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The Role of Mnemo-Gamification Techniques in Vocabulary Retention, Student Engagement, and Identification of Main Ideas in supporting Eighth-Grade Reading Comprehension During the Fourth Academic Term of 2024

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Abstract

This study examines the impact of mnemo-gamification techniques on the reading skills of eighth-grade students at the Instituto Rosa Matilde Romero during the fourth academic term of 2024. The research focuses on three key aspects of reading comprehension: vocabulary retention, student engagement, and the ability to identify main ideas in texts. Mnemo-gamification combines mnemonic strategies with gamified platforms, such as Kahoot and Blooket, to create an interactive learning environment that addresses challenges commonly faced in traditional teaching methods.

Data was collected using three instruments: an observation guide to assess students' vocabulary retention during mnemo-gamified activities, student interviews to explore their engagement and motivation, and teacher interviews to gain insights into students' ability to identify main ideas. The findings highlight the potential of mnemo-gamification to enhance vocabulary retention, increase student participation, and support the identification of key ideas, offering a novel approach to addressing gaps in the teaching of reading skills within the Nicaraguan educational framework. This research aims to provide innovative strategies for improving reading comprehension in English, bridging the gap left by traditional methodologies.

Keywords: *gamification, digital learning, mnemonic strategies, reading comprehension, EFL instruction, and mnemo-gamification.*

I. Research Scope

1.1. Introduction

In the realm of educational exploration, the quest to enhance learning methodologies continually seeks innovative approaches to enrich students' experiences. The synthesis of mnemonic techniques and gamification, coined as Mnemo-Gamification, emerges as a promising frontier in educational research, particularly in the context of bolstering reading comprehension skills among ninth-grade students. This research embarks on an endeavor to unravel the synergies between mnemonics, gamification, and the intricate landscape of adolescent learning.

The primary focus revolves around investigating how Mnemo-Gamification techniques can be applied to cultivate and fortify reading skills in ninth-grade students. However, as with any scholarly pursuit, unforeseen challenges have arisen. The progression and ultimate culmination of this research, delving into the intricacies of memory-enhancing strategies and playful learning, have been significantly impacted by the constraints of time.

This paper candidly addresses the limitations imposed by temporal restrictions on the breadth and depth of our research. The unanticipated constraints have necessitated a reevaluation of the original research timeline, prompting a reflection on the achievable scope and the implications for the study's conclusions. As we navigate the challenges posed by time constraints, it becomes imperative to acknowledge the resultant impact on data collection, analysis, and the attainment of comprehensive research objectives.

While we aspire to contribute valuable insights to the discourse on innovative teaching methodologies, the unavailability of these limitations has prompted a recalibration of expectations. This introduction serves as a preamble to a candid exploration of the challenges encountered and the subsequent adaptations made to sustain the integrity of the research.

1.2. Problem statement

In Nicaraguan schools, English lessons often prioritize speaking and listening skills, leaving little room for activities that support reading. This has created gaps in students' learning, particularly in their ability to engage with reading tasks, retain vocabulary, and identify the main ideas in texts. These three aspects are crucial for understanding written materials and developing stronger reading habits.

At Instituto Rosa Matilde Romero, eighth-grade students often struggle with these specific areas. Many lose interest quickly during reading activities, have difficulty remembering new vocabulary, and fail to grasp the main points of what they read. Traditional teaching methods do not adequately address these challenges, leading to frustration, boredom, and poor learning outcomes.

The widespread use of cell phones during classes has further added to the problem. Instead of serving as a learning tool, phones often distract students, pulling their attention away from their academic tasks.

Gamified platforms like Kahoot combined with memory techniques (mnemonics), may provide a solution by making learning more interactive, engaging, and effective. These methods can help students stay interested, improve their vocabulary retention, and better identify main ideas in texts. However, these techniques have not been thoroughly explored in the Nicaraguan classroom context.

The findings aim to offer teachers new strategies to enhance their methods and improve students' experiences and outcomes in English classes.

1.3. Rationale

In Nicaragua, the current educational framework for teaching English in secondary schools emphasizes speaking and listening skills, with limited attention given to developing reading competencies. As a result, students often struggle with essential reading skills, including vocabulary retention, engagement with texts, and the ability to identify key ideas, which are critical for academic success. This imbalance in language instruction has led to gaps in students' overall language proficiency, particularly in reading comprehension, which in turn affects their ability to excel in various academic subjects and tests.

At Instituto Rosa Matilde Romero, eighth-grade students face significant challenges in these areas. Many students show signs of disengagement during reading activities, often due to the lack of effective strategies to keep them interested and motivated. Furthermore, their difficulties in retaining new vocabulary and identifying main ideas in texts hinder their ability to fully comprehend reading materials, contributing to frustration and poor learning outcomes.

Given these challenges, there is an urgent need for innovative educational strategies that can address these gaps. The application of **mnemo-gamification**—the integration of mnemonic techniques with gamified platforms such as Kahoot and Blooket—presents a promising solution. These interactive, game-based learning tools have shown positive effects in various educational contexts, engaging students and improving their ability to retain information. By combining mnemonic techniques, which enhance memory retention, with the motivation and interactivity of gamification, students may experience a more engaging, effective, and enjoyable learning process.

This study is particularly relevant as it seeks to fill a gap in current educational practices in Nicaragua, where the potential of digital and interactive learning tools is underutilized. By focusing on vocabulary retention, engagement, and the identification of main ideas—key components of reading

comprehension—this research aims to provide evidence for the effectiveness of mnemo-gamification in enhancing reading skills. The findings from this study will not only contribute to improving reading instruction at Instituto Rosa Matilde Romero but also offer insights that can be applied in broader educational settings throughout Nicaragua, helping to better prepare students for the demands of the 21st century.

1.4. Background

Today's world, learning a foreign language is crucial for real-world needs, and gamification and mnemonics are techniques used to develop reading skills. Solihova R. (2023) developed a research called “Mnemonics and its usage in the teaching learning english language” and highlights the importance of reading in teaching English as a second language and emphasizes the need for students to be engaged in the English language before practicing reading skills. The research was carried out on 12 English learners aged 14-16 years old.

Chaidis, D. (2022) published a research called “Online Gamification Platforms for Practicing EFL Students’ Reading Skills: A Systematic Review” and examined the role of gamification in English as a Foreign Language (EFL) education, particularly focusing on online platforms for improving students’ reading skills. The results identified several online platforms, including Kahoot! Quizizz, Socrative, Bibliobattle, Classcraft, ClassDojo, Duolingo, Genially, Into the Book, M-reader, Memrise, Padlet, Quizlet, and ReadTheory.org, as effective for enhancing EFL students’ reading skills.

De la Cruz, Franco, and Luza (2020) conducted a study called “Gamification for understanding English texts for students in a public school in Peru” on 12 students of ninth year at Secondary level in Peru, focusing on the use of Jclick software for understanding English texts and vocabulary mastery. The study had a mixed method approach, with observations and interviews being used to assess the impact of the Jclick software.

Gulo, Damai, and Dian (2022) applied a research called “Improving students’ vocabulary mastery on narrative text through mnemonics at the seventh grade of SMP Hurunato 24 seventh-grade students at SMP Huruna” highlighting the importance of mnemonics in teaching vocabulary and helping students remember and keep information easier. The study concluded that mnemonics are useful for teaching vocabulary and helping students remember and keep information easier, creating a funny atmosphere in English learning. In conclusion, incorporating gamification and mnemonics into EFL education can enhance reading skills, motivation and ICT skills development.

1.5. Objectives

General objective

- Analyze the impact of mnemo-gamification techniques on vocabulary retention, student engagement, and the ability to identify main ideas to improve reading comprehension among eighth-grade students during the fourth academic term of 2024.

