

Universidad Nacional de Loja

Facultad de la Educación, el Arte, y la Comunicación Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros

Crosswords puzzles and improving English spelling among second-year bachillerato students at a public institution in Loja city. School year 2021 – 2022.

Crucigramas y mejoramiento de deletreo en Inglés entre los estudiantes de segundo año de bachillerato de una institución pública de la ciudad de Loja. Año lectivo 2021 – 2022.

Trabajo de Integración Curricular previo a la obtención del título de Licenciado en Pedagogía del Idioma Inglés.

AUTOR:

Jhunior Hernán González Sarango

DIRECTORA:

Lcda. Karina Alexandra Celi Jaramillo Mg. Sc.

LOJA - ECUADOR

2022

Certificación

Lcda. Karina Alexandra Celi Jaramillo Mg. Sc.

DIRECTORA DEL TRABAJO DE INTEGRACIÓN CURRICULAR

CERTIFICA:

Que una vez revisado y culminado el proceso de elaboración del Trabajo de Integración Curricular, así como para dar cumplimiento, a las directrices de la guía para la escritura y presentación del informe de Trabajo de Integración Curricular; y, de conformidad a lo que dispone el Art. 231, inciso segundo del Reglamento de Régimen Académico de la Institución, se cambia el título del Trabajo de Integración Curricular de mayúsculas a minúsculas, el que se denomina Crosswords puzzles and improving English spelling among second-year bachillerato students at a public institution in Loja city. School year 2021 – 2022, de autoría

del joven **JHUNIOR HERNÁN GONZÁLEZ SARANGO**, mismo que cumple con todos los requisitos exigidos por la Universidad Nacional de Loja, para el efecto; previo a la obtención

del título de Licenciado en Pedagogía del Idioma Inglés, por lo que autorizo la presentación

para la respectiva sustentación y defensa.

Lo certifico.

Loja, 17 de agosto del 2022

Lcda. Karina Alexandra Celi Jaramillo Mg. Sc.

DIRECTORA DEL TRABAJO DE INTEGRACIÓN CURRICULAR

Autoría

Yo, **Jhunior Hernán González Sarango**, declaro ser autor del presente Trabajo De Integración Curricular y eximo expresamente a la Universidad Nacional de Loja y a sus representantes jurídicos de posibles reclamos y acciones legales, por el contenido del mismo. Adicionalmente acepto y autorizo a la Universidad Nacional de Loja la publicación de mí Trabajo De Integración Curricular en el Repositorio Digital Institucional – Biblioteca Virtual.

Firma: _

Cédula de Identidad: 1104909864

Fecha: 13 de septiembre de 2022

Correo electrónico: jhunior.gonzalez@unl.edu.ec

Celular: 0987922330

Carta de autorización del Trabajo de Integración Curricular por parte del autor para la consulta de producción parcial o total, y publicación electrónica de texto completo.

Yo Jhunior Hernán González Sarango, declaro ser autor del Trabajo de Integración Curricular titulado: Crosswords Puzzles and Improving English Spelling among Second-Year Bachillerato Students at a Public Institution in Loja City. School Year 2021 – 2022, como requisito para optar el título de Licenciado en Pedagogía del Idioma Inglés, autorizo al sistema Bibliotecario de la Universidad Nacional de Loja para que con fines académicos muestre la producción intelectual de la Universidad, a través de la visibilidad de su contenido de la siguiente manera en el Repositorio Institucional.

Los usuarios pueden consultar el contenido de este trabajo en el Repositorio Institucional, en las redes de información del país y del exterior con las cuales tenga convenio la Universidad. La Universidad Nacional de Loja, no se responsabiliza por el plagio o copia del Trabajo De Integración Curricular que realice un tercero.

Para constancia de esta autorización, en la ciudad de Loja, a los trece días del mes de septiembre del dos mil veintidós.

Firma: _

Autor: Jhunior Hernán González Sarango

Cédula: 1104909864

Dirección: Loja, la libertad

Correo electrónico: jhunior.gonzalez@unl.edu.ec

Celular: 0987922330

DATOS COMPLEMENTARIOS:

Directora del Trabajo de Integración Curricular: Mg. Sc. Karina Alexandra Celi Jaramillo

Dedicatoria

Dedico este trabajo de tesis a mi madre, y a mis hermanos y hermanas; por haber sido la principal fuente de inspiración, apoyo, y motivación durante el tiempo que dedique a esta etapa de estudio para culminar esta carrera. Además, quiero dedicarme este trabajo a mí mismo por creer en mí, por nunca rendirme, y por todas las malas noches que he pasado hasta llegar a esta etapa final.

~ Jhunior Hernán González Sarango

Agradecimiento

Expreso mi más sincero agradecimiento a la Institución Educativa donde se llevó a cabo este Trabajo de Integración Curricular, y a las autoridades en turno por la apertura y disponibilidad brindada para llevarlo a cabo. De igual forma agradezco a los estudiantes de Segundo Año De Bachillerato, paralelo A de la institución, por haber sido parte fundamental durante este proceso investigativo. Cabe destacar el agradecimiento a la docente de inglés de la institución educativa, y a la docente encargada de la asignatura de Integrative Curriculum Research de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros por su orientación y asesoramiento. Así mismo, expreso mi agradecimiento a la Universidad Nacional de Loja, a la Facultad de la Educación, el Arte y la Comunicación, al departamento de Pedagogía de los Idiomas Nacionales y Extranjeros, y a todas las autoridades encargadas de las diferentes funciones mencionadas anteriormente. Por último, pero no menos importante, expreso mi agradecimiento a la Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT), por haber financiado mis estudios académicos a lo largo del desarrollo de la carrera cursada.

~ Jhunior Hernán González Sarango

Index of Contents

Po	rtada	i
Ce	ertificación	. ii
Αt	ıtoría	, iii
Ca	nrta de autorización	iv
De	edicatoria	V
Ag	gradecimientogradecimiento	vi
In	dex of Contents	vii
	Index of Tables	ix
	Index of Figures	ix
	Index of Annexes	ix
1.	Title	1
2.	Resumen	2
2	.1. Abstract	. 3
3.	Introduction	4
4.	Theoretical Framework	7
4	.1 Spelling	. 7
	4.1.1 Definition of spelling	. 7
	4.1.2 Importance of spelling	. 8
	4.1.3 Components of spelling	8
	4.1.4 Stages of spelling	9
	4.1.5 Common spelling issues	10
	4.1.6 How to test spelling knowledge	11
4	.2 Crossword puzzles	12
	4.2.1 Definition of crossword puzzles	12
	4.2.2 Advantages of using crossword puzzle	12
	4.2.3 Types of Crossword Puzzles	14

4.2.4 Crossword puzzles from the perspective of cognitivism	. 19
4.2.5 Application of crossword puzzle in spelling	. 21
4.2.6 Strategies to apply crossword puzzles	. 21
4.2.7 Rules for crosswords puzzles	. 22
3 Previous studies	. 23
Methodology	26
1. Research setting	. 26
2. Procedure	. 26
5.2.1. Research Methods	. 27
5.2.2. Data collection sources and techniques	. 28
5.2.3. Research participants	. 29
3. Data analysis	. 29
Results	32
1. Pretest and posttest results	. 32
2. Interview results	. 35
Discussion	39
Conclusions	42
Recommendations	43
References	44
Annexes	47
	4.2.4 Crossword puzzles from the perspective of cognitivism 4.2.5 Application of crossword puzzle in spelling 4.2.6 Strategies to apply crossword puzzles 4.2.7 Rules for crosswords puzzles 3 Previous studies Methodology 1. Research setting 2. Procedure 5.2.1. Research Methods 5.2.2. Data collection sources and techniques 5.2.3. Research participants 3. Data analysis Results 1. Pretest and posttest results 2. Interview results Discussion Conclusions References References Annexes

Index of Tables

Table 1. Studies Investigating the Use of Crossword Puzzles to Improve Spelling	23
Table 2. Wilcoxon Test	32
Table 3. Wilcoxon Ranks	33
Index of Figures	
Figure 1. Block Grid Crossword Puzzle	15
Figure 2. Quickie Crossword Puzzle	15
Figure 3. Cryptic Crossword Puzzle	16
Figure 4. Barred Grid Crossword Puzzle	17
Figure 5. Themed Crossword Puzzle	17
Figure 6. Skeleton Crossword Puzzle	18
Figure 7. Comparison Between Pretest and Posttest Scores	33
Figure 8. What emotions did you feel when developing crossword puzzles in class?	35
Figure 9. Were the crossword puzzles easy to develop?	36
Figure 10. Did using crossword puzzles help you to improve your spelling ability?	37
Figure 11. Did you like being part of this research project?	38
Index of Annexes	
Annex 1. Pertinencia del Proyecto de Integración Curricular	47
Annex 2. Dirección del Proyecto de Integración Curricular	48
Annex 3. Pre/Posttest	49
Annex 4. Pre/Posttest Answer Key	53
Annex 5. Interview	55
Annex 6. Scoring Scale	57
Annex 7. Lesson Plans	58

1. Title

Crosswords puzzles and improving English spelling among second-year bachillerato students at a public institution in Loja city. School year 2021-2022.

2. Resumen

El presente trabajo de investigación tuvo como objetivo mejorar la habilidad de deletreo de los estudiantes de segundo año de bachillerato de una institución educativa pública mediante el uso de crucigramas como estrategia de aprendizaje. Los participantes de la investigación fueron cinco chicas y cinco chicos, con edades comprendidas entre los 16 y los 17 años aproximadamente. Este estudio empleó una metodología de métodos mixtos. Por un lado, los datos cuantitativos se recolectaron mediante la administración de un pre y posttest al inicio y al final de la intervención. El análisis de estos datos se realizó haciendo uso de fórmulas estadísticas de la prueba de rangos con signo de Wilcoxon para determinar si hubo un cambio significativo antes y después de la intervención. Por otro lado, los datos cualitativos se recogieron mediante la aplicación de una entrevista al final de la intervención. Los datos obtenidos se analizaron e interpretaron usando el método de análisis temático, con el fin de identificar patrones en el significado de los datos. Los resultados dejaron en evidencia que el uso de crucigramas en la clase tuvo un efecto positivo en la habilidad de deletreo de los estudiantes, ya que pudieron aumentar su puntaje promedio de 6,22 en el pretest a 8,70 en el posttest. Evidentemente, la diferencia es estadísticamente significativa (p≤ 0,05). Además, su percepción sobre la aplicación de crucigramas para mejorar la ortografía fue buena porque se sentían felices y emocionados al momento de desarrollarlos. Ellos consideraron que esta estrategia les dio la oportunidad de mejorar su habilidad ortográfica, aumentar su vocabulario, mejorar su estado de ánimo y fortalecer sus vínculos sociales.

Palabras clave:

consonantes dobles, factores afectivos, letras silenciosas, métodos mixtos, pronunciación similar

2.1. Abstract

This research work aimed at improving the spelling ability of second-year students at a public high school by using crossword puzzles as a learning strategy. The research participants included five girls and five boys aged between 16 and 17 years old approximately. This study employed a mixed methods methodology. On the one hand, the quantitative data was collected through the administration of a pre and posttest at the beginning and at the end of the intervention. The analysis of this data was done by using statistical formulas of the Wilcoxon signed-rank test to determine if there was a significant change before and after the intervention. On the other hand, the qualitative data was gathered by applying an interview after the intervention. The data was analyzed and interpreted with the thematic analysis method, in order to identify patterns in meaning across the data. The findings showed that the use of crossword puzzles in the class had a positive effect on students' spelling ability as they were able to increase their mean score from 6,22 in the pretest to 8,70 in the posttest. Evidently, the difference is statistically significant (p≤ 0.05). Moreover, during the development of this strategy, learners felt happy and excited. They considered that it provided them with a lot of opportunities to improve their spelling ability, increase their vocabulary, boost their mood, and strengthen their social bonds.

Keywords:

affective factors, double consonants, mixed methods, silent letters, similar pronunciation

3. Introduction

Spelling is a complex skill and an important part of writing; it allows learners to have a clear communication through written messages. According to Moreno *et al.*, (2020), when learners develop the ability to recognize links between words of the same origin and word relationships, they are improving their communication skills. They also argue that learners who feel confident with letters and word patterns can read and comprehend more complex texts, and have the necessary language tools to better convey their own ideas through both written and verbal communication. In the Ecuadorian system of education, students are expected to reach the proficiency level B1.1 at the end of second-year of high school (according to the division made by the Ministry of Education). They must have accurate enough knowledge about spelling, and they have to apply it most of the time in written or oral texts (MinEduc, 2016).

However, more than 70% of students in Ecuador experience difficulties to spell simple and complex words in English. Consequently, the low level of learners' spelling ability is causing them not to reach their corresponding English proficiency level (MinEduc, 2016). According to Beare (2019), the common English spelling issues are divided into words with silent letters, words with double consonants, and words with multiple or similar pronunciations; which are, in most cases, very confusing for learners. Thus, they are prone to make spelling mistakes. Amiri (2017), Diniyati (2009), Moreno (2020), Puspita (2017), and Salehi (2017) agree that the main reason for spelling complications in learners is that the English language presents inconsistent relationship between phonemes (speech sounds) and graphemes (written symbols). Moreover, they claim that the lack of knowledge about the actual system of English causes students to make wrong use of letters.

Therefore, this research study had the purpose of improving the spelling ability of the second-year students at a public high school in the city of Loja, through the use of crossword puzzles as an interactive activity in the classroom. In addition, this research also explored the perspectives of students on the use of crossword puzzles to improve spelling. In order to fulfill this purpose, the following central research question was formulated: What are the effects of using crossword puzzles to improve the spelling ability of the second-year students, at a public high school in the city of Loja during the 2021 - 2022 school year?

The learning process of English can be a complex task, especially when learners start reading and writing words or when they have not had much exposure to the English language. For this reason, many authors have carried out research studies with the purpose of implementing crosswords puzzles as a class activity in order to determine and measure the

effects, and the perception of students when applying crosswords puzzles during the lesson. After conducting their research, all of them found that using crossword puzzles significantly improved the learners' spelling ability, and the analysis of students' responses to some interviews and questionnaires indicated that they were very active during the class and had positive attitudes toward using crossword puzzles. Also, researchers found a significant difference between the pretest and posttest results. In other words, the use of crossword puzzles in the lessons was very beneficial for them (Amiri 2017, Diniyati 2009, Moreno 2020, Puspita 2017, Salehi 2017).

