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ENGLISH LANGUAGE DEPARTMENT

TITLE

MIND MAPPING AS A COGNITIVE STRATEGY TO
DEVELOP READING COMPREHENSION AMONG KET
PREPARATION STUDENTS, MORNING SESSION AT
EASY ENGLISH SCHOOL OF LANGUAGES IN THE
CITY OF LOJA DURING 2020 – 2021 SCHOOL YEAR

Thesis as a previous requirement to obtain
the Bachelor's Degree in Sciences of
Education, English Language Major.

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CERTIFICATION

MG. SC. MIRIAM EUCEVIA TROYA SÁNCHEZ., PROFESSOR OF THE
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NACIONAL DE LOJA,

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The present research work entitled **MIND MAPPING AS A COGNITIVE STRATEGY TO DEVELOP READING COMPREHENSION AMONG KET PREPARATION STUDENTS, MORNING SESSION AT EASY ENGLISH SCHOOL OF LANGUAGES IN THE CITY OF LOJA DURING 2020 – 2021 SCHOOL YEAR**, under the responsibility of the undergraduate student, **JESSENIA ALEXANDRA ERIQUE SÁNCHEZ**, has been thoroughly revised and fully analyzed. Therefore, I authorize the presentation of thesis for the pertinent legal aims.

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THE AUTHOR

DEDICATION

First of all, I want to dedicate my thesis work to my mother Mónica who devotes her entire life to education, for her unconditional support, prays and endless love. I owe her my dreams and desire to be teacher. My appreciation also goes to my beloved grandparents who have been always in my life to take my hand when journey was too hard. I also would like to dedicate my research to my brother, for his patience and continuous motivation in my ups and downs.

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a. TITLE

MIND MAPPING AS A COGNITIVE STRATEGY TO DEVELOP READING
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b. RESUMEN

El objetivo de la presente investigación fue desarrollar la comprensión lectora utilizando mapas mentales como estrategia cognitiva con los estudiantes de preparación KET, sección matutina de la Escuela de Lenguas Easy English, en la ciudad de Loja durante el año lectivo 2020-2021. El método científico, descriptivo, estadístico y analítico-sintético fueron adoptados para recolectar información, describir, procesar, analizar e interpretar los resultados obtenidos. Instrumentos como exámenes y cuestionarios fueron aplicados, así como hojas de observación y notas de campo para documentar el progreso de los estudiantes. Los resultados evidenciaron que la estrategia de mapas mentales mejoró exitosamente las habilidades de comprensión lectora en los estudiantes, tales como predicción de contenido, identificación de la idea general, localización de detalles específicos y definición de palabras de acuerdo a su contexto. Los mapas mentales como estrategia tuvieron un impacto positivo en los estudiantes al incrementar su confianza y participación en las actividades de lectura.

ABSTRACT

The objective of the current research was to develop reading comprehension using mind mapping as a cognitive strategy among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year. The scientific, descriptive, statistical and analytical-synthetic methods were employed in order to gather information, describe, process, analyze, and interpret the obtained results. The instruments used to collect data were tests and questionnaires applied to seven students. Similarly, observation sheets as well as field notes were utilized to document the students' progress and attitudes. The results evidenced that mind mapping strategy successfully improved students' reading comprehension skills such as predicting content, reading for gist, reading for specific details and inferring the meaning of words. Mind mapping strategy also had a positive impact on students as they increased their confidence and motivation as well as their involvement and interaction in reading activities.

c. INTRODUCTION

Reading is an increasingly meaningful skill in students' academic life. However, reading effectively, especially in a foreign language, is one of the most challenging activities for many students at school (Gamboa, 2017). Reading not only involves a complex process of decoding words but it also requires to develop analyzing, synthesizing and evaluating abilities in order to completely comprehend a text and succeed in the learning process through the acquisition of new knowledge from written texts. The lack of these reading abilities leads students to feel frustrated and demotivated to continue reading. In addition, students will not read properly at least they are well-guided through the application of correct strategies. Furthermore, other relevant factors that influence on students' reading comprehension are little knowledge of vocabulary as well as of grammatical structures, which difficult students to understand what they are reading.

In order to notice what were the reading issues students faced, some nonparticipant observations were executed during the month of July, 2020 through the use of reading texts and reading activities with KET preparation students at Easy English School of Languages, finding out that students mainly struggled in identifying the general idea of texts. They also barely located specific details while answering questions about the text. Moreover, students had difficulty in inferring the meaning of specific words within paragraphs. Subsequently, they were unable to formulate predictions or give opinions based on the reading text

information. In an attempt to solve the problems mentioned above, the researcher considered relevant to research: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages in the city of Loja during the 2020-2021 school year?

Mind mapping was chosen as an effective and powerful strategy to develop reading comprehension due to the fact that it is a practical way to visualize and store information (Buzan, 2005). The application of mind map allows students to organize and summarize particularly data within a text and create a graphic representation of it. Another reason considered by the researcher to choose this strategy is that mind mapping enables to make connections and find similarities between ideas which facilitates the process of understanding. Additionally, the use of mind maps fosters cognitive development, creativity and critical thinking which are essential abilities, especially in reading comprehension.

Five specific objectives related to the general problem were proposed to develop this work. These objectives were: to research the theoretical and methodological references about mind mapping as a cognitive strategy and its application to develop reading comprehension, to diagnose the issues that limit the reading comprehension development in the English language, to elaborate an intervention plan based on mind mapping as a cognitive strategy to develop reading comprehension, to apply the most suitable mind maps in order to develop reading comprehension, and to validate the results obtained after the application of mind mapping as a cognitive strategy among KET preparation students,

morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

The methodology followed in this study is based on the application of the following methods: the *scientific method* enabled the researcher to obtain reliable information to support the process of data collection making an accurate analysis of the results. The *descriptive method* facilitated the report of the events during the intervention plan as well as a detailed description of the stages of the study and the resources used. The *statistical method* was employed to collect qualitative and quantitative results obtained from the observations sheets, field notes and the application of tests and questionnaires. The *analytic/synthetic method* gave the researcher the opportunity to draw conclusions based on a deeply analysis of the information gathered by the instruments.

The present research work includes: first, the *Abstract* which summarizes the general objective, the methods and the instruments used, the population as well as the main results and conclusions; second, the *Introduction* where the core problem is contextualized, the reasons for the selection of the theme are also stated, the specific objectives, the methods applied and the content of the thesis; after that, the *Literature Review* which integrates relevant information about the two variables: mind mapping and reading comprehension. Then, the *Materials and Methods* which involves the materials, design of the research, techniques and instruments used to collect information, the population who collaborated for this research and the stages of the intervention plan. In addition, the *Results* where the data gathered through the application of pre and post-tests and pre and post

questionnaires is presented using tables and graphs with the accurate interpretation and logical analysis. Next, the *Discussion* which contains the parameters evaluated, a description of the intervention plan phases, weaknesses and strengths recognized after the application of the interventional plan and the contribution that it had for the improvement of students' reading comprehension. Subsequently, the *Conclusions* where the final achievements and findings in relation to the thesis work are comprised. Finally, the *Recommendations* section includes suggestions for teachers and future researchers.

d. LITERATURE REVIEW

MIND MAPPING AS A COGNITIVE STRATEGY

Definition of Mind Mapping

The term “mind mapping” was popularized by a renowned British Psychologist, Tony Buzan in the late 60s. He defines mind mapping as a two-dimensional and non-linear note-taking tool that allows learners to use the two parts of the brain (Buzan, 2005). In addition, the same author affirms that “a mind map is the easiest way to put information into the brain and to take information out of the brain.” Mind mapping is also considered as a visual form of note-taking in which not only words are included but also images, symbols, and colors; dividing ideas or concepts in a hierarchical order (Siriphanich, 2010).

In contrast, according to Indrayani (2014), “a mind map is a diagram used to visually outline knowledge which is often created around a single word or text, placed in the center, to which are associated ideas, words and concepts”. While Ingemann (2008) has reported that mind mapping can be seen as one of the most powerful tools to become incredibly creative and understand complex systems. This is because this method enhances the capacity of acquiring new knowledge by integrating pictures to enrich the learning (Indrayani, 2014). Based on the definitions above, mind mapping is clearly an alternative to illustrate facts and events using a diagram that connects ideas as well as foster creativity.

An example of a mind map on the topic of “mind mapping” is given below (Olmo, 2017).

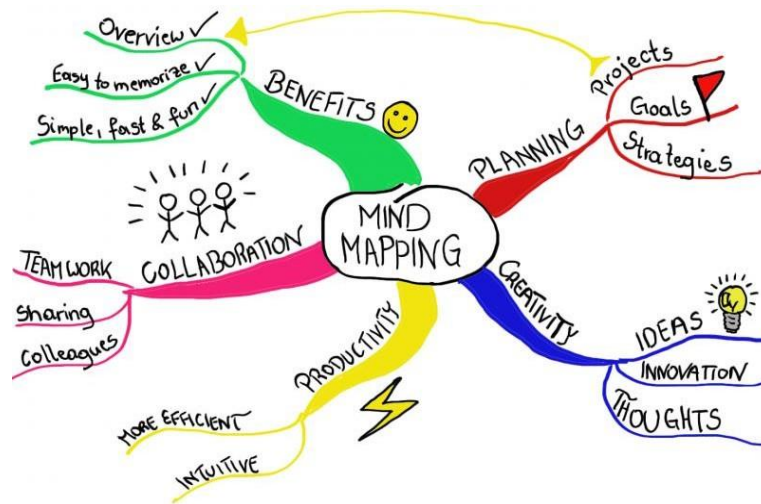


Figure 1: A Mind Map.

Regarding the teaching-learning process, mind mapping strategy refers to the teaching technique that uses mind maps as an instrument to represent students' understanding by joining ideas in a tree branch format with words and pictures (Siriphanich, 2010). Marton and Booth (1997) in Siriphanich (2010) also mention that “students can use mind maps for revising and clarifying thoughts so as to get the deep meaning of a story”.

The concept of “mind mapping” is closely related to Piaget’s Theory of Cognitive Constructivism, which describes the development of learners’ capabilities, makes emphasis on how they decode new content and how they build a mental photograph of the world (Piaget, 1952).

According to the GSI Teaching and Resource Center (2015) in McLeod (2018):

Cognitive constructivism states that knowledge is something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their stage of cognitive development.

Cognitive teaching methods aim to assist students in assimilating new information to existing knowledge, and enabling them to make the appropriate modifications to their existing intellectual framework to accommodate that information.

Piaget proposes that learning is a dynamic process in which learners are continually adapting. As a result, learners construct more complex cognitive structures in their minds organizing and reorganizing material to understand and adapt themselves to it (Lefa, 2014). Piaget (1983) cited in Lefa (2014) highlights how useful is to give students opportunities to classify and group information to facilitate the assimilation of new knowledge with the previous one.

In line with this, mind mapping aims to activate brain functions and improve them. It makes easier the process of grouping and assimilating concepts as well as comparing them and establishing connections between ideas starting from an individual piece of information until arriving to a complete picture (Buzan, 2005). In a similar way, Davies (2010) argues that mind mapping is clearly an effective alternative to have students' brains actively worked. He suggests the use of mind maps inside classrooms as it allows students to think on their own, to be autonomous, to store information in a visual manner and to improve their way of learning.

Importance of Mind Mapping

Mind mapping is important due to the facility to use it in many fields including education as it is focused on the development of the brain capacity and the optimal use of it (Davies, 2010). Owing to the fact that mind mapping extracts

information and turns it into a visual, colorful and structured image, it increases creative thinking and encourages the organization and creation of new ideas (Budhi, Adnan, & Harry, 2016). As this strategy is non-linear, mind maps facilitate memory creating associations and links to record concepts easily (Rajenran, Selvaraj, Rajaguru, & Kalaiselvi, 2017). Furthermore, Chen (2008) cited in Alomari (2019) states that “the adoption of colors and images connected to words help human memory so that one could concentrate the mind on the central part which is the crucial subject”. This means that remembering facts and gaining new knowledge using this kind of diagram will be more effective.

Consequently, the use of mind mapping in education is imperative and relevant. Learners will be able to integrate and clarify complex concepts as well as develop a holistic understanding of the content to be learnt (Siriphanich, 2010). Budd (2004) in Andrini (2016) suggests that students create a visual image to enhance their learning using an innovative way to make connections in meaningful ways. Moreover, Buzan (2005) also claims that “mind mapping is a good tool to improve students’ ability in recording information and enhancing creative thinking.” Students are more likely to interpret relationships between concepts as they are easier to follow than verbal or written descriptions. In this sense, students acquire knowledge in a practical and functional way remembering a wide range of details (Davies, 2010).

There is a large volume of published studies describing the importance of the use of mind mapping. Alomari (2019) finds crucial this technique as “mind maps help younger students with the process of building conceptual comprehension of

content”. Akinoglu and Yasar (2007) in Alomari (2019) considers that mind mapping has a great contribution to students’ development since “mind mapping provides meaningful learning and promote active-learning of language”. In addition, including colors and pictures will make the learning process more enjoyable. In this way, students perceived mind mapping as a fun, interesting, and motivating approach (Budhi, Adnan, & Harry, 2016). Henceforth, the use of mind mapping is important as students not only focus on the content but also on creativity.

Purposes of Mind Mapping

According to Michael Michalko in Buzan and Griffiths (2014), mind mapping aims to establish connections between ideas starting from an individual piece of information until arriving to a complete picture. He emphasizes that the facilitation of the learning through the capabilities of the brain is included in this objective. In a similar way, Davies (2010) argues that the principal purpose of mind maps is to associate ideas storing information in a visual manner.

However, Ingemann (2008) suggests that the only purpose of mind mapping is to get all the ideas from a text to create a visual representation of it. While Buzan (2005) affirmed that there are several specific purposes of mind mapping.

- To activate the whole brain.
- To fix the mental tangled.
- To have students focused on the central explanation.
- To show the relationship between the separated information parts.
- To give a description wholly and specifically.

- To group and assimilate concepts as well as compare them.

Elements of Mind Mapping

Mind mapping includes some specific elements that are necessary for the correct construction of it. Each element greatly contributes to the general objective of mind mapping that is to facilitate the assimilation and understanding of a new topic (Ingemann, 2008). These elements are detailed as follows:

Main idea.

The main idea or central theme is the starting point of the mind map and it represents the topic to be developed. In addition, it is the basic unit from which secondary ideas will derive. The main idea must define and explain briefly the topic as well as give the students a general view of it (Kearns, 2009).

Subtopics.

Subtopics give specific but relevant details about the main topic. Ingemann (2008) suggests that students will carefully analyze the presented information in order to organize and classify the data that they will use. Students should avoid using unnecessary details and repeating ideas.

Levels.

Hierarchy of ideas is represented by the use of levels applied around the central topic. Levels is the means that mind mapping strategy uses to show the difference between information (Ingemann, 2008). Levels allow learners to categorize information in a hierarchical way, recognizing which details belong to the subtitles written before as well as analyzing the relevance of each idea.

Branches.

In order to build a mind map is crucial to connect lines to other lines and make major branches to differentiate main and supporting ideas (Indrayani, 2014). Even though the branches are the smallest component of a map, they have a primary function. Each branch connects ideas, relate topics as well categories and examples. They make easier the process of summarizing and remembering information.

Pictures.

“Pictures are not only more effortless to recognize and process than words, but also easier to recall due to the fact that visual and verbal memories are stored in different parts of the brain” (Dewan, 2015). Therefore, the combination of words and pictures has a positive effect on learning (Lenzer, 2012). Ingemann (2008) supported this by mentioning that “the mind has a great capacity to remember images rather than texts”. This explains the mind mapping aim to create a mental photograph of concepts.

Colors.

Color is a useful tool, which has been widely used in education. “Color draws on both symbolic and cognitive powers to affect learning, facilitating memorization and identification of concept” (Olurinola & Tayo, 2015). Mind maps need to use at least three colors in each sub topic since it helps to make a distinction between ideas (Indrayani, 2014).

Mind Mapping Application in EFL Reading Comprehension

Mind maps aim to develop memory and make it easier to remember and visualize information. This is the reason why it is very efficient and convenient to master a foreign language (Hofland, 2007). Using mind maps students connect prior knowledge and new information, which facilitates them to transfer what they learn and apply it to new situations (Fiktorius, 2013). Regarding receptive skills, mind mapping enables the acquisition of the language in a brilliant form.

Therefore, reading comprehension is one of the primary skills to get information. Mind mapping has a particular influence on this ability as it allows students to decode and understand a text as well as adapt what they have just learnt with what they already know. Cadieux (2011) in Male and Aprilianing (2015) supported the fact that this strategy enhances reading skill by emphasizing that, “mind mapping can be used to improve reading comprehension in both fiction and non-fiction texts and across a variety of genres. Mind maps work because they give the reader another (visual) way to process information.”

Despite the fact that reading is a left-brain skill, mind mapping proposes to develop reading comprehension as a process that involves both sides of the brain. While reading, different images, associations, ideas, and isolated words will come to students' mind. Mind mapping enables the learner to identify and associate this information by using images and colors to interpret better the whole message (Hofland, 2007). In theory, students will create a mental picture of the reading which facilitates the extraction of specific as well as general details.

Several studies carried showed a great improvement in reading comprehension after applying mind mapping strategy (Andrini, 2016; Siriphanich, 2010; Hofland, 2007; Kusmaningrum, 2016; Wirda, Hanafie, & Wahyudin, 2014; Suryani, 2015; Male & Aprilianing, 2019). By drawing mind maps students visualized the text which gave them a clear insight of the content. In addition, students remembered more details from the reading by using this technique (Hofland, 2007). Finally, it was concluded that mind mapping motivates learners to continue reading as they found the construction of a mind map a pleasant activity.

Henceforth, mind mapping is proposed as an alternative for teaching reading comprehension (Andrini, 2016). Kaufman (2010) in Andrini (2016) argues that “mind mapping is an efficient technique to use while reading, since its non-linear format allows students to view the entirety of their notes at a glance, then easily place new information in the appropriate branch or make connections between ideas.” Furthermore, not only this technique enhances the understanding, but also rises learners’ interest in reading activities as the feel free to create their own mind map using their preferred colors and pictures.

Types of Mind Maps Applied in Reading Comprehension

One of the principal objectives of mind mapping strategy is to facilitate the assimilation of new knowledge and the comprehension of new content. For this reason, mind maps are considered the most practical way of visualizing information (Buzan, 2005). They aimed to simplify this complex activity using diagrams, pictures and colors so the brain can recall a wider range of concepts.

Mind mapping is commonly applied in a variety of educational areas and for many purposes. Therefore, different kinds of mind maps have been established during the last decades.

According to Erdem (2017), the structure of a mind map can be different and have some variations depending on the context in which it is used. However, they still use the same elements. Regarding reading comprehension, there are five kinds of mind maps that are focused on key features about reading. Each of these mind maps enables the students to process easily any kind of written information emphasizing in one aspect. Corner (2019) proposes some types of mind maps explains as follows:

Bubble map.

Corner (2019) states that bubble maps are specially used to explain a theme using related adjectives or descriptions. This mind map uses a center circle for the topic and other circles for qualities, properties, or other aspects of the same topic. Bubble maps are an excellent tool to obtain the general or main idea of a text as students will process the reading in a holistic way. In other words, this diagram facilitates to summarize a text after analyzing key aspects within a reading passage.

Circle map.

The circle map is mainly applied to define or explain the meaning of a word or specific concepts. This map consists on a large circle with a smaller circle inside. Students must write the term that will be defined inside the small circle, while thoughts and ideas are written in large areas (Abdelkafy, 2020). Circle map

can be easily developed at any stage of the class as it offers a rapid alternative to review new words.

Multi-flow map.

The differentiation between causes and effects as well predicting events and content are two fundamental properties of multi-flow map. Corner (2019) states that this diagram suggests diving cause on one side (left) and effects on the other side (right). The construction of this mind map allows students to infer information that probably is not explicit in the text and speculate what will happen next and what happened before. In fact, it is ideal to show the relationships between written and not written events based on a reading passage.

Tree map.

Tree map can be defined as “a space-constrained visualization of hierarchical structure which uses enclosure to visualize trees, using size and color coding to map sub-tree onto a sequence of nested rectangular areas” (Long, Fook, & Zainom, 2017). Additionally, the format used in this kind of mind map allows students to categorize the information using a main topic at the top and the subtopics or elements as the roots that support the principal title. Subsequently, students can quickly convert written information into visual material as it facilitates the visualization of a new content as well as the comprehension of definitions and components.

Brace map.

This mind map helps to break a big object into its elements for a deeper analysis. While developing this mind map, all the components become more and

more specific. Contrary to multi-flow, brace map facilitates to establish specific relationships between a whole and its parts. Consequently, the process of obtaining and organizing specific information while reading a text becomes simpler and more straightforward.

