the study carried out by Gonzalez (2022), the author mentions that, through gamification, the learners were more motivated since the games and activities were adapted to the needs and preferences of the apprentices.

Students usually experience feelings of being overwhelmed and stressed when learning a new language, especially when it comes to pronunciation as it is a challenging process. Nevertheless, by implementing gamification, it is possible to create a more

enjoyable and engaging learning environment where learners can feel more motivated. Indeed, Trooster et al., (2017) affirm that using gamification in the classroom can serve as an effective strategy for teaching language, specifically focusing on improving pronunciation skills. This aspect can facilitate the teaching of pronunciation by incorporating gamification techniques, which allow the development of diverse educational activities beyond the traditional textbook approaches. Furthermore, it makes students less dependent on the teacher, and it fosters student independence and transforms them into active contributors of their own learning process.

1.1 Objectives

1.1.1 Main objective

The aim of this research was to investigate how Gamification can improve the pronunciation of English sounds, specifically focusing on minimal pairs, among first semester students in the foreign language teaching program at Universidad Industrial de Santander.

1.1.2 Specific objectives

The present study took into consideration a threefold aim:

1. Identify the performance students have when producing minimal pairs before being exposed to explicit instruction of pronunciation.
2. Design a gamified didactic intervention to teach pronunciation of minimal pairs in a non-traditional way to improve students' performance.
3. Assess the impact of gamification on students' pronunciation of minimal pairs.

2 Theoretical frameworks

2.1 Conceptual framework

2.1.1 Pronunciation

Derwing and Munro (2015) state that pronunciation refers to the way in which people use their speech organs to generate spoken language. It includes all the distinct speech features such as vowels, consonants, stress, intonation, rhythm, accent, comprehensibility, intelligibility, and fluency. When learning a new language (second or foreign) mastering pronunciation is the key for effective communication. That is why, in the education field, it is crucial to consider two distinct aspects of pronunciation instruction to better understand how it can be acquired.

On the one hand, explicit instruction of pronunciation provides a detailed explanation of the language rules. Derwing and Munro (2009) mention that this type of instruction helps notably to develop intelligible and comprehensible speech. This is due to the fact that learners are in contact directly with phonetic and phonological aspects, so they are able to identify the distinctions between their mother tongue and the second language. During an explicit phonetics lesson, the teacher gives the input by showing the phonetics symbols and teaching students how to write them and how to articulate them. Also, the teacher explains phonological rules and shows specific pronunciation examples. What is more, according to Venkatagiri and Levis (2007), providing explicit instruction on how to pronounce words can enhance students' understanding of the sounds and contribute to their ability to be understood when speaking a second language.

On the other hand, implicit instruction of pronunciation allows students to understand the rules of the language by performing different activities without previous explanations. Zhang (2019) as cited in Luo, et al. (2022) perceives “ that students who receive implicit instruction improve their pronunciation by constantly correcting themselves after imitating,

reading aloud, comparing their pronunciation with the original sound, and doing follow-up exercises repeatedly”. During implicit instruction, learners are not aware of rules but learn them unconsciously during their process. This process is beneficial for students because they are receiving input and develop their own ideas to understand what is being taught.

As you can see, instruction when it comes to pronunciation can be divided in two. Each of them has specific characteristics and purposes that help learners with their communicative goals. However, within an EFL language setting, it has been pointed out by Naeini and Adni (2017) that explicit instruction is an effective approach as it gives learners the possibility to improve problematic consonants, syllable stress pattern functioning as noun and verb, and fluency. The results of this study demonstrate that after being exposed to some lessons where the teacher explained explicitly the sound’s phonological features (place of articulation, manner of articulation, correct pronunciation), and employed a variety of strategies such as minimal pair drills, drills with similar words, discrimination drills, etc, students enhance specific characteristics of their pronunciation.

2.1.2 Minimal pairs

Working with minimal pairs enhances learners’ listening skills as they learn to perceive and distinguish subtle sound differences. Minimal pairs have proven to be highly beneficial in pronunciation instruction, particularly in cases where students tend to struggle with distinguishing two sounds that are alike. In the words of Roach (2009) minimal pairs are “Pairs of words in which a difference in meaning depends on the difference of just one phoneme”. In the same manner, Fromkin et al. (2003) support this statement affirming that a minimal pair consists of two words that have different meanings but share a nearly identical structure except for one specific sound, that is in the same position within the word. In the English language, there are various vocalic and consonant minimal pairs considering the fact that the phonetic inventory is rich and diverse (See Table 1).

Table 1*List of vocalic and consonant minimal pairs*

/i:/ and /ɪ/	peak and pick
/æ/ and /e/	bad and bed
/e/ and /ei/	wet and wait
/æ/ and /ʌ/	cat and cut
/e/ and /ɪ/	set and sit
/u:/ and /ɔ:/	flew and flaw
/ɑ:/ and /ɜ:/	fast and first
/æ/ and /ɑ:/	had and hard
/ɒ/ and /ɔ:/	long and short
/b/ and /v/	berry and very
/b/ and /p/	bet and pet
/n/ and /ŋ/	thin and thing
/l/ and /r/	lock and rock
/tʃ/ and /t/	catch and cat
/s/ and /ʃ/	sea and she
/f/ and /v/	fan and van
/f/ and /h/	fat and hat
/f/ and /θ/	free and three
/s/ and /θ/	sing and thing
/ð/ and /z/	with and whizz
/dʒ/ and /z/	page and pays
/d/ and /dʒ/	bad and badge
/f/ and /p/	fool and pool
/tʃ/ and /dʒ/	cheap and jeep
/tʃ/ and /ʃ/	chair and share
/d/ and /ð/	day and they
/t/ and /θ/	tree and three

Note. The previous examples were taken from: Englishclub.com and Englishpost.org

According to Bustos & Pereira (2020), Spanish-speaking learners of English often face challenges in accurately perceiving and producing the sound distinction between vowels and consonants. This difficulty arises because Spanish has a comparatively simpler sound

inventory, with fewer minimal pairs when compared to English. With that in mind, it stands to reason that English teachers have explored different strategies to help learners overcome such difficulty with the minimal pairs. Yoshida (2016), for instance, suggests incorporating a listening practice with different sets of minimal pairs since it is believed that students require assistance in developing skills of sound perception and comprehension. Moreover, they need ample practice incorporating new sounds into contextualized situations and eventually employing them in communicative activities. In order to accomplish this, the author proposes a series of organized steps starting with the introduction of sounds and culminating with a communicative practice to insert the sounds into real-life context, fostering an engaging and efficient learning approach.

2.1.3 Gamification

Gamification has emerged as a popular educational strategy in recent years. According to Deterding (2012) and Chou (2019), it refers to the incorporation of game elements into learning activities with the purpose of making them more enjoyable and entertaining. To get a better idea of the concept of gamification, Kiryakova et al., (2014) define it as the incorporation of game mechanics into non-game activities. This involves taking an existing thematic content and introducing elements commonly found in games, such as point systems, medals, and unlocking surprises. To provide an example, a teacher aiming to help students practice trill consonants in English can approach the activity in a different way. Instead of simply providing a prompt and asking students to identify and pronounce the sounds, the teacher can turn it into a challenging game. The teacher will instruct the students to stand up and listen carefully for the vibrating sound. Each time they successfully identify the trill consonant, they will earn points or prizes. Once this interactive exercise is completed, the learners can proceed to record their pronunciation. However, the points they earn can also be used to acquire certain benefits, such as the opportunity to repeat the exercise before

receiving a grade, assistance from a classmate to address any doubts, or access to digital resources for pronunciation verification. In essence, the objective of the exercise remains on identifying and producing the target sounds. However, the way it is presented to the students has been transformed, by incorporating elements of gamification to enhance engagement and motivation.

However, gamification encompasses more than just entertainment; it has significant educational value as well. Gaviria (2021) highlights that gamification is a strategic method that captivates and motivates students during their learning process by involving them in activities that they would typically not find enjoyable. The purpose of gamification is to create an engaging and learner-centered approach that deviates from the traditional learning norms. By doing so, it aims to address the learning issues and facilitate learning by providing a distinct experience that captures student's interest. Overall, Gamification offers numerous advantages within educational settings. For instance, according to Kapp (2012), it serves as an effective tool for promoting learning and keeping the apprentices engaged and motivated. For that reason, it is necessary to find a balance between the challenges since they should not be too difficult or too easy in order to ensure optimal engagement. Furthermore, gamification is highly beneficial for educators as they can design activities that foster critical thinking and problem-solving skills among students.

2.2 Literature review

Teachers have a variety of strategies and techniques when it comes to incorporating the teaching of English pronunciation to enhance students' communication skills. For instance, Castelo (2018) expresses that songs are considered a valuable tool for teaching pronunciation since they offer the flexibility to explore different aspects such as coarticulation, syllabic structure, word stress, rhythm and intonation. In addition, the author mentions that the songs are attractive to learners due to their concise and repetitive structure, facilitating continuous

practice without much effort. Nevertheless, in the view of Castro (2021), the use of sound-color charts and drilling are effective techniques for instructing pronunciation. The author highlights that combining these two approaches enhances the learning process for apprentices. Through the repetition and imitation of the sounds produced by the teacher, and then associating those sounds with distinct colors, it will be easy for them to repeat the sounds by their own way thanks to the colors with which they characterize each phoneme. Finally, Rayasa (2018) demonstrates that the use of English movies (Youtube) is a good alternative for students to improve their ability to enunciate words and reproduce sounds with greater accuracy since it exposes the student to real life situations. What is more, the videos show conversations with natural pronunciation, colloquial expressions, and idiomatic phrases, accompanied by various gestures and settings which stimulates student's active engagement, fostering motivation and interest in their language acquisition.

As it can be seen, the available literature presents diverse and effective strategies for approaching pronunciation. However, it should be noted that gamification can also be highly effective in facilitating the learning process, particularly in terms of practicing and producing sounds in English. Let us consider the study of Barcomb and Cardos (2020) who followed a mix-method research approach to determine how effective the implementation of a gamified learning environment to acquire the sounds /r/ and /l/. At the beginning, the researchers administered a pre-test consisting of 14 items. The purpose was to get a preliminary idea of students' pronunciation abilities before introducing gamification. Results indicate that students were having many difficulties in distinguishing between the /r/ and /l/ sounds when recognizing and producing it. Then, students were presented with a gamified Moodle called "English detective" that was specially developed to mediate the consonant sounds for this study. At the end, the researchers conducted a post-test that involved 14 isolated words containing the sounds /r/ and /l/ in both the beginning and end positions. Additionally, a questionnaire comprising 8

open-ended questions was administered to assess the participants' perception of the extent to which the gamified online environment facilitated their learning process. Analysis of the results reveal that the implementation of the gamified online environment had a positive impact on learning, specifically in terms of improving the pronunciation of /r/ and /l/ as the learners showed an improvement when pronouncing words that contain these consonants. As a matter of fact, students were more open to independently practice pronunciation as a result of the points reward system, which served as a source of motivation for them, and it also alleviated their anxiety when it came to speaking out loud.

In the same light, Pérez-Cárdenas (2022), executed an action research using gamification to enhance the pronunciation of undergraduate students of Universidad Pedagógica Tecnológica de Colombia (UPTC). Initially, the researcher used a test called The Perception of Spoken English (POSE), which diagnoses problems in the perception of vowels, consonants, word stress, intonation, and sentence stress in students. Students showed low scores when perceiving /ɪ/, /ɛ/, /æ/, /ɑ/, /ow/ vowel sounds, and /θ/ - /t/ (final), /v/ - /b/ (initial), /θ/ - /t/ (initial), /s/ - /z/ (final) consonant sounds. In addition, students found trouble hearing two-syllable words when stress goes on first and the intonation when asking or making comments. Then, the pedagogical intervention was implemented in a virtual environment, and it was assembled in the institutional learning management system MODDLE. Students had to complete a course that integrated game-like activities divided into ten challenges with pronunciation as the main focus. Each challenge had three stages as follows: watch the video, let's practice, and let's play. In the first stage, they had to watch a video showing how to articulate and produce the sound. Videos were taken from BBC Learning English (British pronunciation) and Elemental English (American pronunciation). In the second stage, students practiced what they had learned in the videos through different activities that were created in H5P and Moodle tools. In the final stage, students found a variety of game sources such as

Genially, Kahoot, Quizizz, Bamboozle, Tinytap, Nearpod, H5P, and Jeopardylabs that included questions about the content presented. After the pedagogical intervention, a survey was implemented to know learners' insights regarding their perceptions and awareness of the course, as well as their understanding of the game thinking elements incorporated in the speaking and pronunciation process. In addition, the author applied a post-test to examine if there was a significant improvement in students' English pronunciation. Results indicated that students had a positive perception of those gaming factors that were implemented in the course since they felt motivated to enhance their pronunciation in a different way. In the same manner, it was observed a huge difference when the post-test was applied. Students could differentiate and perceive what vowels and consonant sounds are.

Similarly, Tejedor-García et al. (2016) carried out a test experiment where participants went through different discrimination and production challenges by using a pronunciation gamified tool called TipTopTalk! Unlike the other studies aforementioned, this one was focused on minimal pairs. The main objective of this experiment was to prove the reliability of the app in the improvement of discrimination and production of minimal pairs. To involve students, researchers provided them with as much practice as possible and granted them unlimited access to the different activities within the app. The challenges presented in the activities motivated students to practice and enhance their willingness to improve their performance throughout the process; however, due to the fact some of the participants were native speakers, the idea of frequently practicing their first language was not as interesting as it was for non-native speakers. As a consequence, the app showed that some students' performance (English native speakers' or students with high English level) decreased due to a diminishing fascination with the game-like activities. However, in general terms, the gamified app showed significant progress in terms of the optimal development of production and discrimination of minimal pairs among participants who initially had a lower proficiency level.