According to Amiri (2017), Diniyati (2009), Moreno (2020), Puspita (2017), Profita (2012), and Salehi (2017), sometimes it is impossible to collect all the information that is sought or needed. That's why most researchers from previous studies agree that other researchers interested in researching on the same topic should apply the same variables with different academic years. They also suggest using the crossword puzzle strategy to try to improve other English language skills, as well as to improve some affective factors such as self-esteem and motivation. For this reason, this thesis work aimed to investigate and cover all the gaps mentioned above by using the same variables but different teaching processes and techniques. In this way, the existing breaches in previous studies were covered, but new gaps were originated, which will be covered by other researchers in the future.

The execution of this project contributed significantly to the educational field and especially to the teaching of spelling in English. The investigated sector (students) was able to acquire and improve their knowledge about spelling. Likewise, the development of this work helped to meet the learning objectives of spelling established in the national curriculum. Also, this project allowed the research community to expand its database on processes and techniques for teaching English spelling. This thesis work was widely related to research line number 5 of the UNL, which is based on processes, knowledge, and innovation in education in order to contribute to the generation of new knowledge about the reality and relevant problems of education in Ecuador, such as the teaching of spelling (Universidad Nacional de Loja, 2021). Finally, the project contributed to the search for quality education, thus contributing to the objective number 4 of the Sustainable Development Objectives (Universidad Nacional de Loja, 2021).

The objectives of the research were established based on the research question presented above. These objectives captured what the researcher wanted to achieve with his study. Thus,

the general objective aimed to improve the spelling ability of the second-year students at a public high school in the city of Loja during the 2021 - 2022 school year, by using crossword puzzles as an interactive learning strategy. In the same way, to complement the information needed, some specific objectives were stablished, including to measure the effectiveness of using crossword puzzles to enhance common spelling issues, to implement an intervention plan based on the use of crossword puzzles to improve common spelling issues, and to describe students' perceptions about the implementation of crossword puzzles as a teaching strategy for improving the spelling ability of the second-year students.

Finally, this thesis work covered three indicators of great importance and in which the second-year high school students (participants) had more difficulties. These include words with silent letters, words with double consonants of the same type, and words with similar pronunciation (homophones). The research took place in a public high school of Loja city, whose location is summarized in the following coordinates -3.996300257227824, -79.21042411690766. The time employed to develop this work were around two months, and everything ran very well. However, there were also some limitations in the process of the investigation, the most frequent were the absence of some participating students from classes, lack of technological resources in the educational institution, very short periods of time to apply all the activities planned for the class, and limited vocabulary range of some students.

4. Theoretical Framework

The purpose of the theoretical framework is to review the most relevant contents related to spelling and crossword puzzles and its evolution over time. Therefore, the topics presented in this section are divided into two subsections, the first one is related to the dependent variable, it involves definitions of spelling, components of spelling, problems with spelling, and the importance of spelling. The second subsection deals with the independent variable and includes the definition of crossword puzzles, advantages of crossword puzzles, the application of crossword puzzles, and strategies to apply crossword puzzles.

On the one hand, spelling is an essential ability that students need to handle easily and correctly, as it will help them to write a word accurately, and thus, reach the proficiency levels required by the Ministry of Education at the end of each school year. According to Amiri and Salehi (2017), spelling words correctly increases the quality of writing texts. One of the methods for teaching spelling is the use of games, one of them is crossword puzzles.

On the other hand, Paul (2003) argues that crossword puzzles are a popular game, in which learners have to fill in the blanks with letters to form words, in some cases, it can use pictures as clues. The clues can also be definitions or sentences with gaps if the learners' level is high enough. All things considered, the goal of this literature review is to present the topics that are the basis of the research and that will help to answer the research questions raised for this study.

4.1 Spelling

Spelling is the dependent variable of this study, and it is very relevant in the English learning process, as it helps students to correctly formulate words. Therefore, correct spelling causes learners to write better and more formal passages of text. The main contents related to spelling include definition of spelling, importance of spelling, components of spelling, and problems with spelling.

4.1.1 Definition of spelling

Spelling is the art of correctly assembling words from their letters and it is one of the essential components of successful writing. When a student develops the ability to recognize links between words of the same origin and word relationships that means they are improving their communication skills. Teaching students, strategies, rules, and concepts to grow their spelling and vocabulary knowledge, benefits them in all aspects of their learning, as well as in their everyday life. Since learners who feel confident with letters and word patterns can read

and comprehend more complex texts and they also have the necessary language tools to better convey their own ideas through both written and verbal communication (Moreno *et al.*, 2020).

Oakley and Fellowes (2016) argued that spelling is a complex ability and an important part of writing. Good spelling is also a social expectation and contributes to clear communication of a written message. It requires students to draw on a range of knowledge about the English language. This knowledge includes: Phonological knowledge, Orthographical knowledge, Morphemic knowledge, and Etymological knowledge.

4.1.2 Importance of spelling

Accurate spelling is important for students to get through their schooling years, as spelling is required in order to pass assessments and do tasks. Learning to spell helps students to develop a strong connection between the letters and their sounds, and learning sight words (words that cannot easily be sounded out) will assist learners in both their reading and writing. The more thoroughly students know a word, the more likely it is that they will be able to recognize it in unfamiliar texts, spell it and use it appropriately in their own speech and writing.

Studies have identified that the importance of learning the alternative spellings for words that sound the same (e.g. rain, rein, reign) means that it is easier to quickly discern the correct meaning of that word. It is not an easy process, but when children understand its clear structure and rules, unfamiliar words become more easily decodable (Kidsense, 2021).

4.1.3 Components of spelling

Spelling is learned through a combination of how words sound, how words are constructed from meaningful elements, and word origins. Spelling activities should be diverse and engaging, and relate the context of the curriculum. The components of spelling are shortly detailed below (Phillips, 2015):

Phonological knowledge. It is the ability to recognize and manipulate the spoken parts of sentences and words (Weta, 2010). Having phonological knowledge is important, because sounds (phonemes) cannot always be relied upon to be represented by the same letters (graphemes), hearing phonemes within words and knowing the range of graphemes possible for those phonemes is a key skill in spelling.

Orthographical knowledge. It refers to the information stored in memory that tells students how to represent the spoken language in written form. Orthographic knowledge makes the spelling efforts plausible and substantially reduces the margin for error. For

example, knowing that the word full has two ls when it stands alone but only one l when it is a suffix is helpful. (Apel, 2011).

Morphemic knowledge. It is the knowledge of how words are composed of one or more meaningful linguistic units, including suffixes and prefixes. In other words, morphemes are the parts of the word that carry meaning. For example, the words birds and magician contain the following meaningful components, or morphemes (Amshoff, 2020).

- bird: base word meaning "flying animal"
- -s: plural suffix meaning "more than one"
- magic: base word meaning "mysterious trickery"
- -ian: noun suffix meaning "the person who does"

Etymological knowledge. It refers to the knowledge of the origins and development of the forms and meanings of words and how they have changed over time. Understanding word origins, or what is called etymology, is useful for spelling, as it can give clues to phonological, orthographic, and morphological components of words. For example, while the Anglo heritage of English explains *ch* making the sound we hear at the beginning of *chicken*, it is the French origin that explains why we use *ch* to make the sound we hear at the beginning of *chef.* (WA, 2014).

4.1.4 Stages of spelling

Lutz (2010) states that students go through several stages of spelling development as they discover the intricacies of printed English. She describes five stages: precommunicative, semiphonetic, phonetic, transitional, and correct.

Precommunicative stage. At this stage, students use symbols from the alphabet but shows no knowledge of letter-sound correspondences. They may also lack knowledge of the entire alphabet, the distinction between upper- and lower-case letters, and the left-to-right direction of English orthography.

Semiphonetic stage. Here, students begin to understand letter-sound correspondence, that sounds are assigned to letters. They often employ rudimentary logic, using single letters to represent words, sounds, and syllables (e.g., U for you).

Phonetic stage. Students use a letter or group of letters to represent every speech sound that they hear in a word. Although some of their choices do not conform to conventional English spelling, they are systematic and easily understood. Examples are KOM for come and EN for in.

Transitional stage. At this stage, students begin to assimilate the conventional alternative for representing sounds, moving from a dependence on phonology (sound) for representing words to a reliance on visual representation and an understanding of the structure of words. Some examples are EGUL for eagle and HIGHEKED for hiked.

Correct stage. Finally, at this stage students know the English orthographic system and its basic rules. Students who spell correctly, fundamentally understand how to deal with such things as prefixes and suffixes, silent consonants, alternative spellings, and irregular spellings. A large number of learned words are accumulated, and they recognize incorrect forms. The students' generalizations about spelling and knowledge of exceptions are usually correct.

Lutz emphasizes that the change from one spelling stage to the next is a gradual one and that examples from more than one stage may coexist in a particular sample of writing. However, students do not fluctuate radically between stages, passing from phonetic back into semiphonetic spelling or from transitional back to phonetic. According to Lutz (2010), the major need for inventive spellers who are beginning to read is to have someone to answer their questions and correct their mistakes, such as the misreading of words, when necessary.

4.1.5 Common spelling issues

Spelling words in English is challenging work. Some of the main reasons for this is that the English language presents inconsistent relationship between phonemes (speech sounds) and graphemes (written symbols). According to Beare (2019), the common English spelling issues are divided into words with silent letters, words with double consonants, and words with multiple or similar pronunciations; which are, in most cases, very confusing for learners. Consequently, they are prone to make spelling mistakes.

Words with silent letters. They are words that have letters that in a given word segment are sometimes heard and sometimes not heard. For example:

- resign (g is not heard)
- resignation (g is heard)
- malign (g is not heard)
- malignant (g is heard)

Historians believe that early on English had very few silent letters. However, during the 15th century, many words from other languages, such as Latin and French, were added to the English language. Often these new words didn't follow English rules of grammar.

Since their spellings were fixed, some letters became silent when pronounced in English. Today, experts estimate that approximately 60% of English words have silent letters.

While people trying to learn English may find silent letters frustrating, they can be useful. For example, silent letters help to distinguish between homophones (words with the same sound but different spellings and meanings) in writing (Wonderopolis, 2020).

Words with double consonants. They are words with consonant letters occurring twice in succession in them. For example, the 'nn' in tunnel is a double consonant. Double consonants are frequently found in words that have a suffix added to them, for example 'beginning'. When adding certain suffixes to the endings of words such as -ed, -ing, -er, and -est to words, sometimes double consonants are used. These endings represent the past tense, progressive tense, comparative, and superlative in order. But consonants aren't always doubled when adding these suffixes, so it's important to learn the rules of spelling words with double consonants.

The main rule is known as the rabbit rule, it says that if a word has two syllables, the vowel is short and there is only one consonant sound placed between the vowels, then the consonant in the middle is doubled. For example, rabbit, happy and kitten are all words with two syllables and a short vowel, meaning that the consonants 'bb', 'pp' and 'tt' are doubled (Twinkl, 2014).

Words with similar pronunciation. These types of words are known as homophones and include two or more words with the same pronunciation but different spellings and meanings. English has many homophones. This can sometimes be confusing to people learning English. It can also be confusing for native speakers of English as well (Misty, 2018). For example:

- ad (advertisement) / add (increase)
- ate (past tense of eat) / eight (number 8)
- be (verb) / bee (the yellow/black flying animal)
- blew (past tense of blow) / blue (the colour)
- buy (purchasing) / by (proposition or adverb) / bye (farewell)

4.1.6 How to test spelling knowledge

According to Zamani P *et al.*, (2021), the students' knowledge level of spelling should be calculated at three time-points (before, immediately after, and after the training program) through a written exam with multiple choice questions. Each student's score must range from 0 to 10 points. The test score of students' initial knowledge of spelling is considered as the pretest score. This time-point test is taken before the training program started, and prior to

grouping students to A and B. The students' obtained scores from the final exam are considered as the post-test scores. Finally, the retained learning score is calculated as a follow-up measurement one month after the posttest session. In addition, students' satisfaction with the designed teaching methods has to be rated on the posttest session, and the obtained scores from the both the experimental and control groups are compared for further analyses. If the researcher works only with the experimental group, the scores should be compared to a standard grading scale established by the government agency in charge of the educational system.

4.2 Crossword puzzles

Crossword Puzzles is the independent variable of this study. It is really useful in the English learning process, as it helps students to acquire the language in an interactive way. Thus, its application within the English teaching context can considerably help students reach the proficiency level required by the Ministry of Education. The main contents related to spelling include definition of crossword puzzle, function and importance of crossword puzzle in teaching spelling, advantages and disadvantages of using crossword puzzle, among other.

4.2.1 Definition of crossword puzzles

Crossword puzzles is a kind of word game that appeared in England during the 19th century, it requires the player to accurately fill in all the blank squares with letters that form words; these words are based on clues provided, which can be complete sentences, phrases, or words. Due to their learner-friendly characteristic, crossword puzzles help students extend their vocabulary knowledge and improve their spelling ability, since they need to spell items correctly to complete the puzzle, which motivates them to learn new words and gain greater retention and memorization of vocabulary (Moreno *et al.*, 2020).

Diniyati (2009) agrees with the previous definition as he defines crossword puzzle as a group of words that have been arranged horizontally and vertically so that each word crosses at least one other word at a common letter, it is a fun way to practice spelling and reading comprehension, and to reinforce vocabulary.

4.2.2 Advantages of using crossword puzzle

Ross (2019), argues that crosswords puzzles are an interesting way to get students attention and interest. It is a good way to improve their spelling, vocabulary and mental health. Introducing students to crossword puzzles at an early stage is a good exercise for their mind. It keeps them active and productive, plus it also helps them to manage them better. The advantages are as follows:

Improves Vocabulary and Spelling. Introduce students to crossword puzzles help them to get familiarized with new words by recognizing the words from the puzzles. These words get into their subconscious growing minds. Solving word puzzles is also a good way to learn spellings. The more the exposure to new words, the better their vocabulary and spellings would be.

Develops problem – solving ability. Many crossword puzzles can be challenging. They require students to think hard on multiple solutions, and on how a word interacts with others. Crossword puzzles like these force students to think strategically and logically, and enhances skills like reasoning, problem-solving and developing solutions.

Teaches Persistence. Persistence is required while solving crossword puzzles. Not giving up is a good habit that comes along with problem-solving. It's a healthy way to keep students mentally active. Attempting more than once to solve a word puzzle simply inculcates persistence in students, which helps them learn and understand that it's okay to fail, but it's not okay to give up.

Improves Intelligence Quotient (IQ). According to studies, a crossword puzzle that keeps students mind active through problem-solving, reduces brain cell damage and mental illness like Alzheimer's or dementia. Instead, it strengthens the mind and helps in the growth of new cells. Crossword puzzles are a great medium for teaching kids subconsciously and thus improve productivity.