The principal characteristic is that this diagram uses brackets on its structure. It is advisable to write the general object in a horizontally way and then draw a big bracket after it in an attempt to organize the subtopics into different categories. The brackets tend to group together these smaller parts.

Advantages of Mind Mapping

Mind Mapping has a great number of advantages. As cited before, the principal advantage is that mind mapping improves learning and memory by developing especially the brain functions. Additionally, it facilitates the process of organizing and summarizing information. Particularly, mind maps foster creativity and imagination (Knight, 2012).

On the contrary, some advantages proposed by Cleford (2014) in Andrini (2016) are:

- Easily add ideas or links later, just drawing a new branch.
- Mind maps may help people to see other connections and similarities in the information they receive. Adding sketches to mind maps, them more memorable than conventional notes.
- Mind mappings can make revision faster, even if the course notes are conventional. They condense material into a concise, memorable format.

In the educational field, mind mapping is very advantageous. Apart from facilitating students' learning, mind mapping involves different learning styles (Hofland, 2007). Fiktorius (2013) demonstrated in one of his studies that "mind maps are especially helpful for strong visual learners who absorb information better when it is presented via diagrams". Another advantage is that mind maps are related to multiple intelligences like emotional as well as traditional intelligences such as verbal and spatial (Hofland, 2007). In short, education is highly benefited by mind maps.

READING COMPREHENSION

Reading Skill

"Reading is the process of constructing meaning from written texts" (Smith, 2012). It is a receptive skill as the information is extracted for later being decoded and assimilated.

According to Hartney (2011), "reading is a complex cognitive process requiring visual, auditory and motor skills to enable a child to recognize words and symbols, to associate them with the appropriate sounds and to invest them with meaning derived from previous experience". Clearly, reading refers to the whole and complete understanding of a text. It includes implicit and explicit ideas, isolated words, and connected sentences. However, Namjoo and Amir (2013) state that in spite of being necessary the reader's knowledge about vocabulary and grammar it is also needed reader's analyzing, synthesizing, and evaluating ability.

In relation to this, Hengari (2007) as cited in Hartney (2011) argues that reading is considered an active interaction with the language. It involves a

dynamic comprehension and interpretation as well as an appreciation and application of what is read. Apart from decoding most of the ideas presented in a text, learners are able to relate them to their previous knowledge, analyze its relevance to finally evaluate this information (Musuhara, 2009 in Namjoo & Amir, 2013).

Yukselir (2014) suggests that reading is one of the most valuable and fundamental skills for learners to master the language. In addition, “reading has a positive effect on students’ vocabulary knowledge, on their spelling and on their writing” (Harmer, 2007). Therefore, reading is not only an important means of communication but is also a useful way of language learning.

Reading Comprehension

“Reading comprehension is regarded as a multifaceted cognitive skill, drawing on many knowledge sources and processes ranging from lower-level processes to higher-level” (Manoli, 2013). Erler and Finkbeiner (2007) as cited in Manoli (2013) highlighted that “since the 1990s reading comprehension has been seen increasingly to be the result of complex interactions among the text, the setting, the reader, the reader’s background, the reading strategies, the L1 and the L2, as well as reader decision making”. Basically, the principal idea of reading comprehension is the ability to mentally interconnect different ideas in a text and reach to a mental representation of it (McNamara, 2007).

In a similar manner, reading comprehension is viewed as an interactive process of extracting meaning from a text (Rummelhart in Dilek, 2017). A general component in many definitions is the interpretation of the information in a text,

the use of prior knowledge to interpret this text, and the construction of a coherent representation or picture in the reader's mind (McNamara, 2007). In essence, Siriphanich (2010) summarises reading comprehension as the ability to comprehend a reading passage which can be measured by reading test scores.

However, reading comprehension is not a unitary process. It involves a set of skills that are required to understand completely a text. "This process starts from the moving of words on the page to meaning in the mind, the recognizing of individual words by using knowledge of letter patterns, matching the resulting pronunciations to meaning, and finally connects these words into their mind" (Andrini, 2016).

Apart from the ability to mentally connect ideas, inference-making plays an essential role to ensure a complete understanding of the text. "The reader may fill in details that are not stated in an explicit way, either by integrating statements within the text or by incorporating general knowledge with textual information" (McNamara, 2007). Furthermore, awareness about text structure and the expectations related to the characteristic of a specific text results in a useful technique to help students to activate prior knowledge and schemas to aid the construction of mental representations (McNamara, 2007).

Reading Comprehension Levels

As a cognitive process, reading comprehension requires three levels of understanding. These levels are literal, inferential, and evaluative (Smith, 2012). They need to be developed in the class since they allow the reader to have a deeper perception moving from the easiest to the complex phase.

Literal level.

Starting with the literal level, the reader considers the information that is written in the text, for example, location, characters, ages, and other explicit details. This level is crucial because unless the readers understand well the material from this part, they cannot continue to the next phases (Roundy & Dahahy, 2016).

Inferential level.

During the inferential level the reader must determine what is implied in the text. The student can make predictions about what would happen next or about possible consequences, how the participants in the text are feeling, and other possible inferences. This process is also known as reading between lines.

Evaluative level.

At the end, learners will analyze all the content and build an opinion or judgment about it. Common questions in this level are whether the reader likes or not the reading situation and what aspects he will improve. This stage aims to develop critical thinking and create independence in the reader.

Reading Comprehension Models

Owing to the fact that reading is a receptive skill, it is imperative to analyse the different models that readers use to process the information. The models are often categorized as bottom-up, top-down and interactive model.

Bottom-up model.

Bottom-up is characterized by the influence of the senses into the perception of a text. In this model, “the reader decodes the information by moving from the

lowest level, such as letters and words, towards the higher levels that are clauses, sentences, and paragraphs” (Gamboa, 2017). Clearly, reading is presented as a mechanical process by this model. In other words, the reader draws on lower-level processes and forms a piece-by-piece mental translation of the text information (Manoli, 2013). The bottom-up model is known as text/data-driven or process/sequential models.

Top-down model.

In contrast to bottom-up model, top-down utilizes background information to predict what is about reading. This model starts with high-level processes highlighting the critical role of inference, the reader’s prior knowledge, and expectations in the text processing, which can, simultaneously, interact with stages occurring earlier in the sequence (Manoli, 2013). Therefore, top-down model treats reading as an active process taking into account what the readers already know about the subject, their needs, and experience which allows them to use contextual information. Henceforth, this model is also named as a conceptual-drive process.

Schema theory.

The term schema is frequently attributed to Frederic Barlett who defined it as an active organization of past reactions or experiences. Based on this assumption, schema theory is defined as an organized previous knowledge structured that enables the reader to comprehend, learn and remember information in a better way (Johnson, 2014). According to schema theory, the reader integrates the knowledge given from a text with his background in an interactive manner. There are two

types of schemata, formal and content schemata. “Schema theorists make a distinction between formal schemata (knowledge about the structure of a text) and content schemata (knowledge about the subject matter of a text)” (Villanueva de Debat, 2006).

Content Schemata.

“Content schemata makes reference to the message of the text, and, if the topic is familiar or not. As a result, the reading task will be more productive and efficient” (Villanueva de Debat, 2006). In addition, content schema concerns about the "background knowledge of the content area of the text" (Carreli and Eisterhold, 1983 in An, 2013). In line with this, this kind of schema contains conceptual knowledge or information about a specific topic in relation to what is reading.

Formal Schemata.

With reference to Carreli and Eisterhold (1983) in An (2013), “formal schema refers to the background knowledge of the formal, rhetorical organizational structures of different types of texts”. In other words, formal schema deals with the specific characteristics of each gender and each kind of text like essays or articles. This type of schema not only makes reference to the different types of texts but also involves language features like orthography, syntax, cohesion and text structure. An (2013) has pointed out that the lack of knowledge related to these aspects can contribute considerably to huge problems in reading comprehension.

Interactive model.

The interactive model suggests that bottom-up and top-down process can actively interact between them (Gamboa, 2017). The aim of this model is to combine the elements of both processes and include interacting with hierarchical stages. In addition, various types of knowledge, such as background, syntactical, semantic, lexical, and orthographic processes can be integrated to contribute to text comprehension. (Manoli, 2013). Moreover, “the efficient reading requires the readers to make predictions (bottom-up model) and hypothesis about the text content by relating the new to their prior knowledge (top-down model) and by using as few language clues as possible” (Dilek, 2017). In short, readers are expected to use both processes in order to interpret a text.

Strategies in Teaching Reading Comprehension

“A reading comprehension strategy is a cognitive or behavioral action that is enacted under particular contextual conditions, with the goal of improving some aspects of comprehension” (McNamara, 2007). In theory, these strategies facilitate a better understanding of the text by using different techniques or activities. The principal comprehension strategies are described below.

Skimming.

This strategy aims to quick read and provide the reader with a general understanding or a general idea of the reading passage without taking into consideration grammar aspects. Skimming is also known as reading for gist.

Scanning.

During the process of reading, students will identify different aspects such as supporting details, the author's intention, or the setting in which the text is developed. This will clearly allow students to locate information, draw conclusions and improve comprehension. It is also widely known as reading for specific information.

Predicting.

Students will determine what the text is about or what would happen in the text by analyzing pictures or titles and subtitles. This enables students to have an idea before reading.

Inferring.

While working on this strategy, students are meant to infer the meaning of words as well as deduce aspects that are implicit or that are not clear on the text. This will help them to better understand the general message of the text.

Sequencing.

Students will identify key components of a story such as introduction, body and conclusion. In other words, students will determine what happen at the beginning or what aspects belong to the introduction, what events occurred in the middle and what elements were included at the end.

Visualizing.

Visualizing refers to the creation of a mental picture of the scenery and participants of a text. It enhances the learners' ability to organize and remember ideas as well as inferring and predicting future events.

Questioning.

Questions can be formulated at any stage of the reading process. They are effective since they focus students' attention on what they are learning. This enables the students and even the teacher to monitor the comprehension of a text.

Connecting.

As explained before, the fact of relating previous background to new information can have a positive impact on reading comprehension. However, Knee and Zimmerman (1997) as cited in Correia and Bleicher (2008) have also established three different types of connections. As a result, students should connect the text to their lives, to their knowledge, and to the environment.

Summarizing.

Learners will be capable of expressing the most relevant facts or events in a brief and clear manner but using their own words. The consolidation of the comprehension will be evidenced by applying this strategy.

Reading Comprehension Abilities

There are specific abilities that students have to master in order to effectively interpret a text. Smith (2012) considers some essential aspects for a complete comprehension including reading for gist, reading for specific details, predicting content and inferring the meaning of words.

Reading for gist.

According to the British Council, gist is the general meaning or purpose of a text, either written or spoken. Students will focus their attention on general aspects and content words like the nouns, verbs and adjectives not on grammatical

words or specific details that provide structure rather than meaning (Pappa, 2015). Some of these aspects include key words, bold word, headings or titles and the first and last sentence of the paragraph. If students are able to identify or discover the gist of the text, this means that they have a clear overview of the topic.

Reading for specific details.

In contrast, reading for specific information involves a deep analyzing of the text in order to locate particular details that are previously required (Roberts, 2015). However, it is not necessary to read word by word; students only pay attention to the words that answer to the question. In other words, the focus is on local comprehension and little relevance is given to the rest of the text (Yazar, 2013). As a result, reading for specific details means that students will develop a set of questions or other types of tasks in which they will need to look for key words, numbers, dates or places within the reading passage.

Predicting content.

According to Solong (2010), “predicting refers to the use of knowledge of a subject to make predictions about content and vocabulary, knowledge of the text type and purpose to make predictions about discourse structure and writing style”. Predicting skill gives students the opportunity to activate formal and content schema, set a purpose of reading and engage learners in the text. It also enables students to think ahead before reading and to consider possible events that will occur with the main character (Solong, 2010). One aspect into consideration, is that predictions must be verified and confirmed; students have to check if their predictions were accurate or not and explain why. In this way, sub-skills like

synthesizing, analyzing and evaluating are also developed while predicting information.

Inferring the meaning from context.

As noted by Kaivanpanah and Rahimi (2017), several studies have indicated that learners are able to successfully infer the meaning of unfamiliar words while reading texts. Apart from analyzing the context or the setting in which the word is, students will use examples, synonyms, antonyms and even definitions to finally interpret the unknown word. In the same way, this skill makes students examine a word using text evidence and relate this with their prior knowledge in order to infer its meaning. Additionally, students can substitute the unknown word for a familiar one and revise if that word fits in the context (Walter, 2006).

Stages in Teaching Reading Comprehension

Pre-reading.

The first stage in teaching reading comprehension is the pre-reading, which is fundamental for an appropriate comprehension. During this stage, teacher prepares the learner to be able to understand the reading. It has three main objectives, “to introduce and arouse interest in the topic, to motivate learners by giving a reason for reading, and to provide some language preparation for the text” (Yazar, 2013). Pre-reading activities include:

- Analyzing the reading task purpose.
- Brainstorming ideas.
- Eliciting new vocabulary.
- Guessing from pictures.

- Making predictions based on titles or heading.
- Generating text type or text structure.

While-reading.

This stage is emphasized on the development of the reading process as a monitored or guided phase. This stage must be carefully developed as it represents the core of the reading passage (Camargo & Orbegozo, 2010). As suggested by Yazar (2013), the main purpose of this stage is to help understanding the text structure and clarify text content. Therefore, some of the most popular while-reading activities are:

- Reading aloud.
- Silent reading.
- Inferring the meaning of unknown word using the context.
- Analyzing specific parts of the text.
- Monitoring comprehension by asking quick questions.
- Making lists or filling diagrams.

Post-reading.

Once finished the reading activity, this stage not only aimed to verify comprehension but also to consolidate what has been read and to relate the text to the learners' own interests (Yazar, 2013). In line with this, post-reading stage enables to discuss the meaning and understanding of the given text, either orally or in writing (Camargo & Orbegozo, 2010). As a result, it involves students' reactions to the text, their suggestions, and their opinions whether they like or not. Other post-reading activities include:

- Summarizing.
- Follow-up activities.
- Filling visual organizers.
- Evaluating the reading task.
- Asking students' point of view.

Assessment of Reading Comprehension

Reading Comprehension assessment aims to determine students' understanding and monitor their progress. At the same time, the assessment provides possible issues that students present or skills that they have not mastered during the reading process. In this way, the instruction of the class can be readdressed to their needs. Additionally, numbers will demonstrate the effectiveness of the methodology or technique used. Having discussed why to evaluate learners on reading comprehension, it is necessary to point out that teachers need to analyze what kind of test fits better, when to test and how to score (Rea-Dickins & Germaine, 2011). There are three common ways of assessing reading comprehension.

Multiple-choice tests of reading comprehension.

Multiple-choice questions consist of a stem and a set of options. The stem usually presents a question as a problem to be solved (Chan, 2009). This type of test assesses low-order and high-order skills based on Bloom's Taxonomy. In essence, it can evaluate complex and simple concepts. Greenan (2017) exemplified it when he stated that "while many defaults to questions that test both understanding and remembering facts, a well-worded question can test on

application and analysis”. Another variable of these type of questions are multiple-choice cloze aimed to complete a sentence by giving options.

Short-answer tests of reading comprehension.

In contrast, a short-answer test involves more high-order skills. At the moment of answering these questions, students will construct their own answers using the information or ideas from a text. For Chan (2009), this test includes items like completing the sentence, supplying the missing word, writing short answers, identifying true and false statements by giving descriptions, or filling diagrams with an explanation. Keenan, Betjemann, and Richard (2008), in their research about Reading Comprehension Tests concluded that completing sentences or also known as cloze-test, are more efficient than multiple-choice questions. This is because comprehension is directly evaluated as it implies that students have a clear understanding of the vocabulary and the setting of the text.

Think-aloud/verbal protocol of reading comprehension.

Think-aloud protocol refers to a kind of test in which learners can verbalize their thoughts while they are reading a text (SAGE, 2019). Seyed (2012) argues that readers are able to use their own format, their own ideas and their own language while they are applying this protocol. In the same line, Bonh Gettler (2018) as cited in SAGE (2019) affirms that “think-aloud is believed to reveal spontaneous processes in which readers are thinking at each moment in a relatively unfiltered manner.” Therefore, this way of assessing students has been very popular among English teachers owing to the principle that learners’ comprehension can be easily monitored and the feedback is immediate. Apart

from think-aloud, there are other verbal protocols that can be also used such as “filling in missing information, making predictions, answering questions, stating opinions, making loose associations, reflecting on one’s own understanding and more” (SAGE, 2019).

e. MATERIALS AND METHODS

Materials

During the development of the current research work, the use of three kind of resources were fundamental. Human resources make reference to the seven students of KET preparation at Easy English School of Languages who participated until the completion of the intervention plan. Regarding material resources, it was relevant to employ some reading passages according to students' level. In accordance with them, follow up activities were included to check students' comprehension after reading.

Another material resource was the utilization of mind maps templates like bubble map to develop reading for gist, tree map and brace map to enhance reading for specific details, multi-flow map for predicting content and circle map for inferring the meaning of words. These templates worked as a guide for students so they had a clear idea of what they have to build.

Owing to the modality of the classes, digital material was also essential for the fulfillment of the research. Virtual flashcards and online games were needed to engage students into the class. In addition, some videos were shown to students as a predicting tool in which students participated guessing and brainstorming ideas. Furthermore, pictures supported all the written information presented on the texts. Apart from that, the usage of Kahoot app and Quizizz app was also imperative during the application of the intervention plan as an innovative way of assessing

reading comprehension through multiple-choice questions in which students can have fun while having a test.

The last resource employed was technical which includes computer, internet and cellphone. The researcher considered the computer as a useful tool in order to type all the information gathered from the literature review as well as the results obtained from the instruments. Additionally, internet was fundamental to search about the theoretical references that supported this thesis work. Moreover, it was primary for the implementation of the intervention plan since it was not only the way in which the researcher and students connected to each class but also it allowed to integrate different webpages and virtual resources into the teaching-learning process. Finally, the cellphone was significant to complete the research due to the fact that homework, class activities and other types of tasks were shared between the researcher and participants by using it.

Design of the Research

In order to develop this thesis work, the researcher considered action research as a primary model. This kind of research analyses data collection in a quantitative and qualitative way with the aim of solving an issue and obtain solutions for a specific problem (Creswell, 2012). In accordance with this, action research is also defined by Mills (cited in Creswell, 2012), as “a systematic procedure done by teachers (or other individuals in an educational setting) to gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning”.

For the completion of the current thesis work, the researcher considered the following process also proposed by Creswell (2012). First, the researcher identified the research problem after some nonparticipant observations with KET preparation students at Easy English School of Languages. Based on them, the researcher considered the application of mind mapping as an effective strategy to develop reading comprehension. At the second stage, the literature about the two variables, mind mapping as a cognitive strategy and reading comprehension, was carefully reviewed in order to have theoretical reference to support all the thesis work. After that, the data collection was made through the application of a pre and post- test as well as a pre and post questionnaire. Then, this data was also analyzed and interpreted. Continually, the researcher designed the intervention plan in line with the theoretical information. Finally, the researcher reflected on and reported the results obtained after the implementation of the intervention plan.

Method, Techniques and Instruments

Methods.

For this study, the researcher made use of the following methods:

The scientific method facilitated the study of mind mapping as a cognitive strategy aimed to develop reading comprehension. Subsequently, this method supported the data collection in order to effectively develop the intervention plan and make relevant the inferences from the results as well as a correct analysis of them.

The descriptive method was employed to detail and explain the different stages of this research work. This method was essential to report the difficulties

presented on students in line with reading comprehension as well as know how to overcome them. The current method also allowed the researcher to organize the resources and analyze the alternatives proposed in order to accomplish the objective of the research.

The statistical method facilitated the researcher to gather and analyze qualitative information during the observations as well as quantitative results obtained from the application of tests and questionnaires. Therefore, statistical analysis gave the researcher a way to quantify results expressed in tables and graphics.

The analytic/ synthetic method enabled the researcher to analyze and interpret the data collected by the pre and post-test, pre and post questionnaires, observation sheets and field notes in order to draw conclusions.

Techniques and instruments.

In order to collect the necessary data for this study, the researcher used a pre and post test for the quantitative data and questionnaires, observation sheets, and field notes to gather qualitative information.

Tests.

The researcher applied two types of tests. At the beginning of the intervention plan, a pre-test was employed in order to assess students' knowledge in line with reading comprehension before the implementation of the intervention plan. In contrast, once the intervention plan was completed, a post-test was administered to measure students' performance on reading comprehension after participants received a treatment through the application of mind mapping strategy. The test

consisted of four questions aimed to approach each of the reading aspects considered for this study. Each question included two items which involved multiple-choice, matching, completion and labelling. The first question assessed reading for gist aspect, the second one evaluated reading for specific details, the question number three was focused on inferring the meaning of words and the question number four tested predicting content.

Questionnaires.