It is worth mentioning that since this study aims to explore the implementation of gamification as a didactic resource for teaching minimal pairs, the search was specifically focused on finding papers that met these specific criteria. However, during the search, it was observed that gamification was not widely utilized as a strategy to facilitate the teaching of minimal pairs. That is why, some other articles were explored, and it was found, for instance, that Ishani et al., (2016) carried out an action research study to evaluate the impact of employing a minimal pairs drill technique on the pronunciation skills of eighth grade students. Initially, the authors observed the classroom environment and identified its specific learning characteristics. Subsequently, they implemented the teaching intervention in two different cycles. The results indicated that the students' pronunciation improved from 62 to 82 percent from cycle 1 to cycle 2. Consequently, the authors concluded that the use of the minimal pairs drill technique was an effective strategy for enhancing not only English pronunciation skills but also students' engagement in the classroom. Likewise, Escudero Mancebo et al. (2015) designed an app that employed an Android Automatic Speech Recognition to test a serious game that specifically targeted pronunciation training through the use of minimal pairs. The study involved participants categorized into three groups based on their English pronunciation proficiency: North American native speakers, Spanish students of English philology, and Spanish students of Computer Science. The application presented a series of pronunciation challenges, assessing their performance and assigning a score to their pronunciation, in order to objectively measure and enhance their pronunciation skills. Additionally, the set of minimal pairs chosen focused on specific phonemic contrasts which in most cases, to overcome these difficulties, required serious practice for Spanish students learning English as a second language. Finally, the results showed that the app had the potential to be effectively employed in pronunciation instruction; it positively impacted motivation and demonstrated a significant alignment with the users' expected skill level, giving the best scores to the native speakers.

Bearing in mind the lack of information focused on the integration of gamified tools regarding pronunciation teaching, this study aims to fill this research gap and provide a valuable contribution to the field by incorporating game elements in the context of minimal pairs interventions. The intention is to explore an alternative way in which gamification can enhance the effectiveness of minimal pairs instruction, and to mediate the learning of minimal pairs through the use of game components.

3 Methodology

For this study, a qualitative approach was used since it seeks to understand a particular phenomenon and how it affects the people involved. In accordance with Creswell (2014), the qualitative approach focuses on establishing meaning based on the perceptions of the participants. That is, to comprehend how individuals experience and attribute significance to a specific situation, rather than providing objective responses. Instead of seeking universally applicable answers, the qualitative approach looks for exploring and comprehending the diverse ways in which individuals engage with the phenomenon under investigation. In this case, we preferred this methodology due to its flexibility, allowing for a spontaneous and dynamic relationship between the researcher and the participants. In the words of Mack & Woodsong (2005), this qualitative approach serves as a valuable tool to explore various perspectives and experiences of the individuals involved in order to gain a comprehensive understanding of the phenomenon. What is more, this method enables the collection of detailed and precise information on the research topic by understanding the contextual background in which the phenomena occurs.

3.1 Research Design

This study implemented an Action Research design since it allows researchers to concentrate on a particular situation and find valuable solutions (Stringer 2007). In the same

manner, Mertler (2019) mentions that action research in education attempts to improve a particular setting such as a classroom or a school system by considering the need for a development or change. Moreover, action research enables teachers' practices to improve because they are in an ongoing process where they need to observe, reflect and innovate their practices to fulfill students' learning needs (Pelton et al. 2010).

The purpose of this study considering action research design was to identify the problem that first-semester pre-service English teachers at Universidad Industrial de Santander faced when producing minimal pairs, to design and implement a gamified intervention where minimal pairs were taught, and to assess the impact of the intervention and students' performance on it.

Bearing in mind the model proposed by (Stringer 2007), the basic action research routine was executed in this investigation. It consists of three easy but powerful steps: look, think, and act. In the first step, researchers collect relevant information and describe the situation. Then, they explore and analyze, interpret, and explain. Finally, they plan, implement, and evaluate. For instance, in our project, we looked into the problem students faced when pronouncing minimal pairs, thought about how we could build the gamified intervention considering the literature review and theoretical framework, and acted on designing the intervention through lesson plans. Additionally, we evaluated students' performance and considered their perceptions regarding the effectiveness of gamification on their learning process when practicing minimal pairs.

3.2 Population

Population refers to the specific group that the study aims to investigate or provide treatment based on certain qualifications determined a priori (Majid, 2018). In this research study, the population consisted of all first-semester pre-service teachers enrolled in the "Licenciatura en Lenguas Extranjeras con Énfasis en Inglés" from the Universidad Industrial

de Santander who were taking the Pre-intermediate English course. The population was chosen considering the fact that this course has 10 hours per week which facilitated the availability to implement the interventions. Likewise, simultaneously, these students were taking the Introduction to the Articulatory Phonetics course, therefore the students were expected to be immersed in the process of learning vowel and consonant sounds to grasp English pronunciation.

3.3 Sample

Regarding the sample, defined as a smaller portion of the entire population selected in a manner that ensures the knowledge acquired, is an indicative of the total population studied (Cohen et al., 2007). One out of the two groups (from around 12 students each) of the Pre-intermediate English course was selected taking into account convenience sampling reasoning as described by Cohen et al (2007) “In convenience sampling researchers simply choose the sample from those to whom they have easy access”. Therefore, the main reason why this sampling strategy was chosen relies on the fact that the professor in charge of the Pre-Intermediate English group was willing to give us the space as we had previously discussed the idea of researching about English pronunciation.

3.4 Data collection techniques and instruments

The objectives of this research were developed using the following data collection techniques: Survey and Participant Observation. In terms of instruments, a pre-test, a post test, an observation grid, and a questionnaire were utilized. To ensure the reliability and validity of these instruments, a thought process was followed, including expert review and pilot testing. On one hand, expert review involved obtaining input and feedback from a professional in the field of pronunciation to evaluate the instruments in terms of relevance, clarity, and suitability for the research objectives. On the other hand, pilot testing was conducted to assess the effectiveness and feasibility of the data collection instruments. By doing this, adjustments were

made in order to obtain reliable data.

3.4.1 Survey

Surveys are a highly adaptable data collection technique as they are capable of gathering information and answering any type of research question. Kerlinger (1973, as cited in Mathiyazhagan & Nandan, 2010) “considered survey research as social scientific research and focuses on people, the vital facts of people, and their beliefs, opinions, attitudes, motivations and behavior”. These elements greatly contributed to achieving the goals outlined in this study, which were to identify student’s performance in producing minimal pairs before receiving explicit pronunciation instruction, and to assess the impact of gamification on students' pronunciation of minimal pairs. In order to gather vital information for our research, this data collection technique depended on certain instruments such as tests and a questionnaire. For that reason, taking into account the aims of this proposal mentioned above, a pre-test, a post-test, and a questionnaire were conducted.

3.4.1.1 Pre-test. Pre-tests are a very useful tool that helps teachers to collect information about the knowledge that students have on a specific topic. According to Berry (2008), pre-tests are administered at the beginning of a course to assess the existing knowledge before any intervention takes place. The purpose of this was to determine the initial performance of students to see whether the learner's demonstrated improvement or not in comparison to their development in the pre-test. This instrument was beneficial for our research study as it enabled us to identify the performance that students had when producing the minimal pairs /æ/ and /ʌ/, /e/ and /ɜ:/, /ɪ/ and /i:/, /ɒ/ and /ɔ:/, /ʊ/ and /u:/, /ɪ/ and /ə/ , /æ/ and /e/, /u:/ and /ɔ:/ before being exposed to an explicit instruction of pronunciation. (see appendix A)

3.4.1.2 Post-test. A post-test is a crucial instrument to gain the final data needed in order to evaluate the efficacy of the study held. Ewell (2002, as cited in Boyas, Bryan, & Lee, 2012) states that post-test will consistently demonstrate improvement compared to the pre-test.

The intention of the employment of this tool was to measure how successful the implementation of the didactic strategy regarding performance in pronunciation, comparing it with the pre-test results. Overall, the application of the post-test brought helpful conclusions to our study, not only to provide an analysis of the improvement expected but also to examine possible changes for future research. (see appendix A)

3.4.1.3 Questionnaire. According to Wilson and McLean (1994, as cited in Cohen et al., 2007) “The questionnaire is a widely used and useful instrument for collecting survey information, providing structured, often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyze”. In the context of this study, we used Google Forms to administer the questionnaire, aiming to enhance the management of the received information. This instrument served the purpose of measuring students’ perception regarding the intervention with Gamification and its potential impact on the improvement of minimal pairs pronunciation. (see appendix B)

3.4.2 Participatory observation.

Participatory observation is a significant technique to deeply understand a particular situation or problem in a specific context. DeWalt and DeWalt (2011) mention that in participatory observation the researchers take part of the context they are analyzing by being immersed in the activities, interactions, and events of the group. The aim of implementing this technique was to track students’ performance and behaviors while they were participating in the gamified didactic intervention. Hence, it was beneficial to use this technique in our study to know the development of each student and their attitudes towards the intervention.

3.4.2.1 Observation guide. The observation guide is a meaningful tool to remind important events that happened when carrying out the observation of the study. Campos and Martínez (2012) mention that it allows the researcher to classify the information gathered while observing the phenomenon in an organized format. The goal of this tool was to monitor the effectiveness of the different activities around the integration of game elements. This favored our study to analyze the impact of those activities on students' learning process of minimal pairs when being exposed to gamification. (see appendix C)

3.5 Interventions

Six different lessons were carried out, each one addressing a specific theme as you can see in Table 2.

Table 2

List of the lessons and game elements that were implemented in each activity.

Lesson	Vowel sound	Game Elements	Activity
Lesson 1	What's a vowel sound? Short and long vowel SOUNDS. Minimal pairs.	Narrative	Getting to know the Queen
		Competition and cooperation	Questionnaire in Kahoot
		Rewards	In all the activities
Lesson 2	Minimal pair /æ/ and /ʌ/-Minimal pair /e/ and /ɜ:/	Narrative	The Queendom Garden
		Competition and cooperation	The faster the better, broken phone
		Surprise element and time restriction	Challenge time - Tongue twister
		Progress	Reach the minimal pair
		Rewards	In all the activities
Lesson 3	Minimal pair /ɪ/ and /i:/ Minimal pair /ɒ/ and /ɔ:/	Narrative	The Queen Eloy Valenzuela Zoo
		Competition and cooperation	The Queen Eloy Valenzuela Zoo, Challenge time, Pictionary, Memory Game, Nearpod
		Random event	Karaoke time
		Surprise	Challenge time

		Time restriction	Challenge time, Pictionary
		Rewards	In all the activities
Lesson 4	Minimal pair /ɒ/ and /u:/	Narrative	Invasion of the Queendom
		Competition and cooperation	Invasion of the Queendom, Gartic Phone
		Time restriction.	Gartic Phone
		Rewards	In all the activities
Lesson 5	Minimal pair /æ/ and /e/ Minimal pair /ɪ/ and /ə/	Surprise element	Guess the movie's name
		Time restriction	Tangram
		Rewards	All the activities in the lesson
		Competition and cooperation	The cup in the cup, Random Wordwall, Time to climb
Lesson 6	Minimal pair /u:/ and /ɔ:/	Competition and cooperation	Bingo Pairs, Blooket
		Rewards	Bingo Pairs, Blooket

Note. This table shows the sounds addressed during each class session, along with the gaming elements that were integrated in each activity.

In the first session, the focus was on teaching the concept of vowel sounds, including short and long vowels, and the concept of minimal pairs. To achieve this, two activities were conducted, incorporating three game elements into the didactic sequence as follows: narrative, competition and cooperation, and rewards. Initially, the narrative was presented in the warm up activity called “Getting to know the Queen”. This was an engaging activity for students since they had to be very attentive in order to discover the key to entering the Queendom. The importance of all this activity was to contextualize students with the topic of vowels and to get to know a little about the population studied. Then, the competition and cooperation was present in a gamified questionnaire that was carried out in Kahoot. This questionnaire was implemented after the explanation of the topic in order to check if the students had understood

the information provided. This type of activity was very important to assess students in a more dynamic way. Finally, the rewards element was present not only in this session, but in all the classes with the purpose of extrinsically motivating students. The learners had the opportunity to accumulate points through a series of activities carried out in the different lessons. These points were accumulated on the Class Dojo platform where students could create and customize their own avatar. In the end, the person with the highest point total could trade them for a double movie ticket (see figure1).

Figure 1

Avatars of the participants in Class Dojo.



The rewards were distributed as follows: attendance, homework, participation, victory, second place, third place, and teamwork (see figure 2).

Figure 2

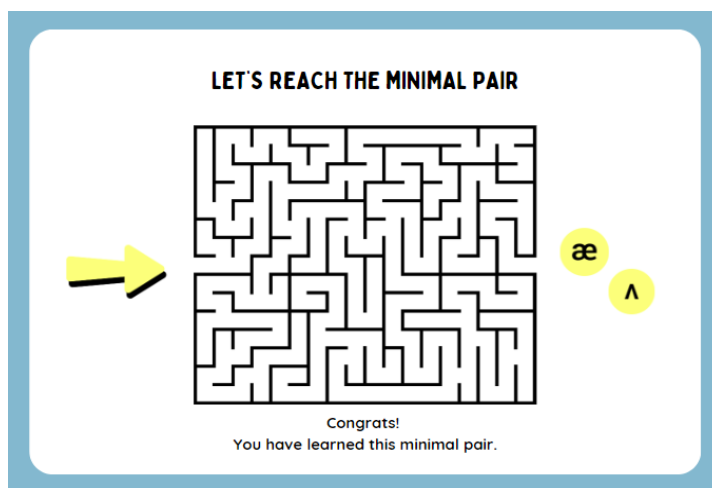
List of the distribution of points in Class Dojo.



