

INVESTIGATING THE EFFECTIVENESS OF VOCABULARY REPETITION AS A TEACHING TECHNIQUE IN ENGLISH LANGUAGE LEARNING

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Abstract

This study explores how repetition frequency and task type affect English vocabulary retention in lower-intermediate secondary learners. Thirty-seven students learned target words through scheduled repetition over six weeks. Pre- and post-tests, one month apart, measured word production, and observation logs gathered learner feedback. Results show that spaced repetition improves vocabulary acquisition and can be even more effective when combined with contextualized practice. Most participants reduced their total error count. Findings support that spaced, varied, and contextual tasks lead to higher retention than limited or decontextualized exposure. Students were also highly motivated and engaged during the game-based tasks. By integrating vocabulary repetition principles into classroom routines, this research offers practical guidance for boosting long-term vocabulary learning in English language classrooms.

KEYWORDS: VOCABULARY RETENTION, REPETITION FREQUENCY, TASK TYPE, SPACED REPETITION, CONTEXTUALIZED PRACTICE, VOCABULARY ACQUISITION, LONG-TERM LEARNING

Resum

Aquest estudi explora com la freqüència de repetició i el tipus de tasca influeixen en la retenció de vocabulari en anglès en alumnes de secundària de nivell preintermedi. Trentaset estudiants van aprendre paraules clau mitjançant activitats programades de repetició al llarg de sis setmanes. Es van realitzar proves abans i després, amb un mes de diferència, per mesurar la producció lèxica, i es van utilitzar registres d'observació per recollir les impressions dels estudiants. Els resultats mostren que la repetició espaiada millora l'adquisició de vocabulari i pot ser encara més efectiva quan es combina amb pràctica contextualitzada. La majoria dels participants van reduir el nombre total d'errors. Les conclusions recolzen la idea que les tasques espaiades, variades i contextualitzades afavoreixen una millor retenció que les exposicions limitades o descontextualitzades. Els estudiants també es van mostrar molt motivats i implicats durant les activitats basades en jocs. Integrar els principis de repetició de vocabulari en les rutines d'aula ofereix una orientació pràctica per reforçar l'aprenentatge a llarg termini del vocabulari en l'ensenyament de l'anglès.

PARAULES CLAU: RETENCIÓ DE VOCABULARI, FREQUÈNCIA DE REPETICIÓ, TIPUS DE TASCA, REPETICIÓ ESPAIADA, PRÀCTICA CONTEXTUALITZADA, ADQUISICIÓ DE VOCABULARI, APRENTATGE A LLARG TERMINI

Introduction

Vocabulary acquisition is an essential component of language proficiency, serving as the foundation for effective communication and comprehension. This TFM investigates the effectiveness of systematic vocabulary repetition as a teaching strategy to strengthen retention among English language learners. Personal experiences as both a language learner and educator have underscored the challenges students face in retaining new vocabulary, which often limits their ability to engage meaningfully in communication and obstruct their overall language development. These observations have fueled my interest in exploring methods to address these challenges.

As a language learner, I have always found vocabulary to be the most challenging aspect of English. It was difficult to motivate myself to practice vocabulary consistently, which ultimately limited my lexical resources and fluency. This personal struggle has shaped my understanding of the importance of making vocabulary acquisition engaging, effortless, and even somewhat unconscious. By designing strategies that integrate repetition into dynamic and enjoyable activities, I aim to address these challenges and emphasize the critical role of vocabulary in language learning.

My interest in this topic arises from a strong belief that effective teaching practices must adhere to cognitive principles that promote long-term learning. Research shows that repeated, and especially spaced, exposure to new vocabulary strengthens memory, counteracts the forgetting curve, and supports the transfer of information from short-term to long-term storage. As learners expand their lexical resources, their ability to express ideas precisely, understand complex texts, and participate in richer conversations improves significantly. Because vocabulary supports communication, reading comprehension, and overall linguistic competence, prioritizing its development is essential for boosting both fluency and general language proficiency.

This research is motivated by the potential to provide practical, evidence-based strategies that teachers can implement in classrooms to improve vocabulary retention. An experimental study will be conducted to compare retention rates among groups exposed to varying frequencies of vocabulary repetitions and different types of exercises. Drawing on established theories, the study seeks to confirm that vocabulary learning with more frequent repetitions will demonstrate significantly higher retention rates. Furthermore, learners' perceptions of these strategies will be explored to provide a comprehensive understanding of their effectiveness. By integrating established vocabulary learning theories with classroom applications, this study aims to contribute meaningfully to the English language education. Additionally, this study aligns with Sustainable Development Goal 4 (Quality Education), which promotes inclusive and equitable quality education and lifelong learning opportunities for all. By developing effective vocabulary teaching strategies that enhance retention and learner engagement, this research contributes to improving the quality of English language instruction in secondary education and supports broader educational equity.

Literature Review

This section reviews key studies that highlight the foundational role of vocabulary in linguistic competence and academic success. The literature emphasizes not only the importance of vocabulary breadth and depth, but also how repetition, retrieval, and contextual exposure contribute to long-term retention and productive use. Together, these findings present vocabulary teaching as a core element of effective L2 instruction.

Fundamental role of vocabulary teaching in English as an L2

Vocabulary plays a key role in second language (L2) proficiency. Far from being a peripheral aspect of language, it serves as the foundation upon which learners build their ability to comprehend, express, and interact. Without enough vocabulary, it becomes difficult, if not impossible, to understand input, produce coherent output, or participate meaningfully in communicative situations. As Schmitt (2010) noted, learners often carry dictionaries, not grammar books, highlighting that learners consider vocabulary an essential part of learning a language. From this perspective, both vocabulary *breadth* (the number of words known) and *depth* (how well those words are understood and used) are critical dimensions of linguistic competence.

Rasouli and Jafari (2016) reinforce this view by highlighting how vocabulary enables learners not only to decode complex texts but also to express their ideas clearly and accurately. They emphasize that vocabulary knowledge supports all four skills and is directly linked to academic performance. According to their review, a rich lexicon allows learners to access and process sophisticated input while also expressing thoughts with clarity and control. Their findings support the idea that vocabulary is a multidimensional construct that supports both linguistic and cognitive aspects of L2 learning.

Vocabulary functions not only as a means of communication but also as a mirror of the social and academic contexts in which language is used. It underpins learners' ability to express emotions, convey social meaning, and construct complex written texts. As highlighted by Dakhi and Fitria (2019), vocabulary size and depth are closely linked to reading and writing performance, and play a moderate role in listening and speaking. Their analysis further supports the idea that vocabulary connects multiple dimensions of language use, contributing to both communicative competence and the shaping of learner identity.

Zwier and Boers (2023) also emphasize that vocabulary is not simply a support skill, but a core component of language knowledge that directly affects learners' ability to understand and produce meaningful communication. They highlight that vocabulary breadth and depth are central to the development of all four skills, and that lexical knowledge provides the foundation for engaging with content at any level of complexity.

From academic texts to informal conversations, the ability to access and apply the right words determines both the clarity and success of communication in any language.

Taken together, these studies confirm that vocabulary is not a separate strand of language instruction but a vital element that interacts with every other component of language. Its development facilitates comprehension, supports productive skills, and contributes to learners' confidence and autonomy. As such, vocabulary teaching must be placed at the center of any effective L2 learning programme.

Memory and Vocabulary Learning

Repetition is effective in vocabulary learning because of how human memory works. In the early stages of learning, new lexical items are temporarily stored in working memory, specifically in the *phonological loop*, a subsystem responsible for the short-term retention of verbal information (Baddeley, 1997). However, without reinforcement, these memory traces rapidly decay, a process described by Ebbinghaus' *forgetting curve*. This curve illustrates that the ability to recall newly learned material declines significantly over time unless the information is reviewed and reactivated through repetition.

To mitigate this loss, repetition needs to be planned over time. Baddeley (1997) highlights the benefits of spaced practice, meaning that reviewing information at intervals, rather than all at once, helps move it into long-term memory more effectively. This *spacing effect* supports the idea that timing and frequency of repetition matter when trying to remember vocabulary in the long term.