Similarly, the Shores of Lake Phalen (2019) state the following advantages related to the application of crossword puzzles within a lesson of English.

Boost learners' mood. The process of completing a crossword puzzle can sometimes be tricky. Learners might feel frustrated or foolish when they cannot figure out a clue, but if they keep working, they will figure out those difficulties. After several ups and downs as they struggle with clues and then succeed in solving them, they will complete the crossword puzzle and feel a great sense of satisfaction. This causes learners' brain to release dopamine, a neurotransmitter that makes them feel blissful. They will get a wonderful sensation of peace, happiness, and pride.

Relieve learners' stress. Students' daily lives are filled with stress due to several factors. Crossword puzzles provide them a way to turn off the noise in their head and truly relax. By focusing on the clues and concentrating on the puzzle at hand, learners can relax and

enjoy a little break away from "the real world." Studies have shown that crossword puzzles can help people feel calmer and happier.

Increase learners' knowledge base. When using crossword puzzles within the class, students won't just learn new words; they will also learn new things in general, especially if they work with other learners (classmates) to solve difficult puzzles. As most crossword puzzles contain a wide variety of trivia, students could learn new things about history, entertainment, science, technology, politics, among others things.

Strengthen learners' social bonds. When learners complete crossword puzzles on their own is impressive, but they should never feel bad if they need to ask for help. In fact, collaborating on a crossword puzzle is a great way to share with classmates and acquire new knowledge. Moreover, because crossword puzzles call on a wide variety of knowledge, people of many different ages (teachers, parents, siblings, friends, etc.) and backgrounds can help learners with them. So, when they struggle with a clue, they can ask to any person next to them for help.

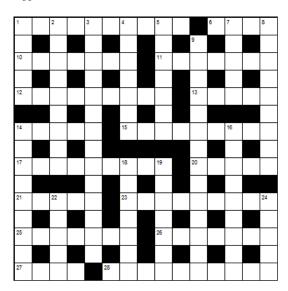
Improve learners' self-esteem. Crossword puzzles contribute to the development of positive self-esteem. When students spent a lot of time and effort solving it, they will have a positive sense of accomplishment. That sense of achievement can significantly improve students' self-esteem.

4.2.3 Types of crossword puzzles

CrosswordClues (2020), argues that there are many types of crossword puzzles in all shapes sizes, formats and difficulties. While beginner crossword solvers (learners) like to start with quickie or straight crosswords which ask for a simple one-word answer to a given definition, the more experienced puzzler (expert learners) may prefer cryptic or skeleton puzzles. All of them are described below:

Blocked grid. This type of crossword puzzle is the most commonly used format, and it is the one that learners recognize more easily as crossword puzzle. The grids are generally rectangular or square and contain a mix of blank squares and black or shaded squares. It is important to make a differentiation between U.S. blocked grids, which contain less shaded squares and all letters are checked or included in two words, across and down; and the U.K. blocked grids, which have more black squares than U.S. and not all letters are checked.

Figure 1
Block Grid Crossword Puzzle



Note. Representation of a block grid crossword puzzle.

Quickie crossword. It is sometimes called a "straight" crossword puzzle. Requires oneword responses to basic definition clues, like: the tree from which coconuts fall, or clues that require students to find a missing word in a phrase or name, for example: _______ Einstein. Quickie or straight crosswords use a variety of grids including the U.S. and U.K. blocked grids as well as barred, thematic and skeleton grids.

Figure 2Quickie Crossword Puzzle

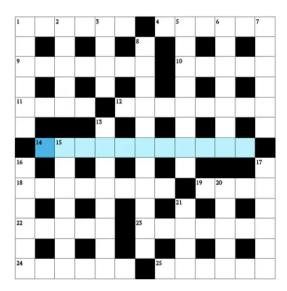
¹ B		² A		³		⁴ A		⁵ N		⁶ A		⁷ T		⁸ F
⁹ O	R	G	Α	N	0	Р	Ι	0	S	Р	Н	Α	Т	Е
Н		Α		D		0		R		Р		Χ		L
¹⁰ R	¹¹ O	R	Q	U	Α	L		¹² T	Ε	L	F	0	R	D
	R			S		L		Ι		Е		Ν		S
¹³ C	-	Т	Α	Т	-	0	Z	S		¹⁴ T	R	0	0	Р
	0			R				Е				Μ		Α
¹⁵ A	Ζ	¹⁶ O	D	Υ	Ζ	17 E		¹⁸ A	S	¹⁹ S	Α	>	₂₀ E	R
D		R				_				Α			O	
²¹ D	-1	R	Α	²² C		²³ N	J	²⁴ M	Ε	R	Α	Т	0	R
U		Е		Α		S		-		D			L	
²⁵ C	-1	R	С	U	-	Т		²⁶ R	Η	0	М	²⁷ B	_	²⁸ C
Т		-1		S		Е		Α		Ν		Е		0
²⁹ O	Р	Е	R	Α	Т	-	Ν	G	S	Υ	S	Т	Е	М
R		S		L		N		Е		Χ		Α		Α

Note. Image showing an example completed of a quickie crossword puzzle.

Cryptic crossword. Solving this type of crossword puzzle could be more difficult than solving the previous types of crossword puzzles, since there are two elements to each clue. In addition to providing the hint or definition, these clues often contain a play on words that can take the form of an anagram and can appear before or after the definition. For example: Don't forget to get here for the party. The answer to this is Get Together, which is both a definition of party and an anagram of forget to get here. The U.K. blocked grid is generally used for this type of crossword and in the U.K. the letter count for each word is included after the clue while in the U.S. the letter count is not given.

Figure 3

Cryptic Crossword Puzzle



Note. Example of a cryptic crossword puzzle

Barred grid. Barred grid crosswords puzzles are not symmetrical and have no black or shaded squares. The answers to clues are divided by bars or bold lines between squares. Because there are no shaded squares some of the letters in a barred grid may be checked.

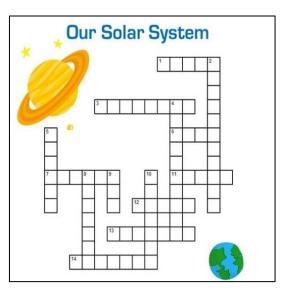
Figure 4
Barred Grid Crossword Puzzle

1	2	3	4		5	6		7		8	9
10	11				1		12		13		
14								15			
16							17				
				18					19	20	
21	22	_		23				24			25
26		27	28		29				30		
31			32					33		34	
35							36				
37	38			39							
	40						41				
42					_	43					

Note. Visual representation of a barred grid crossword puzzle.

Themed crossword. This type of crossword has a specific theme and can be arranged in a variety of formats including, blocked grids, barred grids and skeleton grids. Unlike other crosswords puzzles types, the shape of themed puzzles is not always rectangular or square and often contain graphics to pair with the theme.

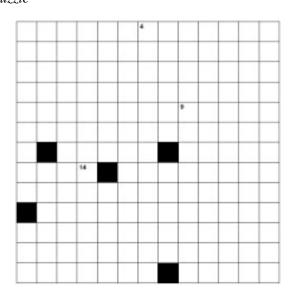
Figure 5 *Themed Crossword Puzzle*



Note. Reference of a themed crossword puzzle.

Skeleton crossword puzzle. Skeleton crossword puzzle, sometimes called diagramless crossword puzzle or bare bones crossword puzzle is usually set in a square or rectangular grid. Unlike other puzzles, in this crossword puzzle, learners must figure out where the answers to the clues go within the grid, since very little information is provided. The grids are usually laid out symmetrical, with one or two shaded squares already indicated. Students have to realize where the other black squares will be. While one or two squares may be numbered, solvers must first solve some of the clues before they can tell where the other numbers should go. The clues provided for this type of crossword puzzle also contain no bracketed numbers therefore students won't know how long the answer is or if it contains only one word.

Figure 6
Skeleton Crossword Puzzle



Note. Picture that illustrates a skeleton crossword puzzle.

Similarly, Diniyati (2009) states that there are different types of crossword puzzles that can vary from the very simple to the very complicated. At primary level, simple crossword puzzles can be given. There are some types of crossword puzzle that are appropriate to Elementary School students, they are:

Picture crossword with word list. In this model, students have to sound out words from the words list and then match them with the picture. Finally, they should copy the words from the word list into the crossword puzzles.

Picture crossword (No word list). When using this model, students need to use the picture clues to figure out the words that go in the crossword puzzles. In other words, they have to print the words from the picture clues into crossword puzzles.

Word clues (Regular) crossword with word list. Students have to use the verbal clues and the word list to figure out where the words go in the crossword puzzles. In this case, they print the words from the word list into the crossword puzzles.

Word clues (Regular) crossword (No word list). In this model, students use only the verbal clues to figure out where the words go in the crossword puzzles. Basically, they have to print the spoken words into the crossword puzzles.

4.2.4 Crossword puzzles from the perspective of cognitivism

Cognitivism and crossword puzzles are closely related. According to Peggy *et al.*, (2017), this learning theory looks beyond observable behavior, viewing learning as an internal mental process. Within this view, learners are actively involved in the way they process information. Knowledge, memory, thinking, and problem solving are areas for development. In fact, crossword puzzles could be considered as an internal process of the cognitivism theory due to the common characteristics that both share.

The history states that cognitivism was developed as a reaction to Behaviorism and gained credence in the 1950s. According to OpenLearn (2020), cognitivists objected to behaviorists because they felt that behaviorists thought learning was simply a reaction to a stimulus and ignored the idea that thinking plays an important role. Although many researchers contributed to the development of the learning theory (e.g. Bruner, Vygotsky, Bloom, Ausubel), Piaget's views had a tremendous impact.

As this is a learning theory that focusses on how information is received, organized, stored and retrieved by the mind. It possible to state the following concepts considering the information about crossword puzzles:

How is the information received when using crossword puzzles? The Gamesver Team (2018) stated that when using crossword puzzles within a lesson, the information can be received through the clues used to complete each row and column. The clues usually can be lists of words, pictures, sentences, statements, dictionary definitions, puns, anagrams, etc. Once the puzzle has been completed, the information obtained will contribute to the information given through the clues. The information received will

help puzzle solvers to increase their vocabulary, develop their mind, improve their problem-solving skills, etc.

How is the information organized when using crossword puzzles? In a crossword puzzle, the information is organized into themes or codes, which can be of different types or fields, including learning, entertainment, motivation, general culture, etc. Lake Phalen (2019) states that once learners solve the puzzles, the information will be organized in their minds just as it is organized in the printed paper crossword puzzle.

How is the information stored when using crossword puzzles? The information acquired through crossword puzzles is stored in learners' minds according to their level of importance and usefulness. If an English student solves two crossword puzzles, one on vocabulary and one on mathematics, the information that he will remember the most will be that of the English crossword since it is the one that is most important to him. In summary, the information stored in people's minds will be kept or discarded according to the need and the use that is given to it. This fact will depend on whether the information is stored in short-term memory or long-term memory (Indrasari, 2015).

How is the information retrieved when using crossword puzzles? As mentioned above, people can retrieve the information obtained and stored in their minds when they need to apply it in real life situations. According to Lestari (2017), information can be retrieved quickly if individuals apply it daily. However, if the information was discarded from the mind, it will be very difficult for an individual to retrieve and apply it. In these cases, to facilitate the process, it will be necessary to solve the crossword puzzles again of the type of information that is needed.

The following concepts support the information above from different perspectives.

What is the role of memory? Memory is given a prominent role in the learning process. Newby (2020) argues that learning results when information is stored in memory in an organized, meaningful manner. Teachers are responsible for assisting learners in organizing that information in an optimal way. They can use techniques such as advance organizers, analogies, crossword puzzles, hierarchical relationships, and matrices to help learners relate new information to prior knowledge. Similarly, he establishes that forgetting is the inability to retrieve information from memory because of interference, memory loss, or missing or inadequate cues needed to access information.

How does learning occur? Jonassen (2013) argues that by making use of the cognitivism theory, learning is equated with discrete changes between states of knowledge rather than with changes in the probability of response. As detailed before, cognitivism focuses on the conceptualization of students' learning processes and addresses the issues of how information is received, organized, stored, and retrieved by the mind. Learning is concerned not so much with what learners do but with what they know and how they come to acquire it. Knowledge acquisition is described as a mental activity that entails internal coding and structuring by the learner. The learner is viewed as a very active participant in the learning process.

What types of learning are best explained by this position? Cognitivism is usually considered more appropriate for explaining complex aspects of learning (reasoning, problem-solving, information-processing) than are those of a more behavioral perspective (Schunk, 2013). However, Bednar (2013) considers that the goal of instruction for both of these viewpoints (cognitivism and behaviorism) is often to communicate or transfer knowledge to the students in the most efficient, effective manner possible. Behaviorists focus on the design of an appropriate environment to optimize transfer, while cognitivists stress efficient processing strategies.

4.2.5 Application of crossword puzzle in spelling

Crossword puzzle as a teaching and learning medium for learners means directly play in the class. In other words, students will be able to learn to spell well unconsciously while they complete the game (crossword puzzle). Crossword puzzles can be applied in a spelling class by ordering students to:

- Sound out words from words lists
- Spell letters to form words
- Match the words with the picture and then print the words from the picture clues into crossword puzzles. (Diniyati, 2009)

4.2.6 Strategies to apply crossword puzzles

According to Zorrilla *et al.*, (2017) the correct use of crossword puzzles as a didactic resource, and the concise instructions of the teacher can improve significantly its application to students within a classroom. To facilitate this process, Valencia provides the following strategies:

Identifying. In this stage students recognize and get familiar with the crossword puzzles activity, in this way, they will activate their prior knowledge.

Relating. After having checked carefully the crossword puzzles, students must relate the clues given (pictures, statements, or texts) with possible words that match them.

Understanding and organizing. In this step students understand how crossword puzzles work, and how they must complete them. In addition, they have to organize themselves and complete each row and column according to their number to facilitate the process.

Applying. Once students have done the previous steps, they are ready to accurately fill in all the blank squares with letters to form the words they matched with the clues previously.