In the second class, there were five different activities where five game elements were integrated: narrative, competition and cooperation, surprise and time restriction, progress, and rewards. Firstly, the narrative element was present in the warm up activity called “The Queendom Garden”. This was an engaging activity for students since we continued with the same thematic of the Queendom but now something terrible happened in the Queen’s garden. The aim of this activity was to review to the students the diagram of the English vowel sounds as well as introducing the minimal pairs /æ/ - /ʌ/ and /e/ - /ɜ:/. In the same way, the competition and cooperation element was present in the warm up activity called “The faster the better” since students had to work in groups in order to put the vowel sound in the correct place in the diagram. Additionally, this element was present in the activity called “Broken Phone” where students had to cooperate and work as a team to ensure that the phrase made its way to the final participant. Then, the surprise element and time restriction was present in the activity called “Challenge time” with the creation of the tongue twister. This element was very useful since surprise events captured students’ attention and it broke the monotony making the content more engaging. Besides, the students had limited time to create the tongue twister, this helped ensure that all the students had an equal opportunity to participate and learn. After creating it, they had to read aloud and to produce the sounds. Following that, the progress element was present in the activity called “Reach the minimal pair” (see figure 3).

Figure 3

Activity where the game element of progress was implemented.



This activity served as a means to shift from one subject to another one. It indicated that students had completed their study of one minimal pair and were now moving to another. Finally, as previously mentioned, the element of rewards was present in the different activities as students earned points to accumulate on the Class Dojo platform in order to motivate them.

In the third lesson, students were introduced to the minimal pairs /ɪ/-i:/ and /ɒ/ - /ɔ:/. To explain those minimal pairs, 6 activities were planned, and 6 game elements were blended into the teaching sequence. Initially, the narrative, and competition and cooperation were implemented in the warm-up named ‘The Queen Eloy Valenzuela Zoo’ to continue with the story proposed in the first class. In this part, the queen did not remember which animals she had that mysteriously disappeared. So, the activity consisted of finding some words around the classroom that contained the name of one animal, and in order to remind her of the name, students had to pronounce it correctly. Additionally, in the activity ‘Challenge time’ surprise, and competition and cooperation game elements were applied. It was presented with that name (Challenge time) and students did not have any idea of what it was about. They heard a list of three words that contained the minimal pair /ɪ/-i:/. The first student who wrote and pronounced them correctly won a point. Moreover, ‘Pictionary’ activity implemented time restriction and competition and cooperation game elements. Students were divided into two teams; one participant of each team drew a given word that had a minimal pair in a limited time. The idea was to guess the name of the drawing and to say its minimal pair. Furthermore, in the activities ‘Memory Game’ and ‘Nearpod’ competition and cooperation game element was effectuated. In the former activity students had to find the correct minimal pair by turning over some cards, and the student that completed all the pairs in the least time won. In the latter activity, students individually answered a questionnaire about both minimal pairs explained in class, so the student with the most correct answers won a reward.

In the fourth lesson, students were introduced to the minimal pair /ʊ/ and /u:/. In order

to do that, 2 activities were planned, and 4 game elements were integrated into the teaching sequence. First, a narrative was implemented in the warm-up activity. The name was ‘Invasion of the Queendom’ since it was an impostor inside the Queendom that was a person who had a different vocalic sound in the classroom. Students had to talk in order to find the impostor and not let them invade the place. Furthermore, competition and cooperation were executed in 2 activities. Firstly, in the warm-up activity, students worked in an individual way to win a point. Second, in the activity named Gartic Phone, students worked in a cooperative way in order to end with the correct sentence. Finally, time restriction was presented in the Gartic Phone activity since it had a limited time to create a sentence that contained the different minimal pairs and to draw the sentence.

Then, in the fifth class, the minimal pairs: /æ/ and /e/ and /ɪ/ and /ə/ were introduced by applying six activities with four game elements incorporated. To begin, the warm-up activity “The cup in the cup” consisted of a type of race where the cooperation and competition game element was displayed since students had to work jointly to build a castle made of plastic cups. After the tower was built, students had to organize, and read a sentence placed on the board where the main objective was to correctly produce the minimal pair shown with the purpose of winning points. Likewise, through the activity called ‘Random Wordwall’, in which students had to play in teams in order to accumulate points by answering questions, they could practice the minimal pair just explained. Both games were important so that students could not only learn over practice but also through their classmates while cooperating. Then, with the purpose of keeping participants’ engagement, we conducted a gamified activity called ‘Time to climb’, part of the interface of the website Nearpod, in which they had to answer a questionnaire to check their understanding of the topic. In this activity, the participants were supposed to choose a predetermined character in an effort to climb a mountain, and reach the summit by virtue of their performance and speed in the questionnaire to evaluate students’ development. Moreover,

another game element was applied: random event. This activity allowed us to give a break to the students after being exposed to content, and practice; and to make an attractive transition to the next minimal pair given that it had nothing to do with the previous or the following topic. ‘Guess the movie’s name’, as the activity was named, was a trivia in which students had to guess the name of the movie by listening to its soundtrack. The student with the most movies guessed, won the victory points that were then added to our virtual classroom in ClassDojo. To finish the lesson, we executed an activity called ‘Tangram’ that accurately carried the surprise and time restriction game element. In this task, students were asked to make groups of two people in order to come up with the figure shown on the screen using the geometric shapes we gave them. The participants were requested to finish the puzzle in no more than five minutes, in that way, this activity could increase their adrenaline and pave the way to gain participants’ motivation. In order to finish the task, the first couple on accurately replicating the image shown, had the opportunity to read a pair of words or sentences where they only could get points if they articulated the sounds in the correct way. As was previously mentioned, throughout the different activities from the beginning to the end of the lesson, students were prized with points, which showed the rewards game element.

Finally, in the last class, while presenting the minimal pair /u:/ and /ʊ:/, two game elements were employed: competition and cooperation, and rewards. These elements were presented in the warm up activity called ‘Bingo Pairs’ as well as in the last activity: ‘Blooket’ where students had to work individually in order to win either the bingo or the questionnaire. In the former activity, students had to complete a column of their bingo card by listening to a set of words that contained a minimal pair. The first person to say ‘bingo’ and having the words mentioned and pronounce them correctly, won a point. In addition, as it was mentioned above, the latter activity implemented the competition game element given the fact that they had to accumulate points by answering questions which gave participants the opportunity to win

money or hack their opponents. In the same way, in both activities the game element of rewards was applied since the participants won points with each activity triumphed.

4 Results

4.1 Students' production of minimal pairs before the use gamification

In order to conduct the pre-test, first of all, an informed consent (see appendix D) was given to the student so the study could be carried out. We proceeded to conduct the pre-test in the following way: first, each of us invited a student to sit outside the classroom to start the test. Then, they were asked to read a set of words and sentences that contained minimal pairs. Finally, while they were reading, they were recorded so that their articulation could be later analyzed.

Before continuing with the analysis, it is important to remember that a minimal pair, according to Fromkin et al. (2003) comprises two words with distinct meanings, yet they exhibit nearly identical structures except for one particular sound, which can be vocalic or consonant sound and occupies the same position within both words. For instance, 'rat' /ræt/ and 'cat' /kæt/ are minimal pairs because they share nearly identical except for the initial sound (in the former, the consonant sound is /r/ and in the latter /k/). In the case of the vowels, 'land' /lænd/ and 'lend' /lend/ are minimal pairs because the vowel sound that is placed in the same position in both words, is different (in the former, the vowel sound is /æ/ and in the latter /e/).

In regard to the analysis, it was determined that not even half of the students were able to effectively produce the 8 minimal pairs contemplated in the test (see table 3).

Table 3

The percentage of students who accurately produce minimal pairs.

Minimal pair	Percentage of students
/æ/ and /ʌ/	8,3%

/e/ and /ɜ:/	36,3%
/i:/ and /ɪ/	18,1%
/ɒ/ and /ɔ:/	0%
/u:/ and /ʊ/	0%
/ɪ/ and /ə/	18,1%
/æ/ and /e/	0%
/u:/ and /ɔ:/	18,1%

Specifically, as seen in the table 3, 36.3% of the students accurately produced the minimal pair /e/ and /ɜ:/ found in words like ‘bled’ /bled/ and ‘blurred’ /blɜ:d/, ‘bed’ /bed/ and ‘bird’ /bɜ:d/, and ‘best’ /best/ and ‘burst’ /bɜ:st/. The 18,1% proficiently produced /i:/ and /ɪ/ existent in words like ‘peel’ /pi:l/ and ‘pill’ /pɪl/, ‘cheek’ /tʃi:k/ and ‘chick’ /tʃɪk/, and ‘sheep’ /ʃi:p/ and ‘ship’ /ʃɪp/; another percentage identical to the previous one managed to produce /ɪ/ and /ə/ observed in words like ‘edition’ /ɪˈdɪʃ.ən/ and ‘addition’ /əˈdɪʃ.ən/, ‘bizarre’ /bɪˈzɑ:r/ and ‘bazaar’ /bəˈzɑ:r/, and ‘comfit’ /ˈkʌm.fɪt/ and ‘comfort’ /ˈkʌm.fət/; once again, and like the two previous cases, the same percentage of students could articulate the minimal pair /u:/ and /ɔ:/ encountered in words like ‘shoot’ /ʃu:t/ and ‘short’ /ʃɔ:t/, ‘tool’ /tu:l/ and ‘tall’ /tɔ:l/, and ‘moon’ /mu:n/ and ‘morn’ /mɔ:n/. The 8,3% succeeding in producing the minimal pair /æ/ and /ʌ/ found in words like ‘bat’ /bæt/ and ‘but’ /bʌt/, ‘hat’ /hæt/ and ‘hut’ /hʌt/, and ‘cam’ /kæm/ and ‘come’ /kʌm/. Finally, 0% of the students were incapable of producing the minimal pair /ɒ/ and /ɔ:/ existent in words like ‘fox’ /fɒks/ and ‘forks’ /fɔ:ks/, ‘wok’ /wɒk/ and ‘walk’ /wɔ:k/, and ‘shot’ /ʃɒt/ and ‘short’ /ʃɔ:t/; another percentage equal to the previous one could not produce the minimal pair /u:/ and /ʊ/ seen in words like ‘cooed’ /ku:d/ and ‘could’ /kʊd/, ‘kooky’ /ˈku:ki/ and ‘cookie’ /ˈkʊk.i/, and ‘pool’ /pʊl/ and ‘pull’ /pʊl/; once more, just like the two previous cases, the same percentage of students did not manage to produce the minimal pair /æ/ and /e/ present in words like ‘man’ /mæn/ and ‘men’ /men/, ‘axe’ /æks/ and ‘ex’ /eks/,

and ‘sad’ /sæd/ and ‘said’ /sed/.

Nevertheless, it is worth mentioning that in many cases, the students could only correctly distinguish and produce one of the sounds in the minimal pair, and in rare occasions, both sounds in the minimal pair. In other words, they did not recognize the contrast between one and the other. For example, in the pair /i:/ and /ɪ/, they were able to effectively produce the vowel sound /ɪ/ (as seen in figure 6) where the student’s lips are slightly spread and they lowered the jaw a little; but not /i:/ probably because the short vowel sound /ɪ/ is similar to the Spanish vowel sound /i/, as seen in figures 4 and 5, where in both articulations (English and Spanish) the tongue is in the same position, and even though it is not visible in the figure, the lips are slightly spread making it easily producible since the participants are Spanish-speakers.

Figure 4

English articulation of /i/. Taken from: Marks, J. (2007). English pronunciation in use: Elementary.

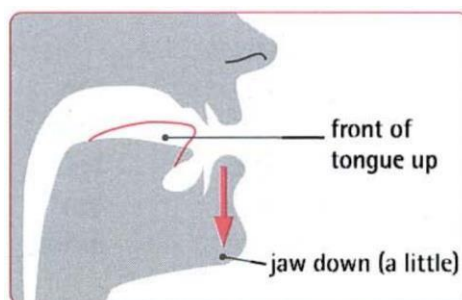


Figure 5

Spanish articulation of /i/. Taken from: Ganeshan, A. (2019). La Articulación delas vocales.

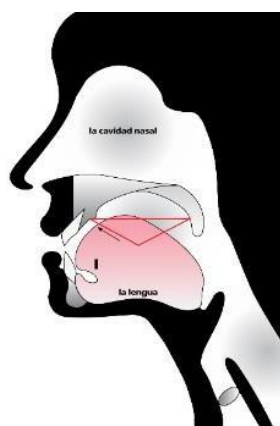
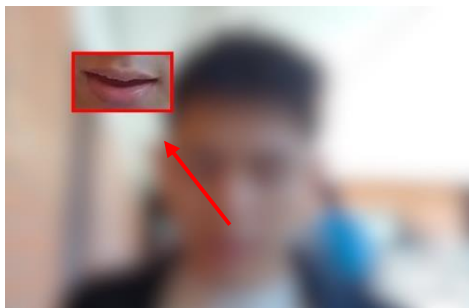


Figure 6

Participant's articulation of /ɪ/.



Note. Student #7 producing /ɪ/.

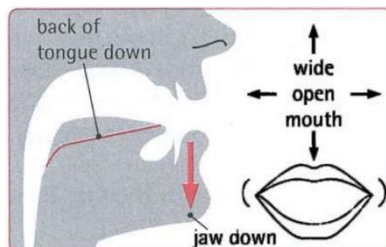
Taking a broad view, the students were unable to accomplish the precise articulation of both sounds in a minimal pair. For that reason, it seemed pertinent to analyze the information in further detail (i.e. the production of sounds vowel by vowel).