A pre and post- questionnaire was employed after and before the implementation of intervention plan in order to identify participants' attitudes and feelings toward mind mapping as a cognitive strategy. The questionnaire involves five multiple-choice questions which were answered during the first and the last week of the intervention plan. The data collected by the questionnaire supported the results obtained from the pre and posttest.

Observation sheets.

The researcher employed an observation sheet in an attempt to record students' progress on each indicator of reading comprehension through the application of mind mapping as a cognitive strategy. The indicators included reading for gist, reading for specific details, inferring the meaning of words and predicting content. These aspects were approached during all the development of the intervention plan.

Field notes.

As a qualitative research instrument, field notes gave the researcher the facility to keep a daily record about participants' attitudes, whether they like or

not the activities, if they were eager or not to participate, and other behaviors presented by students during the application of mind mapping as a cognitive strategy to develop reading comprehension. Additionally, it provided a holistic description of how the lessons were developed, the activities employed and the process followed by the researcher in each lesson.

Population

The population involves seven students from KET preparation, morning session at Easy English School of Languages. Students' ages vary between 17 and 21 years old. The total number of participants is composed by five boys and two girls.

Description of the Intervention Plan

Due to the fact that this is an action-research, the application of the intervention plan will be carried out in different phases:

Phase 1. Initial Reflection.

During a non-participant observation, the researcher was able to see that students of KET preparation, morning session at Easy English School of Languages struggled in completing reading activities especially when they had to read for gist, read for specific details, predict content and infer the meaning of words. Therefore, having analyzed some literature, the researcher found out that mind mapping resulted effective to develop reading comprehension.

Phase 2. Planning.

In an attempt to solve KET preparation students' weaknesses on reading comprehension, lessons plans were presented using mind mapping as principal

activity. The mind maps applied during the development of each lesson were bubble map for reading for gist, tree map and brace map for reading for specific details, circle map for inferring the meaning of words and multi-flow map for predicting content. The lesson plan contained three phases: activation in order to establish a relationship between the new and the prior knowledge, connection aimed to provide students with opportunities to apply and practice the new content and affirming to document students' progress (Murry, Herrera, Miller, Fanning, & Kavimandan, 2015).

Phase 3. Action.

The plan of action was developed during 10 weeks of 3 hours each one. One hour was taken from the weeks 1 and 10 to administrate the data collection instruments (pre and post-test as well as pre and post questionnaire). Consequently, the 10 weeks were developed with lesson plans.

Phase 4. Observation.

During the intervention, the researcher monitored and recorded the KET preparation students' reactions and achievements to planned activities by means of a pre and posttest, a questionnaire, field notes and observation sheets.

Phase 5. Reflection.

Once finished the intervention plan, the researcher reflected critically upon the effectiveness of the implementation of mind mapping to improve reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

f. RESULTS

Pre-Test Results

a. Table 1

Pre-test Scores of KET Preparation Students in Reading Comprehension.

Students' code	RG /2	RSD /3	IMW /2	PC /3	Total /10
EESLKP01	1.00	0.5	1.00	1.50	4.00
EESLKP02	1.00	1.00	1.00	2.50	5.50
EESLKP03	2.00	1.00	1.50	2.00	6.50
EESLKP04	1.00	1.00	1.00	2.00	5.00
EESLKP05	2.00	0.75	1.00	2.00	5.75
EESLKP06	1.00	1.50	1.00	1.50	5.00
EESLKP07	1.00	0.50	1.50	0.50	3.50
Mean	1.20	0.80	1.10	1.75	5.03

Note: EESLKP= Easy English School of Languages, KP= KET preparation, 01= Student's code, RG= Reading for Gist, RSD= Reading for Specific Details, IMW= Inferring the Meaning of Words, PC= Predicting Content.

b. Interpretation and analysis

As it can be seen, the results in Table 1 show the mean score obtained by students in reading comprehension, which is 5.03/10. This mean score corresponds to a needs improvement qualitative score range (see grading scale on page 167). Such findings reflect that participants struggled in achieving a total understanding of the passages which affected their performance on reading comprehension.

Further analysis revealed that students had a great ability in reading for gist as the highest mean score was 1,2/2. The participants recognized some general aspects and joined all the sentences within the paragraph in order to identify the main idea of the text. However, they failed in differentiating between principal

and secondary ideas. In contrast, the lowest score was in the aspect of reading for specific details with a mean score of 0.8/3. It is evidenced that students had difficulty on locating particular details in a text. This is because they tried to understand every single word, which indicated they did not apply suitable reading strategies that facilitated them to focus on the key aspects they were required to answer.

In spite of the fact that students showed strengths in reading for gist, they had a remarkable weakness in reading for specific details which hinders them to develop their reading skills properly. Additionally, they evidently faced difficulties in inferring the meaning of words as well as in predicting content. These findings corroborate the ideas of Smith (2012), who suggests that stating the thesis of a text, recognizing key information, grasping word meaning and making predictions will give the students the opportunity to decipher written information and construct meaning by integrating reader's background and the interpretation of what is being read.

Comparison of the Pre and Post Questionnaires Results

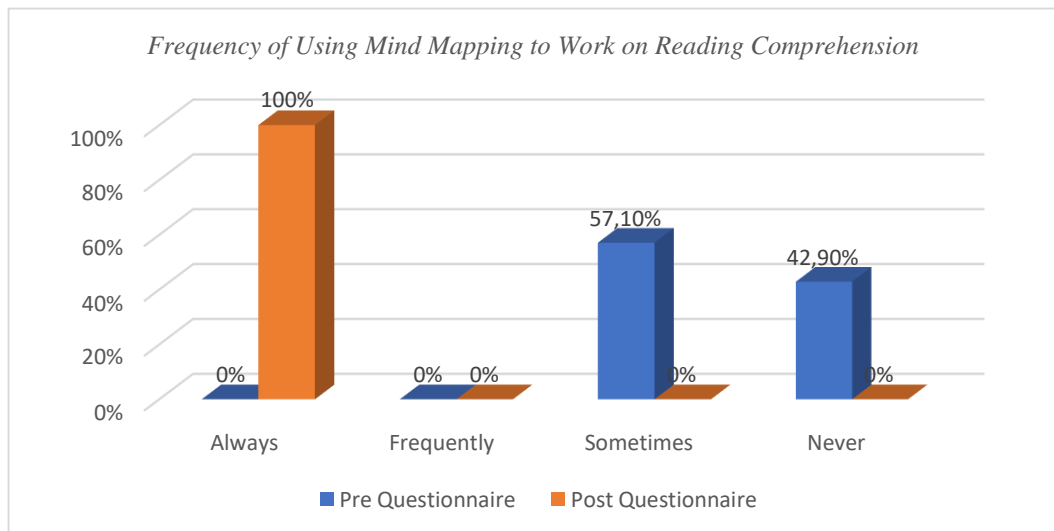
Question 1: How often have you worked on reading comprehension using mind mapping strategy?

a. Table 2

Frequency of Using Mind Mapping to Work on Reading Comprehension

Options	Pre Questionnaire		Post Questionnaire	
	f	%	f	%
Always	0	0.0	7	100.0
Frequently	0	0.0	0	0.0
Sometimes	4	57.1	0	0.0
Never	3	42.9	0	0.0
TOTAL	7	100.0	7	100.0

b. Figure 1



c. Interpretation and analysis

As it can be seen the current results in Table 2 indicate that more than half of the participants (57,1%) stated that they sometimes employed this strategy. It evidences that students' exposure to reading practice through mind mapping strategy was not enough to improve reading skills. Even students recognized this strategy is used in the class, they failed in following instructions to take information from a reading text. Nevertheless, after the implementation of the intervention plan, all (100%) the participants affirmed that they always employed mind mapping strategy to work on reading comprehension. The continual use of mind mapping facilitated students to completely understand a text and keep them engaged in the reading activities. Owing to the constant implementation of the different types of mind maps such as bubble map, circle map, tree map and brace map, students were able to develop more effectively reading comprehension aspects like reading for gist, reading for specific details, inferring the meaning of words and predicting content.

These findings are in line with a previous study conducted by Abdelkafy (2020) who affirms that mind mapping is one of the teaching-learning strategies that should be widely used between EFL teachers as it assists the process of reading comprehension and language acquisition. Additionally, he states that “mind mapping provides different types of maps that must be periodical applied with reading texts as it enhances the learning process. Such maps daily support learners at different stages with the ability to recall information once it is visualized”.

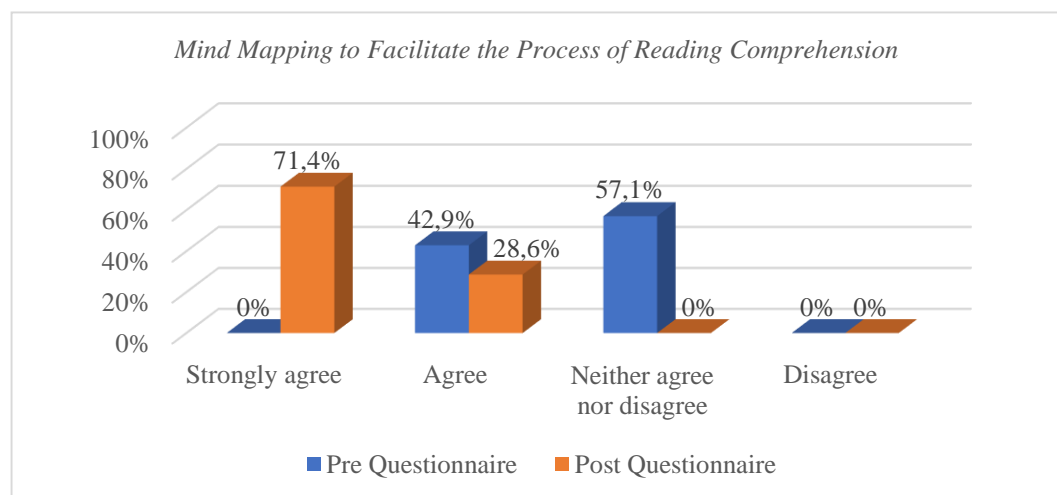
Question 2: I consider that mind mapping strategy makes easier the process of reading comprehension.

a. Table 3

Mind Mapping to Facilitate the Process of Reading Comprehension

Options	Pre Questionnaire		Post Questionnaire	
	f	%	f	%
Strongly agree	0	0.0	5	71.4
Agree	3	42.9	2	28.6
Neither agree nor disagree	4	57.1	0	0.0
Disagree	0	0.0	0	0.0
TOTAL	7	100.0	7	100.0

b. Figure 2



c. Interpretation and analysis

According to the results displayed in Table 3, more than half of the participants (57.1%) mentioned they neither agree nor disagree about the fact that mind mapping strategy facilitates the process of reading comprehension. It indicates that participants were not sure whether mind mapping helps them or not to complete reading activities in an effortless way. Students' previous experience with this strategy was not satisfactory as they regarded mind mapping as a complex structure to apply it with reading texts. However, there is a significant difference in the results once the intervention plan was completed. Post-questionnaire findings evidence that 71.4% of the population totally agreed about the statement that mind mapping simplifies the process of reading a text. By the end of the intervention plan, students realized about how useful and beneficial was mind mapping strategy to comprehend a reading passage. The participants affirmed that they easily identified the main idea of the text, located certain information and guessed the meaning of unknown words as well as formulated their own predictions from a text. Apart from the reading aspects mentioned before, students also developed abilities like summarizing, analyzing and building opinions.

These results are supported by Suryani (2015) who mentions that mind mapping greatly contributes reader to grab information and comprehend any text easily. He states that information structure in the mind map simplifies a concept or description for the reader as well as facilitates the learner to comprehend a text by

writing main ideas and connecting each other in the reader's own way. In fact, the reader could easily recall the information from the mind map or diagram.

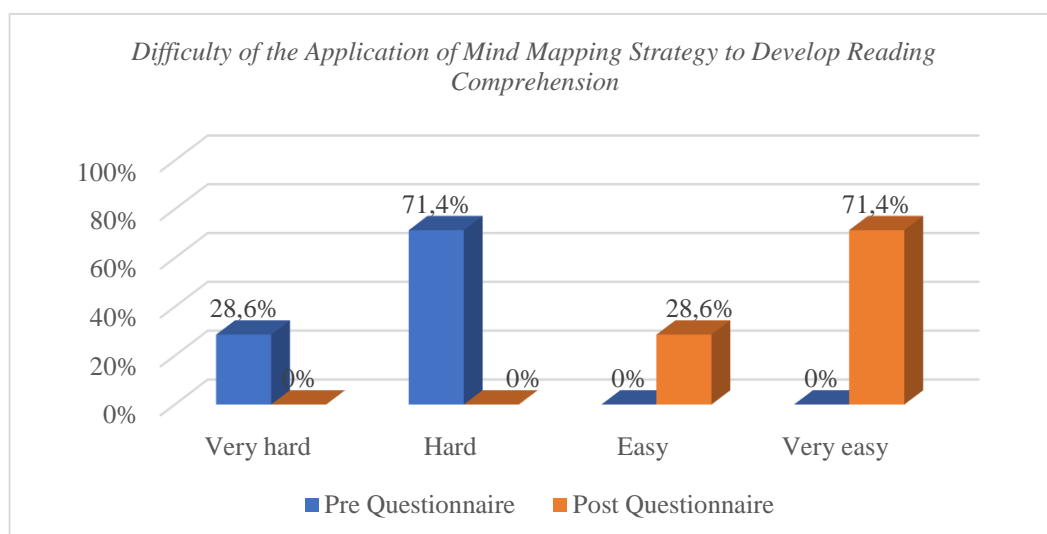
Question 3: How difficult do you consider is the application of mind mapping strategy to develop your reading comprehension?

a. Table 4

Difficulty of the Application of Mind Mapping Strategy to Develop Reading Comprehension

Options	Pre Questionnaire		Post Questionnaire	
	f	%	f	%
Very hard	2	28.6	0	0.0
Hard	5	71.4	0	0.0
Easy	0	0.0	2	28.6
Very easy	0	0.0	5	71.4
TOTAL	7	100.0	7	100.0

b. Figure 3



c. Interpretation and analysis

Regarding the findings from Table 4, it can be observed that 71.4% of the participants expressed that it is hard to apply mind mapping strategy. This reveals that students were not properly taught about how to use mind maps with reading texts and were not provided with the necessary templates to guide them in the

process of mind mapping construction. This caused that students had problems mainly categorizing ideas and classifying details in order to decide what information they had to write inside the maps.

However, data gathered after the application from the intervention plan indicate that 71.4% of the participants considered very easy to apply mind mapping strategy to develop reading comprehension. Students' appreciation became positive as their exposure to this strategy increased. In addition, participants were provided with a deep explanation about how to use it and the necessary mind maps formats were displayed to assist students. This was reflected on the results which affirmed that mind mapping structure is not a difficult strategy to utilize.

In accordance with Hofland (2007), "mind mapping includes a few simple elements. This makes it a very easy technique to use in class. It needs little preparation and the tools are easily found in every school and do not take up a lot of classroom space".

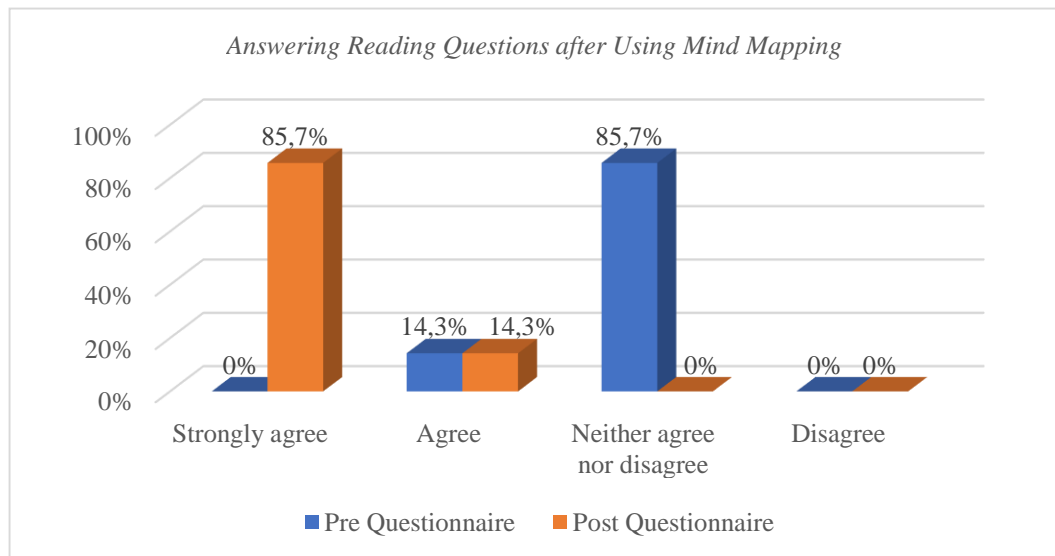
Question 4: After using mind mapping, I can answer different kind of questions related to the reading passage previously worked.

a. Table 5

Answering Reading Questions after Using Mind Mapping

Options	Pre Questionnaire		Post Questionnaire	
	f	%	f	%
Strongly agree	0	0.0	6	85.7
Agree	1	14.3	1	14.3
Neither agree nor disagree	6	85.7	0	0.0
Disagree	0	0.0	0	0.0
TOTAL	7	100.0	7	100.0

b. Figure 4



c. Interpretation and analysis

The results in Table 5 illustrate that in the pre-test 85.7% of the students neither agreed nor disagreed about the statement that mind mapping enables them to answer different kind of reading questions related to a reading passage previously worked. This indicates that reading instructions that students were receiving were not approached to develop reading comprehension skills. Students were only asked to underlined what they considered was the most important in the text and then completed the reading questions. Consequently, students struggled in interpreting written information from a reading text. Also, it was difficult for them to decode this information and give accurate responses to the questions.

Contrary, the results changed positively after the accomplishment of the intervention plan. Almost all the participants (85.7%) reported they strongly agree in relation to the fact that after using mind mapping, they can answer different kind of reading questions. This proved that the different types of mind maps

employed in this strategy facilitated students not only to break a text into smaller pieces to get general and secondary ideas, but also to infer the meaning of words as well as to predict content. This encouraged them to respond written as well as oral questions correctly and deeper answers were formulated which improved significantly their reading comprehension skills.

These findings are in agreement with Siriphanich (2010) who affirms that, mind mapping as a cognitive graphical strategy helps students to read more effectively and supports the completion of reading activities. Owing to the hierarchical branch format, students are able to categorize information which allows to sequence event, answer multiple-choice question, matching and labelling activities, differentiating between true and false statements, etc.

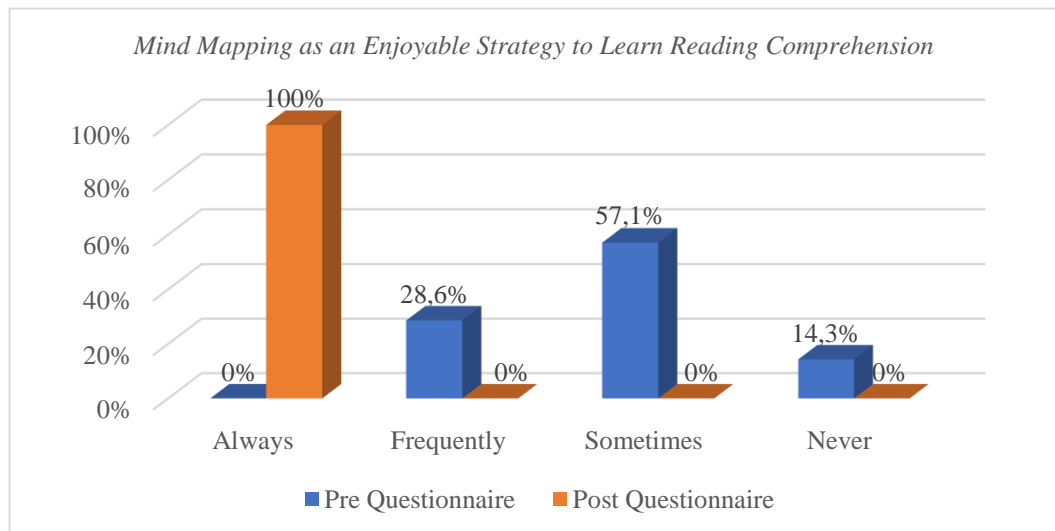
Question 5: Do you enjoy learning reading comprehension using mind mapping strategy?

a. Table 6

Mind Mapping as an Enjoyable Strategy to Learn Reading Comprehension

Options	Pre Questionnaire		Post Questionnaire	
	f	%	f	%
Always	0	0.0	7	100.0
Frequently	2	28.6	0	0.0
Sometimes	4	57.1	0	0.0
Never	1	14.3	0	0.0
TOTAL	7	100.0	7	100.0

b. Figure 5



c. Interpretation and analysis

The data gathered in Table 6 shows that from the total of participants, 57.1% sometimes enjoyed learning reading comprehension using mind mapping strategy. This evidences that mind mapping strategy was previously applied with long texts which result extremely extensive to analyze so students considered it as a tiring process. As consequence of the lack of enjoyment, students did not develop the necessary reading comprehension skills to completely comprehend a text. With the implementation of the intervention plan, the percentage increased to 100%. The participants answered they always enjoyed learning reading comprehension using mind mapping. This affirms that the use of this strategy increased the interest in students as well as their volunteer participation and motivated them to continue reading. As a result, reading classes were more interactive and attractive for students.

