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The Department of Foreign Language Education  
English Language Teaching Program

Master Thesis

**THE EFFECTS OF SEMANTIC MAPPING STRATEGY ON LEARNING  
PERFORMANCES OF PREP STUDENTS: DIGITAL VS PAPER-BASED**

Banu BİLİR  
ORCID: 0000-0003-4573-0878

Danışman  
Asst. Prof. Dr. Emine Eda ERCAN DEMİREL  
ORCID: 0000-0001-7686-1550

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*In the loving memory of my late father*

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## TEZ ÇALIŞMASI ORJİNALLİK RAPORU

*The Effects of Semantic Mapping Strategy on Learning Performances of Prep Students: Digital Vs Paper-Based* başlıklı tez çalışmamın toplam **114** sayfalık kısmına ilişkin, [11/07/2023] tarihinde tez danışmanım tarafından **Turnitin** adlı intihal tespit programından aşağıda belirtilen filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı **% 24** olarak belirlenmiştir.

Uygulanan filtrelemeler:

1. Tez çalışması orijinallik raporu sayfası hariç
2. Bilimsel etik beyannamesi sayfası hariç
3. Önsöz hariç
4. İçindekiler hariç
5. Simgeler ve kısaltmalar hariç
6. Kaynaklar hariç
7. Alıntılar dahil
8. 7 kelimedenden daha az örtüşme içeren metin kısımları hariç

Necmettin Erbakan Üniversitesi Tez Çalışması Orijinallik Raporu Uygulama Esaslarını inceledim ve tez çalışmamın, bu uygulama esaslarında belirtilen azami benzerlik oranının (%30) altında olduğunu ve intihal içermediğini; aksinin tespit edileceği muhtemel durumda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.

[13/07/2023]

Banu BİLİR

Dr. Öğr. Üyesi Emine Eda ERCAN DEMİREL

## **BİLİMSEL ETİK BEYANNAMESİ**

Bu tezin tamamının kendi çalışmam olduğunu, planlanmasından yazımına kadar tüm aşamalarında bilimsel etiğe ve akademik kurallara özenle riayet edildiğini, tez içindeki bütün bilgilerin etik davranış ve akademik kurallar çerçevesinde elde edilerek sunulduğunu, ayrıca tez hazırlama kurallarına uygun olarak hazırlanan bu çalışmada başkalarının eserlerinden yararlanılması durumunda bilimsel kurallara uygun olarak atıf yapıldığını ve bu kaynakların kaynaklar listesine eklendiğini beyan ederim.

[13/07/2023]

Banu BİLİR

## LIST OF ABBREVIATIONS

<b>CASM</b>	: Computer-Assisted Semantic Mapping
<b>DEU</b>	: Dokuz Eylül University
<b>EFL</b>	: English as a Foreign Language
<b>ELT</b>	: English Language Teaching
<b>ESP</b>	: English for Specific Purposes
<b>LLSs</b>	: Language Learning Strategies
<b>SM</b>	: Semantic Mapping
<b>VLSs</b>	: Vocabulary Learning Strategies



## ABSTRACT

Necmettin Erbakan University, Graduate School of Educational Sciences  
Department of Foreign Language Education  
English Language Education Program  
Master Thesis

### **THE EFFECTS OF SEMANTIC MAPPING STRATEGY ON LEARNING PERFORMANCES OF PREP STUDENTS: DIGITAL VS PAPER-BASED**

Banu BİLİR

This study aims to compare the effects of semantic mapping strategy between digital and non-digital means on vocabulary learning in ELT. A quasi-experimental research design was used to conduct the study. The study involved 42 students from the School of Foreign Languages at Dokuz Eylül University studying at various departments such as engineering, international relations, tourism management and international trade in two regular prep classes for English. The participants were divided equally between the two experimental groups. Digital semantic mapping was used by the Experimental group 1 while paper-based semantic mapping was employed by the Experimental group 2. The implementation lasted for six weeks. Quantitative data was collected by a pre-test and a post-test developed and organized by the researcher. The same reading materials and procedures were applied to both groups throughout the process of the implementation. The results of the statistical study were calculated using the T-test. Scores from the pre-tests and post-tests were compared to see how well the implementation worked. Also, a structured interview was employed in order to collect further data. At this stage, a total of 10 students were interviewed, five students from the digital semantic mapping group and five students from the paper-based semantic mapping group. The analysis of the quantitative data demonstrated that there was not a significant difference between the two experimental groups. The positive results of the digital semantic mapping group and the paper-based semantic group have suggested that semantic mapping is an effective strategy for learning new vocabulary no matter how it is applied, with digital means or paper-based. However, the interview results showed that students who used the semantic mapping strategy with digital means were found to be comparatively more eager and motivated to utilize the semantic mapping strategy for vocabulary learning after the implementation as they are digital natives.

**Key words:** Semantic mapping strategy, digital semantic mapping, paper-based semantic mapping, vocabulary learning, digital natives.

## ÖZET

Necmettin Erbakan Üniversitesi, Eğitim Bilimleri Enstitüsü  
Yabancı Diller Eğitimi Anabilim Dalı  
İngiliz Dili Eğitimi Bilim Dalı  
Yüksek Lisans Tezi

### ANLAMSAL HARİTALAMA STRATEJİSİNİN HAZIRLIK SINIFI ÖĞRENCİLERİNİN ÖĞRENME PERFORMANSLARINA ETKİSİ: DİJİTAL VE GELENEKSEL

Banu BİLİR

Bu çalışmanın amacı, anlamsal haritalama stratejisinin İngilizce kelime öğrenimi üzerindeki etkilerini dijital ve dijital olmayan yöntemler uygulayarak karşılaştırmaktır. Çalışmayı yürütmek için yarı deneysel bir araştırma deseni kullanılmıştır. Çalışmaya Dokuz Eylül Üniversitesi Yabancı Diller Yüksekokulu'nda okumakta olan mühendislik, uluslararası ilişkiler, turizm işletmeciliği ve uluslararası ticaret gibi çeşitli bölümlerde okuyacak 42 öğrenci katılmıştır. Katılımcılar iki deney grubu arasında eşit olarak paylaştırılmıştır. İki grupta yer alan öğrenciler iki farklı hazırlık sınıfında eşit şartlarda eğitim görmektedir. Deney grubu 1 tarafından dijital anlamsal haritalama kullanılırken, Deney grubu 2 tarafından kâğıt tabanlı anlamsal haritalama kullanılmıştır. Nicel veriler, araştırmacı tarafından geliştirilen ve düzenlenen bir ön test ve bir son test ile toplanmıştır. Uygulama süreci boyunca her iki gruba da aynı okuma materyalleri ve prosedürler uygulanmıştır. İstatistiksel çalışmanın sonuçları T-testi kullanılarak hesaplanmıştır. Uygulamanın ne kadar işe yaradığını görmek için ön testlerden ve son testlerden alınan puanlar karşılaştırılmıştır. Ayrıca, daha fazla veri toplamak için yapılandırılmış bir mülakat kullanılmıştır. Bu aşamada, dijital anlamsal haritalama grubundan beş öğrenci ve kâğıt tabanlı anlamsal haritalama grubundan beş öğrenci olmak üzere toplam 10 öğrenciyle görüşülmüştür. Nicel verilerin analizi, iki deney grubu arasında anlamlı bir fark olmadığını göstermiştir. Dijital anlamsal haritalama grubunun ve kâğıt tabanlı anlamsal haritalama grubunun olumlu sonuçları, anlamsal haritalamanın dijital araçlarla veya kâğıt tabanlı olarak nasıl uygulandığına bakılmaksızın yeni kelime öğrenmek için etkili bir strateji olduğunu göstermiştir. Bununla birlikte, mülakat sonuçları, anlamsal haritalama stratejisini dijital araçlarla kullanan öğrencilerin, dijital yerliler oldukları için uygulama sonrasında kelime öğrenimi için anlamsal haritalama stratejisini kullanmaya nispeten daha istekli ve motive olduklarını göstermiştir.

**Anahtar Kelimeler:** Anlamsal haritalama stratejisi, dijital anlamsal haritalama, kâğıt tabanlı anlamsal haritalama, kelime öğrenme, dijital yerliler.

## CHAPTER 1

### 1. INTRODUCTION

This chapter briefly outlines the background of the problem in order to highlight the role of semantic mapping strategy in vocabulary learning. It is followed by the purpose and the significance of the study. After that, the research questions, limitations and definitions of key terms are presented respectively.

#### 1.1. Background of the Problem

Learning a foreign or second language is a complex process because of its various circumstances and linguistic issues. In this regard, a variety of factors must be considered such as learning styles and strategies, teaching techniques and motivation in the language learning process. Some research shows that vocabulary is as important as grammar over time despite the common belief that grammar is the most significant part of language learning. Harmer (1991, p. 153) states that “if language structure makes up the skeleton of the language, then it is vocabulary that provides the vital organs and the flesh”. Students are supposed to be rich in vocabulary both for communication and the effective use of the language. Wilkins (1972, pp. 111-112) also pinpoints that “while without grammar very little can be conveyed, without vocabulary nothing can be conveyed”. Although vocabulary learning has a vital effect on language learning, it has not been given the importance it deserves. As students do not have enough knowledge about vocabulary learning strategies, they generally prefer traditional strategies such as listing, using a dictionary, or learning the meaning of the necessary vocabulary from the teacher. Even though these strategies allow them to acquire information and understand the meaning of the sentence or text instantly, they cannot acquire the target vocabulary in the long term.

In addition, reading comprehension and vocabulary knowledge are closely related to one another so it is crucial for language learners to have strong vocabulary knowledge to become successful learners. Learners need to be familiar with the vocabulary used in the texts in order to comprehend the sentences utilized in the text. It is also needed to understand the entire text. Language learners find it challenging to understand the meanings of all the words in a text. Therefore, they must develop some strategies for understanding and inferring unknown words from the reading text. Semantic mapping is one of those strategies. It is

ateaching and learning strategy that integrates knowledge and ideas in a context that is easy to understand and remember.

Semantic mapping strategy may be regarded as one of the most beneficial learning resources. According to Rosário (2021, p. 34), semantic mapping is a useful learning strategy because it helps learners visualize, categorize and observe how words and concepts are related to one another semantically thanks to their relationships and interconnected networks. Background knowledge is a crucial concept for semantic mapping strategy. This strategy helps learners integrate new information with background knowledge. The importance of background knowledge or schemata in the learning process has led to an understanding of the significance of semantic mapping. The learner has the chance to recall, arrange, and graphically depict the information read thanks to semantic mapping. Participating in a semantic mapping exercise prompts students to think about their background knowledge of the topic and offers an effective means of enhancing important words and enables them to integrate the new language into their previous schemata. By grouping known words into a network of words with similar semantic features, semantic mapping helps learners acquire new words.

With the advance of technology, the strategies utilized by the learners have also changed in light of the use of digital resources in second and foreign language learning. Therefore, learners have started to use various devices and online sources to create semantic maps on digital platforms with an increasing interest in digital resources for language learning.

## **1.2. Purpose of the Study**

Vocabulary development is crucial in the process of learning a language. It is also really important for understanding, using and improving communication skills. This leads the students to learn vocabulary more efficiently. In this context, one of the purposes of this study is to find out whether different vocabulary learning strategies such as the semantic mapping strategy may help students learn the target vocabulary effectively.

The development of technology has also necessitated learners to seek out many sources to broaden their vocabulary knowledge and as the students in the study are digital natives, they incorporate technology into their learning process so it may be thought that they learn the new words more easily by using digital means. Learners choose to incorporate technology into their learning process and find out different learning strategies to acquire vocabulary more

efficiently both digitally and non-digitally. The other purpose of the study is to determine whether the semantic mapping strategy using digital and non-digital means is significantly different from one another in terms of vocabulary learning.

Thus, the present study mainly aims to investigate whether the semantic mapping strategy is an effective way for learning new vocabulary in accordance with its implementation and whether there is a significant difference in terms of vocabulary learning between the semantic mapping strategy through digital and non-digital means.

### **1.3. Significance of the Study**

Vocabulary learning is one of the most essential parts of the language learning process. However, it is one of the most difficult parts that students deal with. Students need to have vocabulary knowledge to understand what they read and communicate in the target language. When they do not have a good command of vocabulary learning strategies, they often do not know which strategy is most efficient for them.

It is believed that students learn more effectively when they make an effort or when they are involved in the studies to acquire the target vocabulary or structure. Therefore, the semantic mapping strategy may draw the attention of the students and make them actively participate in the learning process, as they will have an active role with the help of the teacher. That is, techniques like the semantic mapping strategy, in which students play an active role in the learning process, may be useful for vocabulary learning.

Semantic mapping strategy may also assist students both to recall background knowledge and to create a visual picture in their minds by combining the words they have already learned with the words they are learning at the time. Taking part in implementation in which they have active roles may contribute to students' vocabulary learning and make them use this strategy in their own language learning process.

This study will provide data on the vocabulary learning strategies of the learners and the digital vs paper-based choices of them. In addition, they are expected to create visual image using their background knowledge. Given that this strategy is new to students, they are likely to be interested in and engaged during the activity. In particular, the idea that the final outcome will be something they have created themselves will inspire the students to apply this strategy in terms of vocabulary learning.

#### **1.4. Research Questions**

This study aims to investigate the answers to the research questions below:

1. Is there a significant difference between the pre-test and post-test scores of the digital semantic mapping group?
2. Is there a significant difference between the pre-test and post-test scores of the paper-based semantic mapping group?
3. Is there a significant difference between the post-test scores of the digital semantic mapping group and the paper-based semantic mapping group in terms of their improvement?
4. Is the semantic mapping strategy an effective way to learn new words for both the digital semantic mapping group and the paper-based semantic mapping group?

#### **1.5. Limitations of the Study**

This study was carried out with the participation of students of the intermediate level at Dokuz Eylül University in Izmir in the 2022-2023 academic year. The study was limited to two intermediate level groups of prep classes. It was also limited to the instructors and the instructional materials of the university. Finally, the time frame of this study was limited to six weeks. In order to give the learners more effective training, the implementation time might be prolonged.

#### **1.6. Definitions of Key Terms**

*Digital Semantic Mapping:* A clear visual tool that facilitates the organization of thoughts into a visible, sequential framework developed through various types of software.

*Semantic Mapping Strategy:* The process of employing a word cloud or web to create a visual representation of connected concepts to help learners remember, identify and understand the words.

*Language Learning Strategies:* The procedures and behaviors that language learners intentionally employ to help them learn or utilize a language more effectively.

*Vocabulary Learning Strategies:* Learners' attitudes or actions that help them acquire words more effectively.

## CHAPTER 2

### 2. REVIEW OF LITERATURE

#### 2.1. Introduction

In this chapter, comprehensive information on language learning strategies, vocabulary learning strategies, and semantic mapping strategy are provided.

#### 2.2. Language Learning Strategies

Learners have started utilizing learning strategies in a variety of educational contexts, one of which is learning a second or foreign language since the importance of learning strategies in the field of education was acknowledged. Using Language Learning Strategies (LLSs) has increased the essence of learning and as a result, language researchers and educators have grown interested in LLSs over time.

As a way of referring to the learning strategies, several researchers use various terms. For instance, they are referred as “learner strategies” by Rubin and Wender (1987), “learning strategies” by O’Malley and Chamot (1990), and “language learning strategies” by Oxford (1990).

There are various definitions as well as terms. Although the term LLSs is frequently used in foreign or second language teaching and learning, there is not only one meaning that is universally acknowledged (Takač, 2008). For example, according to Tarone (1983, p. 67), a learning strategy is an effort to improve one’s sociolinguistic and linguistic proficiency in the target language in order to include it in one’s interlanguage competence. Rubin (1987, p.22) defines a learning strategy as the process through which information is collected, stored, recalled, and utilized. As for Oxford (1990, p. 8), a learning strategy is a specific step performed by the learner to increase learning’s ease, speed, enjoyment, self-direction, effectiveness, and capacity to transfer to other settings. Learning strategies are also identified as “the distinctive ideas or actions people employ to understand, find out, or remember new information (O’Malley and Chamot 1990, p. 1). Ellis (1995) defines them as mental or behavioral actions connected to some specific stages in the process of language learning and usage while Cohen (1998) emphasizes that learning strategies are actions chosen purposefully by learners to advance the acquisition or application of the target language. Purpura (1999) expands the term language learning strategies by defining them as any intentional or unintentional behaviors utilized in language acquisition, practice, or testing. Furthermore,

Griffiths (2004) describes LLSs as both mental and physical activities that students intentionally choose to control and arrange their language learning process.

As already stated, several definitions of learning strategies have been put forth by researchers. Even though LLSs are referred to differently by various researchers, there are some fundamental characteristics that they all agree upon. For example, Oxford (1990, p. 9) lists the common characteristics of LLSs as below: “1) contribute to the main goal, communicative competence, 2) allow learners to become more self-directed, 3) expand the role of teachers, 4) are problem-oriented, 5) are specific actions taken by the learner, 6) involve many aspects of the learner, not just the cognitive, 7) support learning both directly and indirectly, 8) are not always observable, 9) are often conscious, 10) can be taught, 11) are flexible, 12) are influenced by a variety of factors (motivation, the proficiency level of the learner, age, gender, nationality/ethnicity, career orientation, learning style)”. Oxford (2003, p. 2) also states that LLSs become a “useful toolkit for active, conscious, and purposeful self-regulation of learning” when a language learner consciously selects them during the language acquisition process in accordance with their learning styles”.

### **2.3. Classifications of Language Learning Strategies**

Language learning strategies have been classified by many key researchers in the field, including Rubin (1987), O’Malley and Chamot (1990), Oxford (1990), Stern (1992), Cohen (1996). Almost two dozen L2 strategy classification schemes have been characterized by various scholars (Oxford, 1990, p. 4). Still, the majority of these attempts at language learning strategies mirror the same classifications without making significant differences from one another. Moreover, there is no agreement on the types of strategies, the number of strategies, or the definitions and classifications of language learning strategies (Oxford, 1990, p. 17). Similarly, Gu and Johnson (1996) point out that it is sometimes difficult for these researchers to properly arrange LLS inside their categorization schemes. Rubin (1987) identifies three categories of learner strategies as *learning strategies*, *communication strategies*, and *social strategies*. These strategies might be utilized either directly or indirectly to aid in language learning. His classification might be thought of as the introduction of language learning strategy research (Grenfell and Macaro, 2007). O’Malley and Chamot (1990) establish three types of strategies: *metacognitive*, *cognitive*, and *social/affective strategies*. Oxford (1990) also provides two significant language learning strategy categories. She classifies them as *direct* and *indirect strategies* in accordance with how each strategy affected language learning.

Memory, cognitive, and compensatory strategies were examples of the direct strategies while metacognitive, affective, and social strategies were included in the indirect strategies. Stern (1992) proposes five LLSs categories as management and planning strategies, cognitive strategies, communicative-experiential strategies, interpersonal strategies, and affective strategies (pp. 262-266). The most common classifications are those of Rubin (1987), O'Malley and Chamot (1990), Oxford (1990), and Stern (1992). These classifications will be handled in further detail below.

### **2.3.1. The classification of Rubin**

Rubin began doing research in 1971 to find out what strategies effective language learners use so that the information might be made available to those who were less successful. Rubin (1975, p. 43) defines strategies as “the techniques or devices which a learner may use to acquire knowledge”. However, in 1981, she classified them in terms of processes that influence language learning both directly and indirectly. This was based on the behaviors and situations that were identified via learners’ reports or observations as contributing to language learning. Later in 1987, language learning strategies, which are identified as learner strategies by Rubin, are divided into three categories: *learning*, *communication*, and *social strategies*. Learners use these strategies either directly or indirectly to learn a language. The first category in Rubin’s classification is learning strategies, which are known as “direct strategies” because of their direct involvement in learning. They include cognitive and metacognitive strategies. Cognitive learning strategies are the actions or procedures employed in educational or problem-solving tasks that call for direct analysis, transformation, or synthesis of learning resources. On the other hand, metacognitive learning strategies entail numerous procedures, such as goal-setting, prioritization, planning, and self-management, to be employed to manage, check, or self-direct language learning. In contrast to learning strategies, communication and social strategies support language learning implicitly. Therefore, they are referred to as “indirect strategies” (Rubin, 1987).

*Communication strategies* are the second category in Rubin’s classification. Brown (1980, p. 87) exemplifies the distinct contrast between communication and learning strategies by stating that while learning is an input modality, communication is an output modality. Communication strategies emphasize how to take part in a conversation and convey meaning

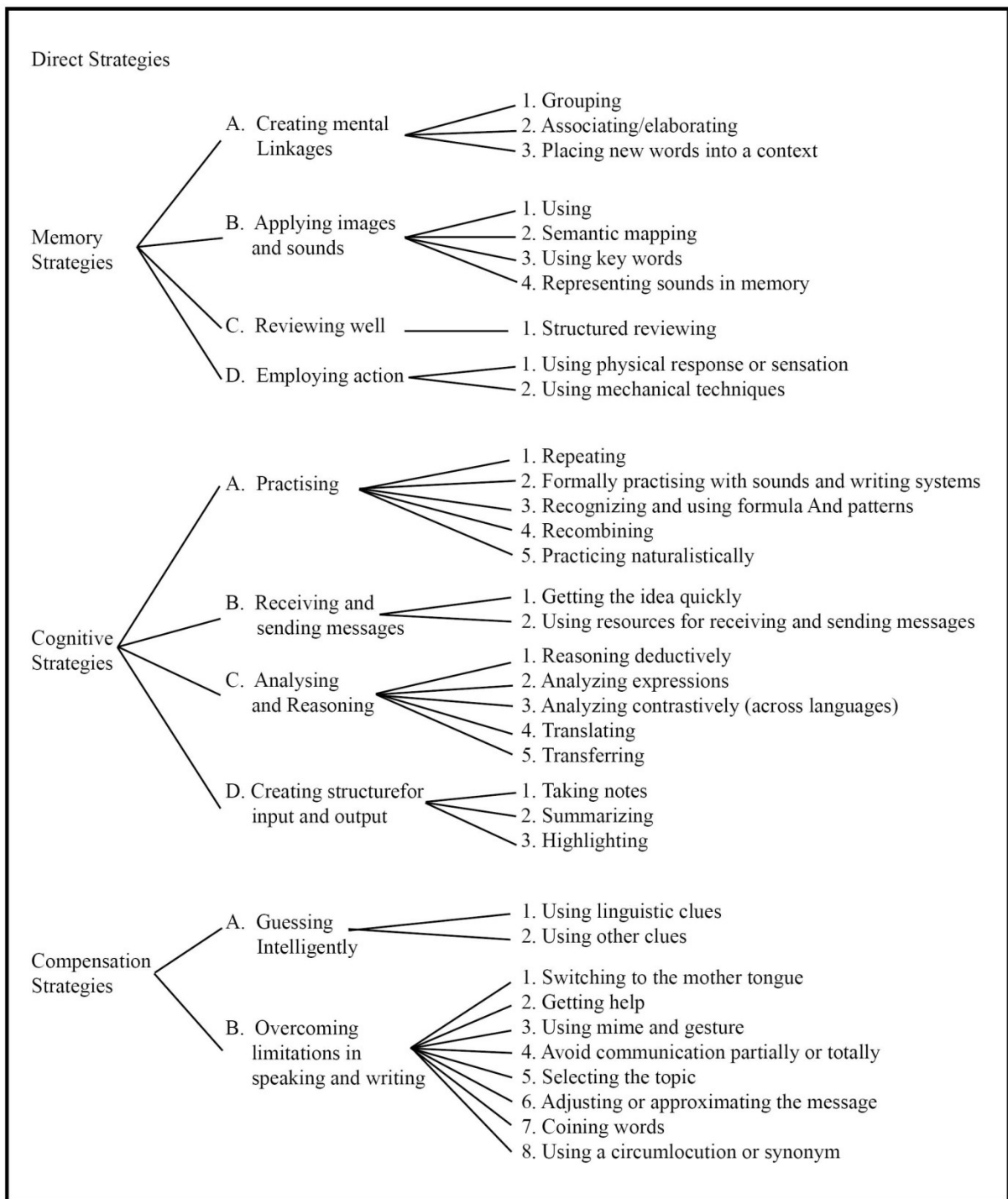
or clearly state what the speaker meant to say. They are employed when the learners face a misunderstanding by a co-speaker to clarify the situation (Hardan, 2013, p. 1719).

The last category is *social strategies*. Social strategies are used when learners are given tasks that give them chances to apply and expose their knowledge. Rubin and Wender (1987) suggest that social strategies not only expose learners to the target language but also assist them in acquiring, storing, retrieving, and using it indirectly.

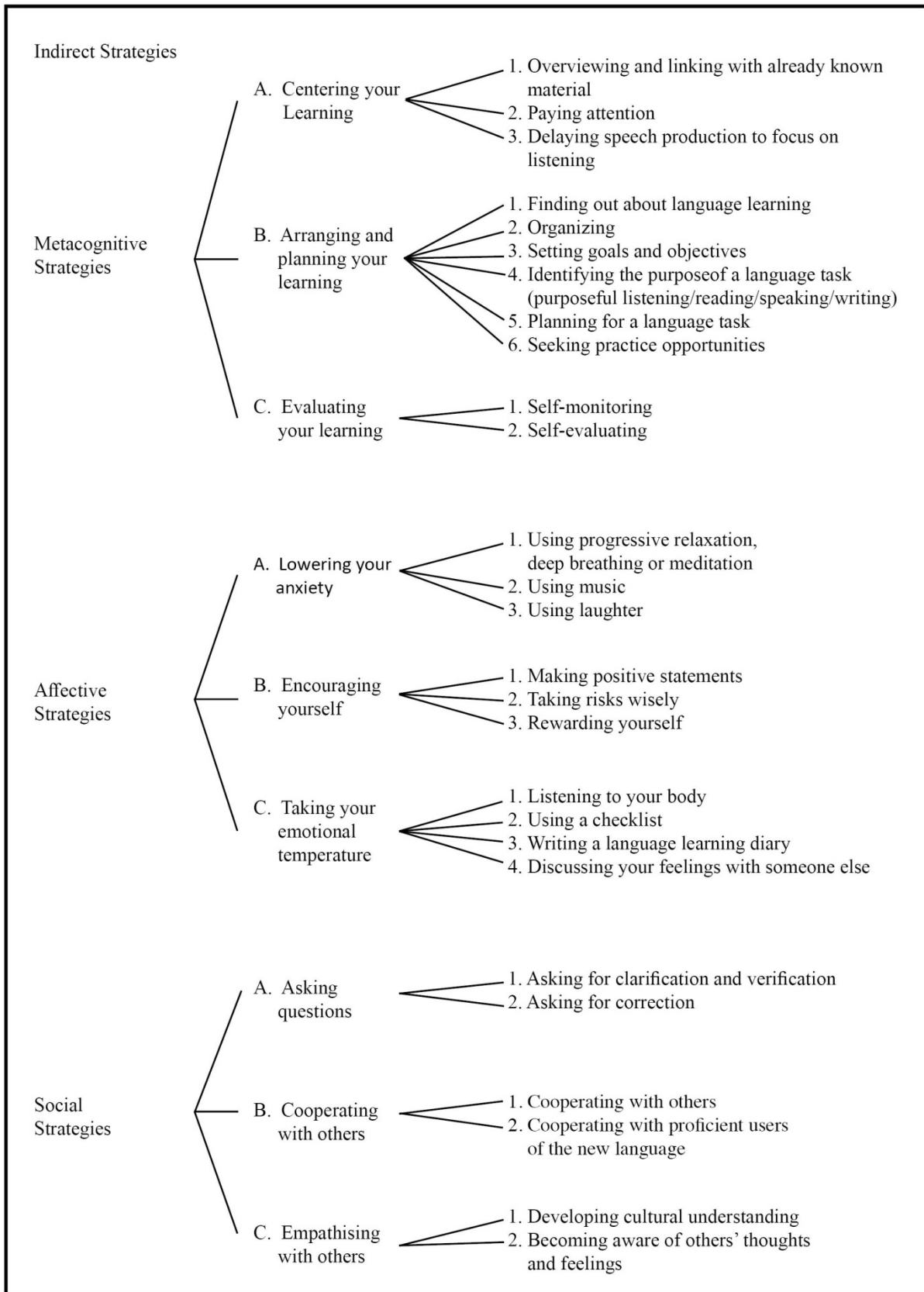
### **2.3.2. The classification of Oxford**

Oxford (1990) attempts to arrange the most comprehensive classification of all language learning strategies. It is said to be the first classification to organize language learning strategies into a hierarchy (Kulikova, 2015, p. 24). In fact, her classification does not significantly differ from the ones that have already been mentioned. There is a substantial overlap between O'Malley's and Oxford's taxonomies. The inclusion of compensation strategies which were not previously covered by any of the major categorization systems marks Oxford's classification as completely distinct.

Oxford's classification of language learning strategies consists of two main categories: Direct and Indirect Strategies. Each category is subdivided into three groups with several different strategy sets consisting of up to eight strategies. *Memory*, *cognitive*, and *compensation* strategies are the sub-categories of *direct strategies* while *metacognitive*, *affective*, and *social* strategies are the sub-categories of *indirect strategies*. As seen in Figures 2.1 and 2.2, there are 62 individual strategies throughout the classification she puts forward:



**Figure 2.1.** Diagram of Oxford’s strategy classification system (Direct Strategies) (Oxford, 1990, pp. 18-19).



**Figure 2.2.** Diagram of Oxford's strategy classification system (Indirect Strategies) (Oxford, 1990, pp. 20-21).

Oxford (1990) supports language learning indirectly by empowering learners to take charge of their own learning by organizing, planning, and assessing their progress. The

control of language development is enhanced by indirect strategies. Although they do not immediately aid in language learning, they do help to influence it by increasing learners' awareness and encouraging them to create objectives and organize their own learning. According to Oxford (1990), direct strategies resemble the performers playing on a stage while indirect strategies resemble the director of the same play. The director, who is in charge of organizing, directing, checking, correcting and motivating the performers, works alongside them while they work with the language itself. Both groups collaborate closely and are inseparable from one another.

