

English Vocabulary Construction: Which Memory Strategy to Use?

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*The struggle of man against power is
the struggle of memory against forgetting.*

Milan Kundera

Abstract

This research paper, which revolves around vocabulary development, aims to reveal how the EFL learners construct their vocabulary and the memory strategies that help them retain newly acquired or learned words. The study also aims to determine the most effective memory strategy. To fulfil this goal, the study targeted 68 university EFL learners, most of whom are enrolled in Algerian universities. The author of this research adopted a mixed-methods approach, using strategies and techniques suitable for both qualitative and quantitative methods. The data were collected by means of a web-based questionnaire, which was sent as Google Forms to the students' Facebook groups. To address the issue of missing data during data analysis, we resorted to the listwise deletion approach. This investigation led us to the assumption that EFL learners primarily develop their vocabulary through reading, utilising a memory strategy that involves incorporating newly learned words into a context. Our investigation also revealed the EFL learners' inefficiency in learning through associations. Ultimately, 'Creating mental linkages' proved to be far more effective than other memory strategies.

Keywords: Vocabulary construction; Memory strategies; Vocabulary learning strategies; Higher education; Memory; EFL learners.

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1. Introduction

In order to develop their communicative skills, language learners usually have recourse to a set of strategies considered vital for this purpose. From the neurological perspective, language learners use neural networks that connect different lobes of the brain to organise their ideas in order to process vocabulary (Willis, 2008). The simultaneous stimulation of the brain hemispheres results in effective thinking, remembering and recalling (Buzan, 2006). Research on first language acquisition suggests that sentence length and complexity, particularly between 2 and 3 years of age, align with escalation in brain activity in language areas (Sprenger, 2014). This stage of life is considered crucial for expanding vocabulary through reading and speaking (Sprenger, 2014). Keeping the brain in view, a large vocabulary is indicative of proficiency in nearly every area of the brain, including working and relational memory, rote memory, classification, association, pattern recognition, storage, and executive function (Willis, 2008). This implies that memory is a critical factor in improving learning. Not surprisingly, EFL learners use a blend of strategies that help to enhance their vocabulary growth. The intent of this research paper is therefore to explore how the EFL learners construct their vocabulary, give an insight into their memory strategies, and reveal to what extent the latter scaffold them to build a solid vocabulary. It also aims to pinpoint the most effective memory strategy they use to achieve their desired objectives. This research paper concludes with a few recommendations aimed at assisting EFL learners in expanding their vocabulary to the maximum extent possible.

2. Review of the literature

Memory is the foundation of all learning, and in the absence of memory settings, information is merely thrown into a deep hole that will never be retrieved (Horsley, 2013). As a matter of fact, one can tell that everything goes well when their memory is reinforced. The more information and memories one has correctly stored in their brain, the greater ability they have to create original connections and combinations (Horsley, 2013). Memory, as a principal element of life, dates back to the distant past. In the absence of devices enabling note-taking, people in the ancient era, like poets and storytellers, used to totally rely on their trained memory to remember their poems and stories (Lorayne & Lucas, 1974). From the psychological perspective, memory is defined as a space where any type of information is

saved, elaborated and generated when necessary (Greene, 2015). Memory is split into three sorts: sensory memory, lasting a few seconds; short-term memory, lasting a few minutes; and long-term memory, lasting from months to years. Sensory memory is the shortest-term memory. It stores the instant data received via the five senses (smell, sight, touch, hearing, taste). Short-term memory stores information concerning recent events, which are of little significance. It helps us perform our daily tasks. Long-term memory refers to all of the memories that one stores for future recall. These memories are not easily removed by stress or daily troubles (Greene, 2015). Long-term memory duration is governed by: 1) the medium of input, meaning whether it is visual, auditory, or kinaesthetic; and 2) the type of input, that is, semantic (facts, concepts), episodic (events, experiments), or procedural (skills, tasks) (Singhal & Singhal, 2015). It goes without saying that the human body goes through the same internal process. However, this internal, distinct shared process does not imply that all learners go for the same strategies. Learning strategies obviously differ depending on the learners. The same learner may also use a variety of strategies for different language skills or vocabulary types. In line with this assumption, Segler (2015) suggested that while some people learn best by reading, others learn best by doing. There are also people who study by making notes, and some others feel that reading aloud helps them learn better. He also purported that when learning, learners use the strategies that suit them best according to the topic intended to be learnt. To put it another way, they may learn to cook by practicing and learn to draw by reading (Segler, 2015).

Even though it is the central pillar that language development stands on, vocabulary learning strategies received and still receive little attention, and in spite of the profusion of research papers that have been written on the learning strategies, those that EFL learners employ to expand their English vocabulary still remain under-researched compared to syntax and phonology (Zimmerman, 1997). Irrespective of the strong claim that communicative competence in all its forms revolves around a well-constructed vocabulary (Gray & Holmes, 1938; Brown, 1959; Harris, 1961; Dale, 1969; O'Rourke, 1974), the way it is learnt and taught started to urge inspiration and capture the imagination of more researchers in the field only in the 1980s and remarkably in the 1990s (Nemati, 2009). Despite the limited research conducted in the early to mid-20th century on vocabulary, conflicting views about the best method for teaching and learning vocabulary have emerged (Smith & Powers, 1930; O'Rourke, 1974). Chambers (1904) and Thorndike (1934) believed that vocabulary learning is context method-based; that's to say, inferring the meaning from the context, while others