Vocabulary development is also characterised by a progressive shift from receptive to productive knowledge. Receptive knowledge refers to the ability to recognise and understand a word when reading or listening, while productive knowledge implies being able to use that word accurately and appropriately in speech or writing. According to Nation (2001) and Schmitt (2000), most vocabulary learning begins receptively, as learners are first exposed to new words in contexts with frequent language exposure. However, for learners to move toward productive control, they must not only understand a word's meaning, but also develop automatic access to its form, grammatical behaviour, and contextual use.

This transition is neither immediate nor automatic. It requires multiple and varied encounters with a word, as well as active engagement with its meaning and use. Repetition supports this by strengthening the mental connections between form and meaning, gradually reducing the cognitive effort needed for spontaneous use. For example, encountering a word while reading may create initial recognition, but using it in a speaking task or written sentence helps the learner to retrieve, organise, and apply that word. Over time, this consistent reinforcement transforms passive recognition into active production.

Therefore, repetition plays a dual role in vocabulary learning: it not only consolidates lexical items in long-term memory but also facilitates the cognitive shift from passive understanding to active language production. Without repeated and meaningful use, words are likely to remain unused, unable to support real-time communication.

Further support comes from neuroscientific studies, which also show that repetition helps strengthen memory by increasing neural connections. Webb (2007) points out that each time a learner recalls a word, their brain becomes more efficient at storing and retrieving it. This repeated use builds stronger mental links and makes the word easier to remember and use in the future.

In short, vocabulary learning depends not only on how often learners encounter words, but also on how deeply those words are processed and reactivated. The interplay between memory, repetition, and the receptive–productive continuum forms the cognitive foundation for long-term lexical development in a second language.

Key Repetition Mechanisms in L2 Vocabulary Learning

Vocabulary acquisition in an L2 is an incremental process that depends on repeated exposures to move words from brief impressions in short-term memory into stable entries in long-term memory. Within this framework, repetition not only supports memorization but also facilitates the shift from receptive to productive vocabulary and contributes to overall fluency.

1. Active Retrieval Practice

Repeated exposure is fundamental to consolidating vocabulary, as highlighted by Nation (2001) and Schmitt (2000). As already studied, learners initially develop receptive knowledge. However, for language competence, this must evolve into productive knowledge, meaning that words can be used actively in speaking and writing.

Active retrieval is the mechanism that drives this transition. Every time a learner is required to recall a word (through short quizzes, oral drills, or writing tasks) the associated neural connections are strengthened. For example, consider a learner first encountering the term “sustainability” in a textbook. If the learner subsequently participates in an exercise where they must orally define the term, then later compose a sentence or short paragraph using “sustainability,” the act of retrieval reinforces the word’s neural trace. As Nation (2001) explains, this process reduces the cognitive load, as each successful recall automates retrieval. Gradually, the learner’s ability to produce the word spontaneously increases, resulting in a smoother, more fluent transition from passive to active vocabulary use.

2. Contextualized and Structured Exposure

While repetition is essential, its effectiveness is greatly improved when vocabulary is encountered within rich and varied contexts. Structured exposure means that a word is repeatedly presented in different sentence structures and discourse types, revealing multiple facets of its meaning. Webb (2007) notes that such varied encounters help build a robust lexical framework that goes beyond mechanical memorization. For instance, the word “conservation” might be introduced with a formal definition in class, encountered in an informative article on wildlife preservation, and later used in a classroom debate about sustainable practices. Each context adds a layer of understanding that strengthens the learner’s proficiency of the word.

Furthermore, Fillmore and Snow (2000) recommend that teachers deliberately design lessons to re-expose students to vocabulary in authentic communicative situations. This might include integrating vocabulary into multimedia presentations or discussions where learners see the words applied in natural dialogue. Structured, contextualized repetition ensures that learners not only memorize a word’s definition but also learn its appropriate usage in a variety of real-life contexts.

3. Explicit and Incidental Learning through Repetition

An optimal approach to vocabulary acquisition combines both explicit instruction and incidental learning opportunities through repetition. Explicit learning involves direct teaching, such as providing clear definitions, pronunciation practice, and morphological analysis, offering learners a solid initial basis. For example, a teacher might explicitly introduce the term “innovation” by explaining its meaning, showing its spelling and pronunciation, and discussing its derivational components.

Incidental learning, on the other hand, occurs naturally when learners encounter the same vocabulary in authentic materials such as stories, conversations, or news articles. Schmitt (2000) suggests that these incidental encounters help reinforce the initial explicit knowledge. For instance, after an explicit lesson on “innovation,” students might read an article on technological advances or watch a video on start-up companies where the word is used repeatedly. This combination of explicit teaching and incidental repetition ensures that the word is reviewed and restudied multiple times in varied contexts.

By linking explicit instruction with incidental exposure, repetition becomes a continuous, integrative process that transforms isolated vocabulary items into components of a learner’s functional language competence.

Teaching Strategies for Systematic Repetition

The strategies presented below correspond to the cognitive mechanisms discussed in the previous sections. They include spaced repetition exercises, active retrieval tasks (supporting retrieval practice), contextualized exposure, and both explicit instruction and incidental learning as complementary approaches. Each strategy supports the transition from recognition to productive use.

1. Spaced Repetition Exercises

To apply the spacing effect described by Baddeley (1997) and supported by Webb (2007), teachers can schedule reviews at increasing intervals. For example, after introducing a new set of vocabulary words, a teacher might use the following sequence.

- **Immediate review.** At the end of the lesson, students complete a short-written exercise where they match words to definitions.
- **Next-Day Quiz.** The following class begins with a quick oral quiz or digital flashcard activity where students recall the words without visual cues.
- **Weekly review.** One week later, students participate in a group activity, such as a vocabulary bingo or a word-sorting task, using the same target words.
- **Application twice a week.** Two weeks after initial exposure, assign a writing task (e.g., a short essay on a related theme) that requires students to integrate the vocabulary naturally.

This structured approach reinforces memory at optimal intervals, ensuring that words are retrieved just before the memory trace weakens, as suggested by Thornbury (2002).

2. Active Retrieval Activities

Active retrieval is critical for moving vocabulary from receptive to productive knowledge (Nation, 2001). Rather than relying on passive review, the following activities are an example of to make students to actively produce vocabulary:

- **Gap-fill sentences.** Provide sentences with missing words (e.g., “To achieve _____, the organization implemented innovative recycling strategies”), prompting students to recall and insert the target vocabulary.
- **Quick-response speaking tasks.** Conduct short, timed rounds where each student must define or use a given word in a sentence. This quick-paced exercise reinforces neural connections through repeated active retrieval.
- **Digital flashcard challenges.** Use online tools (e.g., Quizlet) where students must recall words before the answer is revealed. This self-paced, interactive method reinforces vocabulary retention through continuous active engagement.

These activities ensure that each retrieval attempt strengthens the memory trace, facilitating the transition to automatic and fluent use (Schmitt, 2000).

3. Contextualized Learning Tasks

Effective vocabulary repetition is enhanced when words are learned in meaningful, authentic contexts rather than in isolation. To achieve this:

- **Use of thematic projects.** Lessons can be organized around a specific theme. For example, in a unit on environmental issues, students might learn words such as “sustainability,” “conservation,” and “recycling.” They could read related articles, watch short documentaries, and finally participate in a debate or role-playing scenario focused on environmental policy. This method allows students to see vocabulary used in different contexts, deepening their understanding (Fillmore & Snow, 2000).
- **Interactive reading and discussion.** Assign authentic texts that include target vocabulary. After reading, facilitate a group discussion or a small group activity where students use these words to summarize the text or express opinions. This incidental exposure, following by an explicit introduction, reinforces learning through natural repetition (Nation, 2001; Schmitt, 2000).
- **Project-based assignments.** Engage students in projects that require the application of vocabulary in real-life scenarios. For example, ask them to prepare a multimedia presentation on “innovation” in technology. Through repeated usage in different formats (oral, written, visual), the vocabulary becomes integrated into their active productive vocabulary (Fillmore & Snow, 2000; Rasouli & Jafari, 2016).

4. Combining Explicit Instruction with Incidental Exposure

To maximize the benefits of repetition, a balanced approach that integrates explicit instruction with incidental learning is essential:

- **Explicit lessons.** Begin by introducing new vocabulary through definitions, pronunciation practice, and morphological analysis. For instance, teach a word like “innovation” with its derivational components and sample sentences.
- **Incidental reinforcement.** Follow up with activities that imply authentic materials (such as a short video clip, an article, or a dialogue) that naturally incorporate the target word.
- **Iterative Review.** Make sure explicit instruction is supported by later incidental exposure. This can include readings or class discussions where target words appear naturally, making sure you are creating a clear connection between both learning approaches (Schmitt, 2000).

