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**Using Mind Mapping to improve understanding and retention of vocabulary
acquisition for the EFL's learners.**

**Case Study: 3rd Year Secondary Pupils at Yazouren Mohamed School in
Azeffoun, Tizi-ouzou**

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Dedication

To my beloved parents

To my family

To every person who supported, encouraged and helped me during this period

Faiza Bouckhakour

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Abstract

This study is about using mind mapping as a technique to enhance EFL (English as a Foreign Language) learners' vocabulary acquisition. The study has three main objectives, including introducing the concept of mind mapping, analyzing the connection between mind mapping and understanding and memorizing skills improvement, and determining the effectiveness of mind mapping as a learning guide for vocabulary acquisition. The population for the study was 43 pupils in their 3rd year at Yazouren Mohamed in Azeffoun (Tizi-ouzou), and the data collection and analysis used a mixed methods approach. The study found a significant relationship between the use of mind mapping and improved understanding and memorization skills during vocabulary learning. The authors conclude that the use of mind mapping in learning English vocabulary can help learners achieve a deeper level of learning.

Key terms: Mind mapping, vocabulary acquisition, memorizing skill, understanding skill.

List of abbreviations

EFL: English as a Foreign Language

Q: Question

H: Hypothesis

SPSS: Statistical Package for Social Sciences

QCA: Qualitative Content Analysis

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General introduction

Introduction

In today's world, foreign language learners are required to acquire a vast amount of information and comprehend its various meanings in different contexts. The main objective of researchers in the field of language teaching and learning is to identify effective strategies that can enhance students' learning process, enabling them to achieve a deeper understanding and use their critical thinking skills to evaluate reliable information as much as possible. For example, Constructivist approaches to teaching and learning are based on the premise that students possess valuable prior knowledge, and their teachers assist them in developing this knowledge through active and personally meaningful learning activities (Piaget, 1972; Vygotsky, 1978; as cited in Melrose, 2013).

1. Statement of the problem

First of all, numerous scholars in the field of language teaching and learning advocate for the use of innovative learn strategies, both for individual learning and in the classroom. One of these methods includes visual aids that can enhance the learning process. One such tool that has demonstrated its effectiveness in learning and teaching is mind mapping. Several studies have been conducted on this new learning strategy. For example, Alsaleem (2019) conducted research on "Mind Maps Aid EFL Students' Vocabulary Building." According to her, mind mapping is a visual aid that uses pictures, arrows, and colors to facilitate access to knowledge and memory retrieval. She found that young students benefit from having a single place to register mind maps and the ability to retrieve information from them. The experimental study revealed that mind mapping not only motivates students to learn new things but also encourages them to use new vocabulary regularly, fostering a desire to expand their knowledge.

Another study on the effectiveness of mind mapping in the classroom was conducted by Othman (2018) at UNRWA schools, titled "The Effectiveness of Using Mind Mapping on the 3rd Graders' Vocabulary Learning and Improving their Visual Thinking." The research aimed to investigate the efficacy of mind mapping as a learning guide in the classroom. The main findings of the experiment revealed that mind mapping can be integrated into curricula and teaching materials to enhance various aspects of English. It can also promote visual thinking skills and introduce new methods for teaching vocabulary. However, previous studies on mind mapping have not focused specifically on the correlation between this method and the understanding and memorizing skills in the EFL classroom, particularly in Algerian secondary schools. In this regard, third-year students can determine the effectiveness of mind mapping in improving their vocabulary acquisition and how it impacts their understanding and memorizing skills.

2. Aims and significance of the study

The present study attempts to find the empirical evidence of the correlation between mind mapping technique and EFL learners' understanding and memorizing skills and vocabulary acquisition at the Algerian students of 3rd secondary school. Besides, the study has three main objectives that highlight the main purpose of this investigation: First, it introduced the concept of mind mapping strategy. Second, it analyzes the connection between mind map and understanding and memorizing skills improvement. And finally, it determines the efficacy of mind map as a learning guide for vocabulary acquisition.

3. Research question and hypothesis

This research aims to raise an issue about the effectiveness of using the mind mapping study technique to improve EFL learners' understanding and memorizing skills while the

vocabulary acquisition process, whereas the study tends to raise the following research questions:

1. Whether students understand the vocabulary acquired from the use of mind mapping or not?
2. Can mind map be considered as a memorizing aid for the EFL students?

In order to answer this research question, we have putted forward these hypotheses:

1. YES, students can understand the vocabulary acquired from mind mapping
2. NO, they cannot understand the vocabulary acquired from mind map.
3. Mind map is a memorizing helper.

4. Research technique and methodology

In this investigation we have adopted the mixed method approach that contains both of qualitative and quantitative methods that are used to collect variable data and analyze them. The former is used for gathering data from the textbook analysis and the open-ended questions that will be interpreted through the Discourse analysis (DA), while the later is used for the obtained results from the close-ended questions of the questionnaire to be analyzed by The Statistical Package for the Social Sciences (SPSS) to be displayed into statistical data.

Concerning data collection tools, textbook analysis and the online questionnaire are used as an appropriate tool to achieve more reliable and comprehensive view: the textbook “New prospects” is used a corpus analysis in order to examine the implication of mind mapping in the educational syllabus for the 3rd secondary stream, whereas about eight examples are taken to be analyzed in the discussion chapter. Moreover, Students’ online questionnaire aims to explore the usefulness of mind mapping technique in the 3rd year secondary school students around Algeria (published in a facebook group for the baccalaureate students, it is consists from 15 questions that are divided into three section which each one of them investigate a particular aim: the first rubric is about participants’

general information, whether the second one it explores the effect of mind mapping on the understanding skill, and the last one it investigate the relation between mind mapping and memorizing skill.

5. Structure of the study:

The dissertation follows the traditional simple framework of the master dissertation: first, it deals with the general introduction that presents the study as whole. Then, it followed by chapter one (01) of the review the literature that introduces the theoretical framework under which this study will be conducted. Moreover, chapter two (02) is devoted to the research design which describes the procedure used for the collection and analysis of data. Besides, chapter three (03) that interprets the findings into statistical and numerical data which puts up with chapter four (04) that discusses and examines the obtained results according to the selected theoretical framework. And finally, we conclude with a general conclusion attempts to answer the research questions and check the validity of the research hypotheses, and hopefully suggest some recommendations for further research in the same area of study.

Chapter one
Review of literature

Introduction

In the light of the study's objectives to explore the use of mind maps to improve learners' understanding and memorizing of vocabulary learning skills. We have divided this chapter into two main parts; the first one is about mind mapping, its applications in language use, and its effects on cognitive skills (thinking, understanding and memorizing); while the second part is about vocabulary acquisition, its meaning, its relationship with mind mapping and its implications in EFL classes. At the end, we end the chapter with a conclusion summarizing the entire literature review.

1. Mind Mapping

1.1. Definition

During the 1970s, Tony Buzan, a British author, popularized the concept of modern mind mapping, which he developed through his books and speeches. Various researchers have also studied mind mapping as a learning style in the field of language teaching and learning. According to Buzan, a mind map is a tool that organizes and stores information using keywords, images, and connections to encourage creative thinking. Mind mapping is a brain activity that can be done through hand drawing or by using applications to visualize and store information for a long time. It involves the use of imagination and associations through visual enhancements, such as images, symbols, and colors, to clearly present ideas and make sense of them.

Additionally, mind mapping is a technique for expressing information through visualization, according to Thomas (2008). A mind map is a reflection of personal ideas and thoughts and cannot be replicated identically by two people, as noted by Rustler (2012). It is a personal chart to organize ideas and thoughts, as described by Taylor (2009), and is organized

by ideas, words, or other related elements, such as colors, symbols, and branches, arranged around the main concept, as noted by Krasnic (2012). Mind maps are also known by other names, such as visual mapping, flowchart, visual thinking, and spider diagram, and they help distinguish ideas with colors, symbols, or images that trigger creativity in writing information. Additionally, mind mapping can help teachers combine words with visual representations to build an intuitive form around the central concept.

1.2. Making a Mind Map

Mind maps can be created either manually or using software, and when making one, it is important to incorporate visual elements such as the main topic's central image, colors, branches, images, and keywords. Buzan suggests that mind mapping can be made easier by connecting related ideas and adding visual elements like color, images, spatial arrangement, and visual rhythm. Following the steps outlined by Barton et al. (2017: 45-46), a simple mind map can be created by starting with a central subject, adding branches to highlight main ideas and sub-branches for sub-ideas, including one keyword per branch, color-coding branches to categorize and analyze information quickly, and using images or symbols to convey more information than lengthy sentences.

1.3. Characteristics of a Mind Map

The utilization of visual elements such as pictures, colors, and keywords in mind mapping makes it a highly effective method for illustrating a particular concept. By creating associations and simplifying complex information, the ideas can be presented in a clear and organized manner, making them easier to remember.

1. Using Lines

Clearly, a mind map has nonlinear structure, especially when it uses lines to link the different ideas to the central concept. According to Ingemann (2013: 26) “lines are the main

part in mind mapping; they connect the ideas together to create the flexible structure of the map”. In addition, mind map grows like a tree form; every branch can divide as often as it is possible (Rustler, 2012: 32). Moreover, because there are no straight lines in nature; curved lines are more dynamic. More importantly, Rissner (2003: 10) adds that lines are essential for creating mind maps; where all information is categorized and structured to see how the elements are connected. In other words, they connect the main concept and related ideas; they make the link between different information as clear as possible to show the connection between the other elements (keywords, pictures, symbols) to build a structured plan.

2. Using Images

When creating a mind map, it is important to use pictures, they help to strengthen learners’ imagination. Additionally, Buzan states that key image is the core of the mind map since they are easy to be remembered and stored in the mind (2006: 141). In other meaning, images help learners to learn new information; it presents interesting and relevant ideas that can be easily stored in memory. In addition, Images have a living character; they can be described as outstanding and memorable, they use the imagination skills. This fact is more powerful to attract attention more than the content (Rissner, 2003: 9). In other meaning, they help to understand new words and their meaning by stimulating students' attention. Then, they strengthen students' analytical thinking to deduce the hidden meaning in the picture.

3. Using Colors

Mind maps emphasize the use of many colors to encourage creativity and memorization. Buzan explains that the use of colors helps to manage information in the mind map more quickly to increase the number and volume of creative ideas (2018). This means that colors are readily available in the brain, so that students could combine what they know with what they do. Additionally, in many situations, it is possible to associate a color with a particular meaning which it stands for. Thus, when you read the mind map, it will be easy to

distinguish the various aspects of a theme by the colors used (Rustler, 2012: 35). Therefore, a colored mind map is much easier to understand; this can help learners to feel comfortable and enjoyable at the same time, as it is not confusing to classify certain information on a mind map to facilitate the steps to identify key ideas.

4. Using Symbols

Symbols can be added on the mind map, they lead to organize thoughts and ideas based on personal experience and feelings. According to Rhodes: “one of the most basic ways to be creative when making a mind map is to use the available symbols, since they allow to get around the usual way of thinking by forcing the brain to think about the content in terms of shapes” (2013). This means that symbols help learners to manage their mind map easily, for example, the use of circles, stars...etc, to signify the relationships between different things even though they are in different categories. Hence, they simplify the acts of thinking and understanding. Thus, this visual cue can help learners to associate some ideas of particular symbols; as a result, it can help them to recall more information later.

5. Using Keywords

A keyword is a word that can be used instead of a sentence. It is used to represent the main ideas on the mind map to make the main concept stronger and memorable. Hillar states that keywords are relevant factors in telling the reader what the map is trying to say, a single word is much easier to remember and store in memory than a sentence or phrase (2012). In addition, using keywords alone ensures that the mind map remains clear and uncluttered information can be packed into it (Rustler, 2012). Ideally, only unique keywords should be used instead of phrases to save more typing time. Each idea is summarized in one word to give readers more clarity. Hence, when making a mind map, it is important to do not write whole sentences, because the essential information can be fully associated from one single keyword (Rissner, 2003: 10). Thus, a single word is worth more than a long sentence since it

eases reading the mind map, it helps students organize ideas, better understand concepts and remember them when necessary.

6. Using Associations

According to Ingemann “associations automatically connect the different elements together to create a general understanding of the concept” (2013: 10). In other words, students are likely to use associations when they come up with new ideas and then they learn something new about a particular subject. These associations can be made by using lines, for example, to connect the ideas to the main topic. In addition, learners add their ideas word by word to their mind map and then they repeatedly add all the associations that come to their mind which they are already in their right place to generate the whole structure (Rissner, 2003: 11). This means that, learners need to bring new concepts or ideas to mind in order to construct the meaning of new words, to establish relationships between their previous and latest knowledge. As far, it is possible to assign a specific idea to a meaningful color, picture or symbol in order to make the mind map beautiful, artistic, colorful, imaginative and lively.