### ***Direct strategies***

The actions involving direct language use in the learning process are known as direct strategies. As mentioned above, direct strategies are divided into three sub-categories: *Memory, Cognitive and Compensation Strategies*.

#### ***1. Memory strategies***

Memory strategies are “techniques specifically tailored to help the learner store new information in memory and retrieve it later” (Oxford, 1990, p. 39). The essential tenets of memory strategies include regulation, association, and repetition. They help learners store and retrieve their knowledge of the target language, and they are particularly successful in resolving the difficulties associated with learning and remembering new words. The four fundamental techniques for developing memory strategies are:

*Creating Mental Linkages* includes grouping, associating/elaborating and placing new words into a context. Language resources can be divided into useful context-based components with the use of grouping. Learners can connect and correlate word-based ideas in their memories by combining their existing knowledge with new information using associating and elaborating procedures. Putting new vocabulary in context is a strategy that enables learners to recall words or phrases by linking them with a context that makes sense.

*Applying Images and Sounds* involves using imagery, semantic mapping, using keywords and representing sounds in memory. Learners connect their background knowledge with the new information they have learnt by creating or using visual images through the use of imagery strategies. Semantic mapping is the process of grouping and placing words into categories that are connected to one another in order to help learners build and increase their vocabulary knowledge. Learners are able to plan out relationships between words in their

minds and categorize them. They keep a central idea in mind, place the keyword in the middle and connect it to the idea all around by using vocabulary strategies. Learning to recall new knowledge through audial and visual associations is made easier for learners when sounds are represented in memory strategies. As a result, students are able to retain the new language contents better.

*Reviewing Well* only uses the structured reviewing strategy. It is used by learners as they systematically break down the information in the new language and review it. Learners revise the information on the new language more frequently at first, but afterwards at longer periods.

*Employing Action* consists of using a physical response or sensation and utilizing mechanical techniques. Movement and action are key components of these methods. With regard to the use of physical response or sensation, physical movements are demonstrated to represent the expression of an emotion or feeling. Creative strategies are used to recollect facts for the use of mechanical techniques. Acting, moving, or altering something helps learners retain the target language.

## 2. Cognitive strategies

Oxford and Crookall (1989, p. 404) define cognitive strategies as skills that directly manipulate and modify language, such as through analysis, note-taking, practical application in natural environments, formal work with structures and sounds, etc. A number of studies indicate that choosing and using particular cognitive strategies enhances learners' success in educational settings (Anderson, 1991; Oxford, 2001; Zhang, 2002). That is to say, these strategies enable learners to comprehend and develop the target language by themselves and facilitate their learning context. Cognitive strategies consist of four sets of strategies as below:

*Practicing* includes repetition, formally practicing with sounds and writing systems, recognizing and using formulas and patterns and recombining and practicing naturally. One of the most fundamental cognitive strategies is acknowledged to be practicing. Learners can learn more quickly by practicing frequently. Being able to practice effectively is just as critical as actually practicing. One technique that seems to be used frequently by learners to practice is repetition. It is crucial to practice writing in the target language and using writing tools. Learners can also benefit from the process by using some key principles and trends.

Recombining previously learned material with new knowledge is another technique for practicing the language. Finally, it is a good idea to practice using the language in real-world or natural contexts.

*Receiving and Sending Messages* consist of getting the idea quickly, utilizing resources for receiving and sending messages. Learners utilize skimming to locate the central idea and scanning to locate the crucial details in order to grasp the concept fast. It enables learners remember what they have learned and improves their reading ability. Learners utilize all materials whether written or not to interpret the received messages or to respond to them when using resources for getting and sending messages.

*Analyzing and Reasoning* involve reasoning deductively, analyzing expressions, analyzing contrastively (across languages), translating and transferring. Learners study basic rules and apply them to the new language in order to reason deductively. While breaking down expressions to analyze them, they attempt to understand and determine the significance of the newly introduced words or phrases. They also compare the facts from their native language and the target language when analyzing contrastively. Learners either convert a phrase from their native language into the new language or translate a phrase from the new language into their mother tongue as part of the translation process. When transferring, they research the expressions or structures of one language and use them in the other.

*Creating Structure for Input and Output* includes taking notes, summarizing and highlighting. Learners make a list of important information throughout the class and occasionally or regularly take notes. They write a concise summary of the ideas and explain the mentioned facts or statements shortly. Learners also use colored pens or highlighters to underline the important information in order to emphasize it.

### 3. *Compensation strategies*

Compensation strategies give learners the chance to make written or verbal statements in the target language even if they don't fully understand it (Aparı, 2016, p. 19). They are utilized to reduce information gaps and they try to compensate for a limited vocabulary and grammar set. Learners use a range of linguistic and non-linguistic clues or guessing techniques commonly known as inference when faced with unfamiliar expressions to comprehend meaning. The use of mime and gesture, switching to the mother tongue, asking for assistance, choosing the topic, and altering or approximating the message are some of the

examples of compensation strategies that learners employ, particularly when they are inadequate in language learning. There are two main compensation strategies:

*Guessing Intelligently* includes utilizing linguistic clues and other clues. Learners assume and employ the indicators to understand the full material even though their knowledge may be limited in some ways. That is to say, learners apply their existing knowledge to acquire new skills. Linguistic indicators can be found in the types of words and phrases, word formation and background knowledge of some words. Non-linguistic indicators include images associated with texts, text content or structure, and context from reading texts.

*Overcoming Limitations in Speaking and Writing* includes using the mother tongue, asking for assistance, using mime or gesture, partially or completely avoiding communication, choosing the topics, altering or approximating the message, developing words, and employing a circumlocution or synonym. Learners utilize a word or phrase without translating it when they shift to their native language. They ask someone to lead or provide help and support for the missing word or phrase any time they require help. They imitate the facial or physical expression by miming or gesturing, then they show it. If they partially or completely avoid communication, they abstain from dialogues or conversations in situations requiring lots of effort. In addition, they determine the easiest subject matter when choosing the issues to convey in a conversation. Learners who imitate or adapt the message change or restructure the message by omitting some information. Language learners who are learning a new language create new words in order to convey their intended message. Finally, the learners either utilize words or phrases that have the same meaning in order to illustrate or describe how they are formed.

### ***Indirect strategies***

Indirect strategies which play a supportive and managerial role but have no direct influence on the language learning process give learners the ability to plan their own learning, motivate them to socialize and assess their own development. Indirect strategies are also divided into three sub-categories: *metacognitive*, *affective*, and *social strategies*.

#### ***1. Metacognitive strategies***

Oxford and Crookall (1989) define metacognitive strategies as “behaviors used for centering, arranging, planning, and evaluating one’s learning” (p. 404). Metacognitive strategies provide learners with both the regulation of the learning process and assistance in

organizing personal learning preferences. Additionally, according to Purpura (1999), these language learning strategies have a significant, favorable, and direct impact on the use of cognitive strategies, illuminating the power of metacognitive strategy use to influence the use of cognitive strategies in accomplishing tasks. Metacognitive strategies comprise three techniques. The first one, “*Centering on learning*” refers to directing the learner’s emphasis and effort toward particular learning tasks, activities, skills, and tools. Many learners lose concentration after being exposed to so much innovation and change, but this can be avoided by consciously using metacognitive strategies. ‘*Arranging and planning learning*’ forms the second strategy, which is used to plan and arrange the learners to receive the maximum efficacy from the language learning process. Finally, learners are able to manage their development in language learning with the help of the last strategy, ‘*monitoring and evaluating the learning process*’ (Kesmez, 2020, p. 23). These three strategies may be summarized as below:

*Centering your Learning* includes overviewing and linking with already known material, paying attention and delaying speech production to focus on listening. The purpose of it is to give the student a clear direction. And therefore, specific linguistic activities, resources, tasks, or skills might be the focus of learners’ attention. Learners review and connect previously learned content, give attention to newly acquired language, and put off speaking in order to concentrate on listening in order to concentrate on their learning. Overviewing a topic and relating it to their personal knowledge and experience, they deliberately ignore the complex materials and concentrate on the language materials. Finally, they neglect to talk and delay it somewhat or entirely until they have made significant improvement in their listening skills in order to focus their learning on improving their listening skills.

*Arranging and planning your learning* entails studying about language acquisition, planning, establishing goals and objectives, figuring out the aim of a language activity (purposeful listening, reading, speaking, and writing), arranging for a language task, and looking for practice opportunities. Learners might enhance the advantages and worth of their knowledge and accomplishments by using these strategies which encourage learners to organize and design. That is to say, they make use of these strategies to perform as well as possible in the target language by organizing and coordinating their learning. These strategies are frequently linked to how someone orients themselves to understanding language learning

through reading texts and interacting with real people. Learners find out as much as possible by utilizing every detail and creating their own schedules. They also make their own goals for the learning process, determining the objectives of a task requiring four skills, organizing the phases of an assignment or researching and locating advantageous situations to acquire the new language within authentic settings.

*Evaluating your learning* involves self-monitoring and self-evaluating. Learners are guided to examine both their own competence and their language proficiency using these strategies. The purpose of self-monitoring is to help learners identify their mistakes as they work to comprehend and improve the target language. By using their self-evaluation skills, they also analyze and determine how well they are learning the new language.

## 2. *Affective strategies*

According to Oxford (1990), the word “affective” refers to attitudes, techniques, sources of inspiration, and ideals. Affective elements are consistently present in all forms of learning. Affective strategies enable learners to manage their emotions, attitudes and motivation which are the focus of these learning strategies. Learners’ progress may be interfered with negative feelings, attitudes or situations. Thus, to avoid this, learners can achieve control over such aspects by using affective strategies, which are defined as strategies like self-reinforcement and beneficial self-talk that assist language learners in better managing their feelings, attitudes, and motives for learning languages (Oxford and Crookall, 1989, p. 404). Understanding how to manage one’s feelings and attitudes toward learning may have a positive impact on the development of one’s language learning as the process will be more efficient and easy in this way. There are three substrategies that make up affective strategies:

*Lowering your anxiety* involves utilizing techniques such as progressive relaxation, deep breathing or meditation, music and laughter. These strategies ease learners’ stress while they are learning a new language and improve them physically and psychologically. As Oxford (1990) states, learners can have fun while watching entertaining videos or reading hilarious texts since learners can release tension in their bodies and minds by employing physical exercises, music, and humor while studying the target language.

*Encouraging yourself* involves making positive statements, taking wise risks and rewarding yourself. Learners may improve their feelings and feel more courageous throughout the process of learning a new language by using positive remarks. They manage their

language skills by taking risks that are wisely taken and feeling confident despite the possibility of being incorrect. Also, learners feel prepared to use the language by rewarding themselves for accomplishments (Oxford, 1990).

*Taking your emotional temperature* comprises listening to your body, utilizing a checklist, writing a language learning diary and discussing your feelings with someone else (Oxford, 1990). Learners usually pay attention to their body's reflections of nervousness, anxiety, concern, doubt, panic or dread when they listen to them and try to avoid these emotions. They may observe and classify their attitudes and actions toward the new language by using a checklist.

In addition, they keep records of their individual learning progress and the learning environment by keeping a language learning journal. Finally, learners are able to recognize and understand their way of thinking and express their feelings about the target language by talking about their thoughts on the new language with someone else such as a teacher or a classmate.

### 3. *Social strategies*

Social strategies help learners improve their ability to interact with and learn from people. They comprise asking questions, cooperating and empathizing with others. Alamdari (2010, p. 22) suggests that the most effective method for understanding the meaning is asking questions since it elicits an answer from the partner and fosters interest and involvement. It is crucial to use them properly as social strategies establish the way of the learning process and the nature of the learning environment. Three sub-strategies make up social strategies:

*Asking questions* includes asking for clarification, verification and correction. Asking teachers, native speakers or more proficient users of that language in order to be clarified, verified or corrected is an essential technique. Learners demand assistance from those they are learning from and with, throughout the learning process and ask questions about everything around them. These strategies are beneficial for learners since they can receive feedback and benefit from the opportunities to ask for explanation, paraphrase and repetition. They can request to be guided in their current learning process. Furthermore, learners may ask for assistance from others to correct their mistakes if they are confused.

*Cooperating with others* consists of cooperating with proficient users of the new language. Learners collaborate with others who are more competent in the target language. They are more likely to learn and practice the chosen language right away when they are offered assistance and have someone available to address their concerns and doubts about it. The two ways to work with other learners encompass studying with peers and with accomplished native speakers of that language. The opportunity for natural interaction that language learners have from studying with native speakers or instructors who freely discuss what they are interested in learning is a remarkable experience.

*Empathising with others* involves developing cultural understanding and becoming aware of others' thoughts and feelings. Empathy is a requirement for good interaction. As Oxford (1990) highlighted, developing empathy strategies requires understanding other people's perspectives on the interaction. If learners are able to empathize and understand the significance of effective communication in the target language, they can use social strategies to improve their language skills.

### **2.3.3. The classification of O'Malley and Chamot**

O'Malley and Chamot (1990) introduce another classification of LLSs that is divided into three subcategories: *Metacognitive Strategies*, *Cognitive Strategies*, and *Social/Affective Strategies*. In fact, this classification does not significantly differ from the ones that have already been mentioned. It is especially compatible with Oxford's classification. They share a lot of similarities. For example, O'Malley and Chamot's classification of the cognitive strategies category appears to include Oxford's classification of both cognitive and memory strategies. Additionally, O'Malley and Chamot group socio-affective methods into one category although Oxford divides them into two individual categories.

Some of the primary *metacognitive strategies* are self-monitoring, self-evaluation, pre-organizers, operational planning, self-management, and direct attention, selective attention and self-evaluation. According to O'Malley and Chamot (1990), metacognition and learner awareness of strategies are closely interrelated, so there is a strong correlation between metacognitive awareness and good learning.

*Cognitive strategies* comprise interacting with the material that has to be obtained, manipulating the material mentally or physically, or using a particular method in a learning task (O'Malley and Chamot, 1990, p. 138). That is, they include more direct manipulation of

the learning resources themselves. In addition, they are more constrained to particular learning activities. Repetition, elaboration, translation, note-taking, reassembling, creating an image, creating an audio representation, contextualization, transfer and prediction can be involved among the major cognitive strategies.

*Social/Affective strategies* involve interaction with other people to support learning and regulate feelings and fears (O'Malley and Chamot, 1990). Learners are able to reduce anxiety and encourage relaxation to cope with stress by utilizing these strategies. Asking questions for clarification, collaborating with others to solve a problem, and rephrasing are some primary social/affective strategies.

**Table 2.1.** Language learning strategies (O'Malley & Chamot, 1990, p. 46).

Generic strategy classification	Representative strategies	Definitions
Metacognitive strategies	Selective attention	Focusing on special aspects of learning tasks, as in planning to listen for key words or phrases.
	Planning	Planning for the organization of either written or spoken discourse.
	Monitoring	Reviewing attention to a task, comprehension of information that should be remembered, or production while it is occurring.
	Evaluation	Checking comprehension after completion of a receptive language activity, or evaluating language production after it has taken place.
Cognitive strategies	Rehearsal	Repeating the names of items or objects to be remembered.
	Organization	Grouping and classifying words, terminology, or concepts according to their semantic or syntactic attributes.
	Inferencing	Using information in text to guess meanings of new linguistic items, predict outcomes, or complete missing parts.
	Summarizing	Intermittently synthesizing what one has heard to ensure the information has been retained.
	Deducing	Applying rules to the understanding of language.
	Imagery	Using visual images (either generated or actual) to understand and remember new verbal information.
	Transfer	Using known linguistic information to facilitate a new learning task.
Social/affective strategies	Elaboration	Linking ideas contained in new information, or integrating new ideas with known information.
	Cooperation	Working with peers to solve a problem, pool information, check notes, or get feedback on a learning activity.
	Questioning for clarification	Eliciting from a teacher or peer additional explanation, rephrasing, or examples.
	Self-talk	Using mental redirection of thinking to assure oneself that a learning activity will be successful or to reduce anxiety about a task.

#### 2.3.4. The classification of Stern

There are five categories of learning strategies proposed by Stern (1992) as *management and planning strategies*, *cognitive strategies*, *communicative-experiential strategies*, *interpersonal strategies*, and *affective strategies* (pp. 262-266). *Management and planning strategies* are used by learners to guide their own learning. The teacher serves as a resource or advisor, and learners are able to be responsible for their own development (Stern, 1992, p. 264). Learners who do not have teachers to guide and counsel them can be in charge

of their own language learning process. The purpose of the learner to address their own learning is related to these strategies (Hismanoglu, 2000).

Stern (1992) claims that *cognitive strategies* are connected to the procedures or methods utilized in education or problem solving. These strategies are employed to analyze, modify, or synthesize learning materials directly. Learners are able to overcome challenges in the learning process by combining, converting, and continually investigating their course contents.

Learners employ *communicative-experiential strategies* to maintain the flow of communication and avoid interrupting it (Stern, 1992, p. 265). These strategies are utilized to ask for clarification or repetition, use gestures, paraphrase or use circumlocution. According to Lewis and Williams (1994), learning through doing or experiencing is referred to as experiential learning. Before developing new abilities, actions, or ideas by enhancing thought, learners first engage in the learning process through experiential education.

Learners use *interpersonal strategies* to assess their own performance and development like collaborating and connecting with native speakers, interacting with other language learners of the same level and assessing how well they are speaking the language compared to others. They also include having interaction with native speakers and becoming familiar with the target culture.

*Affective strategies* are a set of behaviors used by language learners to deal with the adverse feelings that are aroused in them when engaging in language learning activities. They can be useful when learners are conscious of these negative emotions like being dissatisfied with their own linguistic development or feeling uncomfortable in foreign language classes. Learners who are good at language learning “try to create positive feelings towards the foreign language and its speakers” by using affective strategies as they are conscious of emotional issues (Alamdari, 2010, p. 25). Learning training can assist learners in overcoming their emotional challenges by highlighting potential sources of frustration or bringing them to their attention as they occur (Stern, 1992, p. 266).

#### **2.4. Strategies and Learning Styles**

Although the terms “learning strategies” and “learning styles” appear to be very much the same, there are some distinctions between them in terms of where they belong in the learning process. Rubin and Wender (1987, p. 19) state that learning strategies are more

focused actions that learners take with the goal of making it easier for them to comprehend, remember, retrieve, and utilize information. On the other hand, learning styles are the natural, habitual, and preferred ways of receiving, processing, and retaining new knowledge and abilities of learners according to Reid (1995). Ellis (1978, p. 9) also defines learning styles as internally based traits that are frequently not noticed or intentionally used by learners for the intake and processing of new knowledge, whereas learning strategies are external skills that are frequently intentionally used by students to increase their learning.

Oxford (1990, p. 12) asserts that “learning strategies are easier to teach and modify” by training in strategy; on the contrary, “learning styles and personality traits are difficult to change”. That is to say, learning styles reflect a learner’s preference for a learning context as they are internally based characteristics. They are also considered to be rather stable and unlikely to alter with the progress of time. However, the learning strategies are described as external skills, which suggest that they are more problem-oriented and conscious, so they are more likely to alter over time in response to the tasks and learning materials employed.

Although these two notions are different in terms of context, they have a very strong construction in terms of learning. Learning strategies are connected to learning styles and they play a vital role in determining learning styles (Oxford and Ehrman, 1995). Krashen (1982) emphasizes the value of comprehending anxiety by pointing out that it could hinder the process of learning and language development. Brown (1994, p. 134) also indicates that the emotional side of people encompasses a variety of personality characteristics, such as how they feel about themselves and the people they are interacting with. In brief, learners will probably be more successful if their learning strategies and the learning styles they use are correlative. Therefore, training the learners on learning styles and strategies is really important to help them determine the appropriate ones for themselves in the process of vocabulary learning.

## **2.5. Defining Vocabulary**

Several researchers in the field provide a wide range of definitions for vocabulary throughout the development of language learning. For example, Nandy (1994, p. 1) defines vocabulary as “the total number of words we know and are able to use”. Read (2000, p. 20) also describes it as “a set of lexemes that includes single words, compound words and idioms” (cited in Richards and Schmidt, 2002, p. 580). That is to say, there is more than simply one word in vocabulary. Similar to Read’s definition, Ur (1996, p. 60) identifies vocabulary as

“the words we teach in foreign languages”. According to her, there could be multiple words in a new vocabulary item that are composed of two or three words but only express one idea, or there could be multiword idioms whose meanings cannot be inferred from an analysis of the individual words. In addition, for Lessard-Clouston (2013, p. 2), the vocabulary of a language is made up of all the words used in that language, both single words and phrases or groups of words that together communicate a single meaning. The terms “word” and “vocabulary” differ from one another. Carter (2012, p. 20) indicates a word as “any sequence of letters (and a limited number of other characteristics such as hyphen and apostrophe) bounded on either side by a space or a punctuation mark”. It is also known as a group of sounds and is the smallest unit of significance in all languages, allowing for the formation of phrases and sentences (Kesmez, 2020, p. 8). On the other hand, Nushi and Jenabzadeh (2016, p. 52) indicate that vocabulary includes multiword phrases, idioms, and even sentences in addition to individual words. In brief, a word is defined as “the smallest of the linguistic units which can occur on their own in speech or writing” (Richards and Schmidt, 2002, p. 580). However, compared to words, vocabulary is more extensive, so it includes not just a single word in all of its variations but also complicated and compound words together with the grammatical structures of a language (Jackson and Amvela, 2000, p.1).

Given that vocabulary is the most crucial component of language teaching and learning, it can be concluded from the definitions above that it is a collection of words that cannot be separated as a component of the language system.

### **2.5.1. The importance of vocabulary in English language learning**

Learning vocabulary is a crucial component of learning a foreign language because vocabulary is a fundamental part of language. People cannot communicate effectively without words. Vocabulary knowledge is the first step for accurately expressing thoughts and in effective communication. The ability to communicate more successfully and with confidence is facilitated by having extensive vocabulary knowledge. Allen (1983, p. 5) claims that when a word is used improperly, communication may become ineffective as a result of lexical issues interfering.

The number of words you are familiar with indicates your level of linguistic proficiency. Regarding vocabulary and its importance in language, several researchers have offered a variety of view points. For instance, Rivers (cited in Nunan, 1998, p. 117) pinpoints

that building an adequate vocabulary is crucial for effective second language learning. We may use the grammar rules and other aspects of language we have acquired to communicate properly. In brief, it is asserted that there is general agreement that building a large vocabulary is crucial to learning a second language (Nunan, 1998; Wallace, 1982).

According to Read (2000, p. 1), “words are the basic building blocks of language, the units of meaning from which larger structures like sentences, paragraphs and whole texts are formed”. Vocabulary knowledge helps the learners master English language skills (Zahedi and Abdi, 2012, p. 2264). That is, the acquisition of vocabulary aids in the development of English language skills. In their study, Riazi et al. (1996, p. 27) underline the significance of vocabulary learning with these words; “vocabulary words, phrases, idioms, etc., are the heart of all language usage in the skill areas of listening, speaking, reading and writing as well as culture”. Vocabulary knowledge is one of the most important parts of learning a language. Wilkins (1972, p. 111) supports their idea, saying that “Without grammar, very little can be conveyed. Without vocabulary, nothing can be conveyed”. Harmer (1991, p. 153) also claims that “vocabulary is like the vital organs and the flesh of the body whereas structures are the skeleton”. However, this does not mean that we can pay no attention to grammar while learning a language. Harmer (1991, p. 154) adds that learning vocabulary is equally as crucial as learning grammar, and teachers should possess the same level of proficiency in teaching vocabulary as they do in teaching grammar. It is clear that vocabulary knowledge is really important in learning a second or foreign language not only for understanding the reading texts but also for understanding the grammar rules of that language. In this sense, Amiryousefi (2015, p. 9) pinpoints that if a learner is unable to employ the proper word in a conversation, grammar perfection is useless, so vocabulary learning is required in order to understand the grammar rules of a second language.

From the views of leading researchers on the importance of words and vocabulary provided above, it is clear that vocabulary learning is one of the most essential parts of the process of language learning.

### **2.5.2. Factors influencing vocabulary learning**

Identifying the problems that learners experience is one of the most significant steps in vocabulary learning. Thornbury (2004, pp. 27-28) points out that factor such as pronunciation, spelling, length and complexity, grammar, meaning, range, connection and idiomaticity are the ones that make some words more difficult to learn in the process of learning vocabulary.

**Pronunciation:** Words that are difficult to say are often more difficult to learn. Challenging words are often those that include sounds that some learner groups are not familiar with. Words that have a lot of consonants, such as “*strength*” and “*crisps*” are also difficult for many learners. As stated by Hewings (2004, p. 3), the biggest challenge in learning pronunciation is that the way words are pronounced in English and Indonesian is different. For instance, an English word may be pronounced differently than another and various sounds correspond to various meanings. As a result, learners become more confused while learning.

**Spelling:** Mismatches between the pronunciation and spelling of a word are likely to be the reason for errors, and they can make a word more complex. Words with silent letters such as “*honest*”, “*climb*” and “*muscle*” are especially difficult. According to the research of Rahmawati (2012), learners’ spelling abilities were instructed using a technique that involves both learner engagement and repetition of the teacher’s words. Consequently, learners lose interest in their studies. The researcher discovered that the learners had difficulty in spelling English words. As English words are read in a very different way than words in other languages, it can be challenging for learners to learn how to spell them. There are various ways to pronounce a single syllable. So, learners have trouble mastering English and as a result of this difference, they become confused while studying English. Also, they need to understand how to pronounce words and what a word looks like (spelled). Learners in this situation fall into the category of those who take spelling the least seriously.

**Length and complexity:** Long words do not appear to be any more challenging to learn than short ones. However, high-frequency words in English typically have a short length, which makes them easier for learners to acquire. “Variable stress in poly syllabic words-suchasin word families like ‘*necessary, necessity, and necessarily*’-can add to their difficulty” (Thornbury, 2004, p. 28).

**Grammar:** As Thornbury (2004, p. 28) states, another issue is the word’s grammar, especially if it is different from the grammar of the word’s equivalent in the original language. Its complexity can be increased by remembering whether a verb such as ‘*like*’, ‘*love*’, or ‘*enjoy*’ is followed by an infinitive (to swim) or an-ing form (swimming). And phrasal verbs are another problematic issue, as some of them are separable while the others are not. For example, “he *handed* the project *in*” and “he *looked after* the cats”.

Meaning: According to Thornbury (2004, p. 28), when two words have similar meanings, such as *do* and *make*, learners are likely to mix them up. For example, ‘make a decision’ but “do the housework”. Another issue might be polysemy. Learners can be hesitant to accept a second, entirely different meaning of the word after acquiring one meaning of words that have multiple meanings, such as ‘*patient*’, ‘*still*’, ‘*kind*’, and ‘*sentence*’. In addition, learning a word may be challenging if the concepts are unfamiliar.

Range, connotation and idiomaticity: Generally speaking, learners find it easier to understand words that can be employed in a variety of contexts than their synonyms with a smaller range of usage. For instance, “the verb ‘put’ is far more general compared to ‘impose, place, position, etc.’. Likewise, using ‘thin’ instead of ‘skinny, slim, or slender’ is a safer bet. Words with style restrictions, such as those that are extremely informal may be problematic. For example, ‘*swap*’ for ‘*exchange*’. Also, ambiguity related to connotations may be problematic. “Thus, ‘*propaganda*’ has negative connotations in English, but its equivalent may simply mean publicity. On the other hand, *eccentric* does not have negative connotations in English, but its nearest equivalent in other languages may be deviant” (Thornbury, 2004, p. 28). Finally, idiomatic words or phrases may be more difficult to learn than words whose meanings are more obvious. That is to say, it is easier to learn the word ‘decide’ rather than the expression ‘make up your mind’.

## **2.6. Vocabulary Learning Strategies**

Vocabulary competence is crucial for communication, so language learners are aware of how important words are while learning a language. The importance of words also becomes prominent, especially while reading in a foreign language. Language learners know that using learning strategies will help them learn the language faster and more easily. Thornbury (2004, p. 150) claims that we employ strategies to overcome linguistic issues like not knowing a word or being unable to recall it when it is required, even in our first language. Within this context, various researchers offer various explanations for vocabulary learning strategies in accordance with their individual viewpoints (Altay, 2015).

VLSs are identified as any combination of techniques or learning practices that language learners acknowledge employing in order to learn new words, retain the words they have learned, and broaden their vocabulary (Intaraprasert, 2004, p. 9). According to Grenfell (2000, p. 1), there is a relationship between learning and teaching strategies; generally, one has an impact on the other. Today, there is a movement toward an interest in the learner and

the impact of learner behaviors on vocabulary learning rather than focusing on the teacher. Rivers (1987, p. 127) asserts that it is not possible to teach vocabulary; he defends his thought by saying that the learners obtain information using strategies although the teacher can demonstrate and explain them. Even when the teacher is able to explain and illustrate, the students must use strategies to acquire information. Therefore, according to Rivers (1987, p. 130), learners need to develop their vocabulary-learning skills. That is to say, their ability to learn new words must be strengthened. In a similar vein, Takač (2008, p. 106) states that Vocabulary Teaching Strategies encourage learners to review, practice, and consolidate their vocabulary through a variety of exercises by establishing and displaying the meaning and structure of lexical items. Accordingly, learners require guidance in the vocabulary learning strategies that they need most as VLSs are the actions that learners take to help them understand and remember new vocabulary. Similar to all this, Catalan (2003, p. 56) asserts that VLSs are the understanding of the processes and strategies frequently employed to learn vocabulary. Also, they are the steps learners take to learn the meaning of unfamiliar words, memorize them for a long time, recall them spontaneously, and use them in oral or written form. On the other hand, Ölmez (2014, pp. 32-33) pinpoints that the productive aspects of VLSs need to be taken into account. Also, vocabulary learning should not be limited to just word meaning or word retention.