Regarding the most difficult vowel sounds, the analysis revealed that less than the 50% of the participants could effectively produce the vowel sounds /æ/, /i:/, /u:/, /ɔ:/, and /ə/ probably because none of these sounds exist in Spanish. In fact, as mentioned in the conceptual framework, Bustos & Pereira (2020) state that Spanish-Speaking learners of English frequently encounter difficulties in the precise perception and production of vowel and consonant sounds. This challenge arises because the Spanish language possesses a relatively simpler inventory of sounds compared to English. In line with this notion, they have become used to articulating the vowels differently, so when asked to articulate a new sound, the production of it is challenging or not achieved also because they have not been exposed to explicit instruction. This idea is supported by Naeini and Adni (2017) who affirm that explicit instruction is a beneficial method that offers learners the opportunity to enhance challenging sounds.

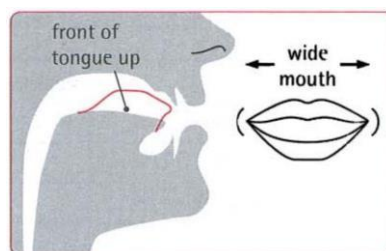
Concerning vowel pronunciation of the /æ/ and /i:/ sounds, Marks, J (2007), outlines that /æ/ is pronounced with a wide-open mouth, jaw and back of the tongue down (see figure 7), and /i:/ is expected to be articulated with a wide mouth and the front of the tongue goes up (see figure 8).

Figure 7

Articulation of /æ/. Taken from: Marks, J. (2007). English pronunciation in use: Elementary.

**Figure 8**

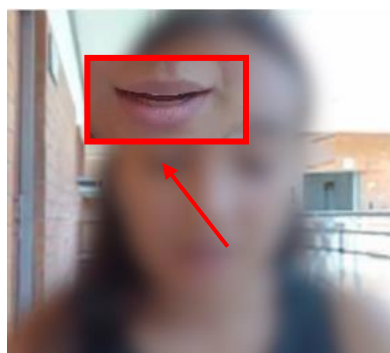
Articulation of /i:/. Taken from: Marks, J. (2007). English pronunciation in use: Elementary.



Nonetheless, the students neither produced /æ/ with the movement of the jaw, nor with the accurate lips' articulation (stretched out), and in the case of /i:/, they produced it with slightly rounded or neutral lips which did not permit the proper pronunciation of the long vowel sound. For instance, student #6 produced the word 'bat' which has the vowel sound /æ/ without a wide-open mouth as shown in the figure 9.

Figure 9

Participant's articulation of /æ/.

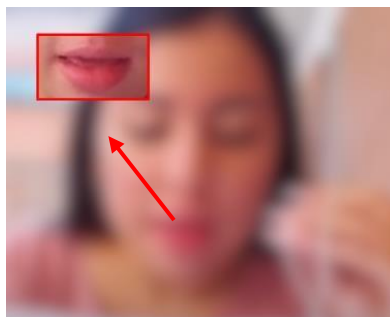


Note. Student #6 producing /æ/.

And in the word ‘piece’ the student #2 pronounced the vowel sound /i:/ with neutral lips and not with a wide mouth as is supposed to be pronounced (see figure 10)

Figure 10

Participant’s articulation of /i:/.



Note. Student #2 producing /i:/.

As previously evidenced, it can be concluded that there are some complex sounds like /æ/, /i:/, /u:/, /ɔ:/, and /ə/ that were not articulated in the way they are suggested to be. Bearing this in mind, the inadequate performance in producing these vowel sounds by first-semester pre-service teachers likely arises from the absence of necessary phonetic guidance, as noted by Adrián, M (2014). He says, that implementing phonetic instruction and correction in the educational setting will enhance students’ phonetic awareness, and this, in turn, will ultimately result in improved pronunciation. That is why, it is necessary to carry out phonetic instruction in order to improve students’ performance.

In contrast, the vowel sounds /ʌ/, /e/, /ɪ/, /ɒ/, /ʊ/, and /ɜ:/ were articulated by the students in a way that was very close to the description suggested in the pronunciation manual written by Marks, J (2007). This happened presumably because some of them exist in the Spanish phonetic inventory such as the sound /e/, meaning that there is prior experience of articulatory movement. For example, in Spanish the word ‘elefante’ has a similar vowel sound as in the word ‘elephant’ in English which leads to an effortless articulation of the sound. Furthermore, as previously shown and mentioned, it was found that one vowel sound was properly performed considering the English Pronunciation in Use’s criteria to produce English vowel sounds. This short vowel sound was /ɪ/. In order to produce this vocalic sound, the mouth should be made a

bit less wide (slightly spread lips), and the tongue should be a bit further back than for the long vowel sound /i:/. For instance, in words like ‘*ship*’, ‘*it*’, and ‘*will*’, students could accomplish the articulation of the vocalic sound suggested by the literature, facilitating the correct production of the sound analyzed. Other sounds were perhaps accurately pronounced by matter of luck, or any type of previous knowledge about the topic, or any incidental interaction with the sound or the word provided.

All in all, the pre-test shows notable findings regarding students’ pronunciation of minimal pairs and specific vowel sounds. The minimal pairs that the students were not familiar with in detail or that they could not pronounce were due to the fact that they had not received explicit instruction (Naeini and Adni (2017)) on vowel sounds, or that they were not aware of the articulation of vocalic sounds. Another reason why students did not manage to produce the minimal pairs that were shown in the pre-test could be attributed to Spanish influence since those sounds (/æ/, /i:/, /u:/, /ɔ:/, and /ə/) do not exist in the Spanish phonetic inventory; however, there are other English phonemes such as /ʌ/, /e/, /ɪ/, /ɒ/, /ʊ/ that have a similar articulation to the Spanish one, leading to a better pronunciation thanks to the similarity. As aforementioned, students’ low performance in the articulation of minimal pairs could have been due to the fact they did not know the contrast in the production of the sounds. Even though they had likely covered information about vowel sounds in their Articulatory Phonetics course, the information had not been addressed through minimal pairs. Nonetheless, considering that they already had some knowledge about vocalic sounds and were just beginning the process, 6 vowel sounds were easily mastered, while 5 presented difficulties. Finally, this emphasizes the importance of implementing phonetic instruction and correction in the classroom to enhance students’ phonetic awareness, leading to improved pronunciation. That is why, the pre-test results indicated the need for explicit explanation, prompting us to develop 6 interventions aimed at teaching the participants how to produce minimal pairs.

4.2 Performance of students when being exposed to gamification.

There were six participant observations in the different didactic interventions. Two of us in the role of researchers were responsible for carrying out the teaching strategies while one was carefully observing and documenting all the activities that were taking place in the class. The primary objective of this was to examine the students' engagement with the different game elements that were incorporated into the lesson and, consequently, assess their performance. These elements were presented in different activities that were carried out in class where gamification was implemented as a didactic strategy by using different websites such as Kahoot, Quizizz, Wordwall, Nearpod, Gartic Phone, and Blooket.

As it was previously mentioned in the methodological design section, there were a total of six classes in which various game elements were introduced and integrated. To begin with, the narrative element was incorporated into four out of the six classes. The storyline conveyed during the lessons was that one of us was a queen, and the students were tasked to determine their worthiness to be part of her queendom. Subsequently, in the following classes, something terrible always happened to the queen, and it was the learners' responsibility to find a way to help her. Usually, this narrative was employed at the beginning of the class as a warm up activity to contextualize students with the subject matter or to review the topic seen in the previous class, but in a different way. Overall, this exercise brought significant benefits, as it engaged the students, and fostered high levels of attentiveness and active participation. The aforementioned resonates with the words of Keller et al., (2020) who affirms that using different learning strategies that involve active participation from students can generate a more effective learning outcome compared with traditional methods. In this case, the innovative element was the narrative presented, which somehow aroused the students' interest and curiosity to know what was going to happen. Even when learners realized that only misfortunes happened to the queen, the students responded with humor, and they were attentive to see how

to assist her. Something similar happens with the video games, where the narrative plays a crucial role since it helps participants to become deeply engaged and immersed in the story (Parsayi and Soyooof, 2018). Even though narrative in video games typically serves to contextualize and encourage people to play, we implemented narrative to actively involve students in academic activities. To conclude, the integration of narrative as a game element proved to be a useful tool for engaging students. Furthermore, this component served as a means for building trust with the students and alleviating any hesitation to speak up and participate.

Secondly, a common element in all classes was the combination of competition and cooperation. This aspect was integrated into each of the various activities conducted in every class. It was noted that students were willing to participate when they were exposed to competition and cooperation. Furthermore, their motivation to compete became particularly evident when they found out that, at the end of the interventions, whoever with the highest point tally will receive a prize. This incentive motivated them a lot, resulting in enthusiastic participation and competitiveness. They were always aware of what the other group was doing, concerned about potential rule violations or errors, and occasionally engaged in arguments because the other team did not deserve to win the points. In accordance with Attle and Baker (2007), it is evident that the presence of competition and cooperation has a significant impact on students' performance. This is because these elements are integral for motivating and engaging learners, actively involving them in their own learning process. In general terms, this combination of elements offered numerous advantages since it created an enjoyable atmosphere that captured all their attention and encouraged students to make decisions and compete with their peers.

Thirdly, another element that was present during four of the six lessons that were carried out was the surprise element and time restriction. These aspects were introduced through

challenging moments with the aim of assessing the students' application of the knowledge gained in previous classes. These game elements made the learners nervous and increased their adrenaline. However, when it was mentioned to them that with the activity they could earn points, their attitude changed, they were much more motivated and began to work with more determination to win. In accordance with Steyn (2020), surprise elements serve as a motivator for students to work harder, enhance their focus, and be more concentrated to make quicker decisions. In broad terms, these elements proved highly advantageous. This could be because the unexpected challenges manage to capture students' attention and disrupt the classroom monotony, making the content more engaging. Moreover, the time restrictions ensured that every student has an equitable opportunity to participate and learn. Simultaneously, the element of time restriction could have increased the adrenaline since the students must finish before time runs out.

Lastly, in three out of the six classes, the element of progress was incorporated. This particular element created a segment within the class where students could calm down, relax, have fun, and clear their mind temporarily from the subject matter being studied. After the progress element was introduced, there was a noticeable transformation in the classroom atmosphere, the class was suitable and optimal to continue with the next topic. This is probably because there was a kind of break within the lessons where students could engage in activities that differed from the traditional ones, while still maintaining the connection to the class. Govender and Arnedo (2021) suggest that the element of progress is related to increasing difficulty and moving on to the new learning content. They state that this results in something attractive for them because it feels like they have accomplished a stage, similar to completing a level in a game. Overall, this element served as a valuable tool for making a transition from one topic to another, indicating to students that they had completed their study of a specific pair and were now progressing to the next one.

To sum up, the integration of various game elements within the six classes affected in a positive way students' performance and participation. Firstly, the narrative element not only captured students' attention and participation but also facilitated trust-building. In addition, the combination of competition and cooperation motivated students, fostering a healthy competitive spirit and encouraging peer interaction. Thirdly, the surprise element and time restrictions added excitement, driving students to work with determination. Finally, the progress element showed the benefits for having breaks for relaxation and transitions between topics. All these elements collectively created a learning environment more interesting and involving, demonstrating the benefits of incorporating gamification as a didactic strategy.

4.3 Perceptions of students about gamification

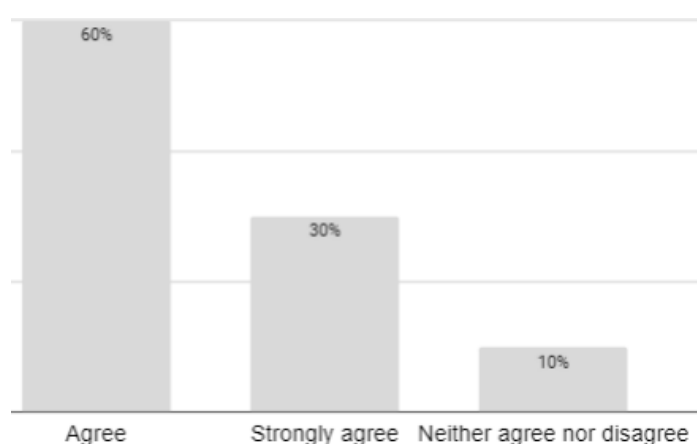
After concluding the interventions, we sent students a Google Form questionnaire with the aim of evaluating the impact of gamification considering student's perceptions. Although 11 students were part of the pre-test and post-test, only 10 students were able to answer the questionnaire. It should be noted that this instrument helped us triangulate the results with the information gathered in the pre-test and post-test as well as with the observations.

According to Deterding (2012) and Chou (2019), gamification is known as the integration of game elements in order to modify the way in which the activities are presented. For instance, instead of telling students to produce /ʌ/ vowel sound, they were asked to get in groups and solve a challenge to unlock the possibility to produce. All in all, the outcome and/or essence of the activity is the same but the way it was presented changed. This can be seen in lesson 2 in which an activity called 'Broken Phone' was carried out. The first student in the line read a sentence and produced it to the next one in the line, the last person had to say it aloud and if the pronunciation was correct, the team won a reward. Thus, the competition and cooperation game element was integrated since they had to work as a team and cooperate to win a point.

To start with, 60% of students agreed and 30% strongly agreed that the gamified intervention effectively enhanced their understanding of the distinctions between minimal pairs (see figure 11) when they were asked about it.

Figure 11

Percentage of students' answers to the question: Did the gamified intervention effectively enhance your understanding of the distinctions between minimal pairs?