4.2.7 Rules for crosswords puzzles

Pegg Jr (2004) established the following rules for crossword puzzles design, which are based on the designs that appear in the New York Times newspapers:

- The pattern of black-and-white squares must be symmetrical. Generally, this rule means that if students turn the grid upside-down, the pattern will look the same as it does right-side-up.
- Do not use too many black squares. In the old days of puzzles, black squares were not allowed to occupy more than 16% of a grid. Nowadays there is no strict limit, in order to allow maximum flexibility for the placement of theme entries. Therefore, large clumps of black squares anywhere in a grid are strongly discouraged.
- Do not use unkeyed letters (letters that appear in only one word across or down). In fairness to solvers, every letter has to appear in both an Across and a Down word.
- Do not use two-letter words. The minimum length that a word new to have is three letters.
- The black squares may not cut the grid up into separate pieces, because students should be able to proceed from any section of the grid to any other without having to stop and start over.
- Long theme entries must be symmetrically placed. If there is a major theme entry three rows down from the top of the grid, then there must be another theme entry in the same position three rows up from the bottom.
- Do not repeat words in the grid, and do not make up words and phrases. Every answer must have a reference or else be in common use in everyday speech or writing.
- The vocabulary in a crossword puzzle must be lively and have very little obscurity.

4.3 Previous studies

This section presents studies that explored the effects and perceptions of using crossword puzzles to improve spelling among EFL learners. The intention of this is to demonstrate the contribution and effectiveness of this strategy in the English language teaching.

Six empirical studies were used as the basis for conducting this research project. The chosen ones belong to different contexts, including Ecuador, Indonesia, and Iran. All of them were conducted by university students from public educational institutions (See table 1 for details). Due to the good knowledge and manipulation of the crossword puzzles and spelling by the researchers, the results of the six studies were generally very good. It was evidenced with the data collected, which showed significant improvements in students' scores and behavior.

Table 1Studies Investigating the Use of Crossword Puzzles to Improve Spelling

Study	Country	Population	Methods	Level of Education
Amiri & Salehi (2017)	Iran	32 students	quantitative	Superior
Moreno et al., (2020)	Ecuador	60 students	mixed	Superior
Diniyati (2009)	Indonesia	41 students	quantitative	Superior
Puspita & Sabiqoh (2017)	Indonesia	30 students	qualitative	Superior
Salehi (2017)	Iran	32 students	quantitative	Superior
Profita et al., (2012)	Indonesia	20 students	quantitative	Superior

Note. Table that shows studies carried out previously to this study by other authors.

The reason why these studies were chosen is because most of them cover very important aspects that will facilitate the execution of this project, for example:

Amiri and Salehi (2017) carried out a quantitative research project in order to determine the effects of crossword puzzles on improving the spelling ability of 32 intermediate EFL learners. The researchers guided their project with the question "Does using crossword puzzles significantly affect spelling improvement among Iranian intermediate EFL learners?" (p. 159). They used a questionnaire for checking the participants' perceptions, and a spelling test administered as pretest and posttest prior to and after the treatment. As result they found that using crossword puzzles improved learners' spelling ability because their mean scores changed

considerably, and the analysis of the responses to the questionnaire indicated that they had positive attitudes and that were happy and excited while developing crossword puzzles.

In the same way, Moreno *et al.*, (2020) conducted a quasi-experimental research study, which aimed to improve spelling through crossword puzzles implementation in 60 Level A1 students of a public University. They collected the data by applying a 20-item questionnaire, and a pretest and posttest to measure the effectiveness of the crossword puzzles implementation in the acquisition of the English spelling. Consequently, the results showed that the use of crossword puzzles is one of the most effective ways of helping students to develop, improve and consolidate their spelling ability as well as being motivated to learn.

Similarly, Diniyati (2009) carried out an action research project with the intention to find out the effectiveness of using crossword puzzles to improve the spelling ability of 41 students. The researcher attempted to answer to what extent crossword puzzles are effective for improving the spelling ability of a group of students. To do this, he applied a questionnaire, a pretest, and a posttest. Lastly, it was found that there was a significant difference between the pretest and posttest results. In other words, the use of crossword puzzles to improve students' spelling was very beneficial for them.

Furthermore, Puspita and Sabiqoh (2017) conducted a descriptive qualitative research study to describe the process of teaching spelling by using crossword puzzles to 30 students from seventh grade in a public school. In collecting the data, the researchers used three kinds of instruments, an observation guide, an interview, and a questionnaire. Finally, they found that the teaching and learning process of spelling by using crossword puzzle ran well, the classroom atmosphere indicated that students were active in the classroom but some of them looked less responsive.

Likewise, Salehi (2017) led an experimental research study, which aimed at exploring 32 Iranian intermediate EFL learners' perception of applying crossword puzzles in relation to their spelling improvement. The researcher collected the data by using a questionnaire, a pretest, and a posttest. Consequently, the results showed that learners had positive attitude towards using crossword puzzles and they were interested greatly in learning spelling applying crossword puzzles as it helped them to enhance their spelling.

Finally, Profita *et al.*, (2012) performed an action research project to find out the improvement of 20 students' spelling mastery through crossword puzzles. In collecting the data, the researchers applied an observation guide, an interview, a questionnaire, field notes, and

tests. Accordingly, they found that applying crossword puzzles in the class, has a good effect in the teaching and learning process of spelling.

Conclusion

The purpose of this review was to see the most relevant content related to the variables under study (crossword puzzles and spelling) that have been published or updated in the last five years, and thus be able to appreciate the innovations that have emerged for the teaching of spelling by using crossword puzzles as the main strategy. It is clear from the literature research carried out that the use of crossword puzzles to improve spelling is very deep and widely practiced in different settings since several years ago. However, over the years some important innovations have been made according to the available tools. Along with this, it is also clear that the use of crossword puzzles within the educational field has been and continues to be very beneficial for students, since it offers them great advantages, with problem-solving, vocabulary and spelling being the most important. As seen in the study by Amiri and Salehi (2017), using crossword puzzles improves learners' spelling ability, and led them to adopt a positive attitude while solving crossword puzzles. Helping students to be able to spell words with more confidence and without making many spelling errors is very important for them to become professionals without problems of communication both oral and written.

5. Methodology

This research study had the purpose of improving the spelling ability of second-year students at a public high school in the city of Loja, through the use of crossword puzzles as an interactive activity in the classroom. In addition, this research also aimed to explore the perspectives of students on the use of crossword puzzles to improve spelling. Therefore, the central question that helped the researcher to fulfill this purpose was: What are the effects of using crossword puzzles to improve the spelling ability of second-year high school students? Consequently, this study used a quantitative design to describe the numerical data collected through the application of a pre and posttest, and a qualitative design to explain the perceptions of students gathered using an interview.

5.1. Research setting

This thesis work was carried out in a public high school in the city of Loja, which is located in the south Ecuador, in the geographical area known as the highlands region or Sierra in Spanish. This city is located between these coordinates: Latitude: -3.98333, Longitude: -79.2 3° 58′ 60″ South, 79° 12′ 0″ West. It has an approximate area of 11,063 km², which places this province in eleventh place among the provinces with the largest area in the country. Loja is known as the cultural capital of the country for its music scene.

5.2. Procedure

The project began with the application of a pretest to the second-year high school students during the first lesson in order to diagnose their cognitive level in relation to spelling. After that, the researcher designed around 20 lesson plans that were used to deliver a total of 24 lessons over a period of 8 weeks. These lessons were delivered on Mondays from 13:40 to 14:20 and from 15:50 to 16:40; on Wednesdays from 15:00 to 15:40; and on Fridays from 16:30 to 17:50. The lesson plans included the learning objectives for each class, the practice activities that were develop in each stage (warm up, presentation, development, assessment) of the lesson, and the instructional resources used to design those activities.

The researcher carried out in each class, a 5 minutes warm up activity (such as: tinto tingo tango, anagrams, the captain orders, mastermind, charades, etc.) to introduce students the topic and content of the class. Then, in the presentation stage, the researcher presented flashcards that contained the vocabulary to be worked on during each lesson. Also, he gave instructions and examples about the spelling process of words with silent letters, double consonants, and similar pronunciation (homophones). After that, during the development of the lesson, students applied the instructions given by the researcher to create their own examples

and develop some spelling activities provided (ex. complete missing letters, spelling bee, write sentences, match pictures with words, etc.). Finally, a closing activity (crossword puzzle) was executed as assessment to confirm the knowledge acquired by students during each class period.

Most of the practice activities were focused on improving the spelling ability of students by using crossword puzzles as the main teaching strategy, and were designed and developed with the support of the English Pedagogical Module, provided by the Ministry of Education. Also, some apps, speakers, laptops, mobile phones and web pages were used to complement the activities and their content when necessary.

In each class, the researcher provided clear instructions to students on what and how they had to do in each activity. Moreover, he performed an exercise as an example so that they can understand better. In order to develop the crossword puzzles correctly, students first had to identify the topic and the content of the activity. Then, they had to relate the content to their prior knowledge. Likewise, they had to understand and organize their ideas to complete the crossword puzzles with the information required. Finally, students had to apply the knowledge acquired in the previous process to solve the activity, taking as base the clues given.

At the end of the intervention, the researcher applied a posttest to check students' improvement after having applied crossword puzzles as a teaching strategy to improve students' spelling ability for 8 weeks. Both the pretest and the posttest helped the researcher to collect quantitative data, which was analyzed and interpreted using the Wilcoxon test. In addition, to reinforce these data, the researcher interviewed six students to find out their perceptions and opinions about the intervention carried out and the activities/strategies used. Finally, the redaction of the results and discussion was done.

5.2.1. Research methods

This research employed a mixed methods methodology, which combined elements of quantitative and qualitative research in order to answer the research questions of this study. According to Manjengwa (2020), mixed methods research offers enormous potential for generating new ways of understanding the complexities and contexts of social experience, and for enhancing the researcher's capacities for social explanation and generalization.

On the one hand, the quantitative method employed a one group pretest-posttest design, which involved a single group (all students in the class) that was pretested, then exposed to a treatment, and finally tested again. In this design, the researcher manipulated the independent variable of this study, which was crossword puzzles; and the success or failure of its application within the lessons was determined by comparing the pretest and post-test scores (Allen, 2017).

On the other hand, the qualitative method employed a narrative design to collect, analyze, and interpret non-numerical data on how learners subjectively perceived and gave meaning to the use of crossword puzzles to improve spelling in the class (McLeod, 2019).

5.2.2. Data collection sources and techniques

The researcher used two data collection methods. The paper and pencil, and the participant observation, which are described below.

Paper and pencil method. The paper and pencil method helped to include selection and supply items in the quantitative instrument. With selection items on the pretest/posttest, the participants had to select from among a set of given answers; including multiple choice, true or false, and matching questions. In supply items, they had to supply their answer, fill in the blank, and write short answers.

Participant observation method. The participant observation method allowed the researcher to become a participant in the intervention process while collecting data on spelling activities, participants' perceptions, and physical aspects of the setting. Also, this method helped to gain insights and develop relationships with participant students.

In the same way, this research included the use of two data collection sources, a pretest/posttest (quantitative), and an interview (qualitative), they are detailed below.

Pretest/posttest. The pretest/posttest was composed by six questions, including multiple-choice, fill in, and matching items. It measured students' cognitive processes, such as thinking, memorizing, problem solving, analyzing, reasoning, and their ability to apply information. The researcher applied this test at the beginning of the intervention to identify the initial knowledge that students had, and at the end of the intervention to collect information on how well the participants learned the contents introduced during the intervention.

It is important to mention that this instrument was based on the criterion-referenced scoring scale defined by the Ecuadorian Ministry of Education, in order to compare the participants' performance on the assessment to a predetermined, external standard, rather than to the performance of others.

In this test, if the participant students got more than 7 points, the treatment had been successful and the application of crossword puzzles was very useful to improve their spelling ability. The scores were assigned based on the answer key stablished by the researcher, which included the correct answers for each question on the pretest/posttest.

Interview. The interview was applied by the researcher at the end of the intervention process to measure the affective dimension of the participants, that is, to gather their emotions and perceptions (qualitative data); it contained around six structured questions, including open-ended and close-ended. This tool permitted the researcher to obtain important data that is inaccessible through observation, which cannot provide information about past events.

5.2.3. Research participants

This research work was carried out with the participation of 10 second-year high school students of the evening section at a public high school in the city of Loja, during the 2021 – 2022 school year. Half of them were women and the other half were men, and their age was between 16 and 17 years old approximately; most of them have a low socioeconomic level. On the other hand, according to the national curriculum, second-year high school students must have the proficiency level A2.1. Therefore, they had to be able to perform and respond to simple language functions, such as exchanging information and requests correctly.

In order to work as closely as possible to what is established in the national curriculum, the researcher delivered the lessons based on the contents from the textbook "English Pedagogical Book for second-year of BGU", and the Crossword Puzzles activity (independent variable) was applied following the teaching process detailed in the procedure section.

The researcher employed the cluster sampling method to define the participants of this study. This method helped to choose a group of students (cluster) from all those existing at the public school (entire population), where the project was carried out. The appropriate cluster was identified and included as the sample based on the researcher schedule availability. This made simple and effective the teaching process. However, before meeting with the participants of the project, a legal process had to be followed. This process involved presenting an official letter to the secretary of the career so that she issues a request for permission addressed to the principal of a certain educational institution to be able to carry out the research work in that institution.

5.3. Data analysis

The analysis process of the data collected in this research, required the use of two data analysis processes. The thematic analysis method, and statistical formulas of the Wilcoxon signed-rank test to find out the significance of the study, they are described below.

Thematic analysis method

The qualitative data of this study was analyzed and interpreted making use of this method, which according to Braun and Clarke (2006), involves reading the transcripts from in depth interviews, and identifying patterns in meaning across the data.

Firstly, the researcher got familiar with the data transcribed from the interviews, and actively observed meanings and patterns that appeared across the data set. Then, he created a set of initial codes that represented the meanings and patterns identified previously. For this, he identified interesting excerpts and applied the appropriate codes to them. Excerpts that represented the same meaning were assigned the same code.

After that, the researcher grouped together all the excerpts associated with a particular code. Then, he sorted the codes into potential themes, and realized if some of them can be made into sub-themes. He reviewed carefully the themes to ensure that each one had enough data to support them. The similar themes were merged together, and the ones that did not have enough data to back them up were removed.

Finally, the narrative to communicate readers about the participants' perceptions on using crossword puzzles to improve spelling was written by the researcher. He made sure that his narrative tells a coherent story about the data, and chose vivid quotes from the data to back up his points. The narrative went beyond just describing the data, and included the researcher's own interpretive analysis and made an argument for the claims he presented.

Wilcoxon signed-rank test

The quantitative data of this research was analyzed and interpreted using statistical formulas related to the Wilcoxon test. According to Lund (2018), the Wilcoxon signed-rank test is the nonparametric test equivalent to the dependent t-test. It is used to compare two sets of scores that come from the same participants. This can occur when researchers wish to investigate any change in scores from one time point to another, or when individuals are subjected to more than one condition.

