

**ESCUELA NORMAL SUPERIOR
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**The space based repetition method as a
support in the English vocabulary learning of
third grade secondary school students**

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PRESENTA

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Dedications

This document is dedicated first to my parents who have raised me with all their effort. I want to say thank you because they have always supported my dreams and decisions in life. They never let me down in my worst moments, a motivation phrase or just a hug was always there to comfort me. I am especially grateful because the person I am today is the result of their teaching. Our memories have not been perfect all the time but that is what makes them interesting. Learning from mistakes and changing it is necessary, and it is a big proof of how love and respect inspire people to change.

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INTRODUCTION

Learning a foreign language like English is often visualized as something incredibly difficult. Especially for secondary school students that get overwhelmed with the process of remembering new vocabulary. As a result, the forgetting barrier appears and makes students experience the loss of information throughout the classes. However, this situation is caused by varied factors such as motivation, personal interests, class management, etc. Nevertheless, these issues altogether lead to the next concerning that is memorization. The motive of mentioning memorization is that it is the first solution that comes to mind to reduce the forgetting matter. And it is because it consists in the typical learning of long lists of vocabulary or verbs through repetition. Despite, in the end, the solution becomes another barrier because students get bored of the same methodology.

The previous situation is one of the main causes of the loss of motivation to learn English and has a reason to be. Overloading the brain with a huge amount of data in a brief period works immediately, but later the data vanishes and does not reach the long-term memory in most of the cases. However, working with memory should not be limited to just repeat as the objective. In contrast, this natural human ability that participates in the realization of common tasks should be guided to achieve results beyond just storing items in the mind.

Thus, in the process of analyzing alternative solutions to overcome these concerns is that the space based repetition method (SBR) appears as a support to learn English vocabulary. The reason for this choice is that this method covers both barriers, the forgetting process, and the reduction of cramming activities. Hence, the present research has the purpose of showing if the SBR method could enhance the English vocabulary learning. Therefore, to direct the intervention there are considered 4 questions: *How can the SBR method help vocabulary learning with third grade secondary students? How the activities proposed match the methodology? Why is the SBR method an option to apply in the English vocabulary learning with third grade secondary school students? How to design a spaced time pattern to apply the method during classes? Why is memory important in the learning of English vocabulary?*

In addition, the population selected to develop the answers to the previous questions is the official secondary school No. 0246 *15 de Septiembre*, located in *Santa Maria del Monte*, a rural community in the state of México. Being more specifically, the sample considered for this study is the 49 third grade students of the group D. The purpose of selecting this group is to observe if the SBR method could support their English vocabulary learning through the application of activities that require students to use their memory.

The research is divided in 4 chapters. Chapter 1 covers the problem statement through the explanation of 3 instruments used to recollect data: observation guide, questionnaire, and an interview with the head English teacher. After that, a brief explanation of the research objectives and questions as wells as the methodology used. In chapter 2 there is a review of the literature necessary to develop and understand the project. Two main variables are considered: vocabulary and the SBR method in relation with memory and vocabulary learning. Then, in chapter 3 it is explained in detail all the activities done during the intervention. Finally, chapter 4 contains the whole results of the intervention plan through the analysis of numeric and interpretative data.

Besides, the methodological route follows the next arrangement. First, a discussion about the students' problem with the forgetting of the English vocabulary learning. This moment is composed by the analysis of the data collected through three different techniques: observation, survey, and interview. After that, there is a review of literature related to important aspects of vocabulary, the description of the SBR method and how memory training supports the vocabulary learning process. In the third moment there is an action plan that describes in detail 7 different activities to apply. Subsequently, the fourth moment explains the assessment analysis made for each activity. Finally, the last moment includes a discussion about the conclusions obtained in contrast with the research objectives.

CHAPTER 1 PROBLEM STATEMENT

1.1 The problem

In Mexico, the national English program *aprendizajes clave* requires students of basic education to develop English as a foreign language. To achieve this learning, the process is divided into 4 cycles with different communication objectives and purposes that are spread along the elementary school, primary school, and secondary school. The combination of these 4 stages aims to achieve a basic competency of domain of this language (B1 skills [according to the (CEFR)]) by the end of third grade secondary school. It means that in the end, students should be able to understand basic texts and conversations, talk about desires, experiences, aspirations or justify answers briefly (SEP, 2017, p. 269).

However, even when students of the third grade of secondary school have had at least two previous years of language learning, it is often common to notice that they still struggle to build the English language competency. In this scenario is that one frequent problem appears: forgetting. This happens when they are asked to retrieve vocabulary or sentence patterns learnt in previous classes. Two or three students try to answer but the remaining 30 or 40 do not participate because they do not remember. The causes of this problem could be varied. Things such as personal interests, unawareness of the own learning process, the use of traditional and repetitive language teaching based on the grammatical approach or the cramming method, etc. are the perfect combination of elements to make students uninterested in learning. And this for sure ends with students forgetting most of the information they learn in class.

The knowledge does not reach the long-term memory, it is affected by the previous situations described and subsequently it is often common to hear students saying, “no me acuerdo teacher” “ya se me olvido” “es que se me olvida todo” “no se me graba profe,” etc. Then, if this is not a recent topic but the result of past practices related to the learning and teaching process it would be worth trying different arrangements of methodologies, strategies, and techniques to reduce this branch between the English level required by the program and the language skills students have in this last part of their basic education.

1.2 Diagnostic

To reach a better understanding of the problem there were applied three different instruments. These instruments aimed to collect enough data about the vocabulary learning process in third grade secondary school students. This collection of information had the purpose of knowing if the forgetting problem had an opportunity to be improved through intervention. Hence, to clarify the problem, the first instrument was an observation guide, it was focused on observing how vocabulary was learnt by students during three classes with the head teacher. Secondly, a questionnaire with 10 questions to recover quantitative data about how students learn vocabulary and how they manage their memory to learn it. And finally, a semi-structured interview to the head teacher to collect information about her experience in teaching English vocabulary.

- **Observation guide**

The observation was done during three classes with the third-grade group D using an observation guide that included 6 elements (see attachment 1). The topics for these classes were months, days, and dates (short and long). In the first class, the vocabulary used for months was presented by the teacher with images. Each month was represented by a picture that had a reference to a typical festivity held on that month. In addition, the form of the word was written on the paper. In this case students just had to copy.

This was not interesting at all for students, they tended to get distracted so often because this was the unique activity developed during all the class. In the case of dates (second class) the patterns were introduced by examples. The teacher wrote one for each (short and long) and told students to analyze the differences, after that, they had to transform short dates into long ones and vice versa. This was more challenging for them and kept them occupied. Finally, in the third class after all these exercises, it was evident that students had not learnt the vocabulary at all, when they were asked to write the date, they had problems recalling the months, days, and the format for each type of date.

Students' problem to remember was an indicator of how copying was not enough for students to learn. Besides, not having an active opportunity to use the vocabulary led to an increase in

the forgetting curve. On the other hand, it could seem that having more practice and exercises (in the case of turning dates into one type or another) helped students to develop more accuracy. However, if the exercises are not interesting for students it is more likely for them to forget the information. Summing it all up, the two major barriers for students to learn vocabulary effectively were low interest and forgetting. If the contents are not presented engagingly, it is easy for them to get lost in the class. Besides, not having opportunities to recall the information makes them lose track of learning. They get used to just copying and not producing. And in the end, all the effort vanishes because students are not able to retain the knowledge for posterior classes.

- **Questionnaire**

This questionnaire was applied to the sample group composed by 46 students in the third-grade group D of secondary school No. 246 *15 de Septiembre*. It consisted of 10 closed questions about the English vocabulary learning process (see attachment 2) and was managed at the end of the year 2022 during the last teaching practices of December. So, this analysis tends to give an interpretation of all the data collected through this instrument to have a better understanding of the challenge that students face when learning vocabulary.

1 ¿Cuánto vocabulario consideras que tienes para comprender un texto o conversación inglés?

10 (22%) of students said nothing, 33 (72%) said a little bit but I need more and 3 (6%) said a lot but I need practice. This shows that more than a half of the students consider that they need more vocabulary to develop a more complex understanding of the English vocabulary.

2 ¿Consideras que necesitas aprender más vocabulario en inglés?

9 (9%) of students said no, but I need practice, 23 (50%) said yes, a lot and 19 (41%) said yes but also practice. These results evidence that almost all the students consider that they need to learn more vocabulary through practice during classes. This seems like a wonderful

opportunity to develop memory benefits combined with active exercises and opportunities to retrieve the vocabulary.

3 ¿Tienes dificultades para aprender nuevo vocabulario en inglés?

6 (13%) of students said I do not know, 17 (37%) said a few, 20 (43%) said intermediate and 3 (7%) said a lot. The answers recovered for these questions could be interpreted as positive for the project. The reason why is that half of students (50%) consider they have difficulties to learn new vocabulary.

4 ¿Cuál es la situación que te detiene de aprender vocabulario en inglés?

0 (0%) of students said I do not like it, 7 (15%) said I do not understand, 15 (33%) said it is difficult and 24 (52%) said I cannot record information in my memory. According to these results, students are not in a negative position to learn vocabulary, instead they have difficulties in retrieving vocabulary because they cannot remember what they learn.

5 ¿Qué tan importante consideras que es tu memoria en el aprendizaje del idioma inglés?

12 (26%) of students said that it is important because it saves essential information and 34 (74%) said that it is important, but along with practice using the vocabulary memorized to learn better. So, students think memory benefits need to be guided beyond just storing vocabulary.

6 ¿Qué tan frecuentemente olvidas el vocabulario en inglés?

6 (13%) of students said that very few, 33 (72%) said that sometimes and 7 (15%) said that always. In this question, students stated that they do not always forget the vocabulary, but they still have problems retrieving the information from their memories.

7 ¿Qué tan buena consideras que es tu memoria actualmente?

0 (0%) of students said it is so good, 5 (11%) good, 29 (63%) more or less, 7 (15%) bad and 5 (11%) so bad. These results support the idea of taking advantage of memory because just 11% of the students consider that they have developed a good management of it.

8 ¿Qué es lo más difícil a la hora de utilizar vocabulario en inglés?

16 (35%) of students said that they do not remember anything and 30 (65%) said that they are afraid of making mistakes while using the vocabulary. This opens the opportunity to work with memory and active exercises to progressively reduce the mistakes and forgetting problems that stop students from developing the English language competency.

9 ¿Te gustaría probar técnicas para mejorar tu retención de vocabulario en clase de inglés?

39 (85%) of students said yes and 7 (15%) said no. These results shows that almost all the students agree with the implementation of different techniques or activities to enhance their English vocabulary retention.

10 ¿Crees que entrenar tu memoria te sea útil para poder recordar mejor y utilizar el vocabulario en inglés?

12 (22%) of students said yes, I strongly agree, 28 (72%) said it sounds interesting and 6 (6%) said I need to experiment with it. The answers to this question evidence that the students are open to experiment with their memory capacities.

In summary, vocabulary learning is not considered as a difficult action for the first time. However, when it is time to retrieve information in following sessions is when the forgetting problem appear. Students agree with the idea that they forget easily what they learn because it is not developed actively. Students are afraid to produce because they do not remember the vocabulary. Therefore, giving attention to diverse ways to enhance their retention and spending more attention on active practice is one area of opportunity to support their vocabulary learning over time.

- **Interview**

This diagnosis aims to give an interpretation of the information collected through the interview applied to the English head teacher at the secondary school *15 de Septiembre* (see attachment 3). The purpose of this interview was to know her experience about vocabulary learning among students. The topics were: why vocabulary learning is important for students to develop good language learning, how they learn it and which problems are faced in this process. Therefore, it is important to analyze and contrast the answers given by the teacher with the problem identified in this research to have a better understanding of the current situation. The results are the following.

- Importance of vocabulary learning

Vocabulary learning has a crucial importance in the English learning. Words are the roots to grow good skills in the language. Hence, it is substantial to pay enough attention to it. In addition, choosing diverse ways to present the vocabulary is part of satisfactory language developing.

- Best activities to learn vocabulary

Following with the activity design, one of the most useful strategies to learn vocabulary is using games. Word games like hang man or hot potato let students have fun while learning. On the other hand, taking advantage of memory is also worthy. If students successfully store vocabulary on their minds, they can recall it later. This retrieving of items is primary because students can identify the vocabulary in different contexts. Vocabulary can be found everywhere, whether a song, video, social media, or book, etc. Staying connected with these attempts to remember is meaningful, memory traces get stronger, and the data goes to the long-term memory over time.

- Barriers to learn vocabulary

The first barrier while learning is interest. If students are not engaged, they just do not pay attention. Students need a reward to feel with the necessity to learn. Then, it is important to change the way information is presented to students. Secondly, the time available. In secondary schools there is not too much time to spent learning English. Events and other

school issues often take minutes or even hours to the subject. Hence, more practice and diverse activities are needed.

1.3 Justification

Learning English as a foreign language requires students to learn a basis of vocabulary to start developing this competency. So, to achieve that, there are diverse techniques, strategies, and methods to grow that bank of words. To mention one, there is the typical cramming repetition where students try to learn lists of vocabulary or verbs using memorization. However, although it is a way to remember words, it works due to the demanding work necessary to store the information. Hence, taking advantage of memory just applying this kind of exercise is not interesting at all for learners. It bores their mind and later it results in forgetting. Nevertheless, memory advantages should not be trapped in just this type of exercises. Instead, using memory should seek for diverse ways to develop this ability in more engaging ways.

Thus, this research aims to try a different management of memory to learn English language. For this reason, is that the space based repetition (SBR) method has been selected to support the learning of English vocabulary with third grade secondary school students. The purpose of choosing this method is that it works with two issues related to vocabulary learning. First, the forgetting curve theory. A memory study conducted by the psychologist Ebbinghaus in 1888 where he states that the mind forgets information over time if there is no attempt or necessity for the brain to retain it. Experience that affects students when they learn new vocabulary. And secondly, the avoiding of massive practice that saturates the mind and increments the forgetting chance. Therefore, the utilization of this space based repetition method covers both, the recalling of the desired pieces of information to be learnt using memory and activities that avoid the excess of mass repetition with periods of spaced practice to send the data to the long-term memory (LTM).

It is important to know that this method has been used in tons of computer software and mobile apps to learn languages such as duolingo, mochi mochi, Super memo, Anki, Mnemosyne and more. However, this paper wants to reflect about its utilization in the

classroom without the use of computer programs and applying it to common exercises that are always possible to do with few resources.

Summing all it up, the present research wants to:

- Try a different emphasis on how memory can be managed to serve as a tool and not as the objective in the English vocabulary language learning.
- Use memory to learn English vocabulary learning using the SBR method.
- Identify the benefits of the SBR method applied to vocabulary learning with students of the third grade secondary school.

1.4 Objectives

General objective:

- To use the space based repetition (SBR) method to support the English vocabulary learning of third-grade secondary school students.

Specific objectives:

- To identify which English learning activities match the space based repetition methodology to apply in the classroom.
- To identify how to choose time patterns to repeat the information based on controlled spaces of time according to students' level and progress.
- To show why memory is important in the learning of English vocabulary.
- To show the benefits that space based repetition has on the learning of vocabulary.

1.5 Research questions

General question:

- How can the SBR method help the English vocabulary learning of third grade secondary students?

Specific questions:

- Why is the SBR method an option to apply in English vocabulary learning of third grade secondary school students?
- Which activities match the method?
- How to design a spaced time pattern to apply the method during classes?
- Why is memory important in the learning of English vocabulary?

1.6 Hypothesis

The space based repetition method enhances the English vocabulary learning of the third-grade secondary school students.

- **Independent variable:** The application of the space based repetition method on third grade secondary students' learning.
- **Dependent variable:** The improvement on the students' learning of vocabulary.

1.7 Methodological framework

Research type: Mixed

How: Data and interpretation

Research techniques: Observation, survey, and interview

Research instruments: Observation guide, questionnaire, and interview guide.

Population: Third grade students at the secondary school *15 de septiembre*

Sample: Third grade group "D"

CHAPTER 2 THEORETICAL FRAMEWORK

2.1 Vocabulary

Words are everywhere, they are the core of language. Therefore, paying the correct attention to this element is critical to build natural and steady communication. Hence, this chapter contains 5 definitions as well as the most essential elements of its development. Besides, it will be discussed how memory participates in the English vocabulary learning process.

2.1.1 Vocabulary definition

To begin with this review of information, it is necessary to know how vocabulary is understood in the language field. So, a primal and short conceptualization for this concept can be found according to the ONLINE ETYMOLOGY DICTIONARY (2023) in the Latin word *vocabulum* that means *word*. Besides, one more definition that derives from that root is the word *vocabularium* that means *a list of words*. Going further in time, the Cambridge dictionary (2022) states that vocabulary can be viewed as all the words that exist in a particular language or that belong to a particular subject. To understand it is so easy. For instance, the words: おはよう [ohayou (hello)], 人 [hito (person)] and 世界 [sekai (World)] belong to the Japanese language and are part of its vocabulary.

One more example of how vocabulary could be understood is among fields of study, to mention one, science. In this case, science vocabulary can be represented in words such as: **experiment, genetics, hypothesis, etc.** Moreover, the oxford learner's dictionary (2022) interpret vocabulary as all the words that a person knows and uses. In addition, that knowledge can be separated into two sides: active and passive. In the active part fit all the words that people use between conversations and other communicative acts. Alternatively, in the inactive side there are included all the words that individuals know and understand but they do not use.

Considering the three definitions above it can be said that vocabulary is just words that people know. A plethora of linguistic items that can be used among communication activities such as conversations or expositions. However, this is a short definition and does not convey the

richness of this concept. Then, moving into a deeper understanding of what vocabulary is, it is necessary to know that it does not mean lists and lists of words that are learnt and repeated one by one while talking or thinking, instead of it, as Nation (2001) defines “words are not isolated units of the language but fit into many interlocking systems and levels” (p. 36). A clear example of this definition is the language itself. When people speak, they do not use words alone all the time, instead, words work together to convey a variety of meanings.

