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Gamification as a Didactic Strategy in the Teaching and Learning
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DEDICATORY

I want to dedicate this achievement to my parents, Marlene Sánchez and Carlos Gavilanez, who have supported me throughout my life and academic journey. Thank you for your guidance, commitment, and trust, which have been fundamental to reaching this goal. To my sisters for their support, understanding, and motivation throughout this academic process. Finally, I dedicate this achievement to myself for the consistency, effort, and perseverance I have demonstrated throughout my studies, and for maintaining my commitment to my personal and professional development.

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Marjorie Tatiana Gavilanez Sánchez

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RESUMEN

La enseñanza y el aprendizaje de la lectura en inglés como lengua extranjera representan un desafío en contextos de educación inclusiva, especialmente para estudiantes con dislexia, cuando las estrategias utilizadas en el aula no se ajustan a sus necesidades de aprendizaje. A partir de lo expuesto, el presente estudio tuvo como objetivo analizar la utilidad de la gamificación en el desarrollo de la habilidad lectora en inglés en estudiantes con dislexia del quinto año de Educación General Básica de la Unidad Educativa Nuestro Mundo Eco-Río, ubicada en la ciudad de Riobamba, durante el periodo lectivo 2025-2026. Para alcanzar este objetivo, la investigación se desarrolló bajo un enfoque mixto, mediante un estudio de caso con alcance descriptivo y aplicado. Para la recolección de datos se utilizaron las técnicas de pre-test y post-test, una guía de observación cuantitativa y entrevistas tanto al estudiante como a la docente. Los resultados cuantitativos evidenciaron una mejora en la puntuación total de la lectura, que aumentó de 6 a 8 puntos, así como una disminución de los errores de lectura de 35 a 20 puntos, lo que corresponde a un 42,86%. En cuanto al análisis de las guías propuestas, en las actividades iniciales se obtuvo un desempeño bajo, ya que se incluyeron textos complejos, mientras que en las guías finales la mejora es notable, pues se incorporaron textos fragmentados, apoyos tanto visuales como auditivos y se diseñaron con herramientas tecnológicas como Wordwall, Genially y Educaplay, entre otras. De manera complementaria, los resultados cualitativos muestran que, aunque existen algunas dificultades fonológicas y factores emocionales que afectan el desempeño, la gamificación también aumenta la motivación y la participación en la lectura. En general, los hallazgos permiten concluir que las estrategias basadas en la gamificación contribuyen positivamente al aprendizaje de la lectura en inglés como lengua extranjera. Por ello, se recomienda utilizar estas estrategias adaptadas, integrando recursos multisensoriales, para atender las necesidades educativas de estudiantes con dislexia.

Palabras claves: Gamificación, dislexia, comprensión lectora, estudio de caso

ABSTRACT

Teaching and learning to read in English as a foreign language pose challenges in inclusive education contexts, particularly for learners with dyslexia when classroom strategies are not tailored to their learning needs. In light of this, the present study aimed to analyze the usefulness of gamification in teaching and learning English reading skills for learners with dyslexia who take the 5th EGB at Unidad Educativa Nuestro Mundo Eco Rio, located in Riobamba, Chimborazo province, during the academic period 2025-2026. To achieve this objective, the research employed a mixed approach, using a descriptive method, applied type, and a case study. Data collection instruments included pre-test and post-test, a quantitative observation guide, and interviews with both the student and the teacher. Quantitative findings revealed an improvement in total reading skill, with scores increasing from 6 to 8 points, and a notable reduction in reading errors, which decreased from 35 to 20 points, representing a 42,86% decrease. Additionally, the analysis of guides revealed low scores in the initial activities, due to the inclusion of complex texts, and a notable improvement in the final guides, which incorporated fragmented texts, visual and auditory supports, and technological tools. Complementary qualitative results indicated that gamification enhanced motivation and participation in reading, although some phonological difficulties and emotional factors continued to affect progress. In general, the findings suggest that gamification-based strategies positively contributed to the learning of reading in English as a foreign language. Therefore, it is recommended to implement these adapted strategies systematically, integrating multisensory resources to meet the educational needs of learners with dyslexia.

Keywords: Gamification, dyslexia, reading comprehension, case study

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CHAPTER I. INTRODUCTION

1.1 Introduction

Historically, the education of students with Special Educational Needs (SEN), including those with disorders not associated with disabilities, was based on traditional models characterized by standardized processes, rote repetition, memorization of grammatical structures, and isolated vocabulary (Scott, 2014). These approaches fail to consider individual differences and the specific challenges these students face, thereby limiting their overall development and hindering effective learning, particularly in reading comprehension within the context of English as a foreign language (EFL) teaching and learning. This absence of appropriate accommodations is what causes low motivation, frustration, and failure in the educational development of many students with special educational requirements (Vonthron et al., 2024).

While the education system in Ecuador has struggled, it has also evolved with the progression of inclusive education laws and the development of the National Curriculum. This adjustment favors the development of a student-centered education, as it adjusts teaching to students' characteristics (Moncayo, 2024). In this process of change, technological advancements and the incorporation of information and Communication Technologies (ICT) play a key role in modernizing teaching practices and promoting ongoing teacher training, facilitating the creation of flexible, accessible, and motivating approaches (Napal et al., 2018).

As a result of these advancements, the need to implement specific methodologies to support learners with dyslexia has been identified, as they often have difficulty decoding and processing written symbols, which negatively affects their reading comprehension (Rascón & Ballesteros, 2019). One strategy that has gained relevance in this area of education is gamification. This methodology incorporates playful elements that encourage student participation and engagement, highlighting the importance of this study (Caraballo, 2023). In this way, gamification becomes an educational tool and approach that aligns with the principles of the National Curriculum for Languages and the Common European Framework of Reference for Languages by promoting active learning methodologies.

To facilitate understanding of the research process, this study was divided into five chapters. The first chapter comprises the introduction, problem statement, formulation of the problem, justification of the problem, and the objectives. Second, the theoretical framework,

which included the state of the art and the conceptual foundations that supported the research. Third, the methodology, detailing the approach, techniques, and instruments for data collection and analysis. Fourth, the results, followed by their respective analysis and discussion. Lastly, Chapter V contained the conclusions and recommendations derived from the study.

1.2 Problem statement

In the educational field, there is growing recognition of the diverse learning profiles among students, including those with special needs, such as dyslexia. According to Rascón and Ballesteros (2019), this condition is characterized by ongoing difficulties across all four skills, especially in reading, where these difficulties are most pronounced.

In support of this, Anaguano (2018) states that children diagnosed with dyslexia face substantial challenges in reading activities. Most of these difficulties stem from “struggling with decoding words, dividing written language into smaller units, encoding sounds, or linking letters to the correct sounds” (pp. 82-83). As a result, these challenges lead students to experience anxiety, academic stress, and low self-esteem, especially when they fall behind their peers. This can affect their motivation and participation in class, generating discouragement that hinders their learning and academic progress.

Considering this context, gamification emerges as an efficient strategy for teaching and learning. According to Casado (2016), “incorporating game elements into non-gaming contexts is a proven way to motivate people to engage in fun activities and online games” (pp. 82-83). This methodology fosters active participation and teamwork, thereby reducing stress and enhancing motivation. Students can monitor their academic progress through tools such as points, levels, tasks, and rewards (Gooch et al., 2016). Moreover, it improves reading by providing students with varied opportunities to engage with texts in a supportive, low-pressure environment. These repeated engagements, such as reading, listening, responding to questions, and completing tasks through games, help learners acquire language knowledge, which is beneficial for learners with dyslexia.

In this scenario, this research sought to analyze the usefulness of gamification in teaching and learning reading skills for learners with dyslexia who take the 5th EGB parallel “B” at Unidad Educativa Nuestro mundo Eco- Rio, located in the city of Riobamba, Chimborazo province, during the academic period 2025-2026. This institution was selected because it possessed the professional and technological resources necessary to facilitate the

implementation of gamification in the classroom. Furthermore, it included a learner with dyslexia who faced challenges learning a new language and showed a strong preference for online games.

To achieve these objectives, the research adopts a mixed approach and applies an explanatory sequential design. The quantitative phase employed a pre-experimental design with a descriptive and applied nature, using a pre-test and post-test with a reading-aloud assessment evaluated through a checklist. Meanwhile, the qualitative phase was conducted as a case study using the narrative biographical method. Moreover, both observation and interview techniques were used, supported by a quantitative observation guide and a semi-structured interview guide as data collection instruments.

1.3 Problem formulation

How useful is gamification in the teaching and learning of English language reading skills for learners with dyslexia who take the 5th EGB parallel “B” at Unidad Educativa Nuestro Mundo Eco Rio, located in the city of Riobamba, Chimborazo province, during the academic term 2025-2026?

1.4 Justification

The importance of this study lies in its potential to transform the learning experience of learners with dyslexia in an English as a foreign language environment. By addressing the difficulties these students face in reading, the research highlights the need for innovative and inclusive pedagogical strategies, using gamification as a tool to improve motivation, engagement, and skills development. This study is significant because it provides a practical and theoretically grounded approach that makes the reading task more accessible.

It is also worth noting the benefits not only for students, with well-structured activities aiming at their improvement of reading, but for teachers as well, providing them with advanced methodological tools that enhance teaching and strengthen the learning process. It was economically viable; transportation costs, physical materials, and digital tools were covered with an affordable budget.

Furthermore, the research also adds to theory by contributing to our understanding of which elements of gamification impact on aspects of reading engagement and learning outcomes in special educational needs. Therefore, extending the literature in the areas of inclusive education and language teaching. Methodologically, the study provides a template for intervention design combining multiple supports that could inform future research and

classroom practice. Despite its contributions, the study has several limitations and it is not necessarily generalizable to all educational settings and populations. Emotional state and individual learning differences were not controllable in this study, which might have influenced the results. Nevertheless, the study provides important information for teachers, students, and researchers interested in applying inclusive strategies to English reading instruction.

1.5 Objectives

1.5.1 General Objective

- To analyze the usefulness of gamification in teaching and learning English reading skills for learners with dyslexia who take the 5th EGB at Unidad Educativa Nuestro Mundo Eco Rio, located in Riobamba, Chimborazo province, during the academic period 2025-2026.

1.5.2 Specific Objectives

- To diagnose the level of reading skills of the study population and the hindrances derived from their condition.
- To apply gamification-based strategies for teaching reading to the participant, considering the findings obtained in the first phase.
- To determine the effectiveness of gamification based on the study subject's progress in reading.
- To interpret the student's and teacher's perceptions regarding using gamification for teaching reading skills.

CHAPTER II. THEORETICAL FRAMEWORK

2.1 State of the art

Gamification in English teaching for children with dyslexia is grounded in classic pedagogical theories and reinforced by current empirical evidence. This framework helps identify its potential and limitations, particularly in inclusive settings where emotional, social, and cognitive factors must be addressed.

At its core, gamification is grounded in principles of interaction, collaboration, and feedback, as articulated in Vygotsky's (1978) sociocultural theory, which emphasizes that learning occurs through social mediation. Trujillo et al. (2022) demonstrated this by developing digital resources that facilitate both competitive and collaborative classroom activities while providing immediate feedback. Nevertheless, Chunqui et al. (2024) argue that poorly managed competition can reduce anxiety and social pressure, particularly among learners with dyslexia, thereby diminishing the effectiveness of gamified interventions.

Krashen (1982) asserts that language acquisition is most effective when input is comprehensible and when learners experience minimal stress or pressure. In this sense, gamification aligns with these principles. As it presents content through meaningful, motivating, and low-stress activities. Supporting this, Wang (2023) found that when gamified tasks are well-structured, motivation can increase by up to 30%. Conversely, poorly organized games tend to generate disinterest quickly. Similarly, Bailón and Bolívar (2022) point out that feedback and rewards should be adjusted to the student's cognitive pace in order to avoid frustration and emotional overload.

Gamification builds on game-based learning, a concept central to Piaget's (1970) theory, which emphasizes the role of play in cognitive development. Building on this theoretical framework, Khaleghi et al. (2022) developed games tailored for students with dyslexia, resulting in a 20% improvement in phonological awareness and visual memory. Likewise, Mytsyk and Babichenko (2024) found that early gamified interventions reduce subsequent reading difficulties by 12%. However, Rodrigo and López (2021) caution that without clear learning objectives, gamified activities risk becoming superficial and ineffective.