1.4. Mind Map Applications

The Mind mapping technique is applied in various ways; it makes the learning process easy and enjoyable to enhance the human performance, it helps to determine students’ specific difficulties in terms of thinking and analyzing deepening their thought, it simultaneously offers solutions to solve these difficulties. It can be used for taking notes, brainstorming a topic, planning and organizing ideas or summarizing which are designed as follows:

1. Note Taking

It is an activity of recording basic information obtained from oral or written sources. It turns out to be a pleasant technique when it is used in the form of a mind map. Besides, it gives students an opportunity to access their knowledge during their lecture sessions to review

their notes by using visualization. For instance, Taylor explains that “mind mapping speeds up the note-taking process, because drawing ideas in the form of keywords or symbols is a faster process than painstakingly writing rows of notes” (2009). This means that students can follow the traditional mind mapping framework by placing the main concept at the center and recording only the most important information. Thus, this mind mapping daily practice will help them write quickly, save time, and develop some of their language skills such as listening, writing, and reading.

2. Summarizing

Unlike the traditional summarizing method, the student summarizes the individual structure of knowledge in a clear and visual form. More specifically, mind maps are used to summarize the content of any given text quickly. According to Hillar: “mind mapping is a great cognitive tool that can be used to organize and manage information while summarizing information that is interrelated, where it provides relevant data to write the relevant article without writing it” (2012: 6). This means that using mind maps to summarize specific written text follows these steps: students are free to use drawings, symbols, keywords, lines, and colors to freely associate their ideas, but it is important to include only the most important ideas on the map. Thus, it helps to create a clear visual format that summarizes all information.

3. Presentation

Another use for mind mapping is for the teacher or students to present their work in the classroom. Taylor finds that preparing a simple presentation by using mind mapping is easy and allows the audience to follow the entire speech (2009). Then, Ingemann adds that “If you want to easily illustrate a complex idea, mind mapping helps” (2013: 11). This means that the use of mind maps in a presentation appears to be effective in engaging with a variety of topics. This application leads to the construct an appropriate organization of information that

will provide a perfect illustration of the topic. As a result, it leads the audience to concentrate on the mind map during the session. At the same time; it allows them to analyze the presented ideas based on their personal analytical thinking, by linking their previous knowledge with the latest information to gain a better understanding of the topic they are dealing with.

4. Learning aid

It is ensured that mind mapping is one of the effective tools to help students learn. For instance, it is one of the newest, world-famous learning styles. According to Buzan “mind maps are ideal for small groups who want to increase their learning efficiency. Using well-structured mind map notes, the content of the entire manual can be communicated to group members within one hour for reading, understanding and sharing” (2006: 185). Regarding the meaning, this tool has proven to be a great technique to achieve and expand the general knowledge of a given topic. In addition, it allows students to use their personal thinking skills to give them more energy to enjoy the experience positively, which helps them come out of their learning anxiety.

1.5. Mind mapping and human brain

Various studies have found a significant correlation between the human brain and mind mapping. As per Rissner (2003: 9), each hemisphere of the brain dominates a specific skillset, with the right side dealing with creative skills like color, rhythm, spatial reasoning, and imagination, and the left side being responsible for logical skills such as numbers, words, and sequences. In the creation of a mind map, both sides of the brain work together on the artistic aspect, leading to better thinking, recall, and memory. This technique mimics the way the brain operates, boosting mental abilities by stimulating both sides of the brain simultaneously. By using associations, mind mapping enhances cognitive functions such as thinking, understanding, and memory, making it an effective tool for maximizing the brain's potential.

1. Improving the Creative thinking

Thinking is the bedrock of learning and discovery, and mind mapping is a means to break free from conventional norms and think originally. It promotes free associations, allowing the brain to quickly generate an unlimited number of ideas that can be organized and analyzed in real time. As per Buzan (2005: 194), creativity is crucial to personal mental success, and the brain is inherently creative, needing only the right environment to unleash its full potential for original ideas and retaining necessary information. Mind mapping is thus seen as a healthy exercise that encourages learners to explore new ideas from a technical standpoint, stimulating both sides of the brain simultaneously and enabling them to approach concepts from different dimensions, such as by associating ideas with visual elements like colors, images, and symbols. Furthermore, mind mapping is a creative tool that helps organize ideas and present them in a clear and easily understandable classification (Rhodes, 2013), with its flexible structure encouraging novel ways of thinking about concepts to achieve a unique and personal organization of information (Krasnic, 2012). This makes mind mapping a natural reflection of the brain's working, improving various thinking skills and human intelligence. By activating both sides of the brain, mind mapping aids in categorizing information for use in a mind map, thereby promoting the immediate and organized flow of ideas.

2. Improving the Understanding skill

In essence, comprehension refers to how learners interpret and make sense of the information they receive. By presenting written material in a structured and systematic way, learners can improve their absorption of new information and gain a contextual understanding of the topic at hand. Mind mapping is techniques that can enhance this ability by helping the brain create meaningful connections and associations between ideas. As King and Gomes

(2014:74) point out, understanding is a dynamic and contextual activity that involves the replication of information between minds, tools, and representations. Mind mapping supports this process by enabling learners to create mental images and concentrate on the relationships between different ideas. By combining information from different concepts, mind mapping can also provide a big-picture view of the subject matter and deepen learners' comprehension (Krasnic, 2012). This technique not only sparks students' interest in science, but also encourages them to think creatively and gain a better understanding of the content of their knowledge (Wang, 2019: 992). For example, when creating a mind map about joy, students might place an image that relates to their feelings at the center and connect it to different branches and sub-branches with lines and colors that represent specific feelings. This practice helps learners develop personal habits of creative thinking, improve their concentration, and better understand the relationships between multiple events, objects, and ideas in their general knowledge.

3. Improving the Memorizing skill

The primary goal of mind mapping is to aid memorization. By using visualization, mind mapping helps to make information more memorable. Buzan (2006: 118) suggests that imagination and associations are crucial for effective mind mapping. Imagination enhances the brain's ability to remember by stimulating sensations that facilitate learning new things, while associations allow for the combination of information with other elements like symbols, colors, and patterns.

a. Imagination: this is the most limitless ability of human intelligence; the more it is used, the more it enhances the ability to remember. This is because, it stimulates sensations that allow the brain to open up new experiences and encourage learning new things (Buzan, 2006).

b. Association: One of the best ways to remember an object is to think about it into images. Because, when associate an idea with something familiar; it works to combine information with other element like symbols, colors and patterns (Buzan, 2006).

It's worth noting that mind mapping not only serves as an effective memory aid but also helps to boost human intelligence by promoting thinking and analysis. By mentally organizing and classifying information into categories, the mind can better analyze and interpret it, thus improving recall. Mind mapping utilizes visualization, which stimulates the brain's natural memory devices to aid in retrieval when needed.

The following structure summarizes the mind mapping applications; it is illustrated by Tony Buzan in his book *Buzan Study Skills Handbook: The Shortcut to Success in Your Studies with Mind Mapping, Speed Reading and Winning Memory Techniques (Mind Set)*. (2006, p. 135).

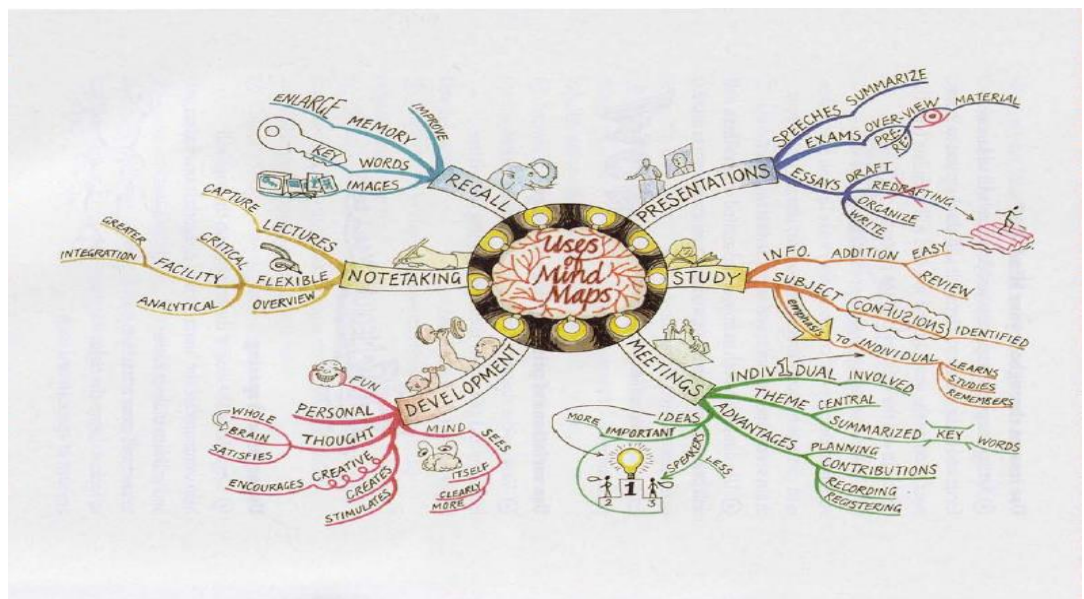


Figure 01: Mind mapping applications, Buzan (2006: 135).

2. Vocabulary

2.1. Definition

It is known that vocabulary is the main aspect in the teaching and learning of languages for conveying meaning in written or spoken language. This learning process can be challenging for many learners who need to equip themselves with good knowledge of vocabulary in order to learn any language. According to Hornby (1974: 959): “Vocabulary knowledge is the total number of words that make up the structure of a language, the range of words known to the person and containing the word list with a definition or translation” (quoted by Putra, 2011: 182). Likewise, Cambridge Advanced Learner's Online Dictionary (2020) defines a vocabulary as all the words a person knows and uses, vocabulary is group of words that have form and meaning in any language and are known to a specific person. From the above definitions, we deduce that a vocabulary is a set of group words that make up a language. They are used both in writing and orally and serve as a useful and essential tool for communicating and expressing thoughts and feelings.

Moreover, Laufer and Nation (308: 1995) have noted that “Vocabulary is not usually learned for its own sake as an important aim in language use, but is to bring learners' vocabulary knowledge into its communicative use whereas the learners are in a situation which there is demanded upon them to make use of what they know in order to expect and see relationship between direct measures of learners' vocabulary size and the richness of vocabulary in their language production”. Regarding meaning, an essential point in teaching and learning vocabulary is the selection of words to be introduced to students that should be matched with their characteristics to clearly build their knowledge as they are still in the process of acquiring and organizing the vocabulary of the language.

2.2. Types of vocabulary

To learn new words, students need to know how to use contextual clues and guess the meaning of the words depending on the specific situation. For this reason, vocabulary has been classified into two main types. According to Nation (2001, 39-40): “Corson (1995: 44-45) uses the terms “active and passive” to refer to productive and receptive dictionaries: words that are only partially known, words not available for use, and words that are avoided during active use”. This means that knowledge of vocabulary can be divided into two types: active (productive) and passive (receptive), both of which are strongly based on the idea of use and not just on degrees of knowledge:

1. Active vocabulary

The first type is called productive vocabulary; Webb (2009) explained that it refers to words that can be understood and used in speech and writing, it can be treated as an active process when learners produce words to express their ideas to others (cited by Alqahtani, 2015: 25). This means that active vocabulary includes all words that students can use orally and in writing. It is called productive because it affects the active side of the language; uses the right words in their respective positions in the sentence, uses the right times and order of words. It is also used in everyday speech that is learned through communication with others.

2. Passive vocabulary

The second type is receptive vocabulary, Webb (2009) claims that it refers to words that students can understand, but they can only be used for reading text, not for speaking and writing (cited by Alqahtani, 2015: 25). In other words, passive vocabulary includes words and their meanings that can be understood while listening or reading, but not used in writing and speaking. Moreover, it is called receptive because it is not used in everyday conversation, but can only be used to recognize and understand the context or meanings of concepts.

2.3. The importance of vocabulary in language use

Researchers in the field of language teaching and learning determine that learning vocabulary is crucial to learn any language, because it is difficult to listen, speak, read or write without possessing vocabulary knowledge:

a. Webb and Chang observed that vocabulary is essential for communication; the lack of vocabulary limit understanding and communication abilities (2012: 43). This means that vocabulary allows individuals to communicate effectively; it helps them to decide on strategies that allow them to expand the range of words, and develop their ability to remember and recall words.

b. Hyso and Tabaku added that “knowledge of vocabulary is important to understand the written materials” (2011). This means, it is impossible to read and understand written texts without sufficient vocabulary knowledge.

c. Vocabulary affects language skills: listening, speaking, reading and writing. It makes the appropriate relationship between the acquisition of words and their position in a sentence excellent, both spoken and written.

d. Othman (2010: 28) adds an important point on which Vocabulary is important for self-esteem, because every time someone speaks, people judge words and phrases, not language. This means that it is important to master the language (written / oral) as people judge what they have read or will only hear from others.

2.4. Learners ' difficulties in vocabulary learning

Usually, the first thing we learn in English is words and their meanings; because the more we know, the better we will be able to understand what we hear and read. But before we can say that we are able to use these words as a native speaker does, it is important to know how to spell them, how to pronounce them, how it can change from a noun to a verb or

adjective, and other rules grammar. As mentioned earlier, Williams (2013: 1) asserted that “vocabulary itself is multifaceted and should be considered as part of the larger language structure and use, involving spelling, pronunciation, and grammatical behavior”. This means that learning English as a foreign language is a difficult task for many EFL learners to reach a certain level in the language; they face obstacles while learning English. Hence, Pronunciation, vocabulary learning and grammar rules are the main difficulties in the language learning process:

a- Pronunciation: the words are difficult to learn and difficult to pronounce.

b- Knowledge of vocabulary: the combination of words with their meanings that exist and are used in a certain language.

c- Grammar rules: they provide students with explanations about the different grammatical structures such as tenses, sentence types or phrases ... etc.