Finally, as it is seen from the above-mentioned definitions, the term VLSs has been used to describe intentional movements, behaviors, or thought processes. Learners more or less purposefully utilize VLSs to aid in mastering vocabulary knowledge in the process of learning a language, which underlines the importance of strategy teaching.

### **2.6.1. Classification of vocabulary learning strategies**

Language learning strategies are integral to both the learning process and the content being studied, so it is impossible to keep them apart from one another. Among language learning strategies, VLSs constitute a subcategory. According to some researchers, all strategies for learning vocabulary are, in some way, based on five processes. Brown and Payne (1994, cited in Hatch and Brown, 1995, p. 373) have described these processes as:

- 1) having access to resources for learning new words,
- 2) acquiring a distinct understanding of the forms of new words, either visually, aurally or both,
- 3) finding out the definitions of words,

- 4) by forming a solid link between the definitions of the words and forms,
- 5) employing the words.

In an effort to classify the vocabulary learning strategies used by second and foreign language learners, researchers in both fields have made a variety of attempts. Some of them are verified below.

### ***The classification of Gu and Johnson***

The Vocabulary Learning Questionnaire, developed by Gu and Johnson (1996), is one of the most extensive lists of vocabulary strategies, with 108 items. Gu and Johnson (1996, pp. 650-651) determine three key dimensions to comprehend the VLS: these are *beliefs about vocabulary learning*, *metacognitive strategies*, and *cognitive strategies*.

Two aspects of *beliefs about vocabulary learning* were analyzed as *learning words through use* or *memorization*. That is to say, learners may learn the words by using them in a sentence or by keeping them in long-term memory for later recollection of visual or aural information.

There are two subcategories of *metacognitive strategies*: *selective attention* and *self-initiation*. Language learners who use selective attention strategies are aware of the vocabulary that has to be learned in order to understand a text while learners who use self-initiation strategies adopt a number of methods to gain a better understanding of phrases and words.

*Cognitive strategies* initially involve three stages: *the initial handlingstage*, *the consolidation stage*, and *the activation stage* (Kesmez, 2020, p. 28). *Contextual guessing*, *effective dictionary use*, and *note-taking* form the first three sub-strategies of the *initial handling stage*. With the aid of background knowledge and linguistic indicators like sentence structure, learners who employ guessing strategies can infer the meaning. The *consolidation stage* includes two sub-strategies as *rehearsal strategies* and *encoding strategies*. *Rehearsal strategies* include word lists and repetition and “*encoding strategies* encompass such strategies as association, imagery, visual, auditory, semantic, and contextual encoding as well as word structure” (Başibek, 2010, p. 32). Finally, *activation strategies* constitute the activation stage, which means utilizing new vocabulary in different contexts. Table 2.2 provides a summary of the proposed strategies.

**Table 2.2.** Vocabulary learning strategies (Gu & Johnson, 1996, p. 654).

Dimensions	Categories and Subcategories
Beliefs about Vocabulary Learning	Words should be memorized Words should be learned through use
Metacognitive	Selective Attention Self-Initiation
Cognitive	Initial handling stage Contextual guessing strategies Using background knowledge/Wider context Using linguistic cues/immediate context Dictionary strategies Dictionary strategies for comprehension Extended dictionary strategies Looking-up strategies Note-taking strategies Meaning-oriented note-taking strategies Usage-oriented note-taking strategies Consolidation Stage Rehearsel Strategies Use of word lists Oral repetition Visual repetition Encoding Strategies Association / Elaboration Imagery Visual Encoding Using word-structure Semantic encoding Contextual encoding Activation Stage Activation Strategies

### ***The classification of Schmitt***

Schmitt (1997) establishes another classification specifically for vocabulary learning by starting with Oxford's (1990) classification of language learning strategies, which consists of *memory strategies*, *cognitive strategies*, *metacognitive strategies*, and *social strategies*. However, Schmitt (1997, pp. 205-206) claims that without the inclusion of vocabulary-specific strategies, Oxford's classification cannot meet the needs for a proper classification of VLSs and there are not any strategies available for the learners to utilize to determine the meaning of a word when they encounter it for the first time, so he combines the discover/consolidation distinctions proposed by Cook and Mayer (1983) to his classification of vocabulary learning strategies to offer a more comprehensive one (Kiliç, 2019, p. 19).

Schmitt (1997) divides the strategies into two groups as *discovery* and *consolidation strategies*. While *discovery strategies* are the ones that are used to specify the meaning of new words when learners meet them for the first time, consolidation strategies are the ones utilized in order to consolidate their meaning when learners encounter them again. They include *cognitive*, *metacognitive*, *memory*, and *social strategies*.

## 1. *Discovery strategies*

Discovery strategies contain both *determination* and *social lstrategies* (See Table 2.3). According to Schmitt (1997, p. 205), *determination strategies* are employed when “learners are faced with discovering a new word’s meaning without recourse to another person’s experience”. Therefore, learners might make use of their language skills, contextual signals, and knowledge of reference materials in order to determine the meaning of a new word. *Social strategies* form the second category of discovery strategies, which are used to explore the meaning of a word by asking another person. The teacher, who can assist the learners in numerous ways, such as using the word in a phrase, explaining it with other words, telling its synonym, translating the word, or using it in a different form, is frequently consulted by the learners. As well as the teachers, classmates and native speakers may be helpful in finding out the unknown words through employing social strategies. Moreover, according to Schmitt (1997, pp. 210-211), working in groups is another way to carry out the activities involved in word discovery.

**Table 2.3.**Schmitt’s classification of discovery strategies.

<b>Discovery Strategies</b>	
<b>Strategy Group</b>	<b>Strategy</b>
Determination	Analyze part of speech
Determination	Analyze affixes and roots
Determination	Check for L1 cognate
Determination	Analyze any available pictures and gestures
Determination	Guess from textual context
Determination	Bilingual dictionary
Determination	Monolingual dictionary
Determination	Word lists
Determination	Flash cards
Social (Discovery)	Ask teacher for an L1 translation
Social (Discovery)	Ask teacher for paraphrase or synonym of new word
Social (Discovery)	Ask teacher for a sentence including the new word
Social (Discovery)	Ask classmates for meaning
Social (Discovery)	Discover new meaning through group work activity

## 2. *Consolidation strategies*

*Consolidation strategies*, which are the second main group in Schmitt’s classification, are divided into four groups: *social*, *memory*, *cognitive*, and *metacognitive strategies* in order to recall the definition and other lexical information associated with a new word (See Table 2.4). First of all, *social strategies* for word consolidation can be seen in cooperative group work, where learners study and practice new words together. According to Dansereau (1988), interactions among learners help them learn more and develop their academic abilities. He

cites cooperative group work's advantages in terms of how it enhances active information processing, offers modeling or imitation of the social context and boosts participant motivation. Furthermore, he points out that cooperative learning gives learners more time to utilize their foreign language in group projects because there is less teacher involvement. It also prepares learners for "team activities" outside of the classroom (pp. 107-108). In the meantime, social strategies can be utilized for both discovery and consolidation strategies so Schmitt covers them in both.

The second strategy of consolidation strategies is *memory strategies*, which are generally known as mnemonics. Memory strategies are utilized to connect new words to learners' background knowledge. That is, in order to recall a new word, it may be combined with other types of stored information, or visuals may be created based on the formal and semantic components of the word (Kesmez, 2020, p. 36).

*Cognitive strategies* are the third category of consolidation strategies. They are identical to memory strategies even though they are not based on manipulative mental processes. Language learners frequently use cognitive strategies to advance to a high level of proficiency. They involve repetition and the use of mechanical tools like word lists, word cards and flashcards to learn and review words. For Schmitt (1997, p. 217), the fact that word cards are portable and simple to use for studying during leisure time is one of their many advantages. Taking notes or writing new words and expressions are the other examples of cognitive strategies. Schmitt (1997, p. 215) also suggests a vocabulary notebook for improving lexical knowledge.

**Table 2.4.**Schmitt’s classification of consolidation strategies.

<b>Consolidation Strategies</b>	
<b>Strategy Group</b>	<b>Strategy</b>
Social ( Consolidation)	Study and practice meaning in a group
Social ( Consolidation)	Teacher checks students’ flash cards or word lists for accuracy
Social ( Consolidation)	Interact with native speakers
Memory	Study word with a pictorial representation of its meaning
Memory	Imagine word’s meaning
Memory	Connect word to a personal experience
Memory	Associate the Word with its coordinates
Memory	Connect the Word to its synonyms and antonyms
Memory	Use semantic maps
Memory	Use ‘scales’ for gradable adjectives
Memory	Peg method
Memory	Loci method
Memory	Group words together to study them
Memory	Group words together spatially on a page
Memory	Use new word in sentences
Memory	Group words together within a storyline
Memory	Study the spelling of a word
Memory	Study the sound of a word
Memory	Say new word aloud when studying
Memory	Imagine word form
Memory	Underline initial letter of the word
Memory	Configuration
Memory	Use Keyword method
Memory	Affixes and roots (remembering)
Memory	Part of speech (remembering)
Memory	Paraphrase the word’s meaning
Memory	Use cognates in study
Memory	Learn the words of an idiom together
Memory	Use physical action when learning a word
Memory	Use semantic feature grids
Cognitive	Verbal repetition
Cognitive	Written repetition
Cognitive	Word list
Cognitive	Flash cards
Cognitive	Take notes in class
Cognitive	Use the vocabulary section in your textbook
Cognitive	Listen to tape of Word lists
Cognitive	Put English labels on physical objects
Cognitive	Keep a vocabulary notebook
Metacognitive	Use English-language media (songs, movies, newscasts, etc.)
Metacognitive	Testing oneself with Word tests
Metacognitive	Use spaced word practice
Metacognitive	Skip or pass new word
Metacognitive	Continue to study word over time

*Metacognitive strategies* are the final category of consolidation strategies. Learners use these strategies to control and assess their own learning by having a general understanding of the learning process. Schmitt (1997, p. 215) identifies them as “a conscious overview of the learning process and making decisions about planning, monitoring or evaluating the best way of studying”. He also adds that one example of metacognitive strategies is self-testing,

which provides the efficiency of one's chosen learning practices, offering positive feedback if development is being achieved or an indication to adjust strategies if it is not (p. 216).

### ***The classification of Nation***

Nation (2001) has developed another classification of VLS. His classification differs from previous ones as it is focused on theory rather than study findings (Aparı, 2016, p. 46). According to Nation (2001), vocabulary learning strategies are divided into three broad categories as *planning*, *sources*, and *processes*. The first category, '*planning*' includes identifying particular word features, employing a range of strategies, and organizing repetition in ways that enhance vocabulary learning and let learners acquire vocabulary items more effectively. Choosing when, where, and how often to concentrate on a vocabulary item falls under this category.

The second category, '*sources*' comprises finding out more about the word. The word form itself, the context or a reference source as well as comparisons and links to other languages and other word forms are all possible sources (Başıbek, 2010, p. 34).

Developing word knowledge by using strategies through retrieving, noticing and generating leads to the final category, '*processes*' (Nation, 2001). Retrieving involves information recall in the original form in which it was kept. At the noticing level, the word should be written down or added to a list of vocabulary, written on a word card, and repeated verbally and visually. Lastly, generation strategies contain "attaching new aspects of knowledge to what is known through instantiation (i.e., visualizing examples of words), word analysis, semantic mapping and using scales and grids" (Nation, 2001, p. 222). Moreover, generating strategies refer to the use of the word in different contexts through four skills (reading, listening, speaking and writing) and mnemonic strategies.

### ***The classification of Ma***

Ma (2009, p. 164) developed another vocabulary learning strategy classification that is based on process. She outlined the phases of vocabulary learning as below:

- A new word is introduced to the reader through various contexts such as classroom activities, vocabulary lists, reading, or conversations in the target language.
- The definition of the new word is found out by asking teachers or classmates, checking dictionaries, or making a contextual guess.

- The form and meaning of new words are examined from a variety of aspects. Learning new words is often challenging as it requires understanding their meaning, spelling, parts of speech, collocations and other important vocabulary components.
- The information related to the word is collected or organized in certain meaningful ways.
- Integrating the form and meaning of the word in one's mind and putting them together is the first step in learning a new word. This procedure can be enhanced by a variety of efficient memory strategies.
- The word must be practiced to ensure long-term memory.
- It can be necessary to remember its meaning by identifying its affixes, roots, or other well-known components when seeing the word again.
- The word must be used in a variety of contexts to reinforce acquisition.

Ma (2009) also claims that this is a cyclical process, and by repeating it, many words or even formulaic sequences are possible to learn. According to her, not every lexical item learned will progress through all of the stages, but those that do have a tendency to be learned more easily and maintained for a longer period of time.

### **2.6.2. Factors influencing vocabulary learning strategy use**

Learners frequently adopt particular strategies as their stereotypes, which causes them to fail along with the rest despite the fact that there are various strategies to choose from in order to increase vocabulary. Therefore, it makes sense that there should be some kind of cognitive guidance. In this regard, Nation (2001, p. 358) emphasizes that it is crucial to incorporate strategy use instruction into a program for vocabulary development. The strategy he proposes entails:

- choosing which strategies to focus on
- calculating the time needed to teach the learners how to apply strategies
- developing a curriculum for each strategy that includes the necessary information and gives several chances to practice in a more independent manner
- evaluating how well learners are using the strategies and giving feedback

According to Ellis's framework (1995), which suggests a variety of factors influencing vocabulary learning strategies, they are divided into three categories as *learner individual differences*, *social and situational*, and *learners' learning outcomes* (cited in Boonkongaen, 2013, p. 47). These factors are so crucial that they should not be ignored.

### 1. Learner individual differences

The first category, learner individual difference factors, includes *motivation, attitude, belief, and language learning experience*. Firstly, learners' motivation and the vocabulary learning strategies they use appear to be favorably associated. That is, learners' intrinsic motivation for learning vocabulary is positively linked with their use of the vocabulary learning strategies (Fu, 2003). As for attitude, Chinese students who had positive attitudes were more likely to use a wide range of the vocabulary learning strategies to clarify their use of the words or learn their meanings (Zhi-liang, 2010). That is to say, there is a direct relationship between the learners' attitude and their use of the vocabulary learning strategy. Gu and Johnson (1996) claim that learners' usage of strategies appears to be related to their beliefs. In the same vein, it is believed that learners use a variety of the vocabulary learning strategies because they feel that words should be learned and used (Si-xiang and Srikhao, 2009). In addition to these factors, language learning experience is another factor that influences the vocabulary learning strategy use. For instance, Stoffer (1995) states in her research that learners' vocabulary learning strategy use is closely related to their prior language learning experience.

### 2. Social and situational factors

The second category, social and situational factors consists of *gender, course type, class level, field of study and language learning environment*. Many researchers pay attention to *gender* and individual variation related to vocabulary learning strategies but the outcomes remain ambiguous. Catalan (2003) puts forth the finding that learners' vocabulary learning strategies vary significantly between genders. As a result of Gu's (2002, p. 51) research, gender was discovered to be a potential factor in vocabulary learning strategies.

Siriwan (2007) also suggests that there is a link between the *course type* and learners' vocabulary learning strategies. For example, his study shows that students studying in regular programs at Thai University use vocabulary learning strategies more than students enrolled in part-time programs.

Another factor influencing vocabulary learning strategy use is *class level*. According to Mongkol (2008), vocabulary learning strategy use was higher among the first-year students at Thai University when learning new words by recalling their parts of speech. Moreover, the first-year students preferred to explain what the word meant in a paraphrase while the second-year students preferred to utilize a vocabulary learning strategy to examine prefixes, suffixes

or origins to understand the meaning of words better. On the other hand, Zhang (2009, p. 180) claimsthat learnersinhigher grades have used vocabulary learning strategies more frequently and proficiently than learners with lower grades.

*The field of the study* is another factor that affects vocabulary learning strategy use. According to Gu's (2002) study, there is a considerable difference between art and science students. He states that students who majored in art held less belief in word memorization than students who majored in science. They had a stronger confidence in the natural acquisition of language through context. Compared to science students, they took more notes on vocabulary. On the contrary, students who majored in science increased their focus on word structure analysis and word-formation rules (Gu, 2002, p. 47).

The last factor in this category is the *language learning environment*. It was found that the majority of students stated their teachers, peers and the educational setting were the most encouraging elements that may be regarded as significant for learning new words (Kameli et al., 2012, p. 27). Also, Kojic-Saboand and Lightbown (1999) conclude that English language learners can access resources for vocabulary as well as extra curricular English activities. Comparatively speaking, they have the opportunity to learn and apply new lexical items. Reading, vocabulary, and notes were reviewed by EFL students in an effort to make up for their inadequate linguistic contexts, but ESL students said they learned new words by utilizing them in conversation.

### 3. *Learners' learning outcomes*

The last category is learners' learning outcomes, which apply to *language proficiency*, *language achievement*, and *vocabulary knowledge*. Studies show a connection between *learners' language proficiency* and the use of vocabulary learning strategies. For example, Ahmed's (1989) research revealed that frequent use of the practice strategy category includes using new words in real and imaginary contexts, asking for tests, asking for help, utilizing written sources to confirm knowledge, and self-testing, which allowed the good learners to be distinguished from the unsuccessful ones. Conversely, the group of less proficient students displayed knowledge of what they might learn about new words and showed no intention of learning words in context. Some studies have been made to assess the learners' language proficiency through their use of vocabulary learning strategies. To exemplify, Suppasetsee and Saitakham (2008, p. 143) infer that the use of guessing and dictionary strategies varies considerably between high and low achievers in English

majors. Additionally, according to Nunan (1991), poor language learners rely more on dictionaries than good language learners do. Finally, the use of vocabulary language strategies by learners does seem to be favorably correlated with vocabulary knowledge. Studies conducted by many researchers show that vocabulary knowledge and learners' vocabulary language strategies use have a positive correlation (Gu and Johnson, 1996; Fan, 2003; Waldvogel, 2011).

Taking all the aforementioned factors, for an effective process of vocabulary learning, educators may promote self-reliance by assisting the learners in becoming aware of the strategies that are most useful for them and by identifying contexts in which they might apply various vocabulary learning strategies. To better prepare them for learning and be more analytical about the strategies they employ, it would be helpful to identify their strategies and raise awareness on these vocabulary learning strategies. Therefore, vocabulary learning strategies will be acknowledged as a way to enable learners to assume control and accountability over their vocabulary learning.

## **2.7. Vocabulary Knowledge and Reading Comprehension**

Understanding words has long been recognized as a key element of reading comprehension since a reader must be familiar with the meaning of the majority of the words in a text in order to understand it. On this point, it is stated that a wide vocabulary improves silent reading performance (Pressey, 1972). It was also confirmed in a study by Albright (1977) that understanding word meanings played an important role in comprehension.

As vocabulary knowledge and reading comprehension are strongly correlated with each other, readers who can identify more vocabulary in a text will comprehend the meaning of the text more properly. Therefore, learners must have an adequate vocabulary to avoid having reading comprehension issues and fully comprehend a text. Within this context, Hilliard (1974) claims that a child's vocabulary level is the second-most important factor in reading comprehension, following general intelligence.

In the meanwhile, the use of reading itself is emphasized as a technique to expand vocabulary, so it is seen that vocabulary and reading are activities that develop in combination (Stoller, 1994). That is to say, reading activities, as opposed to direct vocabulary instruction, can help language learners expand their vocabulary knowledge more efficiently. Texts are better understood by readers who have a strong vocabulary base, and reading is one of the best ways to expand one's vocabulary. A learner must learn to deal with unfamiliar words in order to become a

proficient reader. Reading helps readers understand and frequently pick up new words by inferring them from context. Similar to how a reading text is crucial to learning and encountering new vocabulary, understanding words helps with reading comprehension, and vocabulary knowledge is essentially part of the sequence that leads to reading comprehension. That is to say, vocabulary learning and a reading text are strongly related to one another.

As mentioned above, vocabulary knowledge is essential for understanding texts. Lack of vocabulary proficiency might make it difficult for L2 readers and learners to understand the meaning of texts they are reading. At this point, L2 learners need to use vocabulary learning strategies in order to tackle this vocabulary issue and understand what they read. According to Gunning (1998), there are several things that stop people from reading well, like having a limited vocabulary, not reading for meaning, and not using strategies appropriately.

Anderson and Freebody (1981) state that the number of difficult words in written material indicates the degree of difficulty of the text while the reader's general vocabulary knowledge indicates the degree of comprehension of the text. After all, it is without doubt true that vocabulary knowledge and reading comprehension are closely related. To summarize, reading is one of the best ways to learn new words, and readers who have profound vocabulary knowledge are better able to understand the texts they are reading.

## **2.8. Background Knowledge in Relation to Reading Comprehension**

The most significant and powerful impact on reading comprehension derives from vocabulary. However, it does not mean that vocabulary is adequate for understanding what is being read. Reading comprehension is influenced by a number of variables, including learners' schemata, language proficiency, and background knowledge as well, in addition to their vocabulary knowledge. The concept of schemata must be understood in order to comprehend how background knowledge affects how well a reader understands a text. The phrase "schema" was first used by Bartlett in 1932, who defined it as "an active structure of past reactions, or prior experience" (p. 201). All information processing is based on the fundamental components known as schemas. The schemata produced by the word meaning must also be taken into consideration, in addition to the individual word meanings, according to Heimlich and Pittelman (1986). Most readers have little issue understanding a text when adequate schemata are provided for it. Based on the schema theory of reading comprehension, effective readers have a collection of "scenarios" in their minds that they draw from as they read. These schemata help with comprehension by making connections to earlier concepts or ideas. Johnson and Pearson (1984, p. 2) identify reading comprehension as the "process

of using prior knowledge and the cues provided by the writer to construct a model of the meaning of the text that hopefully bears some resemblance to the author's intended meaning".

Coleman (1995, p. 12) points out that the terms "background knowledge" or "schema" refer to a collection of studies explaining how thinking affects the reading process. As background knowledge of the reader is essential for understanding the text, Adams and Bruce (1980, pp. 36-37) claim that "without prior knowledge, a complex object, such as a text, is not just difficult to interpret; strictly speaking, it is meaningless". Making inferences while reading is important to connect text parts and integrate background knowledge into the material as assumptions regarding information that is not directly offered in the text must be made to fully understand the text.

Also, according to Pearson et al. (1992, p. 153), learning is most effective when "it is integrated with relevant prior knowledge or existing schemata," and background knowledge has the following consequences on reading comprehension:

- good readers employ their background knowledge to interpret the text.
- low-achieving readers might be instructed on how to use their existing knowledge, which will enhance their reading comprehension level.
- high-achieving readers use their background knowledge to make inferences both during and after reading.
- successful readers recognize the significance of the material offered in a reading passage by depending on their background knowledge.
- having background knowledge of a topic is not sufficient, so it is equally vital to activate that information (p. 155).

The purpose of reading is comprehension and meaning, and this is achieved by building a strong vocabulary and background knowledge. Presenting vocabulary in an effective way is crucial to activate background knowledge since strong background knowledge makes it simpler and better for the learners to build meaning through inference. As a result, good commands of vocabulary and background knowledge make reading comprehension more meaningful.

## **2.9. Developing Vocabulary**

Vocabulary development is of great importance in the language learning process. Increasing vocabulary knowledge is a critical step in terms of understanding and using the language and developing communication skills. Words are the building blocks of language

and are a basic requirement for understanding the functioning of language. It is also an important element that strengthens language skills and increases language fluency.

Vocabulary learning strategies are methods that guide students effectively in this process. These strategies can accelerate vocabulary development and provide a more effective approach in the vocabulary learning process. Vocabulary learning strategies help students to expand their vocabulary, understand word meanings and use these words effectively in communication. By using these strategies, students can adopt a more conscious and systematic approach to vocabulary learning.

In short, vocabulary development is of great importance in the language learning process and vocabulary learning strategies should be used effectively to improve language learners' vocabulary knowledge, comprehension and language use. Vocabulary learning strategies guide learners in the vocabulary learning process, provide effective learning strategies and accelerate vocabulary development.

It is also impossible to ignore the relationship between vocabulary knowledge and reading comprehension because both are required in order to make meaning while reading a text. In fact, learning vocabulary is inextricably linked to developing other language abilities, such as speaking, writing and especially reading and listening because the more words learners know, the better they will be able to comprehend what they are reading or hearing (Udaya, 2022, p. 193). That is, one needs to know a lot of words in order to be at a good level in a language. Moreover, Pearson and Johnson (1978, p. 24) state that as comprehension involves bridging the gap between the new and the known, there is a strong emphasis on learning new words as part of teaching reading. Therefore, vocabulary knowledge has become highly significant with an enhanced awareness of how background knowledge affects reading comprehension.

However, it can be challenging to learn, remember and use the meanings and usages of new words while learning a language. For this reason, learners need to use different strategies. Semantic mapping strategy is one of them. It facilitates the understanding, retention, and use of new words for language learners and makes this process easier. Therefore, semantic mapping strategy plays an important role in language learning and vocabulary learning strategies because semantic mapping strategy helps language learners to place words in semantic contexts and connect them to background knowledge networks. This leads to better understanding and recall of word meanings.

### **2.9.1. Semantic mapping strategy**

Most people experience memory problems when there are more than seven items or informational components. “Short-term memory” is the name given to this sort of memory. According to Cowan (2008, p. 2), the phrase “short-term memory” refers to mental processes in which the human brain is capable of temporarily storing only a little quantity of knowledge in a highly accessible state. Eighty percent of the information we receive is said to be forgotten in the first twenty-four hours (Gairns and Redman, 1986). Additionally, Gairns and Redman clarify that if information is not triggered frequently, it is forgotten, and the new input eventually disappears from memory if it is not recalled or repeated. In contrast to short-term memory, long-term memory has a limitless storage capacity and does not lose its information in memory over time. However, how to store new information in long-term memory is a challenge for the language learning and teaching process. Concepts can connect to related ideas when information or concepts are activated, which is necessary for learning to take place. As a result, because vocabulary knowledge is the foundation of understanding a text, it has become increasingly important to consider the role of association between new and known information in reading comprehension, which makes the process crucial in language learning and teaching. Reviewing the literature, Adams and Bruce (1980, pp. 36-37) claim that a complex thing, like a text, is not only challenging to understand without background knowledge but also it has no meaning. Learners must draw conclusions about content that is not directly stated in it to understand the text, in addition, assumptions must be made throughout the reading process to integrate components and apply background knowledge to the text. As Beck and McKeown (1982, p. 15) state an explosion of study that greatly enhanced awareness of how one’s previous information concerning textual notions functions in reading process was inspired by the desire to comprehend the connection between comprehension and background knowledge. Another issue is that learners may understand the objective of the instructor better using their background knowledge. As noted by the definition of reading comprehension, it is the process of using background knowledge and the writer’s indicators to create an understanding of the overall meaning of the text that hopefully shares some similarities to the writer’s original meaning (Johnson and Pearson, 1984, p. 2).

For better comprehension of texts, good vocabulary knowledge is very much needed. Thus, a variety of learning strategies have been proposed in order to enhance vocabulary proficiency. Some of them include using dictionaries in context, learning words through graphic organizers, and creating word lists. The majority of these strategies have been successfully proven to be efficient for developing general vocabulary. However, traditional strategies such as word

lists, root analysis, translation of new words, and dictionary use may not be able to transfer the words to long-term memory. Therefore, teachers and learners need to develop new strategies to put the words into the long-term memory. One of these strategies is semantic mapping, which makes use of background knowledge, schemata, and associations to learn vocabulary through reading texts. Semantic mapping is intended to encourage learners to recall their background knowledge of a topic and broaden that knowledge via the acquisition of new vocabulary.

Semantic mapping has been given various definitions by many specialists and researchers. For example, according to Heimlich and Pittelman (1986, p. 3), semantic maps are “diagrams that help students see how words are related to one another”. They also indicate that semantic mapping is not a new strategy; it has existed for years under the names “semantic webbing,” “semantic networking,” or “plot maps” for years. For Silberstein (1994, p. 49), a semantic map is a strategy that allows learners to illustrate their comprehension of the connections between concepts in a text by creating a semantic map. Antonacci (1991, p. 174) defines SM as “a visual representation of knowledge, a picture of conceptual relationship”. Lewis (1993, p. 118) adds that “semantic mapping, perhaps, the main way of organizing lexical content because there is an explicit organizational principle and coherent real-world context, and it has obvious advantages over randomly occurring vocabulary”. Bromley (1992, p. 218) points out that “a semantic map or web is a graphic representation of categories of information and their relationship to each other”.

As Heimlich and Pittelman (1986, p. 44) describe, semantic mapping strategy is an example of a graphic organizer. To clarify, graphic organizers are educational tools that are used to show how much a class or individual student already knows about a topic or a text. They are placed into the text to facilitate learning. They are also used in the learning process to demonstrate both the importance of the information and the organization of the text. They assist learners in finding connections between concepts through the use of spatial information display. Besides, graphic organizers are thought to help learners organize ideas and concepts in addition to helping them connect new information to background knowledge. That is to say, they help learners organize information visually and graphically to display the connections between other pieces of information.

Researchers have also found this strategy as a great way to expand vocabulary and enhance reading comprehension (Heimlich and Pittelman, 1986; Oxford and Crookall, 1989). Identifying the meaning and content of the vocabulary in a text can be accomplished using this strategy. Badr (2017, p. 3) asserts that the semantic mapping technique is used in the

classroom by drawing some connected circles, squares, ovals, or lines between the key words to be learned and some related words that are previously understood on the board. Semantic maps comprise a main idea or a key concept, along with the grouped concepts that are connected to the main idea or the key concept. Figure 2.3 provides an example of semantic mapping structure.