The promotion of meaningful learning is another key aspect, as defined by Ausubel, applied by Cottinghatt (2023), who argues that new knowledge must be connected to prior experience. In line with this, Rodríguez et al. (2023) insist that gamified learning must

follow a logical sequence and include clear objectives. Wang (2023) confirms that motivation can be maintained only through consistent instructional design. Complementing these ideas, Craft (2023) emphasizes the importance of multiple intelligences and learning styles, suggesting that gamified tasks should be multisensory. Supporting this perspective, Rahmatullah (2024) reports an 18% increase in vocabulary retention when using visual, auditory, and kinesthetic stimuli in gamified environments. In a more innovative way, Hassan et al. (2024) mixed gamification with holographic tools. Their study showed improvements in pronunciation (23%) and also in students' motivation (27%). However, the authors note that these high-tech tools require sufficient resources and appropriate teacher training, which are not always possible in all educational contexts.

Furthermore, gamification employs rewards to maintain student engagement in learning activities. Nevertheless, Deci and Ryan (1985) argue that when learning depends solely on external rewards, it can undermine deep and meaningful learning. In line with this idea, Mogavi et al. (2022) point out that excessive rewards may lead students to participate only at a surface level, without genuine engagement. Chunqui et al. (2024) and Bailón and Bolívar (2022) highlight that poorly adapted platforms, particularly in terms of competition, speed, and visual accessibility, can intensify anxiety and impair performance in students with dyslexia. In this sense, Vonthron et al. (2024) emphasize that the lack of customization in game speed creates barriers rather than support. Therefore, Wang (2023) concludes that gamification must be pedagogically structured and continuously supported to maintain long-term motivation and effectiveness.

In conclusion, gamification, supported by classic theories and different studies, helps to improve motivation and skills in children with dyslexia. However, its success depends on effective pedagogical planning, adaptation to each student's needs, and ongoing support to prevent frustration and ensure that learning remains meaningful. Although many studies report numerical improvements in academic progress when gamification is used, there is still little research on the personal experiences, challenges, motivation, engagement, and perceptions of students with dyslexia during these gamified learning processes that combine both approaches.

2.2 Theoretical Foundation

2.3 Learning Theories in Language Education

2.3.1 *Piaget's Constructivist Theory*

From an epistemological perspective, this study is based on Piaget's constructivist theory, which explains that learning is an active process where students do not just receive information; they organize it, interpret it, and give it meaning within their context. In education, this means creating learning experiences that encourage real interaction, whether in person or in digital spaces. For students with dyslexia, this approach is essential because gamified elements help present information gradually and in a more engaging way. This makes it easier for them to understand and remember the content (Piaget, 1970).

2.3.2 Vygotsky Sociocultural Theory

Gamification and social interaction play a key role in keeping students within their Zone of Proximal Development (ZPD). According to Vygotsky's sociocultural theory, learning occurs through guided interaction, in which instruction and cognitive development support one another. Gamified activities provide students with the support they need to complete tasks that would be too difficult for them on their own (Vygotsky, 1978).

In the same way, guidance from someone more experienced, such as a teacher or a more advanced classmate, helps students develop new skills until they can perform independently (Regader, 2015). Throughout this process, gamification not only keeps students motivated but also helps them develop their thinking skills, as support is gradually reduced. This allows learners to take greater responsibility for their own process and eventually reach their goals (Vygotsky, 1978).

2.3.3 Humanistic Theory

The humanistic theory understands learning as a process of personal growth that involves emotions, values, and the development of one's identity. It goes beyond the simple transmission of academic content and focuses on the integral formation of the person in both personal and professional aspects (Putu, 2024). From this perspective, learning helps people better understand, act more independently, and see how they contribute to their community (Purswell, 2024).

Rogers (1960) emphasizes the importance of an approach centered on the learner, who should take an active role rather than passively receive information. This perspective highlights individual experiences and interests, making activities feel more genuine rather than rigidly structured.

Furthermore, intrinsic motivation is very important in educational settings. Unlike external rewards, it comes from the satisfaction students feel during the learning process itself. Rogers (1969) explains that when people enjoy what they are doing and find personal meaning in it, their motivations become stronger and last longer, because they are driven by curiosity and not by external pressure. Guided by genuine curiosity rather than external pressure. For students with dyslexia, who often have difficulties with reading, this kind of motivation can strongly affect their willingness to participate and also their overall performance. For instance, if a child believes they “can not read well”, they may avoid written tasks and experience anxiety or frustration, which can slow their progress (Patrick et al., 2014).

2.3.4 Connectivist learning theory

This theory, proposed by Siemens (2004) and Downes (2005), holds that learning occurs through connections among nodes, such as people, digital resources, and technological environments (Wilches, 2021). This idea is that learning is understood as a network-based process in which individuals access and construct knowledge through interaction with different kinds of sources (Siemens, 2004).

In a gamified environment, gamification promotes collaboration among stakeholders such as teachers, peers, and digital platforms. These relationships encourage active participation and support the construction of knowledge (Mufungizi, 2024). For learners with dyslexia, connectivism is helpful because it allows information to be accessed through multiple sensory channels, strengthening cognitive pathways and promoting visual, auditory, and kinesthetic practice. Overall, this approach supports gamification by emphasizing that meaningful learning emerges from ongoing interaction between individuals and technology.

2.3.5 Phonological theory

Phonology focuses on how the sounds of a language are organized and how they work, as well as the mental processes that help people recognize and produce them. From this point of view, sounds are not only physical elements but also mental representations that follow certain rules inside a language. In the case of English, this includes distinguishing between minimal pairs such as /p/ and /b/, noticing allophones such as the aspiration of /p/ in pin, and understanding consonant clusters that are very typical of language, for example,

str- in street. All of this shows that English has a particular phonological system that learners need to understand little by little (Chomsky & Halle, 1968).

When students begin learning English, it is normal to see phonological processes that are part of adapting to a new sound system. Some common examples are dropping the final consonant (cat-ca), simplifying consonant clusters (stop-top), or replacing difficult sounds (think- tink) (Chomsky & Halle, 1968).

2.4 Language learning: Acquisition and transfer processes

2.4.1 Language Acquisition

Language acquisition is a fundamental process through which individuals learn to understand, produce, and communicate with others. According to Krashen (1982), this development can occur in two ways: consciously or unconsciously. In terms of conscious acquisition, it takes place when a learner progresses through guidance, instruction, and correction from a teacher or tutor. In contrast, unconscious acquisition develops naturally through constant exposure to a language in everyday environments (Raid, 2000). For instance, in Ecuador, English is considered a foreign language, so learning it is conscious because students have little to no exposure outside the classroom and depend on school settings to practice it.

Krashen (1982) also explains that input and output are key components. Comprehensible input is essential because it provides messages that learners can understand even if the content is slightly beyond their current level. Output, on the other hand, refers to the moments when learners produce language and apply what they know as they interact with others (Raid, 2000).

Another important aspect is the affective filter. According to Krashen (1982), factors such as motivation, anxiety, and self-confidence directly influence language acquisition. A high affective filter, often caused by fear or low self-esteem, can block learning, while a low filter supports the acquisition and retention of new input (Kadhun, 2021). For this reason, implementing gamification as an improvement strategy can make the learning experience more playful, motivating, and engaging, encouraging students to participate actively.

2.4.2 Language transfer

To begin with, language transfer refers to the influence that a person's first language (L1) has on the learning of a new one (L2) (Selinker, 1972). This influence appears when

knowledge from the native language affects, “positively or negatively, the production and understanding of the second language” (Heredia et al., 2024, p. 85). It can occur in areas such as pronunciation, grammar structures, vocabulary, and meaning (Torrijos, 2009).

In addition, language transfer can take two forms: positive or negative. Positive transfers occur when there are similarities between the two languages, which makes learning easier (Itamar et al., 2023). For example, “in Spanish and English, words such as animal, hospital, doctor, hotel, and television look and sound similar, which helps the learner” (Rodríguez et al., 2023, p. 4). In contrast, Negative transfer means that using the first language can sometimes create problems when learning a new one (Selinker, 1972). A clear example is “the placement of adjectives in Spanish: the adjective usually follows the noun”, whereas in English it precedes it (Rojas et al., 2022, p. 65). This difference makes it harder for learners with dyslexia to learn the right structure, as similar language forms can be confusing and lead to more mistakes.

Finally, students with dyslexia may confuse letters or sounds, omit graphemes, leave out words, or reorder them (Álvarez et al., 2023). As a result, interference can become a limitation. Additionally, since English is a foreign language for them, it is important to carefully identify whether specific errors in words, letters, or sounds are related to their English level rather than to dyslexia itself (Suárez et al., 2020).

2.5 Critical Thinking

Developing critical thinking skills is important in teaching and learning English reading, as it encourages students to reflect, analyze information, and make informed decisions in different communicative situations (Facione, 2000). Gamification supports this process by using game-based elements that guide learners to identify key ideas, compare information, and reflect on their choices while reading in English (Dicheva & Dicheva, 2017; Huang & Hew, 2018)

Critical thinking is also connected to motivation. Research indicates that it involves several dispositions. One of them is the “internal and ongoing motivation to approach problems and make decisions through critical thinking” (Facione, 2000, p. 65). Another important disposition is the willingness to persevere, which requires maintaining steady effort to understand and solve problems, even when the tasks are challenging, frustrating, or demanding extra preparation time (Halpern, 1998).

2.6 Neuroeducation

Neuroeducation is an interdisciplinary field that combines knowledge from neuroscience, psychology, and pedagogy to explain how the brain processes information and how this can be applied in educational settings. Its central idea is that learning becomes stronger when emotion, retention, memory, and motivation are activated (Villasmil et al., 2020). Mora (2014) explains that emotion promotes the release of dopamine, a neurotransmitter that enhances motivation, retention, and memorization, elements that are especially important for students with reading difficulties.

Dehaene (2009) explains that reading depends on brain plasticity within specialized neural circuits involved in phonological decoding, verbal memory, and visual attention. For this reason, students with dyslexia tend to benefit from multisensory activities that simultaneously stimulate these different cognitive processes. In this context, gamification is consistent with the principles of neuroeducation, as it activates motivational brain mechanisms related to challenges, progress, levels, and rewards. These mechanisms increase dopamine levels and contribute to fostering practical, engaging meaningful learning experiences (Braidot, 2019).

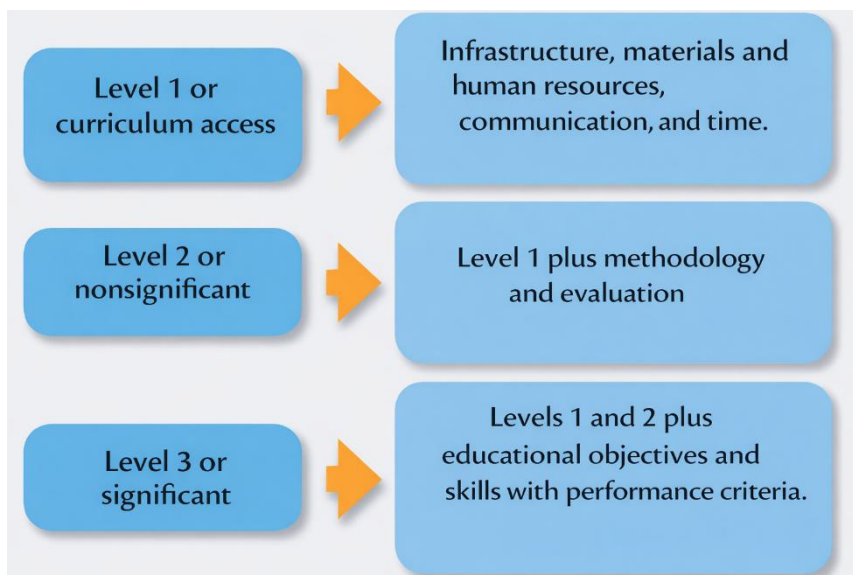
Traditional models such as VAK (Visual, auditory, and kinesthetic) have often been used to classify learning styles. However, neuroeducation indicates that these models lack evidence to support their effectiveness. Instead, it emphasizes that learning occurs through multisensory experiences that activate cognitive pathways and improve comprehension (Barraza & Leiva, 2018).

2.7 Curriculum Adaptations in Educational Contexts

Curricular adaptations in Ecuador are understood as a set of modifications designed to address students' specific educational needs and ensure their access to the curriculum. According to the Ministry of Education, these adjustments may involve changes to “objectives, methodologies, resources, activities, time, evaluation,” as well as the conditions necessary for learning, depending on the grade adaptation the student presented (Ministerio de Educación, 2019, p. 12).