(Henmon, 1921; Gray & Holmes, 1938) see it as discrete method-based where a learner develops their vocabulary using vocabulary lists (cited in Smith & Powers, 1930 and O'Rourke, 1974). Captivated by language learning strategies, Rebecca Oxford, one of the preeminent ESL researchers described vocabulary as having "...its own allures: intriguing etymologies and borrowings from other languages, as well as multiple meanings and implications that make communication an amazing process." (2017, p. 243). Hasram & Singh (2021) stated that language skills, including reading, speaking, writing, and listening, are assessed by means of vocabulary proficiency, and pupils with a restricted amount of vocabulary have difficulty expressing themselves and understanding spoken communication. In spite of its primacy in the development of communicative competence, vocabulary-based language learning would be defective without grammar learning because "Grammar is the astounding force that unites the words in sentences, gives them depth, clarifies their meaning, and makes them ideally practical for communication." (Oxford, 2017, p. 243). In 1990, Oxford established two main learning strategies useful for vocabulary building. These complementary strategies, direct and indirect, split in turn into six categories. Direct strategies are based on cognitive language processing, which is performed differently depending on the intended purpose. They embrace memory strategies, cognitive strategies and compensation strategies. Indirect strategies, which work alongside the direct strategies, cover metacognitive strategies, affective strategies and social strategies. These strategies are called 'indirect' as they handle language learning without directly implicating the target language.

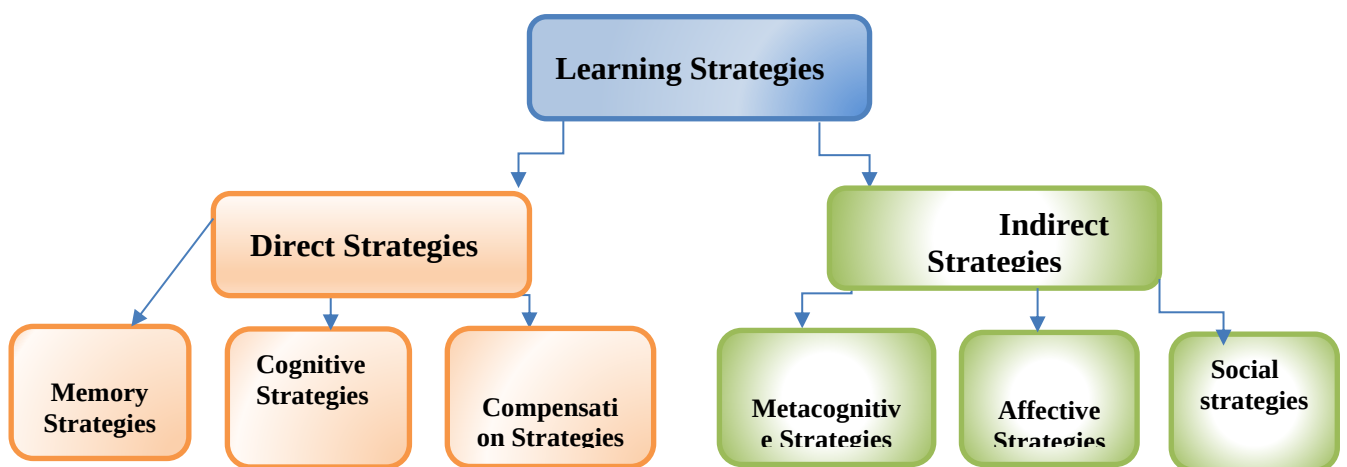


Figure 1. Learning Strategies (Oxford, 1990, p. 16).

Oxford (1990, 2017) classifies memory strategies, the main focus of our research paper, into four categories: a) creating mental linkages; b) applying images and sounds; c) reviewing well; and d) employing action, with each category further subdivided into subcategories. These subcategories are illustrated in the figure below:

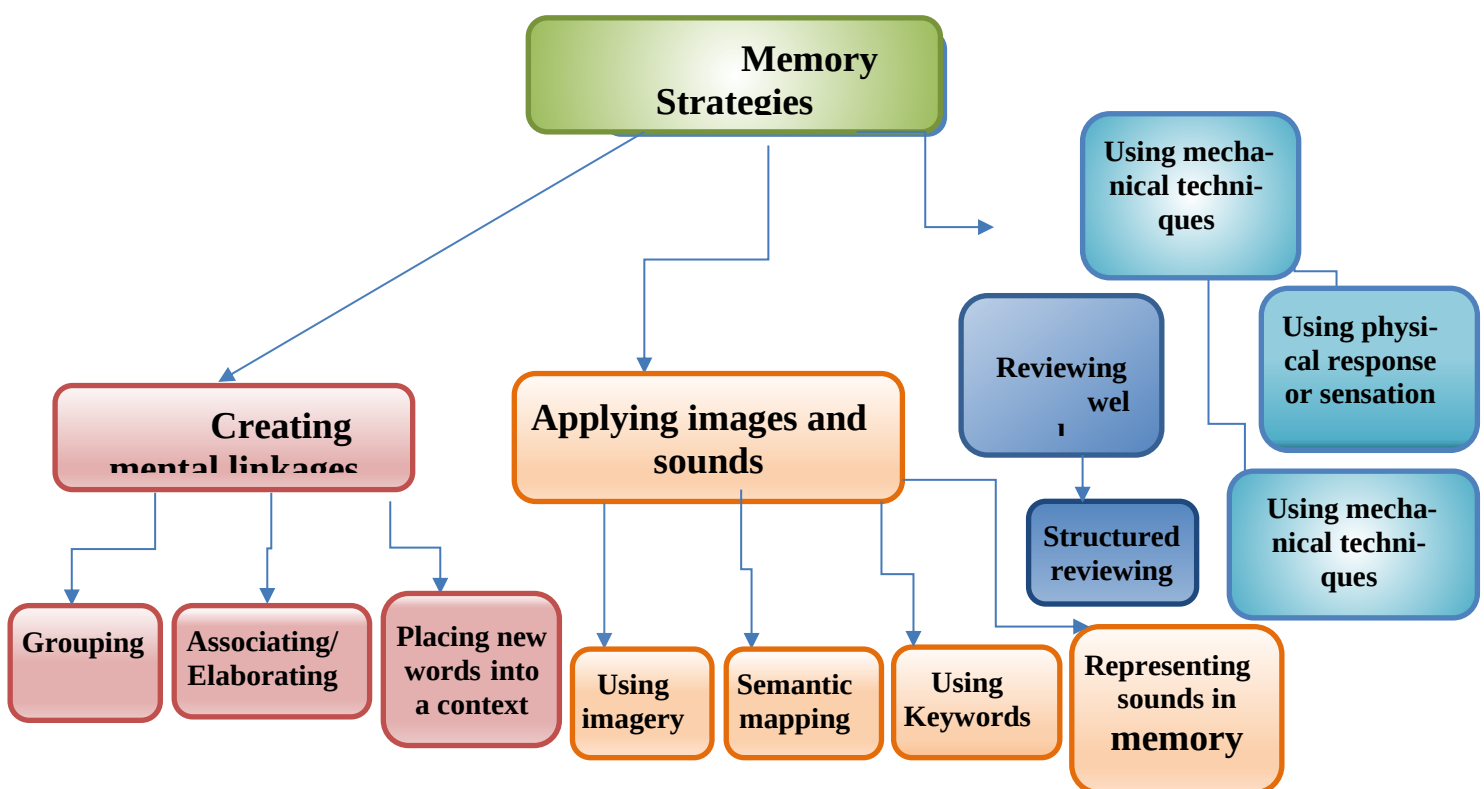


Figure 2. Diagram of the Memory Strategies (Oxford, 1990, p. 39).

It is worth noting that memory strategies would not be effective enough without the two other strategies: metacognitive strategies and affective strategies (Oxford, 1990). Learning by association, which is one of the memory strategies that involves mental linkages, is not a contemporary technique. According to Lorayne & Lucas (1974), Greeks and Romans, particularly orators who delivered flawless lengthy speeches, practiced learning by association. These orators used to associate the sections of their speeches with the parts of their homes. This strategy is called 'loci' or 'places'. For example, the first section of the speech was associated with the entrance, the second section with the hall, the third section with one piece of furniture, and so forth until the speech's conclusion.

It has been suggested that students use vocabulary growth strategies that concur best with their psychological traits. Farrokh and Kalengestani (2019) reported that introverts have a propensity for memory, cognitive, and metacognitive strategies, contrary to the extroverts, who were found to go for determination and social strategies. Oxford (2017) expanded the list of characteristics, besides personality or psychological, to include other factors, such as prior experience, educational, socioeconomic, and cultural background, learning styles, gender, and age of the learners.

3. Methodology

Participants

The population under study consists of university EFL learners, with a sample of 68 students ranging from first-year Bachelor to doctoral students. 95.58% of these students are from different universities in Algeria; 2.94% are from Kent University, UK; and 1.47% are from Lausanne University, Switzerland. The researcher used random sampling because it is: 1) an objective method of sampling; 2) an economical method from money, energy point of view; 3) a convenient approach of sampling in the field of research; 4) It permits the application of statistical devices and treatments of data. The error due sampling can be estimated; 5) It maintains the accuracy in the analysis of results; 6) It is a practical method of sampling ; 7) It is the alternative used to select a representative sampling (Singh, 2006, p. 84). Correspondingly, this sort of sampling is "free from subjective factor or personal error or bias and prejudices or imagination of the investigator, and where the individuals of a sample are independently drawn from the population" (Singh, 2006, p. 84). For ethical reasons, the participants, who were kept anonymous, were informed about the purpose and nature of the study because "any kind of potential for abuse may render the respondents become uncooperative, which then threatens the reliability and validity of subsequent research" (Gray, 2004, p. 278).