Specific objectives

- Acknowledge the effectiveness of mnemo-gamification techniques in enhancing students' ability to recall and use vocabulary during reading tasks.
- Explore students' perceptions of their engagement and motivation during reading tasks after implementing mnemo-gamification techniques.
- Gather insights from teachers regarding students' progress in identifying main ideas in reading tasks as a result of mnemo-gamification activities.

II. Theoretical Framework

This strategy explores the intersection of gamification and mnemonic techniques in reading comprehension development, combining these approaches into what is termed "Mnemo-Gamification." Gamification, defined as the use of game-like elements in non-game contexts, has gained significant attention in the educational field for its ability to enhance student engagement and motivation.

By incorporating elements such as points, rewards, and interactive challenges, gamification transforms traditional learning into a more dynamic and enjoyable experience. Meanwhile, mnemonic techniques were designed to aid memory retention and recall have long been recognized for their effectiveness in enhancing students' ability to remember and retrieve information. The fusion of these two educational strategies, Mnemo-Gamification, aims to create a more engaging and effective learning environment that not only makes learning enjoyable but also strengthens students' comprehension and memory skills.

Gamification has evolved as a significant tool in modern education, aiming to make learning more interactive and enjoyable by incorporating elements like leaderboards, badges, and progress tracking. It is crucial to find a balance between entertainment and educational value to ensure that fun enhances, rather than distracts from, learning. Understanding the psychological factors behind motivation and engagement is essential, as they play a pivotal role in fostering a positive attitude towards learning, increasing perseverance, and encouraging active participation. Mnemonic Techniques: Mnemonic strategies encompass a variety of methods, including keyword mnemonics, the method of loci (associating information with familiar spatial locations), and chunking (grouping information into manageable units).

These techniques are rooted in cognitive psychology, leveraging the way the brain processes and stores information to make it more accessible. Research has consistently shown that these strategies can significantly improve memory and recall, making them valuable tools for enhancing vocabulary and content retention. The integration of gamification and mnemonic techniques (Mnemo-Gamification) aims to merge the

strengths of both methods into a cohesive educational approach. This strategy seeks to boost students' comprehension skills by combining the engaging nature of games with proven memory aids, resulting in a learning experience that is both fun and effective. Potential benefits include improved comprehension of complex texts, enhanced vocabulary development, and increased motivation for academic success.

In addition, this framework will discuss the practical aspects of designing and implementing Mnemo-Gamification in classroom settings, including the challenges educators might face and strategies for successful integration. By examining the theoretical foundation of gamification and mnemonic techniques, this research aims to contribute to the development of innovative and effective educational strategies. These strategies are designed to improve student outcomes by making learning more engaging, personalized, and impactful, ultimately preparing students for greater academic achievements and fostering a love for reading and lifelong learning.

2.1. Gamification

Nowadays, society has changed and as long as technology changes, the world does it as well, the uses of technology in many context has spared quickly and when it comes to talk about gamification plenty of people relates it to education but, the truth is, that gamification could also be applied on healthy, business and so on. According to Capponeto, (2014) gamification can be defined as “the application of games mechanisms in many environments with the aims of enhancing the processes of those involved in non-gaming context” page. 1. Therefore, it is important to realize that gamification is not the same as games, for example, the term gamification refers to the use of elements of games in a determine activity but not just playing as in gaming and it is important to detail what gamification is and what it is not.

2.1.1. Gamification in Education

Modern learning has helped on attach the concept of gamification mostly to education but many differences has emerged based on that, for example, what gamification is and what game based learning is? Or gamification methods imply students

just to play? On instance, games are not gamification, games refer to an activity that implies learning but on a second plan, on the other hand, gamification implies students to learn by using piece of gaming that have scores and achievements set on a determine period of time and is mostly of the time asses by using technology such as tablets or laptops at school (Kapp, 2014). On other words, games and gamification are similar but not the same, for example, if I set a cross word drew using markers it is not the same as a kahoot set that encourage thinking quickly and encourage students to take advantage of their gadgets.

At the same time, it is needed to be clear about that gamification is not just playing for points with no social interaction, for instance, Kapp, K. (2014) mentions important thoughts about that:

The least exciting element of any game is the points, badges or leaderboards. People don't play a game just for points, they play for mastery, to overcome challenges and to socialize with others. The most effective gamification efforts include more than points and badges—they contain elements of story, challenge and continual feedback as well as a high level of interactivity. (page 45)

In other words, gamification never implies learners to be in front of a screen in groups without encouraging any interaction, the best examples can be shown in a classroom where students can express emotions while using kahoots, interactive ppts and also games but not focused on being the principal technique, which means it has to be use as a tool for promoting learning. An example could be when students learn by using software created for educational purpose but in fact, it does not mean that many others are not able to be use in class, it is mainly on the way how teachers apply these games on class

2.1.2. Gamification in reading skills development

Traditional teaching methods forced students to be taught on an English learning focused on speaking without giving the primordial importance to develop reading skills and, at the same time, was focused on traditional techniques that only promotes face to

face interaction in a determined place. Nowadays, developing reading skills when learning a foreign language is essential, but practicing reading skills has nothing to do with just reading from a paper to an audience or only reading just because. For instance, when it comes to enhancing reading skills, teachers must take into account the implications that current young learners have. For example, a gamification method for learners who are used to keeping in touch with media and technologies is the best way to improve that. However, it is important to not just swap papers to screens when reading, and thanks to gamification methods, teachers are able to take advantage of technology without taking students off their technological trends (Kerty, 2020). In other words, applying gamification techniques in young learner who use media and gadgets everyday will help teacher to solve those situations in which practicing reading is hold by reading on books or word sheets and it could encourage students to use media and gadgets in educational purposes and not just for entertainment finales.

In fact, reading is important, but practicing is not only about reading isolated words or phrases without performing critical thinking or vocabulary hunting, that is why gamification methods represents another important part of practicing reading because it allows students to motivate by using technology and promotes reading interest as well. Ming, C. (2020) shares thoughts and alludes that “reading comprehension is needed for the students to expand their knowledge and information, the failure of understanding a few words brings a negative impact towards students reading skills and use a gamificated method is the best method to overcome these situations while performing most that just reading without interest” (pp 22). In other words, reading skills involves students to be engage with the learning technique on first place and take advantage of gamification methods in young learners of L2 is a fruitful opportunity on designing new learning English techniques not only focused on reading but also the other English skills

2.2. Mnemonic techniques

According to (Barcroft, 2012) "Mnemonic Strategies are mental aids that enable the recall of various types of elements and information, such as new word forms, names, historical dates, numbers, formulas, various rules, and lists" (p. 3). In essence, these strategies involve restructuring and breaking down units of information or learning

elements (that which we want to remember). This process transforms these decomposed units into something more familiar and easier to remember, drawing upon previously stored information. In the context of the human brain, we consider memory techniques to be highly beneficial. Therefore, these techniques facilitate the acquisition of new knowledge, incorporate sufficient elements to capture our attention and stimulate interest, and enable us to develop our potential in the realm of language.

On the other hand, (Behr, 2012) asserts that "Mnemonic techniques provide structure and organization as aids for memorizing specific material" (p. 11). This emphasizes the importance of mnemonic techniques in providing organizational structure that enhances memory and the retention of informational material. These techniques are valuable tools for individuals seeking to remember information more effectively. This underscores the significance of mnemonic strategies in furnishing an organizational framework that elevates memory capacity. A mnemonic (memory device or technique) is a mental device that helps remember certain types of objects or information, such as new word forms, names, historical dates, numbers, formulas, and various rules and lists.