Students show excitement when getting involved in teaching and learning process in which the mind mapping strategy is used as it allows connections

indicated by images, symbols, and colors. The benefits of mind mapping include providing the students with a more attractive and enjoyable format for their eye and brain to look at, muse over, and remember (Fiktorius, 2013).

Post-Test Results

a. Table 7

Post-test Scores of KET Preparation Students in Reading Comprehension.

Students' code	RG /2	RSD /3	IMW /2	PC /3	Total /10
EESLKP01	2.00	3.00	2.00	3.00	10.00
EESLKP02	2.00	3.00	2.00	3.00	10.00
EESLKP03	2.00	3.00	1.50	2.50	9.00
EESLKP04	2.00	3.00	2.00	3.00	10.00
EESLKP05	2.00	3.00	2.00	3.00	10.00
EESLKP06	2.00	3.00	2.00	2.00	9.00
EESLKP07	2.00	2.75	2.00	2.50	9.25
Mean	2.00	2.96	1.92	2.42	9.60

Note: EESLKP= Easy English School of Languages, KP= KET preparation, 01= Student's code, RG= Reading for Gist, RSD= Reading for Specific Details, IMW= Inferring the Meaning of Words, PC= Predicting Content.

b. Interpretation and analysis

The results presented in Table 7 illustrate that KET Preparations students obtained a total mean score of 9.6/10, which corresponds to a good level in reading comprehension according to the qualitative score range (see grading scale, p.167). Meaning that students' improvement in reading comprehension skills was very successful.

It is important to point out that the major improvement that students achieved was 2/2 in reading for gist. Students succeeded in getting a complete overview of the reading passages. This reveals that, they acquired the ability to recognize which sentence represents the main idea and which ones involve only secondary

details. On the other hand, students had the lowest progress in predicting content, in which they obtained 2.42/3. This determines that students effectively interpret and process information acquired from a text in order to anticipate events and deduce causes and effects. However, participants still struggle in making accurate predictions since some expressions presented on the reading passage were unfamiliar for them so they failed in decoding these expressions like idioms and phrasal verbs in order to predict something in line with them.

Consequently, the application of mind mapping strategy contributed successfully to improve students' reading comprehension skills, such as: reading for gist, reading for specific details, inferring the meaning of words and predicting content.

These findings confirm the ideas stated by Hofland (2007) who mentions that mind mapping is an effective alternative to develop reading comprehension as it enables the learners to process and associate information by using diagrams and images to interpret better the message of a text. After completing a mind map, students create a mental representation of the whole text which give them a clear insight of the content. In addition, students' knowledge about a text become deeper since they remember more details, make links between ideas and analyze new word from a passage. This facilitates the extraction of specific and general details as well as the assimilation of new knowledge.

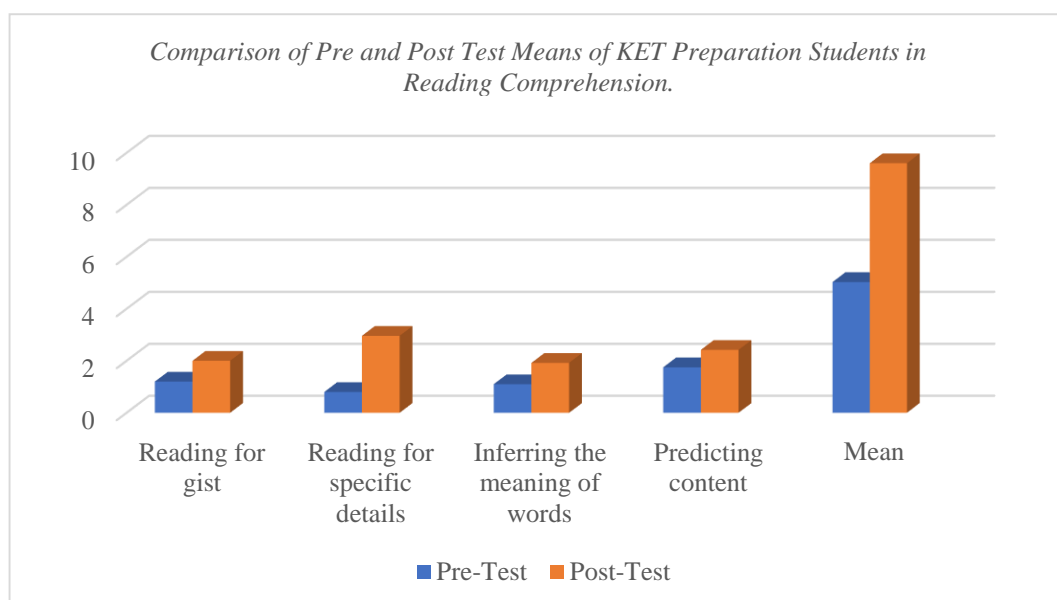
Comparing Pre and Post-Test Means

a. Table 8

Comparison of Pre and Post Test Means of KET Preparation Students in Reading Comprehension.

Aspects	Pre-Test	Post-Test
Reading for gist	1.20	2.00
Reading for specific details	0.80	2.96
Inferring the meaning of words	1.10	1.92
Predicting content	1.75	2.42
Mean	5.03	9.60

b. Figure 6



c. Interpretation and analysis

As Table 8 and Figure 6 present, there is a successful improvement from 5.03 to 9.60 between the total mean scores obtained by KET preparation students in the pre and post-test. This reflects that students succeeded in developing reading comprehension skills through the application of mind mapping strategy.

In accordance with these results, it is notable that students enhanced more their abilities in reading for gist since they had a score of 1.20/2 in the pre-test

while in the post-test, they achieved a total of 2/2. In the same way, there is also a great improvement in reading for specific details in which students gathered 0.80/3 in the pre-test but after the intervention plan, they obtained 2.96/3. The same occurred in the aspect of inferring the meaning of word, in which students increased their scores from 1.10/2 to 1.92/2. In contrast, the lowest enhancement was registered in predicting content in which students attained 1.75/3 in the pre-test and 2.42/3 in the post test.

Hence, the aforementioned findings evidence that the implementation of mind mapping strategy caused a significant improvement in students' reading comprehension. Learners upgraded their capabilities in recognizing the general and specific ideas of a text as well as deducing unfamiliar words and making smart assumptions from a passage. In fact, mind mapping strategy facilitated students to decode and interpret better the message of any kind of text as well as develop their reading comprehension skills.

g. DISCUSSION

The development of reading comprehension through the application of mind mapping strategy among KET preparation students at Easy English School of Languages in city of Loja, during the school year 2020-2021 generated a successful improvement in students' reading comprehension ability which was demonstrated on the positive results obtained by the end of the intervention plan. Students' pre-test mean score was 5.06 out of 10. In contrast, once the intervention plan was accomplished, the post-test mean score increased to 9.60/10. These findings are consistent with previous studies made by Siriphanich (2010) who affirms that English teachers must use mind mapping as it helps poor readers to read more effectively. This is because, it dives a text into subsections and categories which reveals various aspects of a reading passage such as key points, main ideas, causes and effects, connections between sentences and new words.

The four aspects contemplated to evaluate students' reading comprehension ability were reading for gist, reading for specific details, inferring the meaning of words and predicting content. The pre-test results indicated that students could barely find the main idea with a great difficulty in differentiating between the topic and the supporting sentences. In reading for specific details, students had problems to locate key information and extract particular details within a text. Furthermore, students struggled in inferring the meaning of words since they translated every single word into their mother tongue. Finally, in predicting

content, students were not capable of using the knowledge previously acquired in a text to make accurate predictions. In contrast, after the intervention plan, the post-test results proved that mind mapping strategy was effective to develop the aforementioned problems since students greatly increased their scores in each of the reading aspects. Mind mapping strategy highly contributed students' reading comprehension skills as it simplified the process of reading and facilitated them to get a deep understanding and analysis of a text.

During the first lesson of the intervention plan, students' attitude towards mind mapping strategy was not totally negative since they were very curious about how this strategy works and had a lot of expectations about its effectiveness. However, they regarded the process of completing a mind map as a difficult and extensive task. Furthermore, the participants were afraid of making mistakes when they were asked to participate which caused a low interaction within the class. While the intervention plan was carrying out, students gradually started to voluntarily participate and showed more interest and excitement in reading activities, especially when they had to include pictures and expose their maps. By the end of the intervention plan, students' perceptions changed positively as the participants were always eager to fill a mind map. They gained more confidence, spent less time in understanding a text and responded correctly any kind of reading comprehension question which greatly motivated them to continue using this strategy.

Regarding the development of the intervention plan, there were some weaknesses and strengths that were noticed. One of the principal strengths was the

facility in which students comprehended the strategy and their entire cooperation to actively work with mind maps. Another important strength was the number of students in the class which was suitable and allowed the researcher to assess more effectively participants' work and provide a personalized feedback in each activity. Additionally, the researcher was provided with two interactive books which were also relevant as their topics were selected according to students' levels and their possible preferences based on their aged. This caused that students got engaged and were willing to develop the activities proposed in the class.

Nevertheless, some limitations also emerged during the execution of the intervention plan. Owing to the virtual modality in which the intervention plan was completed, the unsteady internet connection was the major weakness. This produced that students leave the session and lose the focus of the class when they managed to return. Moreover, the reading passages as well as the mind maps templates were in their totality online which greatly differs from physical material. The use of them resulted tiring for students as they had to stay the whole lesson using the computer. Finally, monitoring all students' activities during the class was quite difficult as they worked individually at their homes. In order to check them, learners were required to participate which interrupted the rest of the class and reduced the available time.

The application of mind mapping strategy meaningfully contributed to the development of reading comprehension among KET Preparation students. This strategy provided learners the necessary mind maps templates to discover the

general idea of a text, extract specific details, analyze new words and predict content. Thanks to the different mind maps structures applied, students were able to focus on a particular reading comprehension skill per map. This facilitated students to later integrate all the information gathered in their maps and completely comprehend a text. In addition, students also improved more complex reading skills like summarizing, classifying and building strong opinions and judgements about a text. Students remarkably increased their participation, formulated accurate answers and raised their motivation and enthusiasm to develop reading activities.

h. CONCLUSIONS

KET Preparation students' development in reading comprehension was limited by issues like getting the core idea and the overall meaning of a text as well as searching and locating particular pieces of information within the reading passages. Also, students struggled in deducing the meaning of a word by analyzing the context in which it is. Furthermore, students faced difficulties to make accurate predictions about the information presented on a text. As consequence, students failed in completing reading activities which restricted their improvement in reading comprehension.

With the application of suitable mind maps like bubble map, circle map, tree map, brace map and multi-flow map, students overcame successfully their weaknesses in reading comprehension. Participants showed a great improvement in discovering the gist of a passage as well as identifying key information and specific details. Furthermore, students recognized effectively the definition of words and correctly applied them into a sentence. Also, learners acquired the ability of anticipating events and facts by interpreting and categorizing well the information presented on a text. Mind mapping strategy assisted students during all the process of reading comprehension which facilitated them to develop accurately any kind of reading activity and encouraged them to actively participate in reading classes.

Mind mapping strategy successfully developed students' reading comprehension as the participants demonstrated a deep understanding of the

passages after reading them. They efficiently constructed meaning from a text, categorized and summarized information as well as answered reading questions. The implementation of mind mapping strategy had a positive impact on students as they increased their confidence and motivation as well as their involvement and interaction in reading activities. It is concluded that mind mapping strategy was effective to develop reading comprehension among KET Preparation students.

i. RECOMMENDATIONS

In order to detect limitations in students' reading comprehension, be aware of their weaknesses and keep a continual record, it is advisable that English teachers employ different types of reading assessments such as multiple-choice test, short-answers exams and think aloud/verbal protocols. In this way, the strategies and the activities planned for each lesson will be approached to overcome these limitations.

Mind mapping strategy should be continually employed as part of reading classes in order to accomplish a complete comprehension of the reading passages. Mind maps such as bubble map, circle map, tree map, brace map and multi-flow map provide students the opportunity to successfully decode a text, classify and summarize information. In addition, their application upgrades reading abilities, promotes the desire to continue reading, and increases students' participation while developing reading activities.

Owing to mind mapping effectiveness to develop reading comprehension, English teachers should implement this strategy in all the stages of the reading process. Mind mapping guides students and supports them until reaching a clear and holistic overview of the reading passage. This successfully enhances their performance on reading tasks. Furthermore, students greatly benefit from mind mapping application since it raises their security and reduces fear to participate.

j. BIBLIOGRAPHY

Buzan, T. (2005). *The Ultimate Book of Mind Maps*. London: Thorsons.

Buzan, T., & Griffiths, C. (2014). *Mind Maps for business; using the ultimating tool to revolutionise how to work*. Great Britain: Pearson Education.

Creswell, J. (2012). *Educational Research*. Boston: Pearson.

Harmer, J. (2007). *How to teach English*. Pearsn Longman.

Hofland, C. (2007). *Mind Maps in EFL Classroom*. Netherlands: Fontys Hogescholen.

Ingemann, M. (2008). *The Power of Mind Mapping*. Fortune Well. Retrieved July 2, 2020, from Fortune Well: <http://www.fortunewell.com/tpomm.pdf>

Johnson, A. (26 de March de 2014). Shema Theory, Learning and Comprehension. Mankato, Minnesota, The United States.

Keenan, J., Betjemann, R., & Richard, O. (2008). *Reading Comprehension Tests Vary in the Skills They Assess: Differential Dependence on Decoding and Oral Comprehension*. Denver: RoutledgeTaylor & Francis Group.

Lefa, B. (2014). The Piaget Theory of Cognitive Development Implications. *Educational Psychology* .

McLeod, S. (2018). *Jean Piaget's Theory of Cognitive Development*. SimplyPsychology.

- McNamara, D. (2007). *Reading Compehension Strategies*. New York : Lwrence Erlbaum Associates.
- Piaget, J. (1952). *The Origens of Intelligence in Children*. New York: Interational Universities Press.
- Rea-Dickins, P., & Germaine, K. (2011). *Evaluation*. New York: Oxford University Press.
- Smith, F. (2012). *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read*. New York: Routledge.
- Abdelkafy, B. (2020). The Effect of a Program Based on Thinking Maps on Developing EFL Learners' Reading Comprehension Skills and their Attitudes Towards Reading. *Journal of Education – Volume (77)*, 93-156 DOI: 10.12816/EDUSOHAG. 2020. 105594.
- Alomari, A. (January de 2019). *IOSR Journal Of Humanities And Social Science* . Recuperado el 8 de June de 2020, de IOSR Journal Of Humanities And Social Science : <http://www.iosrjournals.org/iosr-jhss/papers/Vol.%2024%20Issue1/Version-1/H2401015358.pdf>
- Andrini, F. (2016). *UIN AR-RANIRY*. Recuperado el 4 de July de 2020, de UIN AR-RANIRY: <http://library.ar-raniry.ac.id>
- An, S. (2013). Shema Theory in Reading. *Theory and Practice in Language Studies*, 130-134

- Budhi, A., Adnan, M., & Harry, G. (2016). The Effect of Mind Mapping on EFL Students' Idea Development in Argumentative Writing across Gender Differences and Learning Styles. *DINAMIKA ILMU*.
- Camargo, J., & Orbegozo, J. (2010). Exploring EFL Students' Reading Comprehension Process through Their Life Experiences and Sight Word Strategy. *HOW Colombian Journal for Teachers of English*, 57 - 72 .
- Chan, C. (2009). *Assessment: Multiple Choice Questions, Assessment Resources@HKU*. Hong Kong: University of Hong Kong [http://ar.cetl.hku.hk]: .
- Correia, M. G., & Bleicher, R. E. (September de 2008). Making Connections to Teach Reflection. *Maichigan Journal of Community Service Learning*, 41-49. Obtenido de Bookmarks.
- Davies, M. (2010). *Concept Mapping, Mind Mapping and Argument Mapping: What are the Differences and Do They Matter?* Melbourne, Australia: The University of Melbourne, Australia.
- Dewan, P. (2015). Words Versus Pictures: Leveraging the Research on Visual. *Pertnership* , 2-3.
- Dilek, C. (29 de April de 2017). *SSOAR Open Access Repository*. Recuperado el 14 de July de 2020, de SSOAR Open Access Repository: er:<http://dx.doi.org/10.9761/JASSS7074>

- Erdem, A. (2017). Mind Maps as a Lifelong Learning Tool. *Universal Journal of Educational Research*, DOI: 10.13189/ujer.2017.051301 .
- Fiktorius, T. (2013). *The use of mind-mapping technique in the EFL classroom*. Pontianak, Indonesia: University of Tanjungpura.
- Gamboa, Á. M. (2017). Reading Comprehension in an English as a Foreign Language Setting . *FOLIOS*, 159-175.
- Hartney, R. (April de 2011). *UNAM University Namibia*. Recuperado el 12 de July de 2020, de UNAM University Namibia: <http://repository.unam.edu.na/handle/11070/515>
- Indrayani, S. (12 de May de 2014). *Institutional Repository UIN Syarif Hidayatullah Jakarta*. Recuperado el 2 de July de 2020, de Institutional Repository UIN Syarif Hidayatullah Jakarta: <http://repository.uinjkt.ac.id/dspace/handle/123456789/24484>
- Kaivanpanah, S., & Rahimi, N. (2017). The Effect of Contextual Clues and Topic Familiarity on L2 Lexical Inferencing and Retention. *Porta Linguarum*, 47-61.
- Knight, K. (2012). *Mind Mapping: Improve Memory, Concentration, Communication, Organization, Creativity, and Time Management*. CreateSpace Independent Publishing Platform.

- Kusmaningrum, M. (2016). Using Mind-Mapping to improved Reading Comprehension and Writing Achievements of the 4th Semester Students of Stain Curup. *Journal of English Literacy Education*.
- Lenzer, A. (29 de November de 2012). *Research Gate*. Recuperado el 3 de July de 2020, de Research Gate: https://www.researchgate.net/publication/257671140_The_role_of_decorative_pictures_in_learning
- Long, L., Fook, G., & Zainom, W. (2017). A Study on the Effectiveness of Tree-Maps as Tree Visualization. *ScienceDirect*, 108-115.
- Male, H., & Aprilianing, H. (2015). Using Mind Mapping to Improve Students' Reading Comprehension at SMK BPS&K II Bekasi. *EFL Theory & Practice Voice of EED UKI*, 54-65.
- Manoli, P. G. (2013). Developing Reading Strategies in Elementary EFL Classrooms. *Institutional Repository - Library & Information Centre - University of Thessaly*.
- Murry, K., Herrera, S., Miller, S., Fanning, C., & Kavimandan, S. (2015). Effect of Transnational Standards on U.S. Teacher. *FIRE: Forum for International Research in Educacion*, 41-63.
- Nanjoo, A., & Amir, M. (2013). A New Look at Comprehension in EFL/ESL Reading Classes. *Procedia - Social and Behavioral Sciences*, 3749 - 3753.

- Olmo, L. (6 de July de 2017). *TICbeat*. Recuperado el 6 de July de 2020, de TICbeat: <https://www.ticbeat.com/educacion/aplicaciones-y-plataformas-para-crear-mapas-mentales/>
- Olurinola, O., & Tayo, O. (2015). Colour in Learning: It's Effect on the Retetion Rate of Graduate Students. *Journal of Educationand Practice*, 2-3. Obtenido de International Knowledge Sharing Platform .
- Rajenran, K., Selvaraj, A., Rajaguru, S., & Kalaiselvi, G. (2017). Mindmaps – The Visual Tool Promotes Active Learning of Science Concepts. *Intternattional Journal of Informattive & Futturisttic Research*, 6238-6248.
- Roberts, R. (1 de December de 2015). *elt-resourceful*. Obtenido de elt-resourceful: <https://elt-resourceful.com/tag/reading-tasks/>
- Roundy, L., & Dahahy, K. (28 de March de 2016). *Study.com*. Recuperado el 20 de July de 2020, de Study.com: <https://study.com/academy/lesson/reading-comprehension-literal-inferential-evaluative.html>.
- SAGE . (2019). Analyzing Verbal Protocols: Thinking Aloud During Reading in Cognitive and Educational Psychology. *SAGE researchmethods dataset*.
- Seyedi, G. (2012). The Think-aloud Method in EFL Reading Comprehension. *International Journal of Scientific and Engineering Research* .
- Siriphanich, P. (10 de April de 2010). *Semantic Scholar*. Recuperado el 10 de June de 2020, de Semantic Scholar:

[https://www.semanticscholar.org/paper/Using-Mind-Mapping-Technique-to-Improve-Reading-of-](https://www.semanticscholar.org/paper/Using-Mind-Mapping-Technique-to-Improve-Reading-of-Siriphanich/7e03cc1057fc1c3b007d0d6b943f8fddedfeb9b60)

[Siriphanich/7e03cc1057fc1c3b007d0d6b943f8fddedfeb9b60](https://www.semanticscholar.org/paper/Using-Mind-Mapping-Technique-to-Improve-Reading-of-Siriphanich/7e03cc1057fc1c3b007d0d6b943f8fddedfeb9b60)

Solong, S. (2010). *IMPROVING THE STUDENTS' READING COMPREHENSION THROUGH*. Makassar : <http://repositori.uin-alauddin.ac.id/4440/1/A.%20Suciarti%20Ak.%20Solong.pdf>.