Moreover, Nation (2002) declares that “the main problem with teaching vocabulary is that you can only deal with few words at a time and a small fraction of what is needed to know a word; this restriction applies to casual learning by listening or reading, but it is much easier to organize a large amount of independent listening and reading”. Meanwhile, there are many words in English, but a limited number of them are learned at school, because lessons are not repeated periodically. In the context of English language learning, vocabulary knowledge is a basic concept in education, but it is already a serious problem for many EFL students with limited vocabulary. Thus, it can cause problems that make it difficult to express learners’ personal thoughts when it matters. They will not be able to speak, write or translate anything in English that could lead to a failure in their studies. For this reason, educators and scholars emphasize that English should be used and practiced frequently in order to emerge in real convertible situations; it should include actual verbal responses practiced in the target

language to improve their language skills. In addition, learning vocabulary requires frequent practice to enrich learners' knowledge. It is important to organize these words into categories in order to distinguish their positions in the sentence and show their relationship to the context.

2.5. Mind mapping and vocabulary acquisition

To improve language teaching and learning, there is a growing body of research supporting the use of innovative methods such as mind mapping. Mind mapping is particularly effective in helping students learn and remember vocabulary through visualization, which combines new concepts with their prior knowledge. Illustrations can be incorporated into mind maps, making them active tools for giving meaning to unfamiliar words. According to King and Gomez (2014: 77), mind map activities are designed based on a given level of English proficiency, which guides students to process, understand, create, or use graphical representations of the language in required content areas. For English as foreign language (EFL) learners, building vocabulary is crucial. Wang and Dostel (2018) have emphasized that the use of mind mapping to review old and new items can help expand their vocabulary. Mind mapping activities can be designed to suit the learners' language level and can start with simple topics and ideas, which gradually advance to more complex topics that require a greater vocabulary range. It is beneficial to group words thematically to cover everyday topics comprehensively (Hofland, 2007: 44). Furthermore, the visual stimulation of mind mapping contributes to enhancing vocabulary learning by sparking students' creativity and imagination. This technique can boost their problem-solving skills, understanding, and memorization of the vocabulary. The positive effects of mind mapping can encourage learners to accumulate knowledge and improve their confidence in using language effectively.

2.6. Mind mapping activity in the EFL classroom

The field of visual methods is wide. Many researchers have studied the use of mind maps in the classroom as a method of learning and teaching. Because it can help students gather knowledge at a specific point in the session and create unexpected participation and discussion among students. Most importantly, teachers need to create a good classroom environment where students are free to express their own thoughts and discover their language skills. Depending on the given theory by Gomez & King, it is possible to use mind mapping outside and inside the classroom and the significant benefits, it is evident that mind mapping strategies deliver different goals in the academic and social field (2014: 76). Unlike traditional methods of teaching, it is possible to include mind maps in the classroom; teachers should be creative and be able to master school materials. Thus, it leads them to attract students' interest and their understanding during the session. Meanwhile, Barton et al (2017) add that "the interest in mind mapping is not limited; it helps to quickly identify students' specific difficulties in thinking and analyzing deepening their thinking, and at the same time proposing solutions to these difficulties. In addition, groups or individual learners can benefit from teacher guidance on how to use mind mapping aids". In doing so, it will encourage them to think from other dimensions that allow their brain to stimulate their creativity through visualization. In this case, students can easily understand how to organize their work to get more information on the topic. To this end, the mind mapping technique can increase the vocabulary of the students' second language. As well as, it is used as a powerful tool to help you learn new English vocabulary through visualization that simplifies learning in the EFL class.

Overall, with this technique, students can learn vocabulary immediately. EFL teachers should focus on using mind maps from the very beginning stage to make lessons as easy as possible. They can include it in the timetable. Meanwhile, mind mapping encourages students

to be creative and strengthens their language skills. Moreover, it gives them the opportunity to use their imaginations on various real-life concepts such as family, society, cultural celebrations ... etc, even if some students are quiet during the lessons, they will try to participate as others. This can help them increase their knowledge and understand the importance of acquiring vocabulary early in the class by equipping them with good learning tools.

Conclusion

In this chapter, we focused on the theoretical framework that covers some of the previous research on mind mapping, vocabulary acquisition, and their relationships. For instance, it is divided into two parts: The first part deals with the definition of mind mapping, its uses, and how it affects the three cognitive skills (understanding, remembering, and thinking). While the second part deals with the general vocabulary learning and its importance in language use, then the effectiveness of mind mapping in vocabulary acquisition and its implications for teaching English as a foreign language is discussed. Consequently, this method has a great influence on language development as it helps learners to learn and gain more information about a specific concept/topic. Meanwhile, it can also be used as a classroom study aid or a task to assess students' vocabulary knowledge as it helps prepare for tests and exams.

Chapter two
Research design and methodology

Introduction

In this chapter, the methodology of the study is explained. The procedures for collecting and analyzing data are the key tools used to investigate and answer the research questions that were introduced earlier. Additionally, the research design includes the specific research methods and procedures utilized for data collection, which in this case, are textbook analysis and an online questionnaire. The textbook analysis was performed using eight examples from the English language textbook "New Prospects" for third-year secondary school students. The online questionnaire was designed for third-year students at Yazouren Mohamed High School in Azeffoun, Tizi ousou. To interpret the collected data, the Statistical Package for the Social Sciences (SPSS) was used for quantitative data, while Qualitative Content Analysis (QCA) was used for qualitative data.

1. Context of Investigation and Sample Population

To ensure credibility in reporting the findings, this investigation has adopted a mixed methods approach for data collection and analysis. The use of both quantitative and qualitative approaches allows for a better understanding of the phenomena being studied. In order to achieve the objectives of the study, data was gathered through textbook analysis and an online questionnaire. The quantitative data was collected through the online questionnaire and was analyzed using statistical methods such as percentages. On the other hand, the qualitative data was gathered from the English language textbook "New Prospects."

The population for this study consisted of forty-three (43) third-year secondary school students at Yazouren Mohamed High School in Azeffoun, Tizi ousou during the academic year 2019/2020. Third-year students were chosen because mind map schemes are only presented in the English textbook for this level. Additionally, since these students are preparing for their baccalaureate exam, they were expected to have a better understanding of

the mind mapping method and its use in vocabulary acquisition, which would result in more valid results related to understanding and memorizing skills.

2. Data collection

2.1. Textbook description for 3rd year secondary school level

In this section, we have chosen the Algerian textbook of English language “*New prospects*” of the 3rd year secondary school to be analyzed. We have extracted eight (08) examples from the textbook which the mind maps schemes are presented in different themes (see appendix A).

Textbook’s description: “*New Prospects*” textbook is designed for the 3rd secondary school students to teach and learn the English language that is recommended officially by the Ministry of National Education in 2006. Its main principles rest on communicative language teaching, which engages learners in real and meaningful communication; this means that the learners are given opportunities to promote their leaning process through in order to develop their language skills. This textbook is divided into six (06) units entitled as follow: “Exploring the past”, “Ill-gotten gains never prosper”, “School: different and alike”, “Safety first”, “Are we alone” and finally “We are a family”. Each of these units contains language outcomes (listen and consider, read and consider, take a break) and skills and strategies outcomes that include four main rubrics (research and reports; Listening and speaking; reading and writing; project outcomes), each of the previous mentioned rubrics deal with a particular subject that is related to the real life situation.

2.2. Pupils’ Online Questionnaire

The questionnaire is a collection instrument to collect the most accurate data in an efficient way. According to Oxford Learners’ dictionaries (2020) “a questionnaire is a set of questions that can be answered by a number of people so that information can be collected

from the answers”, this means that is a significant tool to gather the appropriate data that can provide a general view of the investigation.

For this reason, we have designed an online questionnaire that is addressed to 3rd year secondary school students to survey their views about the use of mind mapping in their studies. The questionnaire is designed online to a group of pupils at Yazouren Mohamed high school in Azeffoun, Tizi ousou. About 43 students have answered our questionnaire. For instance, it is made up of 14 questions that are divided into three 03 main sections: the first one is about general information about the participants; the second part is about understanding skill, while the third one is about the memorization skill. For the first section, we have asked students a set of questions about their general information such as: gender, age, their English level, and their difficulties in learning English. However, in the second section, we have dealt with mind mapping method as visual guide to understand the acquired words through the visual components (colors, images, symbol...etc). While in the third section, we have tackled the mind mapping as a creative memorizing aid instead of rote memorization. (Appendix B)

3. Procedures of the data analysis

3.1. The Statistical Package for the Social Sciences (SPSS)

SPSS is a computer program that analyzes the data and presents them into statistical findings of quantitative data to be display into graphics like tables, pie charts, histograms...etc, that highlight the main results of the data collection. According to Landau & Everitt (2004) “the statistical package for the social sciences “SPSS” is a package of programs for manipulating, analyzing and presenting the data”. This means that, the analysis of the results obtained from the close-ended questions of the online questionnaire will be interpreted into numerical data.

3.2. The Qualitative Content Analysis (QCA)

Qualitative content analysis (QCA) is a data analysis procedure that is used to analyze qualitative data collected from the analysis of the handbook examples and the open questions of the online questionnaire. According to Hsieh & Shannon (2005) “the qualitative content analysis (QCA) is a research method for analyzing the content of non-numerical material in order to build and maintain meaning” (2005). This means that the method identifies and analyzes qualitative data by objectively interpreting the essential meaning to describe and quantify a specific phenomenon.

3.3. The Mixed Method

The mixed method research is a methodology for conducting a particular study; it is a combination of both quantitative and qualitative methods for collecting a total of data. According to Molina-Azorin (2016: 37) “the mixed methods research is the combination and integration of qualitative and quantitative methods in the same study. In addition the use of this research method in studies may play an important role in the development of any field because results obtained from different methods have the potential to enrich our understanding of the fact”. Thus, it is used to compare and analyze findings from the quantitative and qualitative data resources in order to answer the research question and hypotheses:

1. Quantitative Method

It is used for the analysis of the quantifiable data. As it explained by Apuke (2017) “a quantitative research method deals with quantifying and analyzing variable in order to answer question like: who, how much, where, when, what and how many, with the aid of mathematical tools; in particular statistics”. In fact, it is used as a project results for a large population. It attempts to describe the characteristics of a relevant group of people. It tests specific hypotheses and examines significant relationships between the different concepts. This means that the finding collected from the close-ended participants’ answers of the online

questionnaire will be presented in form of number and percentage and be displayed in tables, diagram and pie chart.

2. Qualitative Method

It is used to analyze non numerical data like corpus analysis. According to Lincoln (2002): “a qualitative method studies things in their natural settings that it attempts to make sense to them, or to interpret a phenomenon in terms of meaning people bring to them” (cited by Ospina, 2004). For instance, this method aims to develop an initial understanding of the issue. It looks for a range of ideas about the topic dealing with. It uncovers the underlying motivations and factors that can influence the data. This means that the results obtained from textbook analysis “new prospects” and the open-ended questions from the questionnaire are going to be interpreted in form of written analysis.

Conclusion

This chapter deals with the research design of the current study. It is concerned with data collection instruments and data analysis procedures. First of all, it presents the context and the sample population of the study. Then, it deals with research a methods section that identifies the proposed tools textbook analysis “New prospects” and the online questionnaire, that are used to gather information from the participants for analyzing both quantitative and qualitative data through certain analyses. Moreover, we have adapted both of the SPSS and QCA to analyze the collected data; the former is used to analyze the close-ended questions of the online questionnaire, while the later is used to analyze the open-ended questions of the questionnaire and textbook examples.

Chapter three
Presentation of the findings

Introduction

This chapter presents the results gathered from the data used in this study. Specifically, we will examine the use of the mind mapping technique to enhance EFL students' understanding and memory skills in acquiring vocabulary. The chapter is divided into two main parts. The first part presents the results obtained after analyzing the selected corpus using the textbook evaluation of the third year of secondary school. The second part presents the results obtained from the students' online questionnaire in the form of pie charts, bar graphs, and tables.

1. Presentations of Textbook analysis

This part presents the results of the textbook analysis after investigating the use of mind mapping activities in various activities provided in the English textbook "New Prospects."

The table contains eight (08) examples arranged as follows:

Example	Unit	Unit title	Page	skills and strategies outcomes	Theme of the activity	Type of the activity
01	one	Exploring the past	29	Think, pair, share	Pollution	Vocabulary
02	one	Exploring the past	31	Research and report	Islamic civilization	Vocabulary

03	two	Ill-gotten Gains never prosper	52	Think, pair, share	Anti- corruption program	Vocabulary
04	two	Ill-gotten gains never prosper	57	Vocabulary explorer	Fraud	Vocabulary
05	three	School: different and alike	88	Vocabulary explorer	Education	Vocabulary
06	three	School: different and alike	89	Think, pair, share	Five senses	Vocabulary
07	three	School: different and alike	95	Saying it in writing	My school ideas	Vocabulary
08	six	We are a family	180	Think, pair, share	Feelings/ emotions	Vocabulary

• **Table 01: Mind Mapping Activities in the Textbook (New prospects, 2006).**

Table (01) shows the categorization of examples that are taken from the textbook of English “New prospects” for the 3rd secondary level. We deduce that the syllabus consists of:

1.1. Units’ description

1) Unit One “Exploring the Past”: aims to give an over view about the ancient civilizations like Greek, Pharaohs, and Chinese...etc, and lead students to learn more about the intercultural issues and its effects on the modern culture.