The process of learning vocabulary requires time to be developed, babies for example start with short phrases to ask for something or to express feelings. As time passes and the individual becomes older, the vocabulary increases its complexity. Subjects can create more structured sentences without even thinking about which words come before or after. Therefore, vocabulary acquires another explanation. According to Fortes (2007, p. 11) vocabulary can be explained as all the words that come to the speakers’ minds when they participate in a communicative task such as reading a book, asking for food, etc. Once people achieve fluency, they don’t have to think too much about how to put words one next to other, this ability turns into almost an automatic process that works with long-term memory.

2.1.2 Vocabulary aspects

To understand how vocabulary works it is necessary to know that there are three important aspects to be considered before thinking of learning and teaching vocabulary, they are: meaning, form and use. This categorization explains how words are composed Let us take for example the word “book,” in a library context represents that thing composed by a cover made of plastic/leather and paper for the content. The sentence “I love this fantasy book” shows the meaning in this situation. However, it has another meaning. To exemplify it let us observe this sentence made by a customer in a hotel: “I would like to book the VIP room No. 24, please” In this case “book” is used to ask for a room reservation. Here, the sentence demonstrates that in this conversation the word “book” can be used to replace to express the verb “to reserve.”

So, in other words, the **meaning** is the message, what the speaker tries to convey and what the receiver understands of the word according to the context. Therefore, it can vary

depending on the situation and the speaker's needs. On the other hand, there is the **form**, which can be simply understood as the spelling of the word, in this case: "b-o-o-k", the form is just that, it is the correct arrangement of letters that together generate the word. And finally, the **use**, that has a relation with grammar, how words meet to form collocations or complete sentences. Like for example, in the sentence "I love reading horror stories" It is always true that after the verb "love" it follows a verb ending with "ing," in this exemplification the verb is "reading." So, being aware of this is not only important because it can guide what students need to learn first but also to identify the activities that fit better to learn the 3 different kinds of knowledge. (Figure 1).

Figure 1

Kinds of vocabulary knowledge and the most effective kinds of learning

| Kinds of knowledge | | Kinds of learning | Activities |
|--------------------|---------------------|--------------------------------------|--|
| Form | | Implicit learning involving noticing | Repeated meetings as in repeated reading |
| Meaning | | Strong explicit learning | Depth of processing through the use of images, elaboration, deliberate inferencing |
| Use | Grammar collocation | Implicit learning | Repetition |
| | Constraints on use | Explicit learning | Explicit guidance and feedback. |

(From Nation, 2001, p. 50)

This arrangement has a critical impact on vocabulary learning, as Tovar (2016, pp. 90-91) explains, only with experimentation with the form and meaning, learners can increase their bank of words (the vocabulary storage on their mind). And even if they just store items alone, they are able (with the time and repeated encounters) to group similar words or to use them productively in different communicative situations. Besides, paying attention to form must

be an important aspect to consider after having the first meetings with new words, this because it can cause misunderstanding in learners, “for example, when they face a word that has a similar spelling or sound to their mother tongue, they can confuse the vocabulary and use it wrong.” (Hatch & Brown, 2001, p. 380).

2.1.3 Importance of vocabulary

Since communication is a vital part of human life and it is inherent from the fact of being alive, one can realize that the development of this skill has a critical impact in life. Whether at school, work, at a restaurant or just talking with friends, the act of communication is present there. Nevertheless, as it has been described previously, it is substantial to first develop an optimal vocabulary set composed of forms, meanings and uses to express rich ideas. Thus, thriving this learning from the beginning turns it into a great component to develop a top starting point in the journey of learning a language. “Learning some words and phrases in a new language allows people to start communicating at once. You could say that the learners get an early return to their investment of time and effort.” (Watkins, 2005, p. 34).

The necessity of developing a vocabulary set comes when learners of a foreign language face the needing of understanding conversations or material found in various sources such as books or videos. This scenario seems overly complicated for students, and they end up frustrated and discouraged. This happens due to the complexity of language. In real scenarios, words form large sentences to convey more sophisticated meanings. Thus, trying to understand a real listening or written message is a great challenge for beginners. However, as was argued before, marking the starting point of learning a foreign language by first creating a bank vocabulary should be the one of the first consideration. “In all stages of our education, vocabulary is central to learning content... As each new topic is introduced, key vocabulary is carefully explained to facilitate comprehension of content” (Webb & Nation, 2017, p. 23).

To visualize the usefulness of vocabulary let us take for example a subject that speaks Spanish and has extremely limited knowledge of English. This person wants to order something to eat at a drive-through restaurant. Then, He or She is more likely to say,

“hamburger please” or “Hot dog” (just alone words that are part of the fast-food vocabulary field) rather than “can I have a hamburger with fries please? And nothing happens, there is not much difference between one or another, the worker surely will understand what the person wants just by hearing one or two words. That is the power of vocabulary that must grow from the very beginning of the course. Hence, giving the proper attention to vocabulary and how it interacts with the context is the core component of a good study plan to start learning a language.

In summary, learning vocabulary is important because it brings the next benefits:

- It is easy to learn as it does not require students to memorize grammatical rules.
- It gives almost immediate results. Learners can make useful phrases with two or three words.
- Vocabulary progressively becomes more complex as the learner advances and interacts with different scenarios that make learning interesting.

- **Vocabulary as an indicator of language performance**

Following with the previous discussion about how knowing vocabulary supports language learning, Tovar (2016, p. 91) explains that this knowledge is essential when facing a foreign language. Being aware of it does not only contribute to the comprehension and production of sentences, but it also works as a good indicator of the language performance. This is due to the progression that the learner achieves over time. First, trying to express meaning with short items through experimentation with the context and the need of communication and then, going beyond the grammar barrier making increasingly intricated sentences.

The vocabulary learning progression can be compared to the process of building a house. Every edification starts with a base and then it is raised with walls to be strong and maintain its form and functionality along the time. In this case, the construction of language learning can be seen as a building that is composed of various parts such as grammar or phonetics. But before erecting those composed structures there is something tiny that is the basis to create strong connections by placing one next to other, they are the blocks. In this example words (vocabulary) can be seen as the building blocks of language. These blocks are central

for the creation of strong walls that are: listening, speaking, reading, and writing. (Webb & Nation, 2017, p. 22) In the whole, words assemble to communicate feelings and needs. This means that they are an essential component of every aspect of our lives and of course, they are the core to learn a foreign language like English.

2.1.4 Vocabulary over grammar

Although grammar is often seen as the most important aspect of the knowledge of a language, there are some other important things to consider and the national English program in Mexico *aprendizajes clave* supports that idea. This because it aims to develop an English language learning based on the communicative approach. It suggests an active participation of the students in three different social environments:

- Familiar and community: It covers the interaction between society and the learner. Here, the student must interact with scenarios related to the real world. Things such as enrolling into a club, looking for a job, describing his family, etc.
- Literary and ludic: This field includes students participating in activities like reading tales, drafting poems, etc. This environment is the link between students and the resources available. They do tasks such as describing, predicting, or comprehending.
- Academic: In here, students focus on the threatening of information. Things like essays, reviews or another type of text are the principal duties for them.

In summary, the national program pursuits a teaching-learning process based on the intrinsic value of the language that is the need of communication. All conducted by the teacher who oversees the creation and realization of activities that can lead students to feel inserted into the English language through the experimentation, the gradual reduction of mistakes and the use of contextualized vocabulary (as it has been discussed in previous paragraphs). Despite of what the document and the communicative approach suggest, the way the English learning is managed in a lot of secondary schools has been focused on the opposite side: the grammatical focus. A method mainly used because as Richards and Rodgers (1989, pp. 5-6) state, it does not mean a significant effort for teachers and all the heavy work is done by the students themselves.

Things such as translating enormous and tedious works of literature using the rules of the target language or using the first language as a source to achieve a writing goal are the principal activities in this methodology. There is minimal or no attention to the context. So, in the end, these tasks that are just boring and frustrating for learners, they do not participate actively in their development of knowledge and solely rely on what the teacher gives them. Although a lot of importance has been given to the grammar method, it is crucial to know that “no matter how well the student learns grammar, no matter how successfully he or she masters the sounds of the target language, without words to express a wide range of meanings, communication cannot happen in a meaningful way.” (Tovar, 2016, p. 91).

Contrary to memorizing rules from the beginning it is better to have a wide range of vocabulary learnt through the interaction with forms, meanings and uses in different environments. The main reason for this is, as Nur (2018, p. 2) states, not knowing grammar just leads to making little mistakes with others but not knowing vocabulary is knowing nothing. Students can make mistakes while formulating a sentence like: “hello **me** name is Juan and I **have** 15 years old” and even with those errors, people that speak English would be able to understand what the sentence try to convey.

In contrast, not knowing vocabulary results in not knowing anything. For instance, retaking the previous example, if the student does not know the words “name” and “years” he or she will not be able to make a self-introduction. Therefore, even though he or she knows the verb, subject and noun orders, it will be almost impossible to express this idea. Hence, instead of overwhelming students with dozens of rules that frustrate them, it is better to look forward to an interactive use of vocabulary along a variety of scenarios.

2.1.5 Learning vocabulary

Continuing with the information presented above, it is essential to review how to develop the vocabulary set of knowledge mentioned before to learn a foreign language. Therefore, after knowing how vocabulary is defined, it is time to move into its procedure. So, discovering how this learning happens is another piece of this puzzle. To start with, it is necessary to

mention that while learning vocabulary two perspectives come across within the process. Hatch & Brown (2001, p. 368) mention that they are intentional and incidental learning, a division that explains how learners receive vocabulary through different resources and experiences. Each consisting of distinct kinds of activities and scenarios.

- **Incidental and Intentional vocabulary learning**

Intentional learning happens when the student is focused on learning something specific. Here, the learner intends to do so (Sinyashina, 2020, p. 94) and knows that he or she will learn something assigned by the teacher. Hulstijn (2013, pp. 1-3) explains that it is “a deliberate attempt to commit factual information to memory, often including the use of rehearsal techniques, like preparing for a test in school or learning a song by heart.” In other words, the objective of this type of learning is to store detailed and precise information in the brain. For instance, in a session about the family members where a student is asked by the teacher to make a family tree, he or she is likely to try to remember words like: siblings, aunt, uncle, niece, etc. The student is concentrated on those words because they are part of a task. Besides, other types of activities are lists of vocabulary, drills and all the memory techniques.

On the other hand, incidental learning takes place with no consciousness about the learning of specific items of information. This means that the learner does not focus his attention on a task specifically designed to learn and/or drill a list of vocabulary pre-stated. It is important to not confuse this learning with the acquisitions of the language. Krashen (1989, p. 440-443) in his input hypothesis states that language is acquired instead of learned. This claim rests on the idea that a language is understood once a message is interpreted. For example, if a child sees a person running and someone says, *she is running*, the child interprets that conjunction of letters and sounds as the equivalent of that action. So, as time passes, the kid understands the message and it is gradually acquired without knowing that *she* is a subject pronoun and running a verb in the present progressive tense. In other words, there is no attention to grammar.

However, the clue to make the distinction between incidental learning and acquisition is that acquisition of the language happens naturally due to the context. For example, in Canada where people speak English, they also learn French because it is their second language. In contrast, incidental learning happens when learning a foreign language. The perfect example of this is México where Spanish is the first language. If a Mexican want to learn English, he or she must be conscious about the learning. So, it is not natural because of the needing of materials in English.

Consequently, incidental learning could happen in different situations like while listening to music, reading a book, watching a movie, etc. In these cases, the learner can catch words through the messages. For instance, in an action movie, the spectator can infer that the sentence “fire in the hole” means launch the grenade when he watches a soldier tossing the explosive towards an objective, or perhaps he can pick the word “magazine” and understand that in this case it is not referring to a publication but to the ammo of a gun. So, on this side, the message is the bridge of communication between the student and the form and meaning of words. Other types of activities are watching YouTube videos, listening to songs, conferences, reading books, manga, comics, and other types of written texts.

In conclusion, both types of learnings have diverse ways of presenting new vocabulary. Each of them being more appropriate according to the situation, the words wanted and the objective of the session. The issue here is not to always prefer one over the other. In contrary, make a planning using the advantages of the two faces. Schmitt (2000, pp. 120-123) discusses the benefits of these two poles and states that the intentional learning can support the initial encounter with new words by drilling them on the mind and later, incidental learning helps the learners to recall those words and interact with meanings and messages through the incidental way.

- **Reception and production in vocabulary learning**

Hatch & Brown (2001, pp. 268-270) mention that there is another classification that tells how students manage vocabulary and how different activities match best one side or the other. These two faces are the receptive and productive vocabulary, a division that is also known

as passive and active vocabulary. According to Haycraft (1978, pp. 51-52) the passive process implies tasks such as classifying or matching words. This means that learners do not produce, they just recognize words in context. They can identify the form and meaning of a word while reading a book, listening to a song, or watching a movie but they cannot use that vocabulary to produce a sentence from their memory.

On the other hand, active vocabulary aims to produce whether writing or speaking products. For example, writing sentences from zero or giving the correct spelling of a word. However, this categorization is criticized because of some inconsistencies. To give an example, reading is sometimes labelled as a passive exercise. However, it should be considered as passive since it implies the learner doing something with the words to decode what the text tries to convey (Beylayev, 1963 cited in Hatch & Brown, 2001, p. 370). Besides, Hatch & Brown (2001, p. 270) discuss that this taxonomy is so narrow and does not consider some other important things that can change this conception. For example, people could choose not to say or write (produce) a word because it is a taboo or because it is not a frequent word in the context. Therefore, that lack of production does not mean that that word is in a passive/receptive level at all.

Although this dichotomy has variations in its understanding it can be observed that “receptive learning is easier than productive, learners score higher when the testing format matches the learning format” (Griffin, 1990, cited in Nation, 2001, p. 48). And this happens because, as was discussed above, receptive assignments rely on tasks that focus on the classification and knowledge of meaning instead of producing forms. These duties do not require too much time to be developed by students because they can see and manipulate information that rests on the first level of knowledge called factual (out of four; conceptual, procedural and metacognition in this order) without using their memory to produce from zero.

When learning new words, students start at the factual level, this means knowing terminology and specific details of what they learn. In other words, the data is just there, existing to be stored on the mind to create meaning. It includes the recognition of focused vocabulary according to what is being studied (science, literature, goods, and services, etc.) or symbols

(music notes or math signs for example). (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001, pp. 27-29). Even if this first step is easy, it does not mean that it is not meaningful, it also requires effort. However, the production side is more difficult. This happens because in the production phase students must focus on form, or in other words, use their long-term memory ability. Tasks like writing the correct spelling of a word, using words that are collocated with others naturally or perhaps producing an original sentence using a previous learnt word (Nation, 2001) are far more difficult than just recognizing them using flashcards, board games, worksheets, etc.

Then, once students can manage receptive and productive tasks, they are considered into the next knowledge level, which is the conceptual, stage that according to Anderson, Krathwohl, ET. AL. (2001, pp. 29-31) means the interrelation of items to make something work. So, even if the productive and receptive classification is not always valid, it can be noticed that it follows the development of vocabulary learning from the start to its procedure.

2.1.6 Teaching vocabulary

In previous paragraphs it has been reviewed some of the most important concerns on vocabulary learning. So, it is substantial to explain one more important process that is teaching. Then, it is important to recognize that this part of the process requires a level of understanding on two sides about vocabulary. The first one *what to teach?* and the second how to teach it.

Being aware of this is crucial since vocabulary learning serves as fast and easy proof of a student's progress along a course (Watkins, 2005, p. 34). Learners can see that they are learning when they use the vocabulary store in their mental bank of words. It is in this process where the teacher can guide students to improve the way of doing this.

Vocabulary teaching process is something richer than just giving lists of words, it goes beyond just observing items to later repeating them as the objective. Hence, what the teacher does with the planning and the class must change this conception to visualize interactive scenarios to develop continuous improvements on the way (Tovar, 2016, p. 23). To help this

aim, five components must be taken in count to develop a successful vocabulary teaching to plan more attractive classes:

1. Sources to face unfamiliar words: As was previously discussed, to make students face new words the teacher can use images, real objects, readings, and an infinite repertoire of materials.
2. Getting a visual or auditory stimulus that represents the form of the words: Once the meaning is understood is necessary to focus on the form, so, encountering the words introduced at the beginning can occur among different activities such as readings, puzzles, crosswords, games, songs, etc. This feature requires the student to be producing.
3. Learn the meaning: This means explaining the message of a word and one meaning at time (as words can have different uses). So, it is crucial to explain exactly what is the meaning that is reviewed on the sessions.
4. Create strong connections of memory between form and meanings: This is a process that takes time to be developed as it requires the effort of both participants. First the student must develop a conviction to study after class and to not lose the thread of the topic seen in class. And in the other hand, the teacher who oversees students' needs and interests to create links between the topic and other activities that occur after the sessions on their house or in the street with the purpose of recreate the activities done in class but in a useful way outside the school. With time, the brain gets used to the frequency of words and all that information is stored in the long-term memory.
5. Using words: This goes along with the previous setting because as the teacher gives opportunities to students to use the words more in spaces of time the learning becomes stronger. (Brown & Pyne, 1994 cited in Hatch & Brown, 2001, p. 373).

- **What vocabulary to teach?**

Before thinking about activities and materials, the very first thing to do is state objectives and goals. This is a substantial exercise because it is based on the reflection of the students' needs and the topics that are part of their preferences (music, games, movies, values, society, etc.). (Koay, n.d., p. 1). Without a goal to pursuit, there is not a path to be walked along. So,

delimitating the sessions and the expected achievements will give an overview of how the class will advance, which activities will fit better on that arrangement and how all those things will be meaningful for students.

Then, once the previous markers have been laid down it comes the next phase that is working with the three aspects of a word (form, meaning and use). To do that, it is essential to look back to planning aims. For example, if the aim is to introduce new words or a new topic, the teacher of course will choose to teach the meaning first. This scenario leads to the use of materials like images or realia and activities such as classification, matching or learning of concepts in context. As was written before, this is receptive learning, and it has the objective of sinking the words in the students' mind. In contrast, if the class is at an advanced level of that knowledge, the teacher is more likely to focus on using and forming sentences and phrases that occur in more complex contexts to communicate well formed thoughts through tasks such as roleplays or writing letters.

These exemplifications and guidelines serve as a reference to teachers, being aware of them makes the process of planning easier and gives it a solid foundation and structure. Aspects that are crucial because they help the teaching process to go forward to the features of vocabulary that students need to develop to make learning more adequate (Nation, 2001, pp. 36-37). As Tovar (2016, p. 91) mentions "teaching instructions should look for opportunities in which learners practice the new vocabulary and improve their language performance."