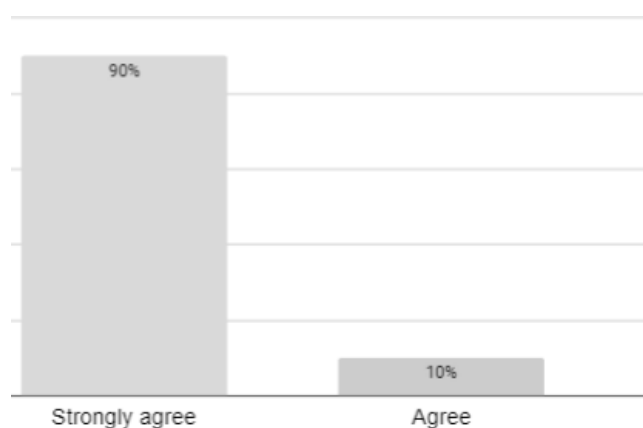
Specifically, when asked to justify their answer, 50% of students mentioned that it was fun, interesting, and entertaining how they received the input. In the same manner, 20% of students said that the explanation was great and they could know more about the differences when articulating a sound. The results are in line with the conclusions of the Al Hejaili and Newbury (2023) study. The authors suggested that integrating game elements in language education benefits the comprehension of Arabic letter forms. Their findings indicated that these elements created an engaging environment, increasing students' interest and dedication to learning the topic.

Even so, 10% of students in this study pointed out that they neither agreed nor disagreed that the intervention enriched their understanding between minimal pairs because they considered that the games were a bit luck-based so they did not help them to practice minimal pairs. It was possible that this student only focused their attention on achieving the rewards more than practicing or doing the task to learn, so this could result in a lack of concern when learning the topic.

Furthermore, 90% of students strongly agreed and 10% agreed that the gamified activities made learning minimal pairs more engaging and enjoyable (see figure 12) when they were asked about it.

Figure 12

Percentage of students' answers to the question: Did the gamified activities make learning minimal pairs more engaging and enjoyable for you?

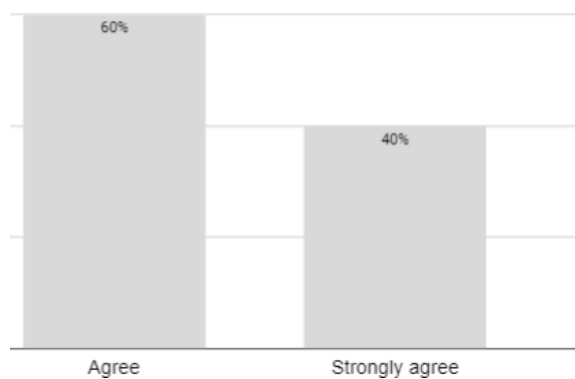


The majority of students mentioned that the activities were interesting, funny, and entertaining in the way in which the topic was explained. In addition, some students highlighted that they learned through those activities in an easier, different, and less mechanical way. Also, 20% of students said that the gamified activities helped them to focus and capture their attention while learning the topic. Thus, in agreement with the results of the study of dos Reis Lívero et al (2021) the implementation of gamified activities made the classes more amusing and raised students' engagement in the classroom.

Besides, 60% of the participants agreed and 40% strongly agreed that they perceived the gamified intervention as a helpful tool for improving their pronunciation of minimal pairs (see figure 13) when they were asked about it.

Figure 13

Percentage of students' answers to the question: Did you perceive the gamified intervention as a helpful tool for improving your pronunciation of minimal pairs?



A vast number of students pointed out that they practiced a lot in the interventions so that is why they felt the improvement when pronouncing minimal pairs. Some of them mentioned that they had to participate in order to complete the task assigned, so they felt motivated by the game elements to get involved in the class (see figure 14).

Figure 14

Students' justification to the question: Did you perceive the gamified intervention as a helpful tool for improving your pronunciation of minimal pairs?

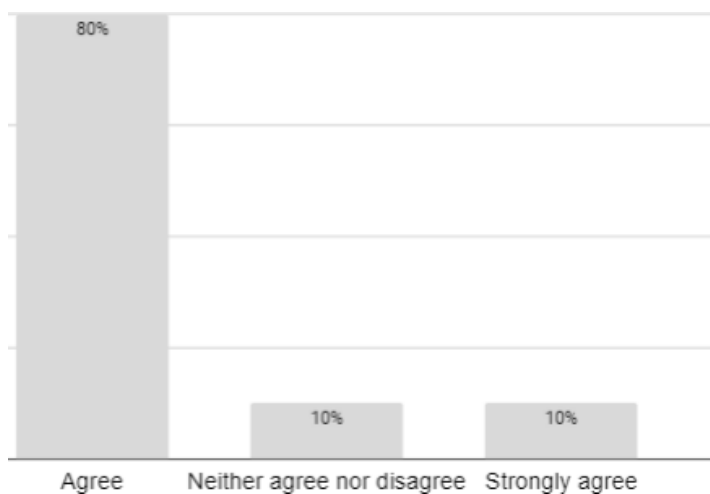
Why? (Justify your previous answer)

- Yes, because we were constantly practicing minimal pairs
- Because you have to participate in a lot of games so you work on your pronunciation in comparison with a normal class where sometimes you never participate
- Most of the games required us to practice pronunciation, so it was a good way of improving it.
- I had the opportunity to not only learn a lot of minimal pairs, but also to practice saying them and to correct them immediately if I was saying it wrongly.

In addition to that, 80% of the participants agreed, 10% strongly agreed and 10% neither agreed nor disagreed that the gamified activities effectively motivated them to practice and learn minimal pairs (see Figure 15) when they were asked about it.

Figure 15

Percentage of students' answers to the question: Did the gamified activities effectively motivate you to practice and learn minimal pairs?



A greater number of participants specified that the activities were so fun, interesting, and enjoyable. 20% of students mentioned that they would like to implement those kinds of activities while studying on their own and two other students said that the activities were competitive and that they always wanted to play or win. In fact, it was evident according to the students' perceptions that the gamified activities that include game elements such as competence and cooperation, surprise, rewards, etc, animated them in a big manner to practice during the interventions.

All in all, the implementation of the gamified interventions demonstrated a positive impact on their learning of minimal pairs taking into account students' perceptions. First, through the gamified interventions, students enhanced their understanding of minimal pairs as they mentioned that it was fun, interesting, and entertaining. Additionally, they perceived the learning process more enjoyable as the activities were presented in a different and non-mechanical way. Furthermore, the gamified intervention helped them to improve their pronunciation when referring to minimal pairs since they felt motivated to participate in the activities presented. For instance, the integration of the game elements in regular activities positively influenced their understanding, engagement, pronunciation, and motivation during the lessons.

4.4 Students' production of minimal pairs after the use of gamification

We carried out the post-test after the interventions with the aim of looking for an improvement in students' performance. The same set of minimal pairs was used as in the pre-test in order to compare the results of both tests (pre-test and post-test), taking into account that they were going to be evaluated after phonetic instruction. We proceeded to conduct the post-test in the same way as in the pre-test: by inviting the students to sit outside the classroom and asking them to read the words and sentences out loud while being recorded so that their articulation could be later analyzed and contrasted with previous results.

In general, the results showed a notorious improvement in the production of minimal pairs since 7 out of 8 minimal pairs tested were rightly produced by more than half of the students (see table 4).

Table 4

Percentage of students who accurately produce minimal pairs in both tests.

	Pre-test	Post-test
Minimal pair	Percentage of students	Percentage of students
/æ/ and /ʌ/	8,3%	72,7%
/e/ and /ɜ:/	36,3%	72,7%
/i:/ and /ɪ/	18,1%	54,5%
/ɒ/ and /ɔ:/	0%	81,8%
/u:/ and /ʊ/	0%	63,6%
/ɪ/ and /ə/	18,1%	81,8%
/æ/ and /e/	0%	27,2%
/u:/ and /ɔ:/	18,1%	90,9%

The post-test revealed profound changes in some minimal pairs. As illustrated in the table, while in the pre-test, not even one student could produce the minimal pair /ɒ/ and /ɔ:/,

after the intervention the 81,8% could do it pronouncing words like ‘tot’ /tɒt/ and ‘taught’ /tɔ:t/, ‘fox’ /fɒks/ and ‘forks’ /fɔ:ks/, and ‘wok’ /wɒk/ and ‘walk’ /wɔ:k/. Another drastic change was evidenced in the minimal pair /u:/ and /ɔ:/ whit the pre-test showing an 18,1% success rate, while in the post-test, the students achieved a precise production of the minimal pair, reaching 90,9% (highest percentage attained) by producing words such as ‘boot’ /bu:t/ and ‘bought’ /bɔ:t/, ‘cool’ /ku:l/ and ‘call’ /kɔ:l/, and ‘drew’ /dru:/ and ‘draw’ /drɔ:/. This represented a substantial 72,8% improvement. Along the same line, another substantial advance was encountered in the production of the minimal pair /u:/ and /ʊ/, since in the the pre-test no student was capable of producing it, while in the post-test 63,6% successfully pronounced the minimal pair in words like ‘cooed’ /ku:d/ and ‘could’ /kʊd/, ‘fool’ /fu:l/ and ‘full’ /fʊl/, ‘kooky’ /'ku:.ki/ and ‘cookie’ /'kʊk.i/.

Other results also displayed favorable development in students’ pronunciation. For instance, only 8,3% of the students accurately produced the minimal pair /æ/ and /ʌ/ in the pre-test, while in the post-test, 72,7% of the students proficiently produced the same minimal pair producing words like ‘bat’ /bæt/ and ‘but’ /bʌt/, ‘cam’ /kæm/ and ‘come’ /kʌm/ ‘dabble’ /'dæb.əl/ and double /'dʌb.əl/. Another percentage, equal to the previous one achieved in the post-test, revealed that, differing from the pre-test where only 36,3% of the students managed to produce the minimal pair /e/ and /ɜ:/, there was a 36,4% improvement in the articulation of the minimal evident in the post-test when pronouncing words such as ‘bled’ /bled/ and ‘blurred’ /blɜ:d/, ‘bed’ /bed/ and ‘bird’ /bɜ:d/, and ‘best’ /best/ and ‘burst’ /bɜ:st/.

Likewise, the results demonstrated that a positive development was visible in the minimal pair /i:/ and /ɪ/, in which, in contrast to the pre-test, where only 18,1% of the participants were able to produce the minimal pair, in the post-test, 54,5% of the students could accurately produce it in words such as ‘eat’ /i:t/and ‘it’/ɪt/, ‘wheel’ /wi:l/ and ‘will’ /wɪl/, and ‘piece’ /pi:s/ and ‘piss’ /pɪs/. Another percentage identical to the previous one achieved in the

pre-test (18,1%) was greatly overcome by the post-test percentage, where the 81,8% of the participants proficiently produce the minimal pair /ɪ/ and /ə/ in words like ‘bizarre’ /bɪˈzɑːr/ and ‘bazaar’ /bəˈzɑːr/, ‘comfit’ /ˈkʌm.fɪt/ and ‘comfort’ /ˈkʌm.fət/, and ‘edition’ /ɪˈdɪʃ.ən/ and ‘addition’ /əˈdɪʃ.ən/. Finally, the lowest percentage was conferred to the minimal pair /æ/ and /e/, where even though only the 27,2% of the participants could produce the minimal pair, it still showed progress. As previously mentioned, on this occasion, they were able to distinguish between sounds, which is why we will not be conducting a sound-by-sound analysis.

Overall, the post-test’s results indicate that explicit instruction through didactic strategies, such as gamification, contributes to improving students’ performance in producing vocalic minimal pairs. As stated by Kapp (2012), gamification functions as an efficient instrument for fostering learning and maintaining the learners’ involvement and enthusiasm. For example, the implementation of the different game elements in the interventions such as narrative, rewards, and competence and cooperation, led students to actively understand the topic and produce the minimal pairs as they were taught. Therefore, game elements used in the pronunciation instruction result in high levels of motivation in students, and according to various voices in the literature (Gaviria (2021)), motivation plays a critical role in whether learning occurs or not, making it a key factor in the educational process.

5 Conclusion

To sum up, before being exposed to gamification, the students were unable to differentiate between the two sounds and could not accurately produce the eight presented sounds in a representative way. When they did manage to produce a sound, it was not in the context of minimal pairs but rather as an isolated vowel. This was primarily attributed to two factors: the influence of the Spanish language (Bustos & Pereira, 2020) and the absence of explicit phonetic instruction (Adrián, M. 2014)). During the observations, it was identified that

students showed a positive response to various game elements, including narrative, competition and cooperation, progress, surprise, and time restriction. It appears that competition and cooperation proved to be an engaging game element to integrate in different stages of the production and instruction of minimal pairs. The presence of this game element effectively created a sense of reward, and it encouraged students to be more attentive, to work with determination, and to be more enthusiastic and willing to participate (Keller et al., 2020; Attle and Baker, 2007). According to more than 50% of the students, the gamified activities had a positive impact on students' motivation and performance. Following their responses, regarding motivation, they pointed out that the activities were fun, interesting, and entertaining (Al Hejaili and Newbury, (2023)). Respecting performance, they had plenty opportunities to practice in a non-mechanical way that clearly represented a higher performance. This is evidenced in the post-test, where we realize that it shows that there was indeed a higher performance. It was discovered that students were capable of producing 7 out of 8 minimal pairs, making proper distinction of sounds.

As it is noticeable, gamification was an effective strategy that helped first-semester students to improve their performance when producing minimal pairs. In other words, gamification gave them a sense of encouragement to actively engage in class activities around the production of 8 vocalic minimal pairs. What is more, the effectiveness of this can also be attributed to the explicit teaching. Information was presented in detail lesson after lesson with the aim of creating awareness when producing sounds. All in all, game elements in combination with explicit teaching seems a powerful combination to enhance pronunciation learning processes.

6 Recommendations

Future research could investigate how to apply these gamified activities when explaining consonant minimal pairs to examine if it would have the same positive impact.