2) Unit Two “Ill-Gotten Gains never prosper”: it represents the main ethics in business and identifies the impact of the social responsibility to eradicate the corruption, bribery, stealing...etc.

3) Unit Three “School: Different and Alike”: it introduces the concept of education; it compares between the educational systems in the world (for.eg in the United Kingdom and the USA) and the different teaching methods and demonstrate the role of education in countries’ development.

4) Unit Four “Safety First”: it indentifies the impact advertising in the economics (selling and buying) and food safety like the fast and organic foods and its effects on person’ health.

5) Unit Five “It us a giant leap for mankind”: it deals with Astronomy, the solar system, human’s inventions and scientists’ discoveries.

6) **Unit Six “We Are a Family”**: it outlines the meaning of family and its role in societies and studying the process of feelings and emotions expression and its significance within the individuals.

1.2. Rubrics’ description (as they are introduced in the “New Prospects” Teacher’s Book for the Secondary Education, Year Three)

1) **Research and report**: deals mainly with students learning outcomes in form of task. they are designed to them in order to work either individually, in pairs, or in groups in the classroom to get feedback to a particular lesson, or lead-in to a activity in form of written and oral like writing or presenting a newspaper article, short story, poem, speech...Etc, on a specific topic.

2) **Think, pair and share**: it focuses on individual, pair or group work where the teacher will play the role of the facilitator who can generate interactions between his students and guide intervening in the classroom when it is necessary.

3) **Vocabulary explorer**: this section deals with vocabulary language development, it reinforces the learners to explore new items, identify its meanings, categorise them into groups (for example: nouns, verbs, and adjectives), allow them to employ these items to solve tasks and write short paragraphs and summarize information.

4) **Saying it in writing**: it follows the previous stages that allow learners to build self-confidence through the use of the material provided in order to help them to obtained new words and prepare them to write prepares the students to write coherent paragraphs and short essays.

From the table above we deduce that all the mind mapping activities are in form of vocabulary assessments. Thus, it leads us to classify them as follows:

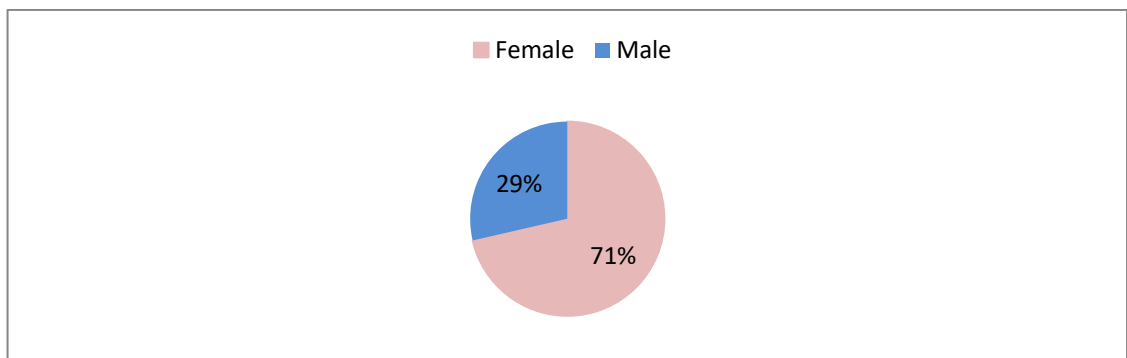
- **Example one (Unit 01: p29):** this activity is taken from think, pair and share rubric; it treats the theme of “pollution” and it is presented as a simple mind map.
- **Example two (Unit 01: p31):** this exercise is taken from research and report section. This activity highlights the theme of “Islamic civilization”, that it summarizes the whole topic in form of a mind map.
- **Example three (Unit 02: p52):** this task is taken from think, pair and share section; it deals with the topic “anti-corruption program” that it is illustrated as a mind map.
- **Example four (Unit 02: p57):** this activity is taken from vocabulary explorer rubric; it treats the subject of “fraud” in shaped mind map.
- **Example five (Unit 03: p88):** this task is taken from vocabulary explorer section; it is illustrated in form of a mind map that it deals with “education” subject.
- **Example six (Unit 03: p89):** this mind mapping activity is taken think pair and share section; it deals with the topic of “five senses”
- **Example seven (Unit 03: p95):** this activity is taken from saying it in writing section; it is a mind map task that it deals with “my school ideas” subject.
- **Example eight (Unit 06: p180):** this exercise is taken from think, pair and share section; it is presented in form of a simple mind map that it treats the theme of “feelings/emotions”.

2. Presentation of the Questionnaire’s results

This part presents the results obtained from the questionnaire addressed online that it is addressed to a group of 43 students in the 3rd year secondary school. The results are presented in percentages, displayed in diagrams.

2.1. General information

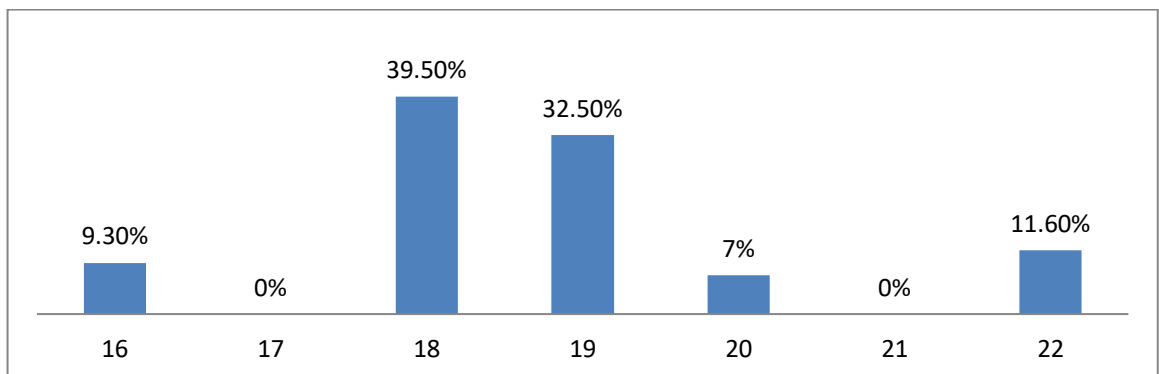
Q01: Gender



- **Diagram 01: Pupils' Gender**

Diagram (01) shows that the chosen class consists of 43 participants (totally 100%), where 31 (71%) are females, while 12 (29%) of them are males.

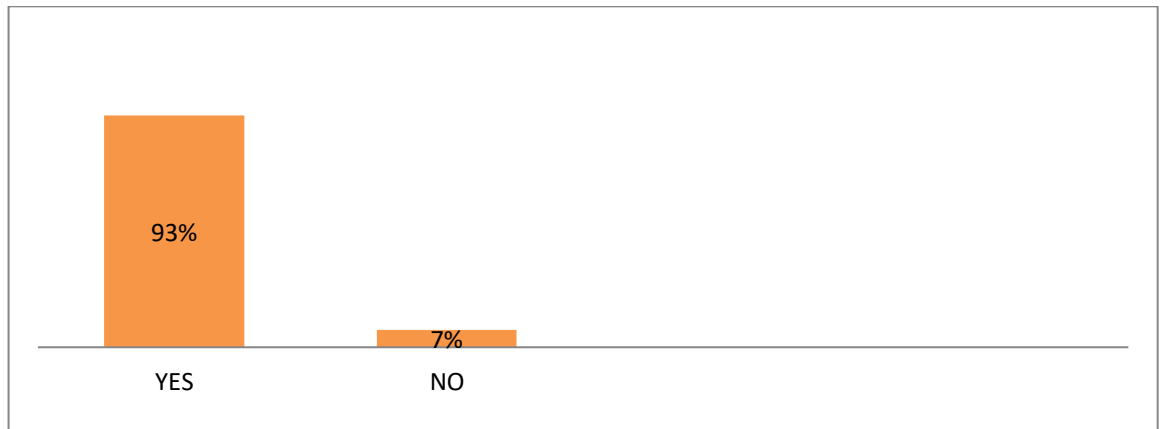
Q2: Age



- **Diagram 02: Pupils' Age**

Diagram (02) displays the age of the 43 participants, it shows that about 4 (9.3%) are 16 years old, 17 (39.5%) are 18 years old. 14 (32.5%) are 19 years old. 3 (7%) are 20 years old. While 5 (11.6%) are 22 years old.

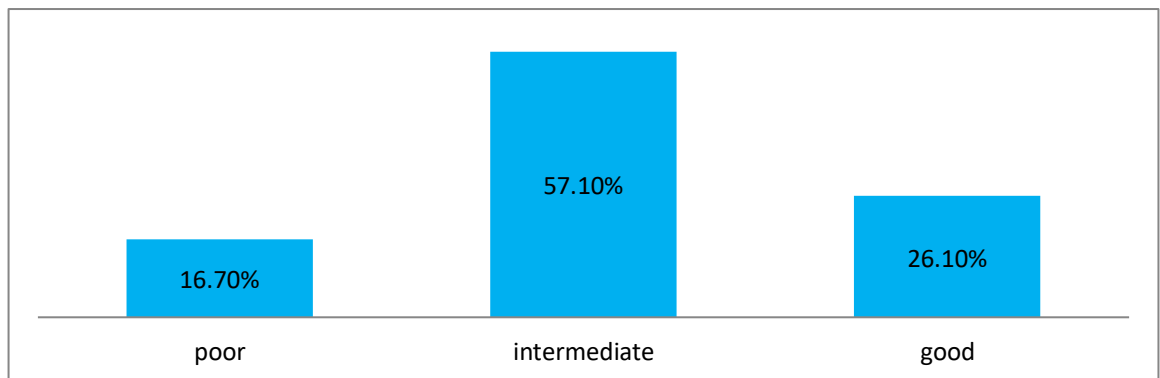
Q3: do you like English?



- **Diagram 03: Pupils' Likes/Dislikes Of The English Language**

From diagram (03) we can see that English language is a preferable language for many pupils. We deduce that from 43 participants, about 40 (93%) prefer learning the English language, while 3 (7%) participants do not like it.

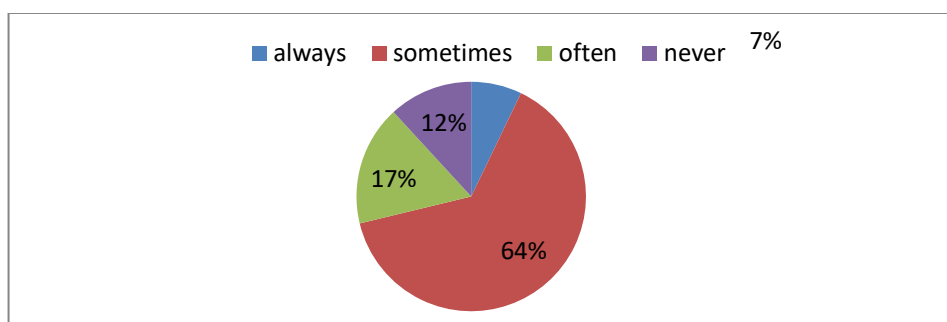
Q04: What is you English level (vocabulary)?



- **Diagram 04: Pupils' Perceptions Of Their English Vocabulary Level**

Diagram (04) shows the English vocabulary level of 43 participants range between poor to good knowledge. Depending on the level of education (3rd grade of high school); there are 11 (23.8%) pupils have a good English vocabulary. 25 (54.8%) are intermediate and 7 (16.7%) pupils have poor vocabulary skills.

Q05: Have you faced difficulties while learning English vocabulary?

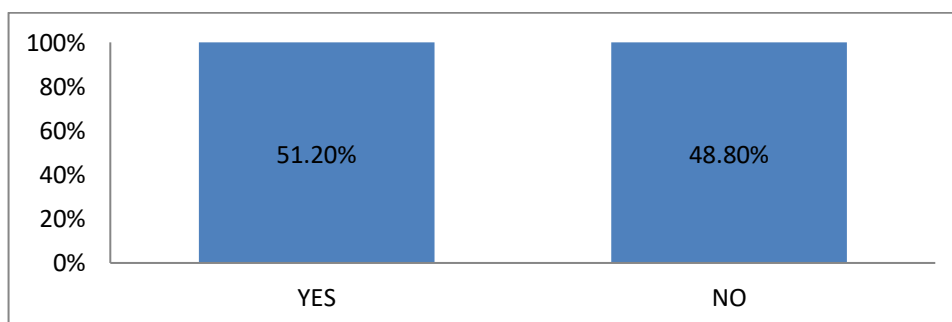


• **Diagram 05: Pupils' Difficulties When Learning English Vocabulary**

This diagram (05) shows that the participants have several difficulties in learning English vocabulary. Out of 43 participants, around 3 (7%) always find learning English vocabulary difficult, 27 (63%) say they sometimes face obstacles when learning new vocabulary, 5 (12%) think that learning vocabulary is easy and 8 (17%) often have difficulties learning vocabulary.