Suryani, L. (2015). *Improving Student's reading Skills by using the Mind Map Technique at SMA N1 Kretek in the Academic Year 2013-2014*.

Villanueva de Debat, E. (2006). Applying Current Approaches to the Teaching of Reading. *English Teaching Forum* .

Walter, J. (2006). Methods of Teaching Inferring Meaning from Context. *RELIC Journal - SAGE Publications* , DOI: 10.1177/0033688206067427.

Wirda, Hanafie, S., & Wahyudin. (2014). Using Maind MAPPING Technique to improve Reading Comprehension of the Second Year Students. *e-Journal of English Language Teaching Society (ELTS)* .

Yazar, U. (2013). Teaching Reading to EFL students to MAke Them Better Readers. *Macrothink Institute Jorunal of Studies in Education*.

Yukselir, C. (2014). An Investigation into the reading strategy use of EFL prep-class students. *Procedia Social and Behavioral Science*, 65-72.

- Corner, A. (2019, November 5). *Business 2 Community*. Retrieved from Business 2 Community: <https://www.business2community.com/infographics/the-7-types-of-mind-map-you-need-to-know-about-infographic-02255971>
- Greenan, S. (2 de May de 2017). *GT the future of Knowledge*. Recuperado el 19 de July de 2020, de Multiple Choice Questions: Benefits, Debates, and Best Practices: <https://blog.gutenberg-technology.com/en/multiple-choice-questions>
- Kearns, J. (26 de May de 2009). *MindManager*. Obtenido de MindManager: <https://blog.mindmanager.com/blog/2009/05/the-10-basic-parts-to-a-mind-map/>
- Pappa, E. (24 de March de 2015). *British Council*. Obtenido de British Council: <https://www.britishcouncil.org/voices-magazine/how-help-english-learners-read-more-quickly>

k. ANNEXES



UNIVERSIDAD NACIONAL DE LOJA

**FACULTAD DE LA EDUCACIÓN, EL ARTE Y LA COMUNICACIÓN
ENGLISH LANGUAGE DEPARTMENT**

THEME

**MIND MAPPING AS A COGNITIVE
STRATEGY TO DEVELOP READING
COMPREHENSION AMONG KET
PREPARATION STUDENTS, MORNING
SESSION AT EASY ENGLISH SCHOOL OF
LANGUAGES IN THE CITY OF LOJA DURING
2020 – 2021 SCHOOL YEAR**

Thesis project as a previous requirement to
obtain the Bachelor's Degree in Sciences of
Education, English Language Major.

AUTHOR

JESSENIA ALEXANDRA ERIQUE SÁNCHEZ.

LOJA – ECUADOR

2020

a. THEME

MIND MAPPING AS A COGNITIVE STRATEGY TO DEVELOP
READING COMPREHENSION AMONG KET PREPARATION
STUDENTS, MORNING SESSION AT EASY ENGLISH SCHOOL OF
LANGUAGES IN THE CITY OF LOJA DURING 2020 – 2021 SCHOOL
YEAR.

b. PROBLEM STATEMENT

Background

The present research work will be carried out at Easy English School of Languages during 2020-2021 school year. This prestigious institute was founded in 2011 as a studying program where English modules were designed and adapted for different institutions. These books were used by some private schools in the city of Loja and Zamora as well as others from El Oro and Azuay province. In 2015, it started to work as a private language teaching center as a response to the necessity of Loja citizenship, of an institution that provides English Language Teaching services. It is located in Perpetuo Socorro neighborhood on Lauro Guerrero Street between Teniente Maximiliano Rodríguez and Mercadillo Street, El Sagrario Parish, Canton and Province of Loja.

Today, the institution is run by Mg. Sc. Alex Fernández Cando, academic director. The mission of the institution is to form students who are able to achieve their goals through the strengthening of their abilities in the English language, using innovative methodologies and teachers with a high academic level that provide their students quality and warmth during the English learning process.

Easy English School of Languages has 6 teachers grouped into 3 female and 3 male teachers. The total number of students is 128. It offers preparation for international exams, personalized classes as well as regular and summer courses. These programs are addressed to children, teenagers and adults in the afternoon

session from Monday to Friday and in the morning session on Saturdays. Additionally, it offers workshops for English teachers covering different topics as well as diplomas in the language in association with some universities.

Current Situation of the Research Problem

English has become one of the most dominant languages which is spoken in almost every part of the world (Nunan, 2015). “The contribution of learning another language since school, allows people to get better results in communication and accuracy using the four skills, as well as the development of the necessary skills for effective language learning in later education” (European Commission, 2004, 2008). The implementation of English to the educational system was made due to the fact that students are exposed to a global world where English is needed. According to Graddol (2006), international education will always require language learning as an important aspect on students’ development. Governments around the world give a great relevance to the English language, searching for different strategies, creating innovative educational plans, and making various investments in this field.

Latin American development needs more English speakers, and, in response, most of the countries have made educational reforms to improve the way in which students learn English (EF Education First, 2019). According to Cronquist and Fiszbein (2017), Latin America is constantly implementing new programs and strategies. However, Latin America is placed under the global average with 50.34 in the EF English Proficiency Index [EF EPI]. Eleven from the nineteen Latin American countries in the study have a score of “low” or “very low” (2019).

Unfortunately, there are many factors that limit an increase in the average. Most of which are related to disparities in access to English education and high levels of violence (EF Education First, 2019).

In Ecuador, English is part of the National Curriculum as a compulsory subject since early primary education (Acuerdo No. 0052-14, 2014). According to Ecuadorian Curriculum (2016) students by the end of high school will be able to reach B1 level according to CEFR which means that they will deal with familiar situations in an independent way (EF Education First, 2019). In line with this, students will reach A2 level between tenth year of Basic Education and first year of Bachillerato. However, this goal has not been achieved due to the manner of connecting the standards with the content, as well as the indicators with the students' progress and the inappropriate material (Cronquist & Fiszbein, 2017). In consequence, EF EPI (2019) results state that Ecuador has a very low proficiency level with a score of 46.57 placing it in the position 81st of 100 countries and the last of Latin America. This means that Ecuador shows no progress in English proficiency from one year to the next, even though English is taught in all the educational levels (EF EPI, 2017).

Regarding Loja city, the average score is 50.48 (EF EPI, 2019). Based on these results, it was concluded that approximately two of ten students reach the end of secondary school without progressing past a beginner A1 level (EF EPI, 2019). Further, EF EPI (2019) affirmed that students who enter upper secondary school with only beginner-level often remain "stuck". Reading was one of the most complex skills at the moment of developing these tests. Therefore, more

attention should be put on reading comprehension mainly among students of 15 and 18 years old (EF Education First, 2019).

In reference to reading comprehension and according to the CEFR, English learners in A2 level are able to identify specific information in simple written material like letters, brochures and short newspapers articles. In order to accomplish this goal, reading strategies should be taught in class so students can learn how to manage and understand a text (Grellet, 1981 in Ministry of Education, 2016). However, reading comprehension is affected by several factors like difficulty when connecting ideas, differentiating the main and supporting sentences, visualizing information as well as deficits of vocabulary and grammar. Therefore, these factors must be overcome so students can understand transactional, expository, and informational texts what is expected from A2 level.

The issues mentioned before were noticed during non-participant observations with KET preparation students, morning session at Easy English School of Languages where most of the students faced problems in reading. Learners consider this skill more difficult and tedious than others as they are not able to understand most of the ideas presented in the text. Students have problems getting meaning from the texts so this prevents them to become independent readers. In addition, issues concerned with predicting content, reading for gist as well as for specific details, inferring meaning from context, and giving opinions or summaries were also observed in students. These deficiencies in reading comprehension, made students lose interest in the activity as well as misunderstanding task and exam instructions.

In an attempt to solve the problem, this research project proposes a cognitive strategy to develop reading comprehension before and after the reading tasks. Following the standards of the CEFR, and the Institution Guideline, the researcher considers this strategy as effective since it provides a way in which students clearly understand the text, connect ideas, identify vocabulary, and extract specific information. Furthermore, students will gain interest and feel motivated in English classes as the strategy not only is focused on content but also on developing creativity.

Research Problem

According to the previously mentioned issues, it is essential to research the following problem:

HOW DOES THE APPLICATION OF MIND MAPPING AS A COGNITIVE STRATEGY DEVELOP READING COMPREHENSION AMONG KET PREPARATION STUDENTS, MORNING SESSION AT EASY ENGLISH SCHOOL OF LANGUAGES IN THE CITY OF LOJA DURING THE 2020-2021 SCHOOL YEAR?

Delimitation of the research problem

Timing.

The present research work will be developed during the academic period 2020-2021.

Location.

This project will be developed at Easy English School of Languages which is located on Lauro Guerrero Street between Teniente Maximiliano Rodríguez and Mercadillo Street, in Perpetuo Socorro neighborhood, El Sagrario Parish, Canton and Province Loja.

Participants.

The participants of this research will be the ten students: five boys and five girls of KET preparation course.

Sub-problems.

- What theoretical and methodological references about mind mapping are adequate to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?
- What are the issues that limit the development of reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?
- What are the phases of the intervention plan that help to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?
- Which kind of mind maps are used to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?

- How effective was the application of mind mapping as a cognitive strategy to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?

c. JUSTIFICATION

The aim of this research is to develop reading comprehension using mind mapping as a cognitive strategy among KET preparation students at Easy English School of Languages, in the city of Loja during the 2020-2021 school year. Reading comprehension problems have been a common issue in EFL teaching-learning for a long time (Kasim & Raisha, 2017). This is confirmed by several studies that have shown that most of EFL students have difficulties in understanding English texts. Yukselir (2014) mentions that reading is a fundamental skill for students to learn and acquire new information. Hung and Ngan (2015) have also mentioned that reading skills can enhance other skills like speaking and writing, improve students' lexis, and can help them to master the target language.

Currently, reading skill is essential to communicate in a modern world where reading activities are everywhere. Moreover, it has a big relevance to students' development especially to learn a new language. In this sense, reading strategies play an important role as they help learners to understand completely texts and overcome reading comprehension problems as well as engage them to continue reading. For this reason, one effective strategy to develop reading comprehension is Mind Mapping, which main purpose according to Buzan (2005), is to create a graphic representation of an idea or concept using a diagram that allows students to store information in a visual way.

Mind Mapping as a cognitive strategy is considered a powerful tool to develop reading comprehension since it provides the opportunity to make associations easily connecting ideas from a text (Manoharan, 2008). Students will benefit from this project as they will understand clearly the text, identify vocabulary, and locate specific information. Furthermore, students will gain interest and feel motivated in English classes as this activity is not only focused on content but also on developing creativity (Buzan & Griffiths, 2014). Moreover, the findings of this project will help teachers with an efficient pedagogical technique for developing reading comprehension.

In addition, the development of this research will benefit the teacher candidate to gain experience related to teaching methodologies, group management and learners' needs. Furthermore, it is primordial to develop this research as it will permit the researcher to get a bachelors degree in Science of Education, English Language Major at Universidad Nacional de Loja.

d. OBJECTIVES

General

- To develop reading comprehension using mind mapping as a cognitive strategy among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

Specific

- To research the theoretical and methodological references about mind mapping as a cognitive strategy to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.
- To diagnose the issues that limit the reading comprehension development in the English language among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.
- To elaborate an intervention plan based on mind mapping as a cognitive strategy to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.
- To apply the most suitable mind maps in order to develop reading comprehension among KET preparation students, morning session at Easy

English School of Languages, in the city of Loja during the 2020-2021 school year.

- To validate the results obtained after the application of mind mapping as a cognitive strategy among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

e. THEORETICAL FRAMEWORK

MIND MAPPING AS A COGNITIVE STRATEGY

Definition of Mind Mapping

The term “mind mapping” was popularized by a renowned British Psychologist, Tony Buzan in the late 60s. He defines mind mapping as a two-dimensional and non-linear note-taking tool that allows learners to use the two parts of the brain (Buzan, 2005). In addition, the same author affirms that “a mind map is the easiest way to put information into the brain and to take information out of the brain.” Mind mapping is also considered as a visual form of note-taking in which not only words are included but also images, symbols, and colors dividing ideas or concepts in a hierarchical order (Panatda, 2010).

In contrast, according to Indrayani (2014), “a mind map is a diagram used to visually outline knowledge which is often created around a single word or text, placed in the center, to which are associated ideas, words and concepts”. While Ingemann (2008) has reported that mind mapping can be seen as one of the most powerful tools to become incredibly creative and understand complex systems. This is because this method enhances the capacity of acquiring new knowledge by integrating pictures to enrich the learning (Indrayani, 2014). Based on the definitions above, mind mapping is clearly an alternative to illustrate facts and events and using a diagram that not only connect ideas but also foster creativity.

An example of a mind map on the topic of “mind mapping” is given below (Olmo, 2017).

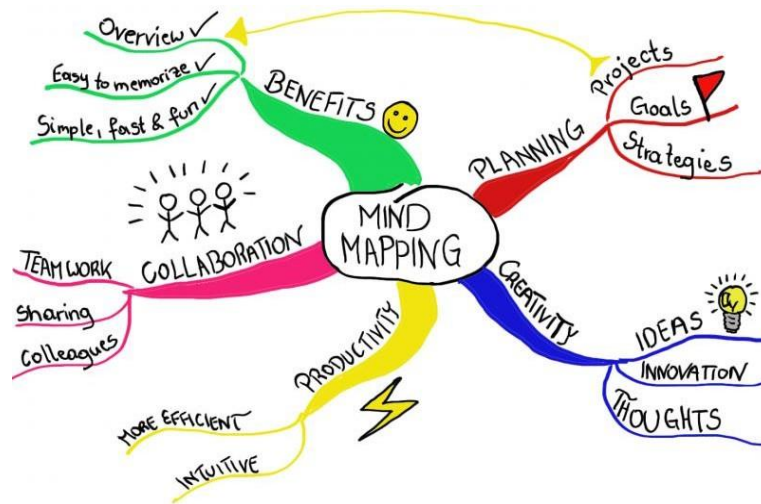


Figure 1: A Mind Map.

Regarding the teaching-learning process, mind mapping strategy refers to the teaching technique that uses mind maps as an instrument to represent students' understanding by joining ideas in a tree branch format with words and pictures (Panatda, 2010). Marton and Booth (1997) in Panatda (2010) also mention that “students can use mind maps for revising and clarifying thoughts so as to get the deep meaning of a story”.

The concept of “mind mapping” is closely related to Piaget’s Theory of Cognitive Constructivism, which describes the development of learners’ capabilities, makes emphasis on how they decode new content and how they build a mental photograph of the world (Piaget, 1952).

According to the GSI Teaching and Resource Center (2015) in McLeod (2018):

Cognitive constructivism states knowledge is something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their stage of cognitive development.

Cognitive teaching methods aim to assist students in assimilating new information to existing knowledge, and enabling them to make the appropriate modifications to their existing intellectual framework to accommodate that information.

Piaget proposed that learning is a dynamic process in which learners are continually adapting. As a result, learners construct more complex cognitive structures of their world in their mind organizing and reorganizing material to understand and adapt themselves to it (Lefa, 2014). Piaget (1983) cited in Lefa (2014) highlights how useful is to give students opportunities to classify and group information to facilitate the assimilation of new knowledge with the previous one.

Principles of Mind Mapping

As a creative tool, mind mapping enhances mental activity since one of his characteristics is to use similar connections to the brain. Despite the fact that each person thinks in a particular way, identical principles are shared among humans which are improved by the use of mind mapping. Based on brain functions Ingemann (2008) proposed certain principles to consider before the construction of a mind map.

Pictures.

“Pictures are not only more effortless to recognize and process than words, but also easier to recall due to the fact that visual and verbal memories are stored in different parts of the brain” (Dewan, 2015). Therefore, the combination of words and pictures has a positive effect on learning (Lenzer, 2012). Ingemann (2008)

supported this by mentioning that “the mind has a great capacity to remember images rather than texts”. This explains the mind mapping aim to create a mental photograph of concepts.

Headlines.

Ingemann (2008) suggests that it is far more advisable to remember single words, short phrases and striking headlines, than to remember pure text. That is the reason why in the construction of a mind map suggests the use of single words to facilitate understanding and the recording of concepts.

Connection.

Brain activity is based on association and automatically links new and previous concepts to create a system to process and understand new knowledge (Ingemann, Fortune Well, 2008). This means that recently acquired information can be assimilated or added to the existing cognitive structures (Piaget, 1983). In order to build a mind map is crucial to connect lines to other lines and make major branches to differentiate main and supporting ideas (Indrayani, 2014).

Colors.

Color is a useful tool, which has been widely used in education. “Color draws on both symbolic and cognitive powers to affect learning, facilitating memorization and identification of concept” (Olurinola & Tayo, 2015). Myers (2004) cited by Olurinola and Tayo (2015) stated that color also influences the way in which information is processed and it can improve the ability to remember both words and pictures. Mind maps need to use at least three colored pens in

each central image or idea since it helps to make a distinction between ideas (Indrayani, 2014).

Importance of Mind Mapping

Mind mapping is important due to the facility to use it in many fields (Davies, 2010) including education as it is focused on the development of the brain capacity and the optimal use of it. Owing to the fact that mind mapping extracts information and turns it into a visual, colorful and structured image, it increases creative thinking and encourages the organization and creation of new ideas (Budhi, Adnan, & Harry, 2016). As this strategy is non-linear, mind maps facilitate memory creating associations and links to record concepts easily (Rajenran, Selvaraj, Rajaguru, & Kalaiselvi, 2017). Furthermore, Chen (2008) cited in Alomari (2019) states that “the adoption of colors and images connected to words help human memory so that one could concentrate the mind on the central part which is the crucial subject”. This means that remembering facts and gaining new knowledge using this kind of diagram will be more effective.

Consequently, the use of mind mapping in classrooms is essential. Learners will be able to integrate and clarify complex concepts as well as develop a holistic understanding of the content to be learnt (Panatda, 2010). As mentioned by Budd (2004) in Andrini (2016), students create a visual image to enhance their learning using an innovative way to make connections in meaningful ways. Moreover, Buzan (2005) also claims that “mind mapping is a good tool to improve students’ ability in recording information and enhancing creative thinking.” Students are more likely to interpret relationships between concepts as they are easier to follow

than verbal or written descriptions (Davies, 2010). In this sense, students acquire knowledge in a practical and functional way (Davies, 2010) remembering a wide range of details.

There is a large volume of published studies describing the importance of the use of mind mapping. Alomari (2019) finds crucial this technique as “mind maps help younger students with the process of building conceptual comprehension of content”. Akinoglu and Yasar (2007) in Alomari (2019) considers that mind mapping has a great contribution to students’ development since “mind mapping provides meaningful learning and promote active-learning of language”. In addition, including colors and pictures will make the learning process more enjoyable. In this way, students perceived mind mapping as a fun, interesting, and motivating approach (Budhi, Adnan, & Harry, 2016). Henceforth, the use of mind mapping is important as students not only focus on the content but also on creativity.

Purposes of Mind Mapping

According to Michael Michalko in Buzan (2005), mind mapping aims to establish connections between ideas starting from an individual piece of information until arriving to a complete picture. He emphasizes that the facilitation of the learning through the capabilities of the brain is included in this objective. In a similar way, Davies (2010) argues that the principal purpose of mind maps is to associate ideas storing information in a visual manner.

However, Ingemann (2008) suggests that the only purpose of mind mapping is to get all the ideas from a text to create a visual representation of it. While Buzan (2005) affirmed that there are several specific purposes of mind mapping.

- To activate the whole brain.
- To fix the mental tangled.
- To let students focus on the central explanation.
- To show the relationship between the separated information parts.
- To give a description wholly and specifically.
- To group and assimilate concepts as well as compare them.