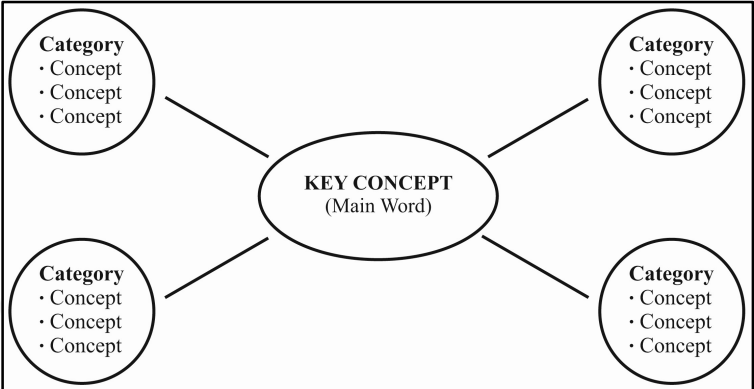


Figure 2.3. Semantic mapping structure.

Semantic Mapping is described as a way of organizing words into a diagram with a central idea at the top or in the middle and supporting ideas connected to the main idea with lines and arrows as seen in Figure 2.4, created by Gairns and Redman (1986).

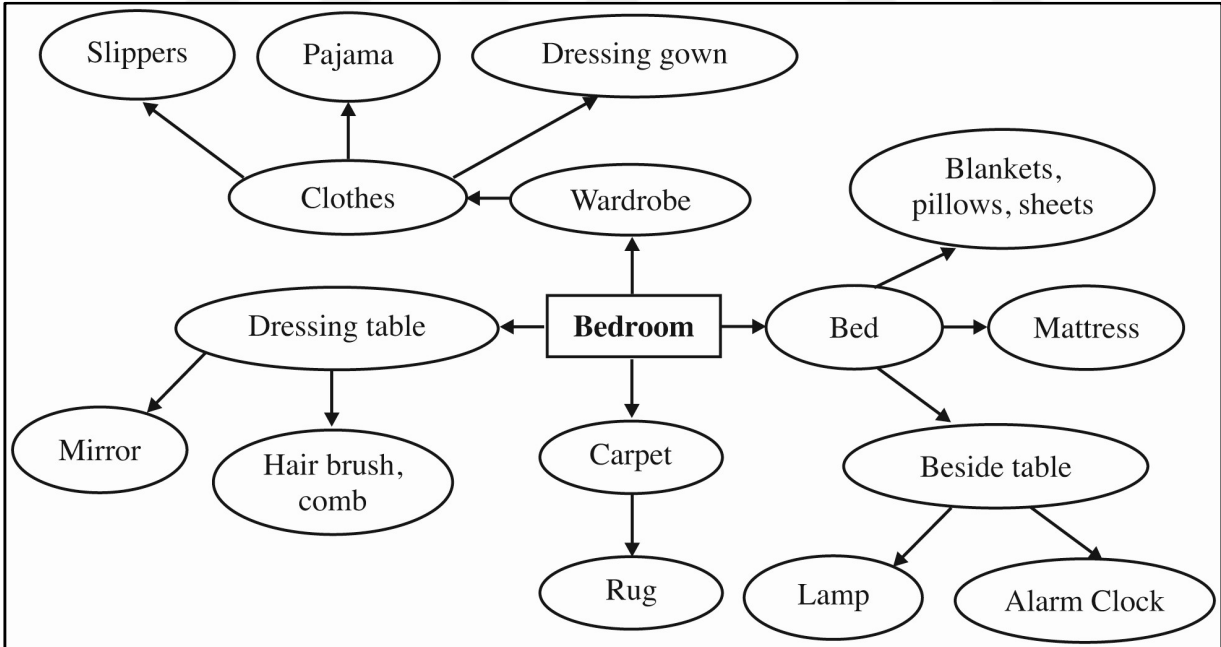


Figure 2.4. Items in bedroom (Gairns and Redman, 1986).

Learners start by writing a topic or key concept in the center box, and then they fill the other boxes with relevant sub-headings. After that, they collect and organize the words under these sub-headings, connecting each new word to the relevant box with a line. He also claims

that this strategy of storing lexical items may be more advantageous to learners than traditional lists since it may more closely resemble the way that our brains store lexical item networks. For instance, the center word is “station, some sub-headings could be places, timetable, people, things to buy, etc.”. Lexical items in these categories can be seen in Figure 2.5.

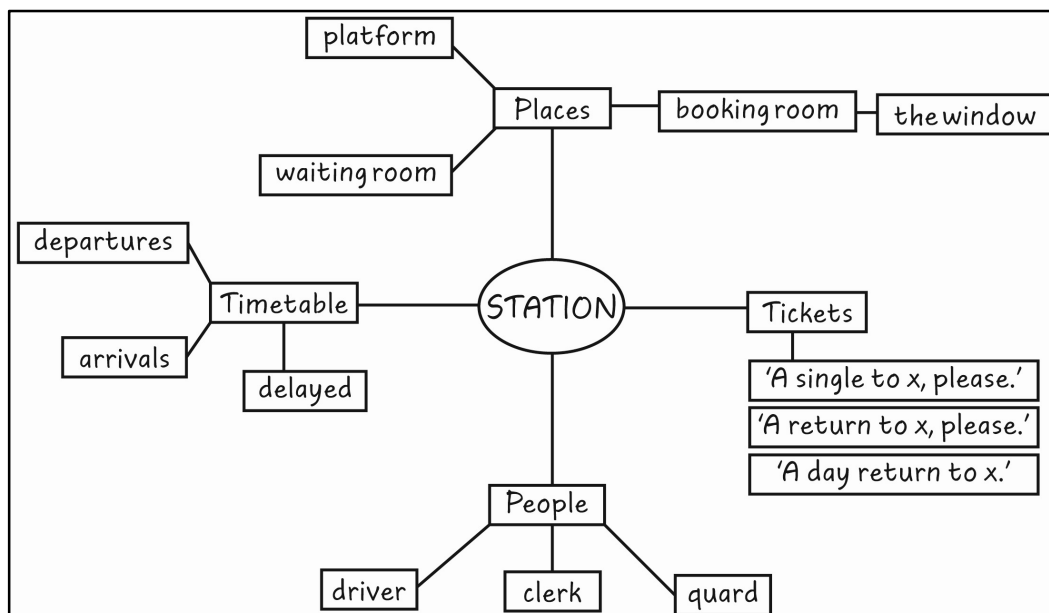


Figure 2.5. Example of semantic mapping (Scrivener, 2011, p. 202).

Semantic maps can be created in two ways. The first one is a classic semantic map, which is created manually on paper or a board. Although semantic maps are developed using paper and a pen, it has become possible to generate the maps digitally since the invention of computers and the internet. So, the second type is called a digital semantic map, which is created using proper software on a computer, mobile device, or other electronic device generated with software and applications that are possible to install and utilize on desktop computers, laptops, tablets, and mobile phones. However, there is no difference in strategy implementation. Both the paper-based and digital semantic mapping strategies may be used to develop vocabulary knowledge in the same way.

### 2.9.2. Digital semantic mapping

Researchers have recently been concentrating on semantic mapping strategies in order to examine their impacts and potential applications in teaching of many subject areas, including languages. But as technology has advanced, the use of software for semantic mapping strategy has also been emphasized and has drawn the interest of researchers and learners in a variety of fields. Software for digital semantic mapping compiles their ideas and

thoughts into something structured immediately and in a concrete way, which is extremely popular in the world these days. As a result, they have attempted to determine the impact of different semantic mapping software on vocabulary and language learning. Therefore, many studies have been conducted on “*digital semantic mapping*”.

Digital semantic maps are believed to be productive and engaging since they depend on using exceptionally quick and specialized computer software that incorporates images, colors, and drawings that appeal to the reader, according to Naghmeh-Abbaspoura et al. (2019, p. 240). The reliance of digital semantic maps on the simple and flexible use of colors, shapes, and images in a creative digital manner can be attributed to the learners’ positive attitudes towards English.

According to Stanley (2013, p. 39), digital or computer-based resources are effective at encouraging learners to use more vocabulary because interesting and creative presentations make words easier to remember. Learners can interact directly with words and phrases. In addition, teaching learners how to use digital learning resources appropriately and successfully integrating them into the curriculum enables learners to develop their lifelong learning abilities, which they may use both inside and outside the classroom. It is important to point out that the use of digital semantic maps for vocabulary learning gives learners the freedom, creativity, and opportunity to express their thoughts and establish connections between ideas and lexical items visually. That is to say, it is an effective strategy that boosts productivity by making it easier to develop and analyze ideas and to organize and retrieve information.

As for Bhattacharya and Mohalik (2020, p. 400), instructors and learners utilize digital semantic mapping as a teaching and learning strategy in order to organize knowledge and concepts in a way that is easy to understand and place in context. Digital semantic maps show the relationships between concepts, words, and information by combining text and pictures.

Myre (2020) also indicates that digital semantic maps are more practical, mobile, and easy to store and share with friends, not just for the scope of the document. Finally, Rosário (2021, p.35) states that noticing the vital role that vocabulary plays in learning a second or foreign language and the range of learning strategies currently available, for example, mind mapping tools, often referred to as e-mind mapping software, computer-assisted semantic mapping, and semantic mapping through the use of software, are well-known technological resource that have facilitated the expansion of vocabulary. Furthermore, because digital semantic mapping strategy is a creative activity, a technique may change based on projects,

resources, and personal interests. Especially recently, young people are very interested in technology and spend most of their time using it, and this has made digitalization necessary in the field of education. Nowadays, digital semantic maps are commonly used in every field, such as medicine, education, or business as they can be created easily and quickly through software. Some of the most popular software packages for digital semantic mapping are MindManager, MindGenius, FreeMind, Inspiration, MindMeister, and MindView (Armstrong, Tucker and Massad, 2009) and Xmind, Mindjet, MindGenius, Mindomo, Coggle, TheBrain, Padlet (Bhattacharya and Mohalik, 2020, p. 401).

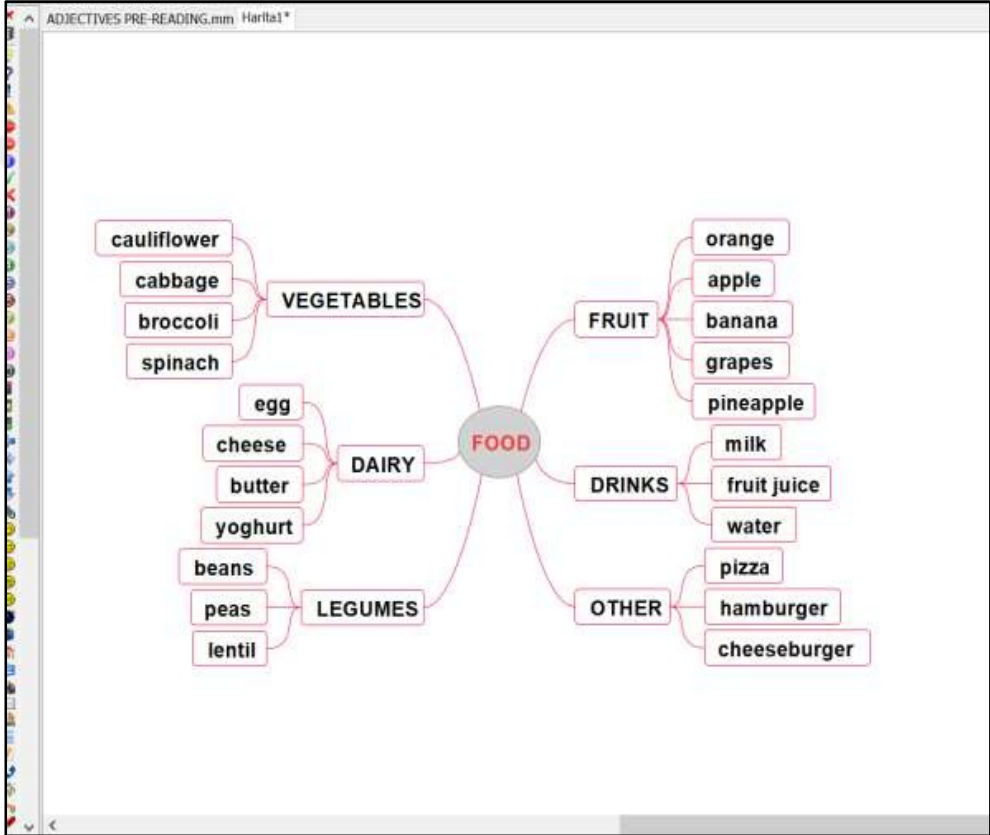


Figure 2.6. An example of digital semantic mapping created through freemind.

According to Armstrong, Tucker and Massad’s (2009) research, FreeMind appears to be the most widely used mind mapping program for the education, business and government sectors. It may be assumed that this is most likely because the program is free and that makes it more available and practical for many types of study and work. Users can make links to online sites, local files, exe files, and any type of file because FreeMind provides the fundamental building blocks for map production by giving users a range of choices for linking other information to maps. An Example of Digital Semantic Mapping created through FreeMind is seen in Figure 2.6 above.

Bhattacharya and Mohalik (2020, p. 404) also claim that digital semantic maps are effective tools for understanding and conveying ideas because individuals are able to analyze visual information quickly. Digital semantic mapping software facilitates learning by making the information simple and easier to understand, and by creating digital mind maps, learners are able to actively participate in the learning process. By breaking down larger or more complex concepts or theories into smaller and simpler components, it helps knowledge be perceived or viewed as more easily comprehensible. It also aids in recalling background knowledge and makes it simple to connect it to new information. Using interactive digital semantic maps during a lesson can assist learners in understanding the topic even better, and they can easily rearrange ideas by clicking and dragging the mouse. Finally, being adaptive may also be counted as one of the other advantages of digital semantic mapping software.

### **2.9.3. Common areas of semantic mapping usage**

Semantic mapping is one of the most effective strategies for vocabulary learning. Stoller and Grabe (1993, p. 30) state that “semantic mapping leads to better vocabulary retention because new lexical items are introduced in semantic networks”. One of the most effective strategies for teaching vocabulary is semantic mapping because it helps learners consider the relationships among words. It encourages learners to actively explore word relationships, which results in a greater understanding of word meanings by fostering learners’ conceptual comprehension of words. Therefore, using this strategy can assist learners in efficiently and successfully memorizing new words. As Heimlich and Pittelman (1986, p. 5) point out “three of the most commonly used applications of the semantic mapping strategy are 1) for general vocabulary development, 2) for pre- and post-reading, and 3) as a study skill technique”.

#### ***General Vocabulary Development***

The development of general vocabulary is the best-known application of semantic mapping. Vocabulary is not simply a group of unrelated words but rather a collection of interconnections, so there appears to be a significant case for conveying vocabulary to learners in a systematic way. This will both show learners how vocabulary is formed and also allow them to assimilate the knowledge in a sensible way (Thuy, 2013, p. 635). There are many different ways that words are related to each other. For example, the meaning of a word is somewhat influenced by its relationship to other words that are similar to it, frequently through sense relations, and words in a word family are connected to one another by inflectional and derivational affixes

(Schmitt, 2000). In this regard, Johnson and Pearson (1984, pp. 12-13) apply a semantic mapping process in reading lessons and vocabulary development as follows:

1. Select a word or topic that relates to classroom work and write it on a piece of paper, the chalkboard, or a transparent slide.
2. Encourage the students to come up with as many words as they can that are associated with the word or the topic chosen, and
3. Help the students organize their lists into categories on a piece of paper.
4. Ask the students to organize their lists of words into categories on the map after sharing their prepared lists orally.
5. Examine the connections between these words. By marking the categories on the class map, students can practice classification extensively.

### ***Pre-reading and post-reading***

Semantic mapping has been suggested as a study skill strategy and a tool to increase students' comprehension of all types of reading materials for both learners and instructors; Pittelman's pioneering study in the field of semantic mapping is the first significant example (1985). However, the first mapping model that "translates reading into thought" was presented by Hanf (1971, p. 225). According to Heimlich and Pittelman (1986, p. 6), Hanf focuses on the semantic mapping strategy, identifying it as a study skill that controls the processing of textbook content. In his technique, group or individual study skills are boosted through the use of mapping. They also claim that semantic mapping has been shown to be an effective alternative to traditional exercises performed before and after reading a new text, in addition to being useful for vocabulary development.

### ***Study skill technique***

Semantic mapping, as a pre- and post-reading strategy, is successful with both basic and other reading materials, and it has been successfully applied for content instruction as well. Learners study the main idea or key concept and try to think of as many words as possible related to the main idea or key concept using their background knowledge before reading a specific text (See Figures 2.7 and 2.8).

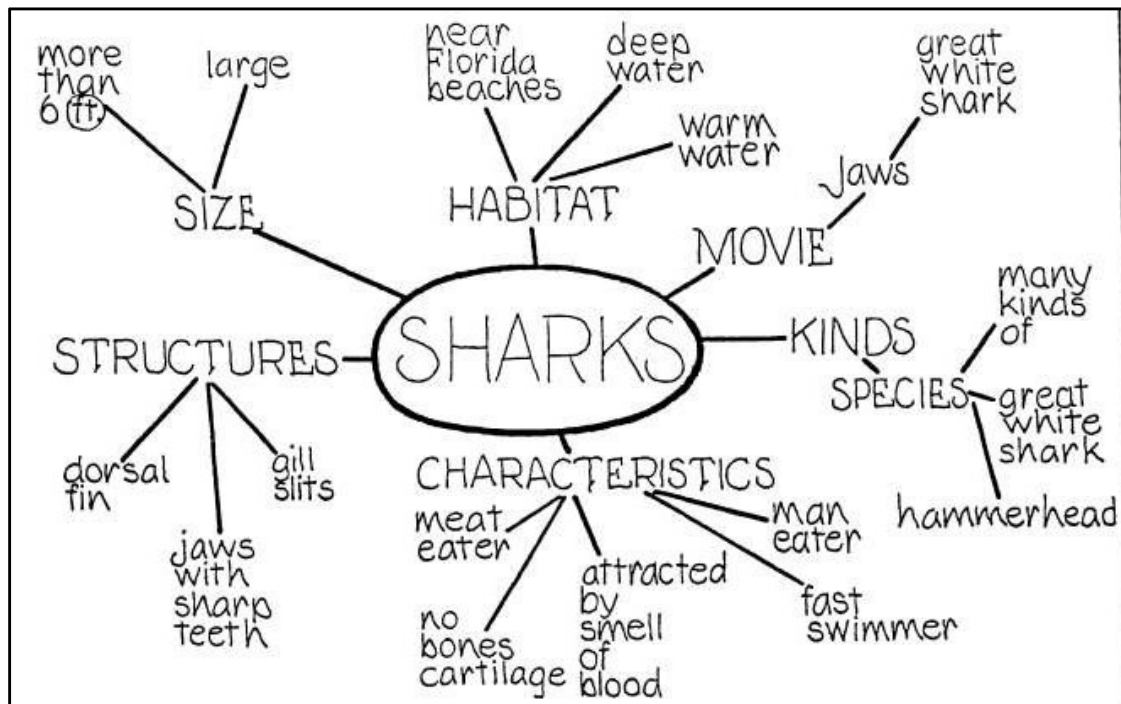


Figure 2.7. Pre-reading semantic map for sharks (Johnson, Pittelman and Heimlich, 1986, p. 780).

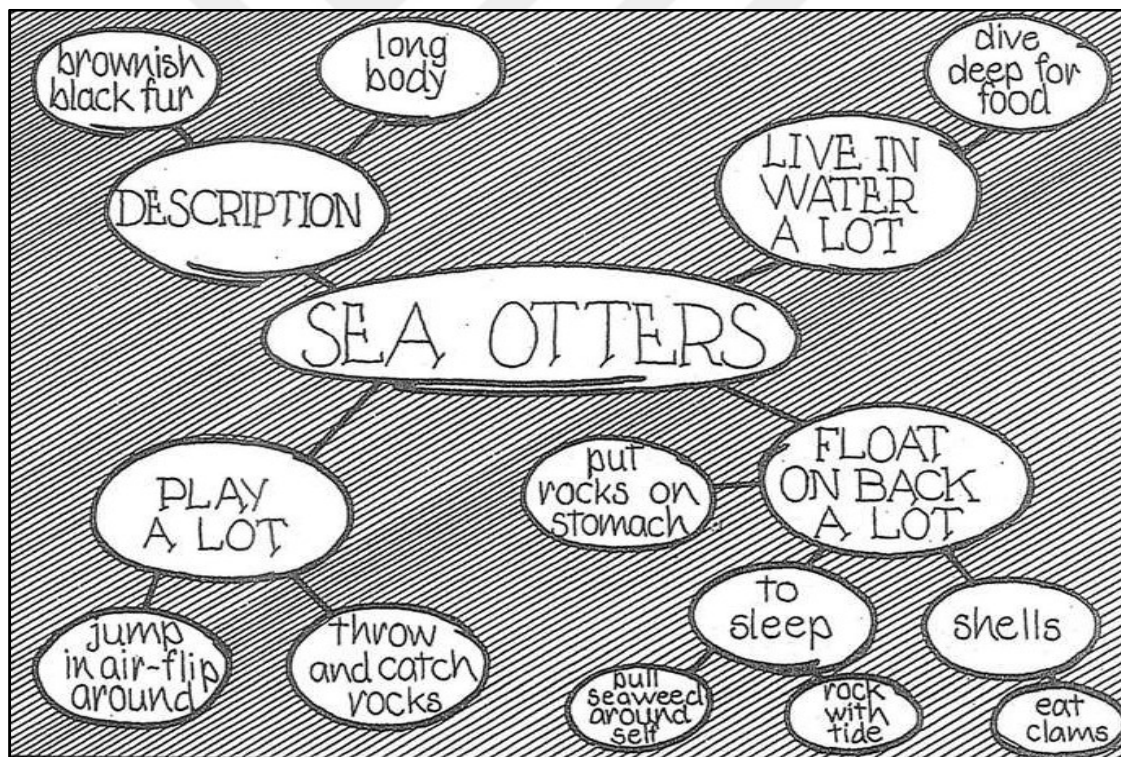


Figure 2.8. Initial classroom map for sea otters (Heimlich and Pittelman, 1986, p. 14).

Then, they can expand their vocabulary knowledge after reading the text by learning new words and categories as seen in Figures 2.9 and 2.10. That is, semantic mapping is a strategy for reading comprehension that helps students concentrate on key concepts and main ideas in a text and then explain what they understand about those concepts. When they are

acquainted with the semantic maps' structure, they are able to create their own semantic maps for pre-, during-, or post-reading activities.

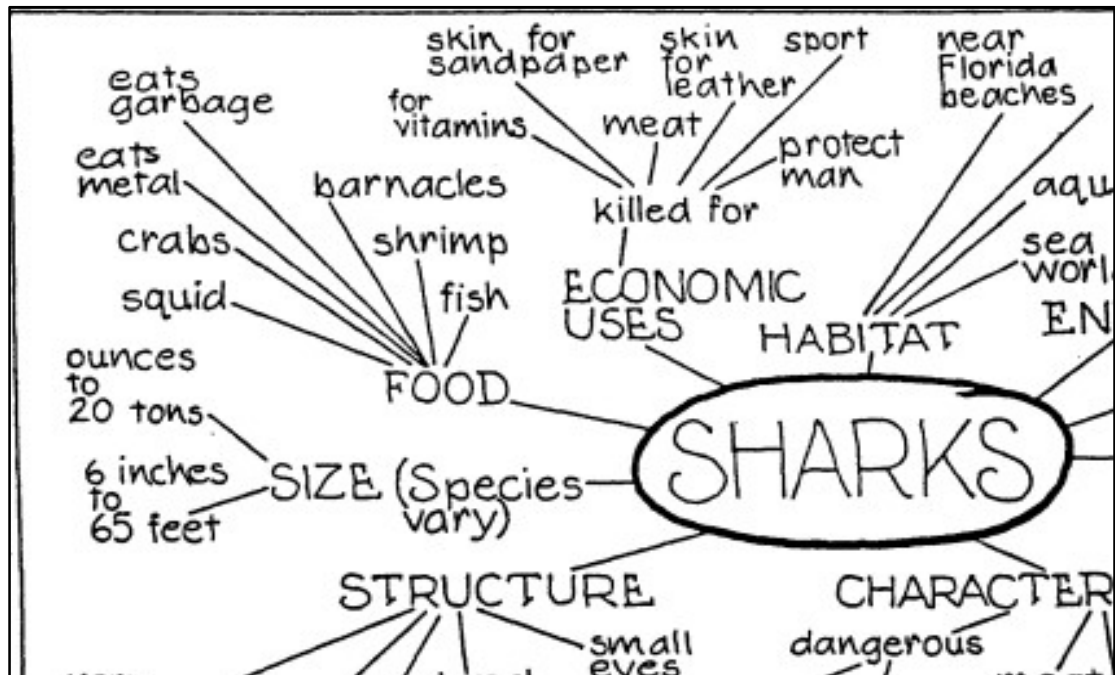


Figure 2.9. Post-reading semantic map for sharks (Johnson, Pittelman and Heimlich, 1986, p. 781).

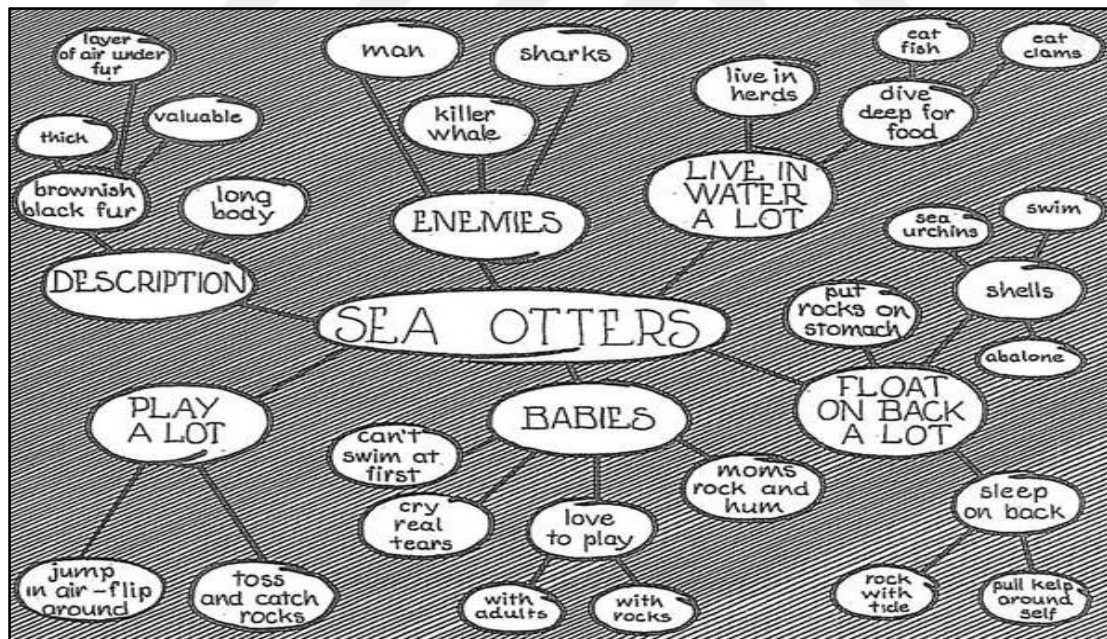


Figure 2.10. Completed classroom map for sea otters (Heimlich and Pittelman, 1986, p. 15).

Another idea might be as Heimlich and Pittelman (1986, p. 8) mention, Hanf suggests three essential phases to develop a content information map from a text: identification of the main idea, secondary categories, and supporting details. In the first phase, the key concept or the main idea is written on a piece of paper and a circle is drawn around it. The primary content of each chapter in the textbook will generate the second phase of the semantic map. In

this part, learners make assumptions about the main parts of the passage before reading the textbook. Then, titles for the subcategories are written on the map. In the final phase, learners go through the map by adding information from memory after reading the chapter for clarification.

Prater and Terry (1988, p. 103) also claim that “when we consider the influence of background knowledge upon reading comprehension, we also must consider effective classroom techniques that activate students’ prior knowledge”. Before reading, the use of semantic mapping as a strategy to activate, evaluate, and enhance learners’ background knowledge of a topic appears to have considerable merit. When new words are introduced within the schematic framework or background knowledge, they can be easily understood and learned, so the development of background knowledge or schemata needs to go right along with the expansion of vocabulary.

#### **2.9.4. The advantages of semantic mapping strategy**

Semantic mapping strategy has been shown in various studies to provide significant advantages in the teaching and learning process. They highlight how applying semantic mapping helps learners’ reading comprehension as well as their thinking, brainstorming, and writing skills. Learners of all ages seem to be motivated by semantic mapping and actively involved in the cognitive process. Heimlich and Pittelman (1986, pp. 45-46) cite a number of advantages of the semantic mapping strategy and assert that learners of all ages seem to be motivated by semantic mapping and actively involved in the cognitive process. Instructors can also evaluate and understand learners’ background knowledge through the semantic mapping process, and they can choose the most appropriate form of instruction to provide them. Heimlich and Pittelman (1986, p. 46) also state that “these judgments can be based upon what students demonstrate they already know about a topic, rather than teachers having to assume what the students know”. That is, these advantages include motivating learners at all grade levels, combining reading and thinking, assessment and teaching, and determining the most effective form of instruction.

Hanf (1971) claims that semantic mapping is an effective strategy of organizing information graphically that has been around for a long time. It helps learners enhance their vocabulary knowledge by categorizing and displaying the word as it relates to other words. Bouchard (2005, p. 69) also explains that semantic mapping enables learners to arrange

concepts, demonstrate relationships, and remember vital information in a partial and visual environment.