Figure 1

Curricular Adaptations by level of adjustment



Note. Figure reproduced and translated from Curricular Adaptations, published by Ministerio de Educación (2019). Original language: Spanish

In its official guide, the Ministry explicitly states that “curricular adaptations are modifications made to curriculum elements, such as objectives, skills, methodology, resources, activities, task completion time and evaluation, as well as access conditions, in order to respond to the Special Educational Needs of each student” (Ministerio de Educación, 2019, p. 12). The document also implies that these adaptations not only modify what is taught and how it is taught but also ensure that learners can engage under equitable conditions through personalized pedagogical support, reasonable adjustments, and accessible resources that facilitate meaningful participation in the classroom (Erazo & Mera, 2024).

2.8 Educational Inclusion in Ecuador

Access to equitable education and equal opportunities for all students has become a key advance in educational institutions. Within the field of English as a foreign language, this commitment is essential because it necessitates adapting lesson planning, instructional methods, and educational resources to address contemporary classroom challenges (Ministerio de Educación, 2019). Although research indicates some progress in inclusive education policies, major challenges remain in teacher training and in implementing strategies to enable all students to participate fully (Arcos et al., 2023; López et al., 2021).

As a result, the English language should meet the needs of students with specific educational requirements, including those with reading difficulties such as dyslexia (León et al., 2024). Although many English teachers recognize the importance of inclusive

practices, studies indicate that they often feel insufficiently prepared to implement differentiated or accessible methodologies in their classrooms (Moreno et al., 2017). Despite these limitations, recent research points to positive advances, including the use of more flexible pedagogical approaches, the integration of technological tools, and a growing interest in practices that promote active student participation (Arteaga & Valdiviezo, 2020).

2.8.1 Global Guidelines Supporting Inclusive Education

According to these frameworks, organizations such as UNESCO promote inclusive education systems that eliminate barriers and ensure the full participation of all students, emphasizing attention to diversity and equal opportunities (Organización de las Naciones Unidas [UNESCO], 2017). These international and national policies and guidelines provide the regulatory support that underpins the implementation of innovative didactic strategies, such as gamification, to enhance the educational experience of students with dyslexia.

2.8.2 Organic Law of Intercultural Education

In the Ecuadorian context, educational policies aim to ensure inclusive, high-quality education for all students, including those with special educational needs, such as dyslexia. The Constitution of the Republic of Ecuador establishes the right to intercultural, inclusive, and equitable education, emphasizing the importance of eliminating any form of discrimination and guaranteeing equal opportunities (Organización de la Asamblea Nacional del Ecuador, 2008). In this regard, the Organic Law of Intercultural Education (LOEI) reinforces these principles, stating in Article 47 that “the state must guarantee policies for the prevention and care of disabilities, as well as the social and educational integration of people with specific difficulties” (Ley Orgánica De Educación Intercultural [LOEI], 2017, p. 2).

2.9 International Standards in English Education

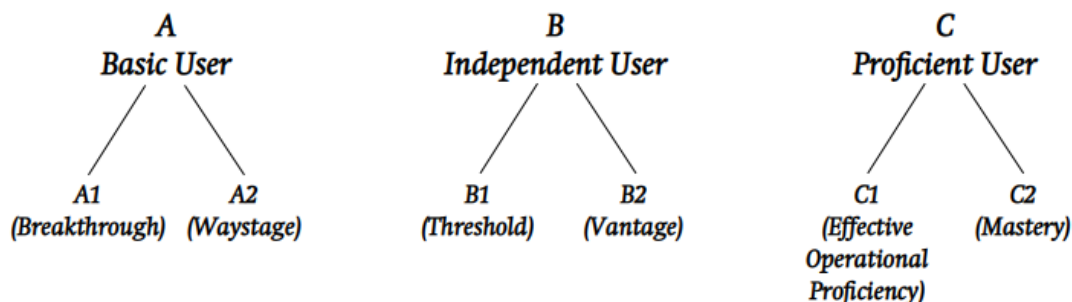
2.9.1 Common European Framework of Reference for Languages

The CEFR is an international guide that explains and organizes language proficiency levels. According to the Council of Europe (2002), this document represents an important step in its efforts to support language education, with the aim of respecting and promoting linguistic and cultural diversity. As defined by the Council of Europe (2002), the CEFR classifies language competence into “six proficiency levels that describe what learners are able to communicate, divided into three broad categories: basic user, independent user, and proficient user” (p. 24). Each level is defined through “can-do” descriptors, which, as the CEFR explains, “indicate what learners can do at each level in terms of communicative

competence” (Council of Europe, 2001, p. 24). In other words, they specify the types of real communication tasks that learners can perform.

Figure 2

CEFR language proficiency scale



Note. Reproduced from the Common European Framework of Reference for Languages (Council of Europe, 2002).

Furthermore, the document states that the CEFR provides a common approach to learning, teaching, and assessing languages. Its six reference levels are used across Europe as a shared scale for measuring language proficiency, making the framework applicable to any European Language, including English (Cambridge English, 2024).

2.10 Gamification: Definition and Elements

2.10.1 Definition of gamification

Gamification involves the use of game elements such as “points, levels, badges, leaderboards, and game-like dynamics in non-game contexts”. Its purpose is to engage and motivate individuals, helping them achieve different goals depending on the context in which it is applied (Bailón & Bolívar, 2022, p. 17)

In addition, when these elements are incorporated into the classroom, learners could work more autonomously, without excessive pressure, and in a more authentic and creative way. As a result, they tend to show higher levels of motivation and a stronger interest in learning.

2.10.2 Elements of gamification

Table 1

Key elements of gamification used in the classroom

Aspect	Definition
Points	These are used to show progress in a specific task or game.
Badges	These are “graphic symbols that show the learner has acquired a skill; they can create a sense of pride associated with that achievement” (Contreras, 2017, p. 27).
Levels	In gamification, levels are used to structure progression, usually starting with an easy level and gradually progressing to more complex ones (Castillo et al., 2022).
Leaderboard	A leaderboard displays participants’ performance and encourages competition and interaction among players (Casado, 2016)
Rewards	These are “gifts offered by the system to promote motivation and engagement” (Contreras, 2017, p. 27)
Challenges	These are specific challenges that students must complete to advance to the next level and finish the activity.
Immediate feedback	“It allows you to know how you are progressing, what you have done well and what you need to improve, which keeps you interested and encourages you to continue completing the activities” (Contreras, 2017, p. 27).

Note: The definitions presented in the table are based on different authors and were organized by the researcher

2.11 Gamification Limitations in the Classroom

Using gamification in the classroom also presents certain limitations. One of the main concerns is that excessive competition can create anxiety or frustration in some students. When learners do not reach a high position on the leaderboard, they feel isolated, which can negatively affect their learning (Ladouceur, 2024).

In addition, gamification requires time and the preparation of teaching materials that demand effort, creativity, and in some cases, external resources. Some institutions have limited technological resources; for example, in Ecuador, public schools tend to have fewer than private schools. As a result, implementing this active methodology can affect the teaching and learning process (Ladouceur, 2024).

2.12 Gamification in the classroom in the teaching and learning of English as a foreign language

Gamification in the English classroom helps create a more engaging and dynamic learning environment because many applications are now designed to support foreign-language learning. With the constant development of technology, students have access to many tools that allow them to study and practice a new language both inside and outside the classroom. These tools offer more chances to improve and strengthen language skills (Bailón & Bolívar, 2022).

In this context, when students face challenges during learning, they often develop important abilities such as problem-solving, decision-making, and groupwork, which contribute positively to their learning process. This dynamic arises because gamified tasks tend to require collaboration, strategic thinking, and active engagement, rather than passive reception of information (Latorre et al., 2025).

2.13 Key reading skills

Regarding English reading skills, it is acknowledged that the reading process encompasses various specific competencies, including “skimming, scanning, intensive reading, and extensive reading” (Yurko & Protsenko, 2020, p. 4). These skills enable students to grasp the main ideas, locate specific information, and comprehend the content.

2.13.1 Skimming

The primary goal of skimming is to gain a broad understanding of the text’s main points and overall context. Yurko and Protsenko (2020) mention that “you do not go too

deep into the details. You do not need to know what every word means. You can just read deeply enough to get the basic idea” (p.4)

2.13.2 Scanning

It is a technique used to find specific information from a text without the need to read it thoroughly, for example, searching for words in the dictionary, dates, and important names. Yurko and Protsenko (2020) mention that “you do not need to pay attention to everything. Just stay focused, ignoring almost everything except for the information you need” (p.4).

2.13.3 Extensive reading

Extensive reading is an approach focused on reading large volumes of text, such as books, news articles, or other long-form materials, at a faster pace. In this type of reading, the person does not analyze or understand every grammatical or linguistic detail; instead, they may briefly review certain aspects and move on to the following sentence. The main goal is to develop fluency, comfort, and overall exposure to the language, rather than delving into each element of the text (Yurko & Protsenko, 2020).

2.13.4 Intensive reading

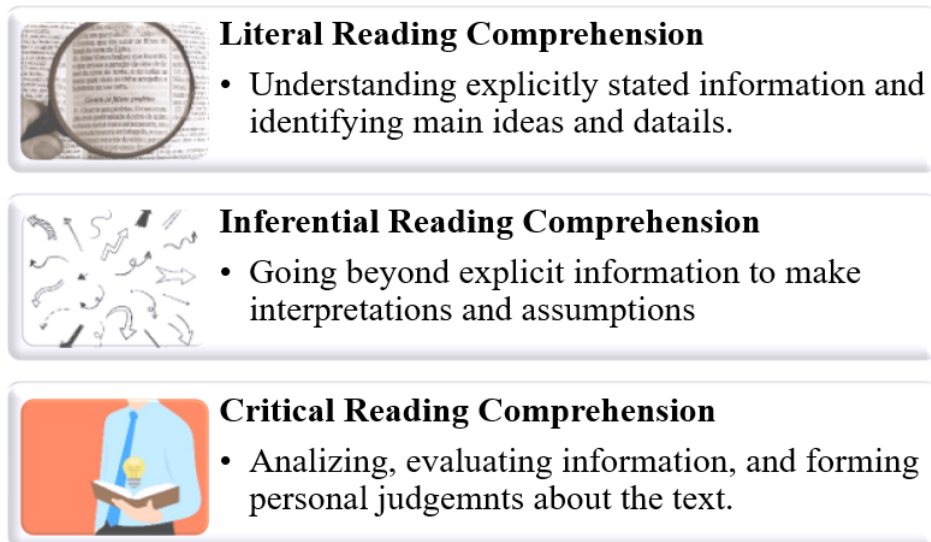
It is focusing too much on accuracy, carefully analyzing the sentence structure and asking oneself: What is happening here? Why is this verb ending used, in the word order, etc.? It is about ensuring understanding of the meaning of the sentence, not just the words, but also the syntactic elements (Yurko & Protsenko, 2020).

2.14 Types of reading comprehension

According to Zapata and Carrión (2021) and Castillo (2020), there are three main types of reading comprehension:

Figure 3

Main types of reading comprehension



Note. The main types of reading described in this figure were synthesized from the literature and organized by the researcher.

2.15 Reading Challenges in EFL Students with Dyslexia

Learning English as a foreign language presents important reading challenges for students with dyslexia. These learners often struggle to accurately decode words, process new vocabulary, and maintain reading fluency (Łockiewicz et al., 2020). These difficulties appear because dyslexia affects phonological processing and the ability to connect letters with their corresponding sounds, which is necessary for understanding English. As a result, “students may read more slowly, replace letters, or need repeated exposure to new words before they can recognize them automatically” (Akter et al., 2025, p. 2).

These challenges affect not only comprehension but also students’ confidence and willingness to take part in reading activities. When reading becomes a constant effort, students may feel frustrated, which can reduce their academic performance and affect their self-esteem. Mogavi et al. (2022) point out that students with dyslexia often face difficulties with vocabulary processing and reading fluency, making reading a demanding task in an English-as-a-foreign-language setting (Moreno et al., 2017).

2.16 Dyslexia: Definition, Main Characteristics, and Types

2.16.1 Definition of dyslexia

Dyslexia is a learning disorder that affects reading, writing, spelling, and, in some cases, speech. It is primarily linked to difficulties in phonological processing, meaning that individuals struggle not with perceiving language but with manipulating its sound structure. According to Suárez et al. (2020), the core difficulty lies in converting spoken language,

supported by familiar, concrete mental images, into written language, which relies on abstract graphic symbols that lack an immediate visual representation.