Research Questions and Objectives

1. **Research Question 1:** How effective is systematic vocabulary repetition in enhancing retention among English language learners?

Objective: To examine the effectiveness of systematic vocabulary repetition in enhancing retention among English language learners.

2. **Research Question 2:** To what extent do differing repetition frequencies (high vs. moderate vs. none) produce a frequency-dependent effect on vocabulary retention rates?

Objective: To compare retention rates across groups exposed to high, moderate, and zero repetition frequencies.

3. **Research Question 3:** How do learners engage with repetition-based activities, as reflected in participation levels and spontaneous feedback?

Objective: To analyze learner engagement by measuring participation and cataloguing in-situ suggestions after each activity.

4. **Research Question 4:** Which short, frequent repetition strategies can be most effectively integrated into regular EFL teaching?

Objective: To formulate actionable recommendations for integrating brief, frequent repetition tasks into English lessons.

These research questions serve as the foundation for this study, aiming to close the gap between cognitive theory and classroom practice, and ultimately contribute to more effective vocabulary instruction in English as a second language.

Methodology of the Research

This study employs a predominantly quantitative research design, complemented by qualitative elements. The quantitative component focuses on measuring and comparing vocabulary retention rates among groups exposed to different repetition frequencies, thus providing statistical evidence regarding the effectiveness of systematic vocabulary repetition. The qualitative part, obtained through classroom observations, offers additional insights into learners' perceptions and engagement. Furthermore, a qualitative analysis will examine the types of activities and varied contexts in which vocabulary is introduced, applying some of the key mechanisms of vocabulary repetition identified through the literature review. This mix of methods approach is justified by the need to integrate numerical data with contextual and subjective information, offering a broader understanding of the intervention's impact.

The research is designed as a classroom intervention conducted over a six-week period during a teaching placement in February and March. The intervention focuses on introducing and reinforcing vocabulary items from Unit 6 of the Macmillan Student Book *Influence 4: "Crime and Consequences"* (MacBeth & Reilly, 2022), which are studied at varying repetition frequencies in an authentic English as a Foreign Language classroom environment.

Participants

This study was conducted at the high school where I completed my teaching placement, located in the Vallès Oriental region near Montseny. The school is situated in a small village and serves approximately 500 students. It offers four classes per course in lower secondary education (ESO) and two classes per course in Baccalaureate.

Given the aim of this study, the intervention was implemented with ESO students. Specifically, the same groups of 4th ESO students with whom I carried out my learning situation were involved in the vocabulary exercises and classroom observations. Integrating the vocabulary activities into my own class schedule made it more feasible to introduce these activities without having to coordinate with other teachers for additional teaching time. Moreover, by working with two distinct 4th ESO groups, I was able to analyze the impact of the vocabulary activities on groups with different learning needs and dynamics, thus ensuring a more comprehensive collection of data.

In total, the study involves approximately 42 high school students, aged between 14 and 15, who are enrolled in an EFL as part of their curriculum. However, only 37 completed both the February and March tests and were therefore included in the analysis. The intervention began during the second week of the placement and continued for four additional weeks, with about four hours of dedicated instructional time. Although variations in school activities, day trips, and other special events (like Carnestoltes) occasionally affected the schedule and duration of the sessions, every effort was made to maintain consistency throughout the intervention.

Data Collection Instruments

The study employs multiple tools to gather both quantitative and qualitative data:

Vocabulary Tests (Quantitative)

Vocabulary tests were administered at two critical moments, at the beginning (pre-test) and at the end (post-test) of the intervention¹, to measure vocabulary retention and acquisition. These tests were designed to assess both receptive knowledge (i.e., recognition and understanding) and productive knowledge (i.e., active usage) of vocabulary items.

To ensure objective results, the tests were conducted anonymously using Google Forms (see Appendix A). Each student was assigned a specific letter to facilitate follow-up and compare February and March test results, tracking their progress after the intervention. The instrument for collecting the data consisted of a multiple-choice questionnaire with 27 questions, each offering three or four possible answers. Additionally, students were given the option to leave a question blank if they were unsure of the correct answer, minimizing the influence of guessing on the overall results. And no feedback was provided to the participants during either administration.

Finally, the pre-test and post-test¹ were identical in content and order, which guarantees consistency and reliability in the measurement of vocabulary progression. The primary objective of these vocabulary tests was to assess the improvement in students' vocabulary knowledge by comparing their performance before and after participating in the vocabulary repetition activities. Although no formal validation procedure was conducted, the test's consistency (same format and items in pre- and post-tests) and anonymity aimed to ensure reliability.

Classroom Observations (Qualitative)

Throughout the intervention, detailed observation logs were maintained to capture qualitative data on student engagement and interactions during vocabulary activities. The teacher recorded participation, behavioral cues and overall classroom dynamics using an Excel observation template that you can check in Appendix B on page 30. It tracked key aspects such as the activity type for each vocabulary set, the teaching strategy employed, and the objective of each task.

Prior to the intervention, students were informed that they would be participating in a small-scale research study focused on vocabulary activities specifically designed to enhance their learning. They were encouraged to provide both positive and negative feedback at any point of the intervention, as this kind of information is crucial for refining teaching methods and boosting overall engagement.

The observation process was structured to complement the quantitative data collected through vocabulary tests by providing valuable contextual insights into the classroom environment. By systematically documenting these patterns and relating them with test

¹ See Appendix A for a reference to the pre- and post-tests.

results, the study offers a broader understanding of the intervention's effectiveness. The observation template was created specifically for this study to document classroom dynamics and student engagement during vocabulary activities. Although it was not formally validated, its structure was informed by the variables relevant to the study's objectives and designed to capture the qualitative data needed for a meaningful discussion of the results.

Analysis of Vocabulary Items in Context (Qualitative)

As part of the observational phase, a qualitative analysis was conducted to examine the impact of vocabulary learning when words are taught in varied, authentic contexts versus a more isolated manner. Using the Excel-based observation template (Appendix B, page 30), the researcher systematically recorded data on how each vocabulary item was used across different activities and language skills. This template noted factors such as the different contexts in which a word appeared, whether integrated into reading, speaking, or other communicative tasks, and the variety of associated activities.

The analysis involved integrating this template and comparing the frequency and diversity of contexts for each vocabulary group with the final vocabulary test results collected via Google Forms. By linking the contextual usage data with retention outcomes, this approach aimed to determine whether vocabulary taught within authentic, multifaceted contexts results in better understanding and retention than vocabulary taught less frequently or in isolation.

Data Collection Process

The data collection for this study was organized into three distinct phases:

Baseline Assessment

Prior to the start of the intervention, all participants completed a vocabulary pre-test (Appendix A). This test was designed to establish each student's baseline proficiency level. The results provided an objective reference point against which the effects of the intervention could later be measured.

Intervention Implementation

As already mentioned, the intervention was conducted over a six-week period within an authentic English as a Foreign Language classroom setting. During this phase, vocabulary items from Group 1 and Group 2 were introduced with different repetition frequencies:

- **Group 1.** Vocabulary items were introduced in Week 2 and repeated a total of nine times throughout the six weeks.

- **Group 2.** Vocabulary items were introduced in Week 3 and repeated a total of three times.
- **Group 3.** Vocabulary items were introduced in Week 5 and not repeated thereafter. Although these items were included in the planned teaching intervention outlined in the book, no extra exposure or practice was provided, unlike in Groups 1 and 2.

This design allowed for a direct comparison of how varying repetition frequencies impact vocabulary retention. To maintain consistency, each vocabulary session was mostly taught on separate days, with a maximum of three sessions per week, and each session lasting no more than five minutes.

In parallel, detailed classroom observation logs were maintained using the Excel-based observation template ²to capture qualitative data on student engagement and note the contextualization of activities. This template systematically recorded data on how each vocabulary item was used across different activities and communicative contexts, such as reading, speaking, and interactive tasks.