In his research (Worthen, 2011) Mnemonics are a strange invention. No other man-made object has been created solely for the purpose of supporting natural psychological processes that are already fully functioning in their natural form. The psychological process is of course memory. This statement emphasizes the uniqueness of mnemonics as a human invention. It suggests that mnemonic techniques are unusual in that they are specifically designed to support and enhance a natural psychological process that already exists within humans: memory. Typically, they involved re-encoding or deconstructing the formal part of the target item (to be remembered). This makes these sections more approachable, shorter, and less important to remember.

2.2.1. Types of Mnemonic

There are various ways to classify types of mnemonics. Each classification system has its own rationale, which influences how mnemonics can be implemented on a practical level.

2.2.2. Organizational and Encoding Mnemonics

(Stelmach, 1990) Has proposed a system which classifies mnemonics into two types. *Organizational mnemonics* “organize and interrelate new information in memory so that it can be later recalled” whereas *encoding mnemonics* are used “to transform low-imagery, abstract material into a more memorable form before an organizational mnemonic is used to store the information in memory” (Bellezza, 1987). Therefore, this classification system assumes a hierarchical arrangement of storage devices. Hierarchical aspects of mnemonic processing are rarely addressed in the memory intervention literature. Failure to consider the hierarchical order of mnemonic components may cause some memory interventions to fail.

2.2.3. Process and Fact Mnemonics

Fact mnemonics provide specific information directly in a way that duplicates the information contained in the mnemonic. *Process mnemonics* are used to generate information from the mnemonic and are helpful in “remembering rules, principles, and procedures, the processes underlying problem-solving” (Bellezza, 1987). In addition, fact mnemonics serve as a straightforward method for directly encoding specific information within the mnemonic itself. In essence, the mnemonic mirrors or duplicates the precise data it aims to help remember. This approach is particularly useful when one needs to retain discrete facts, such as historical dates, vocabulary terms, or numerical values. In order to, fact mnemonics essentially act as memory aids that hold the information you want to remember in a readily accessible format.

2.2.4. Internal and External mediators

The most common for classifying mnemonics is in terms of internal or external mediators. *Internal mediator* is those that exist inside one’s mind and usually are employed to facilitate learning (Bellezza, 1987). The method of loci, peg word, first letter cueing, rehearsal, concentration, imaging, elaborating, associating, reconstructing, grouping, and so forth are examples of internal mnemonic techniques (Cavanaugh, 1983). Internal mediators appear to involve more efforts to learn and use than external mediators. In addition, internal mediators are known as verbal mnemonics.

External mediators are known as visual mnemonics; this mediator is typically something outside of the person's own cognitive processes or natural memory abilities. It can take various forms, such as a mnemonic device, a mnemonic technique, or any external strategy designed to assist in the retention and retrieval of specific information (Bellezza, 1987). External mediator mnemonic techniques are particularly valuable for improving memory performance, as they provide a structured and organized approach to enhance memory recall. Examples of such techniques include acronyms, visual imagery, memory aids, and other external tools designed to support and optimize the memorization process (Cavanaugh, 1983). Besides, external mediators essentially act as props or crutches to improve memory and make it easier for individuals to remember and recall data and knowledge.

2.3. Effectiveness in reading comprehension development

One of the most significant current discussions in the era of learning and teaching is mnemonic reading techniques that plays a key role in learning the second or foreign language because it connects new learning to prior knowledge through the use of visual or acoustic cues (Addullah, 2017). There are several ways to help language learners overcome this difficulty. Research on mnemonic techniques is proposed, used for teaching and learning vocabulary and reading; keyword method, trajectory method, grouping of words, words according to semantic relationships, analyze the structure of words, study their affixes, and root.

(Davoudi, 2016) Investigated the effectiveness of the keyword method of vocabulary teaching on learning and long-term retention of vocabulary in a regular EFL teaching context. Fifty EFL elementary school students were selected and divided into experimental and control groups. The experimental group received vocabulary instruction using mnemonic keywords, and the control group received traditional memorization-based instruction on the same vocabulary items. Two posttests were administered to each group, one immediately after class and one two weeks later. A paired independent samples t-test was conducted on this data and the results showed that participants in the keyword group significantly outperformed participants in the memory group in both vocabulary

learning and retention. Research has confirmed the effectiveness of using mental associations and imagery using mnemonic strategies for basic level vocabulary learning and retention in EFL learners. This study's findings support the idea that mnemonic strategies, particularly those involving mental associations and imagery (such as the keyword method), are highly effective for teaching and retaining basic-level vocabulary among EFL learners. The use of mnemonic techniques appears to enhance vocabulary acquisition and long-term retention compared to traditional memorization-based approaches. These results emphasize the potential benefits of incorporating mnemonic strategies into EFL teaching practices to enhance vocabulary learning outcomes.

In her study, (Jalilehvand, 2012) investigated the effects of text length and images on reading comprehension. Seventy-nine first-year students from her three middle schools in Iran participated in this study. Participants had similar performance levels. The researchers used two of her texts in this study. In fact, one of these two texts was an abridged version of the original. A between-subjects design was used, and participants were divided into four groups. Each group read reading comprehension texts in one of his four conditions: 1) long texts with pictures, 2) long texts without pictures, 3) short texts with pictures, and 4) short texts without pictures. The reading comprehension text consisted of 5 multiple-choice questions and 10 true/false questions. Although participants performed better on the original text, the analysis of variance (ANOVA) results showed that length did not have a significant effect on Iranian high school students' reading comprehension.

However, subjects performed better on text with images. Interestingly, while participants performed better on the original text, the analysis of variance (ANOVA) results revealed that text length did not have a significant impact on the reading comprehension of Iranian high school students. However, the presence of images in the texts did lead to improved performance among the subjects. These findings suggest that visual aids, such as images, play a more substantial role in enhancing reading comprehension among this group of students than the length of the text itself. This study highlights the importance of considering multimedia elements like images when designing instructional materials to improve reading comprehension in educational settings.

(Azmi, 2016) Investigated the effectiveness of using mnemonics in learning English vocabulary. This investigated the students' perspectives and point of view of the mnemonic technique in teaching and learning English vocabularies. The selected participants are students who are currently learning English subject in a primary school. Their English teachers instructed the students about English vocabulary with and without using the mnemonic technique. A set of questionnaire were designed by the researchers and administered for the students. The result received from the questionnaire demonstrated the effectiveness of using mnemonic techniques in learning English vocabularies as well as the students' response towards the technique. In summary, Azmi's study provided valuable insights into the practical application of mnemonics in the context of English vocabulary learning. The findings not only supported the effectiveness of mnemonics but also highlighted the students' favorable attitudes towards this instructional approach, reinforcing its potential as a useful tool in language education.

2.4. Combining Mnemo-Gamification

For the development of this paper two variables were taken as a basis. The first called Reading Comprehension which is considered the dependent variable and the second one is the Mnemo-gamification which is the independent variable. In the first case, this variable has a great importance because it allows us to identify the capacity that learners have, and to which they can reach, in terms of identification and memory of a text until achieving a critical thinking of the text applying the necessary metacognitive processes.

To talk about the second variable, it's important to take into account that both start from two different terms that can be combined for a common purpose. For this reason, the principal aim of this step is to know how the combination of mnemonics and gamification can be relevant in the development of the reading comprehension. Gamification is the tool considered as a learning technique that transfers the full potential of games in the educational field, to improve the results of students in class in accordance with the reality that young people live today (Quiñones Riascos, 2021). This ludic tool can be part of a method that relates the visualization of images to the introduction of new vocabulary as keywords for the total understanding of a text without needing a direct translation.

Therefore, Mnemonics could be a fundamental element in the use of technological devices as part of a set in the study of children's reading comprehension, developing memorization and critical thinking skills through an environment they are already familiar with.

Having defined the principal variables of an important research, it's essential to know in which situation inside a classroom this two concepts could be applicable in order to play a significant role in children's reading development and complete one of the aims of the study based on Identifying the challenges of educators related to the reading comprehension on students.