Research instruments

We used a web-based questionnaire to investigate students' memory strategies and show how these strategies support their vocabulary growth. The advantages of this approach include its cost-free nature and ability to provide anonymity and accessibility to a larger population within a short timeframe (Fox et al., 2003; Rice et al., 2017). The aim of this questionnaire is also to identify the most efficient memory strategy that enables the students to accomplish their intended goals. It was divided into two sections: A and B. The former was designed to get the respondents' personal data, including grade, university and country. The latter section entailed four questions: three closed-ended questions and one open-ended question. In the first question, participants were asked to identify the English language skill or skills they are proficient in. The purpose of this question was to gain a deeper understanding of the language skills students use to boost their vocabulary growth. The second question, which was open-ended, was addressed to examine how and to what extent the students' English language skills support their vocabulary construction. In the third question, the author of this research asked the respondents to select the memory strategy subcategory or subcategories that they use. These subcategories, classified by Oxford (1990), embrace: A) Putting the word in a sentence or sentences; B) Placing the new word in a group with other words based on grammatical function, linguistic function, topic, synonymity, opposition, etc.; C) Making associations in mind in order to memorise the new word; D) Using semantic maps; E) Making associations between the sounds of the new word and the sounds of the word already learnt; F) Using auditory and visual links; G) Relating the new word to the concepts in memory by means of meaningful visual imagery either in the mind or in the actual drawing; H) Keeping reviewing the word already learnt while at the same time learning the new one; I) Acting out the new word; J) Using creative techniques like involving, moving, or changing things. It is worth mentioning that A, B, and C subcategories fall under the 'Mental linkages' memory strategy; D, E, F, and G belong to 'Applying images and sounds'; H is set in 'Reviewing well'; and, finally, I and J are included in the 'Employing action' memory strategy.

To avoid ambiguity, the author of this research paper supported some of these subcategories with her own examples (see Appendix). Finally, in order to determine the most efficient memory strategy, the fourth question asked the students to put the memory strategy subcategories in order of preference and efficiency. It is to be noted that the respondents had access to multiple answers for the first and third questions. The questionnaire was sent via Google Forms to their Facebook groups, and their responses were collected three weeks later.

Research Procedures

The present study used a mixed methods approach, combining qualitative and quantitative data to optimise the advantages and mitigate the limitations inherent in each type of data (NIH Office of Behavioural and Social Sciences, 2018). Given the impracticality of studying the entire population, we resorted to random sampling, widely regarded as an objective sampling technique (Singh, 2006).

To ensure a thorough and significant analysis, we opted for statistical and descriptive analyses. The first, third and fourth, closed-ended, questions were analysed quantitatively, while the second, open-ended, question was analysed qualitatively. In order to explore how and to what extent the English language skills contribute to the students' vocabulary development, the author of this research paper carried out her analysis based on the students' answers. It's important to note that in the answers, the same student indicated a variety of ways in which these skills reinforce their vocabulary. The fourth question, which asked the students to put the memory strategy subcategories in order of preference and efficiency, was analysed in two ways. First, the author of this research paper analysed the students' responses according to their preferences. Then, in order to gauge the effectiveness of the memory strategies, she calculated the total of the percentages of each memory strategy's subcategories.

To address the case of irrelevant and incomplete responses, the latter were considered missing data. Therefore, the author of this research paper used the listwise deletion approach, which recommends evaluating only the cases with complete data (Bell et al., 2009; Grace-Martin, 2021). The rationale for selecting this approach was based on its practicality and widespread integration into most software systems (Grace-Martin, 2021).

4. Results

As mentioned above, this research paper seeks to explore how the EFL learners expand their vocabulary and the memory strategies that help them to strengthen it. The study also aims at identifying the most efficient memory strategy. The results reported based on the research questions formulated earlier are as follows:

Question one

- As an EFL learner, what language skill (s) do you feel good at/ better?

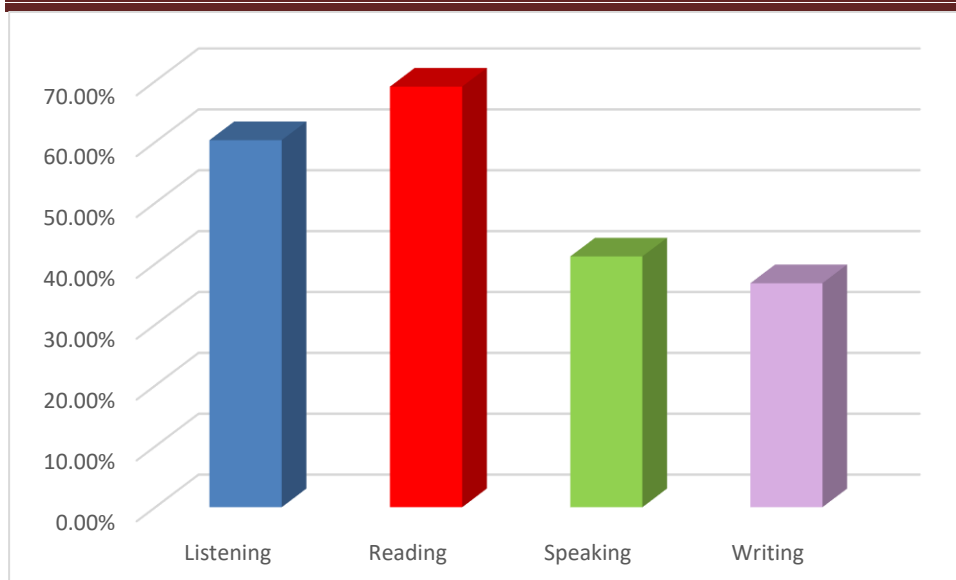


Figure 1. The language skills the EFL learners master the most

According to the above results, 69.1% of the responses suggest that reading is the skill that EFL learners are more efficient at, followed by 60.3% of the answers showing that EFL learners are good at listening. Less than half of the answers (41.2%) indicate that EFL learners are good at speaking. Only slightly more than one-third (36.8%) of the responses indicate that EFL learners are proficient in writing.

Question Two

- In what way and to what extent do (es) this skill or these skills boost your vocabulary?