In the whole, the important considerations for vocabulary teaching are:

- Use distinct kinds of sources to present the vocabulary (videos, songs, newspapers, images, games, etc.).
- Teach high frequency words. This makes the process easier because these words can be found in many contexts. It helps students to collect different stimuli to remember better.
- Focus first on teaching meaning and then move forward to form.

- Combine memory (active recall moments) with meaningful tasks to create stronger links between vocabulary.
- Define goals for the planning and then select the vocabulary related (sports, animals, science, etc.).
- Take students' interests in count.

2.2 Space based repetition method (SBR)

The learning process is complex to define in just one approach, there are diverse theories and methods directed to make the process of getting skills and knowledge easier. However, one rarely conscious method used is the distributed learning (spaced repetition). A method that explores how memory works and how it retains information better if the learner works with spaced retrievals of information along time in contrast to massive repetitions for minutes or hours.

This can be compared with the known phrase “practice makes things perfect” (Kang, 2016, p. 13). And it is not beyond reality, as Carey (2015, p. 77) discusses, the brain must get less and less interested in something that is being repeated (cramming) in a brief period. It does not permit the learner to reflect on his learning and how he can improve or focus on different elements that require more attention to be stored in memory. Cramming (massive repetition) works immediately but that learning is not long enough to be considered good.

Therefore, the next questions surges; how to take advantage of how memory works to learn English vocabulary? Well, to answer this, first it is necessary to know how information is stored in the brain, why memory is still a vital part of humans' life and how vocabulary can be learnt using this ability.

2.2.1 Defining memory

Since ancient times, humans have been surviving a variety of dangers, from predators such as lions or snakes, to natural disasters like earthquakes or hurricanes. All these scenarios being constantly repeated over time have required humans to learn from their memories. First, contacting with something new. Secondly, storing all the important cues absorbed on

that exposure. And finally, using that knowledge to have a quick response against the same or a similar case in the future, Thus, memory can be briefly understood as the “neurocognitive capacity to encode, store, and retrieve information.” (Tulvin & Fergus, 2000, p. 36).

This capability has been the object of study for science from time to time and it cannot be in a different way due to its inherency to the human life. Memory is one of the primal signs of evolution in human cognitive capabilities. It has helped humankind to overcome risks and challenges by encoding, storing, and retrieving different crucial information substantial to survive over time. (Pastor, 2020, pp. 1-3).

Moreover, the enigma behind memory has gone beyond the intrinsic nature of its essential functions, it has awoken curiosity among researchers along history. “By collecting and classifying phenomenological reports, psychologists have constructed theories of how people structure in memory large segments of their life. . . as signposts for ordering and reconstructing the temporal and logical sequence of events.” (Tulvin & Fergus, 2000, p. 27). This is interesting because of its charming mystery of how brain cells work and how all the input (symbols, sounds, images, etc.) are stored on the brain, but often it is just used in a way that learning becomes rote (only memorization) instead of meaningful. “It is mainly due to overuse that rote learning has such a bad name in education. We can all remember being taught to parrot supposedly meaningful facts that we were forced to learn as rote, meaningless information.” (Slavin, 2015, p. 145).

One example of this last claim can be seen when a student learns to multiply. In the end, he can recall the results of each operation but at the cost of just repeating and repeating without thinking about what he is doing with the numbers. Hence, it is undeniable that a full curriculum, educational program, or class based on students just memorizing information is not an option to develop metacognition.

Nevertheless, the real potential of memory does not rest on just storing, it is substantial to underline that this ability is the faculty that permits the revoking of past events and their interpretations by recalling the data stored on the brain. Moreover, it is vital to know that memory is not just like a video recorder, it is not like a CD that can be played one time and when it ends it can be rewound to see the same things again. In contrast, it is like a mechanical

watch gear. It is an active process that is always working on its various levels by receiving, sending, decoding, and interpreting stimuli. (Fuenmayor & Villasmil, 2008, pp. 192-196).

- **Memory importance**

Memory has a huge importance in our lives. This cognitive process is vital every day at every time. “Memory, like all psychological processes, is functional. Of all the things we could commit to memory over the course of a day, we tend to remember those that affect our needs and interests.” (Burton, Western & Kowalski, 2014, p. 264). Things like walking, eating, writing and all those actions that keep us alive are results of memory processing. Moreover, memory is part of higher mental operations such as perception, language and learning in general. Memory is an evolving sign of organisms. The most evident reason for it is that memory is used to overcome daily challenges of the environment. This happens because with the data stored, humans and animals can retrieve experiences to decide whether to repeat an action or not. (Pastor, 2020, p. 1-2).

With nothing stored on the mind, there is no learning (Prada, 2013, p. 2-3), humans need previous information to develop new ways to solve problems. If people forgot everything they learnt, they would not be able to change behaviors or to achieve the mastering of abilities. Let us take as an example the action of driving a standard car; to do that, you need to get used to performing different actions at the same time. In one side, take the control of the clutch, brakes, and accelerator with your feet, on the other, manipulate the transmission with your hand, and in addition, watch your surroundings through the mirrors with your eyes focused on the road. Describing it this way may sound like it is almost impossible to do, and it is at the beginning because it is inevitable to start learning without mistakes and doing it slowly.

As time passes, the brain gets used to the actions and reaches a grade of proficiency making this task easier with practice. To make this happen, memory saves cues that take place when driving a car like the positioning of the arms, the sounds of the motor or the movement of the hand and foot to control the changes from the first shift to the fifth. All this happens in milliseconds, and it would not be possible without previous experiences stored in memory. If there were nothing on the brain, driving a car and other daily actions would be a true martyrdom.

- **How memory works**

Memory can be seen as clock mechanism, a model composed of 3 parts. The first one is the sensorial memory; it receives all the stimuluses that the senses catch. It receives bunches of information but just the important remains and goes to the next phase. This first level is related to all the information that is received through the organs without rest. It is constantly being used due to the hundreds of provocations that the brain experiments throughout the day. For this reason, Prada (2020, p. 8-9) states that it is not under our control to decide which stimuli to receive because it is in relation with external factors. However, it is possible to choose what to store.

The second level is working memory; it analyzes the data previously taken but it has a short life too. This immediate process serves to retain valuable information for a small period. For example, when you try to remember the number of your credit card in the ATM, the brain retains the numeric combination but once you are done with your operation, those numbers stored disappear and open the gate for more information to enter. (Prada, 2020, p. 9).

Finally, there is the long-term memory, which is the storage that remains almost forever, but to arrive here there, it is a long way to experience (Burton, Western & Kowalski, 2014, p. 246). The way is large because memory works all the time since the first moment you have a stimulus like something you hear, smell, feel, etc. "when that happens you start thinking about what to do with that information" (Slavin, 2018, p. 122) you can discard it or keep it. Hence, to send it to the long-term memory it is necessary to continue retrieving the data desired to be conserved. Nevertheless, the difficult moment comes when the information does not reach the LTM level because of motivation, overwhelming of information or just the natural process of forgetting.

- **Forgetting curve**

Throughout the day people receive information from a variety of sources: It could be the TV, radio, a book, from school, computers, the surroundings etc. There is not a moment in which the brain does not pick up data. So, due to this fact, it is that everyone forgets the things that

are not important for the future. Although this is a wise mind process, it also affects human development. The reason why is that everyone needs to review the information over time if it is wanted to be stored on the long-term memory and this is a path that requires effort because if the attempts to retrieve the data are not consistent it leads to loss all the progress done.

The situation above of course happens with students, they learn something new one day, but if they do not link and retrieve the knowledge on posterior days, all the data will surely be lost. Ebbinghaus (1988) declare “the longer a person studies, the longer he retains”. When that does not happen is when the information vanishes. Students experience that break and that is the reason why they often say, “I do not remember anything teacher”.

2.2.2 Defining spaced repetition

Once the memory system has been explored it is time to move it into something applicable to study sessions. So, the space based repetition (SBR) method is a way to do that. In few words, the space based repetition method consists of learning and reviewing information through spaces of time to overcome the forgetting curve and cramming. (Nur, 2018, p. 2-3). This study schedule of spaced practice can vary according to the complexity of the material, the type, the resources used and how the user is committed with his study.

To take an example “one of the most common arrangements in a schedule based on spaced repetition is doubling the amount of time between each review (1 day, 2 days, 4 days, etc.)” (Nur, 2018, p. 2). But there are different algorithms like reviewing twice each week or month. However, most of the applications of this method have been applied mostly to laboratories, so what happens in the classroom in real situations where there are lots of unexpected situations like ceremonies or cultural activities?

Typically, it is thought that the best way to retain information is to study “by hard.” This means to review and review a vast quantity of information trying to save all that data in the brain putting all the effort on remembering like if we were a computer hard disk. However, the research on memory matters has shown that overloading students with enormous quantities of data just makes them lose motivation. Then, to combat this difficulty is that the

spacing effect appears. “The spacing effect is the observation that people tend to remember things more effectively if they use spaced repetition practice (short study periods spread out over time) as opposed to massed practice (i.e., “cramming”).” (Meeder & Settles, 2017, p. 1848-1851).

Consequently, the three model memory functions (sensory, working, and long-term) alongside the forgetting curve makes the information vanish if there are no attempts to recall it over time. As a result of these factors is that the space repetition method begins to sound attractive. The reason is that it combats those overloading moments with spread sessions of learning through minutes, hours, days and even months. “Psychologists have known about it for more than a hundred years and proven that it works to deepen the learning of subject areas or skills that call for rote memorization, like foreign vocabulary, scientific terms and concepts” (Carey, 2015, p. 69).

- **Using different context to create space intervals**

Following with the above, spacing intervals do not only provide a better distribution for the brain to save information but also those spaces give opportunities to play with different situations, materials, activities, and even physical environments that are not a direct part of the study plan. Benedict Carey (2015) on his book *how we learn?* mentions that all the variations on the environment, like lights, colors of the room, hour of the day, sounds, etc., can create stronger cues to help the storing of data. The more differences appear, the more the brain saves references to later use them to remember something.

As people cannot know how the future experiences will be, it is better to experiment with a variety of situations, settings, and problems. Hence, the perfect way to do this is with spaces of time because on each retrieval the situations surrounding the area of study are different and the materials or resources used can change. As time passes there are more chances to encounter more different scenarios to use the learning wanted to be retained in the long-term memory. “Consequently, more, and different traces are produced, which in the end provide a more stable memory representation in the brain for all those items. An increase in numbers

of traces would enhance the ability to remember events over progressively longer periods.” (Sisti, Glass, & Shors, T. 2007, p. 373).

This wide variation of materials and experiences is especially useful for students and teachers since the classroom can be modified to be, for example, an airport one day and the other a supermarket. Or one day the vocabulary or sentences can be reviewed through reading and other times by listening to music. This opens a gate for a great possibility of increasing students’ retention in classes.

2.2.3 English vocabulary learning using the SBR method

Trying to learn a language is sometimes a challenge because of the barriers that come to mind when facing this kind of learning. One of them is the forgetting of information (forgetting curve). It seems so complicated to remember grammatical rules or new words without feeling that it is too much to remember. Subsequently, the other one is the quantity of vocabulary that is necessary to start creating compound sentences. This situation is specially overwhelming for students because it is too much to store in mind. Hence, overpassing these barriers is critical in the learning and teaching process to improve the performance of learning a new language like English.

As a result of these needs is that the SBR appears to deal with the exercise of remembering, Nur (2018, p. 2-4) states that overloading students with information to retain is not beneficial. Thus, to avoid that, this method focuses on giving students spaces of time to rest of their effort on recalling lots of words in one row. In addition, the spacing system helps students to develop vocabulary through different situations. Students could practice with the words seen in classes using their cellphones, the social media, videos, songs, books or just playing a game. There are endless possibilities and that is what makes this method interesting. Contrary of just repeating in isolation, using support of varied materials, references, and spaces of time help to enhance the brain retention and develop a training habit that guides students to interact with the vocabulary.

Willis (2008, p. 81) mentions that “the brain first recognizes the sensory input from seeing, hearing, and visualizing in separate but interrelated regions. It is this active processing (doing things with words...) that brings students ownership of the new vocabulary.” And this as a result, delivers a rich vocabulary that turns into proof of how learners’ memory categorizes, connects and stores with less effort throughout the time. Besides, Willis also comments that the more vocabulary is retained, the deeper and more complex the sentences become, and it helps to grow skills like reading or writing. Rohrer and Pashler (2007, p. 1-4) support this idea through a series of experiments that showed how long spaces of forgetting had better results than short reviews (massed practice). As an example, they mention how students can benefit more from vocabulary if it is spread over weeks in contrast to changing it radically each week.

Moreover, Hatch & Brown (2001) state that “the number of times that a word is encountered may also affect whether it is learned... Learners are sensitive to the frequency with which they encounter both familiar and unfamiliar words” (p. 367). This means that combining spaces of repetition with high frequency vocabulary led to developing a better retention. This is crucial because as was mentioned at the start, vocabulary is not only just words but also a link to create sentences in different contexts. So, using and recalling vocabulary playing with diverse sources, spaces of time and activities is one controlled plan to send the data to the long-term memory. One example of this is after learning a word, for example “hito” (a Japanese word for person) the exercise is trying to remember it each time a person is seen on the street or when you think you are forgetting how to say it. The important aspect is to have opportunities to repeat throughout the day without feeling that it is just repetition.

To help with this process, there are lots of software on the internet to learn vocabulary based on time spaces, such as Anki, nmemosyte, Mochi Mochi, Duolingo, etc. However, technology has not been always here to help, initially, the very first space based study schedules were designed by hand. People managed their time to create learning sessions without the help of computers or software. This is because the preliminary research about spacing intervals was developed during the second half of the nineteenth century. (Meeder, 2017, p. 1848). Despite of its advantages, due to the complications that schools can have with

technology like absence of internet or prohibition of devices it is important to design ways of applying this method in the real time in a normal English class and outside school to continue sinking in the words that students learn.

CHAPTER 3 PLAN DESIGN

3.1 Plan design

The present plan aims to put in practice the space based repetition learning to observe the possible benefits of this method (SBR) applied into the English vocabulary learning. To do this, it was considered an initial sample originally conformed by 46 third-grade students of the group D. However, that number was reduced to 42 due to desertions (that number can vary from class to class due to absences). In addition, it is important to mention that public holidays and school events outside the English class can modify the application patterns and activities.

The plan is inserted through activities and materials that are part of the March planning. They are in tune with the topic expected to be learnt. Therefore, these are the elements considered for the planning development and activity design.

Figure 2

Planning elements

| Social learning environment | Communicative activity | Social practice of the language | Expected learning |
|-----------------------------|-------------------------------|---|---|
| Literary and ludic | Self and others comprehension | Read fantasy literature and describe characters | <ul style="list-style-type: none"> • Use strategies to support the understanding of narratives. • Formulate and answer questions to distinguish and verify specific information. • Describe characteristics and abilities. |

Besides, the planning is considered for two or three weeks (6-9 classes approximately) with classes that are spread over each week from Monday to Wednesday. The planning was divided into three main achievements.

1. Identify literary genres.
2. Read and understand fantasy tales.

3. Design a comic book.

However, for this application it will be only considered the first achievement due to time matters. So, the plan consists of three phases. The first one is based on the receptive phase of vocabulary. Focusing on activities that require manipulation of information by students. It means labelling, classifying, and understanding. The second phase will focus on productive vocabulary, which has the purpose of making students practice with the form of words (writing the correct spelling of words) and finally a third phase that is a test in which students will make proof of their knowledge after a period.

The two initial phases will contain moments of space recalling (in various stages of the class) that will give numeric data about the mistake rate that students get. This to measure how space repetition helps students to reduce that rate with each repetition and how the absence of certain words in certain moments affects students' learning. At the end, that data will be contrasted with the test results to make an overall view. It is important to mention that the space between each review will be mostly of one day (because of the schedule Monday to Wednesday) with variations due to public holidays. Hence, the activities are the following.