The Procedure of Mind Mapping

Buzan and Griffiths (2014) highlight the process of creating a mind map involves a wide range of cognitive skills so it can be viewed as a “whole-brain” thinking tool. Rajenran, et al. (2017) suggest that the procedure to build a mind map can be summarized into three steps, identifying the general idea, selecting the main topics and developing the subtopics. Nevertheless, Andrini (2016) has identified seven steps to make a mind map detailed as follows:

- To begin with the construction of a mind map, it is advisable that learners start from the center of a horizontal blank paper.
- Once identifying the topic, it is necessary to represent it by drawing a picture as the core of the mind map. A central image makes the students concentrate in what the mind map while they are using their imagination to represent this idea into a drawing.

- Continually, the learner needs to use colors. These as well as pictures will add creativity to the mind map and stimulate the capacity of the brain.
- After selecting keywords as supporting ideas, the learner will link the main branches with the central picture and link the supporting branches. Associations have the role of facilitating the understanding of an idea just as the mind does.
- Students must make a curved line rather than straight lines. Curved lines result interesting to the brain whereas straight lines are considered as boring.
- Considering the previous step, learners will check if they have used only a keyword to every single line. This allows learners to reduce the unnecessary information that can saturate the mind map.
- Finally, students have to include pictures in secondary branches. Each picture will represent an idea, this will be recorded by students just thinking in the image rather than in the text.

Other procedure of constructing a mind map proposed by Sugiarto (2005) cited in Suryani (2015) points out five steps:

- Prepare the equipment to make mind maps such as paper (A4/Folio/A3), pencil or pen, stabile, marker, or color pen.
- Determine the topic, make a central image in the center of the paper, the position of the paper is landscape, draw the topic, and give brightness to it. It can be the combination of three or four colors.
- Make a main branch which represents the topic of the line, write the word in the same length with the branch, make a word per line, write

down the word with capital letters, and then give them some colors.

- Make the thin branch which is a subtopic, add the words or pictures, add the main idea, and develop it with the sub-topics. All the sub-topics are placed in every branch separately.
- Continue it with other ideas by making a new branch.

Mind Mapping in EFL Classrooms

Mind maps aim to develop memory and make it easier to remember and visualize information. This is the reason why it is very efficient and convenient to master a foreign language (Hofland, 2007). Using mind maps students connect prior knowledge and new information, which facilitates them to transfer what they learn and apply it to new situations (Fiktorius, 2013). The flexibility of mind maps allows learners to use them in any activity in the class like projects or expositions. Therefore, mind mapping can be used to develop the four basic skills in English as well as vocabulary and grammar in an original way.

Regarding receptive skills, mind mapping enables the acquisition of the language in a brilliant form. In reading, mind maps help students to understand a text creating a mental picture of the reading and being able to recognize specific details as main and secondary sentences (Hofland, 2007). In the same way, mind maps work in the development of listening skill due to the fact that mind mapping is considered to be a powerful note-taking technique that can be applied to organized facts after listening to an audio.

On the other hand, mind mapping is also useful to improve productive skills. This is the case of writing; mind maps operate as a brainstorming tool to generate

and support ideas. In other words, students will be sure about what they are going to write and what ideas they will use in order to build a good composition. In the same line, mind map encourages speaking production in expositions or speeches owing to the facility to record information using this diagram. Furthermore, Fiktorius (2013) claims that “mind maps engage the entire class in conversations” so the interaction between teacher and student will be strengthened.

Finally, drawing a mind map is a suitable technique to elicit vocabulary (Hofland, 2007). Vocabulary can be grouped according to the themes to create associations among the new words. Those words must be represented by pictures and colors based on their own understanding of the word. As a result, the use of mind maps enables students to recall large amounts of words in their mind (Hofland, 2007).

Mind Mapping in Reading Comprehension

Reading comprehension is one of the important skills to get information. Mind mapping has a particular influence on this as it allows students to decode and understand a text and adapt what they have just learnt with what they already know. Cadieux (2011) in Male and Aprilianing (2015) supported this by emphasizing that, “mind mapping can be used to improve reading comprehension in both fiction and non-fiction texts and across a variety of genres. Mind maps work because they give the reader another (visual) way to process information.”

Despite the fact that reading is a left-brain skill, mind mapping proposes to develop reading comprehension as a process that involves both sides of the brain. While reading, different images, associations, ideas, and isolated words will come

to students' mind. Mind mapping enables the learner to identify and associate this information by using images and colors to interpret better the whole message (Hofland, 2007). In theory, students will create a mental picture of the reading which facilitates the extraction of specific as well as general details.

Several studies carried showed a great improvement in reading comprehension after applying mind mapping strategy (Andrini, 2016; Panatda, 2010; Hofland, 2007; Kusmaningrum, 2016; Wirda, Hanafie, & Wahyudin, 2014; Suryani, 2015, Male & Aprilianing, 2019). By drawing mind maps students visualized the text which gave them a clear insight of the content. In addition, students remembered more details from the reading by using this technique (Hofland, 2007). Finally, it was concluded that mind mapping motivates learners to continue reading as they found the construction of a mind map a pleasant activity.

Henceforth, mind mapping is proposed as an alternative for teaching reading comprehension (Andrini, 2016). Kaufman (2010) in Andrini (2016) argues that "mind mapping is an efficient technique to use while reading, since its non-linear format allows students to view the entirety of their notes at a glance, then easily place new information in the appropriate branch or make connections between ideas." Furthermore, not only this technique enhances the understanding, but also rises learners' interest in reading activities as the feel free to create their own mind map using their preferred colors and pictures.

Types of Mind Maps

The principal objective of mind mapping strategy is to facilitate the assimilation of new knowledge and the comprehension of new content. For this reason, mind maps are considered the most practical way of visualizing information. They aimed to simplify this complex activity using diagrams, pictures and colors so the brain can recall a wider range of concepts. Mind mapping is commonly applied in a variety of educational areas and for many purposes. Therefore, different kinds of mind maps have been established during the last decades.

According to Erdem (2017), the structure of a mind map can be different and have some variations depending on the context in which it is used. However, they still use the same principles. Regarding reading comprehension, there are five kinds of mind maps that are focused on key features about reading. Each of these mind maps enables the students to process easily any kind of written information emphasizing in one aspect. Corner (2019) proposes some types of mind maps explains as follows:

Circle map.

The circle map is mainly applied to define or explain the meaning of a word or specific concepts. This map consists on a large circle with a smaller circle inside. Students must write the term that will be defined inside the small circle, while brainstorming thoughts and ideas are written in large areas (Abdelkafy, 2020). Circle map can be easily developed at any stage of the class as it offers a rapid alternative to review new words.

Multi-flow map.

The differentiation between causes and effects as well predicting events and content are two fundamental properties of multi-flow map. This diagram suggests dividing cause on one side (left) and effects on the other side (right). The construction of this mind map allows students to predict information that probably is not explicit in the text and predict what will happen next and what happened before. In fact, it is ideal to show the relationships between written and not written events based on a reading passage.

Brace map.

This mind map helps to break a big object into its elements for a deeper analysis. While developing this mind map, all the components become more and more specific. Contrary to multi-flow, brace map facilitates to establish specific relationships between a whole and its parts. Consequently, the process of obtaining and organizing specific information while reading a text becomes simpler and more straightforward.

The principal characteristic is that this diagram uses brackets on its structure. It is advisable to write the general object in a horizontally way and then draw a big bracket after it in an attempt to organize the subtopics into different categories. The brackets tend to group together these smaller parts.

Tree map.

Tree map can be defined as “a space-constrained visualization of hierarchical structure which uses enclosure to visualize trees, using size and color coding to map sub-tree onto a sequence of nested rectangular areas” (Long, Fook, &

Zainom, 2017). Additionally, the format used in this kind of mind map allows students to categorize the information using a main topic at the top and the subtopics or elements as the roots that support the principal title. Subsequently, students can quickly convert written information into visual material as it facilitates the visualization of a new content as well as the comprehension of definitions and components.

Bubble map.

Corner (2019) mentions that bubble maps are specially used to explain a theme using related adjectives or descriptions. This mind map uses a center circle for the topic and other circles for qualities, properties, or other aspects of the same topic. Bubble maps are an excellent tool to obtain the general or main idea of a text as students will process the reading in a holistic way. In other words, this diagram avoids dividing the text into smaller parts so the ideas are completely analyzed which allows a quick comprehension from students.

Advantages of Mind Mapping

Mind Mapping has a great number of advantages. As cited before, the principal advantage is that mind mapping improves learning and memory by developing especially with the brain functions. Additionally, it facilitates the process of organizing and summarizing information. Particularly, mind maps also foster creativity and imagination (Knight, 2012).

On the contrary, some advantages proposed by Cleford (2014) in Andrini (2016) are:

- Easily add ideas or links later, just drawing a new branch.

- Mind maps may help people to see other connections and similarities in the information they receive. Adding sketches to mind maps, them more memorable than conventional notes.
- Mind mappings can make revision faster, even if the course notes are conventional. They condense material into a concise, memorable format.

In the educational field, mind mapping is very advantageous. Apart from facilitating students' learning, mind mapping involves different learning styles (Hofland, 2007). Fiktorius (2013) demonstrated in one of his studies that “mind maps are especially helpful for strong visual learners who absorb information better when it is presented via diagrams”. Another advantage is that mind maps are related to multiple intelligences like emotional as well as traditional intelligences such as verbal and spatial (Hofland, 2007). In short, education is highly benefited by mind maps.

READING COMPREHENSION

Reading Skill

“Reading is the process of constructing meaning from written texts” (Smith, 2012). It is a receptive skill as the information is extracted for later being decoded and assimilated.

According to Hartney (2011), “reading is a complex cognitive process requiring visual, auditory and motor skills to enable a child to recognize words and symbols, to associate them with the appropriate sounds and to invest them with meaning derived from previous experience”. Clearly, reading refers to the whole and complete understanding of a text. It includes implicit and explicit ideas,

isolated words, and connected sentences. However, Namjoo and Amir (2013) state that in spite of being necessary the reader's knowledge about vocabulary and grammar it is also needed reader's analyzing, synthesizing, and evaluating ability.

In relation to this, Hengari (2007) as cited in Hartney (2011) argues that reading is considered an active interaction with the language. It involves a dynamic comprehension and interpretation as well as an appreciation and application of what is read. Apart from decoding most of the ideas presented in a text, learners are able to relate them to their previous knowledge, analyze its relevance to finally evaluate this information (Musuhara, 2009 in Namjoo & Amir, 2013).

Yukselir (2014) suggests that reading is one of the most valuable and fundamental skills for learners to master the language. In addition, "reading has a positive effect on students' vocabulary knowledge, on their spelling and on their writing" (Harmer, 2007). Therefore, reading is not only an important means of communication but is also a useful way of language learning. As a result, reading is one of the basic skills at the moment of learning English.

Types of Reading

Individuals read a wide variety of texts which implies that they read for different purposes. Koda (2005) in Manoli (2013) exemplifies this mentioning that the aim before reading a newspaper will not be the same as reading a biology textbook. Therefore, different types of reading have been established to determine their objectives and approaches to facilitate the process of teaching this skill.

Intensive reading.

Harmer (2007) stated that the term intensive reading refers to “the detailed focus on the construction of reading texts which takes place usually in classrooms”. According to the British Council in reference to Teaching English, intensive reading implies that learners read in detail with specific learning aims as it is commonly accompanied by tasks. The aim of intensive reading is to get a complete and clear picture of all the information presented including grammatical structures, phrases, and other language features.

Extensive reading.

“The purpose of this type of reading is to get acquainted with new information. This type of reading implies the mastering of the general image and the receipt of new, unfamiliar information” (Kondrashova, 2020). Harmer (2007) has noted that the exact term “extensive reading” refers to the fact that students can read in other environments apart from classrooms. While teaching extensive reading, new material has been included in an attempt to encourage this type of reading. For instance, web pages, newspapers, novels, and magazines.

Skimming or reading for gist.

“This type of reading involves getting a common idea from the text” (Kondrashova, 2020). Skimming aims to form a general concept about a text rather than analyzing all the details from it. Skimming can result harder for students than scanning because it demands that the readers identify the main intention of the content, and at the same time organize and remember the information provided by the author. In order to develop this kind of reading, it is

advisable to analyze the first and last sentences. Thus, it is not needed to read every single word to create a general picture of the text (Kondrashova, 2020).

Scanning or reading for specific information.

Scanning is focused on the extraction of specific details in the text. In other words, the focus is on local comprehension and little attention is given to the rest of the text (Yazar, 2013). In relation to this, Manoli (2013) defines “scanning as a selective type of reading, where major parts of the content are omitted.” Furthermore, Kondrashova (2020) highlights that a complete understanding of the text is not required a deep comprehension of the facts or the complete analysis of grammatical structures. This type of reading is also known as diagonal reading.

Reading Comprehension

“Reading comprehension is regarded as a complex, multifaceted cognitive skill drawing on many knowledge sources and processes ranging from lower-level processes to higher-level” (Manoli, 2013). Erler and Finkbeiner (2007) as cited in Manoli (2013) highlighted that “since the 1990s reading comprehension has been seen increasingly to be the result of complex interactions between a text, setting, reader, reader background, reading strategies, the L1 and the L2, and reader decision making”. Basically, the principal idea of reading comprehension is the ability to mentally interconnect different ideas in a text and reach to a mental representation of it (McNamara, 2007).

In a similar manner, reading comprehension is viewed as an interactive process of extracting meaning from a text (Rummelhart in Dilek, 2017). A general component in many definitions is the interpretation of the information in a text,

the use of prior knowledge to interpret this text, and the construction of a coherent representation or picture in the reader's mind (McNamara, 2007). In essence, Panatda, (2010) summarises reading comprehension as the ability to comprehend a reading passage which can be measured by reading test scores.

However, reading comprehension is not a unitary process. It involves a set of skills that are required to understand completely a text. "This process starts from the moving of words on the page to meaning in the mind, the recognizing of individual words by using knowledge of letter patterns, matching the resulting pronunciations to meaning, and finally connects these words into their mind" (Andrini, 2016).

Apart from the ability to mentally connect ideas, inference-making plays an essential role to ensure a complete understanding of the text. "The reader may fill in details that are not stated in an explicit way, either by integrating statements within the text or by incorporating general knowledge with textual information" (McNamara, 2007). Furthermore, awareness about text structure and the expectations related to the characteristic of a specific text results in a useful technique to help students to activate prior knowledge and schemas to aid the construction of mental representations (McNamara, 2007).

Reading Comprehension Levels

Reading comprehension is a cognitive process that requires three levels of understanding. These levels are literal, inferential, and evaluative. They need to be developed in the class since they allow the reader to have a deeper perception moving from the easiest to the complex phase.

Literal level.

Starting with the literal level, the reader considers the information that is written in the text, for example, location, characters, ages, and other explicit details. This level is crucial because unless the reader understands well the material from this part, he cannot continue to the next phases (Roundy & Dahahy, 2016).

Inferential level.

During the inferential level the reader must determine what is implied in the text. The student can make predictions about what would happen next or about possible consequences, how the participants in the text are feeling, and other possible inferences. This process is also known as reading between lines.

Evaluative level.

At the end, learners will analyze all the content and build an opinion or judgment about it. Common questions in this level are whether the reader likes or not the reading and what aspects he will improve. This stage aims to develop critical thinking and create independence in the reader.

Reading Comprehension Models

As reading is a receptive skill, it is indispensable to analyse the different models that readers use to process the information. The models are often categorized as bottom-up, top-down, interactive model, and schema theory.

Bottom-up model.

Bottom-up is characterized by the influence of the senses into the perception of a text. In this model, “the reader decodes the information by moving from the

lowest level, such as letters and words, towards the higher levels that are clauses, sentences, and paragraphs” (Gamboa, 2017). Clearly, reading is presented as a mechanical process by this model. In other words, the reader draws on lower-level processes and forms a piece-by-piece mental translation of the text information (Manoli, 2013). The bottom-up model is known as text/data-driven or process/sequential models.

Top-down model.

In contrast to bottom-up model, top-down utilizes background information to predict what is about reading. This model starts with high-level processes highlighting the critical role of inference, the reader’s prior knowledge, and expectations in the text processing, which can, simultaneously, interact with stages occurring earlier in the sequence (Manoli, 2013). Therefore, top-down model treats reading as an active process taking into account the readers’ background, needs, and experience which allows them to use contextual information. Henceforth, this model is also named as a conceptual-drive process.

Schema theory.

The term schema is frequently attributed to Frederic Barlett who defined it as an active organization of past reactions or experiences. Based on this assumption schema theory is defined as an organized previous knowledge structured that enables the reader to comprehend, learn and remember information in a better way (Johnson, 2014). According to schema theory, the reader integrates the knowledge given from a text with his background in an interactive manner. There are two types of schemata, formal and content schemata. “Schema theorists make a

distinction between formal schemata (knowledge about the structure of a text) and content schemata (knowledge about the subject matter of a text)” (Villanueva de Debat, 2006).

Content Schemata.

“Content schemata make reference to the message of the text, and, if the topic is familiar, the reading task will be more productive and efficient” (Villanueva de Debat, 2006). In addition, content schema concerns about the "background knowledge of the content area of the text" (Carreli and Eisterhold, 1983 in An, 2013). In line with this, this kind of schemata contains conceptual knowledge or information about a specific topic in relation to what is reading.

Formal Schemata.

With reference to Carreli and Eisterhold (1983) in An (2013), “formal schema refers to the background knowledge of the formal, rhetorical organizational structures of different types of texts". In other words, formal schema deals with the specific characteristics of each gender and each kind of text like essays or articles. This type of schemata not only makes reference to the different types of texts but also involves language features like orthography, syntax, cohesion, and text structure. An (2013) has pointed out that the lack of knowledge related to these aspects can contribute considerably to the problems in reading comprehension.

Interactive model.

The interactive model suggests that bottom-up and top-down process can actively interact between them (Gamboa, 2017). The aim of this model is to

combine the elements of both processes and include interacting with hierarchical stages. In addition, various types of knowledge, such as background, syntactical, semantic, lexical, and orthographic processes can be integrated to contribute to text comprehension. (Manoli, 2013). Moreover, “the efficient reading requires the readers to make predictions (bottom-up model) and hypothesis about the text content by relating the new to their prior knowledge (top-down model) and by using as few language clues as possible” (Dilek, 2017). In short, readers are expected to use both processes in order to interpret a text.

Reading Comprehension Skills

Reading Comprehension demands the interaction of different skills to complete the process of understanding. As mentioned by Mikelecky (2008), “EFL teachers should train students in the skills that will give them the power to comprehend in English”. There are mainly two types of reading skills identified by Brown (2004) cited in Suryani (2015), they are micro-skills and macro-skills.

Micro-skills involve linguistic patterns, and discourse knowledge like parts of the speech, register, or grammar rules. Students’ abilities will be capable of recognizing grammar word-class like nouns and verbs as well as the particular meaning expressed in a sentence. (Brown, 2004 in Suryani, 2015).

In contrast, macro-skills enable the reader to totally comprehend a text. In other words, both types of skills must be integrated by the student to succeed in the interpretation of a text. The following list details the necessary macro-skills for reading comprehension (Brown, 2004 in Suryani, 2015).

- Identify the communicative functions of the texts.

- Infer implicit context using background knowledge.
- Infer links and connections between events, deduce causes and effects, and detect the main idea, supporting ideas, new information, and exemplification.
- Read between lines making a distinction between literal and implied meanings.
- Apply and develop reading strategies such as scanning and skimming, guessing the meaning of words from context, and activating schemata for the interpretation of a text.

However, there are other authors who proposed other skills to develop reading comprehension. Mikelecky in her new study about Teaching Reading in a Second Language (Mikelecky, 2008), includes some skills that according to her students should learn how to apply them unconsciously. These skills are illustrated as follows.

- Summarize the material by mentioning only the most relevant aspects.
- Draw conclusions including new ideas.
- Visualize a picture or diagram of what is explained in the text.
- Read critically by giving opinions or form judgments about the content.

Reading Comprehension Strategies

“A reading comprehension strategy is a cognitive or behavioral action that is enacted under particular contextual conditions, with the goal of improving some aspects of comprehension” (McNamara, 2007). In theory, these strategies facilitate a better understanding of the text by using different techniques or activities. The principal comprehension strategies are described below.

Reading for gist.

This strategy aims to provide the reader with a general understanding or a general idea of the reading passage without taking into consideration grammar aspects. Reading for gist is known as skimming.

Reading for specific details.

During the process of reading, students will identify different aspects such as supporting details, the author's intention, or the setting in which the text is developed. This will clearly allow students to locate information, draw conclusions and improve comprehension. It is known as scanning.

Predicting.

Students will determine what the text is about or what would happen in the text by analyzing pictures or titles and subtitles. This enables students to have an idea before reading.

Inferring.

While working on this strategy, students are meant to infer the meaning of words as well as deduce aspects that are implicit or that are not clear on the text. This will help them to better understand the general message of the text.

Sequencing.

Students will identify key components of a story such as introduction, body and conclusion. In other words, students will determine what happen at the beginning or what aspects belong to the introduction, what events occurred in the middle and what elements were included at the end.

Visualizing.