Moreover, further examination of gamification as a strategy could be a helpful element in other scenarios that encompass pronunciation in phonetics field.

In addition, this study comprises two potential limitations: sample size and time constraints. Although the sample size was limited to only 11 students, the impact that the gamified activities had were positive. Nevertheless, it should be explored with a large sample in order to see if the impact remains positive or to evidence if that result was due to the small sample. Besides, the time that students were exposed to the input was short since the interventions were just 6 that resulted in a considerable improvement when referring to students' production of minimal pairs. Even so, the interventions could be more, and the results probably could maintain or be different.

References

- Adrián, M. (2014). The efficacy of a reading aloud task in the teaching of pronunciation. *The Journal of English Studies*, 12, 95-112. <https://doi.org/10.18172/JES.2825>.
- Al-Dosakee, K., & Ozdamli, F. (2021). Gamification in teaching and learning languages: A systematic literature review. *Revista Romaneasca Pentru Educatie Multidimensionala*, 13(2), 559-577.
- Al Hejaili, A., & Newbury, P. (2023). LAA: Learn the Arabic Alphabet: Integrating Gamification Elements with Touchscreen Based Application to Enhance the Understanding of the Arabic Letters Forms. *Electronic Journal of e-Learning*, 21(4), 353-365.
- Attle, S., & Baker, B. (2007). Cooperative learning in a competitive environment: Classroom applications. *International Journal of Teaching & Learning in Higher Education*, 19(1).
- Barcomb, M., & Cardoso, W. (2020). Rock or Lock? Gamifying an online course management system for pronunciation instruction: Focus on English/r/and/l/. *CALICO Journal*, 37(2).
- Berry, T. (2008). Pre-test assessment. *American Journal of Business Education (AJBE)*, 1(1), 19-22.
- Boyas, Bryan, L. D., & Lee, T. (2012). Conditions affecting the usefulness of pre- and post-tests for assessment purposes. *Assessment and Evaluation in Higher Education*, 37(4), 427-437. <https://doi.org/10.1080/02602938.2010.538665>.

Bustos, J., & Pereira, Y. (2020). Capacidad de percepción de las vocales del inglés en aprendientes del inglés como L2 con español como L1 en contexto de aula. *Lenguas Modernas*, (54), pp. 77–89.

Calvo Benzies, Yolanda Joy. (2013). Advanced Spanish university students' problems with the pronunciation of English vowels. Identification, analysis, and teaching implications. *Odisea*, (14), 37-56.

Calvo Benzies, Yolanda Joy. (2013). Spanish EFL University Students' Views on the Teaching of Pronunciation: A Survey-Based Study. *Language Studies Working Papers*.

Campos, G., & Martínez, N. E. L. (2012). La observación, un método para el estudio de la realidad. *Xihmai*, 7(13), 45-60.

Campos, M. (2023). Pronunciation: list of minimal pairs. *EnglishPost.org*.

<https://englishpost.org/pronunciation-list-minimal-pairs/>

Case, A. (n.d). Minimal pairs. *Englishclub.com*. Retrieved July 14th, 2023, from

<https://www.englishclub.com/pronunciation/minimal-pairs.php>.

Castelo, A. (2018). Songs for Teaching Pronunciation: A Guiding Model. *Journal of Innovation in Psychology, Education and Didactics*, 22(1), 7-22.

Castro Pérez, A. V. (2021). Teaching techniques to improve english pronunciation to students in the third year of elementary school at the Manuelita Sáenz school

in the period of 2021-2022 (Bachelor's thesis, La Libertad: Universidad Estatal Península de Santa Elena, 2021).

Chou Yu-kai . (2019). Actionable Gamification. Packet Publishing.

Cohen, L., Manion, L., & Morrison, K. (2007). Research Methods in Education (6th ed.). London and New York, NY: Routledge Falmer.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

Derwing, T. M., & Munro, M. J. (2015). Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research (Vol. 42). John Benjamins Publishing Company.

Derwing, T. M., & Munro, M. J. (2009). Putting accent in its place: Rethinking obstacles to communication. *Language teaching*, 42(4), 476-490.

Deterding, Sebastian. (2012). Gamification: Designing for motivation. *interactions*. 19. 14–17. 10.1145/2212877.2212883.

DeWalt, & DeWalt, B. R. (2011). Participant observation a guide for fieldworkers (2nd ed.). Rowman & Littlefield.

- dos Reis Lívero, F. A., da Silva, G. R., Amaral, E. C., de Souza, A. N. V., Baretta, I. P., Diegues, M. E. M., Arpini, E., & Lovato, E. C. W. (2021). Playfulness in the classroom: Gamification favor the learning of pharmacology. *Education and Information Technologies*, 26(2), 2125–2141. <https://doi.org/10.1007/s10639-020-10350-w>
- Escudero Mancebo, D., Cámara Arenas, E., Tejedor García, C., González Ferreras, C., & Cardeñoso Payo, V. (2015). Implementation and test of a serious game based on minimal pairs for pronunciation training.
- Fromkin, V., Rodman, R., & Hyams, N. (2003). *An Introduction to Language*. (7th Ed.) Boston: Thomson Wadsworth.
- Ganeshan, A. (2019). *La Articulación de las vocales*. La lingstica hispica Una introduccion.
- Gaviria, D. (2021). *Pedagogía de la Gamificación*. Edición digital repositorio. González.
- Govender, T., & Arnedo-Moreno, J. (2021). An analysis of game design elements used in digital game-based language learning. *Sustainability*, 13(12), 6679.
- Ishani, I., Supardi, I., & Arifin, Z. (2016). Improving Students' Pronunciation by Using Minimal Pairs Drill in Junior High School. *Bulletin of the Japan Institute of Metals*, 3(5), 1-11.
- Jeske, Andrew (2012). *The Perception of English Vowels By Native Spanish Speakers*. Master's Thesis, University of Pittsburgh.

- Kachru, B. B., Quirk, R., & Widdowson, H. G. (1985). Standards, codification and sociolinguistic realism. *World Englishes. Critical Concepts in Linguistics*, 241-270.
- Kapp, K. M. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. John Wiley & Sons.
- Keller, A. S., Davidesco, I., & Tanner, K. D. (2020). Attention matters: How orchestrating attention may relate to classroom learning. *CBE—Life Sciences Education*, 19(3), fe5.
- Kiryakova, G., Angelova, N., & Yordanova, L. (2014). Gamification in education. In *Proceedings of 9th international Balkan education and science conference* (Vol. 1, pp. 679-684).
- Londoño, J. C. (2022). *Fostering Oral Skills in English through Gamification*.
- Luján-García, C., 2012. The impact of English on Spanish daily life and some pedagogical implications. *Nordic Journal of English Studies*, 11(1), pp.1–21.
- Luo, Z., Shao, X., & Warewanich, T. (2022). Effects of Blended, Explicit and Implicit Instruction on EFL Learners in English Pronunciation Class under Emerging Technology. *International Journal of Emerging Technologies in Learning (Online)*, 17(17), 232.
- Mack, N., & Woodson, C. (2005). *Qualitative research methods*.

- Majid, U. (2018). Research fundamentals: Study design, population, and sample size. *Undergraduate Research in Natural and Clinical Science and Technology (URNCSST) Journal*, 2(1), 1–7. <https://doi.org/10.26685/urncst.16>.
- Marks, J. (2007). *English pronunciation in use: Elementary*. Cambridge Cambridge University Press.
- Mathiyazhagan, T., & Nandan, D. (2010). Survey research method. *Media Mimansa*, 4(1), 34-45.
- Mertler. (2019). *The Wiley Handbook of Action Research in Education*. John Wiley & Sons, Incorporated.
- Naeini, B., & Adni, Z. (2017). The impact of explicit vs. implicit instruction on pronunciation intelligibility among Iranian EFL learners. *Journal of Studies in Learning and Teaching English*, 6(2), 103-123.
- Parsayi, F., & Soyooof, A. (2018). Video games: The interface between language learning and storytelling. *International Journal of Pedagogies & Learning*, 13(2), 103-118.
- Pelton, R.P. (2010). *Action Research for Teacher Candidates : Using Classroom Data to Enhance Instruction*, Rowman & Littlefield Education.
- Pérez-Cárdenas, L. V. (2022). Gamification in E-Learning: game factors to strengthen specific English pronunciation features in undergraduate students at UPTC Sogamoso.

[Proyecto aplicado]. Repositorio Institucional UNAD.

Pourhosein Gilakjani, Abbas & Sabouri, Narjes. (2016). Learners' Listening Comprehension Difficulties in English Language Learning: A Literature Review. *English Language Teaching*.

Putra, Erlangga. (2020). The Importance of Learning English Nowadays.

Rayasa, R. (2018). The Use of English Movies to Enhance Tenth Grade Students' Pronunciation at SMA Angkasa 2, East Jakarta. *Journal of English Teaching*, 4(2), 118-131.

Roach, P. (2009) *English Phonetics and Phonology: A Practical Course*. 4th Edition, Cambridge University Press, Cambridge.

Steyn, R. (2020). The element of surprise: an innovative approach in art education.

Stringer, E. T. (2007). *Action research* third edition.

Tejedor García, C., Escudero Mancebo, D., Cámara Arenas, E., González Ferreras, C., & Cardeñoso Payo, V. (2016). Measuring pronunciation improvement in users of CAPT tool TipTopTalk!

Trooster, W., Goei, S., Ticheloven, A., Oprins, E., Boer-Visschedijk, G., Corbalan, G., & Schaik, M. (2017). The Effectiveness of the Game LINGO Online: A Serious Game for English Pronunciation.

- Venkatagiri, H. S., & Levis, J. M. (2007). Phonological awareness and speech comprehensibility: An exploratory study. *Language awareness*, 16(4), 263-277.
- Vera Diettes, K. J. (2014). Fenómenos de reducción vocálica por hablantes colombianos de inglés como l2: Un estudio acústico. *Forma y función*, 27(1), 11-43.
- Yoshida, M. (2016). *Beyond repeat after me : A guide to teaching English language pronunciation*. TESOL Press.
- Zhong, B., & Kang, Y. (2021). Chinese EFL teachers' perception and practice of phonics instruction. *Journal of Language Teaching and Research*, 12(6), 990-999.

Appendix

Appendix A. Pre - test / Post - test

1. Pronounce the next set of words:

1.1

A. bat cam dabble
B. but come double

1.2

A. bed best bled
B. bird burst blurred

1.3

A. eat wheel piece
B. it will piss

1.4

A. tot fox wok
B. taught forks walk

1.5

A. cooed fool kooky
B. could full cookie

1.6 Note: take into account British pronunciation.

A. bizarre comfit edition
B. bazaar comfort addition

1.71.7

A. and sad axe
B. end said ex

1.81.8

A. boot cool drew
B. bought call draw

2. Read the next sentences taking into account British pronunciation.

- A. The guards were angry.
- B. The gods were angry.
- C. The gods' protection was ensured by diligent guards.

- A. Jacob took good care of his axe.
- B. Jacob took good care of his ox.
- C. James killed the ox with his axe.

- A. Look at the sheep.
- B. Look at the ship.
- C. I bought a sheep on Jack's ship.

- A. Mr. Green was beaten.
- B. Mr. Green was bitten.
- C. They were beaten, but not bitten, by the criticism.

- A. Max caught the big fish.
- B. Max cut the big fish.
- C. The cat caught the ball and the claws cut the cloth.

Appendix B. Questionnaire

Pronunciation performance

1. How confident are you in your ability to pronounce minimal pairs accurately?
 - a) Very confident
 - b) Somewhat confident
 - c) Not confident at all

2. Do you believe that accurate pronunciation of minimal pairs is essential for effective communication in the target language?
 - a) Yes, absolutely
 - b) Yes, to some extent
 - c) No, not really

3. On a scale of 1 to 5, how satisfied are you with your current performance in pronouncing minimal pairs? (1 - Not satisfied at all, 5 - Completely satisfied)
 - 1
 - 2
 - 3
 - 4
 - 5

- why? _____
4. Do you remember if you had trouble when perceiving one of the following minimal pairs before receiving the gamified instruction? You can select more than one
 - /æ/ and /ʌ/
 - /e/ and /ɜ:/
 - /i/ and /i:/
 - /ɒ/ and /ɔ:/

- /ʊ/ and /u:/
- /ɪ/ and /ə/
- /æ/ and /e/
- /u:/ and /ɔ:/

why? _____

5. Have you noticed any improvement in your pronunciation of minimal pairs after receiving the instruction?

- a) Yes, significant improvement
- b) Yes, slight improvement
- c) No noticeable improvement

Gamification

1. Did the gamified intervention effectively enhance your understanding of the distinctions between minimal pairs?

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

why? _____

2. Did the gamified activities make learning minimal pairs more engaging and enjoyable for you?

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

why? _____

3. Do you believe that the gamified intervention provided clear and understandable instructions for learning minimal pairs?

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

why? _____

4. Did you perceive the gamified intervention as a helpful tool for improving your pronunciation of minimal pairs?

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

why? _____

5. Did the gamified activities effectively motivate you to practice and learn minimal pairs?

Strongly agree

Agree


Neither agree nor disagree

Disagree

Strongly disagree

why? _____

Appendix C. Observation guide

		Learning objective: Date:												
		Student teacher:												
		Student observer:												
	Minimal Pair		Platform		Game elements			Observations						

Appendix D. Consent form

FORMULARIO DE CONSENTIMIENTO INFORMADO

Yo, _____, acepto participar voluntariamente en este Action Research que busca mejorar la pronunciación de los sonidos vocálicos en inglés a través de la Gamificación en estudiantes de primer semestre del programa de Lenguas extranjeras de la Universidad Industrial de Santander. Declaro que he leído (o se me ha leído) y (he) comprendido las condiciones de mi participación en este estudio. He tenido la oportunidad de hacer preguntas y han sido respondidas. No tengo dudas al respecto.