2.2. Mind Mapping For Improving the Understanding Skill

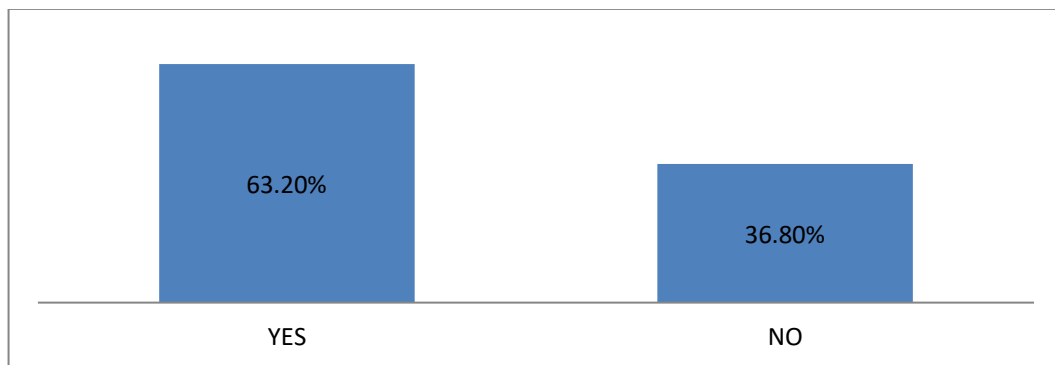
Q06: Have you ever use mind mapping in your studies?



- **Diagram 06: Pupils' views toward the mind map technique**

Diagram (06) shows that mind mapping technique is known to most of the learners. We demonstrate that out of the 43 participants, about 22 (51.20 %) use mind mapping technique in their studies, while 21 (48.80%) participants do not use it.

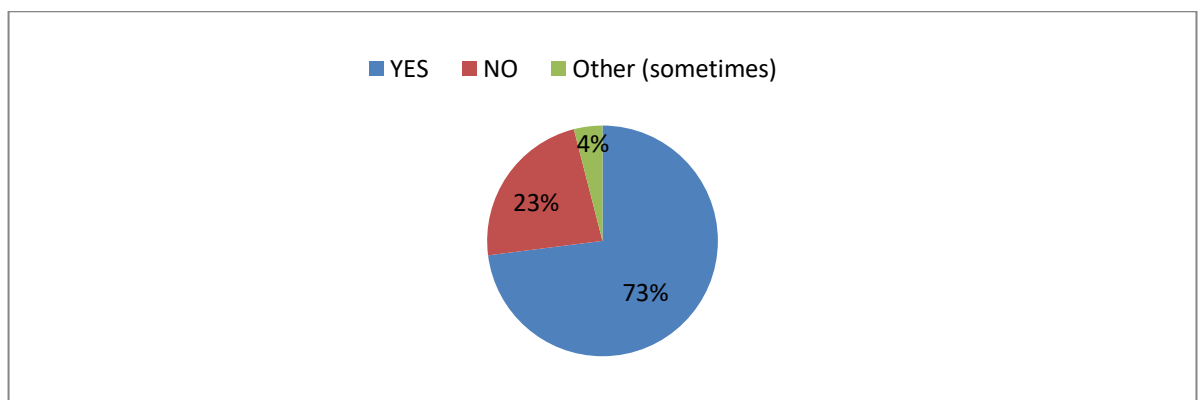
Q07: Did you face any obstacles in using mind mapping strategy?



- **Diagram 07: Mind Mapping Obstacles**

From diagram (07) we conclude that out of 43 participants, around 27 (63.2%) of the participants emphasized that they encountered obstacles when using mind maps, while 16 (36.8%) of participants considered this too easy to use.

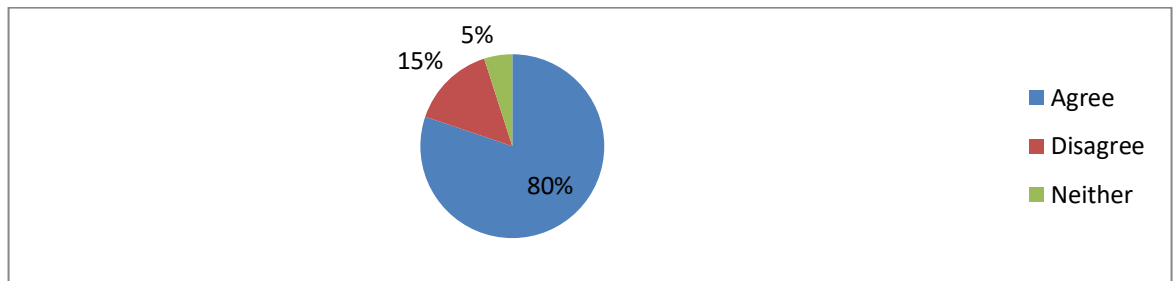
Q08: Does the use of pictures, drawings, and symbols facilitate understanding the new vocabulary items that are acquired through them?



- **Diagram 08: Pupils' Opinions Toward The Efficacy Of Mind Mapping In Understanding The Vocabulary Acquired Through It.**

In diagram (08) we notice that out of 43 participants, around 31 (73%) can understand new words acquired through pictures, drawings, symbols etc., while 10 (23%) participants do not understand them, and about 2 (4%) of the students answered, sometimes they can understand the words from the visualization.

Q09: the use of mind mapping technique while learning English language can motivate you more?



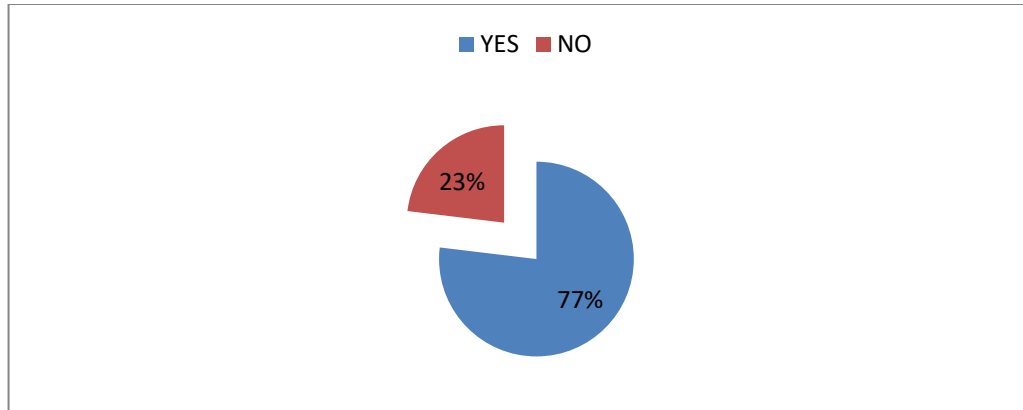
• **Diagram 09: motivation through mind mapping**

In diagram (09), we notice that from 43 participants; 35 (80%) pupils have agreed that mind mapping can motivate learning. otherwise, 6 (15%) have disagreed with this suggestion, while 2 (5%) participants have answered by neither agree nor disagree with the statement.

According to the students who have agreed: first, it stimulates the learning of the English language with its sophisticated ideas and concepts for learning and benefiting and it helps in learning the new word in a creative way. Then, because it's not a boring method and it helps to stimulate the mind to absorb more information and knowledge of other things, since it is an effective way to learn languages not just English. Finally, Mind maps facilitate many new ideas, so they are useful for learning and acquiring new languages. It helps the mind to memorize and learn new words in fun enjoyable way. While those who have disagreed, they have justified their choice as follows: we cannot find the appropriate words. It depends to the person himself.

2.3. Improving Memorizing Skill through Mind Mapping

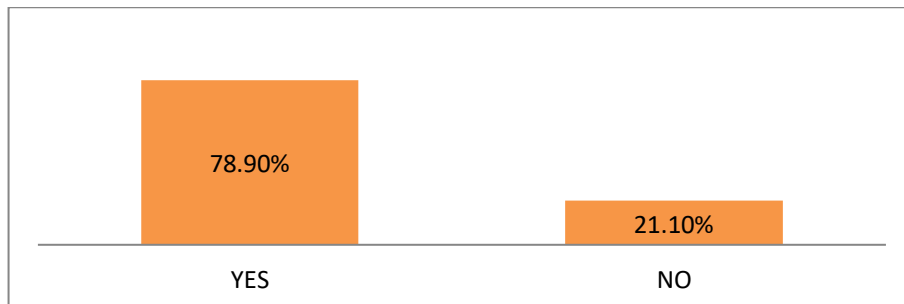
Q10: Does mind mapping help you to memorize your lessons?



- **Diagram 10: Pupils' Views About The Usefulness Of Mind Mapping In Memorizing**

In diagram (10), we observe that from 43 participants, about 33 (77%) have claimed that mind mapping has helped them to memorize their lessons effectively, is easy to memorize. It keeps the lessons in mind for a long time. It helps to reorder lessons more than before; it makes them easier and shorter. While 10 (23%) have argued that it does not help them, where they have determined that mind mapping is not their preferable learning style.

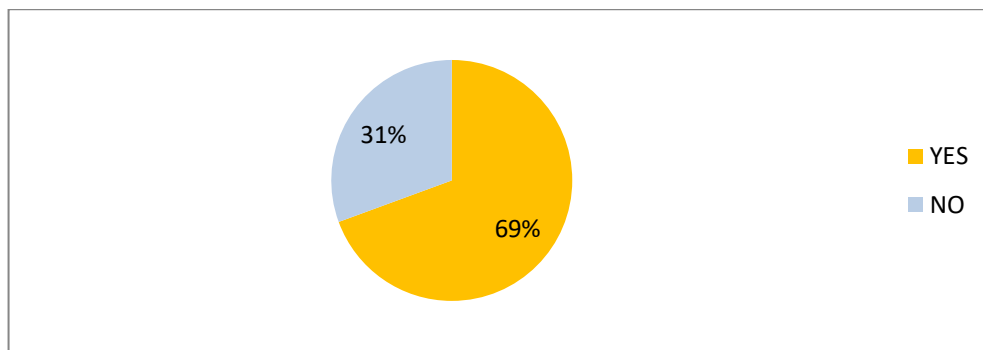
Q11: Do you consider mind mapping activity as memorizing helper in a creative way?



- **Diagram 11: Mind Mapping The Creative Memorizing Tool**

From diagram (11), we demonstrate that from 43 participants, 34 (78.9%) have considered mind mapping as a memorizing helper in creative way, since it motivates to organize their information and helps them to memorize their lessons while 9 (21.1%) participants do not agree with this statement, where they have said that memorizing lessons is about repeating them.

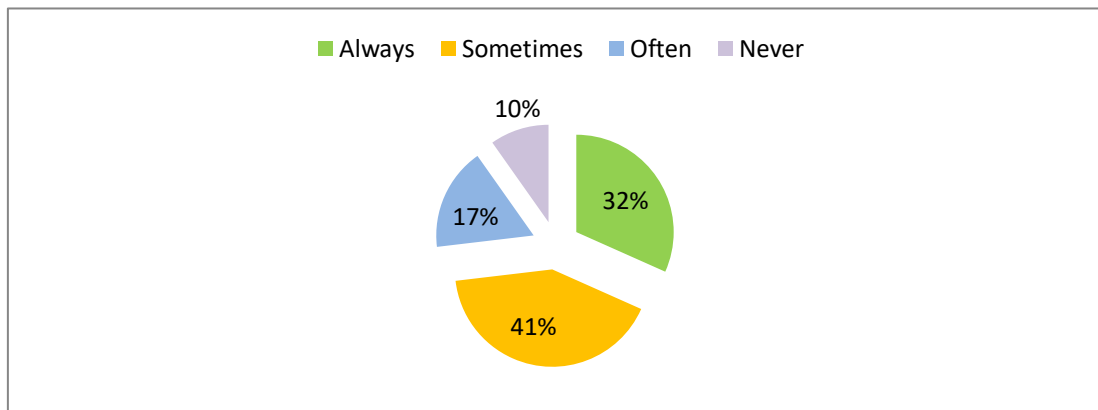
Q12: Does mind mapping strategy improve your understanding and memorizing skills?



- **Diagram 12: Mind Mapping As Improvement for Memorization and Understanding Skills.**

From Diagram (12), we deduce that from 43 participants, 30 (69%) have agreed that mind mapping has helped them to improve their memorizing and understanding skills, while 33(31%) have disagreed with this statement.

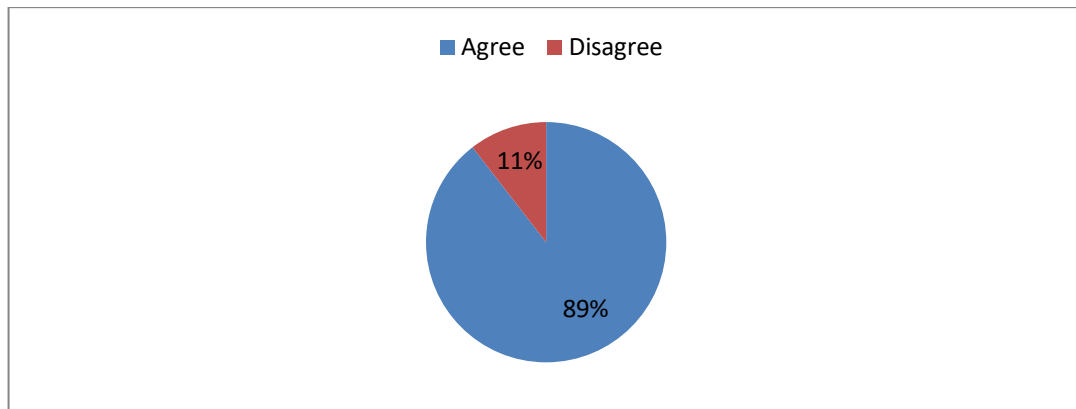
Q13: Does mind mapping enhance your creativity?