2.16.2 Characteristics of dyslexia

Bailón and Bolívar (2022) highlight the most common characteristics:

Table 2

Key characteristics of dyslexia

Aspect	Definition
Difficulty in writing	Children with this condition tend to make spelling and word sequencing errors.
Difficulty in reading	Difficulty recognizing letters and words, which makes it hard for them to read fluently and clearly.
Phonological deficits	These students have to matter in identifying and manipulating phonemes, in rhythm, and in low phonological awareness.

Note. The characteristics described in this table were synthesized from the literature and organized by the researcher.

2.16.3 Types of dyslexia

According to Salazar et al. (2021), there are three types of dyslexia:

Table 3

Common types of dyslexia

Types of dyslexia	Characteristics
Phonetic dyslexia	Difficulty recognizing individual sounds and decoding certain words.
Eidetic dyslexia	Failure to perceive and store the visual form of words.
Deep dyslexia	Difficulty understanding the meaning of words despite being able to read them correctly.

Note. The types described in this table were synthesized from the literature and organized by the researcher.

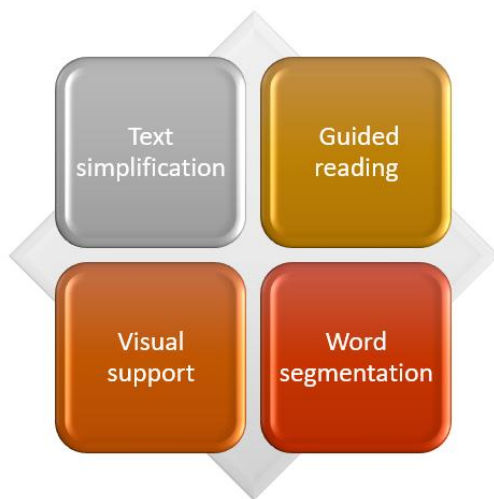
2.17 Strategies to enhance English reading skills for learners with dyslexia

For students with dyslexia, it is necessary to include specific didactic modifications in the teaching of reading skills, as these learners need to acquire knowledge through strategies that align with their individual processing of information. In fact, according to Hulme and Snowling (2016), “dyslexia often affects the development of phonological awareness and the ability to decode written symbols, resulting in limited and inconsistent reading performance” (p. 1).

As a result, the reading process can feel slow, demanding, and discouraging. Therefore, reading support should focus on reducing this cognitive load and providing clear instructional models alongside guided practice (Hulme & Snowling, 2016). Through this type of support, students can internalize reading patterns effectively, with confidence and motivation (Luque et al., 2016). Ultimately, these adjustments contribute to the development of cognitive skills that improve their overall learning (Fumagalli et al., 2016). For instance, the standard strategies that the teacher might use in reading skills are:

Figure 4

Common types of strategies



Note. The common types of strategies described in this figure were synthesized from the literature and organized by the researcher.

2.18 Classroom Gamification: Activities and Resources

Regarding resources and activities, implementing them in the classroom requires careful and tailored design that considers the specific characteristics and needs of students with dyslexia. Here are some activities that the teacher may include in the classroom:

2.18.1 Memory games:

Memory games are playful activities that encourage students to recall, recognize, or connect visual, auditory, or verbal information. Moreover, these activities support a variety of cognitive processes, such as attention, information processing, and retention. Because of this, they become valuable learning tools that can reinforce basic skills in different subjects. Additionally, memory games are especially useful in inclusive educational settings, as they offer structured, engaging practice that benefits learners with diverse needs.

2.18.2 Interactive trivia

A trivia game is a short question and answer activity that can address vocabulary, grammar, brief meanings, or general facts. In this type of game, the student must choose the correct answer, either from multiple choice or true/false, or drag-and-drop formats, and it is designed to reinforce information in a dynamic, engaging way. Moreover, trivia can be implemented in both digital and physical formats. Its primary purpose is to promote participation and motivation while also capturing student's attention throughout the teaching and learning process.

2.18.3 Mazes

Mazes are structured activities in which students navigate through paths, levels, or decision points to reach a final goal. These tasks may appear in physical worksheets or digital formats, including images, sounds, or short interactive instructions to guide learners as they progress. In this type of activity, the student must progress by selecting or pronouncing the correct answer. In the reading area, each step depends on recognizing, reading, or decoding words, sounds, images, or syllables, making the maze a helpful tool for reinforcing reading in an entertaining, gradual way (Nicholson, 2015). Here is an example of activity. In this gamified reading maze, the student progresses through levels and earns points for correct answers.

Table 4

Reading maze activity

Level	Description
1.	The student must recognize the word “sun” among other options; if they select correctly, the student gets 10 points and a message that says: “Good job! You read it correctly.” If the student selects incorrectly, the student receives “Try again.
2.	The learner identifies the image that corresponds to “cat” and, by choosing correctly, earns an additional 10 points with immediate positive feedback.
3.	The learner selects the word "blue"; if they are unsure, the system gives a brief hint: "Color words are easier look at the whole shape of the word."
4.	The learner decodes the word “ball” from syllables; if the student succeeds, he receives a final message: “You completed the maze! Total points: 50

Note. The activity described in this table was designed by the researcher.

2.18.4 Scape room

“Escape rooms are live-action team-based games where players discover clues, solve puzzles, and accomplish a specific goal (usually escaping from a room) in a limited amount of time” (Nicholson, 2015, p. 1). Based on this context, a gamified scape room activity was designed, adapted to the reading process, and incorporated short, progressive challenges to promote word recognition, decoding, and selection. The following section presents the implemented proposal, in which each room requires solving a simple linguistic task to advance and complete the final challenge.

Table 5

Escape room activity

Escape room: the four doors

Room 1: The note	Lia finds a note that says “pet,” and the student reads it carefully to activate the first door.
Room 2: The door of sounds	The door shows two options: pet and pit. If Lia touches the pet, the door opens. If the student misses, a soft message appears: “Listen to /e/.”
Room 3: The mouse corner	In the room, there are two images: a rat and a rope. The word “rat” appears on the wall.
Room 4: The final chest	In front of the chest are two syllables: pa+rt. If Lia spells “part”, the chest opens, and the message appears: “You did it!”

Note. The activity described in this table was designed by the researcher.

To design these gamified activities, teachers can rely on several digital platforms that provide the essential tools for creating interactive games. These platforms include interactive templates, images, text, and audio, as well as options for giving students immediate feedback. Furthermore, these apps allow activities to be organized into levels, rooms, or challenges, which makes it easier to structure the types of tasks described earlier. Some used platforms are “Wordwall, Genially, Educaplay, and Kahoot” (Figuroa et al., 2025, p. 3).

Furthermore, resources such as Duolingo already include built-in gamified elements and offer short, varied exercises with visual and auditory reinforcement. This means that teachers do not need to create activities from scratch, and students can practice at their own pace and at their own time. Additionally, physical materials such as flashcards with images, game boards, and participation tokens facilitate multisensory interaction among participants (Izquierdo, 2024).

2.19 Roles: Teacher and students

2.19.1 teachers' role

In this process, the teacher plays a key role as both a designer and facilitator of learning. As a designer, the teacher structures the gamified activity, selects the tools and mechanics that best align with the learning objectives, and adapts materials to meet the needs of students with special educational needs, including those with dyslexia (Panayiotou & Phtiaka, 2019). Additionally, as a facilitator, the teacher monitors student progress, provides formative feedback, and offers support to learners who experience difficulties during the tasks (Alarcón & Velásquez, 2025).

2.19.2 students' role

The student takes an active role by participating in interactive activities such as missions or challenges that promote autonomy, collaboration, and critical thinking (Calle et al., 2025; Sánchez, 2024). In addition, the learner becomes an explorer within the gamified environment, navigating the context, interacting with digital elements, and making decisions that influence their learning progress (Calle et al., 2025).

CHAPTER III. METHODOLOGY

3.1 Research approach

This research follows a mixed approach. According to Ruiz et al. (2013), “quantitative methods are based on the collection of numerical data, whereas qualitative methods focus on non-standardized data” (p.11). In addition, this approach combines the observation of measurable patterns with the exploration of experiences, perceptions, and meanings, facilitating a more comprehensive and in-depth analysis. Furthermore, it enables the integration of information from different sources, thereby strengthening the validity and reliability of the results. In this way, the mixed approach serves as a tool that integrates multiple perspectives to understand the object of study and to support the interpretation of the findings (Caraballo, 2023).

3.2 Research design

This research followed a sequential explanatory design, which, according to Creswell and Clark (2017), is characterized by the initial collection and analysis of quantitative data, followed by a qualitative phase whose purpose is to explain or delve deeper into the results obtained previously. In this sense, the quantitative phase employed a pre- experimental design with pre- test and post-test, applied to a single case, without a control group, to analyze the changes in student’s reading skill after the implementation of gamification-based activities. The qualitative phase was integrated to complement and interpret these results, focusing on the student’s perceptions and responses during the intervention. By combining the two phases, this design enabled the research to capture measurable data while also exploring how and why these changes occurred.

3.3 Type of research

This research describes the typical characteristics of an applied study, which focuses on the practical applications of knowledge in practical contexts. According to Lozada (2014), applied research focuses on the practical use of theories and findings to address specific challenges. In this study, the applied nature is evident in the implementation of strategies to improve reading skills in learner’s dyslexia, providing tangible interventions and observing their immediate effects in the classroom.

In addition, this study used an interpretative research design to explore and analyze participants’ perceptions of their experiences. Caraballo (2023) explains that the interpretative approach views reality as socially constructed and holds that knowledge grows

through interactions between researchers and participants. To gather insights, qualitative methods, including interviews with students and teachers, were used to examine students' experiences with reading activities, their emotions, and their engagement with the introduced strategies. The research is set up as a case study. Botía (2002) notes that a case study allows for a detailed, contextual analysis of how students with dyslexia learn to read by considering their individual traits, environment, and teaching methods, as well as how dyslexia influences the process of learning to read in English.

3.4 Research method

This research uses a descriptive method to document and characterize the effects of a gamified intervention on the reading process of a student with dyslexia before, during, and after its implementation. The student's initial state, the development of the learning process during the interventions, and the results observed at the end of the strategy's application were described. Furthermore, it is based on the case study method, which includes five key phases: case selection (a student with dyslexia in an English as a Foreign Language context), guiding questions (to focus the inquiry), data collection (semi-structured interviews), analysis and interpretation (based on the research questions and theory), and report writing (chronological presentation of the findings) (Salvador, 2018). In addition, it is a biographical-narrative approach that allows for a deeper understanding of the participant's subjective experiences, providing contextualized perspectives expressed through cognitive, affective, and active dimensions (Botía, 2002).

These methods (descriptive, case study, and biographical-narrative) are interconnected. The descriptive method provides a detailed description of the observed phenomena, the case study situates these observations within a specific and contextualized framework, and the biographical-narrative method is used to understand by capturing the participant's lived experiences. Together, they enable a comprehensible understanding of the study and show not only what happens but also how the student experiences and interprets it.

3.5 Population and sample

3.5.1 Population

The population of this study was composed of 16 students who take the 5th EGB paralelo "B" at Unidad Educativa Nuestro Mundo Eco-Río, located in Riobamba, Ecuador, during the academic period 2025-2026. This group was selected because it included a learner

with a medical diagnosis of dyslexia who received support services. Additionally, this learner showed interest and positive attitudes toward the game, which matched the gamification intervention proposed in this study. The institution also provided the necessary infrastructure and technology, including internet access, which facilitated the implementation of gamified activities.

3.5.2 Sample

The sample comprised a learner with a confirmed diagnosis of dyslexia, as the study employed judgmental or purposive sampling. In accordance with Otzen and Manterola (2017), this type of sampling allows the selection of participants who exhibit specific characteristics of the population, thereby limiting the sample to those cases that meet the established inclusion criteria. To conduct the study, a request was made to the Head of the Degree Program to prepare an official letter addressed to the principal of the educational institution, in order to obtain permission to apply the instruments. Once the request was authorized, the institution obtained the student's legal representative's informed consent to participate. The student's diagnostic report was also provided, ensuring that all procedures were properly authorized and complied with the institution's requirements for ethical data collection.