2.5. Implications for reading comprehension

According to (Snow, 2002), reading comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (p. 11). In the development of students' reading skills, many factors are involved, an example of this is found in certified studies that prove students' motivation is a key factor associated with their reading performance.

(Guthrie & Cox, 2001) mention that this factor affect the whole capacity related to engagement of students with their educational environment and the way they perceive the information including the reading frequency, which in turn influence comprehension.

To continue with the factors that might be associated with reading comprehension, there is the argument of (Kolić-Vehovec & Bajšanski, 2006) who explain that “students' metacognitive awareness of reading strategies also appears to be an important individual variable influencing reading comprehension via a mechanism of comprehension monitoring”. For this reason, the monitoring of cognition became an important factor involved in the reading development of children, the comprehension is an inherent part of the essential processes in the increase of critical thinking and educators must be ready to create a path with potential targets for instruction in which students can focus on following a mental connection to the English language and its context.

This last factor has also an influence on the students' motor capacities that (Gough &

Tunmer, 1986) explain on their *Simple View of Reading* paper, which has been useful to researchers and practitioners by providing a framework for understanding different profiles of struggling readers including students who struggle primarily due to word-level problems causing comprehension issues.

Researchers as (McBride-Chang, 2006) remarks that “family status can be a key predictor of reading comprehension”. A visible fact is that the cost-effective situation is correlated with the scholar achievements of children, Students from socio-economically disadvantaged families tend to be enrolled in schools with poor resources, such as low teacher quality and poor teaching and learning facilities. Hence, McBride emphasize the important role of teacher’s qualification and experience in reading instruction and argue that teacher’s knowledge and experience can impact on student’s reading performance in a regular classroom situation.

2.5.1. Vocabulary retention

According to Richard and Schmits (2002) Vocabulary retention has been defined as “the ability to recall or remember things after an interval of time. In language teaching, retention of what has been taught (e.g. grammar rules and vocabulary) may depend on the quality of teaching, the interest of the learners, or the meaningfulness of the materials” (p. 457). The concept of vocabulary retention, as defined by Richards & Schmidt (2002), refers to the ability to recall and use learned vocabulary or rules after a period of time. In language teaching, this retention is influenced by several factors:

1. **Teaching Quality:** Effective and engaging teaching methods make it easier for learners to remember new vocabulary.
2. **Learner Interest:** Motivated learners who find the material relevant or enjoyable are more likely to retain what they learn.
3. **Material Meaningfulness:** Vocabulary presented in meaningful contexts, such as stories or practical situations, tends to be retained better than isolated or abstract words.

This definition underscores the importance of creating an engaging and context-rich learning environment to enhance vocabulary retention. It aligns with the goal of ensuring that learners not only memorize new vocabulary temporarily but also integrate it into their long-term language use

2.5.2. Importance of reading comprehension strategies

Reading comprehension is one of the most complex cognitive activities in which humans engage, making it difficult to teach, measure, and research. To (Elleman & Oslund, 2019) citing (Gough & Tunmer, 1986), reading comprehension is the product of word decoding and linguistic comprehension and it can be explained by individual differences in these two components, though the relative relationship of the components changes over time. Reading comprehension requires the coordination of multiple linguistic and cognitive processes including, but not limited to, word reading ability, working memory, inference generation, comprehension monitoring, vocabulary, and prior knowledge. Thus, the use of effective reading comprehension strategies is perhaps the most important means to helping students improve comprehension and learning from a text.

To remediate comprehension difficulties, (McNamara, 2007) mentions in her research, that an effective program to remediate comprehension difficulties must include instruction in specific strategies for making inferences, monitoring comprehension and using text structure. Having a clear idea about the importance that this entails, allows educators to see a world of possibilities in which students can be immersed with optimal learning by understanding the context in which they are in, throughout one of the deftness of the language such as reading. As McNamara mentions on her paper “Consideration of comprehension as more general than reading comprehension magnifies the role of prior knowledge as a primary factor in student meaningful learning”, where the prior knowledge and instructions can be considered in a fashion paralleling their importance in the development of expertise and for cumulative content-area school learning.

2.5.3. Engagement when reading

According to Shaya (2020) the engagement during reading aims to the following: Engagement in reading-discussions that uses academic language helps students learn how to make inferences, retell stories, and acquire new (p. 22)

Which aims to explain why engagement is important when taking into the practice reading comprehension. It is not only about reading and identifying vocabulary, it is about making learning meaningful and transcendental for new generations who are not used to reading because they have been commanded to be focused more on speaking and listening tasks. Is it important to highlight that this times cell phones and technological devices are more usual than in the past, so it is crucial for educator to find a way in which students can be engaged in reading while using the gadgets they common use in traditional basis.

2.5.4. Main Ideas identification strategy

Recognizing the main idea within a text is an essential aspect of reading comprehension, serving as a guiding framework for understanding and retaining information. Defined as the central or most significant idea of a paragraph or passage, it establishes the purpose and structure of the text, enhancing cognitive engagement and memory. Its identification, often positioned in the initial sentence of a paragraph, underscores its pedagogical importance in cultivating effective reading strategies and textual analysis, Nasution (2016) regarding to this topic mentions that:

This strategy has been proven as an efficient reading strategy in reading comprehension. The main idea is the central, or most important, idea in a paragraph or passage. It states the purpose and sets the direction of the paragraph or passage. Moreover, it provides a mechanism for increasing understanding and memory. When the main idea of a paragraph is stated, it is most often found in the first sentence of the paragraph” (p.22)

The main idea serves as the central concept or key point of a paragraph or passage, guiding the reader in understanding the author's purpose and the direction of the text. When readers focus on the main idea, it helps them process the information more effectively, enhancing their ability to retain and recall details later.

Furthermore, the location of the main idea often provides a clue for readers; it is typically found at the beginning of a paragraph, serving as a foundation for the supporting details that follow.

This structured approach not only aids in better memory retention but also simplifies the process of interpreting and organizing complex information, making it a fundamental skill in reading comprehension.

2.6. Implementation of Mnemo-Gamification.

The implementation of Mnemo-Gamification represents a dynamic and innovative approach to education that can significantly enhance the reading experience for students. To effectively implement Mnemo-Gamification, several key principles should guide the process.

Firstly, it is essential to begin with a clear understanding of the learning objectives and curriculum standards, ensuring that the fusion of mnemonic techniques and gamification aligns seamlessly to educational goals. Moreover, customization is a key; mnemonic techniques should be tailored to specific subjects and topics, allowing students to apply them in a relevant context. Equally important is the creation of engaging gamified activities that motivate students to actively participate while reinforcing the mnemonic strategies they employ in.

Regular assessment and feedback mechanisms are critical to measure progress and make necessary adjustments as well as a commitment on fostering a supportive and collaborative classroom environment, are vital elements of a successful implementation. By adhering to these principles, educators can unlock the full potential of Mnemo-Gamification techniques encouraging students to create satisfying reading comprehension in order to understand what students are reading, making learning both engaging and unforgettable for the students.

2.6.1. Designing Mnemo-Gamification Techniques

Combining mnemonics and gamification to design a Mnemo-Gamification technique might have several potential benefits. Both techniques have their own advantages, and while using them together, it possibly enhances memory retention and engagement at the moment of reading.

Improving Learning Retention: Mnemonics are memory aids or techniques that help individuals to remember information effectively. By integrating mnemonics into gamified learning experiences, it would make the content more significant. The visual, auditory, or spatial cues provided by mnemonics may help learners recall information easier than leading to improve long-term retention and also it would help them to understand what they are reading.