Sessions Schedule

The six-week intervention was scheduled as follows. In Week 1, because it was my first week of the placement after the break, the supervising teacher asked me only to observe and to familiarise myself with the content and the students. During this week I also presented the research schedule for the remainder of the intervention so she could review it and provide feedback if necessary. In Week 2, all students completed the pre-test and received an initial introduction to the vocabulary-learning process they would follow during my placement. From Weeks 2 to 5, vocabulary repetitions were scheduled as follows:

- Group 1 (6 repetitions): introduced in Week 2, reviewed twice during Weeks 2–3 and once in Weeks 4 and 5.
- Group 2 (3 repetitions): introduced in Week 3 and reviewed once in each of Weeks 3, 4, and 5.
- Group 3 (0 repetitions): introduced in Week 4 with no further repetitions.

Each session lasted 5-10 minutes and was embedded at the start of regular EFL lessons, amounting to three hours of dedicated vocabulary practice. In Week 6, all students took the post-test to measure retention. Although the original design proposed nine, six, and three repetitions for Groups 1, 2, and 3 respectively, occasional timetable modifications or unexpected events forced us to reduce the initial plan to six, three, and zero repetitions.

² See Appendix B on page 30

Final Assessment and Data Collection

The final phase of the intervention consisted of implementing all the planned vocabulary activities³ with the two of the designated vocabulary groups. Each group followed a specific schedule of repetition according to the experimental design, and every session was systematically recorded using an Excel observation template (see Appendix B).

Once all repetition sessions had been completed across the groups, the post-test⁴ was administered to the students. The goal of the post-test was to measure vocabulary retention and acquisition after exposure to the designed activities, allowing for a clear assessment of the short-term learning outcomes resulting from the teaching strategies applied during the four weeks of active instruction.

Finally, the data collected from both the vocabulary tests and the observation templates were integrated to carry out a comparative analysis. By linking test scores with qualitative data on activity types, context, and repetition frequency, it was possible to evaluate the impact of the instructional approach from multiple angles. This combined analysis provided evidence on whether repeated exposure to vocabulary within meaningful, contextualized activities led to improved understanding and retention.

Data Analysis

The analysis of the collected data was conducted using both quantitative and qualitative methods, allowing for a comprehensive evaluation of the intervention's impact.

Quantitative Data Analysis

Test data exported from Google Forms were compiled and analyzed in Excel. For each student and each target word, the number of correct responses was calculated by subtracting the errors from the total of 37 items, then dividing by 37 to obtain a percentage score. Improvement rates for each item and each student were determined by subtracting the February percentage (pre-test) from the March percentage (post-test).

Given the small and uneven group sizes, and the study's focus on percentage change rather than hypothesis testing, no inferential statistical analyses were performed. Instead, all results are reported descriptively through observed percentage gains.

Additionally, students who did not complete both the pre- and post-tests were filtered. These incomplete cases were excluded from the analysis to preserve the accuracy and reliability of the final results.

³ See Appendices C to J for all the vocabulary activities.

⁴ See Appendix A

Qualitative Data Analysis

Qualitative data were gathered from classroom observation logs. The observation logs, maintained using an Excel-based template, were systematically reviewed to identify recurring patterns in student behavior, engagement, and interaction during the vocabulary activities.

After extracting the relevant information, such as the type of activity, the group involved, and the vocabulary teaching strategy used, a summary table was created to visually facilitate the comparison of contextualization across different activities and groups (see Table 4)

Additionally, another chart was developed to illustrate and compare both the frequency and temporal spacing of vocabulary activities across the different groups (see Table 4). This visual representation allowed for a clearer analysis of how often each group was exposed to target vocabulary, as well as the intervals between repetitions as key variables in understanding the potential impact of distributed practice and memory retention within the intervention.

Integration of Quantitative and Qualitative Findings

The final stage of analysis was carried out entirely in Excel, incorporating statistics from Google Forms, comparisons from the observation logs, and additional charts generated from the observation data. This integration of quantitative and qualitative information allowed for a comprehensive analysis, leading to the final results and conclusions of the study.

Results

Table 1

	ERRORS		%	
	FEBRUARY	MARCH	IMPROVEMENT IN SURVEY ACCURACY	DECLINE IN SURVEY ACCURACY
ARREST	1	0	3%	
BURGLAR	11	3	18%	
ADVISE	8	4	11%	
BURGLARY	9	3	16%	
SUGGEST	7	8		3%

CONGRATULATE	12	7	13%	
MURDER	4	0	11%	
ESCAPE	9	5	10%	
COMPLAIN	22	15	18%	
CON	30	11	51%	
ROBBERY	9	10		3%
FRAUDSTER	15	9	9%	
HACKER	4	3	3%	
WITNESSED	12	4	27%	
ROBBER	11	2	25%	
LAW-ABIDING	27	10	46%	
STEAL	21	27		16%
SUSPICIOUS	4	6		5%
SHOPLIFTER	7	4	8%	
SCAM	7	9		5%
HACK	6	4	5%	
SMUGGLER	7	8		3%
VANDAL	6	4	5%	
COMMIT A FRAUD	11	7	11%	
MURDERER	4	5		3%
GUILTY	13	9	11%	

Table 1. Error reduction per word between February and March surveys. 37 in February and 37 in March; words analyzed: 26. The table shows the change in the number of errors between the February and March surveys after the follow-up exercises on vocabulary acquisition. It also presents the percentage improvement or decline in students' assimilation of new vocabulary relative to the start of the study.

Table 2

GROUP	STUDENT	ERRORS FEBRUARY	FEB %	ERRORS MARCH	MARCH %
A	Aa	4	15%	0	0%
A	Bb	2	7%	2	7%
A	Cc	1	4%	0	0%
A	Dd	3	11%	2	7%
A	Ee	3	11%	4	15%
A	Gg	5	19%	2	7%
A	Hh	1	4%	1	4%
A	Jj	15	56%	15	56%
A	Kk	11	41%	7	26%
A	Ll	9	33%	1	4%
A	Mm	8	30%	6	22%
A	Nn	17	63%	6	22%
A	Oo	17	63%	12	44%

A	Pp	8	30%	3	11%
A	Qq	3	11%	4	15%
A	Rr	11	41%	8	30%
A	Ss	12	44%	7	26%
A	Tt	6	22%	2	7%
A	Uu	6	22%	2	7%
D	A	1	4%	0	0%
D	B	10	37%	6	22%
D	C	10	37%	14	52%
D	D	5	19%	1	4%
D	E	0	0%	3	11%
D	F	4	15%	1	4%
D	G	16	59%	13	48%
D	H	4	15%	5	19%
D	J	14	52%	11	41%
D	K	6	22%	3	11%
D	L	13	48%	7	26%
D	M	7	26%	3	11%
D	N	13	48%	11	41%
D	P	10	37%	4	15%
D	Q	14	52%	15	56%
D	R	11	41%	6	22%
D	T	8	30%	3	11%
D	O	4	15%	0	0%

Table 2. Individual student error rates (February vs. March). The table records the number of errors each student made in the February and March surveys, allowing assessment of the intervention's impact and effectiveness and comparison of performance between the two participating groups. To preserve anonymity, each student is identified by a letter. Results are also expressed as percentages, matching the format used in Table 1.

Table 3

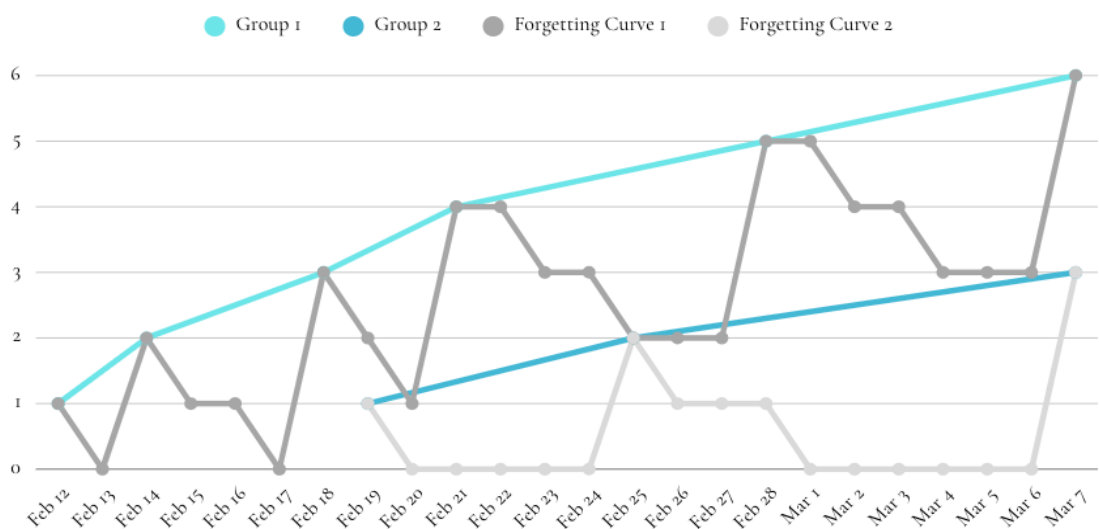


Table 3. Vocabulary Activity Timeline and Forgetting Curves for Groups 1 and 2. This graphic compares the timing and frequency of vocabulary activities for Groups 1 and 2 with theoretical forgetting curves.