Out of 68 students, 59 (86.76%) provided a variety of answers, most of which revealed that the language skills they are good at result in a well-built vocabulary, which in turn makes them communicatively competent. Some others indicated that the skills they master help them level up other skills, such as pronunciation. Reading seems more frequently used by the participants for vocabulary growth. Below are some verbatim excerpts from the students' answers.

1. "Through applying these skills, passive vocabulary will be activated or even learning a new word through its repetition by hearing it different times, reading it, writing it and speaking it."
2. "Listening and reading boost our vocabulary and understand the meaning of huge number of words so that we begin use those new words in our speaking."
3. "If you read and listen you will eventually pick up and learn new words".
4. "If I can read well, I can speak well."

5. "Speaking and reading are my strong suits ever. Since I was in middle school I can express myself clearly and help with learning new vocabularies."
6. "These activities make help you understand word usage, synonyms, and nuances, making your language more dynamic and precise."
7. "Reading and speaking are my strong suit. I can express myself better and clearly."
8. "These four skills boost vocabulary by providing exposure to new words, practicing their use, and reinforcing them through repeated application in different contexts."
9. "Reading and listening help expand my vocabulary by exposing new words in context, making it easier to remember and use them in my own conversation."
10. "Listening improved my communication skills and developed my English."
11. "Listening to podcasts, watching movies or TV shows help me learn how to use words in our daily life."
12. "Reading specifically helps a lot in boosting vocabulary. The more you read the more you will be exposed to new vocabulary."
13. "Since I read and listen it is obviously I learn new words, phrases, expressions and so on."
14. "Listening can significantly boost your vocabulary in several ways. First, you learn new words and phrases in a natural context...whereas Reading extensively and diversely can significantly boost your vocabulary. It provides continuous exposure to new words, allowing you to understand their meaning from context."
15. "Reading is a fascinating way to obtain new words"
16. "Listening, reading and writing enhance knowing new vocabularies and pronouncing them in the right way."
17. " Communication"
18. "Personally, I believe that listening has a crucial role in learning new vocabulary and also in enhancing the pronunciation."
19. "By learning new words and the way they are pronounced."
20. "Listen to English podcasts and discover new vocabulary, then trying to pronounce it as a native speaker."
21. "Listening to podcasts, watching movies or TV shows help me learn pronunciation."
22. "Reading books."

23. “The more I read the more extensive my vocabulary will be. Reading also improves my conversation and comprehension skills; it also helps develop a profound understanding of the language I read.”

Question 3

What strategy do you use to make the new vocabulary engrained in your mind? (You can select more than one strategy.)

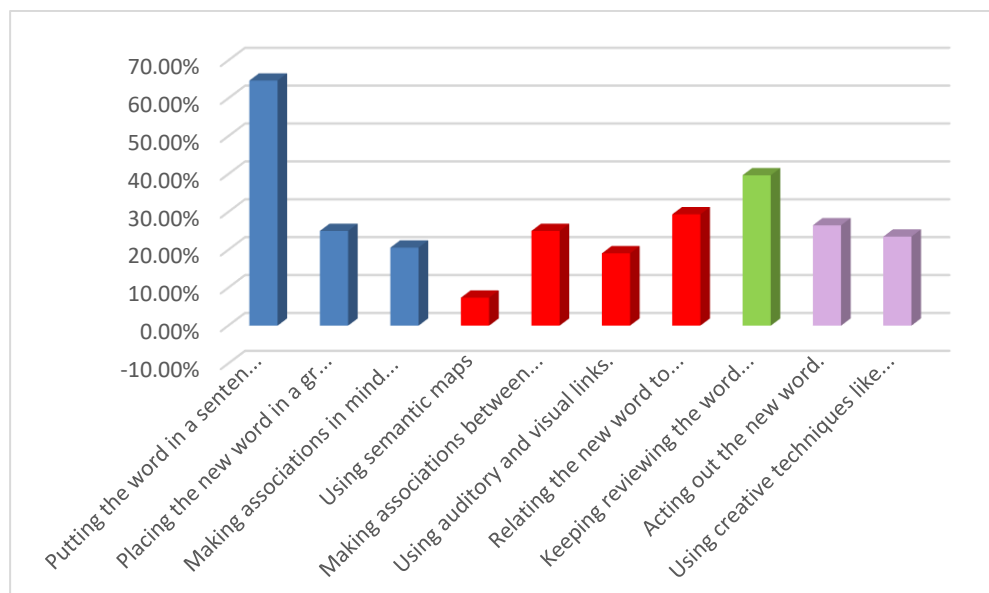


Figure 2. The Memory strategy subcategories the EFL learners use

The findings reveal that 64.7% of the students’ responses indicate that the most commonly used memory strategy subcategory among EFL learners is ‘Putting the word in a sentence or sentences’, while 39.7% of the responses indicate ‘Keeping reviewing the word already learnt while at the same time learning the new one’. 29.4% of the students’ answers suggest the use of ‘Relating the new word to the concepts in memory by means of meaningful visual imagery either in the mind or in the actual drawing’. 26.5% demonstrate the practice of ‘Acting out the new word’. ‘Placing the new word in a group with other words based on grammatical function, linguistic function, topic, synonymy, opposition, etc.’ and ‘Making an association between the sounds of the new word and the sounds of the word already learned’ are used by 25% of the students each. Less than a quarter of the responses (23.5%) denote ‘Using creative techniques like involving, moving, or changing things’. The obtained results also suggest an insignificant rate of ‘Making associations in mind in order to memorise the new word’ and ‘Using auditory and visual links, with 20.6% and 19.1%, respectively. Finally, only 7.4% of the students’ responses suggest that ‘Semantic mapping’ is the least used memory strategy subcategory.