Gamification provides immediate feedback and visual indicators of progress, which might boost motivation. Integrating mnemonics should create a sense of accomplishment as learners successfully apply mnemo-gamification techniques to remember and recall information. Progress tracking and feedback mechanisms would help learners to identify areas in which they need to improve

Mnemonics can be applied to a wide range of subjects and topics. When combining with gamification, this flexibility allows Mnemo-Gamification to be used in various educational contexts, from language learning to mathematics or science.

2.7. Integration into Eighth-Grade Classroom.

Mnemo-gamification can make learning more engaging and memorable for students. The Importance of this combination and how they should be implemented (Mnemonics, Gamification), to get effective results, it is necessary to start by identifying the learning objectives and curriculum standards for the ninth-grade classroom. Determine the subjects and topics where Mnemo-Gamification would be most beneficial, it is well-known that mnemonics techniques were designed to remember things and associate learning to realia but definitely when combining Mnemonic with gamification several good results can be obtained.

Interactive stories where students would engage with narratives and characters while using mnemonic devices for association words to remember story elements. They should progress through the story by recalling details and making choices. To develop character-based mnemonic techniques for vocabulary acquisition. Assign memorable characters to new words, and students can make associations involving these characters to

remember the meanings of the words.

Integration of Mnemo-Gamification techniques to enhance reading skills in ninth-grade students is a powerful educational strategy that recognizes the critical importance of reading skills for their academic success and lifelong learning.

Aspects that an effective Mnemo-Gamification technique for improving reading skill should have:

1. Establish Clear Learning Objectives: Begin by defining specific reading skill objectives that align with ninth-grade curriculum standards. These objectives could include improving comprehension, vocabulary acquisition, critical analysis, and reading fluency.

2. Identify Mnemonic Techniques: Select mnemonic techniques tailored to reading skills. For instance, use of visualization to help students create mental images of the text they're reading, or teach them keyword associations to remember new vocabulary.

3. Gamified Reading Challenges: Develop gamified reading challenges that focus on the chosen reading skills. Create quests, puzzles, or story-based games that require students to apply mnemonic strategies while reading and comprehending texts.

4. Vocabulary Mnemonics: For vocabulary improvement, implement mnemonic techniques that enable students to remember word meanings and associations. Encourage them to create memorable associations with words encountered in their reading materials.

5. Character and Plot Mnemonics: Teach students mnemonic techniques to remember complex characters and plot developments in literature. Encourage them to create mnemonic profiles for characters and story maps for plot progression.

6. Reading Comprehension Games: Create reading comprehension games that require students to recall details and analyze texts using mnemonic aids. The gamified environment can reward students for thorough comprehension.

7. Encourage Independent Reading: Promote independent reading by giving students the autonomy to select books of their choice. Encourage them to apply mnemonic

techniques they've learned in class to their personal reading.

8. Real-World Application: Emphasize the real-world application of reading skills, showing students how strong reading abilities benefit them not only in academics but also in everyday life.

By designing Mnemo-Gamification techniques tailored to improve reading skills, ninth-grade students cannot only enhance their academic performance but also develop a lifelong love for reading and critical thinking, empowering them for future educational and personal success.

The integration of gamification and mnemonic techniques, known as Mnemo-Gamification, represents a powerful and innovative strategy to boost reading comprehension skills among learners. By harnessing the motivational elements of gamification—such as points, badges, and leaderboards—alongside the memory-enhancing techniques of mnemonics, this approach offers a comprehensive solution to some of the most common challenges in literacy education.

The combination of these two methods provides several key advantages that make it a valuable tool in modern classrooms. Enhanced Engagement is a primary benefit, as gamified elements create a dynamic and enjoyable learning environment that can capture and sustain students' interest.

This not only makes reading more fun but also fosters a sense of achievement, encouraging students to strive for higher levels of proficiency. In addition, Improved Memory Retention is achieved through mnemonic techniques, such as visualization and keyword associations, which help solidify important details in a learner's memory, from vocabulary to plot elements and key themes.

Furthermore, the blending of gamification and mnemonics supports Deeper Comprehension by prompting students to interact with texts in a more meaningful way. This interactive engagement nurtures critical thinking and a deeper understanding of the material, leading to better analytical skills.

Additionally, Mnemo-Gamification allows for Personalized Learning, catering to

individual learning styles and needs. By tailoring activities to each student's preferences and strengths, educators can create a more effective and inclusive learning experience. However, to fully realize the potential of Mnemo-Gamification, careful planning and thoughtful implementation are essential. Educators should start by Clearly Defining Learning Objectives, ensuring that the focus is on specific reading skills such as vocabulary building, textual analysis, or inferencing. Selecting the most suitable mnemonic techniques is crucial, as these should align with both the educational goals and the cognitive preferences of learners.

The design of Engaging Gamified Activities must be strategic, ensuring that they are both challenging and relevant, thereby maintaining motivation and reinforcing the use of mnemonics. Finally, Regular Feedback and Assessment are fundamental for tracking progress, identifying areas for improvement, and keeping students motivated to continue advancing. In conclusion, Mnemo-Gamification not only offers a blend of fun and effective learning but also equips students with the cognitive tools they need to become more confident and proficient readers. As education continues to evolve in the digital age, integrating such innovative approaches will be key to fostering a generation of learners who are not only knowledgeable but also engaged and capable of critical thought. By investing in strategies like Mnemo-Gamification, educators can create a more inclusive and impactful learning environment that meets the diverse needs of all students, preparing them for future academic and personal success.

III. Research Methods

3.1. Type of Research

This research project is designed as a qualitative study due to the distinct learning styles, motivations, and challenges that ninth-grade students bring to the educational landscape. Qualitative research, above all, enables us to delve into the individual perspectives of these students. By employing interviews and surveys, we can gain profound insights into the diverse ways in which students respond to mnemo-gamification techniques. This approach yields valuable information regarding the personalized aspects of learning and skill development. According to American Psychological Association: “Qualitative methodology is important for research analysis because it allows for a deeper understanding of the underlying reasons, opinions, thoughts, and motivations of the subjects under study”. (APA, 2022)

The research at hand, focused on implementing mnemo-gamification techniques to enhance the reading skills of eighth-grade students during the 4th scholarly period of 2024, is robustly justified as a descriptive study for several compelling reasons. Foremost, it serves as a fundamental instrument for comprehending the current state of eighth-grade students' reading skills. This comprehension forms the cornerstone for establishing a baseline against which to measure future progress and interventions. Descriptive research excels at presenting a comprehensive overview of the situation, vividly depicting the existing proficiency levels, challenges, and strengths within this context. Additionally, it is imperative to thoroughly delineate the mnemo-gamification techniques employed, providing the foundation for subsequent effectiveness analysis.

In pursuit of an accurate interpretation, we actively participated as observers in classroom session with eighth-grade students. This involvement allowed to assess the dynamics between teachers and students, particularly when applying mnemo-gamification techniques to enhance reading skills during the observed sessions. Beyond this, the qualitative approach mandates that the researcher actively listens, acknowledges, and engages in dialogue within open and adaptable learning environments while also observing and participating intercultural.

3.2. Applied quality criteria: Credibility, reliability and triangulation

3.2.1. Criterion of Credibility

The criterion of credibility, often referred to as the authenticity criterion in research, is a fundamental requirement in the quest for a faithful representation of phenomena and human experiences as perceived by the subjects themselves (Guba & Lincoln, 1989). In the context of this study, the application of the credibility criterion serves the vital purpose of establishing a tangible connection between the study's outcomes and the observed reality, thereby ensuring that the research findings authentically mirror the experiences of the participants.

3.2.2. Criterion of Reliability

The criterion of reliability, as delineated in Guba & Lincoln's seminal work "Fourth Generation Evaluation", centers on assessing the degree of interpretative consensus achieved among diverse observers, evaluators, and judges. Notably, the reliability criterion extends beyond the data itself, focusing on the resilience of the techniques, measurement tools, and observation instruments employed, ensuring their independence from the unpredictable variables that may influence the research process.