As for Harmer (2007, p. 235), teachers and students can work together to create connections between words on a visual framework like a blackboard by employing semantic mapping to teach vocabulary. The instructor and the learners need to work together in semantic mapping in order to create a diagrammatic map that emphasizes the connections between the vocabulary the teacher suggests, the vocabulary that the students offer, and the vocabulary obtained through the reading text. In this sense, it is also stated that teachers and students can build a semantic map on the board that visually presents data inside categories related to a key concept and generates meaningful word associations (Stoller, 1994, p. 3). The teacher makes an effort to encourage participation from the learners, and it is a very engaging technique for expanding vocabulary knowledge and motivating learners to recall and integrate what they already know.

Learners are able to remember, organize, and graphically express the information they have read with the help of this strategy. Participating in this process encourages learners' background knowledge of the topic and enables them to integrate new words into their existing schemata effectively. Also, learners can acquire new vocabulary by using previously learned words in a network of words with similar semantic meanings.

### **2.9.5. The process of semantic mapping strategy**

Learners are prepared to comprehend, learn, and evaluate the information they will read through the semantic mapping strategy. As Heimlich & Pittelman (1986, p. 86) indicate, learners are encouraged to connect their background knowledge to the new information they are reading or studying since they are actively participating in the semantic mapping process. Therefore, several attempts have been made to adapt some instructional procedures in order to implement semantic mapping strategy effectively in the class.

As for Zaid (1995, p. 9), there are five stages to the application of semantic mapping in the classroom. These stages are:

1. Introducing the topic: The teacher writes the topic in a big oval to represent it. The text the students will read is related to this topic, so students are able to infer the purpose of the text.

2. Brainstorming: The teacher encourages students to think of words and concepts that are related to the topic. Brainstorming is a method that uses schema theory to connect known and unknown concepts. All suggestions are accepted at this stage as long as they are related to the topic.
3. Categorization: This stage is also known as the pre-assignment. Students receive assistance in combining their suggestions. The teacher and the students create a category cluster based on the ideas of the students.
4. Personalizing the map: The teacher gives information, such as reading a text that emphasizes the key concepts of the map upon the completion of each student's own version. The text also includes other associated concepts. Students will decide what to add to or remove from their own map while they are reading. This stage involves the integration of new information with background knowledge.
5. Post-assignment synthesis: This stage is used to record the ideas and suggestions that the students make from their own maps on the pre-assignment. Then, the final shape of the map is chosen by the whole class. A visual representation of the knowledge they learned from the map is provided by the new version.

Additionally, Harmon (1998) lists eight techniques that can be used to implement semantic mapping in the classroom. These techniques are *synonyms*, *brief explanations*, *illustrations and nonillustrations*, *rewriting*, *repetition*, *associations*, and *original expression*.

Another suggestion is provided by Rosenbaum (2001, pp. 45-46):

1. Fill in the main bubble with the new word and the page number.
2. Write the sentence in which the new word appears in another bubble to give context for the new word.
3. Add the definition of the word in a different bubble using a dictionary.
4. Find synonyms or antonyms for the word using the dictionary.
5. Write the synonyms of the word in another bubble. Morphology and structural analysis are really crucial as they assist in extending new learning and tapping into background knowledge.
6. Fill in one of the bubbles with a relevant example, unique expression, or association for the word. Record a phrase, a category, an image, or a specific indication of the word in this place.

7. Write an original sentence including the new word independently and appropriately in the bubble at the bottom of the page. Students are supposed to make their own sentences in this part.

The completion of the semantic mapping activity provides a procedure that enables the learners to combine background knowledge, current learning, and enriched personal experience. A framework of the word map is given in Figure 2.11.

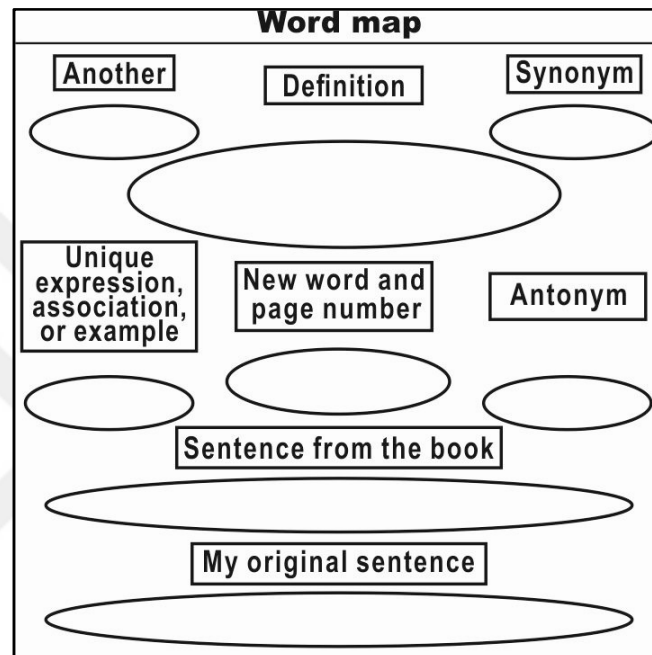
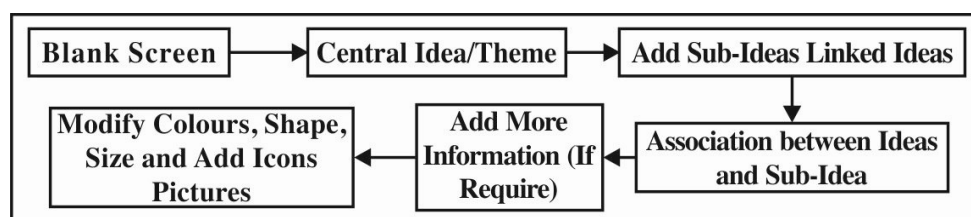


Figure 2.11. A framework of the word map (Rosenbaum, 2001, p. 45).

On the other side of the coin stands the digital version of semantic mapping. Al-Jarf (2015, p. 513) suggests an instructional strategy for teachers who want to implement SM using a computer program in class. This procedure goes through six phases: “*Orientation, presentation and modeling, guided practice, independent practice, extension activities, and assessment*”. First of all, learners are introduced to the semantic mapping software, its purpose, and its components in order to classify, visualize, and remember connections among words. In the second phase, the instructor can train learners how to use the software by making various types of maps: (a) Phonological maps, which emphasize words with the pronunciation and stress patterns (b) morphological maps that focus on words or word components that share the same prefix, suffix, root, and forms deriving from the same word or root; (c) syntactic maps that emphasize word families, collocations, parts of speech, singular and plural forms, idioms, and phrasal verbs (d) Semantic maps, which focus on synonyms and antonyms. For the guided practice, learners try to associate words they already know with the

ones being covered in class using the SM digital program. They continue to add categories and words to each semantic map while keeping their phonological, morphological, syntactic, and semantic maps. The instructor will guide the learners on how to make word lists and add any new vocabulary they learn in class to the already-created maps in accordance with each mapcategory. During the independent practice phase, students will be asked to use the program at home, create new word maps, and add new words to their existing ones. They are given questions that enable them to identify, categorize, or integrate words they have learned on their own in class or at home. Semantic maps can also be developed and added before, during, and after reading. As extension activities, semantic maps can be made by the learners individually, in pairs, or in small groups. They can share, exchange, save, and/or post their semantic maps in an online course. They can also keep them in a folder or e-portfolio. In the last phase, learners are required to organize a list of words into groups and categories on blank semantic maps by analyzing their phonological, morphological, and semantic relations. In addition, at the advanced stage, they are given a group of words and asked to create a semantic map using the digital program to indicate specific categories. Semantic mapping can also be utilized for assessment purposes by testing learners' knowledge of lexical items in this way.

Finally, according to Bhattacharya and Mohalik (2020, p. 404), since there is not “one way” to create a digital semantic map, a procedure is suggested to be followed when using technology to create a diagram as below as seen in Figure 2.12.



**Figure 2.12.** Steps to create a digital semantic map (2020, p. 404).

Step 1- Begin with a blank screen.

Step 2- The core node should include the main concept or topic.

Step 3- Add any related or subordinate ideas that come to mind to the screen. Write them on branches that emerge from the center.

Step 4- Make associations between related and subordinate ideas by drawing lines. To rearrange the ideas, drag and drop the components of the diagram. Add more information to each sub-idea and more information to the digital map until it is adequate.

Step 5- Use formats, such as changing colors, shapes, and sizes, and adding icons and photos, etc., to visually organize and convey the ideas.

### **2.9.6. Previous studies on semantic mapping**

The value of vocabulary knowledge in learning a second or foreign language is becoming more widely recognized. The necessity of vocabulary development has grown more than ever due to a greater understanding of the impact of background knowledge on learning new information. Learners' vocabulary acts as a means of classifying the ideas that are already present in their minds, and this concept served as a turning point for linguists and researchers to conduct new research in the area of language learning using semantic mapping based on the brain's semantic networks' connections. Therefore, several studies have been done to see the efficacy of the semantic mapping strategy in different contexts.

El Koumy (1999) compared the efficacy of three classroom teaching strategies on semantic mapping for college-level English language learners. 187 freshmen at a university in Egypt served as the participants. Three implementation groups were chosen at random for the participants: teacher-initiated semantic mapping, student-mediated semantic mapping, and teacher-student interactive semantic mapping. Over the course of five months, one hour per week of implementation was provided. Participants were given pre- and post-tests in reading comprehension. The teacher-student interactive semantic mapping group performed much better than the other two groups, which had similar results on the post-test despite the fact that there were no considerable differences between the groups on the pre-test.

Raiziene and Grigaite (2005) investigated the impact of utilizing semantic mapping strategy on a child's cognitive development. They defined semantic mapping as a strategy that systematically organized information into a graphic or visual representation. They looked into how the teachers' use of semantic mapping as a strategy for enhancing the two cognitive processes of classification and segregation in a child's sixth age affected cognitive outcomes. The participants were fifty-seven six-year-old children. The results showed that the growth of classification and segmentation processes could be encouraged via the semantic mapping

training. In addition, children who participated in the study in the experimental group were more creative and developed good thinking skills.

Another study was carried out by Taghavi and Sadeghi (2008) with 120 pre-intermediate undergraduate students taking a general English course at Urmia University. The two purposes of the study were to investigate the relationship between gender and the efficacy of semantic mapping strategy instruction on reading comprehension as well as to analyze the impact of semantic mapping teaching on reading comprehension. The findings showed that students' reading comprehension improved significantly after receiving semantic mapping training and teaching semantic mapping had a considerable impact on students' reading comprehension but there was no statistically significant correlation between gender and the impact of semantic mapping training on it.

Al-Otaibi (2011) also conducted a study in order to look into how effective *Computer-Assisted Semantic Mapping* was in increasing the vocabulary and reading comprehension of ESP students. It also examined how well *Computer-Assisted Semantic Mapping* worked to improve students' information retrieval skills and how students felt about the semantic mapping strategy. The participants of the study were level-three nursing students at King Saud University. In the study, it was necessary to map medical terms and texts in order to aid these students in their vocabulary learning, text recall, and comprehension. The results revealed that while the semantic mapping strategy improved student recall and vocabulary, it had no effect on their reading comprehension. This inability to advance in reading was a result of the program's inability to reinforce reading comprehension skills like differencing and comprehending causal connections in a text. Moreover, more student instruction and teacher modeling were needed for semantic mapping. The usefulness of the semantic mapping strategy was viewed favorably by the students although it was stated that more student instruction and teacher modeling were needed for semantic mapping.

Keles (2012) carried out a study to analyze the views of elementary teachers on mind mapping. The participants of the study were twenty-four elementary teachers with experiences between two and twenty-one years. First, the usage of the mind mapping technique was mainly explained to the teachers. Then, the teachers were asked six open-ended questions about mind mapping and utilizing this technique in the classroom in the interview. The findings indicated that using mind maps in the classroom improved teaching, planning, and assessing classes as well as making lectures more enjoyable.

In his study, Thuy (2013) indicated that students were usually challenged with learning vocabulary as well as with specialized linguistic abilities at Tran Quoc Toan High School while they were learning English. They were unable to memorize words for a long period of time or to recall words when needed because of their learning styles and strategies. Therefore, a study was undertaken with sixty students studying at this high school in order to better understand how students memorize information and how they feel about semantic mapping. The findings showed that the students in the experimental group did better at remembering word meanings than the students in the control group. The findings also revealed the students' favorable opinions regarding semantic mapping. That is to say, semantic mapping was beneficial for vocabulary teaching and learning and could increase high school students' vocabulary retention according to the research.

Karamifard and Minaeifar (2016) intended to examine how Iranian EFL students perceive using a digital versus a traditional mind-mapping strategy. The participants were sixty male students in a primary school in Yazd, Iran. There were two groups in the study. Digital mind mapping was used with one group, and traditional mind mapping was used with the other. At the end of the implementation, the results showed that students in the digital mind mapping group outperformed those in the traditional group in terms of perception. Through the use of the digital mind mapping strategy, the group participants not only learned new information but also performed better than those in the traditional group.

In his study, Altay (2017) drew attention to semantic mapping as a practice for EFL students by outlining its advantages and disadvantages and focusing on achieving awareness in this aspect. Twenty EFL students studying at a state university were the participants of the experimental group. A second group of equal size was randomly selected from the same accessible population to serve as the control group. After the evaluation of the pre- and post-tests, the results showed a considerable rise in the vocabulary size of the experimental group.

Situmorang (2017) aimed to find out how the semantic mapping strategy affects students' reading comprehension of narrative texts and whether there were notable differences between the two groups of students who were taught using the semantic mapping strategy and those who were taught using conventional techniques. 60 students at SMP Raksana Medan in ninth grade were the subjects of the study. The results showed that the semantic mapping strategy was successful in assisting students in improving their reading comprehension

performances and it might be recommended as one of the alternatives for teaching reading comprehension to English teachers.

In addition, Bouafia and Guerfi (2020) investigated how second-year secondary students and English teachers in secondary schools felt about the impact of utilizing the semantic mapping strategy on students' vocabulary retention. It was assumed that second-year secondary school students and secondary school English teachers shared a favorable opinion of the application of the semantic mapping strategy to improve students' recollection of vocabulary. Forty second-year students from secondary schools and eight English teachers from secondary schools were involved in the study. Two questionnaires, given to both students and teachers, were administered as part of a descriptive methodology. The results showed that most students and teachers had favorable opinions of using the semantic mapping strategy to help students acquire vocabulary.

Bhattacharya and Mohalik (2020) described various kinds of software used to make digital mind maps, highlighted the software development process for building them, and gave a general overview of the advantages and applicability of such software. The results revealed that academic institutions, teachers, and students could use digital mind mapping software for teaching and learning since it simplified the information effectively for better understanding. For them, students were able to create digital mind maps and actively participate in the learning process using digital mind mapping software. The study suggested using digital mind mapping software as a tool for generating ideas and creating visual representations of concepts as well.

Kılıçkaya (2020) aimed to understand how students experienced collaborative digital graphic writing based on semantic mapping to revise assigned readings and lectures, as well as how it appealed to various learning styles and whether it may help students recall course content. The subjects were senior EFL (English as a Foreign Language) students from a Turkish state institution. The research revealed that digital graphic writing had special qualities for reviewing the assigned readings since it gave students an enjoyable and creative way to review the material by combining text and images. Also, collaborative digital graphic writing offered a helpful strategy to enhance remembrance of course content in addition to learning from each other's comments and suggestions.

Rosário (2021) conducted a study including a systematic review that synthesized 10 years' worth of primary research studies in order to compare the effectiveness of using semantic mapping software to acquire vocabulary in the setting of English as a Foreign Language to other traditional instructional strategies. The primary research studies from 2010 to 2020 were used to determine whether or not teaching vocabulary to EFL learners using semantic mapping software improves their vocabulary learning, as well as to identify the primary researchers' findings regarding the application of semantic mapping software in vocabulary learning. The results indicated that all experimental groups that used the semantic mapping software showed statistically significant increases in vocabulary learning and retention in comparison to participants in the control groups. That is to say, students' ability to learn and remember EFL vocabulary was greatly enhanced by the use of Computer-Assisted Semantic Mapping (CASM) as a vocabulary teaching technique. It could also be concluded that semantic mapping software is a highly effective and beneficial strategy for vocabulary development and acquisition in EFL.

Along with the studies above-mentioned, numerous research studies have been done to determine whether semantic mapping might enhance students' learning abilities generally and across all content areas. Some research examined the impact of semantic mapping on students' reading comprehension performance while others sought to enlighten us on its effects on other skills. As a result, most previous research supported the idea that employing semantic mapping was a useful technique for learning and teaching and developing the performances of learners of all ages. Nevertheless, although the majority of the researchers in the studies arrived at meaningful conclusions in favor of the semantic mapping strategy, some studies showed that there was no significant difference between the groups that applied the semantic mapping strategy or the traditional ways (Roshan, 1997).

## CHAPTER 3

### 3. METHODOLOGY

The overall study design is the first focus of this chapter. Following that, it gives some details on the participants. Finally, data collection instruments and procedures are explained at length.

#### 3.1. Design of the Study

The primary purpose of this research is to determine if memory-based vocabulary learning strategies such as the semantic mapping strategy may efficaciously support learners in acquiring the target vocabulary. It aims to figure out the effectiveness of the semantic mapping strategy on vocabulary learning by comparing it within groups using digital and non-digital means. It is also crucial to determine whether students are able to use their background knowledge to receive new information utilizing this strategy. For this reason, students are supposed to employ the semantic mapping strategy to connect the known and unknown as they are learning new words. Considering the needs of the 21<sup>st</sup> century and the advancements in technology, digital semantic mapping was also in concern. Thus, a quasi-experimental design was seemed appropriate for the study.

Quasi-experimental design is a research in which a dependent variable is compared between two or more groups. In a quasi-experimental study, two experimental groups may receive a variety of implementations which enables analysis of the two groups' performance in relation to one another. Aspects that distinguish the quasi-experimental design apart from the experimental design are not requiring a control group, random assignment or selection of participants and being less rigorous (Loewen and Plonsky, 2017, p. 155). As there are two groups, the present study employed a quasi-experimental design in order to determine the differences between the two groups in terms of appropriateness for the purposes of the research.

#### *Pilot study*

A pilot study was conducted to design the research procedure, assess the feasibility and applicability of the research methodology, identify significant logistical issues with the help of suggested solutions, establish and confirm the appropriateness of research instruments, determine the resources needed for a planned study, assess the suggested

methods of data analysis to identify any potential issues and finally, to conduct the main study.

The pre-test and post-test were crucial components of the study, so as mentioned above a pilot study was developed prior to the implementation process in order to verify their validity and reliability. The prepared measurement instrument was asked to three field specialists for their opinions and suggestions on content validity, learner level, its weight in scoring and determining the academic achievement score. Necessary arrangements were made on the instrument in line with the recommendations provided from experts.

Under the guidance of scale development and language field experts, the questions were developed, modified, and finally completed. The questions were formed as to their parts of speech and it was measured that the learners were able to find out the words out of context. The finalized version was used and applied to 120 prep class students who were not included in the study as the participants. After that, the KR-20 formula was used to calculate how well each test item worked with the rest of the test as a whole. This approach is used to determine if a question is absolutely accurate or incorrect. It is employed to assess the reliability of the multiple-choice tests. Determined Reliability Cronbach Alpha close to (+1.00) indicates high reliability.

$$\text{KR-20: } R_x = \frac{n}{n-1} \left( 1 - \frac{\sum p \cdot q}{S_x^2} \right)$$

KR-20: Reliability coefficient

n: number of items in the test

p: those who answered the item correctly / those who answered the item

q: those who answered the item incorrectly / those who answered the item

p.q: variance of an item

Sx<sup>2</sup>: square of the standard deviation of test scores

The reliability coefficient of KR-20 of the 50-item multiple-choice test was calculated as 0.81 as a result of the application of the pilot test. Discrimination coefficient items which were below 0.20 in the test were removed from the pilot test and the final version of the multiple-choice test consisting of 30 questions was created. These 30 questions served as the

foundation for assessments. At the end of the elimination process, the reliability coefficient was calculated as 0.89. This test was used for pre-test and post-test.

### ***The main study***

Two groups were randomly assigned as “digital semantic mapping group” and “paper-based semantic mapping group”. The students in the digital semantic mapping group tried to acquire the target vocabulary with using digital means while the students in the paper-based semantic mapping group tried to learn the target vocabulary through using non-digital means. The implementation lasted for six weeks.

On the first week of the implementation, a target vocabulary task was applied to both groups as pre-test in order to determine their current level of knowledge regarding the words after being generated or reorganized to be used for the study to check the language with two educational specialists (one of them is an associate professor at Selçuk University at the department of translation and interpreting and the other one is an instructor at the School of Foreign Language at DEU), as well as taking into account the opinions of the 5 colleagues who are instructors at the school of foreign languages of DEU and Selçuk University. On the second week, a topic was given to both groups and they were asked to create a semantic map. The students in the digital semantic mapping group were presented with an empty semantic map sample that they are supposed to fill into develop semantic mapping strategy using digital means. Similarly, the students in the paper-based semantic mapping group continued their regular semantic mapping training, only with the difference of using non-digital means. Then, a reading text was given to both groups. This reading text comprised the target vocabulary included in the pre-test. After reading the text, the students in the digital semantic mapping group were asked to add some new words and they completed the semantic maps with the help of their instructor digitally, and the students in the paper-based semantic mapping group did it non-digitally. The procedure went on the same way for 6 weeks with different topics and different reading texts. In the last phase of the study, a post-test which was the same as the pre-test was conducted to both groups to determine the differences between two groups in terms of achievement.

### **3.2. Participants**

This quasi-experimental study was carried out at the School of Foreign Languages of Dokuz Eylül University, with the participation of 42 Intermediate level EFL learners between the ages of 18 to 20. There were two classes of learners. One of which was the digital

semantic mapping group and the other one was the paper-based semantic mapping group. Both the digital semantic mapping and the paper-based semantic mapping group consisted of 21 students. They were randomly chosen as the sample group for the study using the convenience sampling method. Convenience sampling, also referred to as accidental or haphazard sampling, is a kind of non-probability sampling in which participants from the target population who fulfill specific practical requirements, such as easily accessible, close proximity to the study site, availability at a specific time, or willingness to participate, are chosen for the purpose of the study (Dörnyei, 2007). The homogeneity of the groups was ensured based on the participants' comparable levels of English proficiency and their prior instruction by the researcher. All of the participants in the study were four-year undergraduate students of different departments such as engineering, international relations, tourism management and international trade who had not received a score of 65 or higher on the proficiency test at the start of the academic year. The students were all native speakers of Turkish and they graduated from various high schools all around Turkey. In the 2022-2023 academic year, the students' levels and classes were determined by the placement test they took. That is to say, the students were placed in the classes on the basis of their results of the placement test. The students took an intensive English course for 25 hours a week. They were all supposed to complete their prep classes and pass the exam at the end of the second term to go on with their education at their faculties.

In the digital semantic mapping group, there were 9 female and 12 male students and in the paper-based semantic mapping group; there were 11 female and 10 male students. Both groups were led by the same participant instructor throughout the implementation.

**Table 3.1.** The number and the gender information of the participants.

	<b>Female</b>	<b>Male</b>	<b>Total</b>
<b>Digital Semantic Mapping Group</b>	9	12	21
<b>Paper-based Semantic Mapping Group</b>	11	10	21
<b>Total</b>	20	21	42

### **3.3. Data Collection Instruments**

In this study, data was collected through a pre-test and a post-test. Also, reading texts, maps (both digital and paper-based) were employed to provide content for the data collection procedures. First of all, the participants in both groups had taken the prepared vocabulary test as a pre-test in the same classroom setting before the implementation started. The pre-test including 30 multiple choice questions with 30 different target words was used to measure the participants' vocabulary knowledge. It was designed in accordance with the reading texts the

participants would be required to read. The participants were given 40 minutes to complete the test. After that, the implementation was started for both groups. 6 reading texts with the topics of adjectives, technology, films, crime, art and nature were chosen to be utilized in the implementation. These reading texts were selected intentionally according to the suitability of the semantic mapping strategy. Throughout the process, the digital semantic mapping group created the semantic maps using digital means while the paper-based semantic mapping group developed the maps using paper and pens. The post-test was conducted to the two groups in the following week in order to assess the effects of the implementation.

### ***Pre-test and post-test***

The study was conducted to the participants in the spring term of 2022. Pre-test had the purpose of evaluating the students' current capacity for word comprehension. In addition, the pre-test was utilized to determine whether the digital semantic mapping group and the paper-based semantic mapping group were equivalent. The subjects took the test in the same classroom setting before the implementation. The pre-test was conducted to both groups on the same day. 30 target words prepared according to 6 reading texts were given through multiple choice questions. The time limit was 40 minutes.

The digital semantic mapping group and the paper-based semantic mapping group received the post-tests which had the same set of questions and process on the same day as the implementation was completed. The post-tests were utilized to compare the improvement of the two groups.

### ***Face-to-face interviews***

According to Gass and Mackey (2005, p. 173), semi-structured interviews offer a flexible framework whereby researchers utilize a set of written questions as a guide while retaining the freedom to explore and probe for more in-depth information. To analyze students' perceptions and experiences related to the implementation of the semantic mapping strategy, the study also incorporated qualitative data by structured interviews. The qualitative data aimed to capture students' opinions on the effectiveness of the strategy, their perceived advantages and disadvantages, and whether one group demonstrated a comparative advantage over the other. Structured interviews were employed as the chosen method for data collection following a six-week implementation period.

The interview questions were thoughtfully developed and organized by the researcher under the guidance of field experts, aligning with the research objectives and focusing on aspects such as students' preferences, perceptions, and concerns regarding the utilization of the semantic mapping strategy.

A total of ten students participated in the interviews, with an equal representation of five students from the digital semantic mapping group and five students from the paper-based semantic mapping group. Considering the participants' English proficiency limitations, it was decided that the interviews would be conducted in Turkish, their native language. This language choice aimed to facilitate the participants' authentic and open expression of their thoughts and emotions, ensuring the collection of reliable and meaningful data. It is worth noting that to maintain privacy, the participants' real names were not utilized during the interviews.

The interviews were audio-recorded to capture the data and subsequently transcribed. The transcriptions were then translated into English by the researcher to facilitate the analysis and reporting process. In short, incorporating semi-structured interviews in addition to quantitative data allowed for a comprehensive exploration of students' perspectives, shedding light on their experiences, preferences, and areas of improvement regarding the implementation of the semantic mapping strategy.

### **3.4. Data Collection Procedure**

In the study, first of all, the researcher conducted a pilot study with six classes to determine the validity and reliability of the questions that were used in the pre-test and post-test. A test of 50 vocabulary questions related to 50 target words were asked to the pilot group. The vocabulary questions were prepared according to the reading texts that the participants read during the implementation. After the questions were analyzed in terms of validity and reliability, satisfactory, valid and reliable 30 questions were chosen to be used in the study. Except for the participants in the pilot group, 42 students with no background differences were divided into two groups: the digital semantic mapping group and the paper-based semantic mapping group. Before the implementation, the students in both groups were given the pre-test, including the target vocabulary chosen from the reading texts. The digital semantic mapping group and the paper-based semantic mapping group used the same materials during the 6-week period. In the first week, the semantic mapping strategy was introduced to both groups as digitally (for the digital semantic mapping group) and non-

digitally (for the paper-based semantic mapping group). The digital semantic mapping group also learnt how to use software called FreeMind which is a free of charge software to create their own maps. After reading a text containing the target vocabulary, the learners in the digital semantic mapping group were given an uncompleted semantic map sample and expected to complete the map themselves using the software FreeMind. Meanwhile, the learners in the paper-based semantic mapping group were given an uncompleted semantic map sample and expected to use papers to create their own maps. Each week, the students were asked to create a map related to the topic of the week by themselves and then they had a different reading text. On reading the text, they completed the maps with the help of their instructor. After the implementation, the same post-test was applied to both groups.

### ***Digital semantic mapping Group week 1***

At the beginning of the lesson, the students were told that they were going to study the topic “*Adjectives*” and the vocabulary related to it. Adjectives can be considered as both a vocabulary and grammar topic. However, vocabulary learning techniques are studied in this study so it was handled on a vocabulary basis. Each student had a computer. The instructor opened a blank page and wrote the topic “Adjectives” into the middle of the page. Meanwhile, the students started to create their maps on their own computers as the instructor did. The learners were made to brainstorm as many words as they could. After that, the instructor added all the words received from the learners on another blank page. Next, the instructor wanted the students to put these words on branches starting from the central node. The instructor also informed the students that they could write more words on their maps if they wanted (See Figure 3.1). The students were told that they were going to read a text titled “No Laughing Matter” (See Appendix 2) including the words and ideas they had created on the maps.

Afterwards, the instructor made the students read the text from the board within 10 minutes. While reading, they had the opportunity to take notes of the unknown words. After they discussed these words with their classmates and the instructor, they added and shared the new words they had found out so that they could associate these words with the ones written before. The instructor wrote these new words to the map on the board under the appropriate categories. The instructor wanted the learners to add the target words from the text and highlight them. Also, the instructor highlighted these target words on the board (See Figure

3.2). Finally, they discussed the link between the known and unknown words and learned how to build bridges between these words and ideas.