Table 4

	Group 1						Group 2		
	Word Search	Kahoot	Crossword	Listening	Role Play	Quizlet	Kahoot	Cluedo	Quizlet
Active Retrieval									
Contextualized Structure									
Explicit exercise									
Implicit exercise									

Table 4. Types of vocabulary teaching activities used. This table lists the activities carried out in this research and classifies them according to the literature framework.

Results Presentation

Table 1

To understand the results presented in Table 1, a specific procedure was followed. First, the percentage of correct answers per word was calculated. To do this, based on the 37 surveys conducted, the number of students who got the question wrong for each term was subtracted. The resulting number of correct answers was then divided by 37 and expressed as a percentage.

Subsequently, the variation between the results from February and March was analyzed. For each word, the percentage of correct answers recorded in February was subtracted from the percentage obtained in March. When the difference was positive, it was presented as a percentage of improvement. In cases where the difference was negative, it was also shown as a percentage—without the minus sign—and labeled as a percentage of decline. This format allows for clearer comparison of progress or regression in the correct production of each term.

Based on this data, the vocabulary words studied were classified into different groups according to the degree of improvement observed:

The words **CON**, **LAW-ABIDING**, **WITNESSED**, **ROBBER**, **COMPLAIN**, **BURGLAR**, **BURGLARY**, and **CONGRATULATE** showed the greatest consolidation, with an increase in correct production ranging from 13% to 51%.

A second group of words, consisting of **ADVISE, GUILTY, COMMIT A FRAUD, MURDER, ESCAPE, FRAUDSTER,** and **SHOPLIFTER,** recorded moderate improvement, with increases between 8% and 11%.

The third group includes **VANDAL, HACK, HACKER,** and **ARREST,** which showed a low level of improvement, with increases equal to or below 5%.

Finally, the words **STEAL, SUSPICIOUS, SCAM, MURDERER, SMUGGLER, ROBBERY,** and **SUGGEST** showed a decline in correct production. In other words, fewer students used these words correctly in the March survey compared to February.

Overall, most words show an improvement in correct usage. However, the group that reflects a decline requires closer analysis to identify possible factors that influenced these results.

To better understand this data, it is important to consider how the vocabulary groups were organized and the frequency with which they were practiced during the research. The words were grouped into three blocks:

- **Group 1**, which was practiced six times, includes the words **ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING,** and **WITNESSED.**
- **Group 2**, practiced three times, consists of **CON, ROBBERY, ROBBER, FRAUDSTER, SMUGGLER, ESCAPE, SHOPLIFTER, COMMIT A FRAUD,** and **GUILTY.**
- **Group 3** received no repetition. This group includes the words **SUSPICIOUS, SCAM, VANDAL, MURDER, MURDERER, STEAL, PUNISH, HACKER,** and **HACK.**

The results show a correlation between practice frequency and improvement in correct production. Group 1, which was the most frequently practiced, includes only one word with a decline, while the rest show significant improvements. In Group 2, five words improved between 8% and 11%, while only two declined. In contrast, Group 3, which was not reinforced, contains most of the words with negative values and only three with minimal improvements (equal to or below 5%).

Table 2

To interpret the results in Table 2, the individual progress of each student was analyzed in order to observe the reduction in errors related to the knowledge and meaning of the vocabulary words used in this study.

According to the data, 28 out of 37 students showed a decrease in the number of errors between the test conducted in February and the one in March. Six students recorded an

increase in errors, while three maintained the same number of mistakes as in the initial test.

These results indicate that 75% of the participants experienced a significant improvement in their use and understanding of the foreign language (L2) vocabulary, suggesting positive progress in the learning of the targeted terms.

Table 3

This graphic visualizes the relationship between the timing of vocabulary activities and the theoretical forgetting curves for Groups 1 and 2. The curves, adapted as approximations based on Ebbinghaus' forgetting curve and supported by Baddeley's memory framework and the reviewed literature, illustrate the expected decline in memory retention without reinforcement.

Group 1, which received more frequent and consistently spaced repetitions, maintained a trajectory that better aligns with effective reinforcement strategies. The spacing of activities appears to interrupt memory decay, supporting stronger retention.

Group 2, on the other hand, had fewer total exposures and a more irregular distribution. The gap between the second and third activity appears particularly wide considering the limited number of repetitions. According to the literature, such spacing may exceed the optimal review interval needed to prevent forgetting, especially when the overall exposure is low. As a result, Group 2 likely did not receive enough repetitions within effective timeframes to ensure long-term retention.

Although the forgetting curves are approximate and based on theoretical interpretation, this visual comparison underscores how both the frequency and timing of repetitions play a critical role in vocabulary acquisition and memory consolidation.

Table 4

To interpret the results in Table 3, the distribution of teaching strategies across the two groups was compared:

- **Explicit exercises:** Word Search, Crossword puzzles, and Quizlet appeared most frequently in Group 1, whereas Group 2 included only Quizlet.
- **Contextualized tasks:** Listening, Role Play, and Cluedo qualified as truly authentic crime-scenario activities; Group 1 played two (Listening and Role Play), while Group 2 offered only Cluedo, giving Group 1 more opportunities to learn and practice vocabulary in realistic contexts.
- **Active retrieval:** Gap-fill games such as Kahoot and Quizlet occurred equally often in both groups, providing the same number of recall opportunities.

- **Implicit learning:** Incidental acquisition was more frequent in Group 1 due to repeated exposure in Kahoot, Listening, and Role Play; Group 2 still provided incidental encounters via Cluedo and Kahoot.

Overall, Group 1 logged higher counts for each teaching-strategy category, while Group 2 employed a smaller set of game-based tasks that nonetheless covered all four strategies.

Results Discussion

Relation to Previous Research

The distribution of vocabulary activities and the simulated forgetting curves reinforce the central role of spacing and repetition in memory consolidation, as described by Baddeley (1997). Group 1, which received six well-timed exposures, shows how spaced retrieval can interrupt memory decay and support long-term retention. This is consistent with the 13–51% gains of most Group 1 words and reflects the expected pattern described in Ebbinghaus' forgetting curve, particularly when reinforcement occurs before significant forgetting sets in.

In contrast, Group 2 received only three exposures, with a particularly long gap between the second and third session. According to Baddeley's spacing principles, this wide interval, combined with limited repetition, may have been insufficient to reinforce memory traces effectively, leading to weaker gains (8–11%) for most of its target words and even a decline in some cases. While Webb (2007) argues that any retrieval is beneficial, our findings suggest that both frequency and timing must meet a minimum threshold to yield durable lexical retention.

Group 3, which did not receive any planned repetition beyond the initial exposure, showed little to no improvement and, in several instances, a decline in performance. This clearly illustrates the effect of memory decay in the absence of reinforcement, as predicted by Ebbinghaus' model.

These differences in exposure corresponds to the observed error-reduction patterns. Some items from Groups 1 and 2 showed substantial gains; for example, "CON" (+51%), "WITNESSED" (+27%), and "LAW-ABIDING" (+46%), indicating the benefits of repeated and contextually varied retrieval. However, other words included in Group 3 such as "STEAL" (-16%) and "MURDERER" (-3%) did not follow the same trend, demonstrating that repetition alone is not always sufficient; the quality, distribution, and contextual richness of exposures are equally critical for successful vocabulary acquisition and productive use.