The measure of central tendency that was used along with this method was the mean, which was calculated by adding all the participants' scores within the data set and then dividing by the number of scores within the set. The mean summarized the entire dataset with a single number representing the scores' center point.

The analysis and interpretation process began with the tabulation of the scores obtained in the pretest and posttest into a statistical table. Then, the researcher identified the difference

between the scores in both stages in order to proceed stablishing ranks, being the lowest number the number 1 and so on. After that, he determined the mean of students' scores to facilitate the analysis. Finally, he built another table that summarized the overall measurement for the pre and posttest scores, and interpreted the data in a narrative way so that readers could understand better.

6. Results

This section illustrates the data gathered through the application of a pretest/posttest that helped to measure students' knowledge to spell words with silent letters, words with double consonants, and words with similar pronunciation; and an interview used to explore students' perceptions and feelings toward the application of crossword puzzles as an interactive activity to improve their spelling ability.

6.1. Pretest and posttest results

These results were obtained by following a structured process that permitted to collect numerical data of students' spelling ability. In order to detect the change before and after the intervention, the pretest and posttest scores were compared using the Wilcoxon Test, which is used to compare two related measurements and determine if the difference between them is due to the intervention (in this case the intervention plan) or not. The following table illustrates the data obtained.

Table 2
Wilcoxon Test to Compare the Pretest and Posttest Scores on Spelling

Student code	Pretest	Posttest	Difference	Rank
2YBGUA01	5,17	9,1	-3,93	9
2YBGUA02	5,17	9,7	-4,53	10
2YBGUA03	5,77	8,3	-2,53	7,5
2YBGUA04	6,27	8,2	-1,93	2,5
2YBGUA05	6,57	8,9	-2,33	5,5
2YBGUA06	6,57	9,1	-2,53	7,5
2YBGUA07	6,57	7,1	-0,53	1
2YBGUA08	6,57	8,9	-2,33	5,5
2YBGUA09	6,87	9,1	-2,23	4
2YBGUA10	6,97	8,9	-1,93	2,5
Mean	6,25	8,73		

Note. **2Y** = Second Year; **BGU** = Bachillerato General Unificado; **A** = Parallel "A"; **01** = Number of Student.

Table 3Wilcoxon Ranks

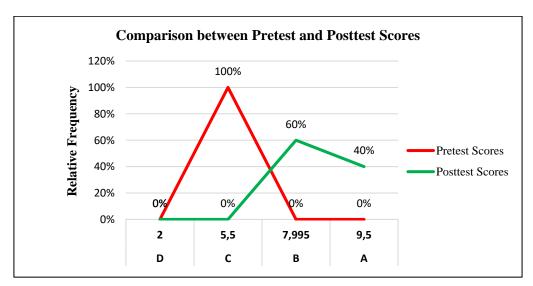
	Ranks	N	Sum of ranks
Pretest scores	Positive ranks	0	0
Posttest scores	Negative ranks	10	55
	Ties	0	
	Value W	0	
	Total population N (n)	10	
	Critical value $p \le 0.05$	8	

Note. Table that summarizes and analyses the data obtained in the pre and posttest.

From the data in *Table 2*, which summarizes the results for the pre and posttest scores, we can see that the comparison of second-year students' performance before and after the application of the intervention plan based on crossword puzzles to improve spelling, evidenced that very good results were obtained. Evidently, it can be seen that all the participants (10 students) had a higher level of spelling after the intervention. The Wilcoxon test showed that the difference between the pre and posttest scores was statistically significant $p \le 0.05$, with a probability of 95% of effectiveness. This was complemented with the data collected through the interview that was applied to the same learners, in order to explore their perceptions towards the application of crossword puzzles as a strategy to improve spelling.

Figure 7

Comparison Between the Pretest and Posttest Scores



Note. Figure that illustrates the students' spelling ability before and after the intervention.

As mention previously, second-year students took a pretest before applying the intervention plan in order to diagnose their initial knowledge of spelling on the indicators selected for the study. Therefore, as *Figure 7* illustrates, all students did not reach the average level of 7 points out ten, as expected by the national grading scale. That means that 100% of them had difficulty to spell words with silent letters, words with similar pronunciation, and words with double consonants. This issue was mainly caused because students had problems to associate letters with its corresponding sounds. In other words, learners did not have enough knowledge about the alphabet and the sounds of letters. Also, they had problems to unscramble letters to form words, complete missing letters, identify their correct spelling, and short lexical range of vocabulary that caused them not to be able to discern and spell certain words placed in some sentences, definitions, and lists of words that worked as clues. Consequently, the researcher had to try to overcome this issue by implementing an intervention plan.

On the other hand, in the same graphic, the posttest results demonstrated a high level of students' performance on spelling. Certainly, more than half of students (60%) achieved the required learning according to the national grading scale. Not to mention the fact that 40% of them mastered the required learning required by the ministry of education. This means that students were able to understand the sound of letters, discern the words placed in clues, unscramble letters to form words, complete the missing letters of words, identify the correct spelling of words, and they increased they vocabulary range. Despite the fact that they improved a lot, they continued to make minor mistakes that hardly affected their ability to spell the vocabulary they worked with throughout the intervention. These mistakes are summarized as missing one or two letters in the spelling of complex words and mispronouncing one or two letters in a word. The knowledge they acquired permitted them to create sentences and short paragraphs to communicate ideas and messages without making grammatical mistakes, both written and orally.

Considering the previous information, it is possible to state that students managed to pass from the precommunicative stage, where they used symbols from the alphabet but they did not have knowledge of letter-sound correspondences, to the transitional stage, where they began to assimilate conventional alternatives for representing sounds, moving from a dependence on sounds for representing words to a reliance on visual representation and an understanding of the structure of words.

According to Moreno *et al.*, (2020), students should learn to spell words from an early age, as it allows them to correctly assemble words from their letters and it is one of the essential

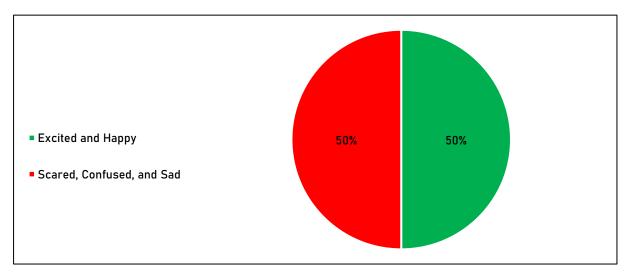
components of successful writing. When a student develops the ability to recognize links between words of the same origin and word relationships that means they are improving their communication skills. Teaching students, strategies, rules, and concepts to grow their spelling and vocabulary knowledge, benefits them in all aspects of their learning, as well as in their everyday life. Similarly, Kidsense (2021) argues that accurate spelling is important for students to get through their schooling years, as it is required in order to pass assessments and do tasks. Learning to spell helps students to develop a strong connection between the letters and their sounds. The more thoroughly students know a word, the more likely it is that they will be able to recognize it in unfamiliar texts, spell it, and use it appropriately in their own speech and writing.

6.2. Interview results

In order to support and complement the data gathered trough the pre and posttest, the researcher administered an interview to six participants of the project to know their perceptions on the application of crossword puzzles as a learning strategy to improve spelling.

Firstly, students were asked about the feelings they had when developing the crossword puzzles.





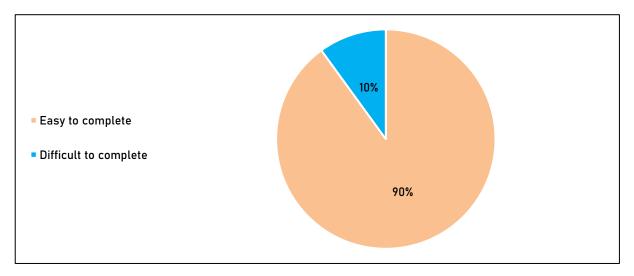
Note. Graphic that illustrates the answers given by students to this question.

Half of them (50%) stated that they felt excited and happy because they liked to work in groups in order to collaborate with their classmates and complete the crossword puzzles correctly. On the other hand, the other half of students (50%) expressed that in the initial lessons

they felt scared, confused, and sad because they were afraid of not being able to complete the crossword puzzles. However, in the consequent lessons and after that the researcher gave the necessary explanations on how to spell correctly in the crossword puzzles, they felt safe and happy. The Shores of Lake Phalen (2019) state that the process of completing a crossword puzzle can sometimes be tricky. Learners might feel frustrated or scary when they cannot figure out a clue, but if they keep working, they will figure out those difficulties. After several ups and downs as they struggle with clues and then succeed in solving them, they will complete the crossword puzzle and feel a great sense of satisfaction. This causes learners' brain to release dopamine, a neurotransmitter that makes them feel blissful. They will get a wonderful sensation of peace, happiness, and pride.

Secondly, the researcher asked to the participants if they perceived that the development of crossword puzzles was easy.

Figure 9
Were the crossword puzzles easy to develop?



Note. Figure that illustrates the answers given by students to this question.

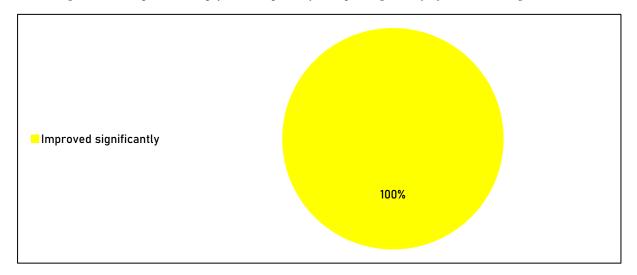
The ninety percent of them said that it was easy to complete them, especially the crossword puzzles that had pictures as clues, because those pictures were presented at the beginning of the class in form of flashcards. Therefore, it was easy for them to remember the correct way of spelling those words and complete the crossword puzzles. Evidently, memory had a crucial role in their learning process. According to Newby (2020), learning results when information is stored in memory in an organized, meaningful manner. Teachers are responsible for assisting learners in organizing that information in an optimal way. They can use techniques

such as advance organizers, flashcards, analogies, crossword puzzles, hierarchical relationships, and matrices to help learners relate new information to prior knowledge.

Thirdly, the participants had to answer if they perceived that the use of crossword puzzles helped them to improve their ability to spell words that contain silent letters, double consonants, and similar pronunciation.

Figure 10

Did using crossword puzzles help you to improve your spelling ability of words in English?



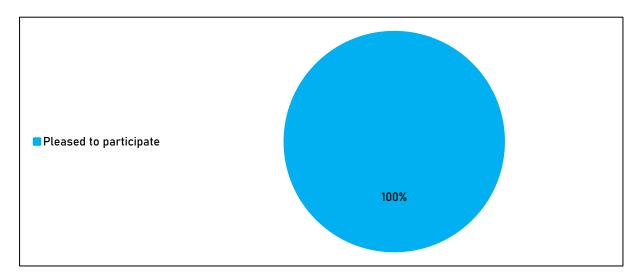
Note. Illustration of the answers given by students to this question in the interview performed.

As result, all of them uttered that they improved significantly. They stated that before using crossword puzzles, they used to make a lot of mistakes at the moment of formulating sentences that contained this type of words. However, the boxes of each row and column in the crossword puzzle, and its daily use to make different activities, helped them to realize the exact number of letters that contain each word. Lestari (2017), argues that the information learned through crossword puzzles can be retrieved quickly if individuals apply it daily. However, if the information was discarded from the mind, it will be very difficult for an individual to retrieve and apply it. In these cases, to facilitate the process, it will be necessary to solve the crossword puzzles again of the type of information that is needed.

Finally, learners were asked if they liked to be part of the project carried out in their educational institution.

Figure 11

Did you like being part of this research project?



Note. Illustration of the answers given by students to this question in the interview.

The answer provided by them evidenced that all of them (100%) were pleased to participate in the project, because they benefited a lot of the advantages offered by crossword puzzles. They argued that they were able mainly to improve their spelling ability. Also, they increased their vocabulary, learned to be persistent, relieved their stress, boosted their mood and improved their self-esteem. It is clear that the use of crossword puzzles as a learning strategy to improve spelling had a positive effect in students' behavior and knowledge.

7. Discussion

This section answers the central research question: What are the effects of using crossword puzzles to improve the spelling ability of the second-year students, at a public high school in the city of Loja during the 2021 - 2022 school year? Also, it describes the limitations found during the research, and gives some suggestions for further investigation. Unlike the results, which are detailed, this section is predominantly argumentative as it relates the research results to the literature review.

As mentioned in the literature review, this research work was based on the use of crossword puzzles as a teaching and learning strategy to improve common spelling issues, considered as the indicators of the research. These indicators or parameters were words with silent letters, words with double consonants, and words with similar pronunciation. Consequently, in the case of words with silent letters, students had problems writing the letter that has no sound when pronouncing it. Likewise, in the case of words with double consonants, students confused at the moment of spelling the consonant repeated twice. Finally, in relation to words with similar pronunciation, students wrote the wrong spelling for the words given. In order to analyze the data gathered through the pre and posttest, the researcher employed the Wilcoxon test, which helped to compare the scores obtained before and after the researcher intervention. In the same way, to analyze the data gathered with the interview and identify patterns in meaning across the data, the thematic analysis was employed.

The results obtained in the pre and posttest demonstrated that difference was statistically significant ($p \le 0.05$). Thus, these results matched those observed in an earlier study conducted by Moreno *et al.*, (2020), which shows that the use of crossword puzzles is one of the most effective ways of helping students to develop, improve and consolidate their spelling ability as well as being motivated to learn. Similarly, Puspita and Sabiqoh (2017) indicate in their study that the teaching and learning process of spelling by using crossword puzzles worked well, and that the classroom atmosphere built while they were being developed contributed students to have an active role. Correspondingly, Amiri and Salehi (2017) state that using crossword puzzles improved learners' spelling ability because their mean scores changed considerably, and the analysis of the responses to the questionnaire indicated that they had positive attitudes and that they were happy and excited while developing crossword puzzles.

Doubtless, the findings obtained have important implications because they provide evidence of the effectiveness of using crossword puzzles within an EFL classroom. This strategy not only was useful to improve spelling, but also other cognitive factors such as selfesteem, motivation, critical thinking, problem-solving, among others. However, when learners are not able to complete the whole crossword puzzle, they may get frustrated and demotivated. According to Ross (2019), crosswords puzzles are an interesting way to get students attention and interest. It is a good way to improve their spelling, vocabulary and mental health. Introducing students to crossword puzzles at an early stage is a good exercise for their mind. It keeps them active and productive, plus it also helps them to manage them better.