3.2 Planned activities

Activity. 1, 2 and 3

The reason for having three activities in this part is that number 1 and 2 are preparations before the recalling moment (3). And this is because the vocabulary needs previous presentation to develop the exercise to assess the memory usage of students. Hence, these 2 first activities will be described in the next chart to explain how the vocabulary is introduced. Also, it is necessary to know that there will not be numeric results until activity number 3 where it is necessary to count the mistakes in labelling each book cover. It is important to count the hits and misses in the worksheet for each cover to collect results about the mistake rate of each genre. The exceptions are science fiction and autobiography (they are examples to explain how to do the exercise).

| Activity 1, 2 and 3: Playing with meaning | |
|--|---|
| Objective | To introduce students to the meaning of literature genres through the active recall technique. |
| Skill | Reading. |
| Technique | Active recalling. |
| Strategy | Space based repetition. |
| Material | Flash cards (books covers), concept map, 3 real books and evaluation worksheet. (Annex. 4, 6, 7 & 8). |
| Phase | Receptive. |
| Function | Diagnostic. |
| Moment | Initial. |
| Technique and instrument for assessment. | Observation guide for 1 and 2 (Annex. 5) |
| Theme | Literary genres. |
| Vocabulary for covers. | Fantasy, horror, science-fiction, comedy, biography, thriller, non-fiction, romance. |
| Additional vocabulary to understand the class. | Book, cover, genre, read, see, know, map, concept, write. |
| Time | Warm up and development of the first class for preparation (20-30 mins), closure (10-15 mins) to use the active <i>recall technique</i> . First recall. |

| | |
|-----------|---|
| Procedure | <p>Warm up. (5-10 minutes)</p> <p>T. asks and writes <i>do you like reading?</i> T. can mimic the act of reading.</p> <p>Ss. answer yes, I do, no, I do not.</p> <p>T. asks: do you know this book? (While showing each cover) or what can you see on the cover?</p> <p>Ss. Answer: yes, I do, no, I do not.</p> <p>Development. (30 minutes development-concept map)</p> <p>T. writes the title <i>literary genres</i> in the middle of the board, then he chooses a cover and asks <i>what can you see?</i> (Showing the Image side) and waits for Ss. Answers.</p> <p>T. pronounces genres vocabulary before showing the form and explains briefly what the characteristics of the genre are. Ss. can participate with vocabulary they already know. Then, T. sticks the flashcard (showing form side) and Ss. Write it in their notebooks. <i>For each cover T. and Ss. can mention different interesting facts about the genre, the book, a related movie, a game, a song, etc.</i></p> <p>This procedure is done with all the flashcards and the result should be a concept map. (Annex. 6).</p> <p>Closure. Here appears the <i>first recall</i> of the concepts and lasts 10-15 minutes. (End of the class).</p> <p>Once the concept map is done, Ss. Practice matching 3 real books (Annex. 7) with a genre. T. shows a book (Annex. 7) and Ss. Participate analyzing the book and finally labelling it with a genre.</p> <p>Whole group check answers.</p> <p>To finish the class, Ss. Receive the worksheet (Annex. 8) and answer without using their concept maps (<i>Active recalling moment</i>).</p> |
|-----------|---|

Activity 4. Memo game

This activity is done without using the notebook, Ss. should use their recalling ability to remember what they learnt on the first class. To support the memory retrieving Ss. must look at the cards with images and the cards with text trying to remember the relationship between them. They have 3 minutes to do that. It is important to count the hits and misses of every pair of cards with each team to collect results about the error rate of each genre.

| Activity 4: Memo game | |
|---|---|
| Objective | To match meaning and form of literary genres vocabulary using the active recall technique. |
| Skill | Reading. |
| Technique | Active recall. |
| Strategy | Space based repetition. |
| Material | 16 cards, 8 images and 8 descriptions about the genres presented in the first class (Annex. 9). |
| Phase | Receptive |
| Function | Formative. |
| Moment | Continuous. |
| Technique and instrument for assessment | Group techniques and interaction activities. |
| Theme | literary genres characteristics (board game). |
| Time | Development of the second class (20-30 minutes). Second recall. |

| | |
|--|---|
| Vocabulary to play the memo game | Fantasy, horror, science-fiction, comedy, biography, thriller, non-fiction, romance, autobiography, typical characters, places, features, vocabulary related. |
| Additional vocabulary to understand the activity | Play, round, turns, match, pictures, text, cards. |
| Procedure | <p>Development. (20-30 minutes). T. makes teams of 4 people. Each team receives a pack of cards (16 in total). Ss. should read the characteristics written in the half of the cards and observe the images in the rest.</p> <p>After analyzing the cards. Ss. Have 1 minute to match (image + description) the cards in pairs (<i>active recall moment</i>). When the time ends, they are not able to touch the cards. Once the pairs are formed, T. asks each team to show how they matched one pair of cards. Then, they participate reading one characteristic of the genre they chose.</p> <p>The whole group checks answers.</p> <p>Then, each Ss. Must extract a key word or key phrase of each text card and write it on their concept map for each genre.</p> <p>After that, Ss. Play the memo game using the 16 cards, the winner is who gets more pairs (2 or 3 rounds).</p> |

Activity 5. A journey through music

This is the first productive task and has two main purposes:

1. Make students recall the form of previous words about genres (without looking to their notes)
2. Give students a different stimulus to remember the words, in this case with ambience music.

Thus, the important thing is to measure the mistake rate in the production of forms and encourage their imagination. It is important to remove the words *biography* and *non-fiction* (this to avoid them to write these genres as they cannot be ambience)

- Note 1: In this case, the word *biography* is removed to skip the recalling practice. The purpose is to see if its mistake rate decreases or increases in the next activity.
- Note 2: It is important to count the mistakes for each word-form first. The word with less mistake rate will be removed in the next activity to observe the impact of the recalling practice absence.

| Activity 5: A journey through music | |
|-------------------------------------|---|
| Objective | To label 6 songs using the previous literary genres vocabulary. |
| Skill | Writing. |
| Technique | Active recall. |
| Strategy | Space based repetition. |
| Material | Speaker and music. (See attachment. 10). |
| Phase | Productive. |
| Function | Formative. |
| Moment | Continuous. |

| | |
|---|---|
| Technique and instrument for assessment | Written evidence and association activity. |
| Theme | Literary genres ambience. |
| Time | Development of the third class (20-30 mins). Third recall. |
| Vocabulary to solve the activity | Fantasy, horror, science-fiction, comedy, thriller, romance. |
| Additional vocabulary for the activity | Audio, song, listen, speaker, write, match, imagine, remember. |
| Procedure | <p>Development. (20-30 minutes).</p> <p>T. shows a speaker and says that he is going to play 6 audios. Then, asks Ss. To write a list from 1 to 6 on their notebooks.</p> <p>T. starts playing the song for 1 minute. While playing the song he can ask questions like <i>What can you imagine? Which place does it represent? Can you feel something?</i> Ss. answer using previous vocabulary.</p> <p>T. Helps Ss. to reach the answer showing the flashcard that matches that genre. After that, Ss. write the genre they think match that audio (<i>active recall moment</i>). The whole group reviews answers. Ss. Must interchange notebooks to check the mistake rate.</p> <p>T. repeats the process for the remaining songs.</p> |

Activity 6. Spelling the genres.

This activity tries to activate students' recalling ability to remember the form of the words without knowing which words are given. Remember that the word with the lowest mistake rate in the past activity must be removed here to see if it increases its mistake rate in the final test. Also, it is necessary to count the mistakes for each word-form while checking the answers.

| Activity 6: Spelling | |
|--|--|
| Objective Productive | To review form of words through spelling. |
| Skill | Writing. |
| Technique | Spelling. |
| Strategy | Space based repetition. |
| Material | No material needed. |
| Phase | Productive. |
| Function | Formative. |
| Moment | Continuous. |
| Technique and instruments for assessment | Written evidence and written spelling. |
| Theme | Literary genres (spelling) |
| Time | Warm up of the fourth class. (5-10 minutes). Fourth recall. |
| Vocabulary to solve the activity | Fantasy, science-fiction, comedy, thriller, romance, biography. |
| Additional vocabulary to | Spelling, listen, letters, write. |

| | |
|-------------------------|---|
| understand the activity | |
| Procedure | <p>Warm up. (5-10 minutes)</p> <p>T. asks Ss. To write a list from 1 to 6. Then, he gives the spelling of 6 words (Ss. Do not know that the words are about the 6 genres previously seen): horror, fantasy, romance, comedy, science fiction, thriller, and biography. Each spelling is repeated twice. Ss. write down the spelled word (<i>active recall moment</i>).</p> <p>After all the words were spelled, Ss. Change their notebook with the classmate behind them to check marks.</p> <p>T. asks Ss. To participate giving answers, whole group check and each student count the marks of the notebook they have.</p> |

Activity 7. Random tasks

This activity consists of 12 activities or tasks that match three aspects.

- Are easy to do.
- Do not require too much time to be done.
- Are related to the topics and vocabulary seen in class.

The number of different activities must be from 6-10 or more to have different resources for students to interact. It is important to count the number of volunteers and the tasks taken for each student. Before the class T. should create mini tasks related to the topic (See the example in attachment 13). These tasks are voluntary.

| Activity 7: Random tasks | |
|--------------------------|--|
| Objective | To recall the genres vocabulary out of school. |

| | |
|---|--|
| Skills | Writing, reading, listening, speaking (according to the task). |
| Technique | Active recall. |
| Strategy | Space based repetition. |
| Material | Cards with random tasks about the topic (literary genres using; music, videos, books, movies, videogames, etc.). (Annex. 12). |
| Phase | Productive. |
| Function | Formative. |
| Moment | Continuous. |
| Technique and instrument for assessment | Observation and checklist (Annex. 11) |
| Theme | Literary genres |
| Time | The handout of the tasks is in the closure of the session. (5 mins) |
| Procedure | <p>Closure. (5 mins)</p> <p>T. puts the task cards in a box. Then, he asks for students that want to be volunteers taking a task card.</p> <p>Ss. That are volunteers must write the task picked in their notebooks. After writing, Ss. Hand back the card to the box.</p> <p>Ss. Must do their homework in the afternoon as homework (<i>active recall moment</i>).</p> <p>T. must encourage Ss. to share in peers what they discovered in their homework.</p> |

CHAPTER 4 RESULTS ANALYSIS

4.1 Analysis presentation

After the application of the activities, two different references of data were obtained. The first one is the interpretation of the observation made for the first two activities for preparation (flashcards and concept map). The second one is the numeric results of the activities 3 to 7 and the final test applied along with its conclusions. All this information together led to the last thoughts about the application of space repetition with students of the third-grade group D in the learning of English vocabulary. More specifically in this case “literary genres vocabulary.”

4.2 Activities analysis results

- **Activity 1: Flashcards (introducing meaning)**

This activity consisted of 8 flashcards that pretended to represent a book cover. The images did not have any name or description on it. The purpose of that decision was to “force” students to recall the word and composition of sounds (phonetics) that match each image. All of them tried to be as explicit as possible to convey the meaning of each genre.

Objective

The objective here was to encourage students to think in English with a focus on meaning instead of the form. Using no descriptions of the word form on the flashcards helped to make them focus on the images, titles, and the previous references they had on their mind about each cover to assign a meaning. Using the question “do you like reading?” before showing the covers was a good departure point since students started to think in books. Their thoughts were clear when they made comments like “a mi no me gusta profe,” “yo no he leido nada profe.”

Students’ reaction

Everyone had a reference for the cover books shown to them. For example, the horror cover (it) was immediately recognized by everyone, it was confirmed that students were using their

previous knowledge when they mentioned the movie first. Another case was with comedy (captain underpants). Although this cover had no intention to be previously known, students were able to mention the name of it in Spanish. A similar thing happened with biography (Albert Einstein). Everyone could recognize the character and the name that was written on the cover.

Final comments

The covers did what they had to do, bring previous memories to students, and maintain them concentrated on the images, titles, context, places, and all other imaginary and memory hints. This is a good idea for making flashcards, if you observe the ones that are on the internet it can be noticed that all of them contain the word form or a description, something that is not good at all because students get use to see the image and the form instead of putting their brain to work to recall the word when they see the image. It is a slight change, but it has influence. In addition, it could be an innovative idea to have the form of the word written at the back of the paper, So, when students are struggling remembering, it can be helpful to flip the card and show just some letters, covering the remaining ones with the hand.

- **Activity 2: Classifying words**

After the use of the book covers (flashcards) it was necessary to make the first critical recall. Therefore, to help students organize the information a concept map was done focusing on all the elements (visual and schemata) that students had at that moment and then using them to classify three different books (“un mundo feliz,” “el misterio velazquez” y “filosofia para principiantes”)

Objective

The objective of this activity was to make students reflect about the covers they had already seen, the genres classified in a map and then using those references to classify books (first recalling).

This exercise tried to make students think about the clues they could see in the three books even if they did not know anything about them. As expected, this exercise went well, some students helped to read the titles, others to read the summary written in the back and others just used their guessing ability to label each book with a genre.

With the book “un mundo feliz” there were at the start answers about “fantasy,” however, after listening to the summary almost everyone agreed with “science-fiction”. With “el misterio Velazquez” there was just a confusion between “thriller” and “horror.” Students saw the cover and they thought it was about ghosts and monsters. But after sharing with them some facts about the plot and the real painting they started to think about mystery and that was the clue to define it as a “thriller” since this genre has an atmosphere of mystery. Finally, it could be seen how they used their knowledge to understand that “filosofía para principiantes” was not a comedy at all although it had a lot of cartoons on it. Guided by the title and the characteristics of this genre (that it talks about real things, e.g., science, astronomy, math, etc.) they were able to recognize that this book belonged to “non-fiction.”

Students’ reaction

Some of them were pretty interested in the books, and that was a plus because they commented at the beginning that they did not like to read. So, giving them these opportunities to discover new and interesting things is an extra point to add to the materials and topics used in class.

Final comments

This time the books were in Spanish, the reason of it was to show them that all the books they have on their house or in the school library can be classified according to genres. This to make them feel more confident. As explained before, students are not used to reading, and doing it in English would be more difficult. However, using books in English provides more opportunities to make them aware of known words and cognates to understand what the books are about and forces them to interact with vocabulary.

- **Activity 3: Re-calling the genres**

The mistake rate obtained for the activity 3 “genres worksheet” was obtained by counting the mistakes for each element of the exercise. The results were the following. 8 (21%) mistakes for fantasy, 3 (7.80%) for biography, 6 (15.70%) for non-fiction, 12 (31.5%) for romance, 26 (68.40%) for comedy, 15 (38.40%) for thriller and 10 (26.30%) for horror. (Graph. 1).

This data shows how the similarities between the book covers assigned for the words romance and comedy caused a huge confusion among students because of the word “love”

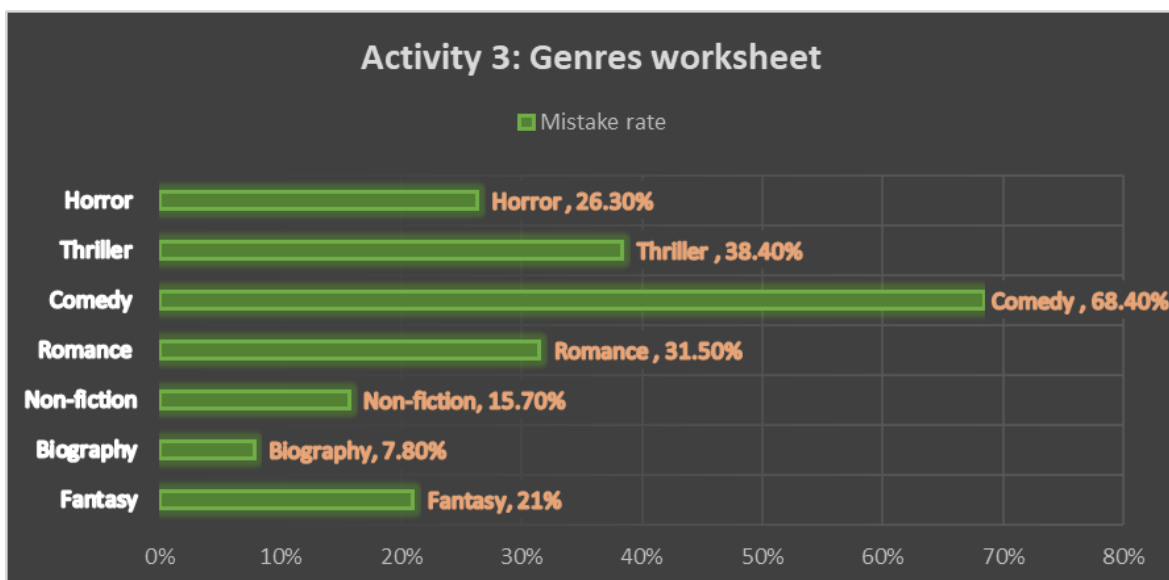
in the titles. As is shown in the graphic, the word comedy obtained 68.40% of mistake rate. The group wrote the word romance on both gaps or had the answers interchanged. This was not expected at the start, but it is evidence of how materials must be clear enough to make distinctions between different concepts.

The importance of the previous conclusion can be confirmed with the second highest mistake rate, which is the word thriller with 38.40%. The reason for this is that it was a very new word for students, and they confused it with horror that had the fourth place on mistake rate with 26.30%. Although this second case led to another confusion it was completely different since horror and thriller had different covers.

However, the introduction of an unfamiliar word like thriller needed more references to develop a better understanding of it. Finally, the words that had a low mistake rate were the ones which had remarkable differences between them, they are fantasy, non-fiction, and biography with an exceptionally low mistake rate, just 21%, 15.70% and 7.80% respectively for each. It is important to notice that science-fiction does not appear on this first receptive activity because it was the example given by the worksheet along with the autobiography that was the example used by the teacher. The media mistake obtained was 29.87% in total.

Graph 1

Genres' worksheet results



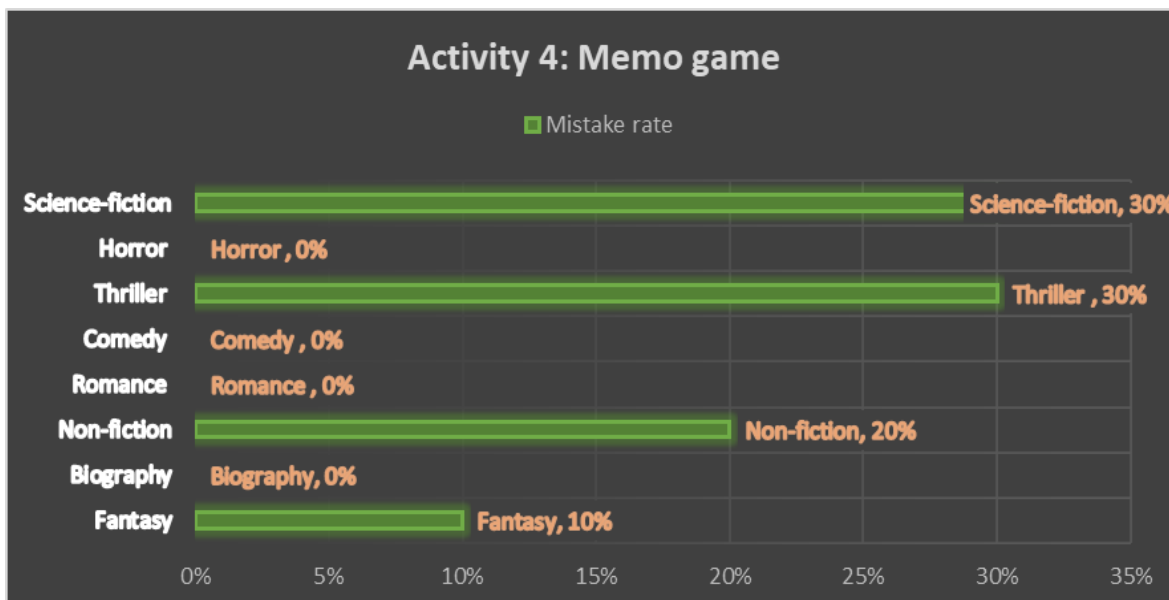
- **Activity 4: Memo game**

The results for the memo game were obtained by counting the mistakes of the card pair formation. There were 9 (11.25%) mistakes in total. The results were 3 (3.0%) mistakes for the word science fiction, 3 (30%) for thriller, 2 (20%) for non-fiction, 1 (10%) for fantasy and 0 (0%) for horror, romance, comedy, and biography. The reason for these low results is that this game was played in 10 teams of 4 people, and of course this setting made things easy for students. Despite this, students had to work actively recalling which image matched each text card without looking to their notebooks. (Graph. 2).