Question 4

Put the above strategies in order of preference and efficiency, e.g., 1-H, 2-B, 3-F, etc.

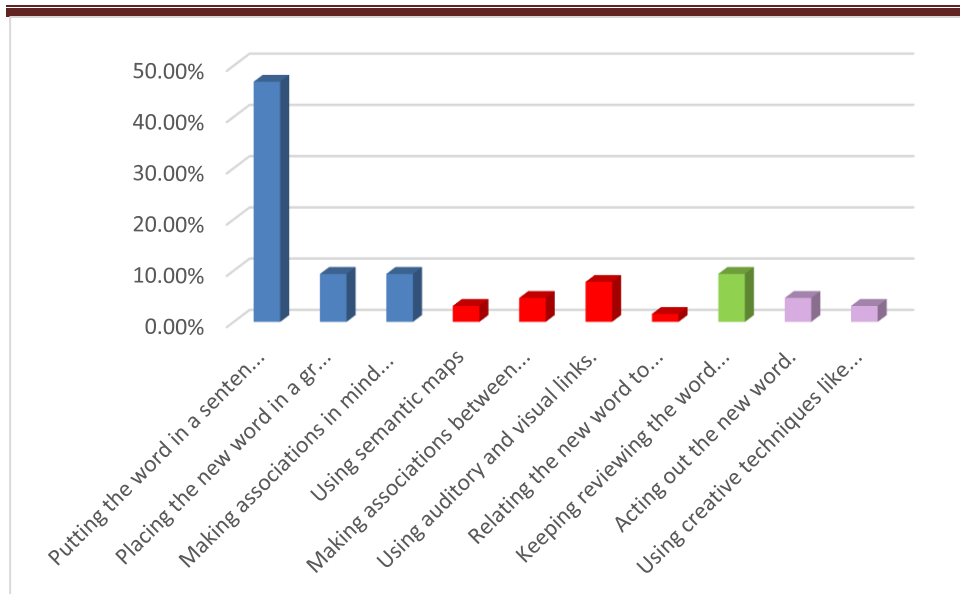


Figure 3 a. The most efficient memory strategy subcategory from the EFL learners' perspective

The above figure denotes that nearly half of the students (46.87%) find 'Putting the word in a sentence or sentences' as the most effective memory strategy subcategory. This is distantly followed by 'Making associations in mind in order to memorise the new word', 'Placing the new word in a group with other words based on grammatical function, linguistic function, topic, synonymy, opposition, etc.', and 'Keeping reviewing the word already learnt while at the same time learning the new one' that only 9.37% of the students report as effective. 'Using auditory and visual links' is claimed effective only by 7.81% of the students. Only 4.68% of the participants report the effectiveness of 'Making associations between the sounds of the new word and the sounds of the word already learnt' and 'Acting out the new word'. Seemingly, 'Using semantic maps' and 'Using creative techniques like involving, moving, or changing things' are of a minor efficacy, in that only 3.12% prefer their usage. Finally, 'Relating the new word to the concepts in memory by means of meaningful visual imagery either in the mind or in the actual drawing' emerges as the least preferred memory strategy subcategory, with only 1.56% of the respondents reporting its effectiveness.

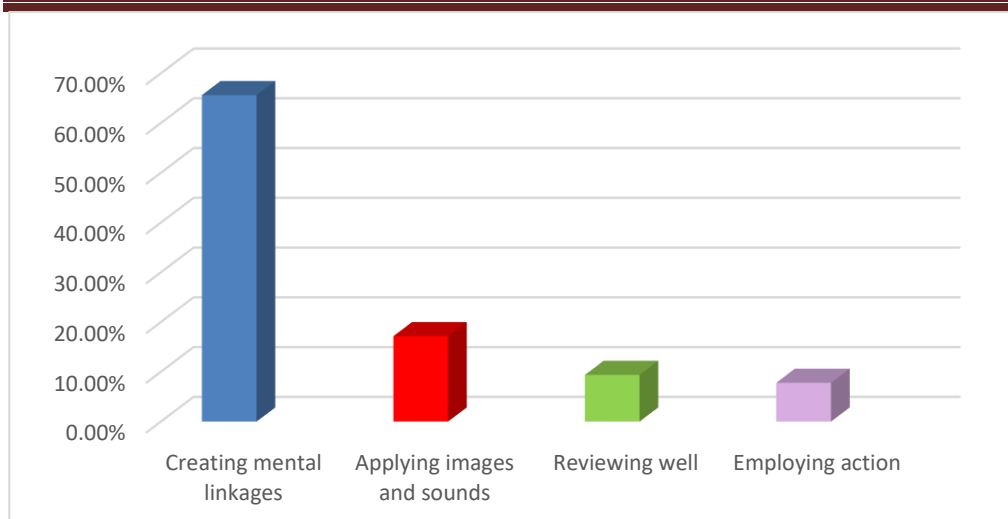


Figure 3 b. The most efficient memory strategy

The results show that the most effective memory strategy is ‘Creating mental linkages’, with the score of 65.61%, and distantly followed by ‘Applying images and sounds’ with 17.17%. ‘Reviewing well’ does not appear to be of significant efficiency, while ‘Employing action’ is reported as the least effective memory strategy.