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

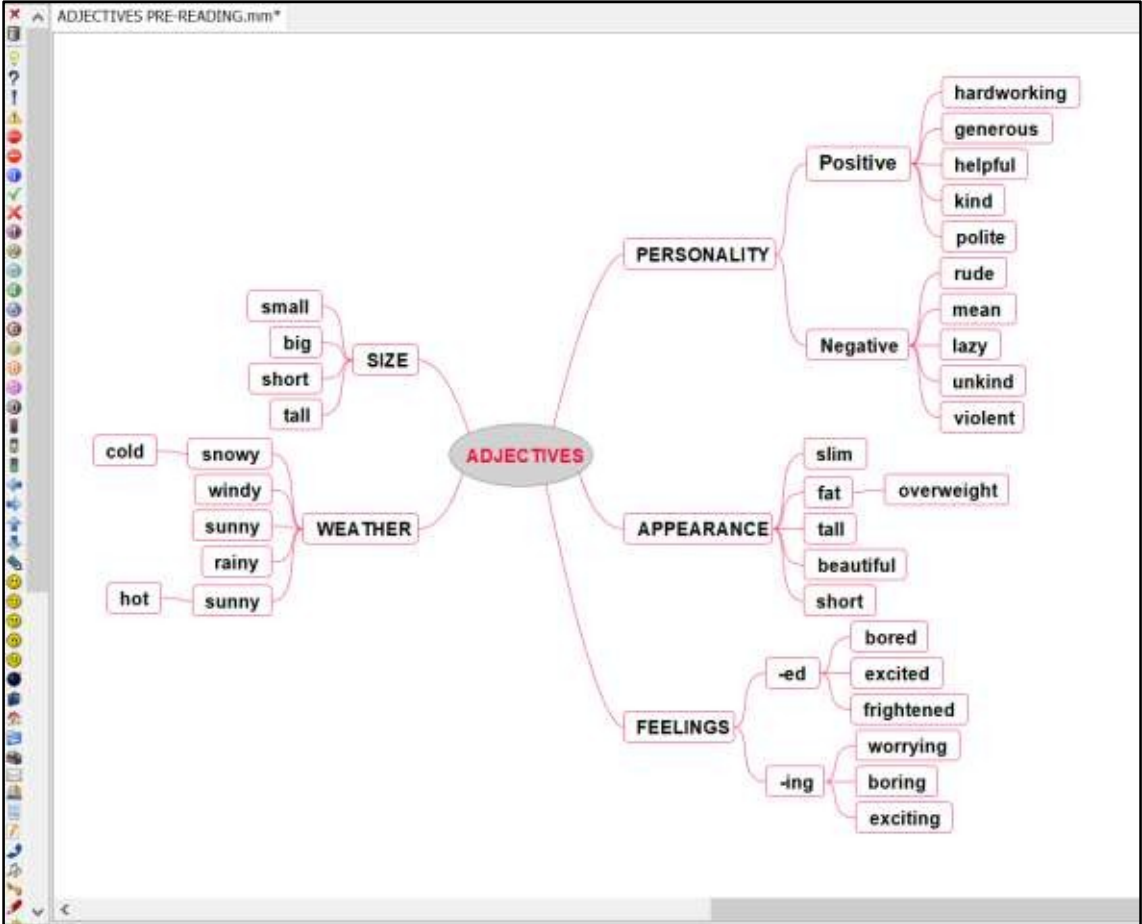


Figure 3.1. Example of a digital semantic map for “Adjectives” before reading.

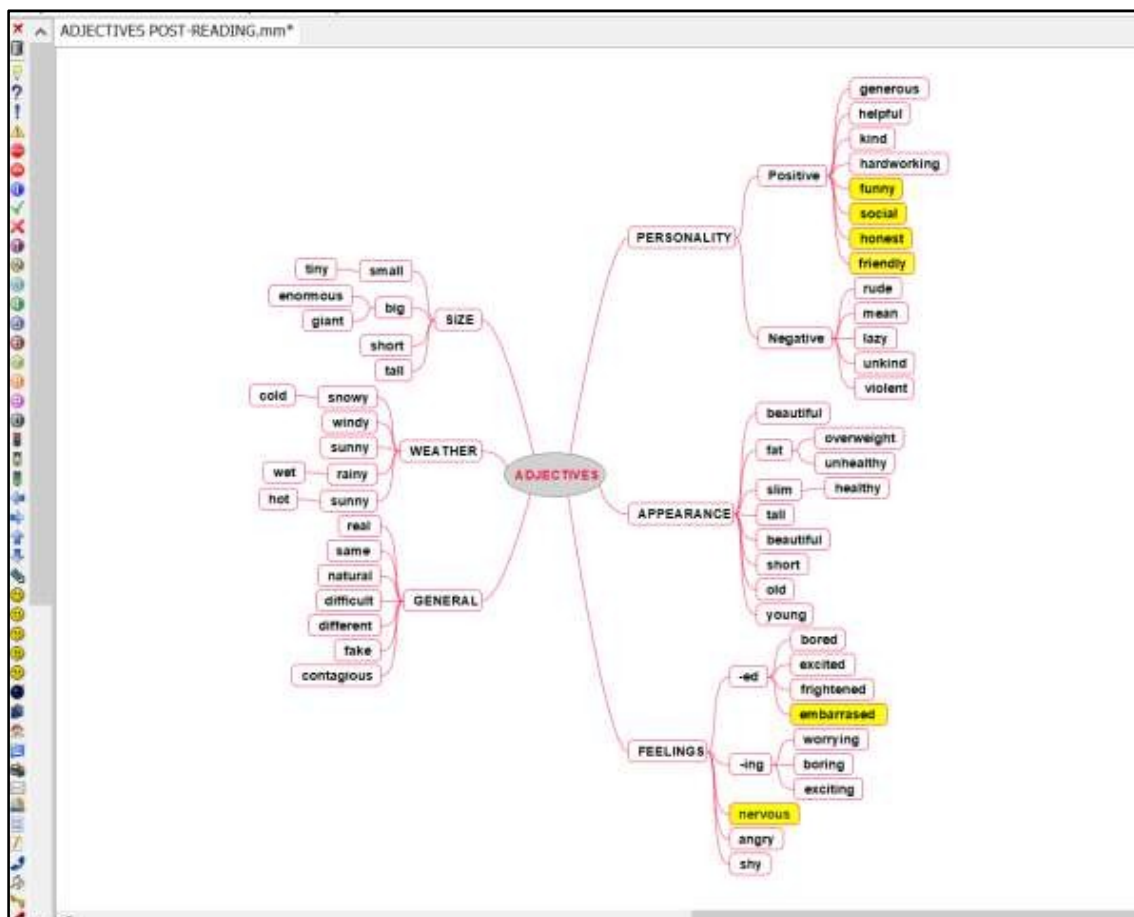


Figure 3.2. Example of a completed digital semantic map for “Adjectives” after reading.

### Week 2

The procedure was followed as in the previous week. The instructor wrote the topic “Technology” in the middle of the blank page. The learners discussed the words related to the topic and listed as many words as they could. After the learners created the initial map with the help of the instructor (See Figure 3.3), they were given the reading text titled “Technology and Change” (See Appendix 3). The learners finished their maps once the text was elaborated on and this enabled them to connect the known and newly learned words (See Figure 3.4).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

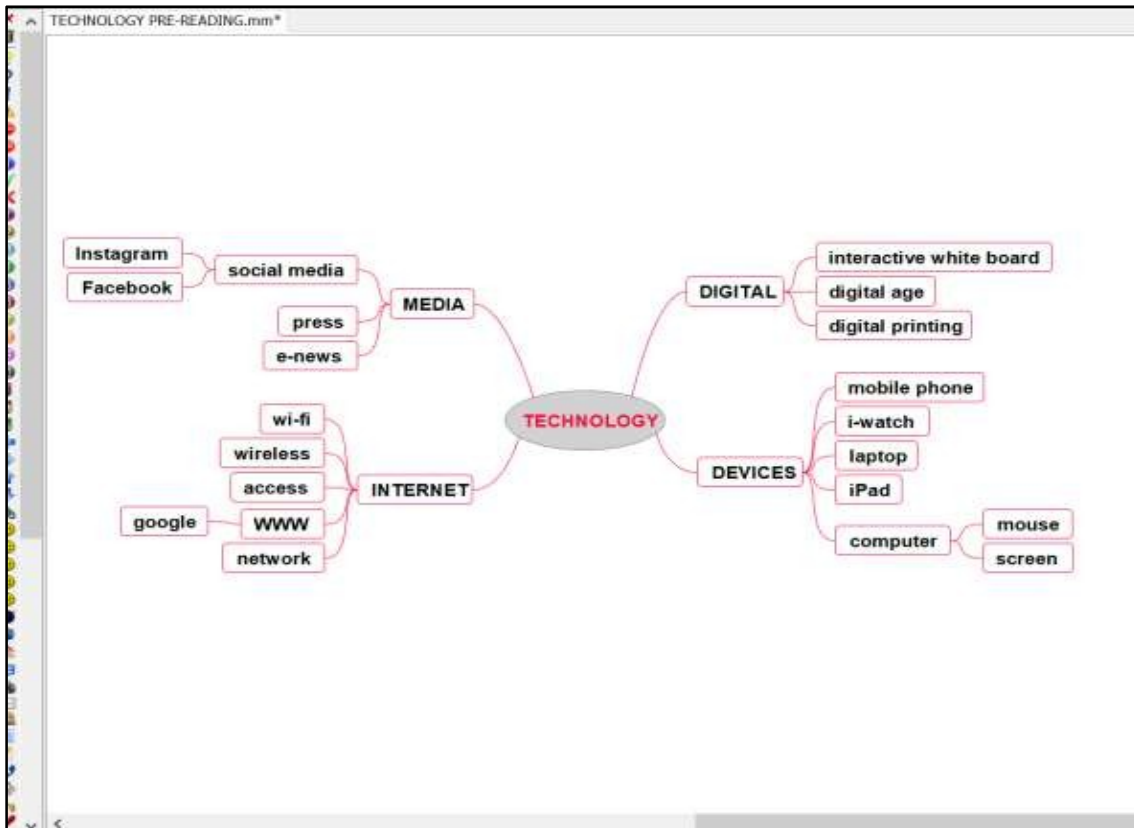


Figure 3.3. Example of a completed digital semantic map for “Technology” before reading.

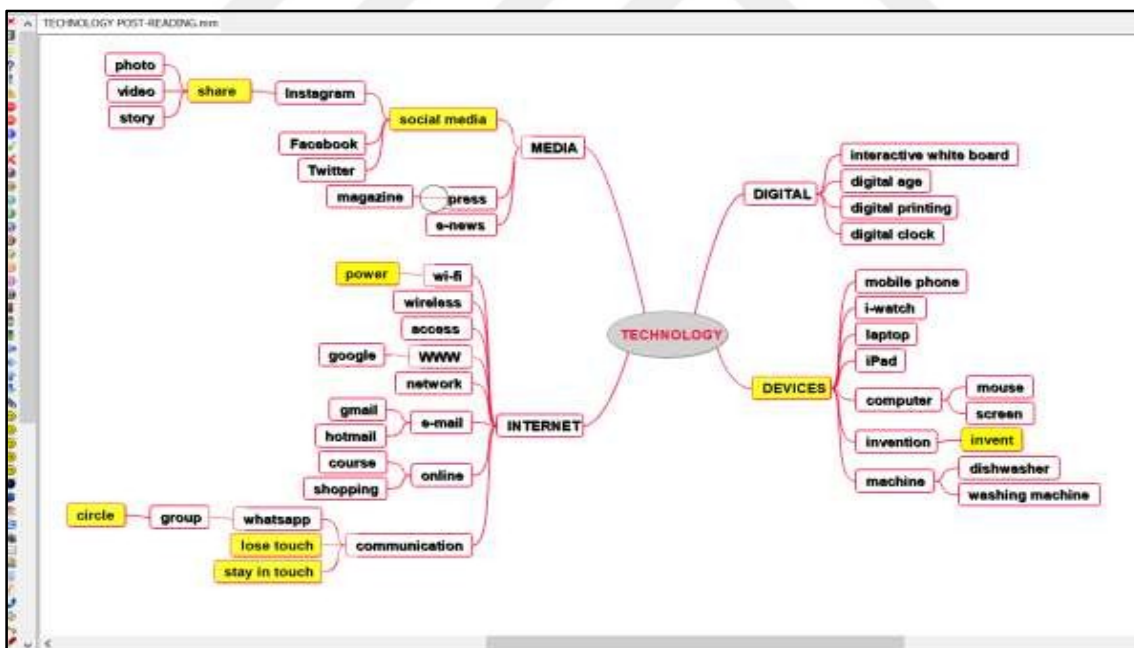


Figure 3.4. Example of technology after a digital semantic map for “Technology” after reading.

### Week 3

The procedure was followed as in the previous weeks. The instructor wrote the topic “*Crime*” in the middle of the blank page. The learners discussed the words related to the topic and listed as many words as they could. After the learners created the initial map with the help

of the instructor (See Figure 3.5), they were given the reading text titled “The Greatest Unsolved Crime” (See Appendix 4). The learners finished their maps once the text was elaborated on and this enabled them to connect the known and newly learned words (See Figure 3.6).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

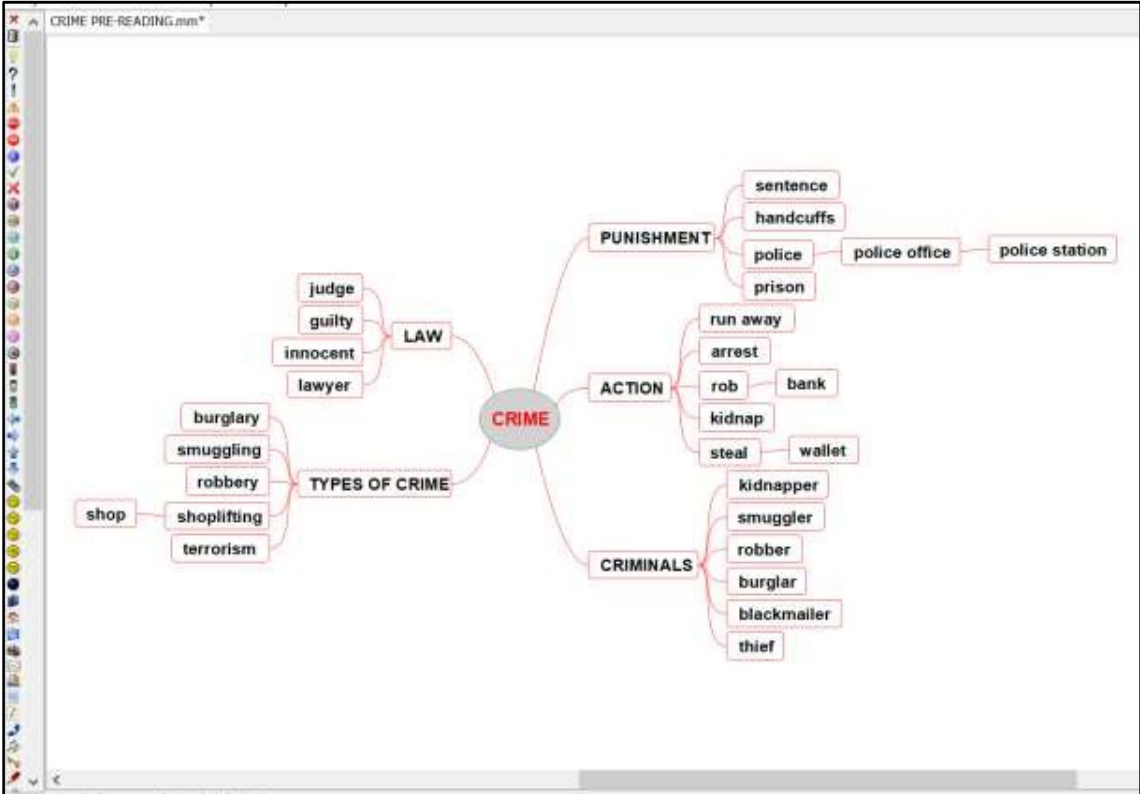


Figure 3.5. Example of a digital semantic map for “Crime” before reading.

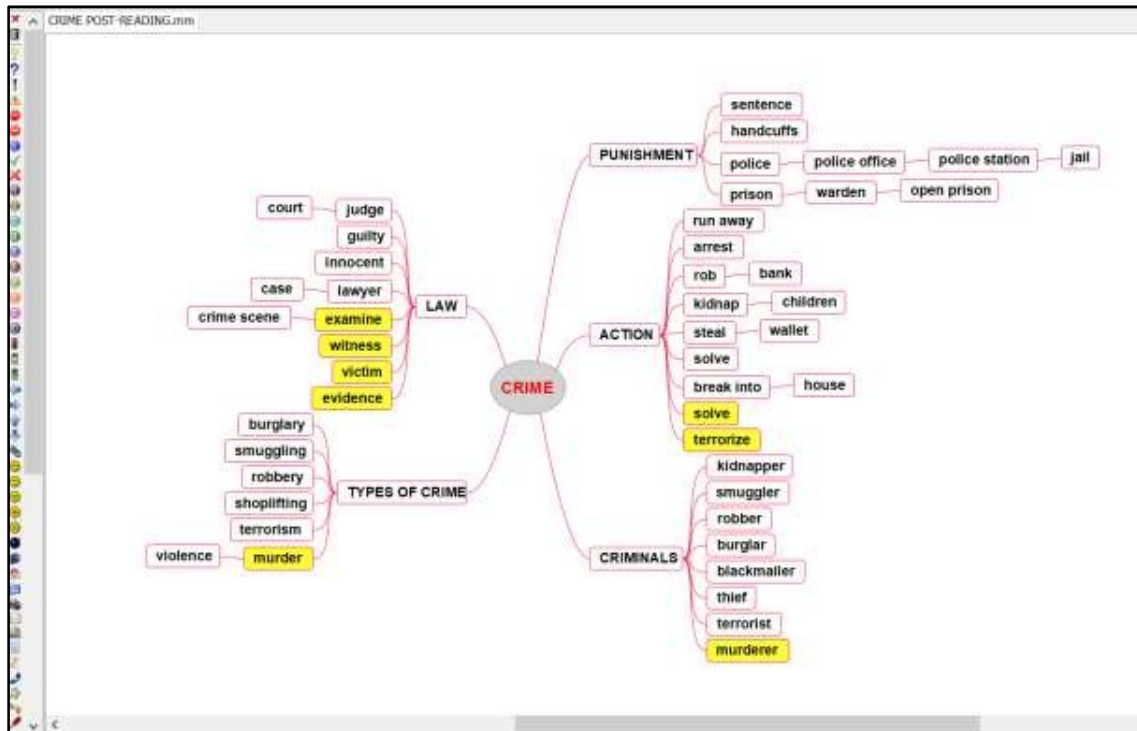


Figure 3.6. Example of a completed digital semantic map for “Crime” after reading.

*Week 4*

The procedure was followed as in the previous weeks. The instructor wrote the topic “Art” in the middle of the blank page. The learners discussed the words related to the topic and listed as many words as they could. After the learners created the initial map with the help of the instructor (See Figure 3.7), they were given the reading text titled “Six of The Best, Biggest and Most Popular” (See Appendix 5). The learners finished their maps once the text was elaborated on and this enabled them to connect the known and newly learned words (See Figure 3.8).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

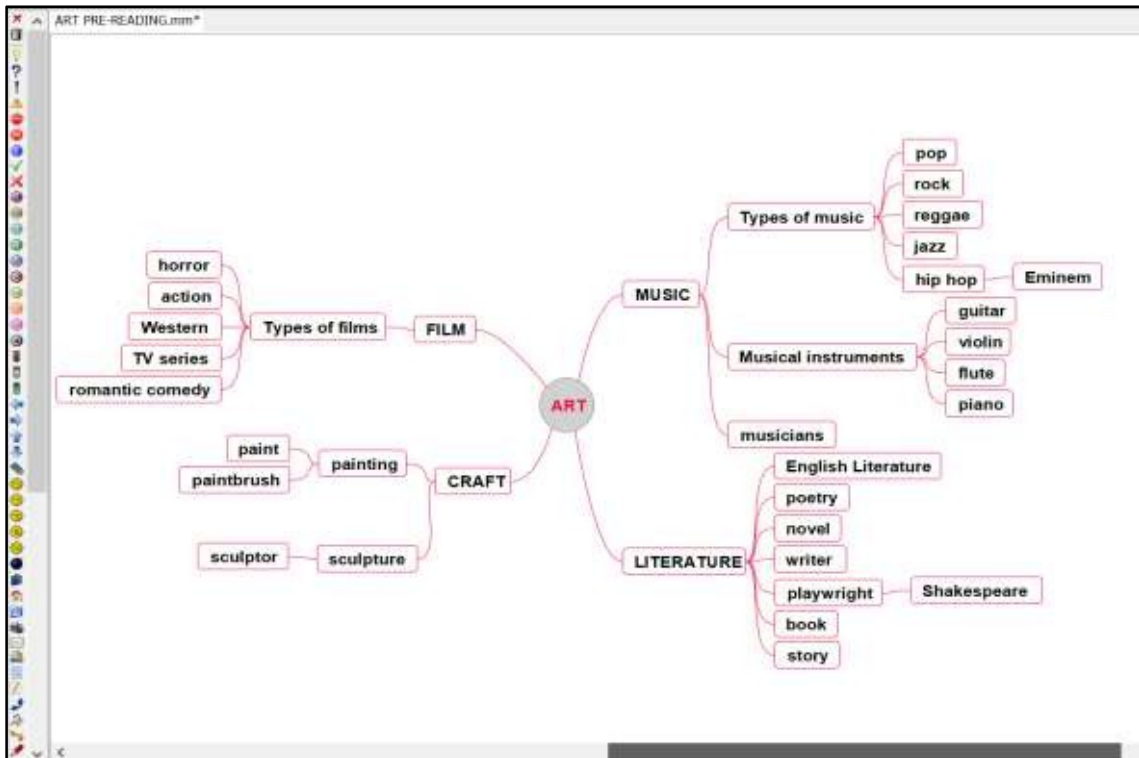


Figure 3.7. Example of a digital semantic map for “Art” before reading.

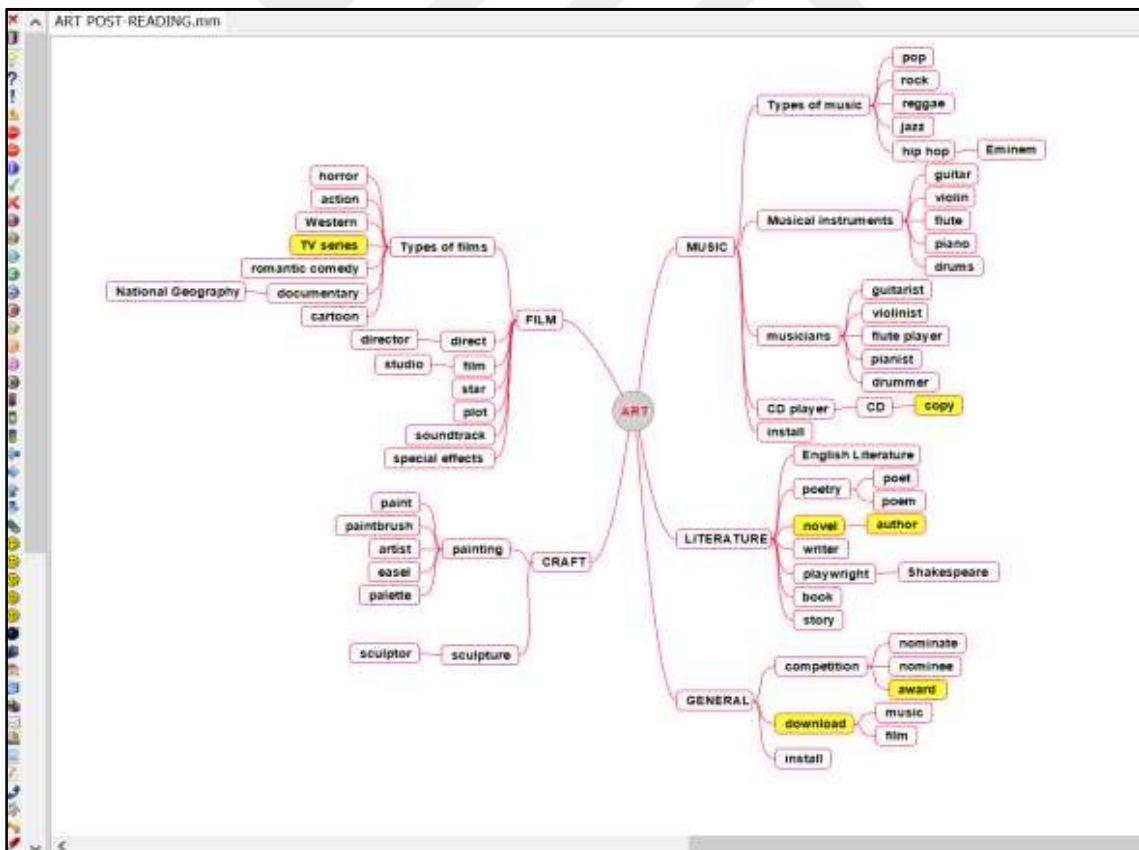


Figure 3.8. Example of a completed digital semantic map for “Art” after reading.

Week 5

The procedure was followed as in the previous weeks. The instructor wrote the topic “Films” in the middle of the blank page. The learners discussed the words related to the topic and listed as many words as they could. After the learners created the initial map with the help of the instructor (See Figure 3.9), they were given the reading text titled “Classic Films You Must See” (See Appendix 6). The learners finished their maps once the text was elaborated on and this enabled them to connect the known and newly learned words (See Figure 3.10).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

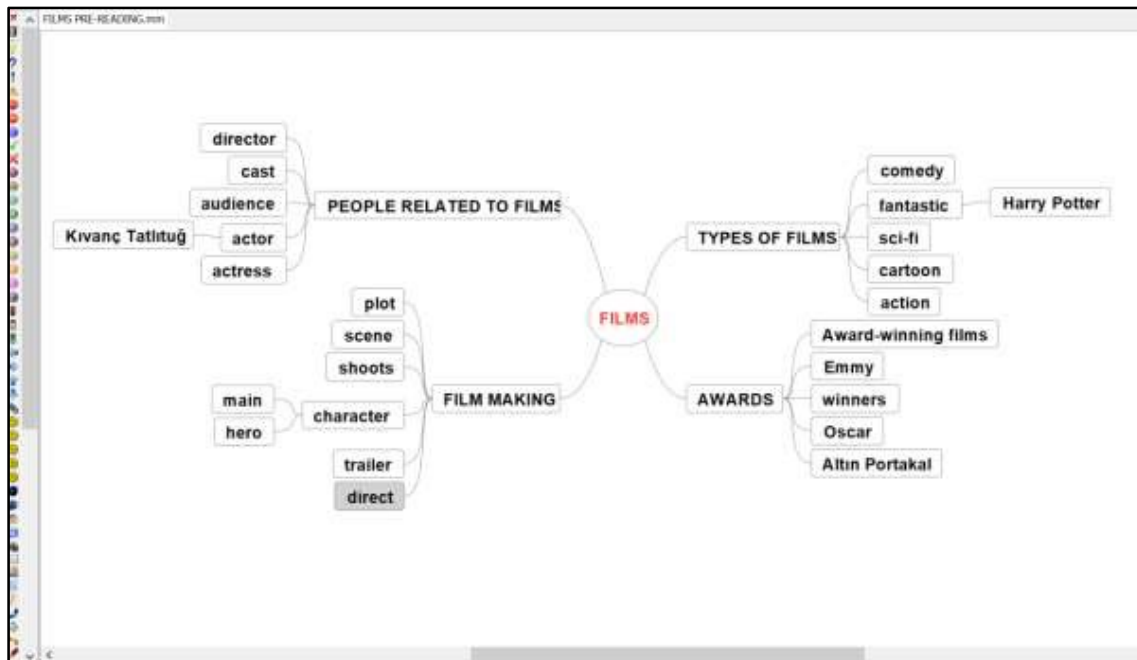


Figure 3.9. Example of a digital semantic map for “Films” before reading.

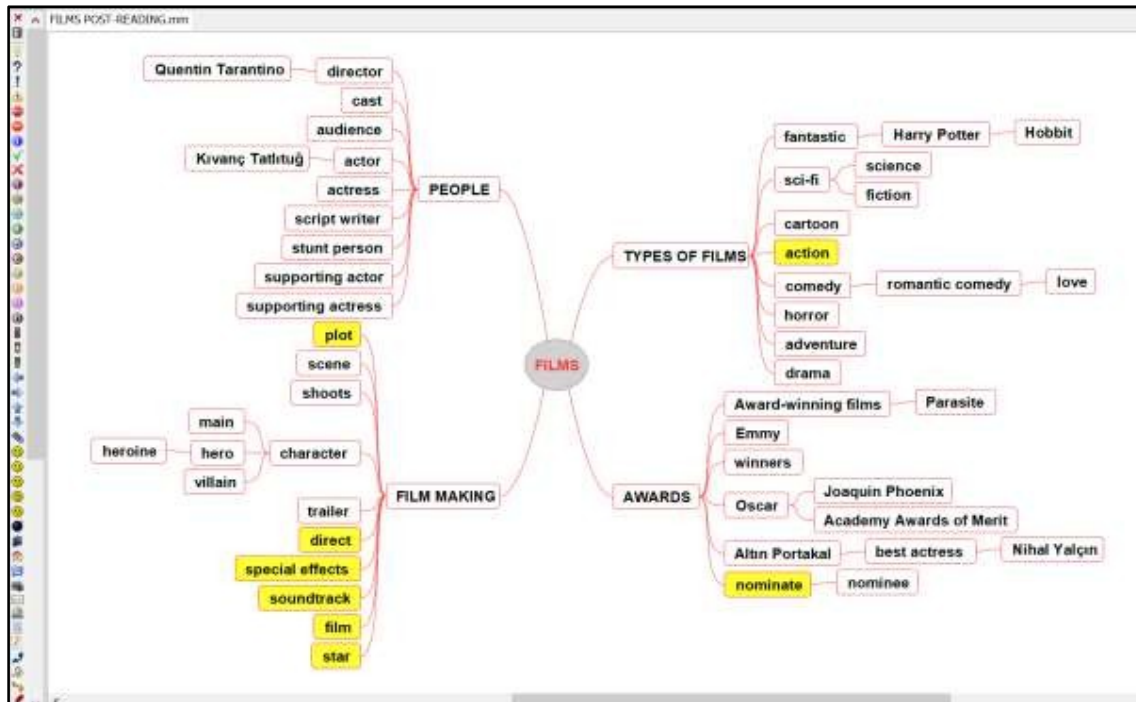


Figure 3.10. Example of a completed digital semantic map for “Films” after reading.