The data collected during this activity supports three things. The first one is that teamwork makes things easier. If a student does not remember something, another can help him or her to reach the answer. Working together creates more opportunities to do a task satisfactorily, in this case with just 11.25% of mistake rate. The second thing is that students perform better when they have different clues that help them remember something. One example of this is the results obtained in previous activity with the word biography. This genre had the lowest mistake rate with 7.8% and that was due to the similarity (showing a person) with both covers (Albert Einstein in the flashcards and Richard III in the worksheet). The same reference point is present here in the game because the cards used for the memo are a miniature version of the flashcards. Finally, the third point is that students can achieve extraordinary grades when they face matching activities that do not require producing something even if they do not have too much practice. The media mistake obtained was 11.25% in total.

Graph 2

Memo game results



- **Activity 5: Music**

From this point the word non-fiction was removed to avoid confusion between it and science-fiction. Also, the word biography was removed to see the impact of its absence in the next class (six days). So, the results for this productive task were the following. 15 (38%) mistakes for the word fantasy, 10 (25.60%) for romance, 8 (20.5%) for comedy, 20 (51.20%) for thriller, 6 (15.30%) for horror and 25 (64.15) for science-fiction. (Graph. 3).

These results show how productive tasks require more time, exercise, and repetitions to be developed even if the words are common. The proof is that the past activity had a media mistake of just 11.25% contrary to this activity that ended up with 35.7%. The graphic shows that the mistake rate rose to 64.10% in the worst case that was the word science-fiction followed by thriller that went up to 51.20%. These two words presented a huge variation in spellings, students wrote things like “saience,” “sience ficcion,” “ciencia fiction,” “trailer,” “triler,” “chirller,” etc.

On the other hand, fantasy and romance presented little mistakes related to the use of the letter “s” and “c.” 38% for fantasy and 25.60% for romance. Finally, comedy and horror had

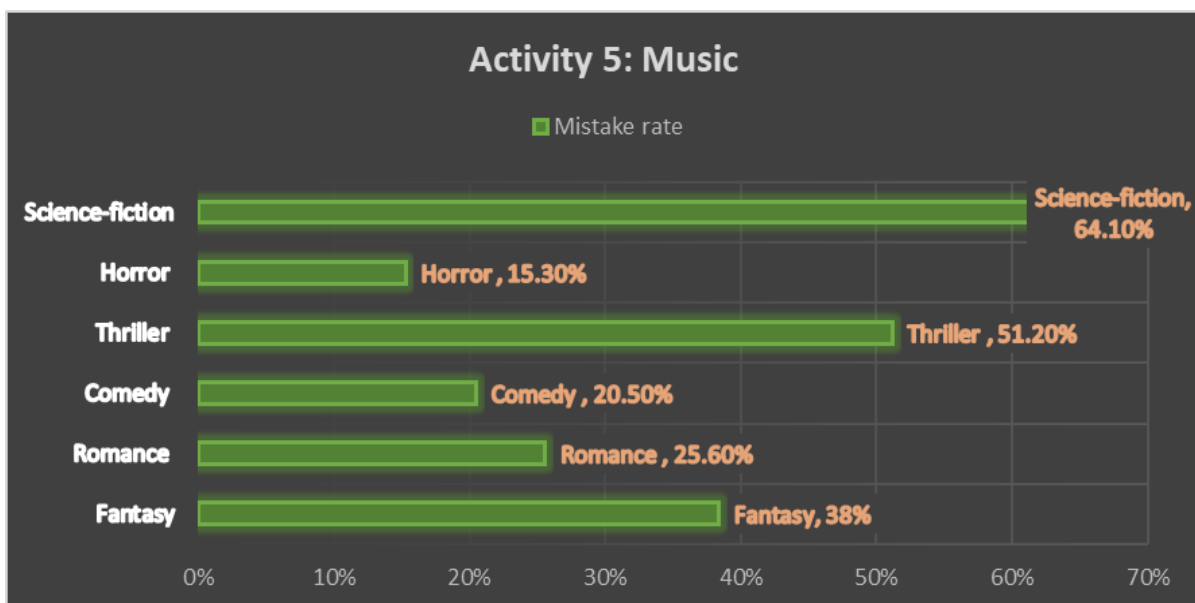
the lower rate percentage. Comedy presented 20.50% of mistake with the use of “I” instead of “y” and horror just 15.30% with students that wrote “terror.”

This increment in the mistake rate shows that missing a receptive exercise result in a low accuracy in producing tasks like in the case of the words science-fiction. Students missed the first interaction with this word in the worksheet used in the first activity (because it was an example). For students, not having that interaction meant a raising of mistake of the 64.10%. Contrary, romance, comedy, and horror, which were presented on all the previous activities achieved less than 30% mistake rate. These words just had little mistakes in one letter. Fantasy had a similar case, however it summed up 38% that although it is not too bad it can be lower. With thriller, the “confusion” presented at the start remained, its 51.20% mistake rate demonstrates that it is still a difficult word for students to remember.

As the graphic shows, horror is the word with the lowest mistake rate. Hence, it will be removed for the next activity to see how the space of 12 days (about 1 week 5 days) approximately (until the test) can affect the accuracy. The media mistake obtained was 35.7% in total. On the other hand, as horror has the lowest rate it will be removed. So, the media error for the other words is 39.88%.

Graph 3

Music activity results



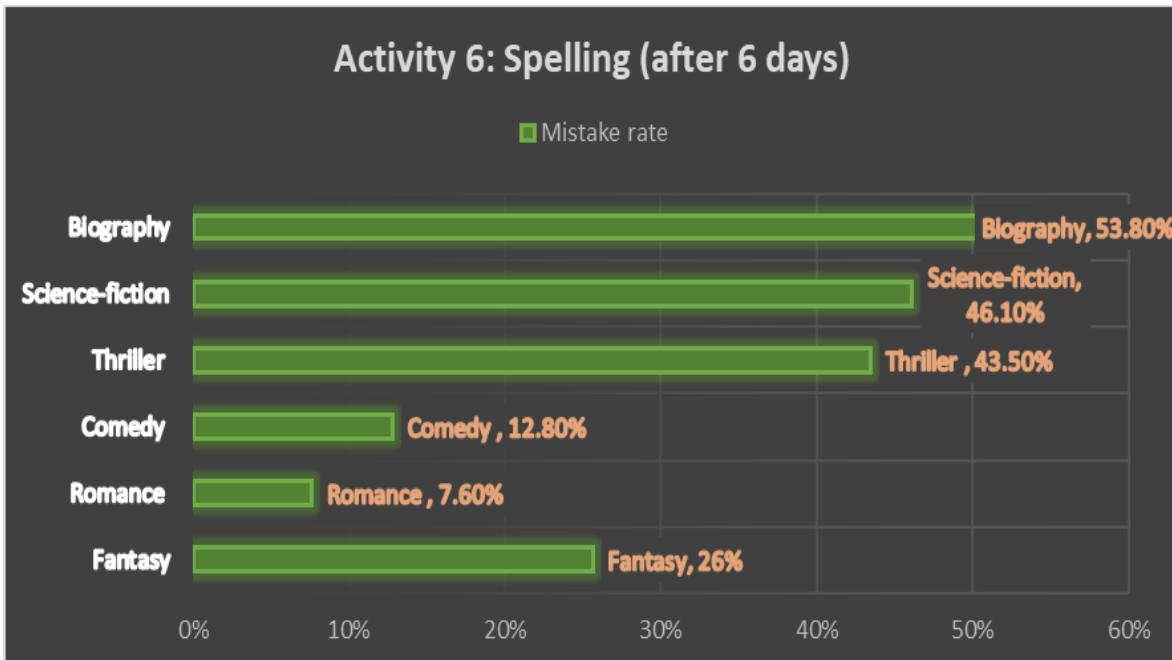
- **Activity 6: spelling**

This activity was done six days after the last class, these are the results. 10 (26%) mistakes for fantasy, (7.60%) for romance, 5 (12.8%) for comedy, 17 (43.50%) for thriller, 18 (46.1%) for science-fiction and 21 (53.80%) for biography. Science-fiction and thriller remained as the two words with the highest mistake rate. Although they presented a reduction of 10% and 8% respectively, they are still difficult for students to recall. In addition, it demonstrates how the absence of the word biography on the last activity had a huge negative impact in the production of its form. This word ended up with 53.80% mistake rate. Students mostly wrote it with “f” instead of “ph.” Finally, fantasy romance and comedy showed a reduction of 12%, 18% and 7% respectively. (Graph. 4).

Two conclusions can be drawn from this. The first one is that having continuous recalling moments like in the music activity and this spelling exercise helps students to gradually correct their mistakes. This impact is exemplified with 5 words out of 6 used in this activity that achieved a reduction in the mistake rate between the 18% at the peak and 7% on the lowest result after six days. The second conclusion is that the more days pass, the harder it is for students to recall information. The example is the word biography that showed the lowest mistake rate at the first receptive activity with 7.8%. Result that increased as days passed (7 to be exact along with a productive exercise lost). Situation that ended up with 53.80% of mistake for this biography. The media mistake obtained was 31.6% in total. However not counting the word biography that was not present in the previous activity it turns into 27.2%.

Graph 4

Spelling exercise results



- **Activity 7: Random tasks**

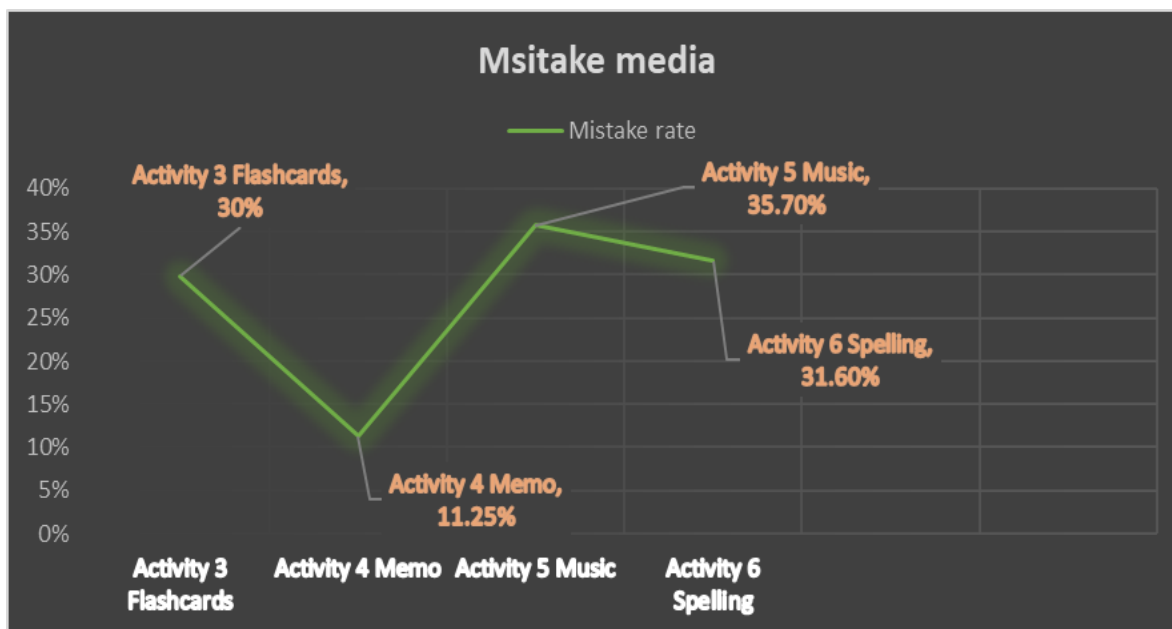
The first day on which tasks were introduced there were 6 (15%) volunteers. Each of them took one task. Then, on day after (this day there was no class) 5 more students were interested in taking on tasks. This made the percentage rise to 28% (11 students). At this point, the first students had two tasks and the second group one task. However, the second group of 5 students took on another task to do on Friday. So, both groups ended up with two tasks at the end of the week. Finally, six days after, the indication was that everyone had to take a task. Hence, 41 (100%) students took a task for that day. This last to observe if students with 3 tasks had better results than the ones that had just one. (Annex. 13).

- **Overall media mistake rate**

The general media mistake rate started with 30% in the first receptive activity (worksheets). Then it was reduced to 11.25% in the second one (memo game), showing that matching activities are easy and even more if they are in teams. After that, the rate increased 24.45% in the first productive activity that ended up with 35.70% of mistake media (music). Exemplifying that even when a student can match information it does not mean that he can produce it correctly. However, after that productive exercise, the results showed a reduction of 4.1%, resulting in a media of 31.60% for the last activity (spelling). This meaning that spaced repetition helped to reduce the media mistake (even after 6 days). So, the next graphic (Graph. 5) shows how the space based repetition helped to reduce the mistake rate in all the stages.

Graph 5

Overall mistake media 1

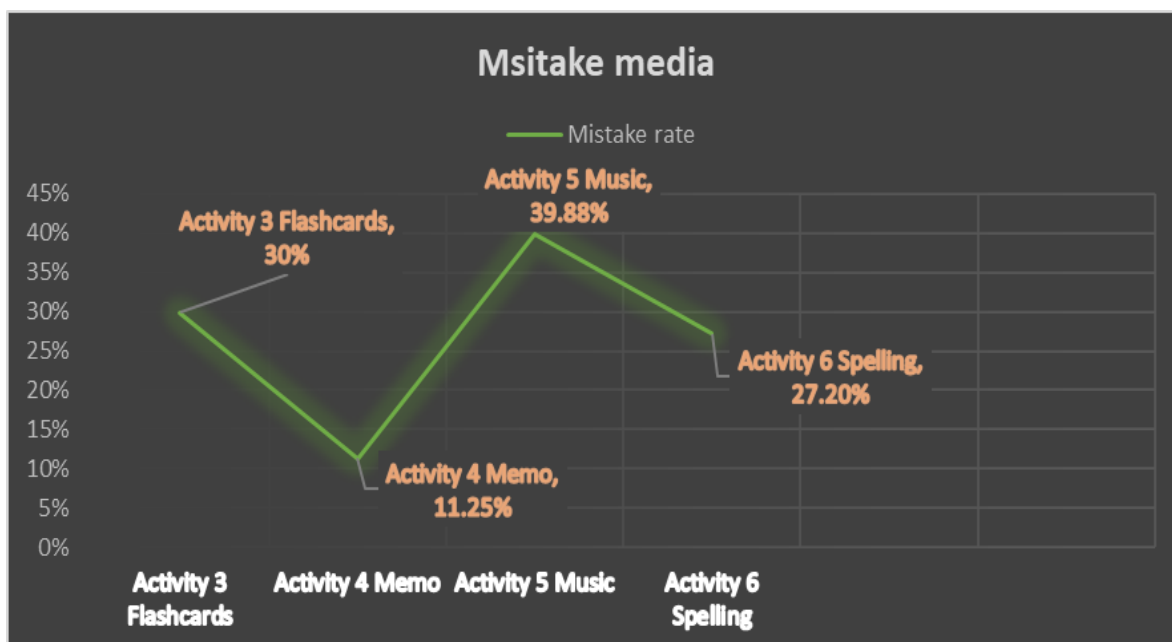


Although in the previous graphic it is shown a little reduction of 4.1% between the music and spelling activity, it changes to a reduction of 12.28%. The reason for this variation (Graph. 6) is due to the absence of the word biography in the music activity and horror in the spelling one. To obtain the present change in percentages 6 words appeared in both activities without exception: fantasy, romance, comedy, science-fiction, and thriller. This analysis is to know

the numeric improvement that was achieved between both activities without mixing the changes of horror and biography. So, the music activity shows a media mistake of 39.88%. And later, the spelling activity appears with 27.20% that is a considerable reduction of 12.28% in comparison with the previous result that was just 4.1%.

Graph 6

Overall mistake media 2



4.3 Exam results

This final test (Annex. 14) was applied after 9 days since the last class to observe how space repetition had impact on students' accuracy with the words previously used in the 5 activities proposed. The exam is composed of three parts. The first one focuses on receptive vocabulary with an exercise of matching three words about genres (fantasy, comedy, and horror) with their respective book cover. The reason for this decision is to prevent students just copying the forms into the next section.

The previous part led us to the second exercise that requires students to produce the form of the words based in descriptions that contain vocabulary related to past classes. The exercise for this part is a crossword that guides students to remember the form of 7 words (fantasy,

comedy, horror, romance, thriller, science fiction and biography). Students should recognize the hints that are contained in 7 short descriptions.

Finally, the last part is also productive but, in this case, it is an info gap exercise that requires students to complete questions. For the two first sentences the answers are: *what is your favorite book?* and *my favorite book is...* For the sentences third and fourth the answers are: *about* and *science fiction*. Thus, the results for this exam will be explained in detail in the next section. The analysis considers two explanations: the overall exam results and the results for each section.

4.3.1 Overall exam results

The present results represent the overall exam score achieved by each student (Annex. 15). The results were obtained by counting the overall marks for each exam. The results were 8 (21%) students with 14 marks, 1 (2.50%) student with 13 marks, 2 (5.12%) students with 12 marks, 7 (18%) students with 11 marks, 7 (18%) students with 10 marks, 5 students (12.80%) with 9 marks, 2 (5.12%) students with 8 marks, 3 (7.60%) students with 7 marks, 2 (5.12%) students with 6 marks, 1 (2.50%) student with 5 marks and 1 (2.50%) student with 4 marks. These percentages result in 77.4% of students that passed the test with a grade higher than 6 (on a scale of 1 to 10). Besides, the highest mark rate is presented in 9 and 10 marks with 18% for each and 14 marks with 21%. According to this data it can be said that spaced repetition had a profound impact on these results since the highest rate is presented in 14 marks with 21%.

- **Part 1**

The overall scores for part 1 that contains 3 items are the following (Annex. 16). 34 (87%) students have 3 marks, 0 (0%) students 2 marks, 4 (10.2%) students 1 mark and 1 (2.5%) student 0 marks. So, it is a clear sign of how the receptive learning part has reached a satisfactory level of accuracy with 87% after these two weeks.