3.2.3. Criterion of Triangulation

The criterion of triangulation, as described by (Denzin & Lincoln, 2017) in "The SAGE Handbook of Qualitative Research", encompasses the utilization of diverse research methods, both quantitative and qualitative, along with data sources and theories contributed by researchers from various contexts. To effectively implement data triangulation, it is imperative that the methods employed for observing or interpreting the phenomenon exhibit a qualitative nature, ensuring that they are congruent and can be compared.

3.2.4. Variables:

The variables definition according to Bevans (2022) follows the definition: In educational research, variables are the characteristics or attributes that are measured, manipulated, or controlled to understand their influence on other variables. They are essential for answering

research questions and forming hypotheses. (p. 22)

Taking into consideration the previous definition, on this context all of the variables taken are dependent because dependent variables are the outcomes that researchers expect to change or be influenced by the manipulation of independent variables. In this case, the independent variable is the application of mnemo-gamification techniques, and the dependent variables (vocabulary retention, student engagement, and identification of main ideas) are the aspects of student learning that are being measured to see how they are impacted by those techniques.

Variables Chart

Variable	Type of Variable	Instrument	Explanation
Vocabulary Retention	Dependent	Observation Guide	Used to assess how well students recall and apply vocabulary during the gamified activities (e.g., Kahoot and Educaplay).
Student Engagement	Dependent	Student Interview	A survey or informal interview where students express their levels of participation, motivation, and interest during the activities.
Identification of Main Ideas	Dependent	Teacher Interview	The teacher’s perspective on how well students identified and summarized the main ideas in reading tasks, particularly during the picture-based reading activity.
Mnemo-Gamification Techniques	Independent	Observation Guide & Student Interview	Both instruments assess how the gamified mnemonic activities are being applied and how students engage with these activities.

3.3. Research Approach

The paper presents a qualitative approach due it seeks to deepen the analysis of the behavior of a group of 9th grade students through a flexible and interactive research. (Gómez Bastar, 2012) mentions that qualitative approach focus on a concrete experience of a natural context and in its historical context, using interpretations and meanings that are attributed to a particular culture, due to the values and feelings that arise (p.47).

Added to that, the research is presented as descriptive. The qualitative is intrinsically related to describing the contexts under which the proposed phenomena are carried out, providing valuable information and characteristics of its environment for subsequent analysis.

The development of this research will take into account factors that will be important to achieve positive results in terms of the teaching-learning process of eighth grade children through the implementation of playful strategies that improve memorization and their reading comprehension skills.

3.4. Population

Rosa Matilde PREC has 3 English teachers and it's relevant to mention that this school has 275 students on the morning shift in total, which of them only one grade was selected for the research, it was the eighth grade B that has 32 students. In which only 16 of them are selected as the sample, 10 women and 6 men.

3.5. Sample

A questionnaire was held (an interview) on 1 teacher, who teaches English to the selected grade on the school to be informed about her experiences applying mnemo-gamification techniques and, another questionnaire (interview) was held on students in order to get opinions around the application of these techniques and reading comprehension overall as didactic strategies on improving English reading comprehension.

The sample type is not probabilistic, which means intentional, based on the nature of the study carried and the objectives proposed by the researchers

3.5.1. Sample selection criterions

In the qualitative method, samples are linked to a not probabilistic sample, which means, the selection techniques are based on the researcher judge and its advisability, etc. It which, we've considered the whole group as the sample due to it is a few population quantity and it is relevant to take into account every student's opinion on the weaknesses and strengths faced when they apply mnemo-gamification techniques. The sample consisted of 16 students from the eight B grade from Rosa Matilde Romero located on Nandaime, Granada.

3.6. Methods and Techniques

3.6.1. Instruments

3.6.1.1. Interview

An interview is a question-and-answer type of round where a person asks questions and the other person answers those questions. It can be a one-on-one two-way conversation or it can be multiple interviewers and multiple participants.

It has been designed unstructured interviews for both teachers and students which will be applied before introducing the Mnemo-gamification topic in order to collect information about what they know and it will play an important role in capturing the nuanced qualities and attributes that traditional structured interviews may overlook. An unstructured interview provides a platform to delve into their teaching philosophy, creativity, and adaptability. It allows interviewers to gauge not just their qualifications, but also their ability to think on their feet and navigate real-world classroom scenarios this interview has a clear objective and consist of five questions which are to know the perception of teachers regarding reading comprehension in students from their experience in each of the areas.

Similarly, for students, an unstructured interview becomes a canvas for self-expression, enabling them to articulate their learning preferences, aspirations, and unique perspectives. The open-ended nature of these interviews fosters a genuine conversation, breaking down formal barriers and allowing for a more authentic exchange of ideas. This significant on their education, where interpersonal skills and the ability to connect with

others are paramount. Unstructured interviews become a powerful tool to assess not just the rote knowledge but the intangible qualities that contribute to a vibrant and effective educational environment, the interview for students consist of ten opened questions, those questions are aiming to recognize weaknesses and develop strategies to enhance reading proficiency.

3.6.1.2. Observation guide

. An observation guide is a method used to collect and record information during observations. It provides a structured framework for observers to document specific behaviors, events, or phenomena they are observing. Observation guides are commonly used in various fields, including education, research, healthcare, and workplace settings.

The structure of an observation guide depends on the context and the objectives of the observation. Fox example: Direct observation which is the collection of information using your senses. By observing, you can document activities, behavior, and physical aspects of a situation without having to depend on peoples' willingness or ability to respond accurately to questions.

A direct observation guide has been created which consists of nine questions where the observer will answer as honestly as possible according to the quality that he/she will have seen related to the teaching-learning process, the observation guide will be applied during the activity or at the end. This observation guide is centered on the observer and classroom observations; it emphasizes the crucial role of the observer in comprehending the dynamics at play. By prioritizing factors such as participation, interaction, and motivation, the guide underscores the observer's responsibility in gauging the effectiveness of teaching strategies and the overall learning environment. This approach acknowledges the observer's unique perspective as a key informant, allowing for a nuanced understanding of the classroom dynamics. By honing in on the observer's role, the guide facilitates a targeted analysis of teacher-student interactions, student engagement, and the motivational factors influencing the learning process.

3.6.2. Implementation and data analysis

The implementation of the instruments followed the next order: first, the interview

to students was applied to get general insights about reading comprehension among the students. Second, the applying of mnemo-gamified techniques using technological devices. Third, the observation guide was applied at the end of the session to identify the effects mnemo-gamification techniques have on the students. In addition to this, is important to highlight that this research was carried out in two sessions. One for the pre-analysis and the second session for the application and post analysis, both of the sessions having 45 minutes each. 90 minutes in total.

3.6.3. Initial findings / Pre application

It is crucial to describe the situation of this students on the beginning, the teacher in charged asked them some questions about what reading comprehension was for them, in the beginning they were too shy to participate and answer to the questions. However, later they were asked the following questions: Do you have problems with reading in English. In which their answers were almost equal. They were not aware about what reading comprehension was, this was attached to some other factors such as: not having enough vocabulary related to the target text to be read to understand the main idea, having the cellphones as distractors when reading and lack of interest about enhancing reading skills.

The first interview was carried out on this stage, the result of this interview shown that 85% of the sample concludes that they face problems when reading comprehension because they do not have the vocabulary or the method to understand a text out of just reading it aloud. The rest 15% conclude that they have problems with reading comprehension, but they often ask for help to get ideas clear. However, it is important to highlight that 100% of them concluded that they cannot understand a reading in English if it is not translating it.

To get further details about it, a text from the book were applied about general culture of Nicaragua about San Jual del Sur, which was only held using the whiteboard, as foresaw, students were not able to catch most of the main points from the text because they mentioned it was boring, and they did not know vocabulary to follow the ideas.