Repetition frequency

The clear link between repetition frequency and vocabulary gains in our study echoes foundational findings on the spacing effect and memory consolidation. Baddeley (1997) describes how distributed practice combats the exponential decline of new information in working memory by re-exposing learners to vocabulary at optimal intervals. In our data (Table 1), most of the words belonging to Group 1 (practiced six times) showed significant improvements, suggesting that repeated, spaced retrieval practice reinforces neural connections and facilitates transfer to long-term stores. By contrast, Group 3, which received no scheduled revision, not only failed to improve but in many cases regressed, illustrating Ebbinghaus' forgetting curve in action.

Active Retrieval

Nation (2001) and Schmitt (2000) highlight that active retrieval, especially through quick-response tasks requiring learners to recall vocabulary without support, is key to turning passive knowledge into active use. In our study, both Group 1 and Group 2 engaged in retrieval-focused activities such as Kahoot and Quizlet, which demanded quick, independent responses. These tasks likely strengthened form–meaning connections and contributed to vocabulary gains, as each retrieval reinforces neural traces and facilitates future recall (Nation, 2001). However, the greater improvement observed in Group 1 suggests that retrieval benefits are enhanced when combined with higher exposure and more diverse practice. While retrieval plays a crucial role, our results imply that its impact depends on how often it occurs and how well it is integrated into a broader instructional sequence. This finding challenges Webb's (2007) claim that any retrieval is useful, by showing that intensity and distribution also shape long-term retention.

Contextualize Exposure

Fillmore and Snow (2000) argue that using vocabulary in context helps learners understand meanings more deeply and use words with greater precision. Although this study did not set out to compare contextualized versus decontextualized learning explicitly, some patterns suggest that context may have played a reinforcing role. Group 1, which received six exposures, not only benefited from more repetition but also had more opportunities to engage in varied and contextualized activities (such as the role play and listening tasks) that naturally incorporate vocabulary in meaningful use. While it is not possible to isolate the specific effect of contextualization, these richer encounters may have supported the higher retention gains observed in group 1 in contrast to group 2 improvement results.

All vocabulary items included in this study were part of a single thematic unit focused on "Crime and Consequences". This deliberate organization reflects the teaching technique described by Fillmore and Snow (2000) as the use of thematic projects, in which vocabulary is taught through a coherent topic that supports repeated and meaningful encounters. Although not all words were practiced equally, and some were not reinforced

through contextualized tasks, the fact that they all belonged to the same semantic field likely supported structured learning. Learners encountered these terms across related tasks and discussions, which may have helped create conceptual links between them. This thematic cohesion provided a natural context for vocabulary acquisition, helping students better understand and remember terms by situating them within a shared communicative framework. Even items in Group 3, which received no planned repetition, benefited from being embedded in a familiar topic, showing that meaningful thematic structure can partially compensate for limited exposure.

Explicit vs Implicit Learning

According to Schmitt (2000) and Nation (2001), successful vocabulary learning requires both explicit instruction and incidental exposure. These two approaches work best when used together, allowing learners to first understand the form and meaning of a word, and then strengthen that knowledge through repeated encounters in different contexts. In our study, Group 1 followed this model most closely as, again, they had more opportunities of practice. Students first practiced the target words through explicit tasks like the Word Searches and the Cross Word (see Appendix C and E), and then used them again in more natural, communicative situations like the role plays and the listening activity (see Appendix F and G). This balance between direct teaching and meaningful use seems to have helped them retain the words better and reduced the number of mistakes in production.

Group 2 also followed this combined approach, but with fewer repetitions and fewer activity types. Learners had one explicit activity, a Quizlet (see Appendix H) and two incidental ones: Cluedo and Kahoot (see Appendix I and J). While this led to some improvement, the lower amount of exposure and the limited range of contexts may explain why results were more moderate compared to Group 1.

In contrast, Group 3 did not receive any planned repetition, either explicit or incidental. Although all their words were part of the same thematic unit, they were not reinforced through practice. As a result, this group showed little or no improvement. These findings suggest what Schmitt (2000) argues: without repeated exposure, especially in varied and meaningful contexts, new vocabulary is difficult to remember and even harder to use productively.

Relation to Research Questions

RQ1: Effectiveness of systematic repetition in retention

Our findings directly address Research Question 1. The 75% of students who reduced their error count between February and March (Table 2) confirm that non-graded quizzing and repeated testing act as effective retrieval practice (Webb, 2007) . Those learners

engaged in multiple retrieval events automated word recall, validating the hypothesis that systematic repetition enhances retention among English L2 learners.

RQ2: Frequency-Dependent Effect

Research Question 2 is answered by comparing the three repetition schedules: Group 1 (six repetitions) achieved gains mostly between 13–51%, Group 2 (three repetitions) saw most improvements between 8–11%, and Group 3 (zero repetitions) displayed minimal or negative change ($\leq 5\%$). This frequency effect pattern highlights the critical role of repetition frequency in driving measurable vocabulary-retention gains.

RQ3: Learner engagement and implicit feedback

Although no formal attitude surveys were administered, we systematically recorded participation levels (High/Medium/Low) and noted student suggestions after each activity in our observation logs (see Appendix B to check the engagement of the students on the different activities). These engagement metrics and in-situ comments serve as indirect indicators of how learners responded to the repetition tasks. Overall, high participation in game-based and review activities suggests strong buy-in, whereas medium or low participation in listening and role-play points to areas needing confidence-building. Future studies could complement these proxies with direct perception surveys or focus groups to deepen our understanding of learner attitudes toward repetition.

RQ4: Integration of short, frequent repetition strategies

Our structured blocks of six and three sessions function as prototypes of the “short, frequent” model. The superior outcomes in Group 1 support the practicality of embedding multiple small reviews into regular instruction. However, without extending practice into authentic contexts, gains may be superficial for certain items. To fully realize RQ4’s aim, an integrated approach, combining explicit drills with incidental exposure (e.g., reading tasks, discussion prompts), should be piloted.

Limitations

Several factors constrain the applicability and depth of the conclusions drawn from this study. First, perception data was limited, as learner engagement was inferred from observed participation and informal feedback rather than direct instruments such as surveys or interviews. This limits insight into students’ motivational and emotional responses to repetition-based tasks. Second, the study’s temporal scope was restricted to two measurement points, pre- and post-tests conducted in February and March, without any delayed follow-up to assess how well vocabulary gains are maintained over time. The sample was also limited in scope, comprising only 37 participants from a single school, which reduces the extent to which findings can be applied to other age groups, proficiency levels, or educational contexts. Additionally, occasional scheduling adjustments meant that the intended repetition schedule was not fully implemented; for example, Group 1

completed only six sessions instead of the planned nine, potentially weakening the observed frequency effects.

Finally, a few vocabulary items did not behave as expected: despite following the repetition model, words such as *suggest* in Group 1 and *robbery* or *smuggler* in Group 2 showed slight declines. These inconsistencies challenge the theoretical assumptions proposed in this study and indicate that repetition and contextualization, while generally effective, may not guarantee acquisition across all lexical items. Likewise, the level of difficulty of the vocabulary items was not formally assessed or controlled for, which could have influenced retention outcomes independently of repetition frequency. For this reason, further research would be needed to examine these inconsistencies in greater detail.

Future Research Directions

To further develop the findings of this study, future research should include delayed post-tests to check whether vocabulary gains are maintained over time and to determine whether initial declines in performance may be reversed. Collecting direct learner feedback through surveys or interviews would also offer useful insights into how students perceive and experience specific vocabulary items and tasks. In addition, it would be helpful to analyze how the types of activities used (contextualized or isolated tasks) relate to the learning outcomes of individual words. Comparing task types with item-specific results could help explain why some words did not improve as expected, even when reviewed repeatedly.

Future studies should also consider variables such as lexical difficulty, morphological complexity, and similarity between words, as these linguistic factors may influence acquisition independently of repetition frequency. Words with low transparency, abstract meanings, or irregular morphological forms may require different types or durations of exposure to be effectively learned. Incorporating these elements into the analysis could help clarify why some vocabulary items deviate from predicted learning patterns.

Lastly, repeating this study with a larger and more diverse group of learners would help confirm whether these inconsistencies are specific to this sample or reflect broader patterns among students of different ages or proficiency levels. All of this could support a more refined understanding of how repetition, task design, and linguistic features interact in vocabulary learning.