- **Part 2**

The overall scores for part 2 that contains 7 items are the following (Annex. 17). 16 (41.02%) students have 7 marks, 19 (23%) students have 6 marks, 4 (10.20%) students have 5 marks,

6 (15%) students have 4 marks, 3 (7.60%) students have 3 marks, and 1 (2.5%) student have 2 marks. 1 and 0 marks do not show incidence. Taking this information into account it can be confirmed that this productive part also reached a huge accuracy rate with 41.02% of students that have all the 7 marks for this part. In addition, the second highest percentage is 6 marks with 23%, confirming a good performance.

- **Part 3**

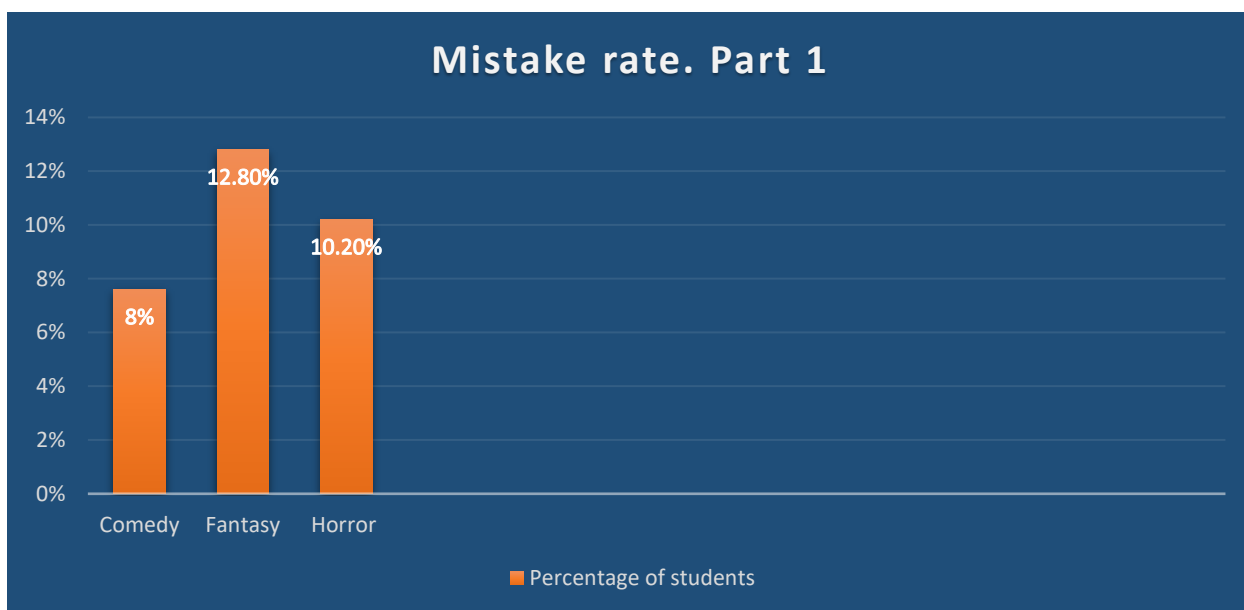
The overall scores for part 3 that contains 4 items are the following (Annex. 18). 9 (23%) students have 4 marks, 4 (10.20%) students 3 marks, 5 (12.80%) students 2 marks, 15 (38.46%) students 1 mark and 6 (15.3%) students 0 marks. All this data shows a clear deficiency with 38% of students that just have 1 mark for this productive part that includes listening and writing. However, it also can be seen that the second highest percentage was 23% of students with all the 4 items for this part. So, it can be concluded that space repetition also helps students to develop more complex uses of vocabulary.

- **Mistake rate part 1**

In this receptive part, the mistake rate per answer is the following. 3 (7.6%) mistakes for the word comedy, 5 (12.8%) for fantasy and 4 (10.2%) for horror (Graph. 7). This data shows an excellent improvement in comparison to the first receptive activity. (Annex. 19).

Graph 7

Mistake rate. Part 1



- **Mistake rate part 2**

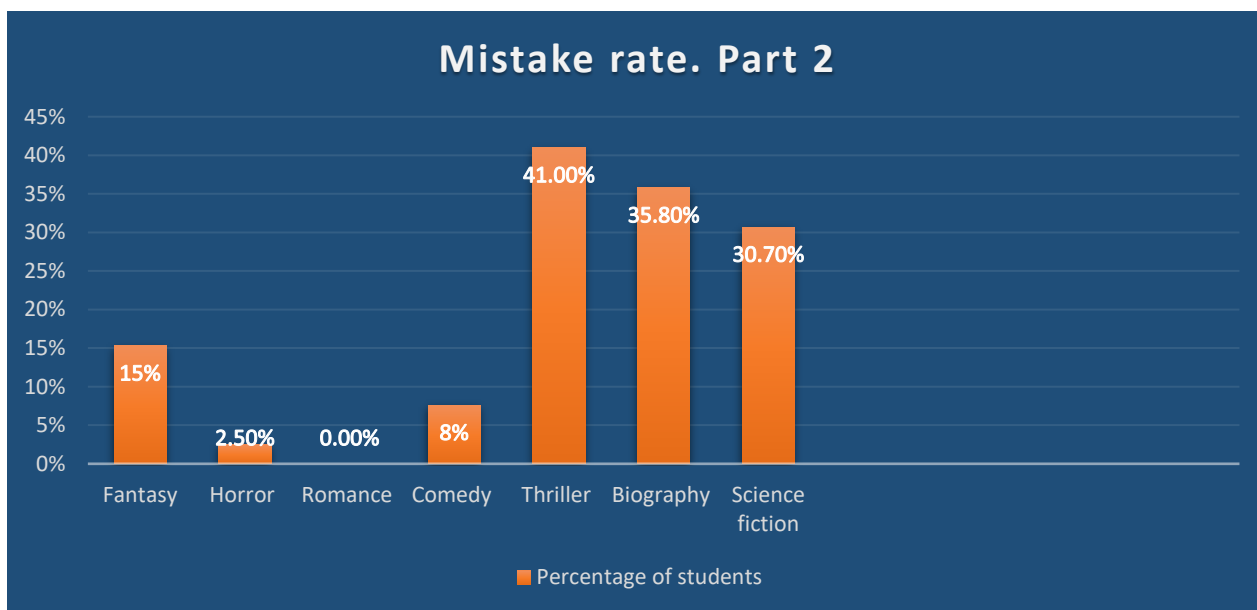
In this receptive part, the mistake rate per answer is the following. 6 (15%) mistakes for the word fantasy, 1 (2.5%) for horror, 0 (0%) mistakes for romance, 3 (8%) mistakes for comedy, 16 (41%) mistakes for thriller, 14 (35.80%) mistakes for biography and 12 (30.7%) mistakes for science fiction (Graph. 8). These results show a significant improvement with the words fantasy, horror, romance, and comedy. Just 6 mistakes in the case of fantasy that has the highest rate between these 4 words. In the case of the words thriller, biography, and science fiction (that were the three highest results among the 7 words) a little improvement can also be seen. (Annex. 19).

These results show that the absence of the word science fiction in the first receptive activity impacted these results making it more difficult to produce its form. This can be confirmed because the word biography was also removed in the first productive activity. As a result, there was a noticeable challenge for students to produce its form. However, the word thriller that was presented on all the activities shows the highest mistake percentage. This exemplifies that there are some words that even with repetitions are difficult to produce. Despite, thriller still shows a reduction in comparison with the two previous productive

exercises. (Annex. 19). It is important to mention that although the form of the words; fantasy, horror and comedy were written in the first exam part, they were not just copied into the crossword by the students. The proof is that if they had just copied there were not mistakes in these three words. However, the word fantasy presents 6 mistakes, comedy 3 and horror 1.

Graph 8

Mistake rate by part 2

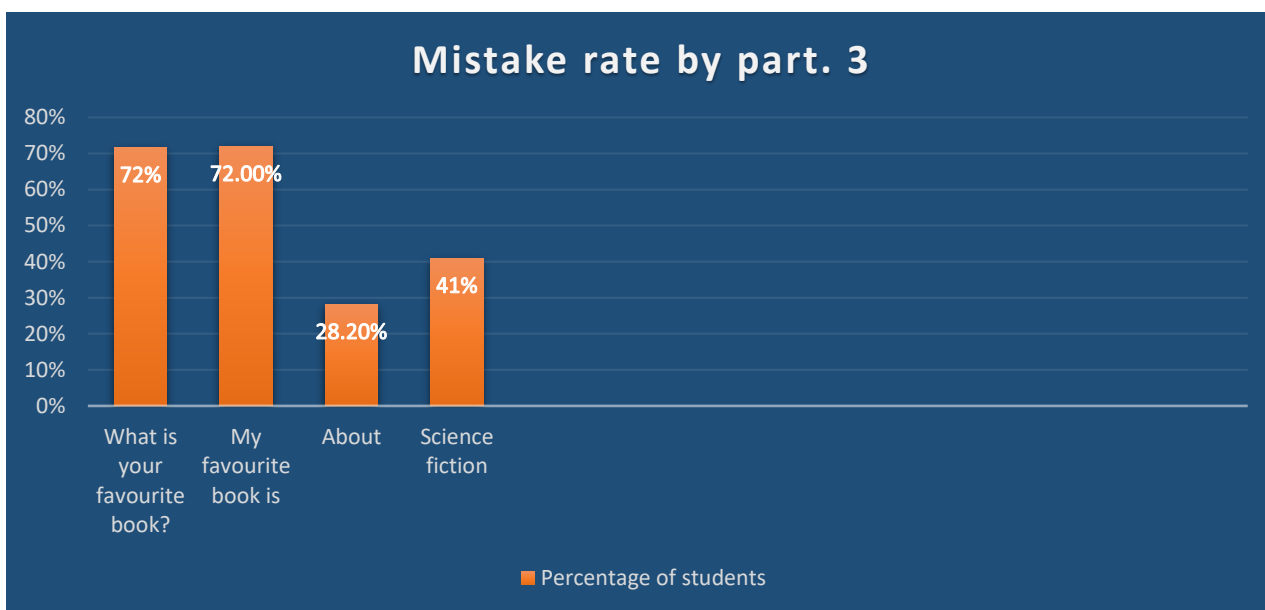


- **Mistake rate part 3**

In this receptive part, the mistake rate per answer is the following. 28 (72%) mistakes for *what is your favorite book?* 28 (72%) for *my favorite book is*, 11 (28.25) for the word *about* and 16 (41%) for the word *science fiction*. (Graph. 9). The data presented here shows that it is still difficult for students to produce complex sentences. This demonstrated with the two highest mistake rates of 72% that correspond to the answers that require three words or more (question 1 & 2). However, the results also show a good outcome with the word “about” that presents the lowest mistake rate with 28.25%. This shows that even when this word was not focused as the other words (fantasy, comedy, etc.) it was sink in students’ minds trough repetitions.

Graph 9

Mistake rate. Part 3



- **Tasks impact on the exam performance**

To observe if the tasks of the activity number 7 (Annex. 12) helped students to achieve better results in the final test it is necessary to compare the results of those students with 3 tasks done and the others with just one task done. So, 11 (28%) students out of 39 students (100%) made 3 tasks along the previous week, the other 28 (71%) just one task that was obligatory for all the students.

Thus, let us observe the differences. 5 (45.5%) students out of those 11 (100%) achieved all the 14 marks that compose the whole test. The remaining six got different marks that gradually dropped from 12 marks. 1 student (9.09%) 12 marks, 1 student (9.09%) 11 marks, 1 student (9.09%) 10 marks, 1 student (9.09%) 9 marks and 1 student (9.09%) with 5 marks. It is important to note that the highest percentage was 14 marks with 5 students. This confirms that students who did three tasks achieved better results than those who just developed 1. The present asseveration can be supported with the fact that 14 marks had the highest incidence rate with 21% (8 students) of students in the overall marks. And 13.2% (5 students) out of

those 21% were students that developed 3 tasks (see annex. 16). This can support the fact that spaced repetition supported the learning of vocabulary.

CONCLUSIONS

This section concludes with this research project showing the main findings, the contrast of the objectives and research questions with the results presented in the analysis part, and finally, recommendations for future research on this topic to expand the contributions.

The data collected showed how memory supported students with their English vocabulary learning. This started since the first moment they faced the activity number 3 (receptive) that was the first recalling moment. It helped to mark the starting point of memory retention improvement. In this activity the mistake rate obtained was 30% but it successfully decreased in the following activity number 4 (receptive) dropping to just 11.25% (One day after the first recalling moment). The results were positive for this first phase.

At this point a notable 19.75% of mistake reduction appeared as proof of how students were honing their retention through the spacing recalling. However, with activity number 5 (productive) the mistake rate increased critically reaching 39.88%. With this mistake percentage it was confirmed that in this case, producing using memory was more difficult for students than just matching or labeling items (like in the two past exercises). Although it could be seen as a step back on student's learning, it was the contrary because the 39.88% was reduced by 12.68% (after 6 days) in activity number 6 (productive) ending with a 27.20% mistake rate at the end of the plan. These variations were not massive but showed how memory had an impact on students' results.

Indeed, memory applications tried to develop something more than just helping to reduce the mistake rate of production and reception moments. These applications also showed how retention and forgetting of vocabulary occur depending on the practice students have. For example, if students miss an opportunity to recall even within a day, they are more likely to forget the vocabulary they learn. And this is especially crucial in the productive part that is more difficult since it requires more accuracy and consequently, practice.

Thus, it is important to spend the right amount of time with receptive recalling activities because they let students learn the forms passively. Focusing first on meanings and contexts helps learners to not worry too much about making spelling mistakes. However, receptive activities do not mean just watching and memorizing, instead, these types of exercises should

aim to sink in the meanings of vocabulary by matching concepts and playing with sensor information such as short readings, worksheets, or card games.

Besides, it is crucial to note that when students perform well in receptive tasks, it is important to not stop in that moment believing they domain the topic. In contrast, which is the signal to move forward to productive tasks that helps them to hone their retention and accuracy of production in writing and speaking tasks.

Moreover, once the productive phase is reached, it is critical to not focus these activities in just producing the same words dozens of times. Alternatively, these tasks should be focused on meaning but with tasks that require students to produce the words wanted from mind storage. Examples are listening to music, dictation, spelling words, playing games, watching videos, movies etc. It is substantial to encourage students to use their retrieving ability to produce the words. One the way to do that is by creating in them the necessity of use the vocabulary.

Eventually, it is necessary to make these recalling moments a habit for students. The reasons why are: first, students are not used to using this ability. This could be proved with the exam results were even when they had 3 answers for part 2 in part 1, they did not even notice. Secondly, not practicing is what makes them forget what they learn. And finally, because of the complications of making a general and constant recalling plan during classes due to the interruptions of festivals and the days without English class.

Summing it all up, this research:

- Could highlight the importance of having opportunities to recall vocabulary from mind storage to make the learning stronger.
- Showed that he SBR method is one effective option to overcome one great barrier of English vocabulary: Forgetting. The method helps students to learn through spaces of time that let the memory rest.
- Demonstrated that the SBR method helped students to learn and reduce their mistake rate in receptive and productive activities.
- Showed that vocabulary can be assessed with short test that focus the attention on a meaningful task.

- Showed that the time patterns to recall the vocabulary could be applied in the distinct stages of the class. Also, that it is difficult to establish a general pattern between classes because of the interruptions due to public holidays or school events. However, the important aspect is to give students a moment during each class to apply the *active recall*.
- Exemplified that memory can be used to develop tasks with a purpose beyond just cramming the information to produce rote learning.
- Exemplified that different resources could be used to create tasks that require students to apply the active recall with an objective beyond just memorization.
- Marked the beginning for students to develop their plan with active recall moments. This done through tasks that cover diverse sources and daily activities (playing videogames, reading a book, watching a video/movie, listening to music, etc.).
- **Some recommendations for further research.**
 - Apply the SBR method to a complete session. In this case the planning was not finished due to intervention of public holidays and school events.
 - Observe the impact of the SBR method in the development of a final product (written or spoken).
 - Extend the duration of the homework tasks for more than a week.

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ANNEXES

Annex 1. Observation guide

| Elementos de observación | Anotaciones |
|---|--------------------|
| Nombre de la escuela | |
| CCT | |
| Turno | |
| Directora | |
| Profesora titular | |
| Profesor en formación | |
| Grado y grupo | |
| Tema de las clases observadas | |
| ¿Cómo se presenta el vocabulario a los estudiantes? | |
| ¿Qué estrategias parecen ser más efectivas para enseñar vocabulario? | |
| ¿Qué estrategias parecen no tener mucho impacto para los estudiantes en el aprendizaje de vocabulario? | |
| ¿Qué barreras presentan los alumnos para aprender vocabulario en inglés? | |
| ¿Qué pasa en clases posteriores a la introducción del vocabulario? ¿Lo recuerdan con facilidad? ¿Tienen problemas para recordar el vocabulario? | |

Annex 2. Survey

Género: **M** **F**

Edad:

Objetivo: Recabar información las dificultades que afrontan los estudiantes de tercer grado de secundaria al aprender nuevo vocabulario

Instrucciones: Subraya la respuesta que creas apropiada según tu opinión

1. ¿Cuánto vocabulario consideras que tienes para comprender un texto o conversación inglés?
Nada **Poco** **Un poco, necesito mas** **Mucho, pero necesito ponerlo a prueba**
2. ¿Consideras que necesitas aprender más vocabulario en inglés?
No, pero si practicar **Si, mucho** **Si y también practicarlo**
3. ¿Tienes dificultades para aprender nuevo vocabulario en Ingles?
No **Pocas** **Ni pocas ni muchas** **Bastantes**
4. ¿Cuál es la situación que te detiene de aprender vocabulario en inglés?
No me gusta **No lo entiendo** **Es difícil** **Tengo mala memoria** **No se me graban las cosas**
5. ¿Qué tan importante consideras que es tu memoria en el aprendizaje del idioma inglés?
Importante porque me permite acordarme **Importante pero también la práctica**
6. ¿Qué tan frecuentemente olvidas el vocabulario en inglés?
Pocas veces **Algunas veces** **Siempre olvido**
7. ¿Qué tan buena consideras que es tu memoria actualmente?
Muy buena **Buena** **Más o menos** **Mala** **Muy mala**
8. ¿Qué es lo más difícil a la hora de utilizar vocabulario en inglés?
No me acuerdo de nada **Me da miedo equivocarme y decir o escribir mal las cosas**
9. ¿Te gustaría probar técnicas para mejorar tu retención memorística en clase de inglés?
Sí **No**
10. ¿Crees que entrenar tu memoria te sea útil para poder recordar mejor y poder hablar y escribir más en inglés?
Si, muy de acuerdo **Si, suena interesante** **Necesito experimentar**

Annex 3. Interview guide

Guía de entrevista sobre el aprendizaje del vocabulario en inglés en estudiantes del tercer grado de secundaria.