Firma Participantes

Firmas Investigadoras Responsables

Appendix E. Lesson plans

Lesson 1	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize vocalic sounds in English to enhance students’ pronunciation.</p> <p>Operational Competences Produce different words with vocalic sounds in the English language correlate vowel sounds- participate actively</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	<p>What’s a vowel sound? Short and long vowel SOUNDS. Minimal pairs.</p>
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. Getting to know the queen 2. Wordcloud 3. What’s a vowel sound? -Short and Long vowel sound -Minimal Pairs 4. Kahoot time! <p>Gamification Elements:</p>

	<p>Narrative (Riddle): This element is present in the warm-up activity called “Getting to know the queen”. This will be an engaging activity for students since they will be very attentive in order to discover the key to entering the queendom. The importance of all this activity is to contextualize students with the topic of vowels and to get to know a little about the population studied.</p> <p>Competition and cooperation: This element is present in a gamified questionnaire that will be carried out in Kahoot. This questionnaire will be implemented after the explanation of the topic in order to check if the students understood the information provided. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates. At the same time, teachers can use it as a tool to evaluate students’ knowledge as well as give them immediate feedback when answering each question.</p> <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities. -Students will earn +2 points for second and third place. This includes an individual competition. -Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition.</p> <p>These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p>	
<p>Momentos de aprendizaje (TAD)</p>	<p>Actividades de apertura</p> <p>Getting to know the queen (Riddle) Have Ss say their names along with an item they want to give to the Queen of Floridablanca. Do not mention to Ss that they are supposed to pronounce a word with any vocalic grapheme that their names have. If students get the code of the riddle ask them to move to the right side, if not ask them to move to the left.</p> <p>Actividades de desarrollo</p>	<p>EVALUACIÓN</p> <p>It will be a formative assessment with the gamified questionnaire.</p>

	<p>Wordcloud Ask Ss which are the vowels in the English language. Mention that there are five vowels when it comes to graphemes. Then, have Ss get into the platform Menti METER register the code and write words with A, E, I, O, U consequently. Then, ask some Ss to pronounce those words. Ask them why they are not producing the words as EI - I - AI - OU - IU.</p> <p>Presentation theory (Canva Slides) Ask the students what a vowel is in order to review the knowledge that they have before the lesson. Ask students to use their phones in order to enter the canva live session to answer this question. All the answers will be projected on the screen and the teacher will socialize the answers with all the students. After this, the teacher will present what a vowel is with a proper definition.</p> <p>Teacher will present the long and short vowel sounds and then ask students to pronounce the words that are in the example column. Then, the teacher will present the theoretical explanation of minimal pairs. After this, the teacher will show a series of examples and will ask students to pronounce each pair.</p> <p>Kahoot time! Ask Ss to answer a questionnaire in Kahoot in order to check their understanding of the topic that was explained.</p>	
Momentos de aprendizaje (TI)	<p>Homework Ask Ss to look for the different minimal pairs that exist in English and to bring them for the next class.</p>	
Recursos	<p>Slides Kahoot Mentimeter</p>	
Bibliografía	<p>https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowning-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf</p>	

	https://main.isuct.ru/files/dept/ino/PUBL/English%20Pronunciation%20in%20Use%20-%20Elementary J%20Marks.pdf
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Lesson 2	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize the minimal pairs /æ/ and /ʌ/ - /e/ and /ɜ:/ to enhance students' pronunciation.</p> <p>Operational Competences Produce different words that contain the minimal pairs /æ/ and /ʌ/ - /e/ and /ɜ:/</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	<p>Check homework Minimal pair /æ/ and /ʌ/ Minimal pair /e/ and /ɜ:/</p>
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. The queendom Garden - The faster the better 2. Presentation theory /æ/ and /ʌ/ 3. Practice time - Cardboards 4. Challenge time - Tongue twister 5. Reach the minimal pair! 6. Presentation theory - /e/ and /ɜ:/ 7. Broken phone 8. <u>Wordwall</u> 9. Padlet 10. Homework <p>Gamification Elements:</p> <p>Narrative (Riddle): This element is present in the warm up activity called “The Queendom Garden”. This will be an engaging activity for students since we are going to continue with the same tematic of the Queendom but know something</p>

	<p>terrible happened in the queen’s garden. The importance of this activity is to review to the students the diagram of the English vowel sounds.</p> <p>Competition and cooperation: This element is present in the warm up activity called “The faster the better” and in the activity called “Broken Phone”. Students will have to work in groups in order to win points. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates.</p> <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities. -Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition. These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p> <p>Surprise element and time restriction: This element is present in the challenge time with the creation of the tongue twister. This element will be very useful since surprise events capture student’s attention and it can break the monotony making the content more engaging. On the other hand, time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p> <p>Progress: This element is present in the activity called “Reach the minimal pair”. This activity will be useful to make a transition from one topic to another. This will show that the students have already finished studying a minimal pair and now they will progress with another one.</p>	
<p>Momentos de aprendizaje (TAD)</p>	<p>Actividades de apertura</p> <p>The Queendom Garden (Riddle) Tell Ss that the queen has a garden full of trees but there is a special tree: a dollar tree. However, there was a hurricane and some dollars of the tree were missing. Draw a tree on the board and put the diagram of the English vowel sounds. Tell students two make two big groups because they have to place the dollars</p>	<p>EVALUACIÓN</p> <p>Students will be evaluated with the padlet activity.</p>

	<p>that were missing in the correct place by working cooperatively.</p> <p>The faster the better Ask students to make two big groups and ask them to choose a person that is going to represent the team. Put a ball on a chair in the middle of the classroom and tell the two students to place themselves, turning their backs to the ball. Count until three and the first student to grab the ball will have the opportunity to win a point. Give to the students that grab the marker a dollar that contains a long or a short vowel. Ask the student to put the dollar in the place that corresponds and then ask the student to produce that sound. If the student places and produces the sound in the correct way, the student will win a point. At the end, the students with the majority of points will win. Points to give in this activity in dojo class: -For the winner team+4 -For everyone that participate in the activity +1</p> <p>Actividades de desarrollo</p> <p>Presentation theory - /æ/ and /ʌ/</p> <p>Ask the students which one is the pronunciation of the minimal pair /æ/ and /ʌ/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.</p> <p>Practice Draw a table on the board that contains the two different sounds. Write on cardboards different words that contain the sound of any of the two minimal pairs and put them in</p>	
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disorder on the board. Ask students to pass to the board and to place any of the words in the sound that correspond.

Challenge time - Tongue twister

Ask students to create a tongue twister that contains the two minimal pairs /æ/ and /ʌ/. Tell students that they can use any technological resources as artificial intelligence. Then, tell students to switch tongue twisters and throughout a hot hot potatoe chooses the students that are going to read the tongue twister.

Reach the minimal pair!

Give to the students a maze and tell them to help /æ/ to find /ʌ/.

Presentation theory - /e/ and /ɜ:/

Ask the students which one is the pronunciation of the minimal pair /e/ and /ɜ:/. Then, play a video about the minimal pair /e/ and /ɜ:/. Ask the students which one is the pronunciation of the minimal pair /e/ and /ɜ:/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.

Broken phone

Tell students to make two big groups. Give students a piece of paper with a sentence that contains one of the minimal pairs /e/ and /ɜ:/. The word with the minimal pair will be written with the phonetic transcription. Tell students that they have to say the phrase quietly to the person in front of them and so on until all of them listen to the sentence. The last person to hear the phrase will have to write it on a piece of paper and then say it. The first group to achieve this will earn a point.

Wordwall

	<p>Ask students to make two big groups. Tell them that they are going to play on a platform called Wordwall. Tell students that each group is going to have the opportunity to answer a question and if they answer in a correct way, they will win 10 points. Tell them that there are some cards with some surprises. At the end, the team with more points will win.</p> <p><u>Padlet</u> Ask students to enter to Padlet and tell them to write a short text of minimum 12 words that contains the two minimal pairs /æ/- /ʌ/ and /e/ - /ɜ:/ . Tell them that they cannot use any resource to do this activity.</p>	
<p>Momentos de aprendizaje (TI)</p>	<p>Homework Give the students a worksheet and tell them that is homework for the next class.</p>	
<p>Recursos</p>	<p><u>Money</u> <u>Video</u> <u>Slides</u> <u>Maze</u> <u>Wordwall</u> <u>Padlet</u> <u>Worksheet</u></p>	
<p>Webgrafia</p>	<p>https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowning-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf https://www.englishclub.com/pronunciation/minimal-pairs-a-u.php https://johnsenglishblog.com/posts/pronunciation/minimal-pairs-11/</p>	

Lesson 3	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize the minimal pairs /ɪ/ and /i:/ - /v/ and /ɔ:/ to enhance students' pronunciation.</p> <p>Operational Competences Produce different words that contain the minimal pairs /ɪ/ and /i:/ - /v/ and /ɔ:/.</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	<p>Check homework Minimal pair /ɪ/ and /i:/ Minimal pair /v/ and /ɔ:/</p>
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. Helping the Queen 2. Presentation theory -/ɪ/ and /i:/ 3. Memory Game 4. Pictionary 5. Challenge Time 6. Karaoke Time 7. Presentation theory - /v/ and /ɔ:/ 8. Tic Tac Toe 9. Quizzes <p>Gamification Elements:</p> <p>Narrative (Riddle): This element is present in the warm up activity called “The Queen Eloy Valenzuela Zoo”. This will be an engaging activity for students since we are going to continue with the same tematic of the Queen but now some of</p>

	<p>the queen's animals are lost and she needs help finding them. The importance of this activity is to review minimal pairs that students saw in the last class.</p> <p>Competition and cooperation:</p> <ol style="list-style-type: none"> 1. This element is present in the warm up activity called “Helping the queen”. Students will have to work in an individual way in order to win a candy and a point. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates. 2. This element is also present in the activity called “Memory Game” and in the “Challenge time” and “Quizizz” where they will have to work in an individual way in order to win points. 3. This element is also present in the activity called “Pictionary” but in this one, students will have to work in groups in order to win points. <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities. -Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition. These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p> <p>Surprise element: This element is present in the challenge time where they will have to write the three words they hear and produce them with the corresponding vowel sound. This element will be very useful since surprise events capture student’s attention and it can break the monotony making the content more engaging. On the other hand, time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p> <p>Time restriction: This element will be present in the activity called “Pictionary” since they will have a limited time in order to draw and to guess what the drawing is about. Time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p>
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	<p>Progress: This element is present in the activity called “Karaoke”. This activity will be useful to make a transition from one topic to another. This will show that the students have already finished studying a minimal pair and now they will progress with another one.</p>	
<p>Momentos de aprendizaje (TAD)</p>	<p>Actividades de apertura</p> <p>The Queen Eloy Valenzuela Zoo (Riddle) Tell Ss that the Queen has a zoo with many animals. But the previous days all of them mysteriously disappeared and she doesn't remember which animals she had. Tell Ss that the Queen requires help and they can assist her by reminding her the animals she had in the zoo. The animals are: cat, bat, elephant, bird, ant, butterfly, alligator, elk, turtle, termite, penguin, duck.</p> <p>Helping the Queen Explain to students that they have to find a secret card around the classroom that contains the name of one animal. Tell them that they have to pronounce it in order to remind the Queen the animals that have disappeared. If they do it correctly, they win a sweet reward (candy) from the Queen.</p> <p>Points to give in this activity in dojo class: -For everyone that participate in the activity +1</p> <p>Actividades de desarrollo</p> <p>Presentation theory -/ɪ/ and /i:/</p> <p>Ask the students which one is the pronunciation of the minimal pair /ɪ/ and /i:/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students. Then, present some examples that contain those vowel sounds and ask students to pronounce them.</p>	<p>EVALUACIÓN</p> <p>It will be a formative assessment with the gamified questionnaire in Quizizz.</p>

	<p>Examples: Ship-Sheep It-Eat Chip-Cheap Sit-Seat Fill-Feel Hit-heat Pill-Peel</p> <p>Practice - Memory game Ask students to scan the QR code to start an individual activity. Explain that they have to find the minimal pair, for example: ship-sheep. The student that finds all the pairs in the least time will win. Class dojo: Participation +1 Winner +4</p> <p>Pictionary Ask students to divide the classroom in 2 groups. They have to choose 1 person to draw. Give the student one word of the minimal pairs selected. In order to win the point, students from both groups have to guess the word drawn and its minimal pair. The first person to guess, wins the point for their group. The words are: -Bit - Beat -Tin -Teen -Bitch-Beach -Slip - Sleep -Fit - Feet</p> <p>Challenge time - List of words Spell students three different words that contain the minimal pairs /ɪ/ and /i:/. Tell students that they have to write the 3 words on a piece of paper. Tell them that the first student to finish is going to pass to the front, pronounce the 3 words and is going to say which vowel sound each word has. If the student gets it right, they will have a point. At the end, the person with the most points will win +4 points in the dojo.</p>	
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	<p>-Eat /i:t/ - Wheel /wi:l/ - Piss /pɪs/ -Comfit /'kʌm.fɪt/ - Sheep /ʃi:p/ - Piece /pi:s/ -Teen /ti:n/ - Bitch /bɪtʃ/ - Feet /fi:t/</p> <p>Karaoke Time</p> <p>Do this activity as a transition from one topic to another one. Ask students about their favorite singers and select one song from them.</p> <p>Presentation theory - /ɒ/ and /ɔ:/ Play a video about the minimal pair /ɒ/ and /ɔ:/. Ask the students which one is the pronunciation of the minimal pair /ɒ/ and /ɔ:/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.</p> <p>Examples: spot-sport shot-short cot-court wok-walk sot-sort pot-port stock-stalk</p> <p>Minimal Pair Tic-Tac-Toe: Ask students to create two teams. Create a tic-tac-toe board with minimal pairs in each square. One participant of each team has to pass to the board and pronounce the word, if they do it correctly they place X or O. If they don't, they lose the opportunity to place X or O. All students participate until a team get three in a row.</p> <p>This is the order to place the words in the squares: spot-short-cot sport-shot-court wok-sort-pot</p> <p>shot-pot-wok stock-sport-short</p>	
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	<p>stalk-cot-walk</p> <p>Quizziz Ask Ss to answer a questionnaire in Quizziz in order to check their understanding of the topic that was explained.</p>	
<p>Recursos</p>	<p><u>Memory game</u> <u>Video</u> <u>Slides</u> <u>Quizziz</u></p>	
<p>Webgrafia</p>	<p>https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowning-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf https://www.englishclub.com/pronunciation/minimal-pairs-i-ee.php https://www.englishclub.com/pronunciation/minimal-pairs-o-or.php https://main.isuct.ru/files/dept/ino/PUBL/English%20Pronunciation%20in%20Use%20-%20Elementary_J%20Marks.pdf</p>	