3.6 Techniques and instruments for data collection

For specific objectives 1 and 3, the pre-test and post-test techniques were applied to diagnose the student's reading skills and determine the effectiveness of the intervention. Data were collected using a standardized questionnaire from the official Cambridge Movers English Test A1. The reading section consisted of three parts, which evaluated the imaged-word matching test, identification of main ideas, and basic vocabulary, including familiar places and simple adjectives. It is important to know that the reading test was scored according to Cambridge evaluation criteria, assigning one point per question, which allowed for comparison of the pre- and post- intervention results, and the student level was determined based on the Common European Framework of Reference for Languages (CEFR) and the Ecuadorian National Curriculum. Furthermore, in the final part of the diagnostic, a paragraph from Cambridge was adapted to identify common difficulties associated with dyslexia. The student's oral reading was evaluated using a checklist-type instrument, focusing on decoding and confusion of similar letters, digraphs, and vowel sounds.

For specific objective 2, focused on the application of gamification-based strategies for teaching reading. To better understand how these strategies were used, a non-participant systematic observation was carried out following the results of the first phase. As Useche et al. (2019) indicate, this involves observing and evaluating the behavior of individuals in their natural environment to collect accurate and detailed data. The instrument consisted of a structured quantitative observation guide designed to gather information on the student's reactions, behaviors, and responses during the intervention and to describe how it influences motivation, interaction, and the learning process.

Finally, for specific objective 4, to interpret the perceptions of both the teacher and the student regarding the use of gamification strategies in reading skills. The interview technique was used. The instrument consisted of a semi-structured interview guide that included thematic categories such as motivation, engagement, challenges, and perceived benefits of gamification during the intervention.

3.7 Validation of instruments of recollection of data

The pre-and post-test were not subjected to a validation process, as standardized tests were used, ensuring their reliability and validity. However, the data collection instruments, including the checklist, quantitative observation guide, and semi-structured interview guide, were validated through a three-phase process. A teacher from the National and Foreign Languages Pedagogy Degree at Universidad Nacional de Chimborazo and another subject matter expert reviewed this process.

- a) The instruments were presented to the supervising professor and then to the relevant experts.
- b) Review and suggestions were made to improve the clarity and relevance of the questions.
- c) The suggested observations were incorporated in the final version.
- d) Data collection process.

In addition, interviews with the teacher and the student were conducted face-to-face, according to the participants' availability, which ensured the participation of all key actors in the study. The interviews were audio recorded with the participant's prior consent in order to facilitate later transcription and analysis. It should be noted that the student's responses were provided in Spanish to promote confidence and ensure clear communication. Finally, it is important to emphasize that the confidentiality of the

participants' identities and their voluntary participation in the study were guaranteed. For this purpose, all participants signed an informed consent form explaining the purpose of the study and authorizing the responsible use of the information.

3.8 Techniques and instruments for the analysis and interpretation of results

Quantitative data were analyzed using a descriptive comparative analysis, which allowed for the description and comparison of the student's reading skill at two different times: before and after intervention. This analysis compared pre- and post-test results to identify changes in reading comprehension levels and the number and types of reading errors. This procedure facilitated the identification of variations in reading skill and allowed for the evaluation of the effect of the gamification-based activities implemented during the intervention.

Furthermore, the study followed the thematic narrative analysis. According to Fernández (2015), which consists of five structured steps. First, participants were selected, narratives were collected, and the type of analysis was determined. Second, key themes or categories in the participants' responses were identified. Third, the collected messages were reorganized according to recurring themes. Fourth, the most relevant themes were selected based on their theoretical and thematic relevance. Finally, the narratives were rewritten to show the main patterns found during the analysis.

To enhance the validity and reliability of the findings, a methodological triangulation was used. This meant comparing data from different sources such as tests, interviews, and quantitative observations. Using this approach made the results more consistent and gave a fuller understanding of the topic.

CHAPTER IV. RESULTS AND DISCUSSION

4.1 Results Analysis and Interpretation

The results of the research are presented below, organized according to the stated objectives and instruments used for data collection. The first phase of the analysis and interpretation of the results is based on three main objectives. These objectives frame the presentation of the data and enable a comprehensive understanding of students' reading throughout the research process.

In line with this, Table 6 and Figure 5 present the results obtained from the pre- and post-test assessments administered to the participant. The results treated the student's initial reading performance and the change observed after the implementation of gamification-based instructional strategies. The comparison between pretest and post test score allow for an analysis approach, and specific reading skill provide evidence of the effectiveness of the intervention

Table 6

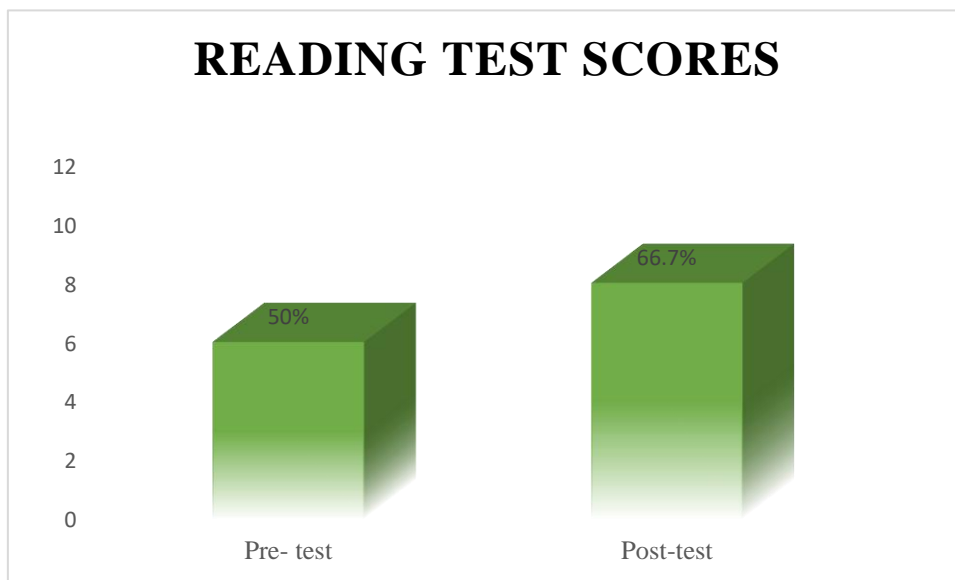
Pre-test and post- test results

Section	Pre-test	Post-test
Part 1 Vocabulary association	4	4
Part 2 Literal reading comprehension	2	3
Part 3 Inferential reading comprehension	0	1
Total	6	8

Note. The table represents the Pre-test and post- test results

Figure 5

Pre-test and Post-test scores



Note. The figure illustrates the student’s total scores before and after the intervention.

The pre-test and post-test results allowed for a comparative analysis of student’s reading skill before and after the intervention, as presented in Table 6 and reinforced by Figure 5 below. In the pre-test, the student obtained a total score of 6 (equivalent to 50%), indicating a basic level of reading skill and allowing identification of both specific strengths and significant difficulties across different levels of comprehension. After the intervention, the post-test reflected an increase in the total score to 8 points (equivalent to 66.7 %), reflecting an overall improvement in the student’s reading skill and suggesting a positive effect of the applied strategies, especially considering the student’s dyslexia. The results are organized into three sections: Part 1 addresses vocabulary association, Part 2 examines literal reading comprehension, and Part 3 analyzes inferential reading comprehension.

In the vocabulary association section, the participant answered all four questions correctly on both the pre-test and post-test, achieving 100% percentage. This result indicates a strong ability to recognize words, likely facilitated by the use of visual aids and the segmentation of the test into short sentences, which enhanced progress. This notion is supported by Mayer (2012), who explains that the vocabulary recognition activities rely primarily on word-level processing and visual memory, skills that can remain relatively intact in students with dyslexia when the linguistic context is not complex. Similarly, Snowling (1998) points out that combining verbal information with visual elements

facilitates cognitive processing by allowing the distribution of mental workload across different channels.

In the literal reading comprehension section of the pre-test, the learner achieved a score of 2 out of 5 points in the pre-test (40% correct). This result suggests difficulties in identifying explicit information, primarily related to poor decoding, limited sustained attention while reading, and problems integrating information at the sentence level. According to Castillo (2020), literal comprehension depends on “efficient decoding and fluid text processing; when these processes are impaired, as is often the case in students with reading difficulties, the identification of explicit information is compromised, even in short texts” (p.15). Post-test results showed an increase in this section’s score from 2 out of 3 points (60% correct), representing a 20% improvement and greater ability to locate and comprehend explicit information. This improvement can be attributed to the use of structured and gamified activities during the intervention, including fragmented stories. In these activities, short texts were divided into smaller sections to support sentence-level decoding and comprehension. Additionally, the gamified bingo activity was used to reinforce the identification of key words identified in the diagnosis phase, such as Pictures, Pedro, Stop, bag, and explicit details, in an engaging way. Visual supports, such as images, and auditory input, through guided reading and audio prompts, were incorporated. Supported. In addition, the systematic use of visual and auditory resources, along with interactive activities through the Doulingo application, facilitated attention, reinforced word recognition, and supported comprehension of explicit information (Mayer, 2012).

The greatest difficulties were evident in the inferential reading comprehension section. In the pre-test, the student scored 0 out of 5 points (0% correct), indicating marked difficulty in drawing inferences from the text. This result is consistent with the student’s diagnosis of dyslexia, which is characterized by persistent difficulties in decoding and phonological processing that affect higher-level comprehension. The diagnostic assessment revealed persistent decoding errors, especially with similar letters, which interfered with the student’s ability to integrate ideas and construct meaning; these errors are presented and analyzed in detail in Table 7. In response to these identified difficulties, instructional activities were implemented using both adapted tasks that considered the student’s condition and complex texts aligned with the instructional level. The specific activities, content, and additional resources are described in detail in Figure 7. On the post-test, although the student scored 1 out of 5 in this section (20% correct), this result represents a slight improvement

over the initial level of inferential reading skill. While the score remains low in quantitative terms, the progress acquires pedagogical value when considering the student's condition and the high complexity of the inferential tasks (Samiei & Saman, 2021). Furthermore, these authors note that inferential comprehension involves integrating ideas and complex texts and drawing conclusions, processes that contribute to one of the greatest challenges of reading comprehension (Samiei & Saman, 2021).

Once the student's English reading level is known, the following table presents the number and types of errors identified in the pre-test and post-test. The reading text used in both assessments was adapted from an A1-level Cambridge text and was modified to incorporate specific graphemes and morphemes associated with reading difficulties. This adaptation enabled the identification of decoding errors related to the student's dyslexia, particularly in areas involving similar letters. This information highlights the specific challenges the student faces due to dyslexia, particularly in areas such as similar letters, digraphs, and vowel sounds, as detailed in Table 7, and supports a focused analysis of the effectiveness of the applied strategies in improving reading skills.

Table 7

Pre-test and Post-test number of errors

Category	Aspect	Number of errors		Type of words	
		Pre-test	Post-test	Pre-test	Post-test
Similar letters	/p-b/	0	0		
	/b-d/	2	1	Pedro	Ball
	/t-d/	0	0		
	/t-r/	2	2	Pictures	Trickly
	/l-r/	2	1	Learn	Friend
	/d-r/	3	1	Pedro	Pictures
	/g-r/	1	1	Bag	Word
	/p-l/	1	0	Stop	
	/f-p/	1	0	For	
	/n-o/	3	1	On	On
	/d-b/	1	0	And	
	Digraphs	/sh/	2	2	Brushes, shirt
/θ/ (th)		3	2	The, then, with	Then, with
/ð/ (th)		1	0	Teeth	
(ch) /tʃ/		1	1	Pictures	Chasing
/p-b/		0	0		
/i:/		3	1	Teeth, reads, sees	Liam
Vowels	/ɪ/	1	0	He	
	/ei/	2	2	Take, play	Braves
	/ɜ:/	0	0		
	/ʌ/	3	3	Up, loves, funny	Loves, fun, runs
	/əʊ/	2	2	About, for	About, sound
	/oʊ/	1	0	Pablo	
Total		35	20		

Note. This table shows the results obtained from the pre- test and post-test

Table 7 presents an integrated comparison of the reading errors identified in the pre-test (35 errors) and post-test (20 errors). This comparison enabled analysis of both the reading difficulties associated with dyslexia and the changes observed after the intervention. The reduction of 15 errors after the intervention demonstrated overall progress in the student's oral reading. For clarity, the data was organized into three sections: similar letters, digraphs, and vowel sounds. However, the analysis reveals that the greatest concentration of difficulties occurred in the similar letters category in both the pre-test and the post-test, a characteristic of dyslexia.