Conclusion

This study examined the impact of repetition frequency on vocabulary retention among lower-intermediate English learners. The results reveal a clear relationship between the number of exposures and the effectiveness of vocabulary acquisition. Group 1, which received a total of 6 exposures, showed the most significant improvement in vocabulary recall and use. Group 2, with only three exposures, demonstrated limited progress, while Group 3, which received no repetition beyond the initial introduction, showed minimal or negative change. These findings strongly support the predictions of Ebbinghaus' forgetting curve, which states that memory decays rapidly without reinforcement, and that repeated, spaced exposure can interrupt this decline and promote long-term retention. These results confirm the initial hypothesis stated in the research objectives, namely that vocabulary learning improves significantly with repeated and contextualized exposure.

The study successfully met its goals of evaluating retention gains across different repetition frequencies, analyzing student engagement, and identifying effective strategies for integrating vocabulary practice into regular instruction. The comparison across groups confirms that the frequency of repetition is a decisive factor in successful vocabulary learning. Spaced repetition appears to promote memory consolidation by reinforcing neural connections over time, leading to more stable and long-term recall.

Moreover, the data suggest that applying a variety of activity types that involve active recall, structured tasks and explicit and implicit learning has a positive impact on vocabulary acquisition. The study followed key principles from established theoretical models combining explicit instruction with incidental exposure in meaningful contexts. Group 1 was exposed to a wider variety type of activities which highlights the value of this integrated approach. This combination of varied tasks and repetition appears to be more effective than isolated repetition alone. However, this aspect of the research has not been fully explored, and further research is needed to isolate the specific effects of each activity type and to better understand their role within repetition-based instruction.

For this reason, this study also opens the door to deeper exploration. Three vocabulary items (*suggest*, *robbery*, and *smuggler*) did not follow the expected pattern, showing small declines despite being included in structured practice. These exceptions indicate that repetition may not have a uniform effect across all lexical items and that additional factors, such as word difficulty or learner attention, may also play a role.

In addition, although learner engagement was not formally measured, observation data indicate that students responded positively to interactive and game-based activities, while tasks demanding more sustained attention, such as listening or role-play, elicited varied levels of participation. This suggests that student motivation and confidence may mediate the effectiveness of repetition-based strategies and should be considered in future instructional planning.

Beyond its immediate findings, this study offers practical insights for educators seeking to improve vocabulary instruction through evidence-based strategies. By demonstrating the benefits of spaced repetition and task variety, it encourages teachers to integrate these principles into everyday classroom practice. This approach can help reduce vocabulary loss, increase learner motivation, and support long-term language development. Likewise, future research and teaching practice could build on this work to explore how repetition techniques can be adapted for different age groups, proficiency levels, and learning contexts.

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APPENDICES

Appendix A

Google Form (Pre test – Post test)

We used a Google Form of multiple-choice questions to assess students' vocabulary knowledge, administering the same form as both the initial and final test of the study.

<https://docs.google.com/forms/d/e/1FAIpQLSdWiFdLVnCFyaQ-1yLVBGU5j04fgIN0k5ihs0HJHvhXNDyu4g/viewform?usp=header>

Appendix B

Observation Log Template and Observation Logs per group

This observation-log template was designed to support the qualitative research phase. Each game has its own log, documenting conclusions and highlighting the variations observed throughout the activity.

VOCAB GROUP	Group 1/2/3
DATE/SESSION	Day and session number
ACTIVITY	Type (flashcards, gap-fill, debate, etc.)
OBJECTIVE	Specific goal (e.g., "Review 5 verbs from Block 1")
TEACHING STRATEGY	Teaching strategy implied and employed during the activity
WORDS	Brief list of items practiced
PARTICIPATION	Overall level (High/Medium/Low)
NOTES AND SUGGESTIONS	Frequent errors, group dynamics, proposed improvements

VOCAB GROUP	Group 1
DATE/SESSION	Session 1 - February 12th
ACTIVITY	Word Search. They had to look for the words in Catalan and link them to the translation in English
OBJECTIVE	Link words to its translation
TEACHING STRATEGY	Explicit learning, as the students had to relate the English words to their translation into Catalan.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	High
NOTES AND SUGGESTIONS	Some students work independently, while others simply copy what their colleagues have written or done.

VOCAB GROUP	Group 1
DATE/SESSION	Session 2 - February 14th
ACTIVITY	Kahoot. Multiple choice questions
OBJECTIVE	Use the vocabulary word accurately in context
TEACHING STRATEGY	Active retrieval, as the kahoot consisted of a gap-sentence fill game making learners recall and enter the missing word in context. Implicit learning because students focus on context; they integrate the vocabulary naturally as they complete the sentences.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	High
NOTES AND SUGGESTIONS	Students worked individually with high engagement, and we had time to discuss the correct answers and the reasoning behind them.

VOCAB GROUP	Group 1
DATE/SESSION	Session 3 - February 18th
ACTIVITY	Read the clues, match each one to the correct word, and fill in the crossword grid accordingly.
OBJECTIVE	Link words and definitions
TEACHING STRATEGY	Explicit learning, as the students had to relate the English words to their definition.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	High
NOTES AND SUGGESTIONS	Some students work independently, while others simply copy what their colleagues have written or done.

VOCAB GROUP	Group 1
DATE/SESSION	Session 4 - February 21st
ACTIVITY	Listen to vocabulary words in context and distinguish their meanings.
OBJECTIVE	Listening. Multiple choice listening including words from Group 1 in context. No sepecific work on the word meaning.
TEACHING STRATEGY	Contextualized structure and incidental learning: students listen to words used naturally in context and internalize them incidentally while focusing on the story or information.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	Medium
NOTES AND SUGGESTIONS	Students are usually more engaged in activities that resemble a game or include some form of competition.

VOCAB GROUP	Group 1
DATE/SESSION	Session 5 - February 27th
ACTIVITY	Role Play. students simulating a police station interview—with roles like Police Officer, Victim, Witness, and optional Security Expert—to practice crime-related vocabulary
OBJECTIVE	Active use and production of the vocabulary word in the correct context.
TEACHING STRATEGY	Contextualized structure and incidental learning: students listen to, read and reproduce crime-related vocabulary in a realistic context, internalize terms naturally while performing their roles.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	Medium
NOTES AND SUGGESTIONS	It is very difficult to engage students in speaking activities. They do not feel confident enough, and for this reason they end up skipping the activity, even though they work in small groups of three to four students.

VOCAB GROUP	Group 1
DATE/SESSION	Session 6 - March 7th
ACTIVITY	Quizlet: a multiple-choice game linking definitions to words and vice versa.
OBJECTIVE	Final review: vocabulary meanings and definitions, incorporating words from Group 2.
TEACHING STRATEGY	Explicit learning, as the students had to relate the English words to their definition and active reattribution as it was a quiz.
WORDS	ARREST, COMPLAIN, BURGLAR, ADVISE, CONGRATULATE, SUGGEST, BURGLARY, LAW-ABIDING, and WITNESSED.
PARTICIPATION	High
NOTES AND SUGGESTIONS	This was a very effective activity. To keep it engaging, you might vary the game mode and visual presentation—students respond well to competitive elements. Additionally, consider adding tasks where they select the correct word for specific sentences, so they get extra practice using vocabulary in context.

VOCAB GROUP	Group 2
DATE/SESSION	Session 1 - February 19th
ACTIVITY	Kahoot
OBJECTIVE	Link vocabulary words and definitions
TEACHING STRATEGY	Active retrieval, as the kahoot consisted of a gap-sentence fill game making learners recall and enter the missing word in context. Implicit learning because students focus on context; they integrate the vocabulary naturally as they complete the sentences.
WORDS	CON, ROBBERY, ROBBER, FRAUDSTER, SMUGGLER, ESCAPE, SHOPLIFTER, COMMIT A FRAUD, and GUILTY.
PARTICIPATION	High
NOTES AND SUGGESTIONS	As with kahoot with group 1 words, students worked individually with high engagement, and we had time to discuss the correct answers and the reasoning behind them.