5. Discussion

This research paper aims at supplementing earlier research on the strategies that enhance vocabulary development. Its purpose is to illustrate how EFL learners expand their vocabulary, provide an understanding of memory strategies, and demonstrate how these strategies can help them strengthen their vocabulary. It also aims to pinpoint the most effective memory strategy they use to achieve the wished-for goals. Our current research found reading to be more involved in vocabulary growth compared to the rest of the language skills. This corroborates the literature that reveals a deep and robust correlation between the EFL learners’ vocabulary knowledge and their overall language skills, with a specific emphasis on reading comprehension (Milton & Al Masrai, 2012). The findings confirm Farrant and Zubricks’ (2012) assumption about the eminence of parent-child book reading on children’s vocabulary growth. They also align with Trelease’s (2006) assertion that read-alouds and storytelling lead to a significant increase in vocabulary, in addition to fostering language, cognitive, and psychological development (as cited in Krashen, 2012). On the same wavelength, Cain and Oakhill (2011) claimed that “...poor readers may not only experience reduced growth in their literacy skills in general, they may also have fewer opportunities to learn about different topic areas and to extend language skills that can be developed through books” (p. 4). Our results

also suggest that a well-constructed vocabulary is a key to communicative competence as it enhances the learners' use of the English language in their everyday conversation for diverse purposes and in different contexts. As a matter of fact, restricted lexicon and incapacity to appropriately use vocabulary in oral interaction hamper L2 learners from expressing themselves (Nation 2001, as cited in Alharthi, 2020). Taking the primacy of vocabulary into account, Quines (2023) put it: "Vocabulary is very important because it's the medium that we can use to express our thoughts and emotions, share information and knowledge, understand others and develop different aspects of relationships" (p. 19). The pertinence of pronunciation is also reported in our investigation because "Knowing the spoken form of a word includes being able to recognize the word when it is heard and at the other end of the receptive-productive scale being able to produce the spoken form in order to express a meaning" (Nation, 2001, p. 55).

The memory strategy subcategories are seemingly used by the students at varying degrees. Students most commonly use the memory strategy subcategory of "putting the word in a sentence or sentences," which refers to incorporating new words into a context. This differs from the compensation strategy subcategory, which involves intelligently inferring the meaning of new words from the context (Oxford, 1990). This finding suggests that using the new words repeatedly and in different contexts is the highly effective memory strategy subcategory that enables EFL learners to strengthen their vocabulary. This is because repeated exposure to specific words in various situations leads to enhanced learning and improved word retention, to the point that these words become automatic (Stahl & Fairbanks, 1986 as cited in Venetis, 1999). In line with this assumption, Klesius and Searls (1991, p. 69) contended that "automatic association of meanings with words is as important as automatic pronunciation of words since either requires attention required for comprehension" (quoted in Venetis, 1999, p. 2). On the other flip of the coin, using semantic mapping appears to be the least used memory strategy subcategory. This may be due to the fact that the EFL learners find it a consuming subcategory. Consequently, these learners flee it for being ineffective. In this respect, de la Garza and Harris (2016) pointed out that many language learners often give up on a strategy because they feel discouraged and demotivated by what they perceive to be insufficient results.

Vocabulary growth through association, which includes associating/elaborating, representing sounds in memory, using imagery, and using keywords, appears to be employed only to a certain extent. Making associations in mind in order to memorise the new word, which refers to associating/elaborating, and where the students could learn, for instance, the new word

“**Blacksmith**” by associating this word with ‘**Smith**’, the man who is ‘**black**’ because of the iron forging, is found to be of a little allure. Our EFL learners also don’t seem to be good enough at associating between the sounds of the new word and the sounds of the word from any language, in our case, English, French, or Arabic words that they already know. This falls under **representing sounds in memory**, where our EFL learners could associate between the English word ‘serge’ /sɜːdʒ/ (woollen fabric) and the Arabic word ‘سرج’/sirʒ/ (saddle), or between the English word ‘syndrome’ /sɪndrəʊm/ with English words ‘sin’ /sɪn/ + drum /drʌm/. This study also shows that the EFL learners could scarcely use imagery in which they would associate, for example, the new word ‘**peace**’ with a dove carrying an olive branch. Finally, using auditory and visual links, which refers to **using keywords**, does not seem to be highly used by the EFL learners under study. In this strategy, **the learners** identify a familiar word that sounds like the new word, and then they generate an image of some relationship between the new word and a familiar one. For instance, to learn the new English word ‘**grab**’ /græb/, they could associate it with the Arabic word ‘غراب’ /ɣurab/ (crow), then picture a crow grabbing food from their hand. Notwithstanding the simplicity and practicality of this association processing, these memory strategy subcategories are reported deficient. The students’ failure to construct vocabulary through the associating process may be attributed to the lack of instruction, training, or information from their teachers regarding the effectiveness of this memory strategy subcategory. Those who find it effective may well use it by intuition. Keeping reviewing the word already learnt while at the same time learning the new one is moderately used by the EFL learners under study, therefore effective to a certain degree, although it is “...especially useful for remembering new material in the target language.” (Oxford, 1990, p. 66), and “If a learner has not reviewed vocabulary words for a long time, memory retention will gradually decrease over time.” (Chen & Chung, 2008, p. 633). It has been suggested that productive learning comes as a result of spaced reviewing (Oxford, 1990; Nation 2001) because “The general principle which lies behind the spacing is that the older a piece of learning is, the slower the forgetting.” (Nation, 2001, p. 116). The obtained results may be explained by the fact that these learners are unaware of how to organise reviewing throughout the item learning period, from the time they first encounter the vocabulary until they become familiar with it. The results evidence the substandard efficiency of ‘Acting out the new word’, which falls under Employing action, even though it is more frequently used than half of the memory strategy subcategories. This could indicate that these students use this memory strategy subcategory randomly or delay enactment, despite the fact that enactment during learning improves retention (Zimmer 2001a, as cited in Macedonia & von Kriegstein, 2012, p. 393). With a focus on memory strategies in