In the category of similar letters, the pre-test the student made 16 number of errors, particularly in /b-d/(2), /l-r/(2), /n-o/(3), /d-r/(3), and /g-r/, identified in words such as Pedro, pictures, learn, on, bag, stop, and for. These errors show difficulties in recognizing visually similar letters, a common characteristic of dyslexia. According to Bishop and Snowling (2004), confusion between similar graphemes occurs when orthographic representations are not fully consolidated in visual memory. Furthermore, Shaywitz (2003) explains that this confusion is intensified when letters share visual characteristics such as shape, orientation, or spatial position, thereby affecting reading accuracy from the earliest stages of reading development.

When comparing these results with the post-test, the learner made 7 errors, fewer than in the diagnostic phase, particularly in /b-d/ (2-1), /l-r/(2-1), and /n-o/(3-1). This reduction indicates improved grapheme recognition after the intervention. This intervention included activities focused on fragmented stories, a memory game, a maze, gamified Bing, an escape room, and repeated practice with specific grapheme patterns identified by the diagnostic test. The explanation implemented in response to these difficulties is described in Figure 7. However, the data also show that some confusion persists or appears in new reading contexts, demonstrating that difficulty does not disappear but rather transforms (Vellutino et al., 2004). A clear example of this was identified in the word "picture." In the pre-test, the student exhibited decoding errors due to graphic confusion and letter omissions with similar letters, particularly in the /t-r/ area. In the post-test, although the word was recognized correctly, a new graphic confusion, specifically /d-r/, was identified in another reading item, as shown in Table 7, confirming the instability of orthographic representations characteristic of dyslexia. This finding is supported by Ehri (2014): when visual connections

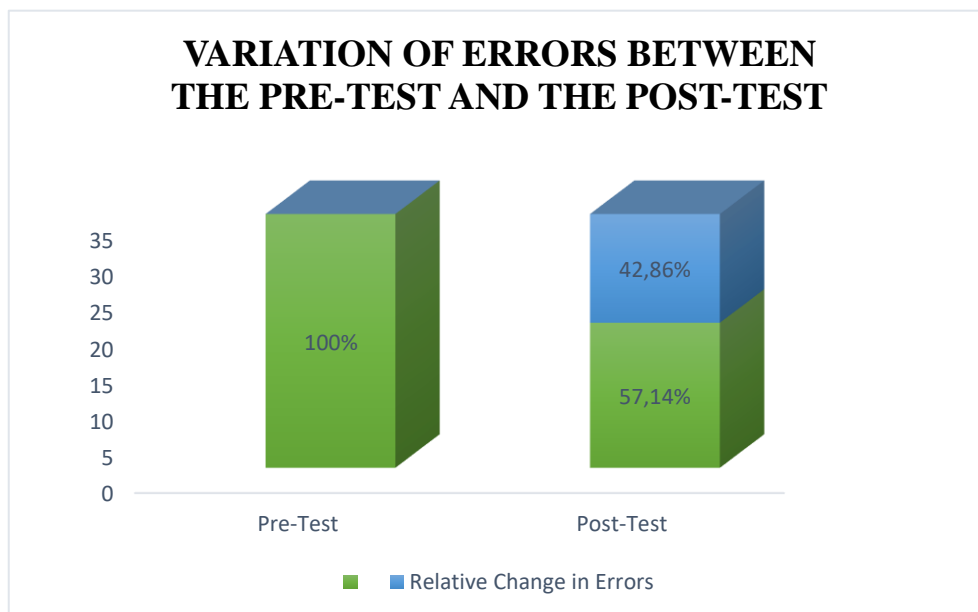
between graphemes are not automated, students may make errors, especially when the graphic combinations or reading context change.

Regarding diagraphs and vowel sounds, the contrast between the pre-test and post-test shows a moderate reduction in errors; the student made 7 errors in the pre-test and 5 in the post-test. Although some errors persisted, for example, /sh/ remained at 2 errors. However, these do not constitute the student's difficulty. As evidenced in Table 2, errors were identified in vowel sounds such as /i/, /ɪ/, /eɪ/, /ʌ/, /əʊ/, and /oʊ/; nevertheless, these confusions are commonly observed in learners of English as a foreign language and are not exclusive to students with dyslexia. These errors can be explained by linguistic transfer from the learner's native language to English as a foreign language acquisition. This process occurs when structures, patterns, or spelling habits from the first language influence how it is read or written (González & Díaz, 2025). For this reason, analyzing these aspects allows for a deeper understanding of the student's reading skill and helps differentiate difficulties related to dyslexia from those associated with English.

In order to better understand the results, Figure 6 presents a visual comparison of reading errors in the pre-test and post-test, with percentages provided for clarity. In the pre-test, errors accounted for 100% of reading difficulties, indicating the student's initial proficiency. Following the intervention, the post-test revealed a reduction in errors to 57.14%, representing a 42,86% decrease in reading errors. This percentage comparison provides a clearer understanding of the magnitude of the improvement and highlights the positive effect of the applied strategies on the students' reading skill, especially given the presence of dyslexia.

Figure 6

Error variation between Pre-test and Post-test

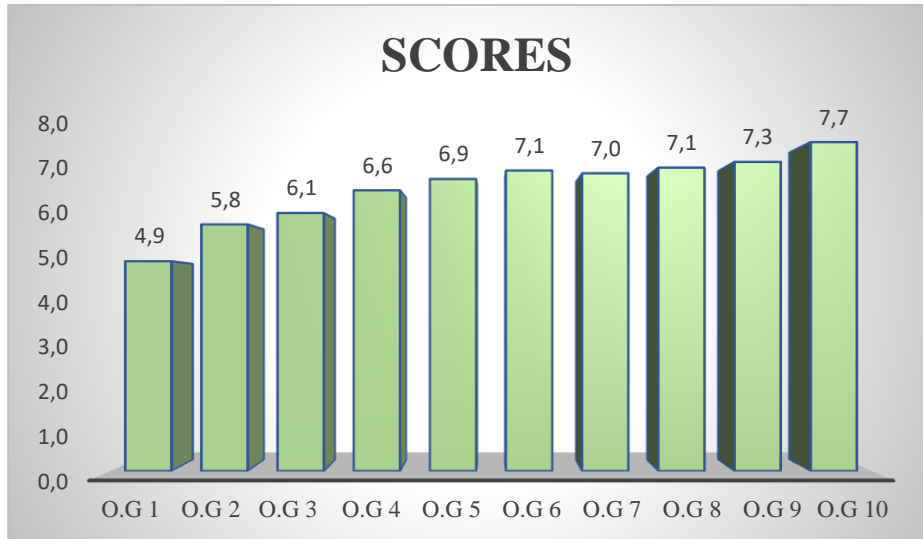


Note. This figure illustrates the variation of errors between the pre-test and the post-test percentages.

The results obtained after the intervention demonstrate an improvement in the student's reading skill. Therefore, this progress is attributed to the implementation of gamification-based strategies designed to address the difficulties identified in the diagnostic phase. In line with the objective of applying gamification-based strategies for teaching reading to the participants, and considering the findings from the first phase, the intervention incorporated interactive, structured activities with visual and auditory support to strengthen letter recognition, taking into account the students' dyslexia. These findings are illustrated in Figure 7, which shows the progressive increase in students' scores on the 10 observation guides used during the intervention.

Figure 7

Overall mean scores from the observation guides



Note. This figure presents the overall mean score across activities (O.G1-O.G10).

The progression of reading skill presented in Figure 7 is explained by the design and implementation of the 10 observation guides (G.O. 1-G.O. 10), all developed using technological tools and gamification strategies, such as levels, challenges, lives, points, rewards, and competition (Bailón & Bolívar, 2022). These strategies were integrated into activities such as memory games, matching activities, mazes, escape rooms, gamified activities using Duolingo, route maps, and fragment story Bingo (Izquierdo, 2024). However, the scores obtained varied according to the type of activity, the length of the texts, and the degree of adaptation to the student’s dyslexia.

The lowest scores, as evidenced in G.O.1 (4,9), G.O.2 (5,8), G.O.3 (6,1), and G.O.4 (6,6), corresponded to activities such as memory games, mazes, and escape rooms that incorporated complete texts, more continuous information, and time management to complete game levels. Although the student demonstrated a relative strength in memory-based activities, the inclusion of complex and extended texts within the memory games increased cognitive load, limiting decoding and comprehension (Sweller et al., 2011). These guides required sustained reading effort, which affected the student’s reading skill. Bishop and Snowling (2004) point out that students with dyslexia have difficulty automating reading, so prolonged exposure to lengthy texts increases cognitive load and decreases reading skill. Similarly, Shaywitz (2003) explains that “limited time for processing text can lead to reading fatigue, resulting in poorer outcomes, even when the context is familiar” (p. 27).

In contrast, the highest scores in guides 8(7,1), 9(7,3), and especially 10(7,7) were associated with activities that explicitly addressed the student's dyslexia. These guides used fragmented stories, gamified bingo, and interactive activities supported by applications such as Duolingo, which helped reduce reading load and improve comprehension. These activities included brief instructions, visual and auditory support, activities in non-game contexts, and time adjusted to the student's dyslexia (Cubas, 2020). In this regard, Shaywitz (2003) points out that adapting the execution time in reading tasks reduces cognitive fatigue and improves reading skill, especially in activities requiring sustained attention. Although all guides incorporated at least one technological tool, observation guide 10 stood out for integrating two digital tools (Wordwall and Genially), which fostered immediate feedback, constant interaction, and student motivation.

Consistent with the above, Deterding et al. (2011) state that gamification increases student engagement by transforming academic activities and using digital tools to create more accessible and motivating experiences. This effect is observed in the highest-scoring guides, where student's showed greater participation, confidence, and autonomy during reading. Kapp (2012) adds that the intentional use of technological tools within gamified environments enhances intrinsic motivation and fosters more meaningful learning.

In summary, the contrast between the low-scoring guide (G.O.1), which relied on lengthy texts and required more time, and the high-scoring guide (G.O.10), designed with activities adapted to dyslexia, shows that the improvement presented in Figure 7 resulted from a gradual adjustment of teaching strategies. These findings confirm that factors such as "time management, text fragmentation, the use of visual and auditory resources, and the integration of technological tools had a positive influence on the reading progress, motivation, and interaction" of a student with dyslexia in the context of learning English (Shaywitz, 2003, p. 27).

Once the improvement in the student's reading skill has been established and the activities implemented, the next objective focuses on interpreting the perceptions of both the student and the teacher regarding the use of gamification in reading instruction. This objective analyzes how the implemented strategies, such as levels, lives, immediate feedback, rewards, challenges in memory games, escape rooms, and gamified stories, were perceived. Analyzing these perceptions provides qualitative information to the quantitative results and helps to better understand how gamification affects reading, teaching, and learning.

In general, the findings indicate that the use of gamification-based strategies positively influenced student's reading skill. This improvement is reflected in better test scores and fewer reading errors over time. Beyond these numerical results, the data also provide insight into the teaching and learning process during the intervention. Therefore, the next section focuses on both student and teacher perceptions of gamification in reading instruction. These perceptions are organized into four areas: motivation, engagement, challenges, and benefits, offering a broader view of the learning experience beyond the test applied.

Motivation: Increased Interest and Positive Attitude

In the educational field, motivation is a key factor in learning to read English, especially for students with special educational needs, such as dyslexia. In this sense, gamified activities help create a more flexible learning environment in which students can progress and complete learning tasks (Fierro et al., 2025). This is evidenced by the interviewee subjects. The learner points out that these types of activities allow him to “...*leer a mi propio ritmo.*” This perception is consistent with the teacher's view, who recognizes that students with dyslexia often show “a low disposition towards rigid and structured activities”, and therefore gamified strategies help introduce reading context in “... a more engaging way” (Novillo C., interviewed teacher, 2025).

Similarly, the motivation generated by gamified activities is not limited to learning English but can extend to other subjects as well. The interviewed student (2025) expressed interest in learning “*matemáticas, especialmente con temas relacionados al fútbol*” as he believes that learning this way is “...*más divertido y más fácil.*” In this regard, Novillo, who also mentioned that when students are motivated through games, they show greater interest and willingness to participate because “they feel well when they can understand the topic better” (Novillo C., interviewed teacher, 2025). As noted by Ortiz et al. (2018), gamification can be applied in different areas of learning, fostering more meaningful experiences and increasing student interest in actively participating in various subjects.