Week 6

The procedure was followed as in the previous weeks. The instructor wrote the topic “*Natural Environment*” in the middle of the blank page. The learners discussed the words related to the topic and listed as many words as they could. After the learners created the initial map with the help of the instructor (See Figure 3.11), they were given the reading text titled “Animals Have Adapted to Survive Everywhere” (See Appendix 7). The learners finished their maps once the text was elaborated on and this enabled them to connect the known and newly learned words (See Figure 3.12).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

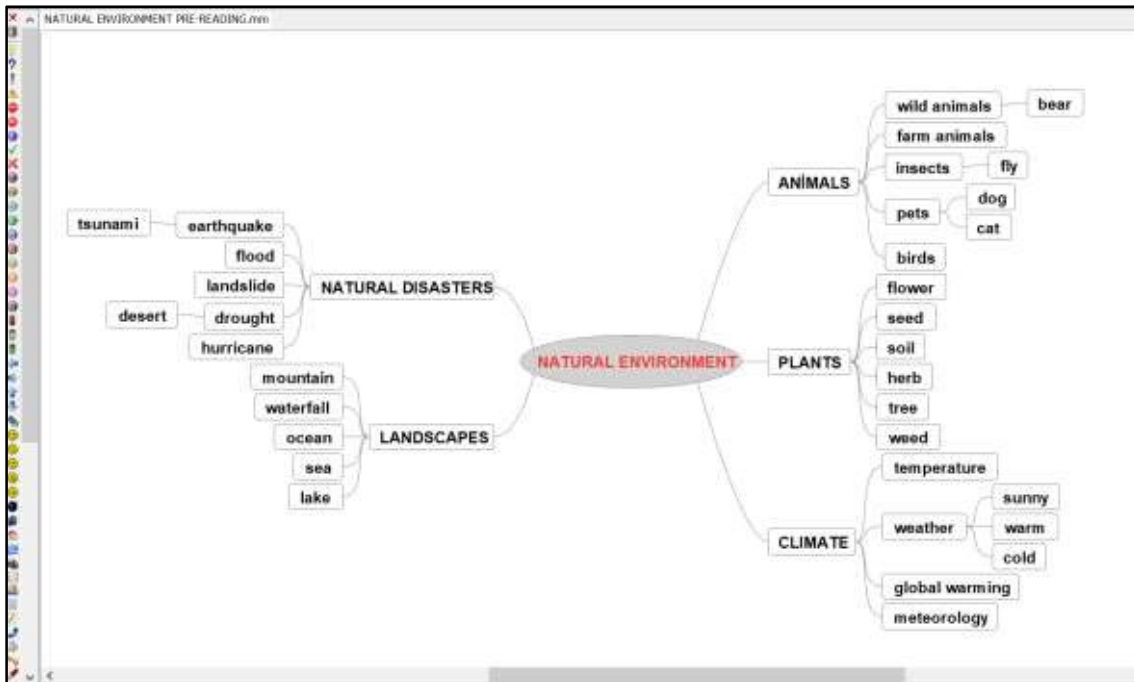


Figure 3.11. Example of a digital semantic map for “Natural Environment” before reading.

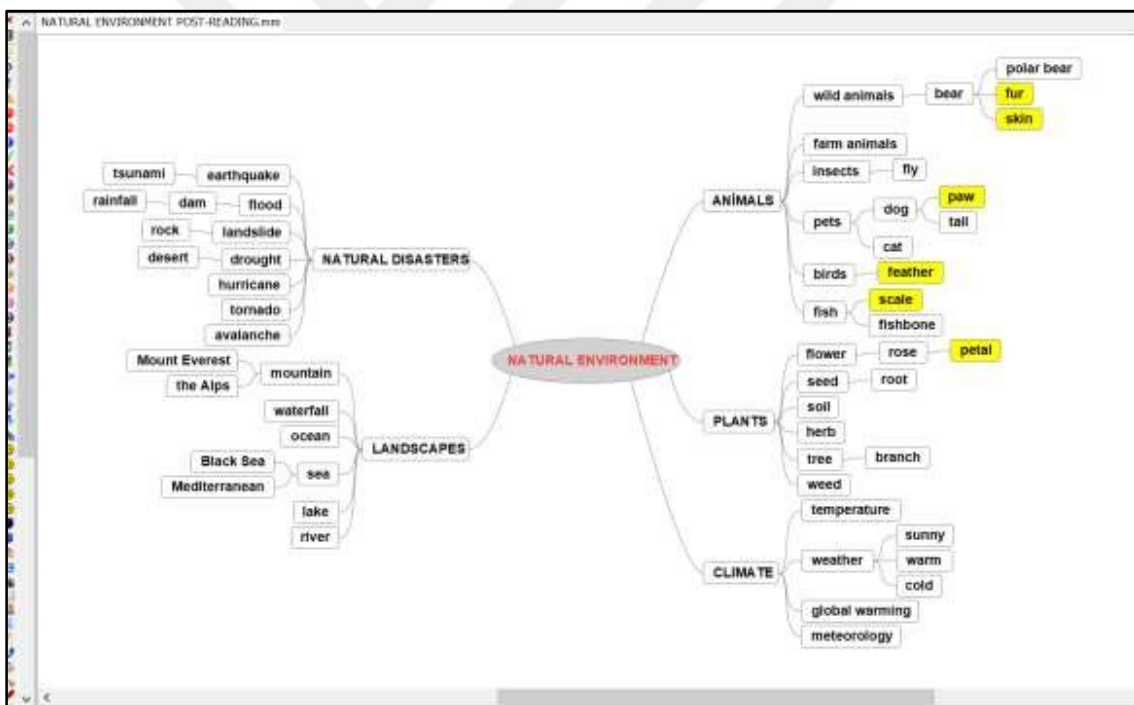


Figure 3.12. Example of a completed digital semantic map for “Natural Environment” after reading.

### *Paper-based semantic mapping Group week 1*

To begin with, the instructor explained the purpose of the lesson and informed the learners that they were going to study the topic “Adjectives” and the vocabulary related to it. Each student had a blank paper. The teacher wrote the topic “*Adjectives*” in a circle on the whiteboard. Then, the learners discussed the topic and the instructor wanted the learners to brainstorm and list as many words as they could. The instructor wrote all the words which

were listed by the students on the right side of the board. The students were asked to categorize the words that were listed on the board. The instructor also added that the students could write more words on their maps if they wanted (See Figure 3.13). The instructor told the learners that they were going to read a text titled “No Laughing Matter” (See Appendix 2) including the words and ideas they had created on the maps.

On the second phase of the implementation, the students had 10 minutes to read the text on their own. While reading the text, they underlined the unknown words. Next, they discussed the meaning of these words with their classmates and the instructor. Then, the instructor asked the learners to think of more words and categories to add on their maps. They shared the new words they added to their own maps. The instructor wrote these new words to the map on the board under the appropriate categories. Meanwhile, she explained their relations with the words written on the map before. She made the students indicate the target words which were taken from the text and added to their maps by a colored pencil. She also used a different board marker to define these target words (See Figure 3.14). Finally, they discussed the connections with the unknown and known words and learned how to build bridges between these words and ideas.

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

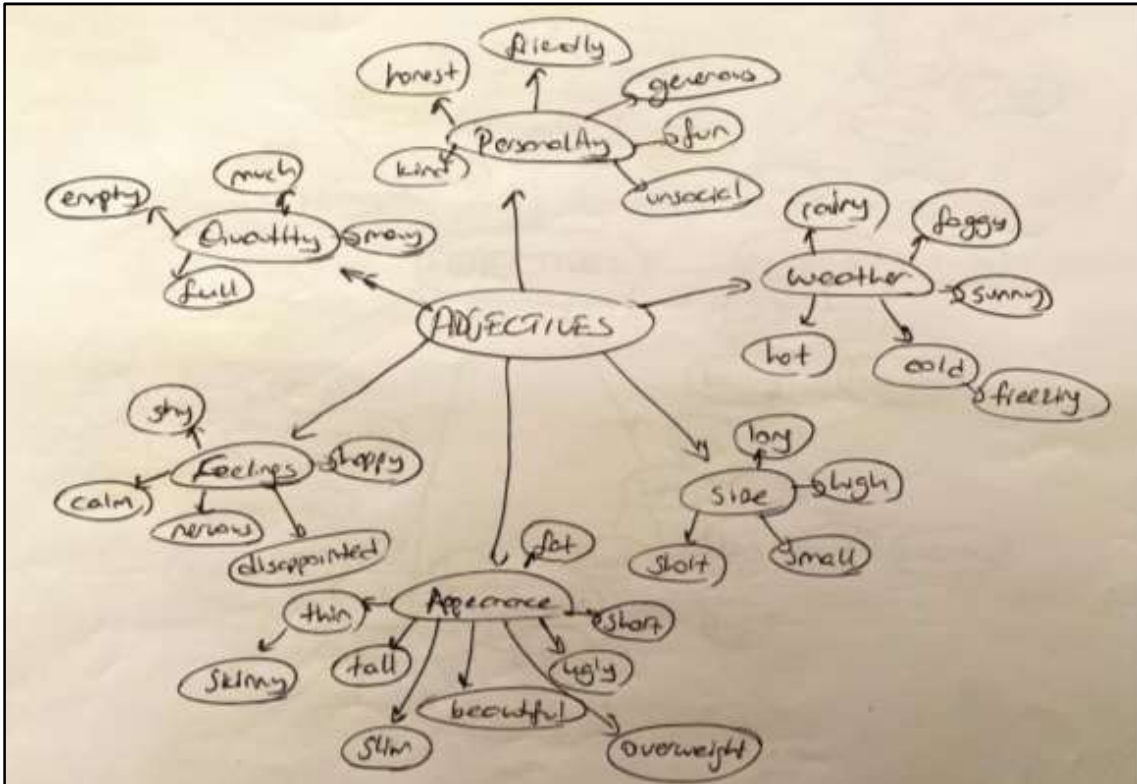


Figure 3.13. Example of a paper-based semantic map for “Adjectives” before reading.

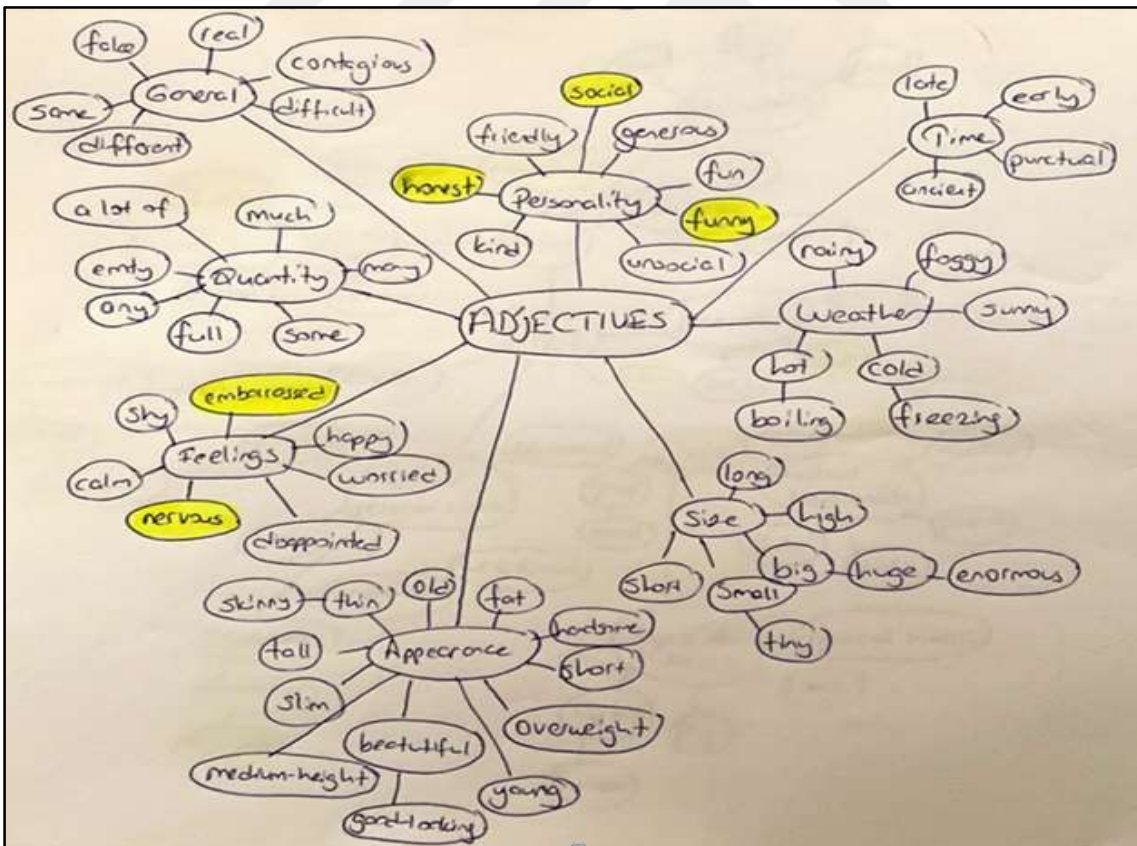


Figure 3.14. Example of a paper-based semantic map about “Adjectives” after reading.

Week 2

The participants were told that they would apply the same procedure as in the previous week. The instructor wrote the topic “Technology” in the circle on the board. After the learners discussed and listed the words, they created the initial map related to the topic with the help of the instructor (See Figure 3.15). After that, the instructor presented the reading text titled “Technology and Change” (See Appendix 3). Upon elaborating on the text, the learners completed their maps so that they could make connections between the known and the new words (See Figure 3.16).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

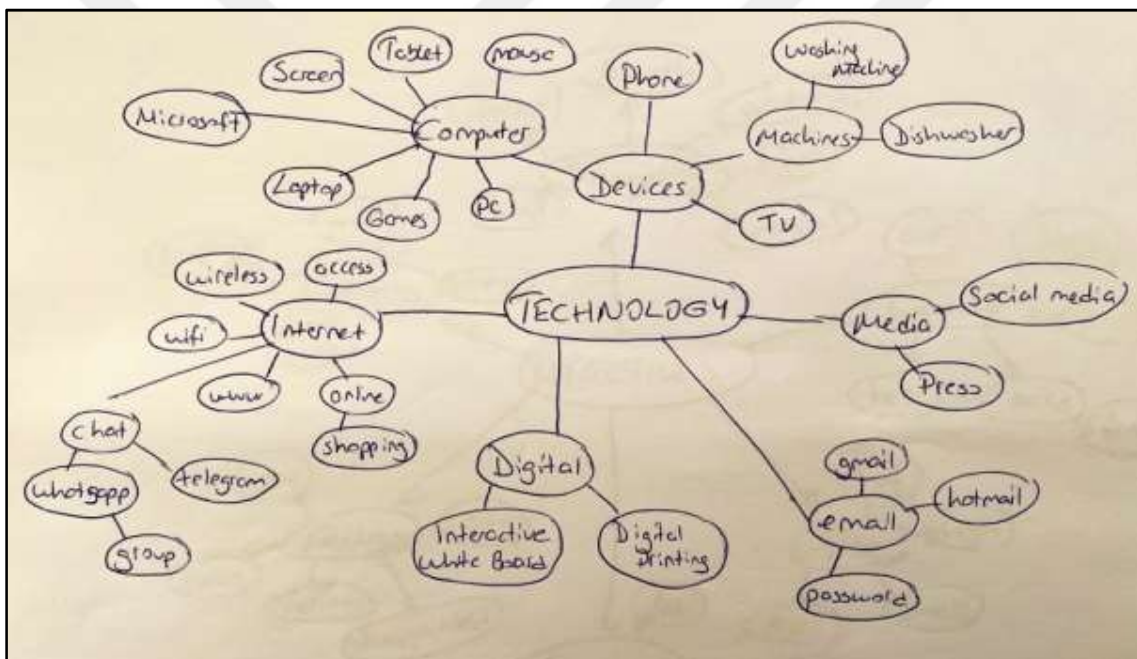


Figure 3.15. Example of a paper-based semantic map about “Technology” before reading.

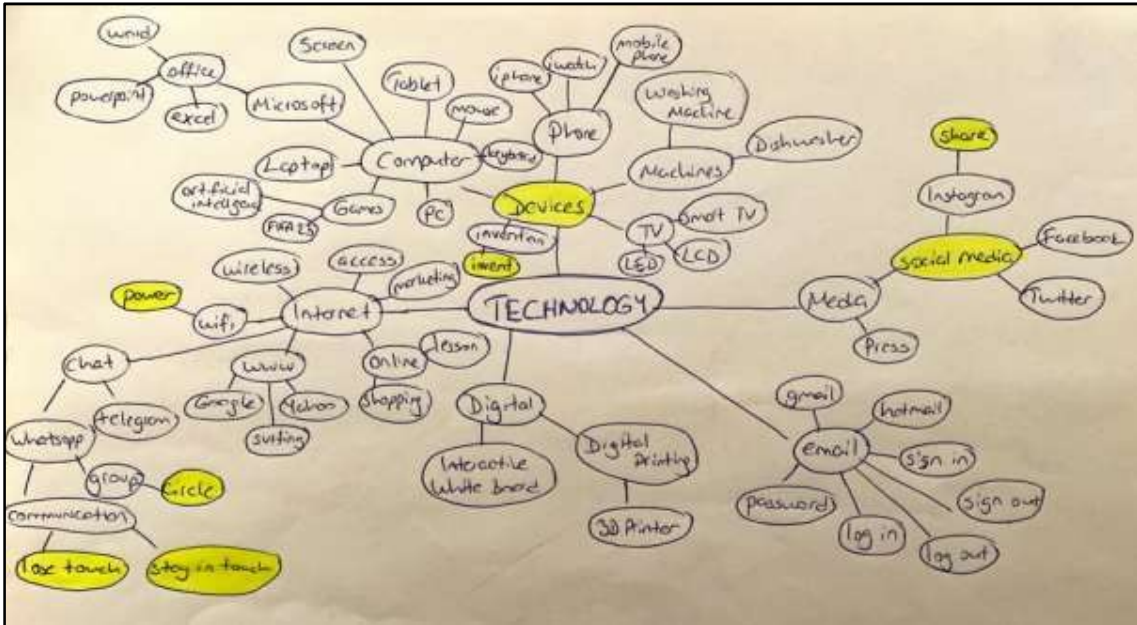


Figure 3.16. Example of a paper-based semantic map about “Technology” after reading.

### Week 3

The participants were told that they would apply the same procedure as in the previous weeks. The instructor wrote the topic “*Crime*” in the circle on the board. After the learners discussed and listed the words, they created the initial map related to the topic with the help of the instructor (See Figure 3.17). After that, the instructor presented the reading text titled “The Greatest Unsolved Crime” (See Appendix 4). Upon elaborating on the text, the learners completed their maps so that they could make connections between the known and the new words (See Figure 3.18).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

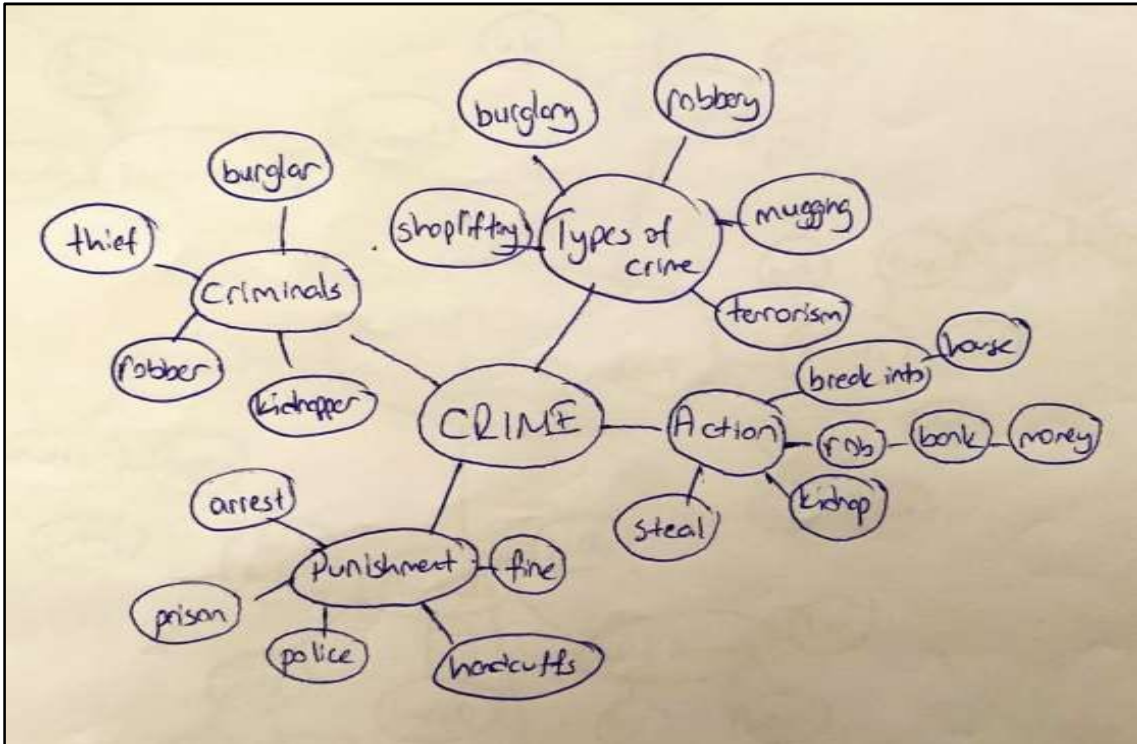


Figure 3.17. Example of a paper-based semantic map about “Crime” before reading.

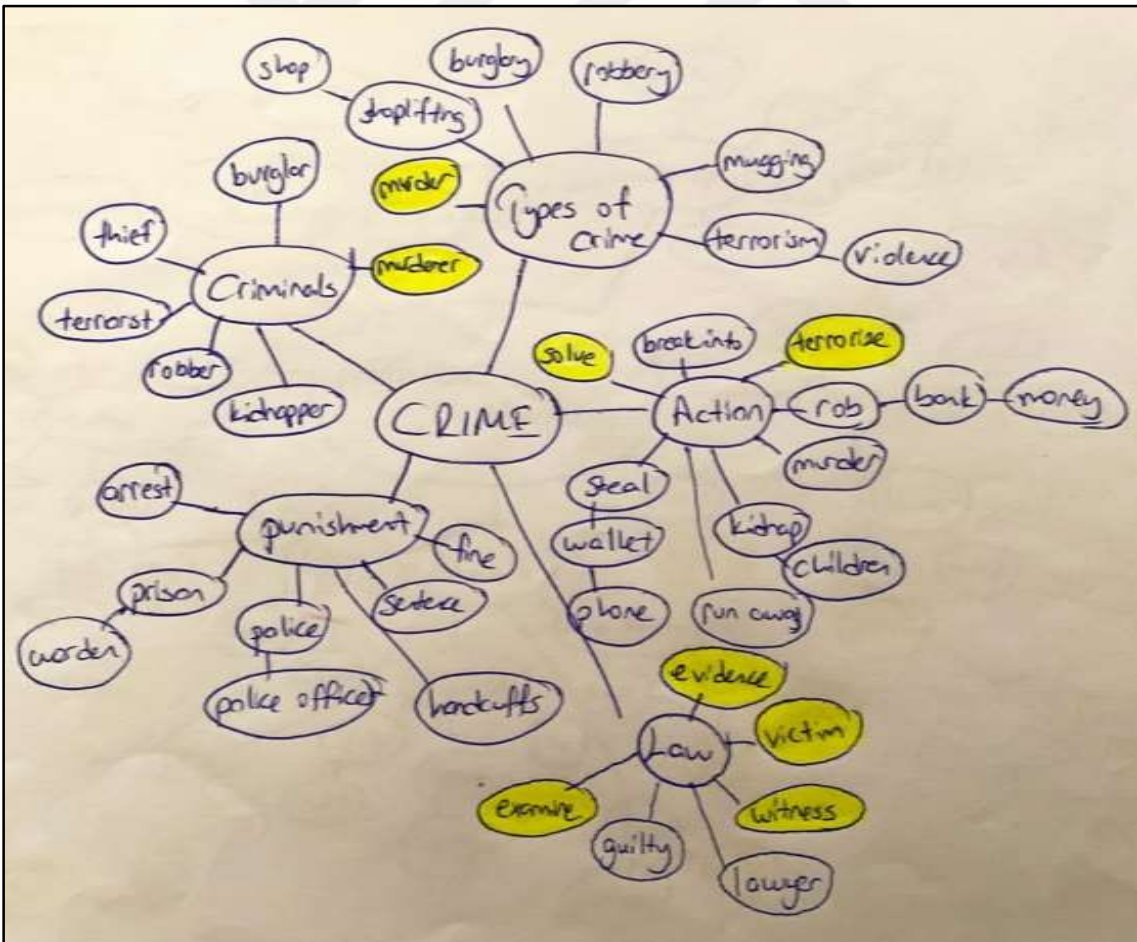


Figure 3.18. Example of a paper-based semantic map about “Crime” after reading.

Week 4

The participants were told that they would apply the same procedure as the previous weeks. The instructor wrote the topic “Art” in the circle on the board. After the learners discussed and listed the words, they created the initial map related to the topic with the help of the instructor (See Figure 3.19). After that, the instructor presented the reading text titled “Six of The Best, Biggest and Most Popular” (See Appendix 5). Upon elaborating on the text, the learners completed their maps so that they could make connections between the known and the new words (See Figure 3.20).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

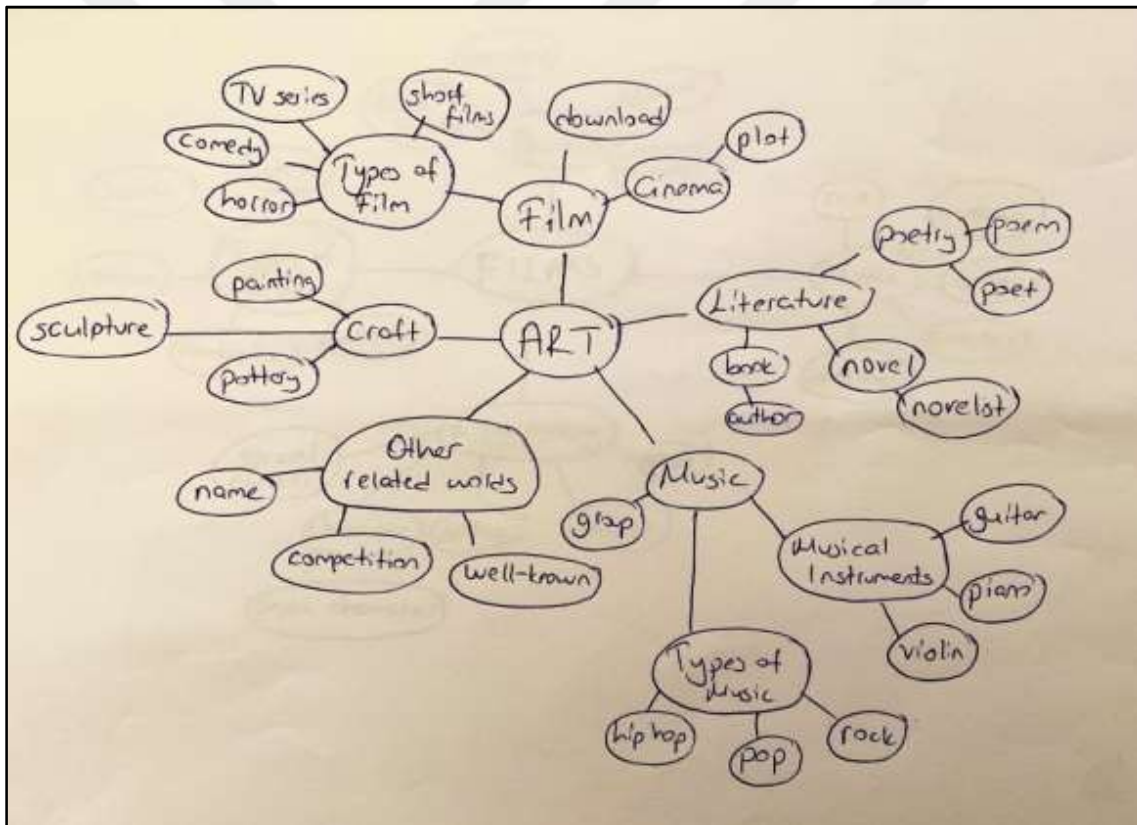


Figure 3.19. Example of a paper-based semantic map about “Art” before reading.