- **Diagram13: Enhance creativity through mind mapping**

Diagram (13) indicates that from 43 participants, 14 (32%) have claimed that mind mapping allows them always to think creatively. 18 (41%) have argued that mind mapping enhance their creativity sometimes. 7 (17%) have said that it often helps them to be creative, while 4 (10%) have determine that it is a useless tool.

Q14: In the near future, can we include mind mapping as a learning style of teaching and learning English in the Algerian education system?



- **Diagram 14: Learners' Views toward the Use of Mind Mapping In the EFL Classroom as a Learning Strategy.**

From Diagram (14), we deduce that from 43 participants, about 38 (89%) have agreed about including mind mapping technique within the field of language learning and teaching as one of the main learning style in the EFL classrooms, they support the idea, since it is very motivating to try something different. while 5 (11%) have disagreed with this statement.

Conclusion

In this chapter, we are presenting the findings of our study. Initially, we showcased the results derived from the analysis of the textbook, followed by the outcomes of the online questionnaire. Our analysis of the textbook highlighted that mind mapping activities are

frequently included in the syllabus. We gathered eight examples, each of which pertained to a specific topic such as pollution, education, feelings, fraud, and more. On the other hand, the online questionnaire demonstrated that mind mapping is effective in enhancing the vocabulary acquisition and comprehension and memorization skills of 3rd-year secondary school students. These findings will be further elaborated in the subsequent chapter.

Chapter four
Discussion of the findings

Introduction

This chapter is intended to discuss the results of our study that are obtained from textbook analysis and the online questionnaire. This chapter consists of two main sections. It analyzes the examples that are taken from the textbook “new prospect” for 3rd year secondary school. Then, it discusses learners’ answers and views that are obtained from the online questionnaire. Thus, it will provide an answer to the research questions asked in the general introduction and the proposed hypotheses are going to be confirmed or rejected.

1. Discussion of the textbook analysis

The investigation utilized the English textbook "New Prospects" intended for 3rd-year secondary school students, as its corpus. Eight examples were selected from the textbook for analysis. "New Prospects" is composed of six units with the following titles: Exploring the Past, Ill-Gotten Gains Never Prosper, School: Different and Alike, Safety First, Are We Alone, and We Are a Family. Each unit includes language outcomes such as listening and considering, reading and considering, and taking a break, as well as skills and strategies outcomes that are categorized into four main rubrics: research and reports, listening and speaking, reading and writing, and project outcomes. For the purpose of this investigation, eight examples were chosen from different units, with each belonging to a specific rubric.

1.3. Examples analysis (the examples are presented in appendix A)

To start with example 01 (unit one, p.29): The excerpt describes a task from the "Think, Pair and Share" section of the textbook. The learners are instructed to work individually with the theme of "Pollution." They are required to record details of the three main ideas related to the theme (climate change, cities drowned in smog, melting of the Arctic ice cap) in a mind map activity. The central concept is presented in the center, while the sub-

ideas radiate from it and are linked with lines. However, the mind map lacks colors, symbols, or images. This task allows learners to express their own thoughts and expand their vocabulary to find the appropriate words. Moreover, the activity is linked to other questions that ask the groups to brainstorm and write a list of terms and phrases to express the main concept and supporting details. As stated by Buzan (2006: 181), when writing an essay using a mind map, it is essential to begin with the main ideas noted in the map, followed by the key points to be addressed in each idea, and lastly, relate these points to each other. This way, mind mapping can help students write coherent essays based on the organization of their mind maps. The most significant benefit of this activity is that learners can identify and correct their errors and mistakes by reviewing their work repeatedly.

Concerning the example 02 (unit one, p.3): The given example is from the "Research and Report" section, where learners are instructed to work individually, in pairs, or in groups on the theme of "Islamic civilization". The topic is presented in the center of the mind map, with two main ideas branching out from it. The first idea requires learners to answer questions related to the concept of when and where the civilization flourished, rose, and fell, while the second idea deals with its achievements in different fields like literature, medicine, mathematics, and agriculture. The mind map is organized with colored squares, circular shapes, and connecting lines, with learners adding relevant information and pictures to fill it up and present their findings in the classroom. This example demonstrates a well-organized mind map that includes important components such as colors, shapes, and lines. According to O'brien (2018), using colors and images instead of words in a mind map is crucial in helping learners focus on each branch and analyze the information in it. This approach also assists in weaving ideas together into a big picture, providing learners with an overview of the subject being studied.

As far as example 03 (unit two, p.52) that it is taken from “Think, Pair and Share” section. It asks learners to work individually with the chosen theme “anti-corruption program”. The main topic is putted into bubble, placed in the centre and linked to the sub ideas with lines. It presents four main ideas: appoint honest civil servants, edict stringent regulations, rehabilitate the value of the work and fight tax evasion. In fact, they are guided to jot down the details that are related to the main ideas and present a short public statement of the subject at the end of the session. For this regard, the mind map used in this activity does not follow the right steps of an efficient mind map; it is a messy one, it lacks colors and it uses phrases instead of keywords. Thus, it can be impeded the stimulation of the visual flow of ideas that support the identification of the key-concept of each main idea. Mainly, Buzan (2008: 159) has explained that “a messy mind map can ignore the flow of the ideas, where each idea cut off from the others. This action can disturb the dynamic connection between the branches and discourage the brain to come out with new ideas”. In addition, students can face some obstacles describe the appropriate details and do not employ the right words of each idea; it may create a disturbance among students that do not have information about the theme dealing with.

Regarding example 04 (unit two, p.57) that it is taken from “Vocabulary Explorer” section. It deals with vocabulary knowledge. The selected theme is about “Fraud” that means cheating and deception. In this activity the subject is placed in the centre of the mind map. It is an incomplete mind map, because pupils are oriented to fill it by picking up the ideas from the related text (p.54-55) by putting down each word on the appropriate column. For instance, we have observed that this mind map is used two types of lines: the straight ones are for verbs, while the curved are for nouns other words. As well as, this map follows the right structure (the use of colors, line, single words); according to King & Gómez (2014: 73) “the

words that are presented in different contexts are easy to remember and retain in the learners' brain for a longer period of time". This means that, in this activity learners are able to complete this word-map by using an instrument (the text) and use their personal vocabulary to gain better understanding of the factual meaning and remembering vocabulary used efficiently.

Then, example 05 (unit three, p.88) that it is taken from "Vocabulary Explorer" rubric. It deals with the topic of "Education". It is presented in the centre and linked with three main aspects: nouns, verbs and adjectives putted into bubbles but without using colors. For instance, learners are guided to follow task orientations to complete the map by classifying them into three categories (nouns, verbs, adjectives) and fill each one of them with its appropriate related items. It means that, they jot down all the associated ideas of the main topic that come with the present information in the mind map. They can share them with each other about what they have jotted down, while teacher gives any necessary explanations and suggestions. In addition King & Gómez (2014: 75) have explained that "Mind maps provide learners with an active interaction that allows them to learn through the use of a central image that works outward in all directions that presents a productive and organized structure of key ideas and images". This means that learners are able to learn and distinguish nouns from verbs and adjectives, and identify each element's characteristic through its language form and its position in the sentence.

As concerns example 06 (unit three, p.89) that it is taken from "Think, Pair and Share" activity. The proposed topic on the map is "The Five Senses". It is an enjoyable task for many pupils to express their thoughts freely. The mind map used in this activity is lacked of colors, but the main topic is placed in the center, where the sub-ideas are presented in form of five questions: What textures/shapes do you feel? What can you taste? What does it remind you of? What can you see? What can you hear? And what odors and smells can you identify?. For instance, pupils are going to develop the main concept by adding new ideas and

relationships as they construct the map. They are able to answer these questions about what they feel, hear, see, smell and taste and describe each situation can remind them to a particular sensation easily, since it is something innate in the human being. In addition, Rhodes (2013) has explained that “Not only do mind-maps help us to unfold our imaginative ideas, but they help us to bottle them in such a way that we can understand it, spread it, teach it, share it, and use it”. This means that, this activity does not only stimulate them only but also it increases their ability to understand, which it leads them to explore their personal capabilities of thinking, stimulates their imagination and encourages their creative insights and ideas.

As for example 07 (unit three, p.95) that it is taken from “Saying it in writing” section. It deals with “my ideal school” topic. It is presented in a formal mind map, where the main topic are placed into the center and linked by curved lines of the sub-ideas to the concept. It treats eight major ideas: program, examinations, students’ population, teaching methodology, discipline, buildings, special activities and course attendance. Each idea shows the key meaning of every element in the diagram. For instance, learners are oriented to brainstorm this information by using the mind map. Then they try to plan a sort of decisions on a written form (speech). According to Taylor (2009) “the mind map is a visual representation of a personal thinking, it can help the learners to focus on their task structure by start writing all the ideas that come up into the mind and associate them freely but without correction of the errors”. This means that, before start writing, re-read the map again and pick up each relevant item to determine how a significant point is related to the other point of the subject. This involves the process of generating new ideas and find more efficient solutions to identify their mistakes and correct them later to learn more and develop their vocabulary knowledge.

And finally, regarding example 08 (unit six, p.180) it is taken from “Think, Pair and Share” rubric. It deals with the concept of “Emotions”, where pupils are asked to use the mind map to write a newspaper article about “Feelings and emotions expected from Algerian

women and men in various situations”. The mind map used for this task is incomplete in order to fill it by their personal thoughts. Thus, it leads them to think from two different sides masculine and feminine. This means that, they will identify the emotions of both genders and this can lead to the creativity process to find out the appropriate ideas by using imagination. This task allows them to develop the vocabulary of feelings through different expressions that describe each individual emotion (joy, love, grief, wail...). As it is explained by Krasnic (2012) “mind Mapping sustains learners’ motivation because they get constant feedback and gratification through seeing the development of their map and, hence, their learning”. For this regard, students can have higher motivations and be more confident in vocabulary learning when using mind-mapping, thus it will improve their writing performances.

2. Discussion of the Students’ Online Questionnaire

As mentioned before, the current study aims to investigation the use of mind mapping to enhance EFL learners’ understanding and memorizing skills in vocabulary acquisition. Therefore, to answer the research question, this questionnaire is designed online and addressed to forty three (43) pupils at the 3rd year secondary school, it consists of three sections and fifteen (15) questions in order to determine the validity of the hypothesis indicated in the general introduction.

- **General information**

The results from (Q01) “Gender” and (Q02) “Age” indicate that most of the participants are active young learners; this means that both gender and age are factors that can influence the learning process. In other words, there is a significant relationship between the learners’ gender and their academic performance; many studies like Ariane & Pascale study’s (2012) demonstrated that age and gender affect the motivation of the students in the

acquisition a foreign language. However, this study does not represent a large learner population and further research should certainly complete this work to find significant and representative differences. In addition, women are more motivated to achieve a higher level of education than men in the learning process. Moreover, Age is one of the most important factors influencing the acquisition of new languages; young learners are more motivated to learn foreign languages than adults due to their young brain's ability to acquire a second language, which facilitates their studies.

Moreover, the results obtained from **(Q03) “Do you prefer the English language”** demonstrate that the majority of the participants prefer English as second foreign language for many reasons. According to Gohil (2013: 10) “Today, English is widespread largely due to the fact that it is used so heavily in television, film and music. Hollywood's global spread has contributed strongly to the international popularity of English. It is also the predominant language on the Internet. Web pages in other languages often tend to have an English translation. The British Empire and the dominant nature of American popular culture have contributed overall to the spread of English across the planet”. This means that this language becomes the most spoken and written language. It is considered the language of science, business and computers that permits accessing to different domains to communicate and interact effectively with people and it explores the multiple cultures from all over the world. Thus, by learning English, young learners will have many opportunities to compete in many different fields.

In addition, from **(Q04) “What is your English level?”** we deduce that the participants' English level varies between weak and good vocabulary knowledge. Hence, most of the participants have positive attitudes towards the English language. This is very encouraging for them as they are working to improve their level of English, especially vocabulary acquisition in many ways in order to reach the desired level. Obviously, learners should believe that one

of the most effective ways to learn the English language is to come up with a number of strategies that can help them absorb more knowledge of vocabulary acquisition. Otherwise, according to Putra (2011) “learners can solve these problems with multiple solutions. They should especially read literary articles and works to get more words; they can check the meaning of words and their punctuation with dictionaries every time. Also, playing games like crosswords, anagrams, word mix, Scrabble makes learning positive and fun”. In addition, words can be acquired by listening to native conversations. Meanwhile, it is enough for them to learn 5 words with their meaning every day. Then they can start practicing by writing short statements along with their translations. For now, they can try to debate themselves and then engage in public talks. Thus, it can help them learn more from others.