At the end of this stage, the English teacher Lic. Graciela Acevedo Herrera, who is in charge of the 8th A group, full filled the interview for teacher (added to Annexes 11.2).

After the analysis of it, she concluded that the main reason why students do not understand reading is because of the lack of vocabulary and lack of general analysis, highlighting that she practices reading comprehension with audios and filling the blank spaces on a worksheet.

3.6.4. During the application.

On this section, some limitations were presented, in order to implement the mnemonics using the technological devices it was needed to have access to an ICT, however, on the time this research was carried out the school went through a rebuilding process so, students from eight grade did not have access to the ICT. In order to overcome this situation and not to affect the main purpose of the application, students used their phones to play the games. Only a 50% of them have cellphones and they were commanded to play the game in pairs.

The main topic used on this section was the general verbs. A Kahoot game was introduced in order to identify some verbs from the text and memorize them to answer the questions later. The main technique on this activity was the ACRONYM in which the main word formed of verbs was RATON.

R for Run, A for Attend, T for Turn, O for Order and N for Needs. They had access to some pictures in which they were able to identify the verb with the action and using the acronym, they were able to answer the questions.

The question was based on the order of the actions presented, and then they answered the questions of T or False to check If they followed the main idea on the text properly. Some questions were: Maria attends to a meeting before running? Maria attend to a meeting after running?

The second reading held was based on general Nicaraguan culture from Granada, using a Kahoot the reading was given and students had to identify the acrostic **BECHITICA for beverage. BE for beverage, CHI for chicha, TI for tiste and Ca for cacao and FONAVIGA in which Fo for food, NA for nacatamal, VI for vigoron and GA for gallopinto.** This time the text was not as short as the first one. They had to read aloud the text and identify the main aspects of the reading which where beverages and

food from Granada. Then they answered some questions using the Kahoot as well. The questions were similar to the first reading but not only about True or False, this time they had to order the acrostic in order to follow the order on the reading. At the end, they found the acrostic easier to remember than the acronym.

The last reading presented was based on pictures, in which they have some sentences with no text but only with pictures, the pictures were based on daily routine verbs, such as brush your teeth, take a shower, go to school, do the homework or have lunch, for this time the exercise was held on educaplay, they had access to the reading on the cellphones and they were commanded to read the text and guess the meaning of the verbs in English shown on the pictures. After three minutes, the activity began, the text was split on sentences, so they had to choose the verb that continues after the hour. For example, at six o'clock in the morning **I get up**. After finishing this, the instructors reviewed the order with them to check if their ideas followed the order on the reading.

3.6.5. After the application/ Post

On this section, the second interview was carried out in order to assess how much improvement teacher could see. In this section the teacher, Lic Graciela Acevedo were asked the questions concluding the following:

- Students found the gamified techniques easier to follow up than traditional methods and she highlighted that they were really engaged on the activity.
- On the beginning students found this a little bit confusing because they were new techniques to be applied. However, they understood them easily and comprehend better the vocabulary and main ideas while using their cellphones as technological tools instead of distractions
- As a recommendation teacher suggested that it would be much better if students practice in the future on creating mnemo-gamified techniques by themselves.
- The most efficient one for them to practice reading and keep the main idea on their mind was the acrostics with kahoot

After the application of each stage the observation guide was held by the research observer, in which the conclusions were that the most efficient mnemo-gamified technique applied was the acrostics with Kahoot, followed by the picture with the educaplay. It was found that students struggled with initial letters of the acronym rather than the two letter from the acrostic. At the end, motivation, participation and access to technological environment.

It is important on this section to highlight some informal feedback provided by students, most of them found the reading easy and it was easier for them to get the main idea using mnemo-gamified techniques rather than common strategies for reading.

IV. Conclusions

The implementation of mnemo-gamified techniques demonstrated significant potential in enhancing vocabulary retention, engagement, and the ability to identify main ideas among eighth-grade students. Through activities such as acronyms, acrostics, and picture-based readings, students displayed noticeable improvement in their reading comprehension abilities.

Key findings include:

1. **Vocabulary Retention:** The activities helped students recall and use vocabulary effectively. The acrostic method, particularly using familiar cultural references, proved to be the most effective, allowing students to memorize and contextualize terms with ease.
2. **Engagement:** Gamified approaches, such as Kahoot and Educaplay, significantly increased student motivation and participation. The interactive nature of these platforms kept students focused, even when limited by technological constraints.
3. **Identification of Main Ideas:** Students demonstrated better comprehension and ability to identify the main ideas of texts when guided by mnemonics. Informal feedback revealed that students found these techniques more effective and enjoyable compared to traditional methods.
4. **Challenges and Adaptations:** Limitations such as lack of access to ICT facilities were mitigated by using personal devices and promoting collaboration. While some students struggled initially with acronyms, they adapted well with practice.

In conclusion, mnemo-gamification emerged as a valuable instructional tool, addressing key gaps in traditional reading comprehension strategies. This approach not only enhanced reading skills but also fostered a positive learning environment, suggesting its broader applicability in similar educational contexts. These findings align with the objectives of the research and underline the importance of innovative, technology-driven methods in modern pedagogy.

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VI. Anexes

6.1. Instruments' Validation

Managua, November 26th, 2024.

Dear Professor,

We are pleased to inform you that you have been chosen to assess the interview instruments for students and teachers at the outset of our research exploration, as well as the surveys administered to students and teachers at the conclusion of our study.

This research, titled "**Analyze the impact of mnemo-gamification techniques on vocabulary retention, student engagement, and the ability to identify main ideas to improve reading comprehension among eighth-grade students during the fourth academic term of 2024.**" is a significant undertaking in our educational community.

Your expertise and evaluation of these instruments are crucial to ensure their validity and the effective utilization of the data they yield. Your contribution is highly valued, and we are grateful for your collaboration in this endeavor.

Teacher's name:

Victor Centeno

Academic background:

Integrated English

Professional experience area:

English teaching

Institution:

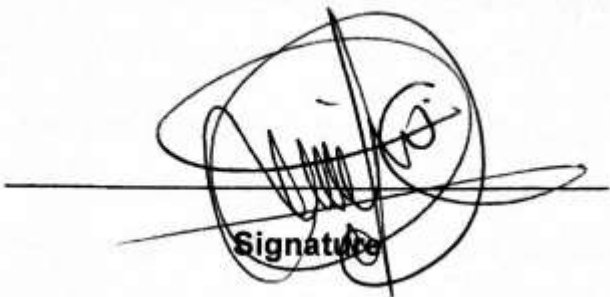
UNAN-Managua

Research's objective:

Analyze the impact of mnemo-gamification techniques on vocabulary retention, student engagement, and the ability to identify main ideas to improve reading comprehension among eighth-grade students during the fourth academic term of 2024.

Objective of the Interview: Analyze the effectiveness of mnemo-gamification techniques in enhancing students' ability to recall and use vocabulary during reading tasks.

Objective of the observation: Gather insights from teachers regarding students' progress in identifying main ideas in reading tasks as a result of mnemo-gamification activities.



Signature

Managua, November 25th, 2024.

Dear Professor,

We are pleased to inform you that you have been chosen to assess the interview instruments for students and teachers at the outset of our research exploration, as well as the surveys administered to students and teachers at the conclusion of our study. This research, titled " **The Role of Mnemo-Gamification Techniques in Enhancing Vocabulary Retention, Student Engagement, and Identification of Main Ideas in Eighth Grade Reading Tasks During the Fourth Academic Term of 2024** " is a significant undertaking in our educational community.

Your expertise and evaluation of these instruments are crucial to ensure their validity and the effective utilization of the data they yield. Your contribution is highly valued, and we are grateful for your collaboration in this endeavor.