Fecha: 15 de diciembre de 2022

Lugar: Escuela secundaria oficial No.0246 "15 de septiembre", Santa María del monte, Estado de México.

Objetivo: Esta entrevista tiene como finalidad conocer cuál es la percepción del docente titular de la materia de inglés en relación con el aprendizaje del vocabulario en los estudiantes de tercer grado de secundaria. Los datos obtenidos serán usados para tener un punto más de referencia en cuanto a la investigación referente a la facilidad con la que los estudiantes olvidan el vocabulario que aprenden en clase

Entrevistador: Docente en formación Christopher Corral Escobar

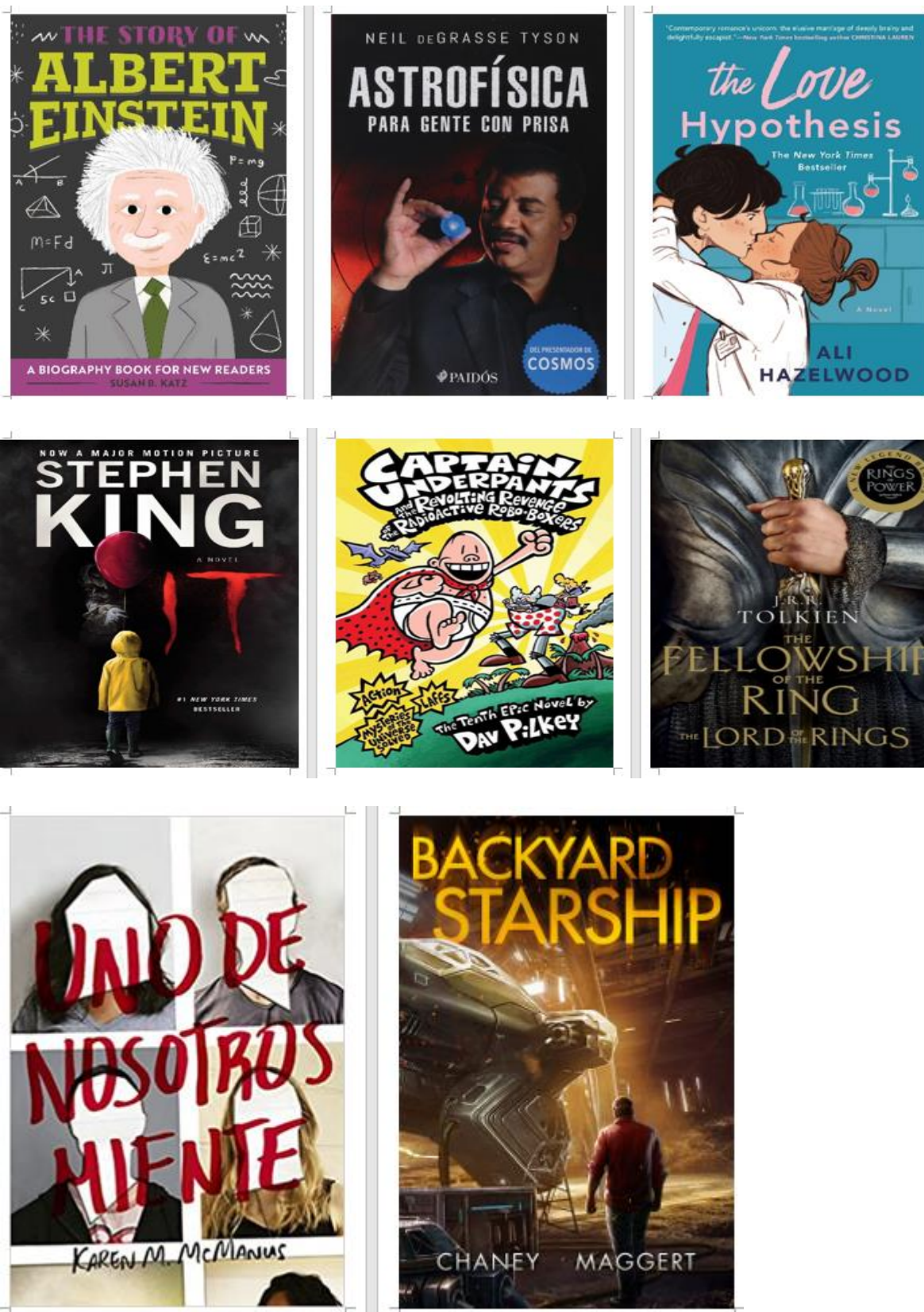
Entrevistado: Docente titular de la materia de inglés en Segundo y tercer grado.

Características de la entrevista: El tiempo estimado de la entrevista es de 4 a 10 minutos, el nombre del entrevistado se mantendrá anónimo y la entrevista será de tipo semiestructurada.

Temas para tratar:

- Saludo y presentación.
- Importancia del aprendizaje del vocabulario en inglés.
- Estrategias de la enseñanza del vocabulario.
- implicación de la memoria en el aprendizaje.
- Barreras para el aprendizaje del vocabulario en inglés.
- Despedida y agradecimiento.

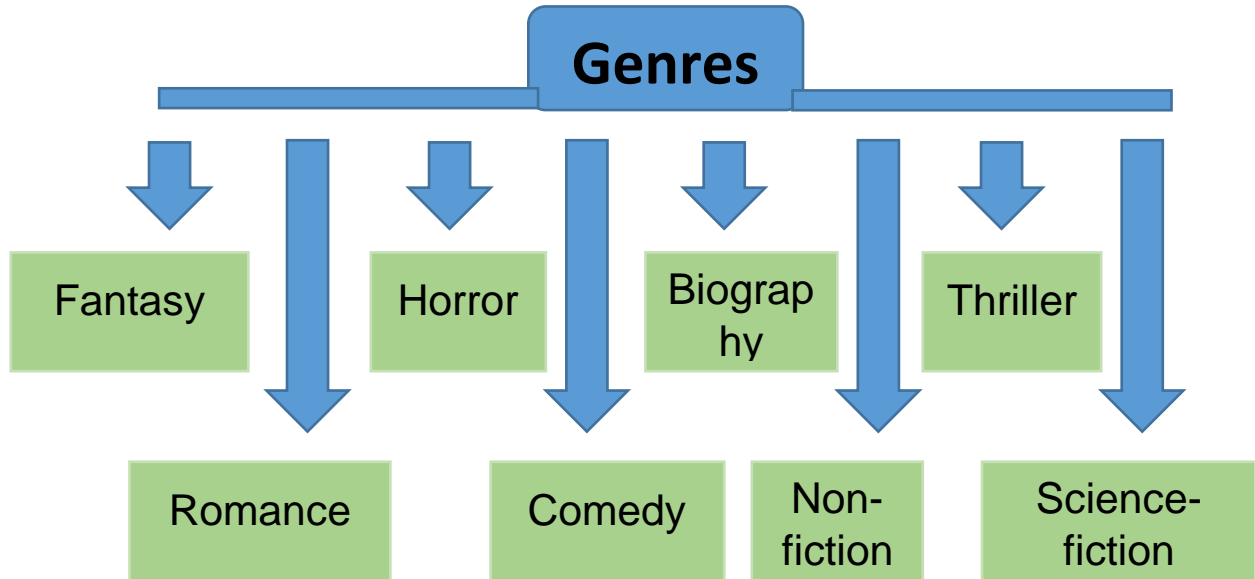
Annex 4. Flashcards



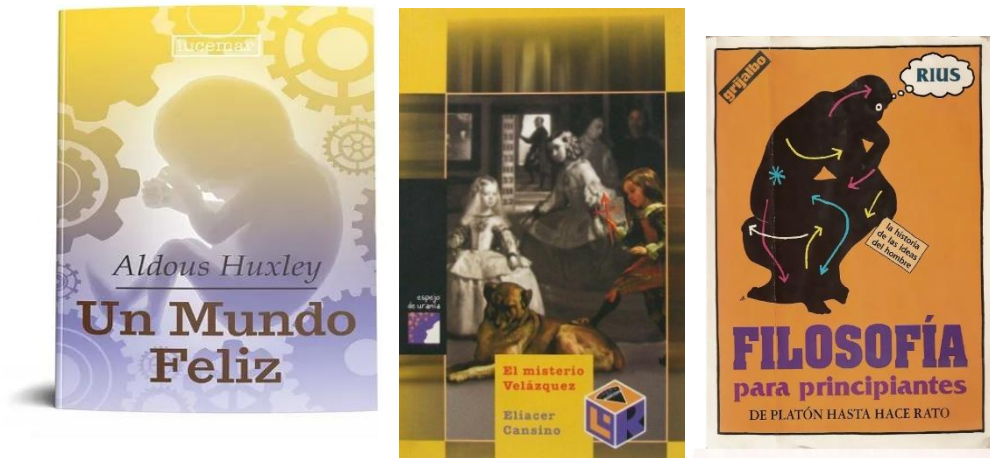
Annex 5. Observation guide for activities.

| Observation guide | |
|--|--|
| Activity | |
| How were materials used? | |
| Was the objective achieved? | |
| Students' reaction to the material/activity. | |
| Suggestions and final comments. | |

Annex 6. Concept map (fantasy, romance, comedy, biography, non-fiction, science fiction).



Annex 7. Books



Annex 8. Worksheet

Match the book genres to the pictures

autobiography biography comedy fantasy horror
non-fiction romance science-fiction thriller

1 science fiction 2 _____ 3 _____

4 _____ 5 _____ 6 _____

7 _____ 8 _____ 9 _____

Match the book genres to the pictures

autobiography biography comedy fantasy horror
non-fiction romance science-fiction thriller

1 science fiction 2 _____ 3 _____

4 _____ 5 _____ 6 _____

7 _____ 8 _____ 9 _____

Annex 9. Memo game



Fantasy

Typical characters: Dragon, mage, sorceress, knight, beast, king, princess, queen, prince.

Places: Castle, forest, hut, kingdom.

Features: Takes place in the medieval times, it rescues values like honor and bravery.

Vocabulary related: Sword, armor, helmet, horse, fight, fire, attack



Horror

Typical characters: Monster, ghost, beast, assassin.

Places: Haunted house, graveyard, hospital.

Features: It tries to scare the reader.

Vocabulary related: Clown, zombie, vampire, mummy, werewolf, night.



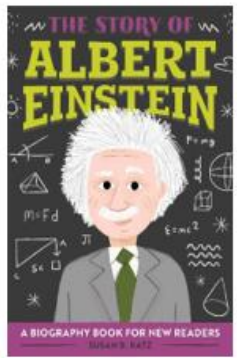
Comedy

Typical characters: Cartoons, kid, animals.

Places: City, town, house, irreverent places.

Features: It tries to entertain the reader, make him laugh.

Vocabulary related: Irreverent, weird, unusual, funny.




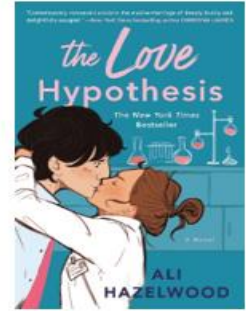

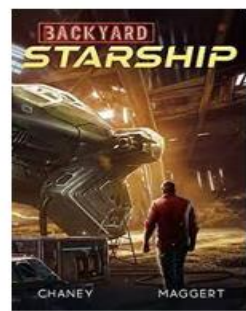
Biography

Typical characters: Historical and famous people.

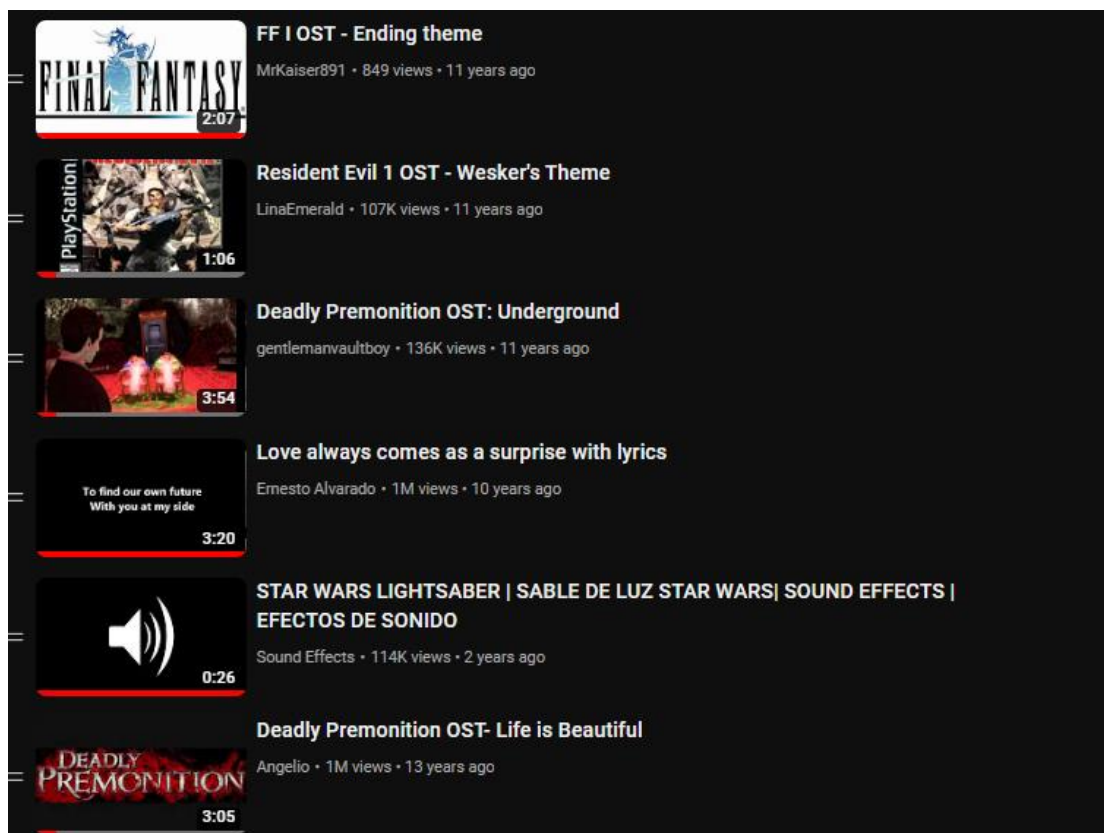
Places: Real countries, cities, and towns.

Features: It informs about the life of real characters.

Vocabulary related: True, description, life, studies, works, education.

| | | | |
|---|---|--|--|
|  | <p>Non-fiction</p> <p>Typical characters: Real people.</p> <p>Places: Real places.</p> <p>Features: It is based on real information about different things: science, research, education, etc.</p> <p>Vocabulary related: Field, facts, based on, discussion, inform.</p> |  | <p>Romance</p> <p>Typical characters: Humans.</p> <p>Places: Every place is possible.</p> <p>Features: It follows the process of a relationship; it could be sad or happy.</p> <p>Vocabulary related: Love, kiss, hug, lovers, beloved, darling, husband, wife, girlfriend, boyfriend, friend.</p> |
|  | <p>Thriller</p> <p>Typical characters: Criminal, detective, assassin, police.</p> <p>Places: Uses real places but the story is not true, or it can be imaginary locations.</p> <p>Features: It is not about horror, it is centered into mystery and suspense</p> <p>Vocabulary related: Clue, action, fights, confrontation.</p> |  | <p>Science fiction</p> <p>Typical characters: Alien, astronaut, machines, robot.</p> <p>Places: Uses real places but the story is not true, or it can be imaginary locations.</p> <p>Features: It creates a whole imaginary world from the writer mind.</p> <p>Vocabulary related: Space, discover, planet, time, travel.</p> |

Annex 10. Songs (fantasy, horror, thriller, romance, science fiction, comedy in this order).