From (Q05) “**have you faced difficulties while learning English vocabulary?**” we observe that the participants have some difficulties in learning English vocabulary. Nation (2002) declares that “the main problem with teaching vocabulary is that you can only deal with few words at a time and a small fraction of what is needed to know a word; this restriction applies to casual learning by listening or reading, but it is much easier to organize a large amount of independent listening and reading”. Overall, pronunciations, lack of vocabulary and grammar rules are the most common obstacles in a language. It is because; most of them are not confident when speaking English in public or in groups. As a result, they only use the vocabulary they learned in class, but they cannot use it externally unless they know how to form a simple sentence or paragraph. This limitation affects their language skills. In this aspect, it is important to discover what makes learning English vocabulary difficult for almost young learners. So far, several scholars have emphasized that English should be used and frequently practiced taking into account the actual verbal reactions practiced by native speakers in order to improve language skills.

- **Mind Mapping to Improving The Understanding Skill**

Furthermore, from (Q06) **“Have you ever tried to use mind mapping in your studies?”** we deduce that most of learners show their interest and desire to involve their learning level. Many of them are attracted by mind mapping tool; it is an appropriate tool for their age that reflects the way their brain thinks, it allows them to create a mind map based on their own understanding. As it is explained by Buzan (2005: 139) mind mapping helps learners to manage their information effectively, and increase the potential for personal success. Those students who use this technique usually report that they feel a sense of confidence, that their aims are achievable, and that they are on track for reaching their goals. Additionally, it is effective to take notes, plan their daily lessons at home or summarize them. When they have to study a lot, they have to concentrate on the relevant information in each subject; it can help them to revise for their exams. Hence, it encourages them to think, analyze, and derive a consistent meaning from different concepts. With mind mapping, they can make progress in their academic achievement and improve their English as well as self-development.

Concerning (Q07) **“Did you face any obstacles in using mind mapping strategy?”** we deduce that scholars have clarified that; there are some difficulties that may face learners when making a mind map. Sometimes, learners do not follow the right steps when creating a mind map can face this kind of obstacles. In fact, as it is explained by Buzan (2006: 159-160) **“this is happened when ignoring a particular element in the map like colors, images, lines or do not place the topic in the center of the page. Otherwise, some learners use long sentences or phrases instead of key words”**. Thus, it is called a messy mind map, when the student includes more information, it can impede the stimulation of the visual flow of the ideas that defines the main concept, identify the basic ordering of the ideas and decrease the ability of the visual memory when registering the information that may come across.

Moreover, depending on the results obtained in (Q08) **“Does the use of pictures, drawings, and symbols facilitate understanding the new vocabulary items that are acquired through them?”**, they indicate that most students support the use of mind maps in order to make the vocabulary learned through it easy to understand. Moreover, pictures, symbols and drawings are a powerful communication tool. They are useful for conveying the meaning of concepts. They can help improve understanding by reinforcing information, drawing attention, and engaging the imagination. This why most of scholars focus on the use of these components; for instance, Taylor (2009) states that “using images in mind mapping produces more precise and powerful associations of ideas”, while Rhodes (2013) adds that “symbols are used to collect, organize, and simplify complex information into a visual representation, or more specifically a mind map” Therefore, it is important to use them on purpose so that they do not detract from the purpose of the topic. Including these visual stimulators support the content by adding information to the topic they cover.

Besides (Q09) **“does the use of mind mapping technique while learning English language can motivate you more?”** indicates that depending on students' agreements, word acquisition is considered one of the main benefits of mind mapping; it is obvious to see that this technique stimulates their learning since it is not a boring method. It helps them absorb more information from the subjects they are dealing with. In addition, mind mapping is considered a healthy training. It is a technical way that creates a motivational environment for studying. It allows learners to use their imagination to associate different ideas with visual elements (colors, images, symbols ...). Moreover, Krasnic (2012) claims that “many students prefer mind mapping as the best tool to take notes and summarize information into a format that helps them study, learn better, and excel on exams, since this technique takes an active role in the learning process”. In addition, Buzan (2018) has explained that “experience and studies have shown that mind mapping can help young children and students of all ages

improve their levels of concentration and comprehension and memorize information more easily". This means that mind mapping is an active tool that helps to organize various ideas into categories. As far, it aids them to gain much more understanding that can immediately manage the flow of ideas regularly and effortlessly.

- **Improving Memorizing Skill Through Mind Mapping**

However, in (Q10) **"Does mind mapping help you to memorize your lessons?"** we observe that, for those who have answered by "YES", they have claimed that a mind map is easy to be remembered, because it helps to organize lessons and information more than before and it makes them easier and shorter. While those who have said "NO", they have determined that mind mapping is not a preferable learning tool. As we know, English vocabulary seems to be a challenge for many young learners; it spends a lot of time learning vocabulary. On one hand, using rote memorization is considered boring, especially when trying to recall the entire lesson by heart without missing any element; doing so, it can decrease students' enthusiasm for learning and limit their ability to think. On the other hand, remembering a mind map more than a whole paragraph makes the learning process clear and visual. As a result, Jiang (2020) has shown that "Mind mapping delivers significant benefits in vocabulary learning especially during the lessons; it could change simple texts into colorful, highly organized and easy-to-memorize diagrams in ways that encourage students to participate and have a deeper understanding at the same time". This means that the use of mind mapping helps learners to build an organized structure of vocabulary knowledge. It allows them to remember new words instead of memorize them by heart. Some of them have gained more confidence in using English after using it. They became interested in exploring how to apply mind mapping to their research. Thus, it will help them develop the skills of developing their words. In addition, mind mapping is a good way to speed up the process of learning, get the words

meaning appropriately and simplify the complex information and store them in the brain for a long time.

In relation with (Q11) **“Do you consider mind mapping activity as memorizing helper in a creative way?”** we deduce that for those who have answered by “YES”, they have explained that mind mapping is good because it helps to remember information. The use of colors and images make us more creative. While those who have answered by “NO”, they have said that memorizing lessons is by repeating them. Regarding the meaning, mind mapping seems to be a personal learning method depending on how it is required and represents self-awareness and design. As most researchers argue, like Wang (2019) who has confirmed that “this is due to the divergent thinking characteristics of the human brain, which makes young students map their ideas effectively. On the one hand, using this method to remember or recall information will motivate and develop students' divergent thinking and creativity to give it a general framework”. As a result, it causes the knowledge of vocabulary to be understood as indicating only relative information about one key word. And at the same time, it enables the logical organization of ideas through the imagination, which stimulates visual memory to analyze the intended information to be understood and remembered.

Moreover, from (Q12) **“Does mind mapping strategy improve your memorizing and understanding skills?”** As we have said before, mind mapping is considered very modern; it simplifies lot of information for an easy memorization. In every stage of it, pupils find themselves learn and gain something new. It clarifies ideas, makes them easier and helps in memorizing. The more the learners get involved the more they learn since it focuses on all the skills. It helps to understanding and memorization together as it facilitates difficult information. Means that, most of the participants confirm that the mapping tool improve their both understanding and memorizing skills. As many scholars, Buzan (1993, cited by Wang & Dostél, 2018) has claimed that “Mind Maps can inspire interest in students, by making their

lessons and presentations more spontaneous, flexible, creative and enjoyable, in order to give the deeper understanding of the subject. They can help them to relate their own knowledge to those expressed in books, lectures and presentations”. From both of the literature and the results, we have deduced that this technique has a great effect on learners. It attracts their interest while studying. More specifically, the use of creative and colorful draws help students to understand the general topic, since they can use their previous information with the presented one. In addition, this way can help them to build new knowledge each time.

Concerning the results gained from (Q13) **“Does mind mapping enhance your creativity?”**, they indicate that creativity represents a personal development; it the core of the mind map that makes learning more attractive. For this regard, Rhodes (2013) has claimed that “With a mind map, learners are able to learn and memorize content better. That is because this technique helps them to see things in their mind’s eye as well as on the page. The process of writing out the content and organizing it helps them to reinforce this knowledge as well. They can play around with the content on a mind map, which also helps to reinforce learning”. This means, there are participants who prefer the visual learning style, where they are willing to learn more through the use of imagination. It is wonderful how mind mapping brings more flexibility to learners’ creativity in a heuristic way; it provides learners with more clarity about their topic, ideas, and actions, it shows them all the related ideas in the map; where associations are displayed by images, symbols, and colors, they capture students’ attention and provide them with an attractive and enjoyable schema that is quite helpful for thinking, understanding and memorizing. That is to say, the use mind mapping stimulates brain’s creativity through the visual components of the mind map that can access easily to the human intelligence. Furthermore, mind mapping is the most flexible activity for creativity. It allows displaying all related topics on the mind map through the use of keywords and

connections that are indicated by images, symbols, and colors. Thus, it does not enhance creativity, but also attract the visual attention.

Regarding the last question, (Q14) **“in the near future, can we include mind mapping as a teaching learning strategy in the field of foreign languages in the Algerian educational system?”**, it shows that for those students who have agreed, they support the idea, since it helps the student a lot and saves time. This is very motivating; we need to try something different to change the traditional methods of teaching. It is the best way to see the level of learners and their difficulties to find solutions. Most of the students use these mind maps at home, we think that including them in schools will increase the success rate. It can help the learners who struggle with registering information and knowledge and memorize them in order to improve their creativity skills then make their abilities better. This means that, they are satisfied with this learning strategy. Otherwise, Barton et al (2017) add that “the interest in mind mapping is not limited; it helps to quickly identify students' specific difficulties in thinking and analyzing deepening their thinking, and at the same time proposing solutions to these difficulties. In addition, groups or individual learners can benefit from teacher guidance on how to use mind mapping aids”. This means that the domain of visual methods for learning and knowledge is broad where several studies have been conducted to investigate the application of mind mapping in the classroom as learning and teaching method. It can be applied in the classroom because of its simple format that works to gather students' knowledge in a specific moment during the lesson and be used even as a classroom assessment technique that may create an unexpected participation and discussion among students. Also, it is possible to be used by teachers who can successfully present the lessons in a new way in the classroom. In fact, the interest of mind mapping is not limited; it helps to quickly to determine students' specific difficulties to find out the appropriate solutions to solve them.

Conclusion

In this chapter we have overviewed the whole content of this investigation, briefly summarizing the main goal of this study and our motivation through it. First, we have found how much the Algerian students prefer the English language and try out to improve their language level. Then, we have dealt with mind mapping that seems approximately a preferable tool for most of our participants who claim that it is enjoyable learning tool that can improve both of their understanding and memorizing skills and their creative thinking effectively. And finally, we have discussed the implantation of mind mapping in the classroom and its use in the textbook of English language for the 3rd year secondary school, where we have found that mind mapping tasks are rarely to use (only eight examples are taken from the textbook), but at least they treat some important topics like education, pollution, emotions, fraud...etc.

General conclusion

The aim of this dissertation is to explore the relationship between the mind mapping strategy and EFL learners' ability to understand and memorize vocabulary. To achieve this goal, three primary objectives have been identified. Firstly, to introduce the concept of mind mapping strategy; secondly, to analyze the connection between mind maps and improvements in understanding and memorizing skills; and finally, to determine the effectiveness of mind maps as a learning tool for vocabulary acquisition. The literature review section provides a theoretical framework for the study, with a focus on two key concepts: mind mapping theory and vocabulary acquisition. The chapter discusses prior research on mind mapping and vocabulary acquisition in detail, divided into two sections. The first section covers the definition and applications of mind mapping, as well as its impact on cognitive skills such as understanding, memorizing, and thinking. The second section addresses the importance of vocabulary learning and its relevance in language use, as well as the efficacy of mind mapping as a learning guide for vocabulary acquisition. Additionally, the literature review discusses the implications of using mind mapping within EFL classroom settings.

The aim of this dissertation was to explore the correlation between mind mapping strategy and the acquisition of vocabulary by EFL learners' understanding and memorizing skills.

Three major objectives were identified to achieve the main purpose of the study. The first objective was to introduce the concept of mind mapping strategy, the second objective was to analyze the connection between mind mapping and the improvement of understanding and memorizing skills, and the third objective was to determine the efficacy of mind mapping as a learning guide for vocabulary acquisition.

In this investigation, a mixed methods approach was adopted to ensure credibility in reporting the findings. Both quantitative and qualitative approaches were used to gather the intended data. Quantitative data were collected through an online questionnaire and analyzed statistically, while qualitative data were gathered through textbook analysis. The study

population comprised of 43 third-year secondary school students at Yazouren Mohamed high school in Azeffoun, Tizi ousou, year 2010/2020.

The results of the study confirmed the first two hypotheses and revealed that students have a positive attitude towards using new learning styles. Mind mapping was found to be helpful in improving understanding and memorizing skills while learning vocabulary. The use of mind mapping in EFL classrooms was recommended as a new style of teaching and learning foreign languages.

The findings suggest that mind mapping can be a useful technique in Algerian schools and could be implemented within the educational syllabus. Teachers of English as a foreign language can benefit from using mind mapping to improve language teaching and other language skills such as writing, reading, and listening.

In conclusion, this study provides valuable information about the benefits of using mind mapping in language acquisition. It is hoped that this technique will be adopted and implemented in Algerian schools to enhance language learning and teaching.