Engagement: Active Participation Through Gamified Interaction

Engagement is related to the student's active and sustained participation during the learning process (Fredricks et al., 2004). From this perspective, the implementation of gamified activities fosters greater involvement and participation in reading tasks, as these activities become a means of progressing and achieving objectives within the game. This

idea is corroborated when the interviewed student (2025) states that “*yo participo intentando leer las instrucciones para completar cada rompecabezas y a veces relaciono la imagen con la palabra para comprender el texto*”, actions necessary to advance in the activity and understand the content of the text. This sustained participation is further reflected in the way reading activities were structured, as the inclusion of progressive tasks with images, vocabulary, and short sentences enables the student to “... understand exactly what the text means” and remain focused during reading tasks (Novillo C., interviewed teacher, 2025).

Furthermore, the presence of game elements “...*recibir regalos y vidas extras,*” as the interviewee student (2025) mentioned, helped learners maintain concentration and engage more during the activities. Consequently, these elements can be considered as reinforcers that promote sustained attention and continuity in the learning experience. According to Novillo, these elements encourage participation because students “... want to continue playing and completing the tasks”, which helps sustain attention and involvement (Novillo C., interviewed teacher, 2025).

Challenges: Phonological Difficulties and Emotional Barriers

According to Snowling (2013), students with dyslexia experience greater difficulties in phonological processing, which affects reading and pronunciation in a foreign language. In this sense, the difficulties encountered when applying gamified reading activities are related to the phonological and decoding characteristics of students with dyslexia. This is reflected in the interviewed student's experience (2025), who stated that, when pronouncing the word “jumper”, “*No podía pronunciarla aunque la repita muchas veces porque la confundo con el español*”. This statement suggests that, beyond the difficulties in identifying and decoding words, the interference from Spanish, the student's native language, influences their pronunciation difficulties when reading in English (Heredia et al., 2024).

Furthermore, the Interviewed Student (2025) also noted that sometimes he “...*se calma y sigue intentándolo.*” This is the presence of strategies for emotional self-regulation and persistence. In this regard, Martínez et al. (2021) argue that self-regulation allows students to manage negative emotions and maintain effort in the face of difficulties. Similarly, Torres et al. (2025) highlight that adequate support and the possibility of facing challenges without penalties promote the development of confidence and resilience in students with dyslexia, key aspects within inclusive learning processes.

However, Novillo pointed out that emotions such as “fear, shame, and stress” often limit students' willingness to read aloud, especially when they are afraid of making mistakes in front of others (Novillo C., interviewed teacher, 2025).

Benefits: Continuous Practice and Confidence Building

Snowling (2013) notes that students with dyslexia benefit from the use of images and the implementation of language sounds to facilitate reading. This is reflected in the student's experience, who mentioned that “*palabras sueltas, como vocabulario relacionado con imágenes*” were easier to understand. Furthermore, the student indicates that it was easy to identify the *Sonido “i” en inglés, tomando en cuenta que la “i” en inglés se pronuncia como ai*”, which suggests that repeated practice of the sounds helped improve their reading comprehension in a foreign language.

On the other hand, the student states that learning through gamified activities “*ayuda mucho porque puedo practicar y practicar hasta que lo logro*” and “*hace que el aprendizaje sea más divertido*”, and notes that these activities “*ayudan con la pronunciación en los niveles en los que se utilizaba la voz para responder.*” These ideas are related to those proposed by Trujillo et al. (2022), who explain that gamification increases motivation and enables continuous practice, thereby favoring learning and improving pronunciation in learners with reading difficulties.

4.2 Discussion

This study aimed to analyze the usefulness of gamification in teaching and learning English reading skills to learners with dyslexia who take the 5th EGB at Unidad Educativa Nuestro Mundo Eco-Rio, located in the city of Riobamba, Chimborazo province, during the academic term 2025-2026. In general, the results show that the gamified intervention helped students improve their reading skills. Data from pre-tests, post-tests, and observation guides showed steady progress, with scores increasing over time. Feedback from student and teacher interviews also showed positive attitudes toward gamification, particularly reading engagement, confidence, and enjoyment during activities.

The quantitative results of this study reveal an improvement in students' reading performance after the implementation of gamification-based strategies. Regarding English reading skills, the student reached 66,7% of the target reading level on the post-test, representing progress compared with the level identified during the diagnostic phase. This increase demonstrates the positive influence of gamified activities on the development of

reading in English as a foreign language, especially when these strategies are adapted to the needs of students with dyslexia. Additionally, the quantitative observation guides (O.G.1-G.O.10) showed a consistent increase in scores, with the greatest gains occurring in activities specifically designed for dyslexia, including fragmented stories and gamified bingo. This finding aligns with Rodríguez et al. (2023), who reported an increase in English reading score from 54% to 62% among students with learning difficulties. These gains are likely due to the adaptation of activities for dyslexia and the use of individualized instructional strategies. Similarly, Bailón and Bolívar (2022) reported that elementary school students improved their English reading level by up to 60%, highlighting that progress was greater when activities accounted for learning pace and the use of visual resources. Conversely, Trujillo et al. (2022) observed more moderate improvements, approximately 55%, in contexts in which gamification was not adapted to specific educational needs. In this sense, the 66,7% achieved in this study suggests that incorporating gamified strategies to address dyslexia, fragmented texts, and technological resources fosters more noticeable progress in English reading skills.

Beyond improvements in reading level, the total number of reading errors declined from 35 in the pre-test to 20 in the post-test, corresponding to a 42,86% reduction. This finding is notable, as persistent decoding errors are a core characteristic of dyslexia. Snowling (2013) shows that students with dyslexia typically demonstrate slow progress in reducing errors due to unstable phonological and orthographic representations.

In addition to the numerical data, the qualitative findings focus on the student's and teacher's perceptions during the implementation of the gamified activities. The student stated that gamified reading tasks allowed him to “...*leer a mi propio ritmo*” and to repeat activities without pressure, while the teacher reported that rigid, traditional reading tasks usually generate fear, stress, and a low willingness to participate among students with dyslexia. Similar perceptions were reported by Reyes and Narváez (2022) and Ortíz et al. (2023), who found that participants reported that gamified activities made reading less stressful and more enjoyable, allowing them to work at their own pace without fear of making mistakes. Likewise, the interviewed student explained that he actively participated by “...*intentando leer las instrucciones*” and by relating images to words to understand the text. Comparable student perceptions were documented by Trujillo et al. (2022), who reported that learners reported engaging more with reading tasks when visual support and game dynamics were included. However, both the student and the teacher in this study

acknowledged persistent challenges stemming from Spanish interference and emotional barriers, such as fear or shame, during reading aloud. Similar statements were reported by Heredia et al. (2024), who found that participants were confused between English and Spanish sounds and expressed insecurity when reading in front of others.

Despite the positive results and their consistency with previous research, the theoretical contribution of this study lies in providing a contextualized understanding of how gamification functions as a pedagogical strategy for teaching and learning reading to learners with dyslexia in an English as a Foreign Language context. Instead of focusing only on reading results, this study emphasizes how gamified activities influence student's emotions, autonomy, and engagement with reading tasks. Furthermore, integrating quantitative data with both learner and teacher perspectives demonstrates that gamification fosters a learning environment in which reading difficulties are not eliminated but become more manageable. In addition, this approach enables learners to maintain motivation, self-regulate their learning, and participate actively, even when confronted with phonological and decoding challenges.

Despite this contribution, this study presents certain limitations that may have influenced the results. Therefore, the main limitations identified during the study's development are described below. One of the main limitations of this study is the sample size: it was conducted as a case study with a single student with dyslexia. This limits the generalizability of the findings to broader educational contexts or diverse populations. Another limitation related to external variables, such as the students' emotional state, learning pace, and prior exposure to English, could have influenced performance during activities and assessments. Finally, although validated quantitative and qualitative instruments were used, the results are context dependent, and variations in instructional conditions or resources could lead to different outcomes.

Finally, given the identified limitations, future research should increase the sample size and employ experimental or quasi-experimental designs that enable comparisons between groups with and without a gamified intervention. It would also be pertinent to extend the implementation of the strategy to analyze its sustained influence on the development of reading and other language skills, such as writing and listening comprehension.

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The results identified a limited reading level in English, characterized by persistent difficulties in recognizing and processing visually similar graphemes, as well as in reading continuous texts. These difficulties are directly associated with the student's dyslexia and manifest primarily as decoding errors and omissions in oral reading. Therefore, the diagnostic phase was essential for identifying specific learning needs and guiding the design of appropriate teaching strategies.

The findings showed that gamification-based strategies implemented after the initial assessment addressed the student's educational needs. Quantitative observation during the intervention revealed measurable improvements in the student's reading skills, as evidenced by increased scores across the 10 observation guides. Activities such as fragmented stories, memory games, a maze, and gamified bingo were designed for implementation, and fragmented texts, visual resources, audio, flexible time management, and technological tools were incorporated to facilitate a more accessible learning environment for learners with dyslexia.

After the application of the intervention, the student's reading improved from 6 to 8 points, and the learner made fewer decoding errors, representing a 42,86% decrease from the initial diagnostic phase. Although some challenges persisted, gamification made learning more accessible for implementing in student's dyslexia.

Finally, the findings showed that these perceptions were varied, rather than exclusively positive. Regarding motivation and engagement, both the student and the teacher reported that gamified activities increase interest, participation, and confidence during reading tasks, primarily through rewards, repetition, and visual support. However, in terms of difficulties, phonological challenges limited reading habits, and emotional factors such as fear and anxiety were identified as continuing to affect reading progress, even in a gamified context. Despite this challenge, both participants highlighted several benefits, including reduced pressure, increased practice opportunity, and the creation of a safer and more inclusive learning environment.

5.2 Recommendations

It is recommended that teachers administer more specific diagnostic assessments for students with dyslexia to identify their English reading difficulties. These assessments should focus on phonological processing, decoding, and pronunciation errors, such as confusion of similar letters, digraphs, and vowel sounds. Conducting a more precise, focused diagnostic evaluation would help teachers design more appropriate teaching strategies for students with dyslexia.

The integration of gamification-based strategies into reading instruction as part of regular classroom practice. These strategies should be carefully designed based on diagnostic findings and adapted to student's learning pace and abilities.

Gamification should be implemented not only in English reading instruction but also in other school subjects such as Mathematics, Science, and Social Studies, as a complementary strategy to support learning. Its use across different areas may help increase student engagement, promote active participation, and create a more inclusive learning environment, particularly for students with learning difficulties

It is recommended that the perceptions of both student and teacher be considered when implementing gamification in reading instruction. While gamified activities can increase motivation and engagement, educators should also address emotional factors such as anxiety and fear of making mistakes by creating supportive and non-threatening learning environments.

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ANNEXES

1. Checklist



UNIVERSIDAD NACIONAL DE CHIMBORAZO

PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

DIAGNOSITC TEST

Part 4: Passage

Read the story aloud.

Pedro gets up at seven o'clock. He brushes his teeth and puts on his blue shirt. He packs his bag and takes a banana for breakfast. Then he goes to the bus stop and waits with his friend Pablo. On the bus, Pedro reads a book about pirates. He really enjoys the pictures, and sometimes he laughs when he sees funny words. He loves to learn, even when letters play tricks on him.

Description: This checklist is used to identify and record common reading difficulties in children with dyslexia when learning the English language. It focuses on errors with sound letters (**p-b; b,d; p,d; t,d; s-z; f-p; l,r**), digraphs (**/f/δ/θ/tj/Ph**), and sounds (**/i:/; /ɪ/; /eɪ/; /ɛ/; /ʌ/; /ə/; /oo/**) helping teachers detect specific problems for later support in reading development.

Aspect to Observe	Number of Errors	Word or phrase detected	observations
Sound Letters			
[p-b]	a.-		
[b-d]	b.-		
[t-r]	c.-		
[t-d]	d.-		
[L-r]	f.-		
[n-o]	g.-		
[g-r]	h.-		
[d-r]	i.-		
[f-p]	j.-		
[d-b]	k.-		
[p-l]	l.-		
Digraphs			
[Sh /f/]	a.-		
[Th /ð/]	b.-		
[Th /θ/]	c.-		
[Ch /tʃ/]	d.-		
[Ph]	e.-		
Sounds			
[/i:/]	a.-		
[/ɪ/]	b.-		
[/eɪ/]	c.-		
[/ɛ/]	d.-		
[/ʌ/]	f.-		
[/ə/]	g.-		
[/oo/]	h.-		



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FINAL TEST

Part 4: Passage

Read the story aloud.