Visualizing refers to the creation of a mental picture of the scenery and participants of a text. It enhances the learners' ability to organize and remember ideas as well as inferring and predicting future events.

Questioning.

Questions can be formulated in any stage of the reading process. They are effective since they focus students' attention on what they are learning. This enables the students and even the teacher to monitor the comprehension of a text.

Connecting.

As explained before, the fact of relating previous background to new information can have a positive impact on reading comprehension. However, Knee and Zimmerman (1997) as cited in Correia and Bleicher (2008) has also established three different types of connections. As a result, students should connect the text to their lives, to their knowledge, and to the environment.

Summarizing.

Learners will be capable of express the most relevant facts or events in a brief and clear manner but using their own words. The consolidation of the comprehension will be evidenced by applying this strategy.

Stages in the Reading Comprehension Process**Pre-reading.**

The pre-reading stage is essential for an appropriate comprehension. It has three main objectives, "to introduce and arouse interest in the topic, to motivate learners by giving a reason for reading, and to provide some language preparation

for the text” (Yazar, 2013). Pre-reading activities such as eliciting new vocabulary, guessing from pictures or making predictions based on the titles are introduced in this stage

While- reading.

This stage is emphasized in the development of the reading process as a monitoring or guided phase. As suggested by Yazar (2013), the main purpose of this stage is to help understanding the text structure and clarify text content. Some while-reading activities are answering questions, making lists, and completing diagrams or maps.

Post-reading.

Once finished the activity, this stage not only aimed to verify comprehension but also to consolidate what has been read and to relate the text to the learners’ own interests (Yazar, 2013). Post-reading involves students’ reactions to the text, their suggestions, and their opinions whether they like or not. Moreover, post-reading activities include question answering, and filling exercises or diagram.

Assessment of Reading Comprehension

Reading Comprehension assessment aims to determine students’ understanding and monitor their progress. At the same time, the assessment provides possible issues that students present or skills that they have not mastered during the reading process. In this way, the instruction of the class can be readdressed to their needs. Additionally, numbers will demonstrate the effectiveness of the methodology or technique used. Having discussed why to evaluate learners on reading comprehension, it is necessary to point out that

teachers need to analyze what kind of test fits better, when to test and how to score (Rea-Dickins & Germaine, 2011). There are three common ways of assessing reading comprehension.

Multiple-choice tests of reading comprehension.

Multiple-choice questions consist of a stem and a set of options. The stem usually presents a question as a problem to be solved (Chan, 2009). This type of test assesses low-order and high-order skills based on Bloom's Taxonomy. In other words, it can evaluate complex and simple concepts. Greenan (2017) exemplified it when he stated that "while many defaults to questions that test both understanding and remembering facts, a well-worded question can test on application and analysis". Another variable of these type of questions are multiple-choice cloze aimed to complete a sentence by giving options.

Short-answer tests of reading comprehension.

In contrast, a short-answer test involves more high-order skills. At the moment of answering these questions, students will construct their own answers using the information or ideas from a text. For Chan (2009), this test includes items like completing the sentence, supplying the missing word, writing short, identifying true and false statements descriptions, or filling diagrams with an explanation. Keenan, Betjemann, and Richard (2008), in their research about Reading Comprehension Tests concluded that completing sentences or also known as cloze-test, are more efficient than multiple-choice questions. This is because comprehension is directly evaluated as it implies that students have a clear understanding of the vocabulary and the setting of the text.

Think-aloud/verbal protocol of reading comprehension.

Think-aloud protocol refers to a kind of test in which learners can verbalize their thoughts while they are reading a text (SAGE, 2019). Seyedi (2012) argues that readers are able to use their own format, their own ideas and their own language while they are applying this protocol. In the same line, Bonh Gettler (2018) as cited in SAGE (2019) affirms that “think-aloud is believed to reveal spontaneous processes in which readers are thinking at each moment in a relatively unfiltered manner.” Therefore, this way of assessing students has been very popular among English teachers owing to the principle that learners’ comprehension can be easily monitored and the feedback is immediate. Apart from think-aloud, there are other verbal protocols that can be also used such as “filling in missing information, making predictions, answering questions, stating opinions, making loose associations, reflecting on one’s own understanding and more” (SAGE, 2019).

f. METHODOLOGY

Design of the Research

This research project will be developed based on action research model defined by Mill (cited in Creswell, 2012), as “a systematic procedure done by teachers (or other individuals in an educational setting) to gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning”. In addition, action research in education involves finding immediate solutions to the teaching-learning process. Based on the definitions above, the procedure of action research is cyclic and follows these steps; identifying a problem, gathering data through different instruments, interpreting results, proposing an action based on the data and finally reflecting on the work done (Ferrance, 2000).

The current research work has the objective of developing reading comprehension using mind mapping as a cognitive strategy among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year. This study includes planning, acting and observing, as well as reflecting on results derived from the intervention plan that lasted for eight weeks. The researcher starts from a detected problem, plans an action in order to solve that problem. Continually, the practitioner applies the strategy proposed, and reflects on the possible outcomes after finishing the intervention stage which will be reported in the thesis work.

Methods, Techniques and Instruments

Methods.

For the development of this project, the researcher will use different methods to make a description of the data that result from the intervention plan.

The following general methods will be applied along the research:

The Descriptive Method will be used in order to describe, detail and explain the different stages of the study. This method will be important to report the difficulties presented on students in line with reading comprehension, as well as knowing how to overcome them. The current method will also organize the resources used by the researcher and analyze the alternatives proposed in order to accomplish the objective of the research.

The Scientific Method will facilitate the study of mind mapping as a cognitive strategy aimed to develop reading comprehension, and will help the observations done both before and during the intervention. Subsequently, this method not only will enable the prediction of the possible solution but also will support the data collection to make more relevant the inferences and the analysis of it.

The Statistical Method includes phases as arranging, planning and collecting information. This method will facilitate the researcher to collect and analyze qualitative information during the observations as well as quantitative results obtained from the application of tests and questionnaires. Therefore, statistical analysis will give the researcher a way to quantify results expressed in graphics.

The Analytic/ Synthetic Method is employed for data collection based on the combination of two methods. Analytic method aims to observe the results dividing them into different parts to analyze them on their own. Once divided and examined these parts, synthetic method suggests integrating them and studying in a comprehensive way. This method will enable the researcher to analyze and interpret the data collected by the pre and post-test, pre and post questionnaires, observation sheets and field notes in order to draw conclusions.

Techniques and Instruments

Data Collection.

The purpose of data collection is to obtain reliable evidence that will be interpreted in an analysis of the findings and enable the accurate execution of the research. To carry out this procedure, two types of research will be implemented. Quantitative research provides information that can be made into statistical graphics, while qualitative research is employed to gather non-numerical details to understand concepts, behaviors or experiences. Therefore, to gather the data for this study, the researcher will use a pre-test and a post-test for the quantitative data. Additionally, questionnaires, observation sheets, and field notes will be considered to collect qualitative information.

Tests.

Tests will allow participants to perform cognitive tasks in relation to reading comprehension. Additionally, tests will yield a numerical score by which the researcher will calculate the mean to compare the pre- and posttest results.

Pretest - posttest.

A researcher-made pretest will provide a measure on the performance of reading skill before the participants (KET preparation students, morning session at Easy English School of Languages) receive a treatment through the intervention plan designed in this research project. After the treatment or intervention plan, a posttest will measure again the performance of the reading skill in order to make a pretest- posttest comparison of the cognitive dimension of the performance of the reading skill of the participants being treated.

Questionnaire.

According to McLeod (2018), a questionnaire is an instrument for researchers; they have a set of questions with the purpose of collecting relevant information or data from participants. A researcher-made questionnaire will be administered to the participants to answer questions related to their attitudes and feelings toward mind mapping as a cognitive strategy. The data collected by the pre and post questionnaire will support the results obtained from the pre and posttest.

Observation.

It will allow the researcher to identify specific aspects during the application of the research work. This process will be developed through observation sheets and field notes. The observation will be during a natural environment as lived by KET preparation students, morning session at Easy English School of Languages during their English classes. There will be needed two types of observation as detailed below.

Nonparticipant Observation.

Non-participant observation involves observing participants without actively participating. According to Spradley (2016), in this kind of observation the investigator will not participate actively within the classroom environment and the teaching learning process, but compile and analyze information obtained during this process. The intention of this procedure is to recognize the issue that the dependent variable of the research presents to further be reinforced with the participant observation.

Observation Sheet.

The researcher will employ an observation sheet to record students' attitude and behavior at the moment of working on reading comprehension. This observation sheet is a self-development instrument that describes accurately and comprehensively the indicators and all the relevant aspects of the dependent variable.

Participant Observation.

In participant observation, the researcher will be a member of the setting in which the data will be collected. The teacher candidate will be intentionally involved in the problematic situation by using mind mapping as a cognitive strategy in order to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

Field Notes.

As a qualitative research instrument, field notes will give the researcher the facility to keep a record of the events and activities employed in each lesson of the intervention plan. Additionally, it will provide information about participants' attitudes, feeling and behaviors toward the application of mind mapping as a cognitive strategy to develop reading comprehension. Therefore, the field notes are intended to be analyzed by the researcher as evidence to produce important meaning and an accurate understanding of what is being studied. They can establish most of the qualitative data attached to a research project (Emerson & Robert, 2020).

Population Sample

The population is ten KET preparation students, morning session at Easy English School of Languages. The total number of participants is composed by five boys and five girls.

Description of the Intervention Plan

The objective of this study is to develop reading comprehension through mind mapping as a cognitive strategy to help KET preparation students, morning session at Easy English School of Languages. Due to the fact that this is an action-research, the application of the intervention plan will be carried out in different phases:

Phase 1. Initial Reflection.

During a non-participant observation, the researcher was able to see that students of KET preparation, morning session at Easy English School of

Learners have difficulty at the moment of reading for gist, reading for specific details as well as predicting content, inferring meaning of words and visualizing information. This situation allowed the researcher to recognize that reading comprehension is an issue among learners who are not taught by using the appropriate method during their English classes.

Being this concern, the researcher asked whether there are some different techniques that would better prepare students to improve reading comprehension. Therefore, having read some mainstream literature, the researcher found out that mind mapping will result effective for learners.

Phase 2. Planning.

In an attempt to solve KET preparation students' weaknesses on reading comprehension, lesson plans will be presented using mind mapping as principal activity. The lesson plan contains three phases: activation, connection and affirming (Murry, Herrera, Miller, Fanning, & Kavimandan, 2015). They integrate guided, controlled and free practices that improve reading comprehension among students. Each stage can be summarized as follow:

Activation.

The purpose of this phase is to activate prior establishing a relationship between what is going to be learnt and what is already known. Activities such as games, songs, questions, brainstorming and pictures can be used in this stage.

Connection.

Students confirm or disconfirm predictions made in the previous stage. In this way, students are provided with opportunities to apply and practice the new

knowledge. Using individual or collaborative group work, students interpret, analyzed, and create.

Affirming.

In order to document students' progress, teacher applies authentic assessment to keep a record. In addition, teacher affirms the students' progress by providing the corresponding feedback. Students are asked to reflect on and discuss new learning.

On the other hand, this plan of action will explicitly respond to the following research questions.

- What are the phases of the intervention plan that help to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?
- Which kind of mind maps are used to develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?

Phase 3. Action.

The plan of action will be developed during 10 weeks of 3 hours each one. One hour will be taken from the weeks 1 and 10 to administrate the data collection instruments (pre and posttest and questionnaires). Consequently, the 10 weeks will be developed with lesson plans. As is usual, things will rarely go precisely as expected, therefore some minor changes or deviations will be made to meet possible drawbacks.

Phase 4. Observation.

During the intervention, the researcher will monitor and record the KET preparation students' reactions and achievements to planned activities by means of a pre and posttest, a questionnaire, field notes and an observation sheet.

Phase 5. Reflection.

Once finished the intervention plan, the researcher will reflect critically upon the effectiveness of the use of mind mapping to improve reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

The intervention plan will be developed with a lesson plan model that contains the following stages: action, connection and affirming.



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INTERVENTION AND OBSERVATION PLAN WEEK N° 1

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: I'm shopping!

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To differentiate between present simple and present continuous as well as using phrasal verbs related to shopping by using inferring from context strategy and clear examples, through the application of bubble map, tree map, circle map and multi-flow map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Present Simple Present Continuous Key Words Belt, boots, dress, ate, jacket, jeans, shirt, shoes, 	<ul style="list-style-type: none"> Students will have a test about reading comprehension. The test will be scored using the rating scale. Additionally, questionnaire of multiple-choice questions will be applied to collect students' reactions and behaviors about mind mapping as a cognitive strategy. <p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned some lead-in activities related to reading skill in order to introduce the topic, connect prior knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>guessing from pictures and word jumble.</i> 	<ul style="list-style-type: none"> Flashcards about shopping. Word Jumble Slides.



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INTERVENTION AND OBSERVATION PLAN WEEK N° 2

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: It's my favourite sport.

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To apply comparative and superlative structures as well as identifying the main idea and categorizing supporting details like places, dates and adjectives of a reading text, through the application of multi-flow map, circle map, brace map, and bubble map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Comparatives and Superlatives. Key Words Badminton, basketball, judo, table tennis, train, interesting, incredible, 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>hangman</i> and <i>what do you see</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Using words and pictures on the screen, students analyze key vocabulary of the unit. They relate the meaning of the word with a picture and sentences. Students are given a reading passage with the title; “Young gymnast”. Before reading, the title is analyzed in order to guess the content of the text. 	<ul style="list-style-type: none"> Olympic Sports Flashcards

<p>popular, best, cooler, faster, harder, healthier.</p> <p>• Colloquial expressions Give up, it's a pity, worried about, spend time.</p>	<ul style="list-style-type: none"> • Before reading, students draw a multi-flow map. Students brainstorm ideas about Olympic Gymnastics and write their prediction about the text in one side of the map. After reading students are expected to confirm their predictions using a justification. • Students read the passage with teacher's guidance. Students are asked to highlight key words in order to build their circle maps. Students infer meanings of these words analyzing the isolated sentence in which it is place. Students share their circle maps with the rest of the class. • Students are asked to construct a bubble map in order to discover the general idea. Students summarize their maps in one sentence. After, students are presented some general ideas from which they will select the one that best expresses the core of the text. • Teacher introduces brace map as another mind map to get supporting details. Using guided reading, students are asked to extract the subtopics to start building the map. Students highlight the categories for the secondary brackets. Individually, students work with the information necessary for the brackets in the third level. Students write the main characteristics of each subtitle. Students are asked to retell the information in their maps. • Once finished the construction, students retell what the text is about by using the mind map as a model. Teacher provides feedback about the activity. <p>AFFIRMING</p> <ul style="list-style-type: none"> • Students are asked to confirm their predictions used in the multi-flow map. Student will decide if their prediction was true or not and write a justification. • Students answer some multiple-choice questions in relation with the passage. Students can easily find the information in the maps. 	<ul style="list-style-type: none"> • Young Gymnast reading passage. • Brace map template • Comparative and superlative slides. <p>• Multiple-choice questions.</p>
<p>MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet</p>		
<p>SUPPORT: Coaching and guidance from the thesis advisor.</p>		
<p>TIME: November 16th to November 20th, 2020</p>		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 3

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Sports around the World

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To differentiate between prepositions and create visual material from a text by identifying key aspects in the text in order to apply new knowledge, through the application of bubble map, tree map, circle map and multi-flow map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Prepositions IN-ON-AT Key Words Refugee, butterfly style, holiday, spell, wannabe, league, wrestling, hitting, 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>brainstorming</i>, and <i>claps & likes</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Students are presented an article about Yusra Mardini. Students are asked to apply skimming to draw their bubble maps and identify the main idea of the text. After that, teacher presents some options of possible titles from which students will 	<ul style="list-style-type: none"> Claps & Likes slides. Yusra Mardini article. Common Sports around the World reading passages.

<p>multiple-console, anime, held, seasons, practice, lacrosse, martial arts, rugby, motorsports, kabaddi, judo, kendo, hockey, instead, also.</p> <ul style="list-style-type: none"> • Colloquial expressions Take up Can't stand 	<p>have to select the appropriate one based on the information collected in their maps.</p> <ul style="list-style-type: none"> • Students pay attention to the use of the prepositions in-on-at in the reading. They are asked to infer the use of each of them using a circle map for each of the prepositions. Each preposition is place in the small circle while examples are written in the large circle. Teacher encourages students to write their own examples. Then, teacher presents some slides and explains how to use prepositions. Students play kahoot by identifying the correct preposition for each sentence in order to reinforce knowledge. • Once explained prepositions, students work on the second reading passage. Students build a tree map using the information from the text about “Common Sports around the World”. Students classify what sports are played in each country according to the reading. Then, students draw a picture that represents each sport. Students construct this map using different colors for each category. • Teacher divides the class into two groups in order to build the multi-flow map. One group is assigned to complete the left side with information about sports played in Canada, France and Chine while on the right side they will predict what sports are likely to disappear and what will become the most famous. The second group will develop the same process, but they will be in charge of Germany, Japan and United States. <p>AFFIRMING</p> <ul style="list-style-type: none"> • Students present their map in the class. Teacher uses student peer feedback. At the end of this task students are asked comment on their classmates’ work highlighting positive aspects as well as giving some suggestions. • Students match the words with the correct preposition and complete a text using them. 	<ul style="list-style-type: none"> • In-On- At slides. • Prepositions Exercise Slides.
<p>MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet</p>		
<p>SUPPORT: Coaching and guidance from the thesis advisor.</p>		
<p>TIME: November 23rd to November 27th, 2020</p>		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 4

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Have you got any homework?

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To use correctly the object pronouns and organize different types of information from texts through the application of multi-flow map, tree map and circle map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Have to Objects Pronouns Key Words Art, biology, chemistry, music, math, geography, history, board, desk, pencil 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>roll the dice, true and false contest</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Teacher presents some questions and students discuss them. These questions will help the students to predict the content of the next reading. Once finished, teacher and students draw a multi-flow map in order to compare their predictions after 	<ul style="list-style-type: none"> Interactive pictures. Flashcards about school objects.



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INTERVENTION AND OBSERVATION PLAN WEEK N° 5

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Places in a city.

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To respond easily and quickly to reading comprehension question order to create a general picture of the passage, through the application of bubble map, circle map, brace map and multi-flow map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Present Simple Past Simple Key Words Cinema, factory, hospital, mosque, post station, museum, stadium, train 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>Yes-No flashcards and what's missing.</i> <p>CONNECTION</p> <ul style="list-style-type: none"> Students brainstorm the places that they already know. Teacher introduces the new topic of the lesson by presenting incomplete pictures and having students guess 	<ul style="list-style-type: none"> Flashcards about places.



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INTERVENTION AND OBSERVATION PLAN WEEK N° 6

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Prisons Around the World.

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To complete complex graphic structures using the information provided by a text as well as formulating sentences from visual material in order to apply imperative forms, through the application of bubble map, circle map, tree map and multi-flow map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Imperatives Present Simple Key Words Traffic lights, crossing, roundabout, bridge, square, turn left, go over, turn right, 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>5 seconds summary</i>, and <i>story maker</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Students are asked to imagine some phrases that teachers and mothers are always saying (e.g. wash the dishes or open the door). Students analyze what they have in 	<ul style="list-style-type: none"> Movies cards. Imperative tense slides. “Art in prison” reading text.

<p>cross, go straight, corner.</p> <ul style="list-style-type: none"> • Colloquial Expressions Be quiet, wake up, clean up, and look at. 	<p>common. Then, teacher explains what imperatives are and how to use them to give directions.</p> <ul style="list-style-type: none"> • Students are presented a reading about “Art in prison”. Students read quickly the text. Teacher presents an empty bubble map and ask for students’ participation to complete the bubbles of the map. Students answer three general questions about the main idea of the text. • Teacher presents some key word from which students will infer the meaning using the definition given by the dictionary as ell as their own interpretation of the word. Students write both conceptualization in the circle maps about this new vocabulary. • Using the same reading, students are asked to form pairs and create a tree map with the different aspects about art inside a prison. They can add pictures and colors. The activity is checked by the teacher using oral protocols. <p>AFFIRMING</p> <ul style="list-style-type: none"> • Students read again and develop some questions that request written answers. • Students draw a multi-flow map that they will use to predict information. Teacher with students’ participation fills one side of the map with sentences about the past situation of art in a prison. Individually, students will have to write their predictions about what will happen in the future. Each of the teacher’s sentence should be in line with the student’s ideas. 	<ul style="list-style-type: none"> • Pictures related to Art. • Reading Worksheet (google forms).
<p>MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet</p>		
<p>SUPPORT: Coaching and guidance from the thesis advisor.</p>		
<p>TIME: December 7th to December 11th, 2020</p>		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 7

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Did you get the message?