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Appendices

Presentation of textbook analysis examples:

Figure 02: example 01 (p.29)

② Jot down details about the ideas you have selected as follows:

```

    graph TD
      A((pollution)) --- B((climate change))
      A --- C((cities drowned in smog))
      A --- D((melting of the Arctic ice cap))
    
```

③ Write a first draft essay using the structure provided above. Then exchange drafts with your partner for error checking.

④ Write a revised version and share your ideas with the class.

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Figure 03: example 02 (p.31)

RESEARCH AND REPORT

ORGANISING

- Carry out research to fill in the spidergram below with relevant information. Then present your findings to the class.
- Enliven your spidergram by including pictures of achievements in Islamic civilization.

```

    graph TD
      A[Fleurished Where? When?] --- B[Islamic Civilization]
      B --- C[Achievements in]
      C --- D1[Medicine]
      C --- D2[Astronomy]
      C --- D3[Architecture]
      C --- D4[Mathematics]
      C --- D5[Industry]
      C --- D6[Literature]
      C --- D7[Music]
      C --- D8[Philosophy]
      C --- D9[Theology]
      C --- D10[Agriculture]
      C --- D11[Law]
      B --- E[Fell: Where? When?]
    
```

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Figure 04: example 03 (p.52)

Think, pair, share

● Prepare a short public statement saying what you would do to fight corruption if you were elected mayor of your town. Follow the procedure below.

① Individually, jot down ideas about your anti-corruption programme using the following spidermap.

② Compare your spidermap with that of your partner. Are there any interesting ideas that you can exchange ?

③ Join a group (representing your campaign counsellors). Together select the most relevant ideas from your spidermaps and write a draft public statement. Start with a punchy topic sentence. E.g.

Dear fellow citizens,
Corruption is an evil that must be fought now !

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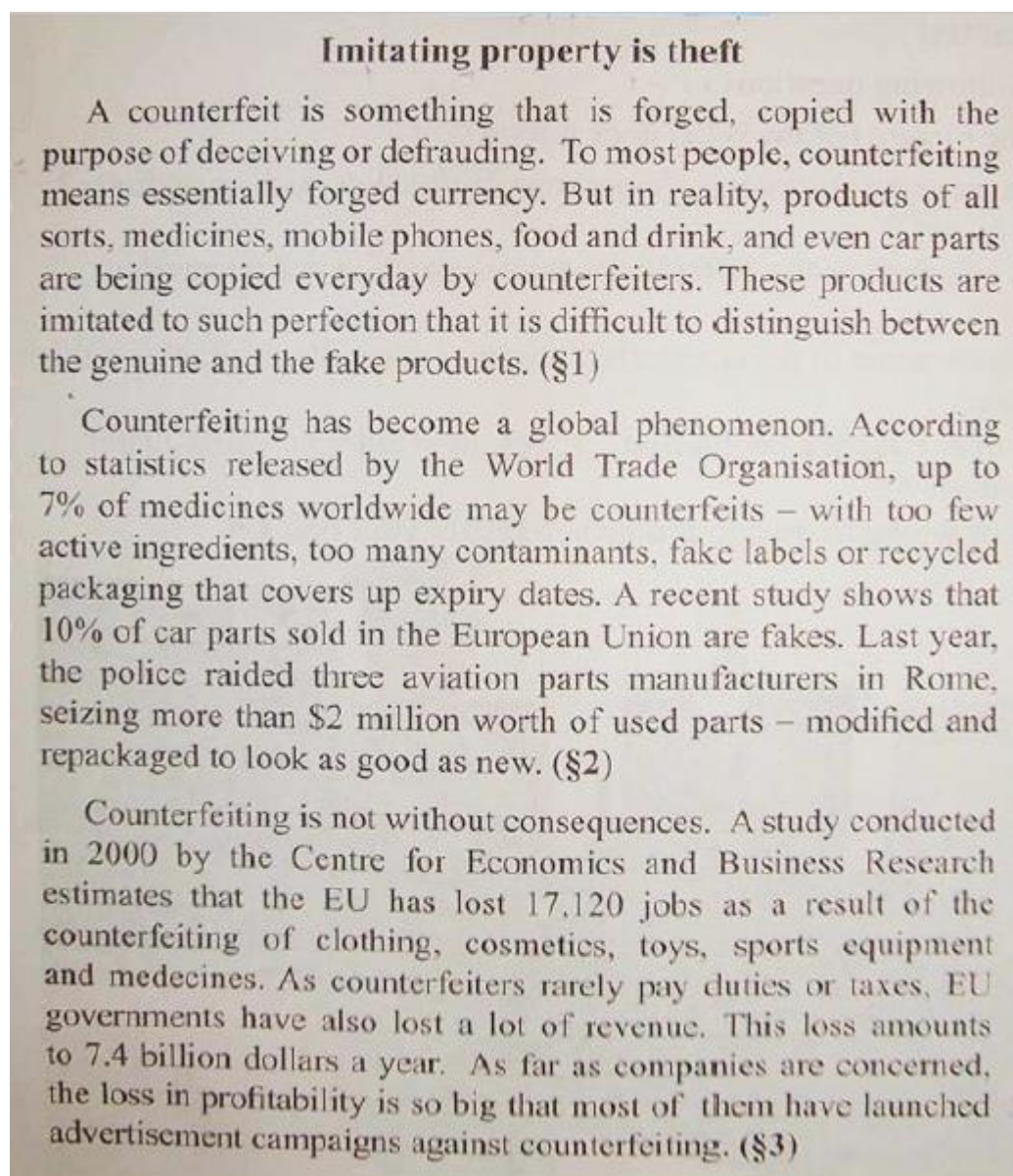
موقع عيون البصائر التعليمي

Figure 05: example 04 (p.57)

Vocabulary Explorer

① Go back to the text and find words related to fraud and fill in the wordmap below. The straightline is used for verbs and the curved line for nouns. Add other words of your own.

Figure 06: The related text (p.54-55)



However some consumers, both in the developed and the developing countries, are relatively unconcerned about counterfeiting. Since brands are too expensive, many of these consumers are obliged to buy counterfeits to satisfy their needs. These consumers know well that they mustn't buy imitations because they are just like stolen property. They are also aware that they must refrain from buying them because of their lower quality and lack of safety standards. And yet consumers, especially those with low incomes, feel that they have to purchase them, for, as the good old proverb goes, 'necessity knows no law'. In conclusion, companies had better think of reducing the prices of their brands instead of spending huge amounts of money on advertising against counterfeiting. (§4)

(From *The Economist*, May 17th, 2003)

Figure 07: example 05 (p.88)

② Put the items on the left around the appropriate heading in the mindmap on the right. Then, in pairs, add three more items to each category.

- fail - pass - successful
- do a course - to get a commendation
- be up to standards - take up a course
- graduate - succeed - take (exams)
- hardworking- qualified - assess
- evaluate - assessment - to fall behind
- to hold a degree - school fees - timetable
- skills - training - go to university

Figure 08: example 06 (p.89)

> Think, pair, share <

Follow the guidelines below to write a letter to a friend of yours describing your school/classroom.

① When we describe things/people we generally express **personal feelings**. So start with an interesting topic sentence.
E.g. School is the only place in the world where I feel free.

② Descriptive writing relies on an appeal to **the five senses**. Use the clustering below to list what you can see, smell and what these sensations remind you of, etc.

Five senses

- What can/will you see?
- What textures/shapes do you feel?
- What can you taste?
- What does it remind you of?
- What odours/smells can you identify?

③ **Details** are very important in descriptive writing. So indicate exactly the **location** of objects, their **shapes**, their **colours** and most importantly the **feelings** they evoke by using **similes**, i.e. comparisons with **like** or **as**.

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Figure 09: example 07 (p.95)

elbassa ▶ **Saying it in writing**

- Imagine that you could plan an ideal school. Decide what sort of school it would be. Then describe it in detail. Follow the procedure below.
- ① Brainstorm ideas about your ideal school using the following spidermap. Explain your decisions.

My ideal school

- programme
- examinations
- student population
- course attendance
- special activities
- buildings
- discipline
- teaching methodology

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Figure 10: example 08 (p.180)

▶ Think, pair, share ◀

- Write a short newspaper article describing the **feelings and emotions expected from Algerian women and men in various situations**. Follow the procedure below.
- ① Think about the topic and jot down ideas using the network tree below. Don't write full sentences at this stage.

Feelings/Emotions

- women
 - grief
 - wail
 -
 - love
 - ?
- men
 - grief
 - love
 - ?

- ② Compare your network with that of your partner. See if there are ideas that you can exchange with her/him. Then develop the ideas in your network into a short article using the text entitled **Feelings** as a model.
- ③ Review your article for mistakes. Then read it to your classmates.

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The online Questionnaire

The following questionnaire is addressed to 3rd year secondary school pupils. It is a part of the research that we are carrying out about the efficacy of mind mapping to enhance EFL learners' understanding and memorizing skills on vocabulary learning. In order to achieve our objectives, you are kindly requested to read each of the statements, and then you choose the answer that best reflects your thoughts. The validity of our research is based on your answers, so we hope that you will give us your full attention.

Section one: General information

1-Gender:

• Male

• Female

2- Age:

3- Do you like English?

• Yes

• No

4- What is your English level?

• beginner

• Medium

• Advanced

5- Have you faced difficulties while learning English vocabulary?

- Always
- Sometimes
- Often
- Never

Section two: Mind map and the understanding skill:

6- Have you ever tried to use mind mapping in your studies before?

- Yes
- No

7- Did you face any obstacles in using mind mapping strategy?

- Yes
- No

8- Does the use of pictures, drawings, and maps help you in achieving your understanding of the vocabulary acquired through them?

- Yes
- No

9- Do you think that the use of mind mapping technique while learning English language can motivate you more?

- Yes
- No

Explain.....

.....

Section Three: mind map and memorizing skill:

10- Does mind mapping help you to memorize your lessons?

- Yes
- No

Justify:

.....
.....

11- Do you consider mind mapping activity as memorizing helper in a creative way?

- Yes
- No

Explain.....
.....
.....

12- Does mind mapping strategy improve your understanding and memorizing skills?

- Yes
- No

Explain:.....
.....

13- Does mind mapping enhance your creativity?

- Yes
- No

14- In the near future, can we insert mind mapping as a learning strategy of teaching and learning English in the Algerian education system?

- Agree
- Disagree

Explain.....
.....
.....

Thank you.

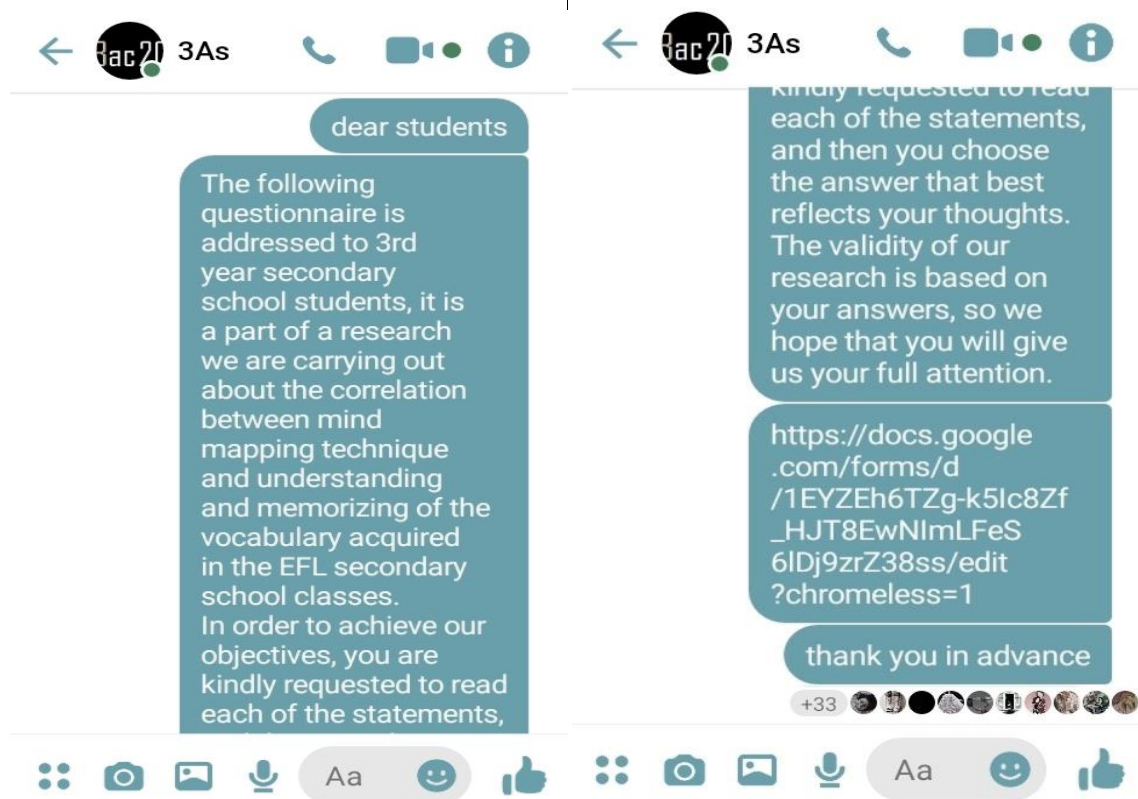


Figure 11: Learners' Participation On The Online Questionnaire (Messenger Group Chat)