Teacher's name:

Gerardo Ramón Gómez Lora

Academic background:

Reading / Writing

Professional experience area:

English teaching

Institution:

UNAN - Managua

Research's objective:

Analyze the impact of mnemo-gamification techniques on vocabulary retention, student engagement, and the ability to identify main ideas to improve reading comprehension among eighth-grade students during the fourth academic term of 2024.

Objective of the Interview:

Analyze the effectiveness of mnemo-gamification techniques in enhancing students' ability to recall and use vocabulary during reading tasks.

Objective of the Observation:

Gather insights from teachers regarding students' progress in identifying main ideas in reading tasks as a result of mner.



Signature

Signature

6.2. Teacher Interview



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MANAGUA
UNAN - MANAGUA

Dear Teacher, your opinion is important for us to reach our research goal. This interview has been designed to help the research with the title as: **The Role of Mnemo-Gamification Techniques in Enhancing Vocabulary Retention, Student Engagement, and Identification of Main Ideas in Eighth-Grade Reading Tasks During the Fourth Academic Term of 2024.**

This interview has been designed to gather information following the objective of:
Gather insights from teachers regarding students' progress in identifying main ideas in reading tasks as a result of mnemo-gamification activities.

Teacher's name: Lic. Leandra Graciela Acevedo
Subject: Foreign language. Grade: 8th R.

Please, answer as honestly as possible:

1. General Overview of Student Progress:

"I saw some good progress in the students' ability to identify main ideas after using the mnemo-gamification activities. At first, students had trouble understanding the main points when reading. But after using activities like acronyms, acrostics, and pictures, they became better at picking out the key information from the texts. The acronym technique, especially, helped them remember the verbs and the order of actions in the text, making it easier to understand the main idea."

2. Engagement with Reading Tasks:

- "The students were much more interested and involved in these activities compared to regular reading tasks. Even though we had some challenges with access to technology, they were able to use their phones to play the games, which kept them focused. Pairing students up worked well because they helped each other stay engaged. The Kahoot games were very popular, and students enjoyed the fun,

competitive element. The picture-based reading using Educaplay was also a hit, as students liked the visuals and the interactive nature of the activity."

3. Specific Observations on Main Idea Identification:

- "Students got better at identifying main ideas after using the gamified techniques. For example, the acrostic activity, where they had to remember food and drink names from Granada, helped them understand the main themes in the text. They could easily link the items to the acrostic letters, making it easier to recall the main ideas. The acronym RATON also worked well, although some students had a harder time remembering the first letters. With more practice, they became more confident with the technique."

4. Challenges or Limitations:

- "We had some difficulties with access to ICT because the school was under renovation, and only half the students had cellphones. They had to work in pairs, which slowed down the process a bit. Some students also found the acronyms difficult at first, especially when trying to remember the first letters. However, they found the acrostics easier to work with, and they improved over time with practice."

5. Effectiveness of Mnemo-Gamification:

- "Overall, the gamification techniques worked really well for improving students' reading comprehension. The acrostic activity with Kahoot was the most effective, followed by the picture-based reading on Educaplay. These activities made it easier for students to focus, understand the main ideas, and remember the vocabulary. I believe these techniques helped them learn in a fun and engaging way."

6. Student Reactions and Feedback:

- "The students told me they found the readings much easier with the gamified activities. They said that breaking the information into smaller parts helped them understand the main idea better. Many of them said they liked the activities more than traditional reading strategies because they were more fun and interactive."

7. Future Recommendations:

- "In the future, I would like to try more activities where students can create their own mnemonics. I think this would help them engage even more and improve their memory of the material. I would also like to use more multimedia tools since students liked the pictures and games. Lastly, I think we could give more practice

6.3. Student Interview

NATIONAL AUTONOMOUS UNIVERSITY OF NICARAGUA
APPLIED RESEARCH PROJECT

INTERVIEW FOR STUDENTS
DATA COLLECTION INSTRUMENT

Objective:

To know the level of knowledge students have about reading comprehension based on their experiences in each of the areas, aiming to recognize weaknesses and develop strategies to enhance reading proficiency.

Student's name: Lorena Guadalupe Fernández

Subject: English Grade: 8^{vo}-6^o Date: 02-09-24

1. Can you describe what reading comprehension means to you?

Es una destreza lingüística.

2. What kind of books or texts do you enjoy reading and why?

Me gusta leer fantasía porque escapo de la realidad.

3. Have you ever struggled with understanding the main idea or key points in a text? How did you address this challenge?

Leo mejor o le pregunto a la maestra.

4. Do you use any specific strategies when reading, like summarizing, annotating, or asking questions about the text??

5. How do you handle difficult vocabulary or unfamiliar words when you come across them in a text?

Indagando con la maestra.

6. Based on your experience, what you do when you read something challenging and you do not understand it?

Si porque se me dificulta pronunciar algunas palabras.

7. Are there any specific subjects or types of texts that you find more challenging to comprehend? Why do you think that is?

Ingles, es una clase bonita para alguien a quien le gusta aprender otros idiomas.

8. Have you ever helped a classmate or friend improve their reading comprehension skills? What strategies did you use to assist them?

Si

9. Do you set goals for your reading comprehension, such as understanding a certain percentage of a text or learning new words? If so, could you give an example?

Si, pronunciar mejor las palabras para entender el idioma porque es importante.

10. What do you think you need to do to enhance your reading comprehension skills in the future?

Practicar, aprender palabras nuevas, escuchar música para mejorar mi pronunciación

6.4. Observation Guide



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Dear observator, your opinion is important for us to reach our research goal. This interview has been designed to help the research with the title as: **The Role of Mnemo-Gamification Techniques in Enhancing Vocabulary Retention, Student Engagement, and Identification of Main Ideas in Eighth-Grade Reading Tasks During the Fourth Academic Term of 2024.**

This interview has been designed to gather information following the objective of:
Acknowledge the effectiveness of mnemo-gamification techniques in enhancing students' ability to recall and use vocabulary during reading tasks.

Observer's name: **Rashmy Frinee Benavides Rosales**

Grade: **8th Grade**

Date: **November 26th 2024**

Please answer as honestly as possible:

<u>Category</u>	<u>Indicators</u>	<u>Observation Notes</u>
<u>Vocabulary Recall</u>	- Students recall vocabulary words when prompted. - Students associate words with their meanings.	- Most students recalled the verbs from the acronym "RATON" without difficulty. - A few students had to pause but were able to recall "Order" and "Needs" after seeing pictures.
<u>Vocabulary Usage in Context</u>	- Students use vocabulary in sentences. - Vocabulary is integrated in answers. - Connect vocabulary to reading's main ideas.	- During Kahoot, students used sentences like "I run every morning." - Some students used the vocabulary in context, especially after the acronym activity.
<u>Engagement with the Vocabulary</u>	- Students actively participate in games. -	- Students were engaged in Kahoot and Educaplay activities, answering

Task	Students discuss vocabulary with peers. - Students stay motivated.	questions and discussing answers with peers. - Some students were initially distracted by phones but were quickly engaged when paired with classmates.
Accuracy in Responding to Vocabulary-Related Questions	- Students answer vocabulary-based questions correctly. - Students use vocabulary correctly in explanations.	- Most students answered vocabulary questions correctly (e.g., identifying “Attend” as “to be present”). - In picture-based activities, they correctly identified and used verbs like “brush” and “shower.”
<u>Improvement Over Time</u>	- Students show improved vocabulary recall and usage after multiple rounds of activities. - Confidence grows with complex vocabulary tasks.	- After the second Kahoot round, students showed improvement, especially with the food-related vocabulary. - Confidence grew, and most students easily recalled words.

General Notes:

- **Engagement Level:** Most students were highly engaged during the gamified activities.