Liam loves the park. He runs fast and kicks the ball high. He sees a dog chasing a red ball. Liam laughs and waves at his friend Emma. They sit on the grass and read a story about a brave cat. The pictures are bright and fun. Sometimes, Liam smiles when the words look or sound tricky. He enjoys reading, even if some letters or words are confusing.

Description: This checklist is used to identify and record common reading difficulties in children with dyslexia when learning the English language. It focuses on errors with sound letters (**p-b; b,d; p,d; t,d; s-z; f-p; l,r**), digraphs (**/f/ð/θ/tj/Ph**), and sounds (**/i:/; /t/; /ei/; /ɛ/; /ʌ/; /ə/; /oo/**) helping teachers detect specific problems for later support in reading development.

2. Quantitative Observation Guide



UNIVERSIDAD NACIONAL DE CHIMBORAZO

PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

QUANTITATIVE OBSERVATION GUIDE

Description: This quantitative observation guide is designed to numerically identify the participant's performance when applying gamification strategies through gamified activities developed in digital tools, evaluating aspects related to the learning process, motivation, and interaction. During each session, the observer assigns a score from scale 1 to 10 to each item based on the student's observable behavior. The scores belonging to the same category are averaged to obtain a category score for that session.

The category score is interpreted using the following scale: (very poor), (badly), (acceptable), (good), and (excellent). At the end of the intervention, the average of all session scores in each category provides the participant's overall performance level in Motivation, Interaction, and Learning Process, allowing the identification of progress throughout the intervention.

DATE			
SECTION			
DURATION OF THE LESSON			
TYPE OF ACTIVITY			
DIGITAL TOOL USED			
	ITEMS	GRADE	OBSERVATIONS
LEARNING PROCESS			
1	Does the student decode the words presented during the activity?		
2	Does the student identify key details in the texts presented in the gamified activity?		
3	Does the participant recognize and distinguish similar letters?		
4	Does the student recognize and distinguish similar digraphs and sounds?		
5	Does the participant relate information based on the text or images included in the activity?		
MOTIVATION			

6	Does the participant show positive emotional reactions during the activity (e.g., smiling, expressing enthusiasm)?		
7	Does the participant show negative emotional reactions during the activity (e.g., frustration, frowning, signs of discomfort)?		
8	Does the participant react appropriately to correct responses or successes in the activity?		
9	Does the participant react appropriately to mistakes or failures in the activity?		
10	Does the participant show mood swings in attention throughout the session?		
INTERACTION			
11	Is the participant actively predisposed to the gamified task?		
12	Does the student participate through verbal responses during the activity?		
13	Does the student participate using gestures during the activity?		
14	Does the participant understand and follow the instructions of the gamified activity?		
15	Does the participant stay engaged during the different content of the gamified activity?		

3. Semi- interview guide



UNIVERSIDAD NACIONAL DE CHIMBORAZO PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Student Interview Guide-Students

Description: This semi-structured interview aims to interpret the students' perceptions regarding the use of gamification for teaching reading skills. The questions are organized around four key themes: motivation, engagement, difficulties, and perceived benefits. Since English is a foreign language for the students, the questions were designed in Spanish to ensure they could fully comprehend and express their experiences. The responses will help reveal how they experienced the activity, which aspects were most meaningful, and how this strategy influenced their learning.

Initial Phase:

Preliminary Greeting: The interviewee will be informed about the fundamental purposes guiding this research, highlighting the importance of their contribution to enhancing the expected results.

Authorization to Record the Interview: Consent will be required in advance to ensure confidentiality and to ensure that the information is used exclusively for academic purposes.

Background Information:

Interview Location: _____

Interview Date: ___/ ___/ 2025

Interviewer:

Interviewee Name: _____

Age: _____ years

Role: Student

Grade: 10th EGB

Ice breaking:

- a) Si pudieras ser un personaje de una película, serie o caricatura, ¿quién serías y por qué?

1. Motivation

- ¿Sientes que los juegos hacen que te interese más la lectura? ¿Por qué?
- Si pudieras aprender otras materias con juegos, como matemáticas, ¿cómo te gustaría que fueran esos juegos?

- Durante tu lectura, apareció alguna palabra que era como un acertijo o reto. Cuéntame cómo la descubriste.

2. Engagement

- Durante las actividades propuestas, ¿cómo participabas para completar los retos y superar los niveles?"
- ¿Crees que es más fácil prestar atención cuando el docente explica la clase usando juegos? ¿Por qué?
- Cuando estabas jugando, ¿qué hacías para estar concentrado y seguir jugando?"

3. Challenges

- Cuéntame sobre alguna palabra o parte de la lectura en inglés que te tomó más tiempo comprender.

- Describe una situación de la actividad que te resultó complicada o que no entendiste del todo.

- ¿Qué haces normalmente cuando algo en el juego o en la lectura no te sale bien?

4. Benefits

- ¿Después de completar la actividad, qué partes de la lectura se hicieron más claras o fáciles de descubrir para ti?

- Cuando juegas y aprendes palabras nuevas, ¿cómo crees que eso te ayuda en tus clases de inglés?

- Después de la actividad, ¿qué hacías con las palabras nuevas que descubriste en tus lecturas o en la clase?



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PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Interview Guide: Teacher Perceptions

Specific Objective for this Interview: To interpret the teachers' perceptions regarding using gamification for teaching reading skills. The questions are organized around four key themes: motivation, engagement, difficulties, and perceived benefits.

Initial Phase:

Preliminary Greeting: The interviewee will be informed about the fundamental purposes guiding this research, highlighting the importance of their contribution to enhancing the expected results.

Authorization to Record the Interview: Your prior consent will be requested, guaranteeing confidentiality and the exclusive use of the information for academic purposes.

Background Information:

Interview Location: _____

Interview Date: ___/ ___/ 2025

Interviewer: _____

Interviewee Name: _____

Age: _____ years

Role: Professor

Area: _____

Institution: _____

Professional Experience: _____

1. Icebreaker question

- a) If you weren't a teacher, what other profession would you have liked to pursue?

1. Motivation

- a. How do you think gamification has influenced students' interest in reading activities?
- b. What aspects of gamified activities seemed to capture students' attention and motivation the most?
- c. What activities within an educational game do you think could help students be more motivated to read?

2. Engagement

- a. How would you describe the student's level of engagement and concentration during the gamified reading sessions?

- b. In what ways do you think gamification helped students stay engaged and active during the activities?
- c. What differences have you observed in classroom engagement when using gamification compared to traditional activities?

3. Difficulties

- a. What have been the main challenges in implementing gamified activities for teaching reading?
- b. From your perspective, what stands out to you about students with dyslexia when they engage in gamified activities?
- c. What limitations do you think gamification might have in supporting reading skill development?

4. Perceived Benefits

- a. What improvements or advantages could students with dyslexia experience in their reading skills through gamified activities?
- b. Considering that students with dyslexia may struggle with reading comprehension or remembering vocabulary, how could gamified activities with levels, points, or challenges help support these skills?
- c. How might gamified activities help students with dyslexia feel more capable or confident when practicing reading in English?

4. Informed Consent



CONSENTIMIENTO INFORMADO

Yo; _____ con C.C. _____
declaro que he sido informado e invitado a participar en la investigación denominada.
"Gamification as a didactic strategy in the teaching and learning process of English for
learning with dyslexia". Este es un proyecto de investigación académica con el fin de
obtener el título de pregrado de la Universidad Nacional de Chimborazo.

Entiendo que este estudio busca to analyze the usefulness of gamification in teaching and
learning English reading skills to learners with dyslexia who take the 5th EGB at Unidad
Educativa Nuestro Mundo Eco-Rio, located in the city of Riobamba, Chimborazo province,
during the academic period 2025-2026.

El estudio consiste en la aplicación de estrategias basadas en la gamificación, diseñadas
para fortalecer las habilidades de lectura en inglés mediante actividades interactivas y
dinámicas adaptadas a las necesidades del estudiante con dislexia. Posteriormente, se
llevará a cabo una entrevista semiestructurada con preguntas relacionadas con las
estrategias aplicadas, con el propósito de conocer las percepciones, experiencias y
opiniones del participante sobre el uso de la gamificación en su proceso de aprendizaje.
La duración estimada de la entrevista será de aproximadamente 15 minutos.

Me han explicado que la información registrada con mi autorización será consignada a mi
nombre (_____), o, en caso contrario, será confidencial, y que los
nombres de los participantes serán asociados a un número de serie. Esto significa que las
respuestas no podrán ser conocidas por otras personas ni identificadas durante la

Estoy en conocimiento de que los datos no me serán entregados y que no habrá retribución
por la participación en este estudio; sí que esta información podrá beneficiar de manera
indirecta y, por lo tanto, tiene un beneficio para la sociedad, dada la investigación que se
está llevando a cabo.

Asimismo, sé que puedo negar mi participación o retirarme en cualquier etapa de la
investigación, sin expresión de causa ni consecuencias negativas para mí.

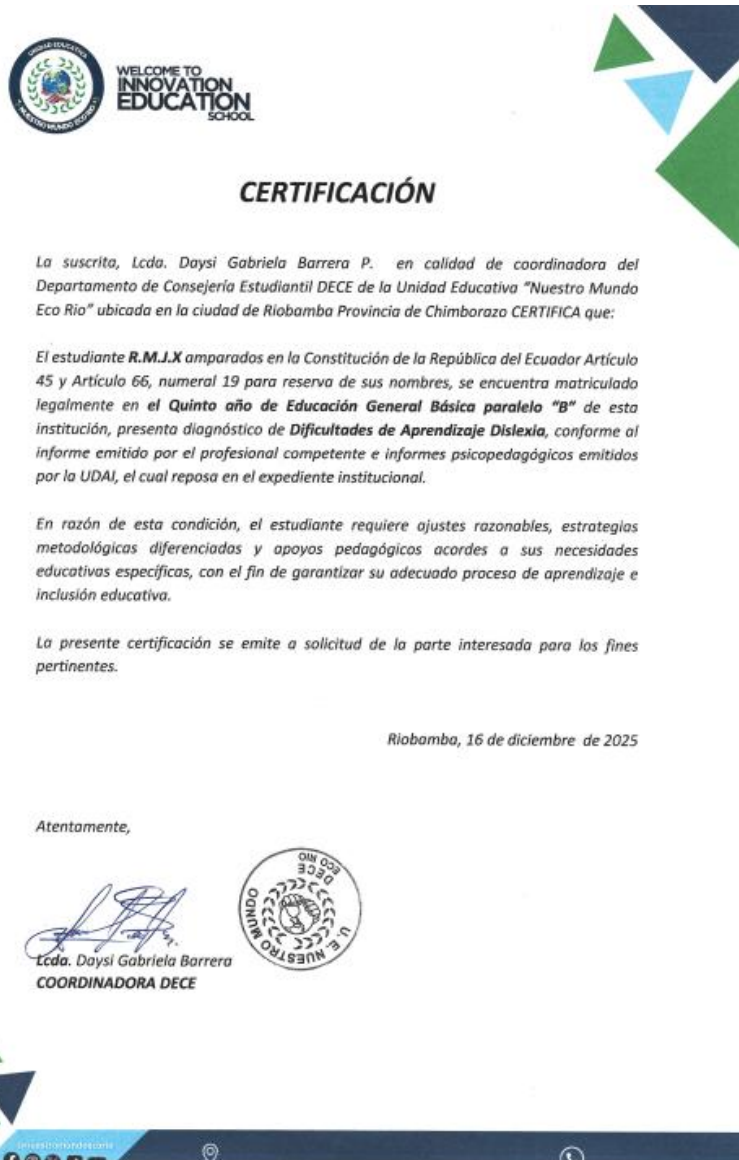
Sí. Acepto voluntariamente participar en este estudio y he recibido una copia del presente
documento.

Firma participante: _____

Fecha: _____

Si tiene alguna pregunta durante cualquier etapa del estudio puede comunicarse con
marjorie.gavilanez@unach.edu.ec

5. Documentation supporting the diagnosis of dyslexia



6. Photographic evidence



November, week 3: Development of the maze activity in the Wordwall application.