To answer the central research question, the researcher formulated three research objectives. The first one aimed to measure the effectiveness of using crossword puzzles to enhance common spelling issues. Consequently, the data demonstrated that using crossword puzzles to improve spelling is really helpful. The scores of the participant students changed significantly, passing the mean from 6,22 in the pretest to 8,70 in the posttest. Moreover, they were able to pass from the precommunicative stage to the transitional stage in only 8 weeks of intervention.

The second objective wanted to investigate how helpful is the application of an intervention plan based on crossword puzzles to improve spelling issues. Thus, according to the data collected, the intervention plan was extremely helpful as it worked as a guide to deliver each lesson, and helped to establish the class objectives and the most suitable process to achieve them. The activities planned for the different stages of the class, contributed to the obtention of good results. According to Buckle (2020), an intervention plan is a blueprint for helping a student build specific skills or reach a goal. Generally, it includes a goal, intervention strategy, timeline, and progress monitoring method.

Finally, the last objective was designed to describe students' perceptions about the implementation of crossword puzzles in the class. Accordingly, the answers given by students in the interview demonstrated that they liked a lot to work with crossword puzzles because apart from improving their ability to spell words with silent letters, double consonants and similar pronunciation, they also were able to have an active role in the lesson, increase their self-esteem, their motivation, and their vocabulary. Diniyati (2009) states that crossword puzzles as a teaching and learning medium for learners means directly play in the class. In other words, students will be able to learn to spell well unconsciously while they complete the game (crossword puzzle).

Evidently, this interactive strategy can be applied with different groups of students, regardless their age and their English level. In fact, this strategy should be employed to teach spelling since an early age to shape the ability of learners. The sample size does not affect the

use of crossword puzzles in the class. On the contrary, when students compete with many peers, they work harder to try to be the best. However, sometimes the time assigned to deliver a lesson is not enough to develop all the activities planned. Likewise, the findings of this study are significant in an 80%, because there was not a control group to determine the efficiency of the strategy by comparing their scores with the ones of the experimental group. This does not affect the effectiveness of the strategy, but it would be important that in future investigations the researchers include both the control and the experimental group in their projects.

8. Conclusions

This section presents the assumptions determined based on the results gathered through the application of the pretest/posttest and the interview conducted to the participants of the study. This information is associated with the objectives of the research, they are as follows:

Crossword puzzles are very effective in improving spelling issues that affect students' performance, and prevent them from being able to transmit written messages correctly. The more relevant indicator in this study was words with silent letters, the improvement in students' ability to spell this type of words was evident as the mean score changed from 1,08 in the pretest to 2,58 in the posttest. Thus, learners were able to spell words with silent letters easily, and gained greater retention of vocabulary that has this type of letters.

The intervention plan designed based on crossword puzzles, helped to deliver meaningful lessons, state the general objective for the class, detail the activities planned to improve spelling, and explain the process to accomplish successfully the teaching-learning process using this learning strategy. In other words, the researcher was able to have an overview of what he was going to teach during the class, and what he wanted to achieve at the end of it.

The implementation of crossword puzzles in the lessons generated good reactions and perceptions on students. All of them were happy and focused at the moment of solving this game. They considered that this strategy is very useful and help them to improve their spelling ability, increase their vocabulary, boost their mood, relieve their stress, improve their self-esteem, and strengthen their social bonds. This information is validated with the scores that students obtained in the pre and posttest, which changed significantly before and after the intervention.

9. Recommendations

This section presents the recommendations stated based on the conclusions presented above. These include suggestions for English teachers and researchers.

Crossword puzzles should be included by teachers in their English classes, as their design, organization, and learner-friendly characteristic, contribute to the reduction of spelling issues, turns the classroom atmosphere friendly, and made the learning process entertaining and interactive. In order to get good learning results, teachers mainly need to teach the sound of the letters of the alphabet.

When teachers and researchers design and develop intervention plans based on crossword puzzles, they need to include different learning topics (like football, basketball, video games, music, cinema, etc.) to catch the attention and interest of students. Moreover, they should include specific details of what and how they are going to manage each stage of the lesson. They must take into account that the allotted time for each class period is very short, so that, these activities should be brief and concise.

Teachers and researchers should promote cooperative learning among students while they solve crossword puzzles. This will allow them to share ideas, express perceptions, increase their self-esteem, improve their knowledge, and strengthen their social bonds. These affective factors will contribute to the students' performance and to the obtention of good academic results.

10. References

- Amshoff, B. (February 5th, 2020). *What is morphemic knowledge?* https://askinglot.com/what-is-morphemic-knowledge
- Apel, K. (August 15th 2011). What is orthographic knowledge? https://pubmed.ncbi.nlm.nih.gov/21844399/
- Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 77-101. doi:10.1191/1478088706qp063oa
- Beare, K. (February 15th, 2019). *Common spelling problems in English*. https://www.thoughtco.com/spelling-problems-in-english-1212366
- CrosswordClues. (February 28th, 2020). *Which types of crossword puzzles are there?*. Crosswordclues.com: https://www.crosswordclues.com/blogs/types-of-crossword-puzzles
- Davidson, M. (August 26th, 2018). *English homophones: same pronunciation, different spellings, and different meanings*. https://commongroundinternational.com/learning-english/homophones-same-pronunciation-different-spellings-different-meanings/
- Diniyati, N. (2009). The use of crossword puzzles to improve students' spelling. *Universitas Negeri Semarang Repository*, 1, 1-48. http://lib.unnes.ac.id/id/eprint/2527
- Jr, E. P. (May 10th, 2004). *Crossword puzzles rules*. https://www.mathpuzzle.com/MAA/19-Crossword%20Rules/mathgames_05_10_04.html
- Kidsense. (March 20th, 2021). Why is spelling important? https://childdevelopment.com.au/areas-of-concern/literacy/spelling/
- Lutz, E. (November 08th, 2010). Invented spelling and spelling development https://www.readingrockets.org/article/invented-spelling-and-spelling-development
- Ministerio de Educacion Ecuador. (2016). National curriculum guidelines. *Educacion Ecuador*, 06-25. https://educacion.gob.ec/wp-content/uploads/downloads/2014/09/01-National-Curriculum-Guidelines-EFL-Agosto-2014.
- Moreno, A., Lara, M., Mena, J., & Vera, A. (2020). Using crossword puzzles to improve english level one students' spelling skill. *Ciencia Digital*, 4(2), 19-29. doi:https://doi.org/10.33262/cienciadigital.v4i2.1194

- Okeke, U. (2008). Spelling and phonetic inconsistencies in English: a problem for learners of English as a foreign/second language. *African Research Review*, 64-83. doi:10.4314/afrrev.v2i1.41025
- Oakley, G., & Fellowes, J. (2016). A closer look at spelling in the primary classroom. *Primary English Teachers Association Australia*, 10-20. https://research-repository.uwa.edu.au/en/publications/a-closer-look-at-spelling-in-the-primary-classroom
- Orawiwatnakul, W. (2013). El uso de crucigramas como herramienta en el desarrollo del vocabulario. *Electronic Journal of Research in Educational Psychlogy*, 413-428. doi:https://doi.org/10.14204/ejrep.30.12186
- Phillips, E. (May 09th, 2015). *Important components of spelling*. http://digitalspellingresource.weebly.com/important-components-of-spelling.html
- Profita, D., Susilohadi, G., & Sarosa, T. (2012). Improving english vocabulary mastery by using crossword puzzle. *Project (Professional Journal of English Education)*, 255-263. doi:http://dx.doi.org/10.22460/project.v2i2.p110-114
- Puspita, N., & Sabiqoh, N. (2017). Teaching spelling by using crossword puzzle. *English Education: Jurnal Tadris Bahasa Inggris*, 10(2), 308-325. doi:https://doi.org/10.24042/ee-jtbi.v10i2.1753
- Ross. (April 09th, 2019). 5 benefits of crossword puzzles for kids. https://www.millioncenters.com/blog/5-benefits-of-crossword-puzzles-for-kids
- Salehi, H. (2017). Impacts of applying crossword puzzles on improving spelling among iranian intermediate efl male and female learners. *Research Iaun*, 1-14. https://research.iaun.ac.ir/pd/hadisalehi/HTMLShowResume_Papers.php
- Salehi, H., & Amiri, B. (2017). Effects of using crossword puzzles on improving spelling among young eff learners. *Asian Journal of Education and E-learning*, *5*(05), 159-169. https://www.ajouronline.com/index.php/AJEEL/article/view/5040
- Twinkl. (June 23rd, 2014). *What is a double consonant?* https://www.twinkl.es/teaching-wiki/double-consonant#:~:text=A%20double%20consonant%20is%20a,%2C%20for%20example %20'beginning'.
- Wonderopolis. (March 16th, 2020). Why are there silent letters? *Where the Wonders of Learning Never Cease*. https://wonderopolis.org/wonder/why-are-there-silent-letters

- WA Government. (July 07th, 2014). *Etymological knowledge*. https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/curriculum-browser/english/overview/glossary/etymological-knowledge
- Weta. (January 10th, 2010). *Phonological and phonemic awareness*. https://www.readingrockets.org/teaching/reading101-course/modules/phonological-and-phonemic-awareness-introduction
- Zorrilla, V., Mercedes, A., Miranda, P., & Nancy, J. (2017). El crucigrama como recurso didáctico para el aprendizaje del vocabulario en inglés en los estudiantes del primer grado de educación secundaria de la institución educativa 'Honores' de Huaraz 2017. *UNASAM*, 35-43. http://repositorio.unasam.edu.pe/handle/UNASAM/2725
- Zamani, P., Biparva Haghighi, S., & Ravanbakhsh, M. (2021). The use of crossword puzzles as an educational tool. *Journal of Advances in Medical Education & Professionalism*, 9(2), 102–108. doi: 10.30476/jamp.2021.87911.1330

11. Annexes

Annex 1: Pertinencia del Proyecto de Integración Curricular

Loja, 9 de mayo de 2022

Mg. Paola Moreno Ordoñez DOCENTE DE LA CARRERA DE IDIOMA INGLÉS Y PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Para los fines pertinentes, me permito informar que luego de haber revisado el proyecto de investigación denominado: CROSSWORDS PUZZLES AND IMPROVING ENGLISH SPELLING AMONG SECOND-YEAR BACHILLERATO STUDENTS AT A PUBLIC INSTITUTION IN LOJA CITY. SCHOOL YEAR 2021 – 2022., de autoría de JHUNIOR HERNÁN GONZÁLEZ SARANGO, estudiante del Ciclo 7 de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Facultad de la Educación, el Arte y la Comunicación, período académico Octubre/2021–Febrero/2022, en el que se ha podido evidenciar que el autor ha incorporado todas las sugerencias y observaciones. Por lo tanto, se emite el informe favorable en cuanto a la Estructura, Coherencia y Pertinencia, puesto que cumple con los elementos establecidos en el Art. 226 del Reglamento de Régimen Académico de la Universidad Nacional de Loja.



Mg. Sc. Karina A. Celi Jaramillo, DOCENTE CARRERA IDIOMA INGLÉS Y PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

Annex 2: Dirección del Proyecto de Integración Curricular



FACULTAD DE LA EDUCACIÓN, EL ARTE Y LA COMUNICACIÓN CARRERA DE IDIOMA INGLÉS
CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

> Ofc.206-DC.II/PINE-NG-AEAC-UNL Loja, mayo 12 del 2022

Licenciada M.Sc. Karina Alexandra Celi Jaramillo, DOCENTE DE LA CARRERA DE PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS DE LA FACULTAD DE LA EDUCACIÓN, EL ARTE Y LA COMUNICACIÓN DE LA UNIVERSIDAD NACIONAL DE LOJA; Ciudad

De mis consideraciones:

De conformidad con el Art.228 del Reglamento de Régimen Académico de la Universidad Nacional de Loja, me permito designarle DIRECTORA del Trabajo de Integración intitulado: CROSSWORDS PUZZLES AND IMPROVING ENGLISH SPELLING AMONG SECOND-YEAR BACHILLERATO STUDENTS AT A PUBLIC INSTITUTION IN LOJA CITY. SCHOOL YEAR 2021 – 2022., de autoría de JHUNIOR HERNÁN GONZÁLEZ SARANGO, estudiante del Ciclo 8 de la Carrera de Pedagogía de los Idiomas Nacionales y Extranjeros de la Facultad de la Educación, el Arte y la Comunicación, correspondiente al período académico Abril 22/2022 - Septiembre 9 /2022.

Aprovecho la ocasión para expresarle los sentimientos de mi especial consideración y

Atentamente,

EN LOS TESOROS DE LA SABIDURÍA ESTÁ LA GLORIFICACIÓN DE LA VIDA



Lcda.M.Sc. Rosa Paola Moreno Ordoñez, DIRECTORA ACADÉMICA

Elaborado por: Dra.M.Sc. Nela Aguilera Asanza, ANALISTA DE APOYO A LA GESTIÓN ACADÉMICA

Ciudadela Universitaria "Guillermo Falconí Espinosa" Casilla letra "5" Teléfono: (593) 07 - 2545614



PRE / POSTTEST				
Date/Time: Participant Code: Course: Note: This test is confidential, please answer the questions honestly.				
The questions 1 and 2 are intended to test students' knowledge of spelling words with silent				
letters. 1. Complete the missing words in the following sentences. (1.5 points)				
 Richard Carapaz hurt his k _ e _ about to finish the cycling marathon. The cyclist who won the race accidentally k _ o e _ a person. British teenagers are tech-s v _ , because they love to chat. Most British students l _ k _ to wear uniforms made by famous designers. Malala Yousafzai thinks that women s _ o d have 12 year of free and quality education. 				
2. Choose the word that is spelled correctly in each set of words. (1.5 points)				
Set 2 A. Ache B. Acke C. Eik Set 2 A. Sleivery B. Slavery C. Slavry				



A. Caos B. Kaos C. Chaos	A. Psychology B. Sychology C. Psichology	A. Slipper B. Sliper C. Slipr
C. Chaos		
D		
Ni		
ne questions 2 and 5 are in	tended to evaluate students' l	knowledge to spell words with
louble consonants.		,
. Unscramble the correct :	spelling of the word. (1.5 po	ints)
/p/p/e/A/a/r	/	
/t/e/a/c/i/o/C/n/m	n/u/m/	
/i/n/g/l/o/B/g/	/g/	
/e/T/l/i/e/b/r/	/r/	
/c/i/f/f/a/r/T	7	
	'	
Complete the following se	entences. Use the pictures in	front as clues. (1.5 points)
		Minister and a second
Frida Kahlo had a terrible t		



Carlos m the school bus every morning. Frida Kahlo was not h when her husband decided to move to New York. Japanese students stand and greet their teacher at the b and end of each class. In Japan, students eat lunch in their c at their desk.	Frida Kahlo was not h when her husband decided to move to New York. Japanese students stand and greet their teacher at the b and end of each class.	Frida Kahlo was not h when her husband decided to move to New York. Japanese students stand and greet their teacher at the b and end of each class.			
Japanese students stand and greet their teacher at the band end of each class.	Japanese students stand and greet their teacher at the band end of each class.	Japanese students stand and greet their teacher at the band end of each class.	Carlos m the school b	us every morning.	
Japanese students stand and greet their teacher at the b and end of each class.	Japanese students stand and greet their teacher at the b and end of each class.	Japanese students stand and greet their teacher at the b and end of each class.	Frida Kahlo was not h wh to New York.	en her husband decided to move	
In Japan, students eat lunch in their c at their desk.	In Japan, students eat lunch in their c at their desk.	In Japan, students eat lunch in their c at their desk.	Japanese students stand and greet tand end of each class.	heir teacher at the b	Good morning!
			In Japan, students eat lunch in their	r c at their desk.	