Lesson 4	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize the minimal pairs /ʊ/ and /u:/ to enhance students' pronunciation.</p> <p>Operational Competences Produce different words that contain the minimal pairs /ʊ/ and /u:/ and /æ/ and /e/.</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	Minimal pair /ʊ/ and /u:/
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. Invasion of the Queendom 2. Presentation theory -/ʊ/ and /u:/ 3. Perform the word 4. Gartic phone <p>Gamification Elements:</p> <p>Narrative (Riddle): This element is present in the warm up activity called “Invasion of the Queendom”. This will be an engaging activity for students since we are going to continue with the same thematic of the Queen but now we have some impostor inside the queendom and we need to find them. The importance of this activity is to review minimal pairs that students saw in the last class.</p> <p>Competition and cooperation:</p> <ol style="list-style-type: none"> 1. This element is present in the warm up activity called “Invasion of the Queendom”. Students will have to work in an individual way in order to win a point. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates.

	<p>2. This element is also present in the activity called “Gartic phone” where they will have to work in a cooperative way in order to end with the correct sentence.</p> <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities. -Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition. These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p> <p>Time restriction: This element will be present in the activity called “Gartic phone” since they will have a limited time in order to create a sentence that contains the different minimal pairs and to draw the sentence. Time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p>	
<p>Momentos de aprendizaje</p> <p>(TAD)</p>	<p>Actividades de apertura</p> <p>Invasion of the Queendom (Riddle) Tell Ss that the Queendom has been invaded and there are some impostors around the queendom trying to kill the Queen. Tell students that they have to find the impostors inside the Queendom. In order to do this, each student will have a word with the same vocalic sound but one of them will have a different sound: that’s the impostor. Students will do a circle and will ask questions to each other in order to guess the other’s word. Students have to guess which one is the different sound, finding in that way the impostor. Words: 1. Eat, bean, meet, street, green, machine, team, queen, bee, see, free, key, week, beach, speech, ship 2. It, Sit, Hit, Swim, Wish, Fish, Big, Pig, King, Bitch, Blink, Fit, Win, Dream 3. Dog, Hot, Box, Shop, Top, Lost, Frog, Rock, Stop, Wok, God, Job, Sock, Doll, Law 4. Law, Draw, Saw, Ball, Call, Fall, Small, Talk, Walk, Sport, Short, Court, Stalk, Dog</p> <p>Points to give in this activity in dojo class:</p>	<p>EVALUACIÓN</p> <p>It will be a formative assessment with the Perform the Sound.</p>

	<p>-For everyone that participate in the activity +1</p> <p>Actividades de desarrollo</p> <p>Presentation theory -/ʊ/ and /u:/</p> <p>Ask the students which one is the pronunciation of the minimal pair /ʊ/ and /u:/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students. Then, present some examples that contain those vowel sounds and ask students to pronounce them.</p> <p>Examples:</p> <p>bull-Boole A bull is a male cow. The Reverend Boole invented Boolean algebra.</p> <p>could-cooed I could do with a nice cup of tea. The pigeons cooed, it was a soft gentle sound.</p> <p>full-fool My glass is half full. Don't be stupid. Any fool can see that.</p> <p>kooky-cookie The new teacher is strange, a bit kooky even. Would you like a double chocolate chip cookie?</p> <p>pooed-pud I hate to tell you, but the cat has pooed on the rug. That was delicious chicken. What's for pud?</p>	
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	<p>Practice - Perform the Sound Tell students that you are going to say some words and depending on the vocalic sound they will have to do an action. If the word contain the vowel sound /ʊ/ they will have to do a “tree pose” and if the word contain the vowel sound /u:/ they will have to do the “warrior pose”. Class dojo: Participation +1</p> <p>Gartic phone Ask students to enter the web page Gartic Phone. Tell students that they have to create a sentence including words with the minimal pair /ʊ/ and /u:/. The idea is that the sentence reaches the end.</p>	
<p>Recursos</p>	<p><u>Slides</u> <u>Gartic phone</u></p>	
<p>Webgrafia</p>	<p>https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowning-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf https://johnsenglishblog.com/posts/pronunciation/minimal-pairs-04/ https://main.isuct.ru/files/dept/ino/PUBL/English%20Pronunciation%20in%20Use%20-%20Elementary_J%20Marks.pdf</p>	

Lesson 5	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize the minimal pairs /æ/ and /e/ and /ɪ/ and /ə/ to enhance students' pronunciation.</p> <p>Operational Competences Produce different words that contain the minimal pairs /æ/ and /e/ and /ɪ/ and /ə/.</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	<p>Minimal pair /æ/ and /e/ Minimal pair /ɪ/ and /ə/</p>
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. Challenge time - The cup in the cup 2. Presentation theory /æ/ and /e/ 3. Random wordwall 4. Nearpod 5. Guess the movie's name 6. Presentation theory - /ɪ/ and /ə/ 7. Tangram 8. Homework <p>Gamification Elements:</p> <p>Competition and cooperation:</p> <ol style="list-style-type: none"> 1. This element is present in the warm up activity called "The cup in the cup" and in the "Random wordwall". Students will have to work in a cooperative way in order to win a point. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates.

	<p>2. This element is also present in the activity called “Nearpod” where they will have to work in an individual way in order to win the questionnaire.</p> <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities. -Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition. These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p> <p>Surprise element: This element is present in the challenge time where they will have to stack the cups, put a sentence in order and then to pronounce it in the correct way, This element will be very useful since surprise events capture student’s attention and it can break the monotony making the content more engaging. On the other hand, time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p> <p>Time restriction: This element will be present in the activity called “The cup in the cup” since they will have a limited time in order to put the cups and to organize the sentence. Time restrictions help ensure that all the students have an equal opportunity to participate and learn. In the same way, the adrenaline increases since they must finish before time runs out.</p> <p>Progress: This element is present in the activity called “Guess the movie”. This activity will be useful to make a transition from one topic to another. This will show that the students have already finished studying a minimal pair and now they will progress with another one.</p>	
<p>Momentos de aprendizaje</p> <p>(TAD)</p>	<p>Actividades de apertura</p> <p>Actividades de desarrollo</p> <p>Challenge time - The cup in the cup Ask students to make two different groups. Tell students that they have to stack the cups using a balloon. The first group in doing it has to pass to the board and organize</p>	<p>EVALUACIÓN</p>

	<p>a sentence. After this, ask students to read the sentence aloud and if they do it correctly, they will win a point. At the end, the group with more points will win +4 in the dojo.</p> <p>Sentences:</p> <ul style="list-style-type: none"> -The wolf howled at the moon -She pushed the door and entered the room -She looked the beautiful blue sky -The food tasted very good -She used her boots in the wood -The classroom is full of fools <p>Presentation theory - /æ/ and /e/ Ask the students which one is the pronunciation of the minimal pair /æ/ and /e/. Ask them what they think the differences are at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.</p> <p>Examples: Look out! There's a bend in the road. There's a live band at the pub tonight.</p> <p>England could win, but I wouldn't bet on it. A cricket bat is made of willow.</p> <p>Is chocolate cake better than a Victoria sponge? For the batter you will need four eggs, 8oz sugar, 8oz flour and 8oz butter.</p> <p>If you don't know the answer, just guess. Is your cooker electric or gas?</p> <p>If you agree, nod your head. Sorry, but I had to go.</p> <p>Random wordwall</p>	<p>It will be a formative assessment with the gamified questionnaire in Nearpod and Booklet.</p>
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	<p>Ask students to make two big groups. Tell students to play rock, paper, scissors in order to decide who is gonna start. Tell them that they are going to play on a platform called Wordwall. Tell students that each group is going to have the opportunity to answer a random question according to the roulette, and if they answer in a correct way they will win 10 points. Tell them that there are some cards with some surprises. At the end, the team with more points will win.</p> <p>Nearpod Ask Ss to answer a questionnaire in Nearpod in order to check their understanding of the topic that was explained.</p> <p><u>Guess the Movie's name</u> Do this activity as a transition from one topic to another one.</p> <p>Presentation theory - /ɪ/ and /ə/. Ask the students which one is the pronunciation of the minimal pair /ɪ/ and /ə/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.</p> <p>Tangram Ask students to do groups of two. Then, tell them that they are going to do a tangram puzzle. Give each couple a set of records and tell them to recreate the figure that is projected on the board. Tell them that the first couple have to run to the front, grab a piece of paper and to read the words or sentences that are on it. If they do it in the correct way, they will win a point. At the end, the couple with more points will win +4 points in the dojo.</p>	
<p>Momentos de aprendizaje (TI)</p>	<p>Homework: Tell students to look for the differences between /u:/ and /ʊ:/ and to exemplify with some sentences. Tell them that in the next class, one person is going to be chosen in a random way and will have to explain the differences to their classmates.</p>	
<p>Recursos</p>	<p><u>Slides</u> <u>Random wordwall</u></p>	

	<u>Nearpod</u> <u>Video</u> - Guess the movie.
Webgrafia	https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowing-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf https://www.englishclub.com/pronunciation/minimal-pairs-a-e.php https://main.isuct.ru/files/dept/ino/PUBL/English%20Pronunciation%20in%20Use%20-%20Elementary_J%20Marks.pdf

Lesson 6	
Competencia(s) a desarrollar	<p>Cognitive Competences KNOWLEDGE Recognize the minimal pairs /u:/ and /ɔ:/ to enhance students' pronunciation.</p> <p>Operational Competences Produce different words that contain the minimal pairs /u:/ and /ɔ:/.</p> <p>Attitudinal Competences Students actively participate in the lesson by reading, producing, and giving examples.</p>
Contenidos	<p>Minimal pair /u:/ and /ɔ:/</p>
Gamification Integration: Procedures and Elements.	<p>Procedures:</p> <p>Agenda</p> <ol style="list-style-type: none"> 1. Presentation theory -/u:/ and /ɔ:/ 2. Bingo pairs 3. Blooket <p>Gamification Elements:</p> <p>Competition and cooperation:</p> <ol style="list-style-type: none"> 1. This element is present in the warm-up activity called “Bingo Pairs” and in the “Blooket”. Students will have to work in an individual way in order to win the questionnaire. This type of activity captures the attention of participants and motivates them to participate in the class. Overall, it brings great benefits as it encourages students to make decisions and to compete with their classmates. <p>Rewards: Students will have the opportunity to accumulate points during the classes through a series of different activities: -Students will earn +1 point for attendance. This includes being in the class. -Students will earn +1 point for participation. This includes participating in the different class activities.</p>

	<p>-Students will earn +2 points for homework. This includes doing the homework assigned in the class. -Students will earn +3 points for teamwork. This includes winning a team competition. -Students will earn +4 points for victory. This includes an individual competition. These points will be accumulated in the dojo class platform where students can create and customize their own avatar. In the end, the person with the highest number of points will be able to redeem them for a double movie ticket.</p>	
<p>Momentos de aprendizaje (TAD)</p>	<p>Actividades de apertura</p> <p>Actividades de desarrollo</p> <p>Presentation theory - /u:/ and /ɔ:/ Ask the students which one is the pronunciation of the minimal pair /u:/ and /ɔ:/. Ask them what they think are the differences at the moment of producing them. Present the diagram of the articulator's position of both vowels and practice with students.</p> <p>Bingo Pairs Tell students that they are going to listen to some words that contain the minimal pairs. Tell them that they have to cover the words that they hear. Tell them that when they complete a column or row they have to say “Bingo”. After that, ask the person to pronounce the words that they cover. If they do it in a correct way, they will win a point, otherwise we will continue playing until someone else shouts bingo.</p> <p>Blooket Ask Ss to answer a questionnaire in the Blooket in order to check their understanding of the topic that was explained.</p>	<p>EVALUACIÓN</p> <p>It will be a formative assessment with the gamified questionnaire Booklet.</p>
<p>Recursos</p>	<p>Slides Bingo Cards Blooket</p>	

Webgrafia	https://byjus.com/english/vowels-in-english/#what-is-a-vowel https://www.grammarly.com/blog/vowels/ https://en.wikipedia.org/wiki/Vowel https://www.teachingenglish.org.uk/professional-development/teachers/knowning-subject/d-h/long-vowels https://pronunciationstudio.com/wp-content/uploads/2014/11/The-Sound-of-English-Free-Sample-by-Pronunciation-Studio.pdf https://main.isuct.ru/files/dept/ino/PUBL/English%20Pronunciation%20in%20Use%20-%20Elementary_J%20Marks.pdf
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