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To identify grammatical structures from a short text using reading for gist as well as reading for specific details, predicting information and inferring the meaning of words through the application of circle map, multi-flow map and tree map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Past Continuous Past Simple Key Words Viral, check, upload, download, email, send, camera, case, computer 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>definitions game</i> and <i>spot the difference</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Students brainstorm social media websites that they use and what is the purpose of each one. Teacher uses some pictures to reinforce the knowledge. 	<ul style="list-style-type: none"> Spot the difference pictures Definitions slides.

<p>game, keyboard, laptop, memory card, mouse, smartphone.</p>	<ul style="list-style-type: none"> Students are present a short text about the “Impact of Internet on students’ life”. Students create a multi-flow map. Students read and underline with red color the causes about the impact of Internet and with green color the effects of Internet. Using a multi-flow template, teacher asks for students’ participation where each student is asked to fill one cause or one effect. After, students write their predictions about what could happen if the effects of Internet become more and more huge. Teacher encourages students to draw a circle map for new words. Using the same reading, students extract one different word they do not know the meaning. Students write their words in the small circles and they divide the large circle into synonyms of the word, antonyms, an example and a picture. Students read new text about “three video makers”. They build their tree maps. Students firstly find the main idea of the text and discuss with the class in order to check if it is right or wrong. They fill the principal box with the idea that all agreed. Then, students are asked to draw three categories for each subtitles and list down the key features of them. This time, students are asked to write an extra box for grammar topic of the class. In this column, students will write there all the sentences that follow the past continuous structure. <p>AFFIRMING</p> <ul style="list-style-type: none"> Students answer some multiple-choice questions about each category for their maps. Then, teacher focuses on the extra bubble and has students discover the structure of past continuous and when to use. Then, students will write their own sentences using these structures 	<ul style="list-style-type: none"> Technology pictures. Impact of Internet reading text. Three video makers reading text. Past Continuous slides. Multi-flow template. <ul style="list-style-type: none"> Multiple-choice question (kahoot platform).
<p>MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet</p>		
<p>SUPPORT: Coaching and guidance from the thesis advisor.</p>		
<p>TIME: January 4th to January 8th, 2021</p>		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 8

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: I love that film!

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To locate specific information like physical details within a text in order to totally comprehend a text, through the application of circle map, brace map and bubble map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Past Simple Could/ Couldn't Key Words Channel, followers, website, companies, quote, level, advertisements, draw, 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>tongue twisters</i> and <i>trivia questions</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Teacher introduces the grammar topic by using flashcards about abilities. Teacher explains and asks for students' participation. Students practice by using cards about I could do or I couldn't do ... when I was ... 	<ul style="list-style-type: none"> Trivia Questions Tongue twisters Could / Couldn't Slides Who is Sherlock Holmes? reading passage.

smartphone, map, ride.	<ul style="list-style-type: none"> Teacher presents some questions and students discuss them. These questions will help the students to predict the content of the next reading. Once finished, teacher and students draw a multi-flow map with their predictions on one side in order to compare their predictions after reading. Students are presented a text about Who is Sherlock Holmes. Students read the text aloud and complete a bubble map in order to get the main idea of the text. They use the bubbles to write general aspects about Sherlock Holmes using wh-question like what, when, where, why and how. Taking into account, this information, students are asked to draw how they imagine this character and restate the main idea in 10 words. Students are asked to read again. Using a brace map, they categorize the information and separate the ideas in order to develop more effectively the task. Students answer the questions from the reading task. Students will use self-correct to score their performance in this task. Students verify their previous prediction on their multi-flow maps and write a justification for each prediction. <p>AFFIRMING</p> <ul style="list-style-type: none"> Using an interactive circle map, students write the meaning of the new words analyzing the context in which they are. Students are asked to use the words in a conversation. Finally, they are given an email from which they will identify if activities from the task below belong to the present or to the past based on the modal can/could. 	<ul style="list-style-type: none"> Interactive Circle Map Assessment sheet.
MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet Data Source 3: Assessment sheet		
SUPPORT: Coaching and guidance from the thesis advisor.		
TIME: January 11 th to January 15 th , 2021		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 9

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: Holiday Activities.

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To formulate long sentences using verbs with –ing and infinitive and interpret reading passages by constructing a visual representation of words in order to integrate new knowledge to existing one, through the application of tree map, circle map and multi-flow map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
Verbs with –ing or to infinitive. <ul style="list-style-type: none"> Key Words Beach, desert, forest, island, mountain, desert, lake. 	ACTIVATION – activate prior knowledge. <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>what happen next</i> and <i>riddles</i>. CONNECTION <ul style="list-style-type: none"> Students read a text and extract only the highlighted sentences. Teacher copies the sentences board and presents a picture of each one. Students are asked to guess 	<ul style="list-style-type: none"> Pictures Riddles

<ul style="list-style-type: none"> • Colloquial expressions Take off, put on. 	<p>what each sentence is about. Teacher presents some circle maps with new vocabulary on the small circles. Students must discover their meaning from context and complete the large circle. Then, they develop some exercises using these words.</p> <ul style="list-style-type: none"> • Students read again the text and construct a tree map. Students skim the text in order to discover the main idea of each paragraph. Teacher presents some titles for the text. Students will have to select the most appropriate one for the reading. Students write the categories in each secondary box in order to obtain specific details about each person in the text. Students will list down key words for each category. With this information, students explain how they imagine each person in the text • Students relate a statement from the text with the person that makes this activity. Students must use their tree maps to complete this activity. • Then, teacher focuses on grammar and explains that there are verbs with –ing and other verbs followed by infinitive. Students give their own examples using the rules presented by the teacher. <p>AFFIRMING</p> <ul style="list-style-type: none"> • Teacher assesses students with a multi-flow map. Students are presented a short narrative text. They will analyze the actions of characters and the resulting effects of these actions and write on their maps. Students presents their conclusion to the rest of the class. 	<ul style="list-style-type: none"> • Holiday Activities reading text. • Verbs with –ing or to infinitive slides • Titles slides. • I climb Snowdon, don't you? Narrative text.
<p>MONITORING PLAN: Data Source 1: Field notes Data Source 2: Observation sheet</p>		
<p>SUPPORT: Coaching and guidance from the thesis advisor.</p>		
<p>TIME: January 18th to January 22nd, 2021</p>		

Adapted from Murry, K. G., Herrera, S. G., Miller, S. S., Fanning, C. A., Kavimandan, S. K., & Holmes, M. A. (2015). Effect of Transnational Standards on U.S. Teacher Education. FIRE: Forum for International Research in Education). Syakur. (2007). The Components of Speaking Ability



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INTERVENTION AND OBSERVATION PLAN WEEK N° 10

1. INFORMATIVE DATA

Institution: Easy English School of Languages

Teacher: Mg. Sc. Alex Fernández Cando

Teacher Candidate: Jessenia Alexandra Erique Sánchez

Participants: KET preparation

School Year: 2020-2021

Topic: It's going to be sunny.

RESEARCH PROBLEM: How does the application of mind mapping as a cognitive strategy develop reading comprehension among KET preparation students, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year?		
GOAL: By the end of the intervention plan students will be able to develop reading comprehension using mind mapping as a cognitive strategy focused on the following aspects: reading for gist, reading for specific details, inferring the meaning of words and predicting information.		
LEARNING OBJECTIVES: At the end of this lesson students will be able: <ul style="list-style-type: none"> To interpret information from a text and answer reading question through the application of different kinds of bubble map, tree map and circle map. 		
CONTENTS	INSTRUCTIONAL FOCUS	RESOURCES AVAILABLE / NEEDED
<ul style="list-style-type: none"> Structures Future with going to. Key Words Foggy, sunny, windy, snowy, cold, warm, cool, rain, sun, dust, dry, weather. 	<p>ACTIVATION – activate prior knowledge.</p> <ul style="list-style-type: none"> Before starting the lesson, the teacher planned particular activities related to reading skill. These lead-in activities aim to introduce the topic, connect existing knowledge with the new one and encourage students to participate in the class. The teacher makes use of: <i>the goose game</i>. <p>CONNECTION</p> <ul style="list-style-type: none"> Students read a text about Madagascar- when to go? and complete a bubble map in order to get the main idea of the text. Students restate the main idea in 10 words. 	<ul style="list-style-type: none"> Board games

g. TIMELINE

ACTIVITIES	2020												2021																																				
	OCTOBER				NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH				APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
PHASE I: PROJECT																																																	
Presentation of the Project			X	X	X																																												
Designation of the Project Advisor				X	X																																												
Project revision and approval			X	X	X																																												
Designation of the Thesis Advisor					X	X																																											
PHASE II: ACTION PLAN																																																	
Application of Instruments					X	X	X	X	X																																								
Act and Observe					X	X	X	X	X	X			X	X	X	X	X	X	X	X																													
PHASE III: THESIS PROCESS																																																	
Tabulation and elaboration of tables and Graphs																					X	X																											
a. Theme				X	X	X														X	X																												
b. Introduction																					X	X																											
c. Summary																					X	X																											
d. Review of the Literature									X	X											X	X																											
e. Materials and Methods																					X																												
f. Results (Interpretation and analysis)																				X	X	X	X																										
g. Discussion																					X	X																											
h. Conclusions																					X																												
i. Recommendations																					X																												
j. Bibliography and Annexes																					X	X																											
PHASE IV: REVISION AND APPROVAL																																																	
Thesis revision																									X	X	X	X	X																				
Thesis presentation																										X	X	X																					
Thesis Approval																										X	X	X																					
PHASE: V PHASE OF INCORPORATION																																																	
Presentation of documents																										X	X	X	X	X	X	X	X	X															
Private Review																																				X	X	X	X										
Corrections																										X	X	X																					
Public sustentation and incorporation																																					X	X	X	X	X	X	X	X	X	X			

h. BUDGET AND FINANCING

Budget

Expenses	Cost
Internet connection	\$165.00
Print of reports	\$80.00
Print of the project	\$175.00
Copies	\$140.00
Unforeseen	\$150.00
Print of the final report and thesis	\$150.00
TOTAL	\$860.00

Financing

The financing of the expenses derived from the present research work will be assumed by the research author.

Resources.

Human.

- The teacher candidate as a researcher.
- The thesis advisor.
- Students of KET preparation, morning session at Easy English School of Languages, in the city of Loja during the 2020-2021 school year.

Material.

- Printed materials.
- Books.

- Notebooks.
- Laptop.

Technical.

- Computers.
- Printers.
- Internet connection.

i. BIBLIOGRAPHY

- Abdelkafy, B. (2020). The Effect of a Program Based on Thinking Maps on Developing EFL Learners' Reading Comprehension Skills and their Attitudes Towards Reading. *Journal of Education – Volume (77)*, 93-156
DOI: 10.12816/EDUSOHAG. 2020. 105594.
- Alomari, A. (2019). Using Mind Mapping Technique to Improve Reading Comprehension Ability. . *Journal of Humanities and Social Science* , 53-58.
- An, S. (2013). Shema Theory in Reading. *Theory and Practice in Language Studies*, 130-134.
- Andrini, F. (2016). *UIN AR-RANIRY*. Retrieved July 4, 2020, from UIN AR-RANIRY: <http://library.ar-raniry.ac.id>
- Budhi, A., Adnan, M., & Harry, G. (2016). The Effect of Mind Mapping on EFL Students' Idea Development in Argumentative Writing across Gender Differences and Learning Styles. *DINAMIKA ILMU*.
- Buzan, T. (2005). *The Ultimate Book of Mind Maps*. London: Thorsons.
- Buzan, T., & Griffiths, C. (2014). *Mind Maps for business; using the ultimating tool to revolutionise how to work*. Great Britain: Pearson Education.

- Chan, C. (2009). *Assessment: Multiple Choice Questions*, *Assessment Resources@HKU*. Hong Kong: University of Hong Kong [http://ar.cetl.hku.hk]: .
- Corner, A. (2019, November 5). *Business 2 Community*. Retrieved from Business 2 Community: <https://www.business2community.com/infographics/the-7-types-of-mind-map-you-need-to-know-about-infographic-02255971>
- Correia, M. G., & Bleicher, R. E. (2008, September). Making Connections to Teach Reflection. *Maichigan Journal of Community Service Learning*, 41-49. Retrieved from Bookmarks.
- Creswell, J. (2012). *Educational Research*. Boston: Pearson.
- Cronquist, K., & Fiszbein, A. (2017). English Language Learning in Latin America. *The Dialogue Leadership for the Americas* .
- Davies, M. (2010). *Concept Mapping, Mind Mapping and Argument Mapping: What are the Differences and Do They Matter?* Melbourne, Australia: The University of Melbourne, Australia.
- Dewan, P. (2015). Words Versus Pictures: Leveraging the Research on Visual. *Pertnership* , 2-3.
- Dilek, C. (2017, April 29). *SSOAR Open Access Repository*. Retrieved July 14, 2020, from SSOAR Open Access Repository: [er:http://dx.doi.org/10.9761/JASSS7074](http://dx.doi.org/10.9761/JASSS7074)

- EF Education First. (2019). *EF English Proficiency Index for Schools*. EF Education First. Retrieved May 25, 2020, from <https://www.ef-danmark.dk/epi/reports/epi-s/###request-form>
- Emerson & Robert. (2020, June 25). *Research Guides*. Retrieved from PDF: <https://libguides.usc.edu/writingguide/fieldnotes>
- Erdem, A. (2017). Mind Maps as a Lifelong Learning Tool. *Universal Journal of Educational Research*, DOI: 10.13189/ujer.2017.051301 .
- European Commission. (2004, 2008). *COMMISSION OF THE EUROPEAN COMMUNITIES*. Brussels: COM.
- Ferrance, E. (2000). *Action Research*. Providence, RI 02903-4226: Northeast and Islands Regional Educational Laboratory at Brown University.
- Fiktorius, T. (2013). *ACADEMIA*. Retrieved June 5, 2020 , from ACADEMIA: https://www.academia.edu/3823093/The_use_of_mind-mapping_technique_in_the_EFL_classroom
- Gamboa, Á. M. (2017). Reading Comprehension in an English as a Foreign Language Setting . *FOLIOS*, 159-175.
- Graddol, D. (2006). *English Next*. England : British Council .
- Greenan, S. (2017, May 2). *GT the future of Knowledge*. Retrieved July 19, 2020, from Multiple Choice Questions: Benefits, Debates, and Best Practices: <https://blog.gutenberg-technology.com/en/multiple-choice-questions>
- Harmer, J. (2007). *How to teach English*. Pearsn Longman.

- Hartney, R. (2011, April). *UNAM University Namibia*. Retrieved July 12, 2020, from UNAM University Namibia: <http://repository.unam.edu.na/handle/11070/515>
- Hofland, C. (2007). *Mind Maps in EFL Classroom*. Netherlands: Fontys Hogescholen.
- Hung, D. M., & Ngan, P. V. (2015). INVESTIGATING READING STRATEGIES USED BY EFL STUDENTS. *Asian Journal of Educational Research*.
- Indrayani, S. (2014, May 12). *Institutional Repository UIN Syarif Hidayatullah Jakarta*. Retrieved July 2, 2020, from Institutional Repository UIN Syarif Hidayatullah Jakarta: <http://repository.uinjkt.ac.id/dspace/handle/123456789/24484>
- Ingemann, M. (2008). *Fortune Well*. Retrieved July 2, 2020, from Fortune Well: <http://www.fortunewell.com/tpomm.pdf>
- Johnson, A. (2014, March 26). *Shema Theory, Learning and Comprehension*. Mankato, Minnesota, The United States.
- Kasim, U., & Raisha, S. (2017). EFL Students' Reading Comprehension Problems: Linguistic and Non-Linguistic Complexities. *ENGLISH EDUCATION JOURNAL (EEJ)*, 308-321.

- Keenan, J., Betjemann, R., & Richard, O. (2008). *Reading Comprehension Tests Vary in the Skills They Assess: Differential Dependence on Decoding and Oral Comprehension*. Denver: RoutledgeTaylor & Francis Group.
- Knight, K. (2012). *Mind Mapping: Improve Memory, Concentration, Communication, Organization, Creativity, and Time Management*. CreateSpace Independent Publishing Platform.
- Kondrashova, I. (2020). The Importance of Teaching Different Types of Reading a Foreign Language to Non-Linguistic Students. *International Journal of Humanities and Natural Sciences*.
- Kusmaningrum, M. (2016). Using Mind-Mapping to improved Reading Comprehension and Writing Achievements of the 4th Semester Students of Stain Curup. *Journal of English Literacy Education*.
- Lefa, B. (2014). The Piaget Theory of Cognitive Development Implications. *Educational Psychology*.
- Lenzer, A. (2012, November 29). *Research Gate*. Retrieved July 3, 2020, from Research Gate: https://www.researchgate.net/publication/257671140_The_role_of_decorative_pictures_in_learning
- Long, L., Fook, G., & Zainom, W. (2017). A Study on the Effectiveness of Tree-Maps as Tree Visualization. *ScienceDirect*, 108-115.

- Male, H., & Aprilianing, H. (2015). Using Mind Mapping to Improve Students' Reading Comprehension at SMK BPS&K II Bekasi. *EFL Theory & Practice Voice of EED UKI*, 54-65.
- Manoharan, P. K. (2008). *Education and Personal Development* . New Delhi: S.B. Nangia for APH Published Corporation.
- Manoli, P. G. (2013). Developing Reading Strategies in Elementary EFL Classrooms. *Institutional Repository - Library & Information Centre - University of Thessaly*.
- McLeod, S. (2018). *Simply Psychology*. Retrieved from Questionnaire: Definition, Examples, Design and Types: <https://www.simplypsychology.org/questionnaires.html>
- McNamara, D. (2007). *Reading Compehension Strategies*. New York : Lwrence Erlbaum Associates.
- Mikelecky, B. (2008). *Teaching Reading in a Second Laguage*. Pearson Education Inc.
- Ministerio de Educación. (2016). *Ecuadorian Curriculum in English as a Foreign Language*. Quito.
- Murry, K., Herrera, S., Miller, S., Fanning, C., & Kavimandan, S. (2015). Effect of Transnational Standards on U.S. Teacher. *FIRE: Forum for International Research in Educacion*, 41-63.

- Namjoo, A., & Amir, M. (2013). A New Look at Comprehension in EFL/ESL Reading Classes. *Procedia - Social and Behavioral Sciences*, 3749 - 3753.
- Nunan, D. (2015). *Teaching English to Speakers of Other Languages* . New York: Routledge Taylor & Francis .
- Olmo, L. (2017, July 6). *TICbeat*. Retrieved July 6, 2020, from TICbeat: <https://www.ticbeat.com/educacion/aplicaciones-y-plataformas-para-crear-mapas-mentales/>
- Olurinola, O., & Tayo, O. (2015). Colour in Learning: It's Effect on the Retetion Rate of Graduate Students. *Journal of Educationand Practice*, 2-3. Retrieved from International Knowledge Sharing Platform .
- Panatda, S. (2010, April 10). *Semantic Scholar*. Retrieved June 10, 2020, from Semantic Scholar: <https://www.semanticscholar.org/paper/Using-Mind-Mapping-Technique-to-Improve-Reading-of-Siriphanich/7e03cc1057fc1c3b007d0d6b943f8fddedfeb9b60>
- Piaget, J. (1952). *The Origns of Intelligence in Children*. New York: Interational Universities Press.
- Rajenran, K., Selvaraj, A., Rajaguru, S., & Kalaiselvi, G. (2017). Mindmaps – The Visual Tool Promotes Active Learning of Science Concepts. *Intternattional Journal of Informattive & Futturisttic Research*, 6238-6248.

- Rea-Dickins, P., & Germaine, K. (2011). *Evaluation*. New York: Oxford University Press.
- Roundy, L., & Dahahy, K. (2016, March 28). *Study.com*. Retrieved July 20, 2020, from Study.com: <https://study.com/academy/lesson/reading-comprehension-literal-inferential-evaluative.html>.
- SAGE . (2019). Analyzing Verbal Protocols: Thinking Aloud During Reading in Cognitive and Educational Psychology. *SAGE researchmethods dataset*.
- Seyedi, G. (2012). The Think-aloud Method in EFL Reading Comprehension. *International Journal of Scientific and Engineering Research* .
- Smith, F. (2012). *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read*. New York: Routledge.
- Suryani, L. (2015). *Improving Student's reading Skills by using the Mind Map Technique at SMA N1 Kretek in the Academic Year 2013-2014*.
- Villanueva de Debat, E. (2006). Applying Current Approaches to the Teaching of Reading. *English Teaching Forum* .
- Wirda, Hanafie, S., & Wahyudin. (2014). Using Maind MApping Technique to improve Reading Comprehension of the Second Year Students. *e-Journal of English Language Teaching Society (ELTS)* .
- Yazar, U. (2013). Teaching Reading to EFL students to MAke Them Better Readers. *Macrothink Institute Jorunal of Studies in Education*.

Yukselir, C. (2014). An Investigation into the reading strategy use of EFL prep-class students. *Procedia Social and Behavioral Science*, 65-72.

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