VOCAB GROUP	Group 2
DATE/SESSION	Session 2 - February 25th
ACTIVITY	Cluedo. Answer a series of questions to solve the crime and unravel the mystery.
OBJECTIVE	Practice and use vocabulary words through reading and writing activity.
TEACHING STRATEGY	Contextualized structure and implicit learning. Cluedo presents crime-related vocabulary in a real mystery scenario. Learners interiorize terms naturally as they follow the story.
WORDS	CON, ROBBERY, ROBBER, FRAUDSTER, SMUGGLER, ESCAPE, SHOPLIFTER, COMMIT A FRAUD, and GUILTY.
PARTICIPATION	Medium - low
NOTES AND SUGGESTIONS	Some students found it too difficult and weren't very engaged, so some didn't even finish it. It was premature to do an activity like this without more practice on the vocabulary first.

VOCAB GROUP	Group 2
DATE/SESSION	Session 3- March 7th
ACTIVITY	Quizlet: a multiple-choice game linking definitions to words and vice versa.
OBJECTIVE	Final review: vocabulary meanings and definitions, incorporating words from Group 1.
TEACHING STRATEGY	Explicit learning, as the students had to relate the English words to their definition and active retriavel as it was a quiz.
WORDS	CON, ROBBERY, ROBBER, FRAUDSTER, SMUGGLER, ESCAPE, SHOPLIFTER, COMMIT A FRAUD, and GUILTY.
PARTICIPATION	High
NOTES AND SUGGESTIONS	This was a very effective activity. To keep it engaging, you might vary the game mode and visual presentation—students respond well to competitive elements. Additionally, consider adding tasks where they select the correct word for specific sentences, so they get extra practice using vocabulary in context.

Appendix C

Word Search

This is an activity students made related to the group 1 of vocabulary. Students had to find the Catalan words and match them with their English translations.

C B V A Q A X C T Z U L A R R N T Y J R
C W I S U Z V W Z D C D B N R H P V J J
N Q R V E Y Z D U M Z L G C E U L H B X
E P W W I T S U R K I G T Q C L E J P V
R E N O X V S R C X U K V K O R M A U R
S B Q Y A P M O F Y Z R S U I S M W R F
E M Q B R Y H U H L K M F Q A U X P O E
J L N W S A V W Q C B E B V X G N B Q L
C Y T U E C I V I C Z R C Z O G D F N I
X X L I P R E S E N C I A T O E Y W T C
U P A V C J J Z N T R D R R Z R W H I I
V K C Q D N K V S I I T C D Z I Q Q Y T
W N G L F N Z V T Q H R L U W R R A K A
R O B A T O R I R I V E L D E T E N I R
B T K V L X E D Q X Z Z A Z Q C B A V N
K N E U H H H M R B S E D R A K L F M I
Y D Z G Z P O B F A M M R L C E L E D C
S I A C O N S E L L A R E J C I U W B G
N N H P U C S J A L A T T N W H G C N B
C L A C K J X W U H B Y T Y P I R D X V

The Catalan translations of these words are hidden in this word search. Your task is to find them and then match each one with its correct English translation from the list below.

Arrest →

Burglar →

Burglary →

Witnessed →

Advise →

Law-abiding →

Congratulate →

Suggest →

Complain →

Appendix D

Kahoot

This is an activity students made related to the group 1 of vocabulary. This online activity features multiple-choice questions delivered via a web platform, with timed scoring and leaderboards to boost engagement and friendly competition among students.

Access: <https://create.kahoot.it/share/kahoot-group-1/845f849d-32de-4f0c-aab2-42d587e60a94>

Appendix E

Crossword

This is an activity students made related to the group 1 of vocabulary. Students had to read each clue, identify the matching vocabulary term, and enter it into the corresponding slots in the grid.

Access: https://puzzel.org/es/crossword/play?p=-OIKvx4o-_sjFj-SEOoM

Appendix F

Listening

This is an activity students made related to the group 1 of vocabulary. Listening-based vocabulary exercise. They listened to a short passage where target words appear in context and then complete a multiple-choice quiz based on what they've heard.

Multiple Choice Questions

1. Who reported the burglary?
 - A. A burglar
 - B. A neighbor
 - C. A law-abiding homeowner**
 - D. Sergeant Rivera
2. What did the caller witness?
 - A. The burglar running away
 - B. A burglar smashing a window and grabbing valuables**
 - C. The police arriving
 - D. Interior lights turning on

3. What did the police collect as evidence?
 - A. Surveillance footage
 - B. Fingerprints**
 - C. A written confession
 - D. Motion-sensor logs

4. What measure does the sergeant advise?
 - A. Installing cameras
 - B. Locking doors and windows before bedtime**
 - C. Moving to a safer street
 - D. Complaining to the mayor

5. What suggestion does he make for when you're away?
 - A. Leave a hidden key
 - B. Install an alarm system
 - C. Use interior lights on timers**
 - D. Complain to the police

6. Whom does Sergeant Rivera congratulate?
 - A. The burglar
 - B. The dispatch team
 - C. The vigilant neighbor and the homeowner**
 - D. All law-abiding citizens

Appendix G

Role Play

This is an activity related to vocabulary group 1. Students engaged in an interactive role-play simulating a police-station interview, assuming roles such as Police Officer, Victim and Witness. In groups of 3, they had to prepare the role-play and perform it with another group.

ROLE PLAY: CASE AT THE POLICE STATION

INSTRUCTIONS

- 01 Form groups of 3 students
- 02 Pick one role and take 1 minute to read your tasks to include them in your role play performance
- 03 In your trio, create a 2–3 minute dialogue incorporating all nine target words at least once: *arrest*, *complain*, *burglar*, *advise*, *congratulate*, *suggest*, *burglary*, *law-abiding*, *witnessed*
- 04 After practicing aloud, present your role play to another group at least once.

- 05 Here is the start of the role-play. Continue it, making sure to include the remaining target words:

Police Officer: “Good morning. I understand you want to complain about a **burglary**. What did you find when you arrived?”

Homeowner: “I’m a **law-abiding** citizen, and I came in to discover broken locks and missing valuables.”

Police Officer: “You’re the **witness**—what exactly did you witness?”

Witness: “I saw a **burglar** climbing through the back window around midnight.”



ROLES

Police officer



- Takes the report when the Homeowner complains of a burglary.
- Asks the Witness what they witnessed.
- Decides whether to arrest the suspect.
- Advises and suggests security measures.
- Congratulates everyone on clear cooperation.

Homeowner



- Complains about the break-in: "I'm a law-abiding citizen and this burglary has shaken me."
- Describes what they found at the scene.

Witness



- Explains what they witnessed: "I saw the burglar climbing through the window..."
- Provides any extra detail to help the investigation.

Appendix H

Quizlet

This is an activity related to vocabulary group 1 and 2. This activity was a customizable multiple-choice game linking definitions to words and vice versa. Students could switch between game modes and, at home, review each target term and its meaning simply by visiting the provided study link.

Access: <https://quizlet.com/es/1011053633/crime-and-consequences-flash-cards/?i=6fe8na&x=1jqt>

Appendix I

Kahoot

This is an activity students made related to vocabulary group 2. This online activity features multiple-choice questions delivered via a web platform, with timed scoring and leaderboards to boost engagement and friendly competition among students

Access: <https://create.kahoot.it/share/kahoot-group-2/803a8fb9-c8eb-426c-8960-a9634571d2c5>

Appendix J

Cluedo

This is an activity students made related to vocabulary group 2. Students work through a series of targeted questions to solve a crime mystery, using reading and writing tasks that require them to actively deploy the group's vocabulary.

THE MUSEUM BREAK-IN

Cluedo



What should you do?

Read the text and complete it with the missing words from the box:

Police Report

On Friday evening, a daring _____ (1) took place at the old town museum.

A masked _____ (2) forced the guard to open the main door. Inside, he used a forged ID card to _____ (3) the security cameras.

Meanwhile, his accomplice, _____ (4), distracted visitors. They put the stolen artifacts into boxes and managed to _____ (5) by van.

Detectives believe they plan to _____ (6) by deleting all digital traces.

A known _____ (7) was seen near the docks earlier that day. Neighbors report a suspicious _____ (8) dropping boxes at midnight.

If arrested, both will be _____ (9) for multiple crimes.

Investigators suspect they may also _____ (10) using fake identities.

**CON, ROBBERY, ROBBER,
FRAUDSTER, SMUGGLER, ESCAPE,
SHOPLIFTER, COMMIT A FRAUD,
GUILTY, COMMIT A FRAUD**

Answer:

Answer those questions below and solve the case:



Who is the main suspect?



What exactly did they do?



Where did they hide the stolen stuff?