terms of efficacy, our investigation unveiled the high efficacy of the ‘Creating mental linkages’ strategy. Its effectiveness may be attributed to its motivating effortlessness and straightforwardness, which incite and encourage learners to process information spontaneously or without delay. This memory strategy superiority may also be due to the fact that ‘Creating mental linkages’ are “... the most basic memory strategies and the foundation of more complex memory strategies.” (Oxford, 1990, p.58).

6. Limitations and Pedagogical Implications

This research paper aims to explore how the EFL learners develop their vocabulary and shed light on the memory strategies that help them construct a strong vocabulary; it also seeks to identify the most effective memory strategy used to attain the desired ends, using a sample of 68 students. Hence, the findings cannot be applied to all the EFL learners. Another methodological limitation concerns the summer holiday period during which the questionnaire was sent—the fact that may have constrained the students’ participation. The paper at hand recalls the importance of implementing teaching vocabulary in higher education. It adds to the existing literature demonstrating the potency of vocabulary instruction (Oxford, 1990, 2017; Nation, 2001). The findings suggest an array of practical implications for higher education and address all the parties, including the decision-makers, teachers, and students. They urge decision-makers to integrate modules and training sessions designed for teaching and learning strategies for vocabulary development into the higher education curriculum. The results also encourage teachers to read more and gain a deeper understanding of how to teach strategies that aid students in developing a robust vocabulary that aligns with their needs. Finally, they raise students’ awareness about the use of memory strategies alongside cognitive and compensation strategies, emphasising the equal application of all memory strategy subcategories as a substantial key to receptive and productive competencies.

7. Conclusion and Recommendations

This scientific investigation is intended to explore how the EFL learners develop their vocabulary, unveil the memory strategies that they utilise to strengthen it, and discern the most efficient memory strategy for vocabulary development. Grounded on the findings, we can conclude that most EFL learners build their vocabulary through reading and typically use the memory strategy subcategory, which involves incorporating the newly learnt words into a context. The EFL learners under study are reported not to be that good and therefore struggle to learn vocabulary through associations. The ‘Creating mental linkage’ memory strategy is revealed to be the most effective memory strategy due to its simplicity. These conclusions make

us call for an urgent implementation of modules and training sessions that particularly cover strategies for vocabulary learning. The EFL learners should be provided with significant teaching based on their needs, be given the opportunity to choose the strategy they feel comfortable with, and be encouraged for the choice they make (Oxford, 2017). Along with cognitive and compensation strategies, students should also build their vocabulary by practicing all memory strategy subcategories, with a greater emphasis on learning through associations.

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Appendix

Students' Questionnaire

Dear student,

This questionnaire is a part of a research project on English learning and teaching. Please answer the questions honestly. Thank you for your invaluable contribution and kindly answering the questionnaire.

Section A

- 1- Grade:
- 2- Country:
- 3- University

Section B

- 1- As an EFL learner, what language skill(s) do you feel you are good at/better at?

Listening ☐ Reading ☐ Speaking ☐ Writing ☐

- 2- In what way and to what extent do(es) this skill or these skills boost your vocabulary?

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- 3- What strategy do you use to make the new vocabulary engrained in your mind? (you can select more than one strategy)

A- Putting the word in a sentence or sentences. In other words, you use it in a meaningful sentence, conversation or story.

B- Using semantic maps, in that you write a concept at the top or at the centre of a paper, then you relate the new words linked to the key concept by means of lines or arrows.

C- Making associations in your mind, e.g., in order to memorize the new word “**Blacksmith**”, you associate this word with ‘**SMITH**’, the man who is ‘**BLACK**’ because of the iron forging.

D- Placing the new word in a group with other words based on grammatical function, linguistic function, topic, synonymity, opposition, etc.

E- Making association between the sounds of the new word and the sounds of the (English, Arabic or French) word that you already know.

F- Acting out the new word, e.g., you act laughing when you learn the verb ‘to laugh’, or you associate the new word with the physical feeling or sensation, e.g., comfortable, hungry, fear, etc.

G- Using creative techniques like involving, moving, or changing things, e.g., writing words on cards, and moving cards from one stack to another when the words are learned.

H- Using auditory and visual links. That’s to say, you identify a familiar word that sounds like the new word, then you generate an image of some relationship between the new word and a familiar one.

I- Keeping reviewing the word that you have already learnt at the same time that you are learning a new one.

J- Relating the new word to the concepts in memory by means of meaningful visual imagery either in the mind or in the actual drawing, e.g., you associate the new word ‘peace’ with a dove carrying an olive branch.

4- Put the above strategies in order of preference and efficiency, e.g., **1-H, 2-B, 3-F**, etc.