Finally, the questions 5 and 6 have the objective of testing students' knowledge to spell words with similar pronunciation.

 Your teacher will pronounce one word from each item, listen carefully and select the word you hear. (2 points)

Item 1

- Song
- Son

Item 3

- Weather
- Whether

Item 2

- Board
- Bored

Item 4

- Peace
- Piece
- Your teacher will come to your seat to complete this activity orally. You must spell the following words. (2 points)
 - Lead
 - Led
 - Science
 - Since
 - Addition
 - Edition
 - Council
 - Counsel

THANKS FOR YOUR COLLABORATION!



PRE / POSTTEST

ANSWER KEY

QUESTIONS	ANSWERS	SCORE
	• knee	0.3 points
	 knocked 	0.3 points
1	 savvy 	0.3 points
	• like	0.3 points
	• should	0.3 points
	• Set 1: A	0.3 points
	• Set 2: B	0.3 points
2	• Set 3: C	0.3 points
	• Set 4: A	0.3 points
	• Set 5: A	0.3 points
	Appear	0.3 points
	Communicate	0.3 points
3	 Blogging 	0.3 points
	Terrible	0.3 points
	Traffic	0.3 points
	traffic	0.3 points
	• misses	0.3 points
4	 happy 	0.3 points
	 beginning 	0.3 points
	• classroom	0.3 points
	• Item 1: Song	0.5 points
5	Item 2: Board	0.5 points
,	Item 3: Weather	0.5 points
	Item 4: Peace	0.5 points



RUBRIC FOR QUESTION 6

Criteria	2	1.5	1
Fluency	Pronounces softly and never stops. (0.5 points)	Stops now and then to figure out a letter. (0.37 points)	Mumbles a lot, and needs to stop to figure out letters. (0.25 points)
Intonation	Perfect intonation. (0.5 points)	Can hear but not loud enough. (0.37 points)	Too soft, and cannot hear at all. (0.25 points)
Body posture	Stands still in a relaxed way. (0.5 points)	Keeps moving while spelling. (0.37 points)	Cannot hold still. (0.25 points)
Structure	Repetition, spelling, and final repetition. (0.5 points)	Only repeats at the beginning or at the end. (0.37 points)	Forgets to repeat at the beginning and at the end. (0.25 points)
SCORE	2 points	1.5 points	1 point



INTERVIEW FOR RESEARCH PARTICIPANTS

Dear participant, I ask for your collaboration to answer the following questions that aim to complement the research work on: CROSSWORDS PUZZLES TO IMPROVE SPELLING AMONG STUDENTS OF TENTH-GRADE, AT A PUBLIC SCHOOL IN THE CITY OF LOJA, DURING THE 2021 - 2022 SCHOOL YEAR. Thank you in advance for your collaboration.

1. 	What emotions did you feel when developing crossword puzzles in class?
2.	Were the crossword puzzles easy to develop?
3.	What kind of crossword puzzle caught your attention the most, the one that contained pictures or the one that contained phrases? Why?
4.	Did using crossword puzzles help you improve your English word spelling skills?



	Oo you think your problem-solving ability improved after you've developed crossword puzzles?
I	Did you like being part of this research project?
	THANK YOU FOR YOUR COLLABORATION!



GRADING SCALE FOR QUANTITATIVE DATA

Table: Grading scale

Qualitative scale	Quantitative scale
A = Master the required learnings	9.00 - 10.00
B = Achieve the required learning	7.00 - 8.99
C = Close to achieving the required learning	4.01 - 6.99
D = Not reach the required learning	<u>≤</u> 4

Source: Ecuadorian Ministry of Education

Annex 7: Lesson Plans

LESSON PLAN 1

Class: 2nd "A" BGU	School year: 2021-2022
N ⁰ Students: 10	Topic: Pre-test
Language Level: B1.1	Type of institution: Public
Date: May 09th, 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 40 minutes
Lesson Objectives	Resources
Pretest administration	Worksheet Board

Warm-up and Objective Discussion

Show students a word with a silent letter, one with doble consonants, and one with similar pronunciation; ask if they know what are or what happen with that type of words. Explain that today they will be assessed to know their ability to spell words with silent letters, double consonants, and multiple pronunciation. Explain that they will be learning how to spell these types of words the next lessons.

Instruct (Teach) and Model

Instruct (explain)

- · Present the test to the students and explain how to fill in the blanks
- Explain the objective of each question.
- · Give one example (complete one item) in each question.

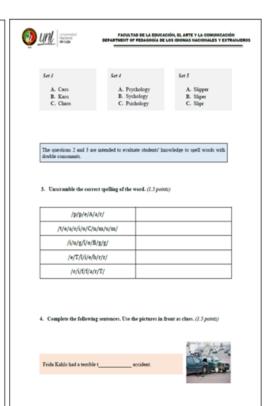
Guided Practice

Independent practice

Assessment

Annexes:





LESSON PLAN 2



Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Mysteries
Language Level: B1.1	Type of institution: Public
Date: May 12 th , 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with silent letters	Worksheet Markers Board

Warm-up and Objective Discussion

Charades. Give 2 pictures to 2 students and asks them to come to the front of the class. Students show the photo to the rest of their classmates. They spell the name of the image, and students in front guess the correct word. Explain that they will learn to identify and spell words with silent letters.

Instruct (Teach) and Model

Instruct (explain)

- Teach the alphabet to students. Pronounce correctly each letter and ask students to repeat after you.
- · Explain what are the words with silent letters by using flashcards.
- · Pronounce and spell the words in the flashcards.
- · Explain the meaning of each word and give some examples using the words.
- Write a list of words with silent letters on the board and ask students to identify the silent letter in each one.

Model

Hand out a crossword puzzle and ask students to see carefully how is completed each row and each column. Give students enough time, so that they can understand better.

Guided Practice

Give students the flashcards, so that they can spell by themselves the words. Tell them that they are going to use that vocabulary to complete the crossword puzzle. Ask students to make some sentences using those words.

Less-Guided Practice

Place students in pairs and ask them to think of other words related to the topic.

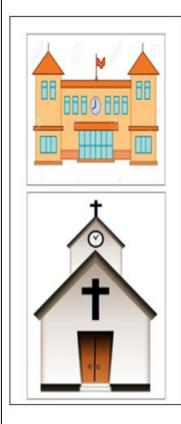
Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the silent letter in each of them.

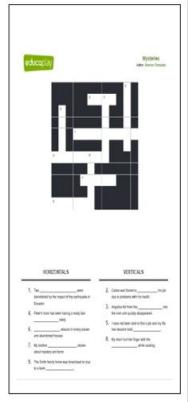
Assessment

The crossword puzzle will be considered as assessment to measure the knowledge acquired during the lesson.

Annexes:







LESSON PLAN 3

Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Stories of all kinds
Language Level: B1.1	Type of institution: Public
Date: May 16th, 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	Resources

Warm-up and Objective Discussion

Name two things. Give students a piece of paper with some categories (verbs, adjectives, etc). Ask they to choose one and name and spell two things according to that category. Explain that they will learn to identify and spell words with silent letters related to stories of all kinds, and also to make sentences with those words using conditionals.

Instruct (Teach) and Model

Instruct (explain)

- · Write on the board some words with silent letters to work on during the class.
- Spell the words, ask students to repeat after you, and explain the meaning of each one of them.
- · Explain the function and use of conditionals (cero, first, and second).
- Explain the rules to make sentences with conditionals, and give some examples using the words with silent letters.
- Write on the board some sentences using conditionals and the words with silent letters, then ask students to identify each word (and the letters without sound) in each sentence.
- Present students a letters' soup activity that contains words with silent letters.

Model

Hand out a crossword puzzle, which has pictures as clues, and ask students to see carefully how is completed each row and each column. Give students enough time, so that they can understand better.

Guided Practice

Give students the letters' soup activity and explain how to complete it, so that they can look for the word with silent letters. Tell them that they are going to use that vocabulary to complete the crossword puzzle. Ask students to make some sentences using those words.

Less-Guided Practice

Ask students to make some sentences using conditionals and the words with silent letters that they found in the letters' soup activity.

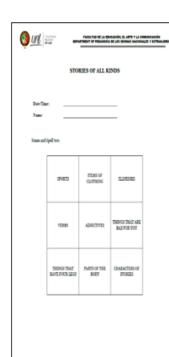
Independent practice

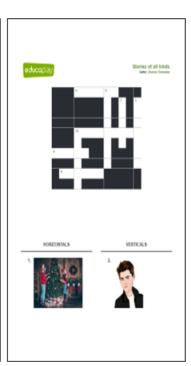
Have students complete the crossword puzzle worksheet and ask them to spell and identify the silent letter in each of them.

Assessment

The crossword puzzle and the letters' soup will be considered as assessment to measure the knowledge of students acquired during the lesson.

Annexes:









Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 09	Topic: Old Times and Modern World
Language Level: B1.1	Type of institution: Public
Date: May 19th, 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: to spell words with silent letters about Old Times and Modern World.	 Worksheets Markers Board Book Song

Warm-up and Objective Discussion

tingo tingo tango. Teacher says tingo tingo tingo, and students pass a pen until the teacher says tango. The student who losses, name and spell tree verbs.

Instruct (Teach) and Model

Instruct (explain)

- · Play an audio that contains words with silent letters.
- · Extract one word of the song and write it on the board.
- · Spell the word correctly.
- · Present a secret code spelling worksheet that contains words with silent letters.
- Introduces a crossword puzzle (worksheet) to students, and explain them how to fill in the blanks.

Model

Students listen again to the song (three times) and identify other words with silent letters. Students write on the board the words they find and then spell them. Students complete the secret code spelling worksheet. Students make a short paragraph using the words with silent letters of the secret code spelling worksheet. Students complete some activities in their English Book.

Less-Guided Practice

Ask students to make some sentences using the words with silent letters that they found in the audio.

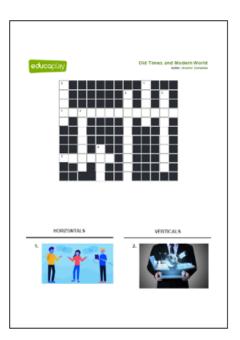
Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the silent letter in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.





Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Talk About Traditions
Language Level: B1.1	Type of institution: Public
Date: May 23th, 2022	Schedule: Monday, 13:40-14:20 / 15:50-16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	Resources
Students will be able:	

Warm-up and Objective Discussion

Leftover word. Teacher writes on the board a group of words with similar characteristics. Only one word is different. Students identify the word and try to guess what type of word it is.

Instruct (Teach) and Model

Instruct (explain)

- Explain what are the words with double consonants by using a worksheet with some words that have missing letters.
- · Read and spell the words.
- Explain the meaning of each word and makes some sentences as examples.
- Explain students how to complete some activities in their English book.
- Present students a crossword puzzle activity (worksheet) and explains how to solve it.

Model

Students complete the missing letters in the worksheet. Students spell the pronounce and spell the words. Students identify the double consonant in each word. Students make some sentences using the words with double consonants. Students complete the activities in their book.

Less-Guided Practice

Ask students to make some examples using the words with double consonants that they found in the missing letters activity.

Independent practice

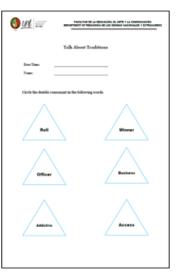
Have students complete the crossword puzzle worksheet and ask them to spell and identify the double consonants in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.







Class: 2 nd "A" BGU	School year: 2021-2022
Nº Students: 09	Topic: Going on Vacation
Language Level: B1.1	Type of institution: Public
Date: May 26th, 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: to spell words with double consonants about Going on Vacation	Worksheets Markers Board

Warm-up and Objective Discussion

Word association. Teacher says one word with a double consonant and students associate that word with another. It could be a verb, noun, or adjective but need to have double consonant.

Instruct (Teach) and Model

Instruct (explain)

- Read a short story that contains words with double consonants and students try to identify them.
- · Present an anagram activity to present the vocabulary.
- · Pronounce and spell the words.
- · Explain how to complete some activities in the English Book.
- Introduce a crossword puzzle (worksheet) to students, and explain them how to fill in the blanks.

Model

Students listen carefully to the story and try to identify all the words that have double consonants. Students solve the anagram activity. Students spell the words with double consonants. Students make a short paragraph using all the words with double consonants. Students complete the activities in their English Book.

Less-Guided Practice

Ask students to make some sentences using the words with double consonants that they found in the unscramble activity.

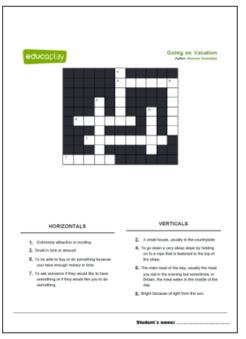
Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the double consonants in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.







Class: 2 nd "A" BGU	School year: 2021-2022
N ^o Students: 10	Topic: Holiday Destination
Language Level: B1.1	Type of institution: Public
Date: May 30th, 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with double consonants related to the topic (holiday destination).	Worksheets Markers Board English Book

Warm-up and Objective Discussion

The captain orders. Teacher says that a ship is about to sink and the captain orders students to say and spell the name a place to rest on a holiday.