FF I OST - Ending theme
MrKaiser891 • 849 views • 11 years ago

Resident Evil 1 OST - Wesker's Theme
LinaEmerald • 107K views • 11 years ago

Deadly Premonition OST: Underground
gentlemanvaultboy • 136K views • 11 years ago

Love always comes as a surprise with lyrics
Ernesto Alvarado • 1M views • 10 years ago

STAR WARS LIGHTSABER | SABLE DE LUZ STAR WARS| SOUND EFFECTS | EFECTOS DE SONIDO
Sound Effects • 114K views • 2 years ago

Deadly Premonition OST- Life is Beautiful
Angelio • 1M views • 13 years ago

Annex 11. Checklist

| Criteria | Yes | No |
|----------------------------|-----|----|
| Volunteer | | |
| First task round | | |
| Second task round | | |
| Obligatory and final round | | |

Annex 12. Random tasks

| | | | |
|--|---|---|---|
| Task: Search on YouTube: “Final Fantasy OST” write the genre of that kind of music and write the name of one song you like. | Task: Search on google: “Aldous Huxley books” look at the covers and write the title and genre of 2 books that catch your attention. | Task: Search on google: “Lovecraft books” look at the covers and write the title and genre of 2 books that catch your attention. | Task: Search on YouTube: “No man’s sky OST” write the genre of that kind of music and write the name of one song you like. |
| Task: Search two books in your house. Write the title and genre of those books. | Task: Search on YouTube: “Leap year movie trailer” watch the video and write the genre of that movie. | Task: Search on YouTube: “Game of thrones trailer” watch the video and write the genre of that series. | Task: Search two movies in your house. Write the title and genre of those movies. |

| | | | |
|--|--|--|--|
| Task: Search on YouTube: “Alien Isolation trailer” watch the video and write the genre of that videogame. | Task: Search on YouTube: “murdered soul trailer” watch the video and write the genre of that videogame. | Task: Ask to 2-3 persons in your family: Which is your favorite book? And write the answers. | Task: Ask to 2-3 persons in your family: “Which is your favorite book?” And write the answers. |
| Task: Ask to 2-3 persons in your family: “Which is your favorite movie?” And write the answers. | Task: Search a youtuber or influencer that talks about books and write the channel’s name. | Task: Search a youtuber or influencer that talks about movies and write the channel’s name. | Task: Recommend a book to 5 different persons and write the name and genre of those books. |

Annex 13. Volunteers



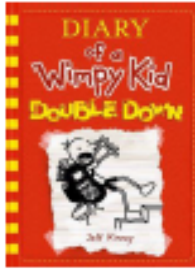
Annex 14. Exam

Genres test

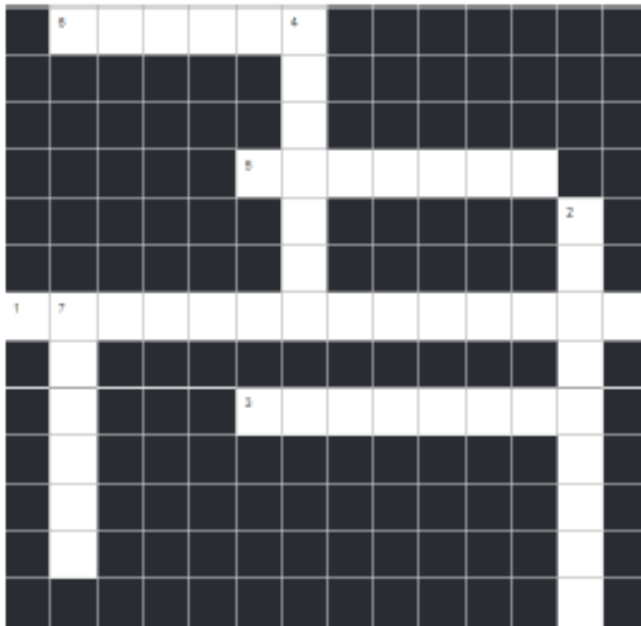
Student's name _____

Part 1. Write the genre on the line according to the cover.

Horror Comedy Fantasy



Part 2. Fill the crossword puzzle about genres



Horizontals

1. The typical characters are aliens and astronauts. It talks about the space (Star Wars is an example)
3. It has a mystery ambience. The main characters are assassins, policemen and detectives.
5. It talks mostly about medieval times and magic (one example is Harry Potter)
6. The typical characters are zombies, monsters, and ghosts (the 'It' movie is an example)

Verticals

2. It talks about a person's life. It has real information and is written in third person. (Albert Einstein life or Da Vinci are examples)
4. It mostly talks about love (The Love Hypothesis or Eleanor & Park are examples)
7. It is about happy stories. The style is made with cartoons (Captain Underpants is an example)

Part 3. Listen to the audio and complete the dialogue:

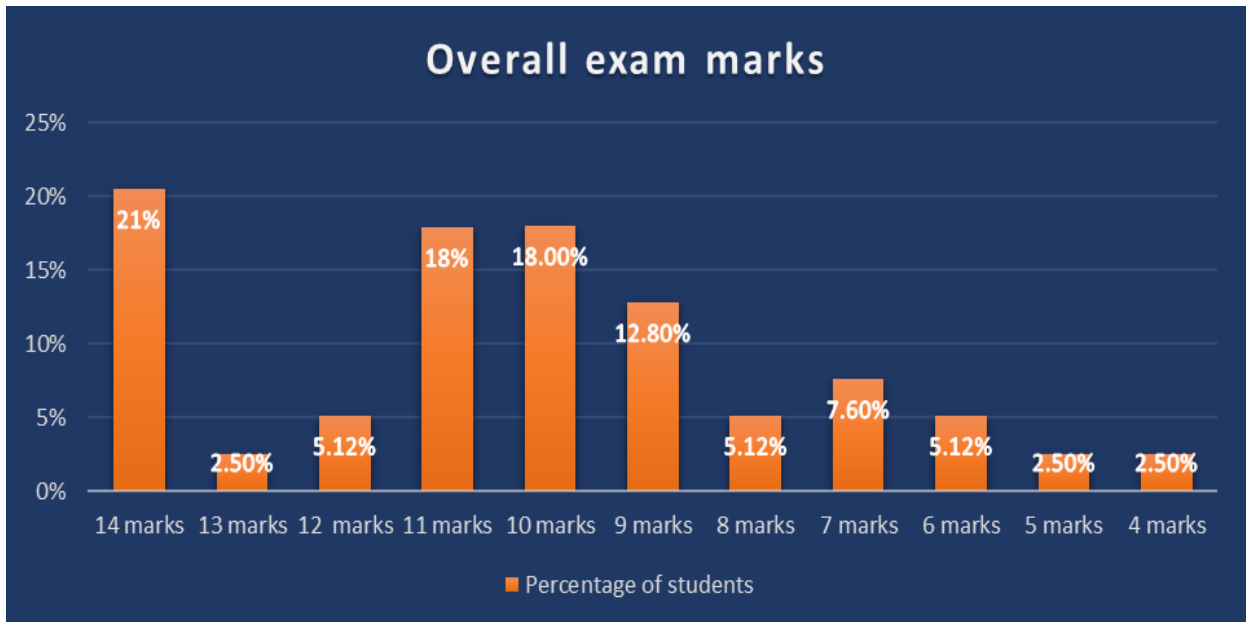
Person 1 _____?

Person 2 _____ The martian.

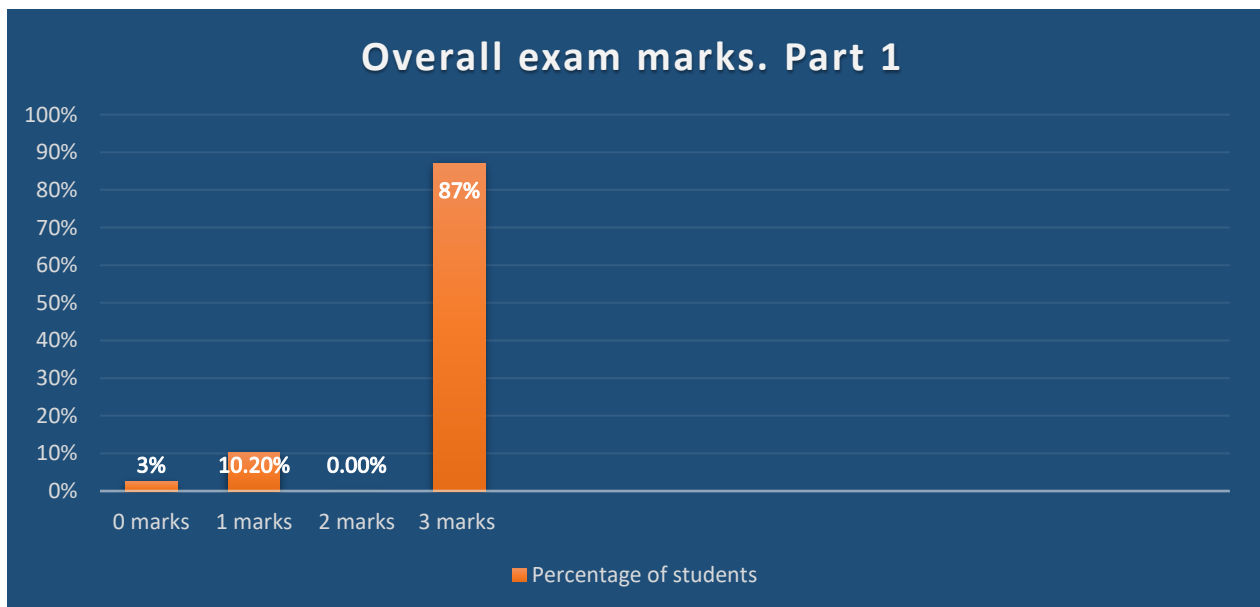
Person 1 What is it _____?

Person 2 It is about _____.

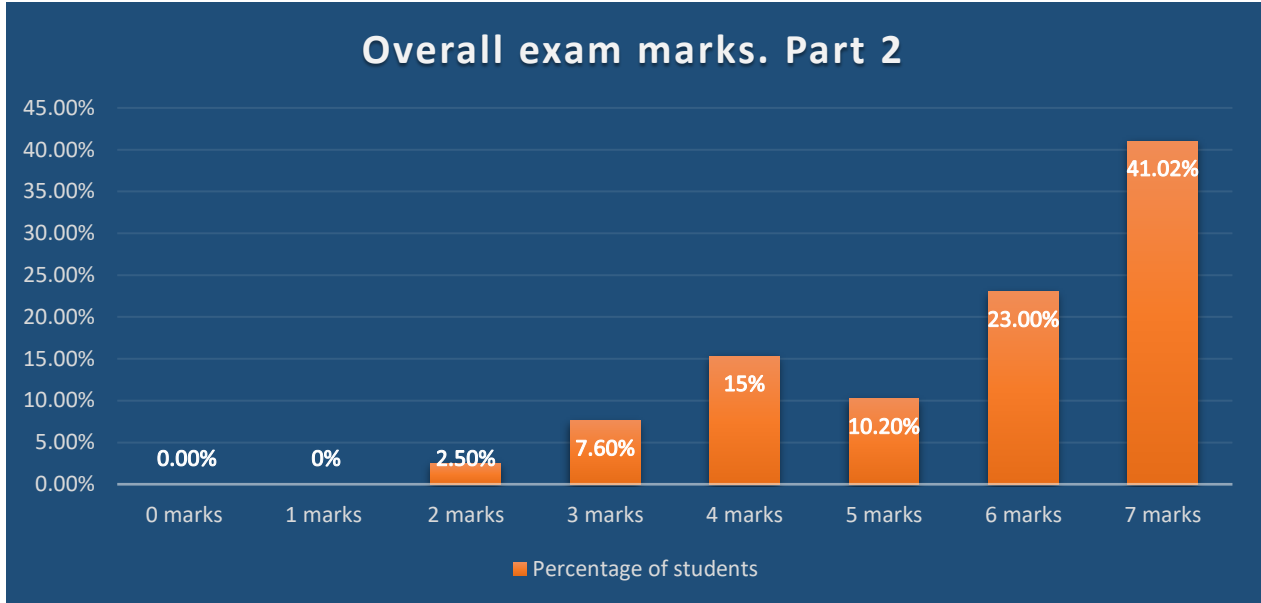
Annex 15. overall exam results



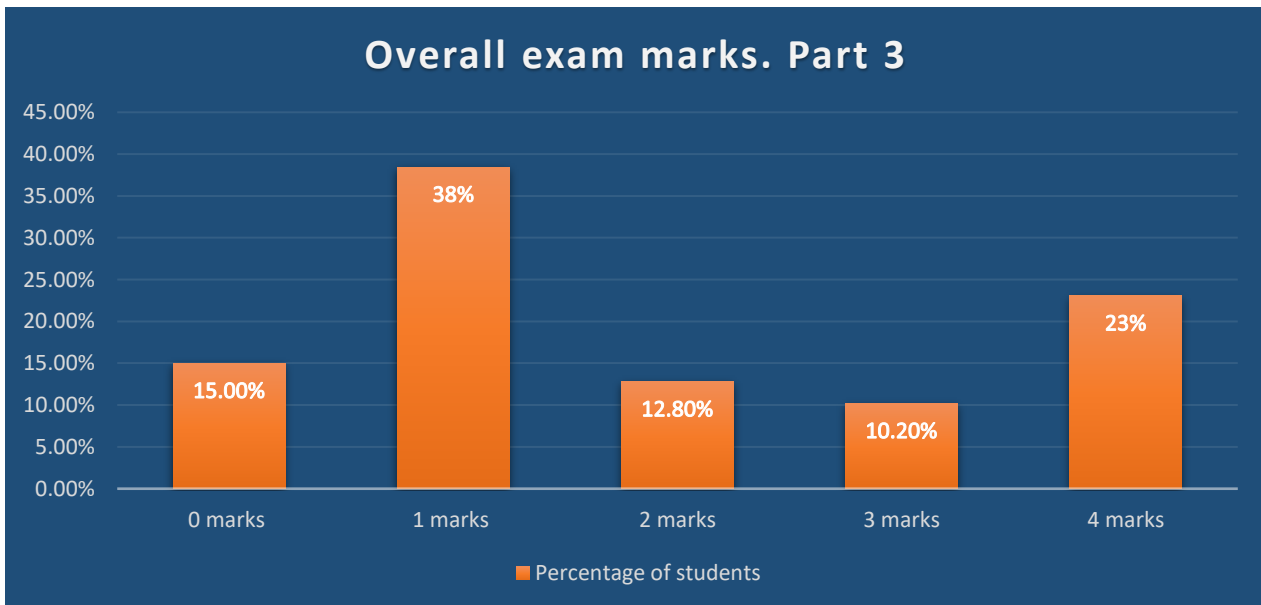
Annex 16. Overall exam results. Part 1



Annex 17. Overall exam results. Part 2



Annex 18. Overall exam results. Part 3



Annex 19. Mistake rate results overview

| Words | Activity 3 worksheet | Activity 4 Memo | Activity 5 Music | Activity 6 Spelling | Final test (receptive) | Final test (productive) |
|--------------------|-------------------------|--------------------|---------------------|------------------------|---------------------------|----------------------------|
| Fantasy | 21% | 10% | 38% | 26% | 12.80% | 15.30% |
| Romance | 31.50% | 0% | 25.60% | 7.60% | Absent | 0% |
| Horror | 26.30% | 0% | 15.30% | Absent | 10.20% | 2.50% |
| Science fiction | Absent | 30% | 64.10% | 46.10% | Absent | 30.70% |
| Thriller | 38.40% | 30% | 51.20% | 43.50% | Absent | 41% |
| Comedy | 68.40% | 0% | 20.50% | 12.80% | 7.60% | 7.60% |
| Biography | 7.80% | 0% | Absent | 53.80% | Absent | 35.80% |
| Non-fiction | 15.70% | 20% | Absent | Absent | Absent | Absent |

ASUNTO: Carta de liberación de trabajo de titulación

Toluca, Estado de México, 30 de junio de 2023

CRISTOPHER CORRAL ESCOBAR
ALUMNO DEL OCTAVO SEMESTRE DE LA
LICENCIATURA EN ENSEÑANZA Y APRENDIZAJE DEL
INGLÉS EN EDUCACIÓN SECUNDARIA
PRESENTE

Quien suscribe, Lic. Araceli Malleli Peña Vargas, en su calidad de asesora, y en atención al cumplimiento en tiempo y forma de los procedimientos de construcción, asesoría, dictaminación y acreditación de su trabajo de titulación que la normatividad vigente marca, se dirige a usted, con respeto, para expedirle la presente

CARTA DE LIBERACIÓN DE SU TRABAJO DE TITULACIÓN

en la modalidad de Tesis de Investigación que lleva por título: The space based repetition method as a support in the English vocabulary learning of third grade secondary school students.

Por lo anterior, se le informa que, puede continuar con los trámites correspondiente para la programación de su examen profesional.

Sin otro particular, le desea éxito.

ATENTAMENTE



Lic. Araceli Malleli Peña Vargas

c.c.p. Mtro. Inocencio Montoya Escobar. Responsable del Área de Exámenes Profesionales.
c.c.p. Lic. Cindy Yareli Gaxiola Camacho. Jefa del Departamento de Control Escolar.

ASUNTO: Se asume responsabilidad del trabajo de titulación

Toluca, Estado de México, 30 de junio de 2023

MTRA. MARÍA DEL SOCORRO ARREDONDO ZÁRATE
DIRECTORA DE LA ESCUELA NORMAL SUPERIOR
DEL ESTADO DE MÉXICO
PRESENTE

Quien suscribe, Christopher Corral Escobar, estudiante del octavo semestre de la Licenciatura en Enseñanza y Aprendizaje del Inglés en Educación Secundaria, en atención a la normatividad vigente para el proceso de titulación, se dirige a su persona con respeto, para informarle que asume plena y conscientemente la responsabilidad total en la autenticación, originalidad, estructura y formato del trabajo de titulación que presentará en su examen profesional, en su modalidad de Tesis de Investigación, con el título: The space based repetition method as a support in the English vocabulary learning of third grade secondary school students, para proceder al trámite correspondiente.

Asimismo, le refiere que se han atendido las recomendaciones realizadas por el asesor y las sugerencias de los dictaminadores asignados; por lo que asume el compromiso de llevar a cabo el proceso de réplica establecida en el protocolo conveniente.

Sin otro particular por el momento, le envía un cordial saludo.

ATENTAMENTE



Christopher Corral Escobar

"2023. Año del Septuagésimo Aniversario del Reconocimiento del Derecho al Voto de las Mujeres en México"

ESCUELA NORMAL SUPERIOR DEL ESTADO DE MÉXICO

SECCIÓN: SUBDIRECCIÓN ACADÉMICA
No. DE OFICIO: DIR/SAC/AEP/0349/2022-2023
ASUNTO: Se autoriza la edición de trabajo de titulación

Toluca, Estado de México, 30 de junio de 2023

CRISTOPHER CORRAL ESCOBAR
ESTUDIANTE DEL OCTAVO SEMESTRE DE LA
LICENCIATURA EN ENSEÑANZA Y APRENDIZAJE DEL INGLÉS EN EDUCACIÓN
SECUNDARIA
PRESENTE

La Dirección de la Escuela Normal Superior del Estado de México, se dirige a usted, respetuosamente, en atención al cumplimiento en tiempo y forma de la normatividad vigente del procedimiento de elaboración, construcción, dictaminación, liberación y acreditación del trabajo de titulación en su modalidad de TESIS DE INVESTIGACIÓN, con el título: THE SPACE BASED REPETITION METHOD AS A SUPPORT IN THE ENGLISH VOCABULARY LEARNING OF THIRD GRADE SECONDARY SCHOOL STUDENTS, asesorado por la LIC. ARACELI MAYELLI PEÑA VARGAS; para informarle que se le AUTORIZA la edición correspondiente.

Sin otro particular, le exhorta a dar continuidad al procedimiento para el logro de su examen profesional respectivo.



MSAZ/JMMC/FJGR/VE/19

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SUBSECRETARÍA DE EDUCACIÓN SUPERIOR Y NORMAL
DIRECCIÓN GENERAL DE EDUCACIÓN NORMAL
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