Instruct (Teach) and Model

Instruct (explain)

- · Write on the board a set of words including words with double consonants.
- Read and spell the words.
- Make some sentences with some words with double consonants.
- Explain how to complete some activities in the English Book.
- Presents students a crossword puzzle activity (worksheet) and explain how to solve it

Model

Students identify and classify the words with double consonants in their notebook. Students pronounce and spell the words with double consonants. Students identify the double consonant in the words. Students form pairs, think of other words with double consonants and make some sentences with them. Students complete the activities in their English Book.

Less-Guided Practice

Ask students to make some examples using the words with double consonants that they found in the set of words.

Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the double consonants in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.





Class: 2 nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Living Like a King
Language Level: B1.1	Type of institution: Public
Date: June 02 nd , 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: to spell words with double consonants about living like a king.	Worksheets Markers Board Book Audio

Warm-up and Objective Discussion

Word ladders. A student spells a word with double consonants related to living like a king, and another student spells the antonym for that word.

Instruct (Teach) and Model

Instruct (explain)

- · Play an audio that contains words with double consonants, and students listen.
- Extract two words with double consonants of the song as a sample, and write them
 in the board.
- Give students a worksheet to write the words.
- · Explain how to complete some activities in the English Book.
- Introduce a crossword puzzle (worksheet) to students, and explains them how to fill in the blanks.

Model

Students listen to the song (two times) and identify the words with double consonants. Students write the words with double consonants in a worksheet provided by the teacher. Students pronounce the words and spell them. Students complete the activities in their English Book.

Less-Guided Practice

Ask students to make some examples using the words with double consonants that they found in the unscramble activity.

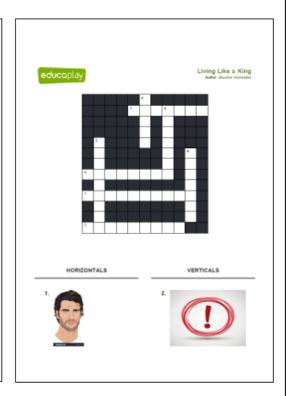
Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the double consonants in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.

unt la	FACULTAD DE LA EDUCACIÓN, EL ARTE Y LA COMUNICACIÓN DEPARTMENT OF PERAGOGÍA DE LOS IDIONAS NACIONALES Y EXTRANJE	ino:
	Living Like a King	
Date/Time:		
Write the words with	double consonants you identified in the song.	
WOR	DS WITH DOUBLE CONSONANTS	



Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Dealing with Difficult Situations
Language Level: B1.1	Type of institution: Public
Date: June 06 th , 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
T 011 d	
Lesson Objectives	Resources

Warm-up and Objective Discussion

Homophone Quiz. Teacher says a word from a list of homophones. Students write on the board another word similar to the one mentioned by the teacher.

Instruct (Teach) and Model

Instruct (explain)

- · Explain what are words with similar pronunciation by using flashcards.
- · Read and spell the vocabulary presented with the flashcards.
- · Explain the meaning and function of the words.
- · Explain the use of the first conditional by using a grammar chart.
- Make some sentences using the first conditional and words with similar pronunciation.
- · Explain how to complete some activities in the English Book.
- · Present and explain how to complete a crossword puzzle activity.

Model

Students read and spell the words in the flashcards. Students mention other words with similar pronunciation. Students describe possible situations in the future using the first conditional and the words with similar pronunciation presented before. Students complete the activities in their English Book pages 72 and 73.

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation that they studied in the flashcards.

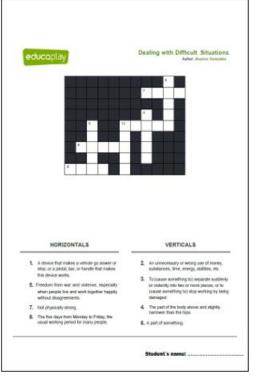
Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify the double consonants in each of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.







Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: What Will You Do If?
Language Level: B1.1	Type of institution: Public
Date: June 09th, 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
to spell words with similar pronunciation related to the topic. to make sentences using the second conditional and words with similar pronunciation.	 Worksheets Markers Board Book Flashcards

Warm-up and Objective Discussion

Odd One Out. Teacher writes three words on the board, two have similar pronunciation and one does not. Students identify the ones with a similar pronunciation and eliminate the one that does not fit in the group.

Instruct (Teach) and Model

Instruct (explain)

- · Present the vocabulary to work on during the class by using flashcards.
- Take two words with similar pronunciation of the flashcards a sample, and write them in the board.
- · Explain the use of the second conditional.
- Make one sentence using the words and the second conditional.
- Explain how to complete some activities in the English Book (reading, completing, matching, writing).
- Introduce a crossword puzzle (worksheet) to students, and explain them how to fill in the blanks.
- · Give feedback of the previous lessons.

Model

Students look again the flashcards and spell the words with similar pronunciation. (5 min) Students make sentences using the words and the second conditional. (10 min) Students complete some activities that involve matching, writing, completing, and reading. The activities are in their English Book pages 76, 77, and 78. (20 min) Students make groups to make a review and receive feedback of the previous classes. (15 min).

Less-Guided Practice

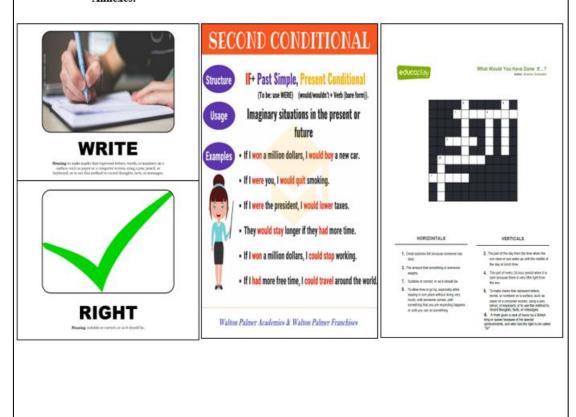
Ask students to make some examples using the words with similar pronunciation and the second conditional.

Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell each one of them.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.



Class: 2 nd "A" BGU	School year: 2021-2022
N ^o Students: 10	Topic: Your Wish Is My Command!
Language Level: B1.1	Type of institution: Public
Date: June 13th, 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	
Lesson Objectives	Resources

Warm-up and Objective Discussion

Broke phone. Students make two columns. The last student in each column says a command and the rest of students try to transmit the command to the first student in each column. The first students perform the command.

Instruct (Teach) and Model

Instruct (explain)

- · Present the vocabulary to work on during the class through flashcards.
- · Spell the words presented in the flashcards.
- · Explain the meaning and function of the words.
- Present a matching worksheet that consists of linking the words with similar pronunciation.
- · Explain how to complete some activities in the English Book.
- · Present and explain how to complete a crossword puzzle activity.

Model

Students spell the words in the flashcards by themselves. Students complete the matching worksheet. Students pronounce and spell the words they wrote in the worksheet. Students complete some activities including labeling, listening, matching, writing, discussing, and reading; in their English Book pages 80 and 81.

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation that they studied in the flashcards.

Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell and identify another word with similar pronunciation.

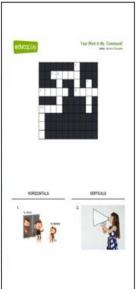
Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.











Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: What Troubles Teens?
Language Level: B1.1	Type of institution: Public
Date: June 16 th , 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with similar pronunciation about what troubles teens.	Wordwall Markers Board Book Kahoot

Warm-up and Objective Discussion

Matching. Teacher presents an activity designed by using Wordwall, and gives students the link so they can log in the activity. Students match some pictures about what troubles teens with its corresponding meaning.

Instruct (Teach) and Model

Instruct (explain)

- Present the vocabulary (words with similar pronunciation) corresponding to the lesson by flashcards.
- · Pronounce and spells the words presented in the flashcards.
- · Present a kahoot activity to students, and explain then how to complete it.
- · Make two sentences using the words with similar pronunciation.
- Explain how to complete some activities in the English Book (reading, completing, matching, writing).
- Introduce a crossword puzzle activity to students, and explain learners how to fill in the blanks.

Model

Students spell letter by letter the words presented. Students complete a kahoot activity that consists of selecting the correct words for some given definitions. Students make sentences using the words presented in the kahoot activity. Students complete some activities that involve matching, writing, completing, and reading. The activities are in their English Book pages 82, 83, and 84. (20 min) Students make groups to make a review and receive feedback of the previous classes. (15 min).

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation presented at the beginning of the class.

Independent practice

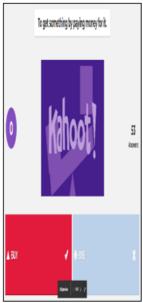
Have students complete the crossword puzzle worksheet and ask them to spell the words with similar pronunciation.

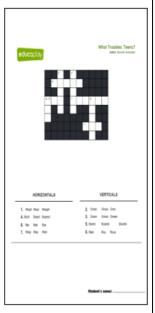
Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.









Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Gap activity
Language Level: B1.1	Type of institution: Public
Date: June 20th, 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with similar pronunciation, double consonants, and silent letters related to the topic.	 Worksheet English Book Flashcards PowerPoint Zoom Wordwall Educaplay

Warm-up and Objective Discussion

Charades. Teacher projects 2 pictures in zoom. The whole class spell the name of the pictures and two students guess the correct word.

Instruct (Teach) and Model

Instruct (explain)

- Present the vocabulary to work on during the class through flashcards designed using PowerPoint.
- · Spell the words presented in the flashcards.
- · Explain the meaning and function of the words.
- Present a matching activity that consists of linking the words that have similar pronunciation, double consonants, and silent letters.
- · Present and explain how to complete a crossword puzzle activity.

Model

Students spell the words in the flashcards by themselves. Students complete the matching activity. Students make sentences using the words presented in the flashcards, and send them through the zoom chat. Students read their sentences and identify the words with silent letters, double consonants, and similar pronunciation.

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation that they studied in the flashcards.

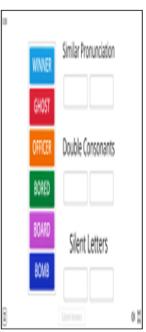
Independent practice

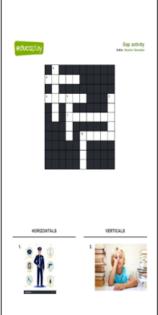
Have students complete the crossword puzzle worksheet and ask them to spell and identify another word with similar pronunciation.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.









Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: The Teenage Brain
Language Level: B1.1	Type of institution: Public
Date: June 23th, 2022	Schedule: Thursday, 13:00-15:00
Teacher Student: Jhunior González	Time per lesson: 120 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with similar pronunciation related to the teenage brain.	 Worksheets Markers Board Book Flashcards

Warm-up and Objective Discussion

Word Association Warmer. Teacher writes two columns of words with similar pronunciation in disorder. Students match the words that are similar in pronunciation and spell them.

Instruct (Teach) and Model

Instruct (explain)

- · Present the vocabulary to work on during the class through flashcards.
- · Spell the words in the flashcards, and explain the meaning of each one of them.
- Write on the board two sentences using words with similar pronunciation.
- Explain the meaning of each sentence, so that students can notice the difference in meaning.
- Explain how to complete some activities in the English Book (filling in, matching, reading.).
- · Explain how to complete a crossword puzzle.

Model

Students take turns to spell the words in the flashcards. Students go to the board and write some sentences using the words with similar pronunciation. Students make pairs and think of other words related to the class topic. Students complete some activities in their English Book pages 78 and 79.

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation presented at the beginning of the class.

Independent practice

Have students complete the crossword puzzle worksheet and ask them to spell the words with similar pronunciation.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.





Class: 2nd "A" BGU	School year: 2021-2022
Nº Students: 10	Topic: Gap activity
Language Level: B1.1	Type of institution: Public
Date: June 27 th , 2022	Schedule: Monday, 13:40–14:20 / 15:50–16:40
Teacher Student: Jhunior González	Time per lesson: 80 minutes
Lesson Objectives	Resources
Students will be able: • to spell words with similar pronunciation about the topic.	 Worksheet Book Wordwall Kahoot Educaplay

Warm-up and Objective Discussion

Anagram. Students complete the missing letters of some words based on the clues given through pictures.

Instruct (Teach) and Model

Instruct (explain)

- Present the vocabulary to work on during the class by using flashcards made in PowerPoint.
- · Spell the words presented in the flashcards.
- · Write two sentences using the words with similar pronunciation.
- Explain the meaning of each sentence, so that students can notice the difference in meaning.
- Present a kahoot activity that consists of choosing the word that is spelled correctly.
- · Explain how to complete a crossword puzzle.

Model

Students take turns to say and spell the words presented. Students write some sentences using the words with similar pronunciation and send them through the zoom chat. Students read their sentences and identify the words that have similar pronunciation. Students complete the kahoot activity designed by the teacher.

Less-Guided Practice

Ask students to make some examples using the words with similar pronunciation that they studied in the flashcards.

Independent practice

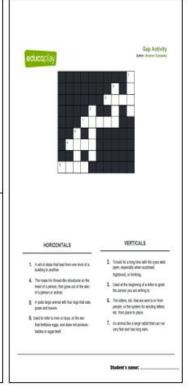
Have students complete the crossword puzzle worksheet and ask them to spell and identify another word with similar pronunciation.

Assessment

The crossword puzzle will be considered as assessment to measure the knowledge of students acquired during the lesson.







Class: 2 nd "A" BGU	School year: 2021-2022	
Nº Students: 10	Topic: Posttest administration	
Language Level: B1.1	Type of institution: Public	
Date: June 30th, 2022	Schedule: Thursday, 13:00-15:00	
Teacher Student: Jhunior González	Time per lesson: 120 minutes	
Lesson Objectives	Resources	
to apply a posttest to students, and in this way realize if the treatment has been effective. to conduct an interview with students, in order to know their perceptions on the implementation of crossword puzzles to improve spelling.	Posttest Interview	
Warm-up and Objective Discussion		

Instruct (Teach) and Model

Instruct (explain)

- · Present the posttest to students
- Allot 15 minutes for students to answer questions 1, 2, 3, and 4. In these questions, students fill in the blanks, order letters to make words, and identify words with correct spellings.
- Allocate 15 minutes for students to answer questions 5 and 6. In question 5, the teacher spells some words and students choose the correct one. In question 6 students pronounce and spell certain assigned words.
- Present an interview to students, which has the objective of measuring their perceptions about the implementation of crossword puzzles to improve spelling.
- Allot 50 minutes to interview all the students who participated in the research.

Guided Practice

Students solve questions 1, 2, 3, and 4 of the <u>posttest</u> by themselves (15 minutes). Students answer questions 5 and 6 with the guidance of the teacher (15 minutes). Students answer the interview conducted by the teacher (50 minutes).