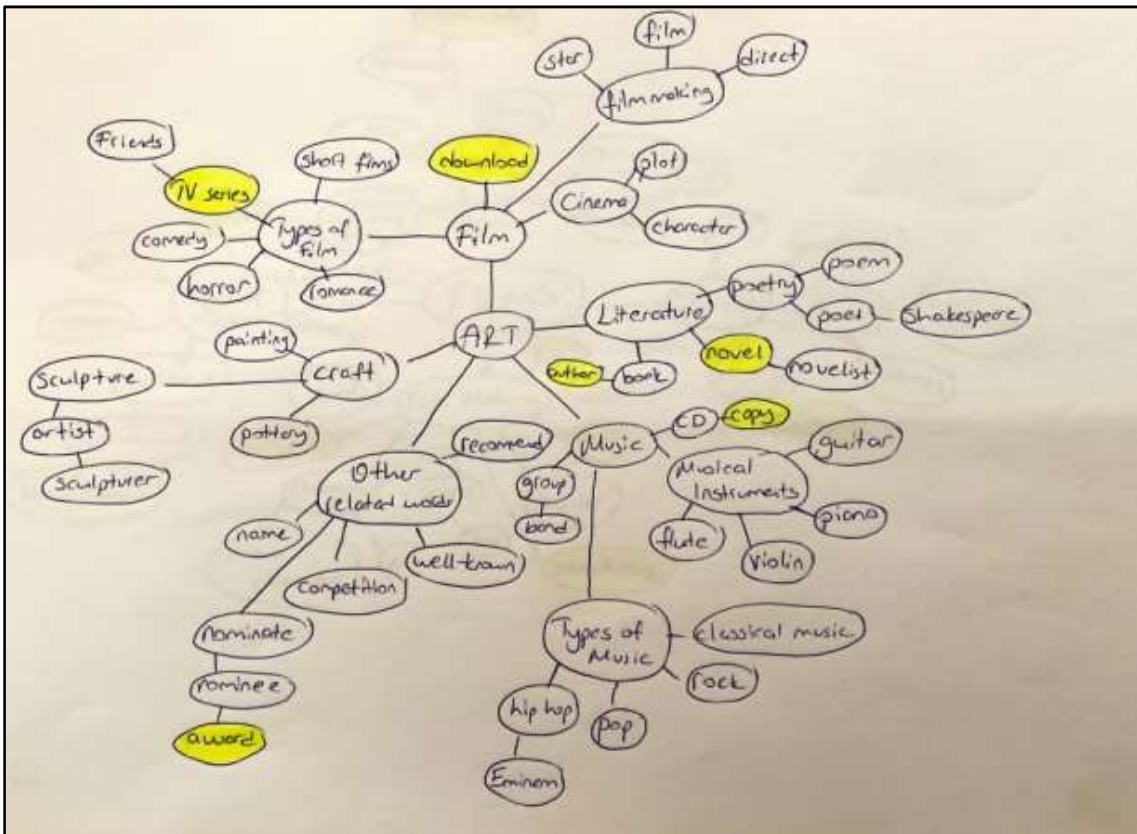


Figure 3.20. Example of a paper-based semantic map about “Art” after reading.

### Week 5

The participants were told that they would apply the same procedure as in the previous weeks. The instructor wrote the topic “Films” in the circle on the board. After the learners discussed and listed the words, they created the initial map related to the topic with the help of the instructor (See Figure 3.21). After that, the instructor presented the reading text titled “Classic Films You Must See” (See Appendix 6). Upon elaborating on the text, the learners completed their maps so that they could make connections between the known and the new words (See Figure 3.22).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.



Figure 3.21. Example of a paper-based semantic map about “Films” before reading.

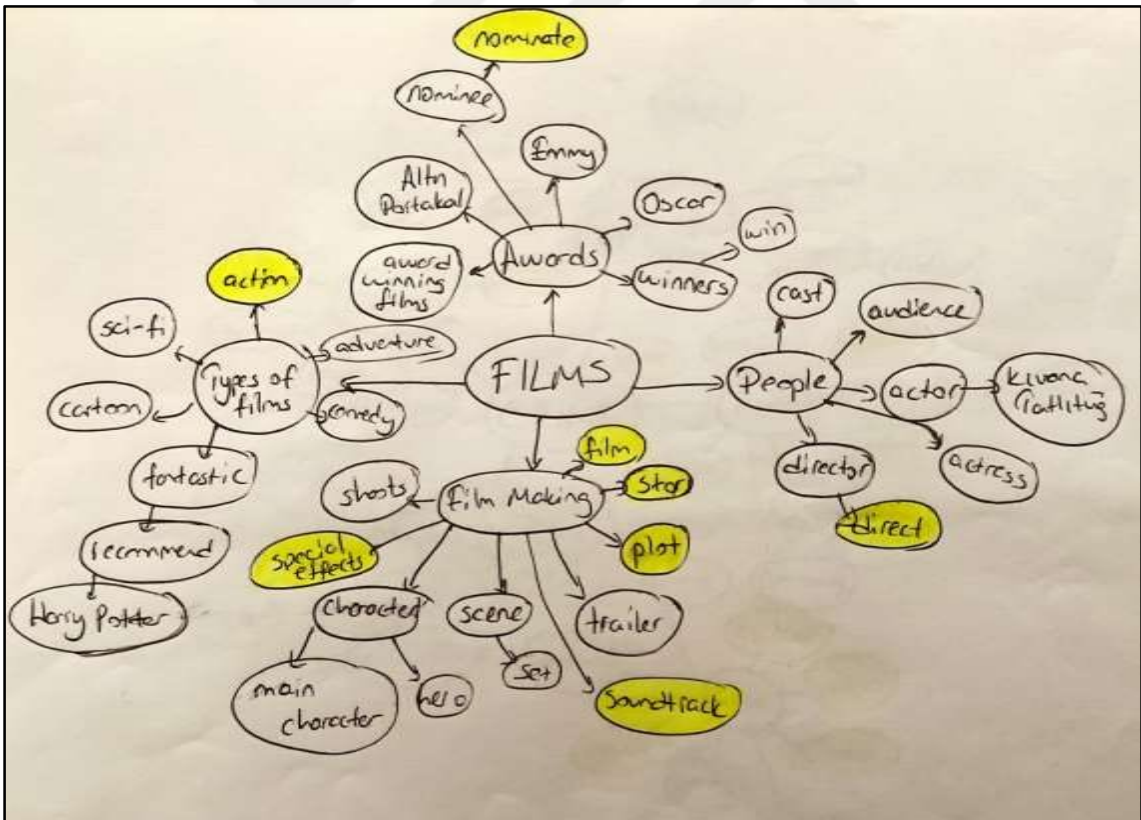


Figure 3.22. Example of a paper-based semantic map about “Films” after reading.

Week 6

The participants were told that they would apply the same procedure as in the previous weeks. The instructor wrote the topic “*Natural Environment*” in the circle on the board. After the learners discussed and listed the words, they created the initial map related to the topic with the help of the instructor (See Figure 3.23). After that, the instructor presented the reading text titled “*Animals Have Adapted to Survive Everywhere*” (See Appendix 7). Upon elaborating on the text, the learners completed their maps so that they could make connections between the known and the new words (See Figure 3.24).

The target words and their relations with the other words were revised. The instructor provided the learners with a brief explanation about the maps and the text if they needed.

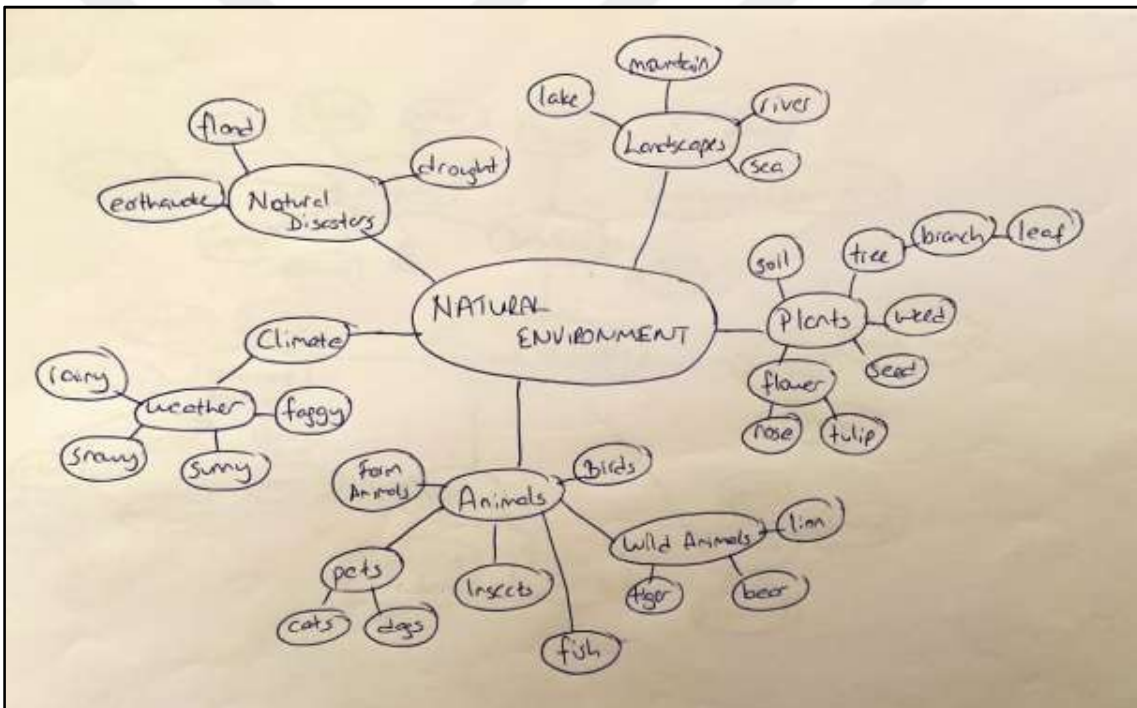


Figure 3.23. Example of a paper-based semantic map about “Natural Environment” before reading.

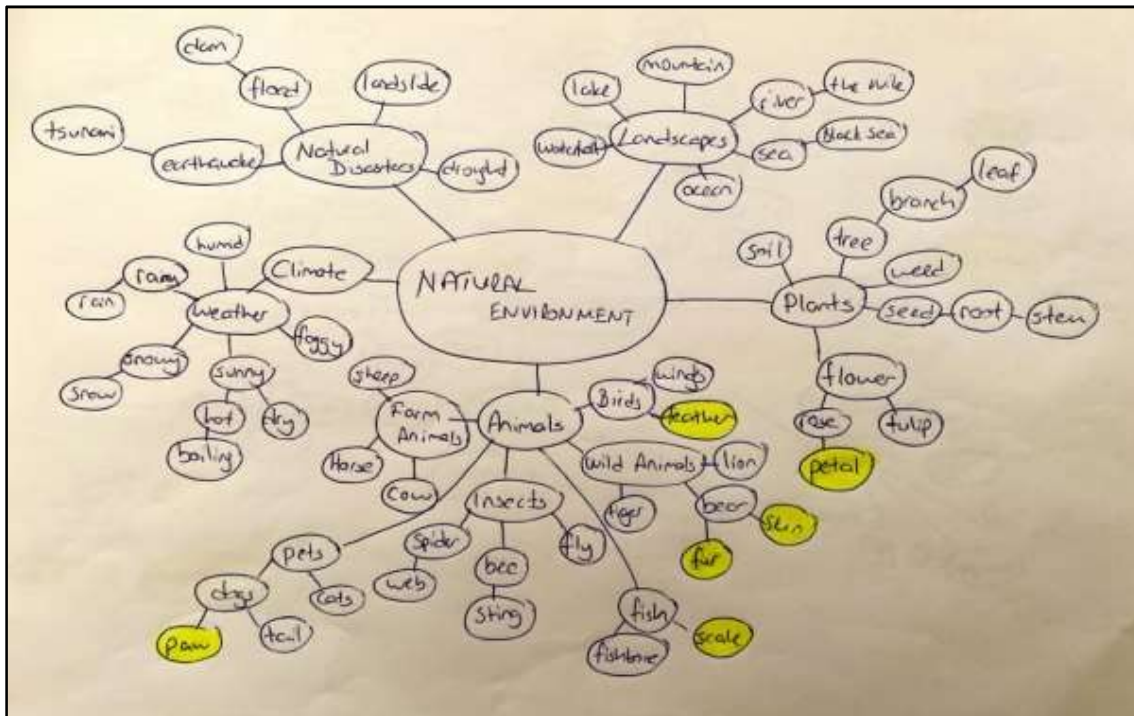


Figure 3.24. Example of a paper-based semantic map about “Natural Environment” after reading.

### 3.5. Data Analysis

This study was conducted to evaluate the difference between the digital semantic mapping group in which the strategy was applied digitally and the paper-based semantic mapping group in which the strategy was applied non-digitally. Data were obtained from both groups and necessary analyses were made on these data. A T-test for independent groups and dependent T-test for repeated measures were used to get the quantitative results. The T-test for independent groups was used to evaluate whether there was a significant difference between the means of the digital semantic mapping group and the paper-based semantic mapping group. On the other hand, the dependent T-test for repeated measures was used to determine the changes in the measurements between the participants in the same group over time.

The researcher also conducted face-to-face, structured interviews with the participants in order to thoroughly examine their perspectives and ideas about the application of the semantic mapping strategy. The result of these interview questions helped the researcher get further data and a greater comprehension of the findings of the quantitative analysis. The interviews were conducted with the randomly-selected ten students a week after the implementation on voluntary basis. Five of the participants were from the digital semantic mapping group and the other five of them were from the paper-based semantic mapping group. These participants were informed about the interview process in detail. Additionally,

participants were given an appropriate setting by the researcher so that they felt comfortable sharing their thoughts, feelings, and experiences related to the issues presented throughout the interview. Turkish, the mother tongue of the participants, was used during the interviews to encourage them to express their thoughts and feelings truly. After the interviews had been conducted, each interview recording was transcribed before being translated from Turkish to English by the researcher. Finally, the data were analyzed to see the beliefs of the participants towards the semantic mapping strategy.



## CHAPTER 4

### 4. FINDINGS

In this study, the data from experimental group 1 using the digital semantic mapping strategy were compared to the data from experimental group 2 using the paper-based semantic mapping strategy and the appropriate analyses were conducted.

#### 4.1. Normality Test

**Table 4.1.**Normality test results.

Kolmogorov-Smirnov		Shapiro-Wilk	
df	p	df	p
42	0.68	42	0.53

P< 0.05

According to the normality test results, it was determined that both values showed normal distribution since the p value was greater than 0.05. In the analysis, parametric tests were utilized as the data displayed a normal distribution. A T-test was used to determine whether there were any differences between the two variables.

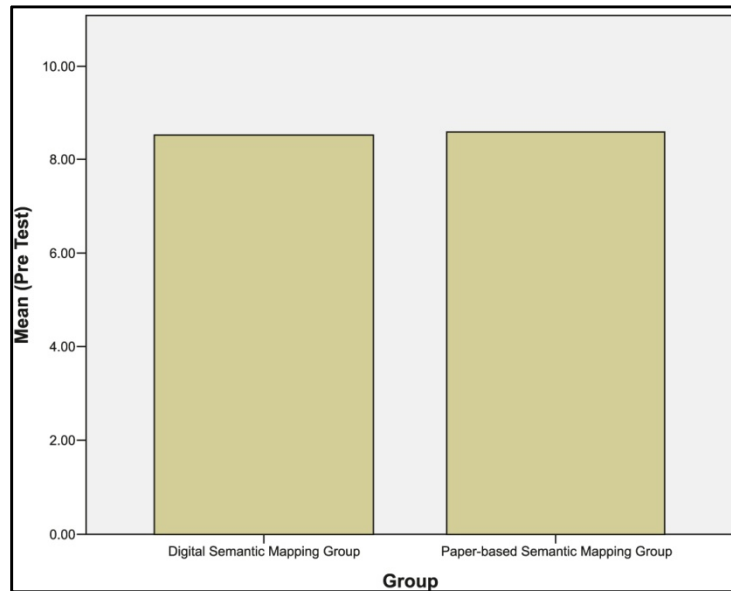
#### 4.2. Findings Related to the Pre-test of the Digital Semantic Mapping Group and Paper-based Semantic Mapping Group Students

**Table 4.2.** The Results of independent t-test for pre-test scores of the digital semantic mapping group and the paper-based semantic mapping group.

Groups	N	Mean	SD	t	P
Digital Semantic Mapping Group	21	8.52	3.20	.056	.956
Paper-based Semantic Mapping Group	21	8.57	2.27		

N: the number of the participants / Mean: the average determined by dividing the total test scores belongs to a particular group / SD: a measurement of the data's degree of dispersion with respect to the mean / t: the size of the difference in relation to the variation in the sample data / P: significant differences

A t-test was conducted for the pre-test results in order to see difference of the means of the groups. Table 4.2 presents the mean scores, Standard Deviations, t, P values of the pre-test. According to the results of the analysis, the mean scores of the Digital Semantic mapping Group were M: 8.52, SD: 3.20 and the Paper-based Semantic Mapping Group were M: 8.57, SD: 2.27. When the table was analyzed, the t value was .056 at the .956 level of significance. As P value being > 0.05, it was found that there was no significant difference between the two groups.



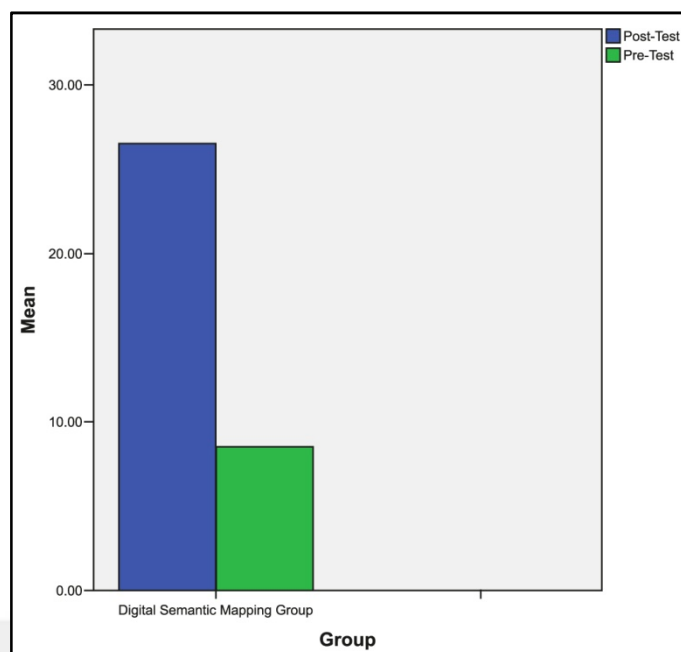
**Figure 4.1.** Comparison of the pre-test results of the digital semantic mapping group and the paper-based semantic mapping group.

### 4.3. Findings Related to the Pre-test and Post-test of the Digital Semantic Mapping Group Students

**Table 4.3.** The results of paired samples t-test for the pre-test and post-test scores of the digital semantic mapping group.

Tests	N	Mean	SD	t	P
Pre-test	21	8.52	3.20	21.73	.000
Post-Test	21	26.52	2.96		

Table 4.3 presents the mean scores, Standard Deviations, t, P values of the pre-test and post-test of the Paired Samples Digital Semantic Mapping Group. According to the results of the analyses, the academic achievement of the digital semantic mapping group in the pre-test and post-test averages were  $X=8.52$  (pre-test) and  $X=26.52$  (post-test). When the table was analyzed, a significant difference was found between the pre-test and post-test averages of the students in the digital semantic mapping group ( $t= 21.73$ ;  $p< .05$ ).



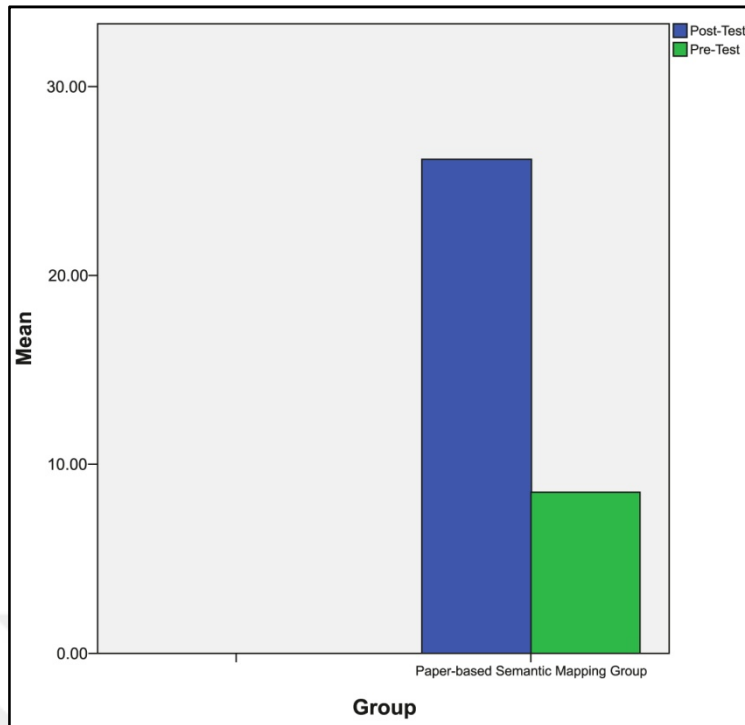
**Figure 4.2.** Comparison of the results of t-test for the pre-test and post-test scores of the digital semantic mapping group.

#### 4.4. Findings Related to the Pre-Test and Post-Test of the Paper-based Semantic Mapping Group Students

**Table 4.4.** The results of paired samples t-test for the pre-test and post-test scores of the paper-based semantic mapping group.

Tests	N	Mean	SD	t	P
Pre-test	21	8.57	2.27	20.03	.000
Post-Test	21	26.14	3.52		

Table 4.4 presents the mean scores, Standard Deviations, t, P values of the pre-test and post-test of the Paired Samples Paper-based Semantic Mapping Group. The findings show that the pre-test and post-test averages of the paper-based semantic mapping group for academic achievement are  $X=8.57$  (pre-test) and  $X=26.14$  (post-test). There found to be a significant difference between the pre-test and post test of the paper-based semantic mapping group when the table was analyzed ( $t=20.03$ ;  $p< .05$ ).



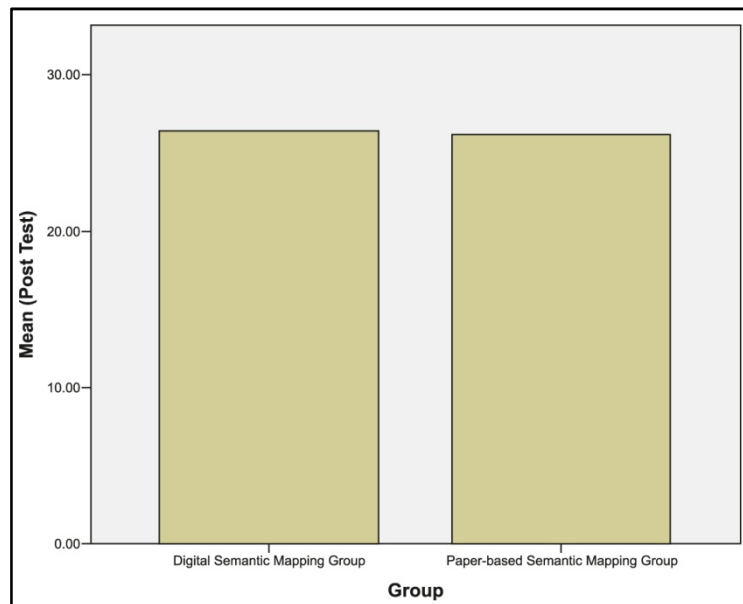
**Figure 4.3.** Comparison of the results of t-test for the pre-test and post-test scores of the paper-based semantic mapping group.

#### 4.5. Findings Related to the Post-test of the Digital Semantic Mapping Group and Paper-based Semantic Mapping Group Students

**Table 4.5.** The results of independent t-test for post-test scores of the digital semantic mapping group and the paper-based semantic mapping group.

Groups	N	Mean	SD	t	P
Digital Semantic Mapping Group	21	26.52	2.96	.379	.707
Paper-based Semantic Mapping Group	21	26.14	3.52		

Table 4.5 presents the mean scores, Standard Deviations, t, P values of the post-test. It is clearly seen that there was no significant difference between the post-test averages of academic achievement of the digital semantic mapping group and the paper-based semantic mapping group ( $t=.379$ ;  $p>.05$ ) when the table was analyzed. According to the results, it was found to be that the post-test averages of academic achievement of the digital semantic mapping group ( $X=26.52$ ) and the paper-based semantic mapping group as ( $X=26.14$ ).



**Figure 4.4.** Comparison of the post-test results of the digital semantic mapping group and the paper-based semantic mapping group.

#### 4.6. Findings from the Interviews

After the statistical evaluation of the pre- and post-tests, a face to face interview was carried out to two groups in order to get further information about the perspectives and ideas of the participants regarding the application of semantic mapping strategy. During the interview, participants were asked three main questions about their experiences. The findings are presented below:

1. *How was the process of learning vocabulary with semantic mapping strategy, what did you like and what did not you like in this process?*

Participants were asked the first question to evaluate the process of vocabulary learning with semantic mapping strategy and to express what they liked and disliked in this process in order to provide feedback on the effectiveness of this strategy. This evaluation may be intended to provide feedback that can be used to understand students' experiences and improve learning methods. By encouraging students to think about the positive and negative aspects of the semantic mapping strategy, this question provides an important research opportunity to understand the perceptions of students towards this process. Participants' answers may help to identify areas where the semantic mapping strategy is effective. In this way, researchers can make adjustments to make this strategy more effective or provide better support to students based on participants' feedback. It is important to note that these observations are based on the given responses and may vary depending on individual learning styles and preferences.

In this context, all the students in the digital semantic mapping found the process of vocabulary learning with semantic mapping strategy positive and stated that it increased their motivation and self-awareness. Regarding the effectiveness of semantic mapping strategy, the participants state that:

*“I liked realizing that I actually knew a lot of words when I was using this strategy. It motivated me. Recently, we are used to doing everything in a computer environment during online education”* (P1)

*“It was a pleasant process to use this method.”* (P2)

*“...learning vocabulary in this way was more enjoyable, efficient and permanent.”*  
(P4)

In terms of “self-awareness”, another participant (P5) relates learning styles and vocabulary learning.

*“It was a method that I normally never knew and one of the most important issues in learning English is to learn vocabulary. In this way, it made me realize my own learning style by using a different strategy. It was a very good experience for me.”* (P5)

It was also indicated by two participants that learning in a digital platform also assisted them in acquiring vocabulary.

*“Recently, we are used to doing everything in a computer environment during online education. It was more useful to use a digital platform for vocabulary learning.”* (P1)

*“... learning vocabulary in this way was more enjoyable, efficient and permanent.”*  
(P4)

However, except for P1, the other participants encountered difficulties such as having difficulty in remembering the words they knew (P2, P5) or spending time to create the maps (P2, P3, P4).

*“...it took a lot of time to think about the words I knew while creating the maps and not remembering the English equivalents of the words I knew caused me to panic. Generally speaking, a process that can be very productive for students with extensive vocabulary knowledge was challenging for students like me who have vocabulary difficulties.”* (P2)

*“It took me some time to try to remember the words I used to know and this made me a little uneasy.” (P5)*

*“I can only say that it is necessary to spend a little more time for this strategy.” (P3)*

*“However, spending a little too much time in the process of creating the maps stressed me out.” (P4)*

As for paper-based semantic mapping strategy group about the positive aspects, three participants asserted that this strategy might accelerate the vocabulary learning process and facilitate memorization.

*“I was actually using the semantic mapping strategy before, but now I started to use it on English words and vocabulary learning process has accelerated a little more.” (P1)*

*“...it will definitely be easier to memorize with this semantic mapping strategy.” (P4)*

*“I realized that it was an easier way to learn vocabulary. That's why I liked it. In general, I think this method will be effective in a long process.” (P5)*

This strategy was also believed to be enjoyable by P3 and P4. In addition to acceleration of vocabulary learning process, it was enjoyable for P4:

*“It was quite enjoyable for me.” (P4)*

*“the process is incredibly enjoyable.” (P3)*

It was also suggested that this strategy helped them learn the vocabulary in a more permanent way.

*“...this strategy also forces you to do some research. As a result, knowledge gained through research becomes more permanent.” (P2)*

On negative aspects, three participants (P1, P3, P5) mentioned that the semantic mapping strategy required a certain amount of time.

*“But I recommend you to use it for a certain period of time, that is, if you have a lot of time.” (P1)*

*“It requires some work.” (P3)*

*“If I need to make a negative comment on this subject, I don't like that it takes a long time.” (P5)*

Although it was believed that the process was a bit tedious by the some participants, they did not find this issue as a negative aspect.

*“First of all, I found this method to be a little challenging, but learning something always requires work.” (P2)*

*“Although it requires some work, the process is incredibly enjoyable. I have to use all of my vocabulary when I switch to a new issue.” (P3)*

*2. What do you think are the advantages and disadvantages of a semantic mapping strategy?*

The second question asked in the interview had the purpose of addressing the benefits and drawbacks of the semantic mapping strategy. Participants were given the opportunity to respond to the question by highlighting the advantages and disadvantages of applying this strategy. It was also employed to look into issues like how a strategy affects students' learning effectiveness, motivation, and vocabulary. Given that its impacts and practicality might be assessed, participants were encouraged to reflect on the procedure and share their experiences.

When the responds of the digital semantic mapping strategy group to the second interview question were analyzed, it was seen that increased motivation and engagement was the most stated advantage of this strategy.

Three participants (P1, P4, P5) pointed out that using digital platforms and different strategies in vocabulary learning were able to make the process more fun, engaging, and interesting.

*“It is more fun to learn vocabulary using digital platforms and applications than learning vocabulary with traditional methods.” (P1)*

*“Using different techniques in vocabulary learning can increase interest in the subject and the lesson. Supporting the learned words visually can help students remember them more. In addition, working together with both the teacher and classmates can make learning vocabulary more enjoyable.” (P4)*

*“Using new methods instead of traditional ways can make the lesson more engaging, and participating so actively in it can make it more interesting and fruitful. (P5)*

Easier vocabulary retention mentioned by two participants (P1, P3) was another advantage. It was reported that using semantic mapping strategy makes it easier to remember known words and learn new words, especially when the topic covers previously learned vocabulary.

*“When there is a subject that covers previously learnt vocabulary, it is easier to remember known words and learn new words.” (P1)*

*“It was an active study that enabled me to learn efficiently in the lessons. I believe that the words learnt in this way are more permanent than other methods.” (P3)*

Another highlighted point was that visually supporting the learned words could aid in remembering them better.

*“Supporting the learned words visually can help students remember them more.” (P4)*

It was also emphasized by P3 that the active study involved in semantic mapping strategy contributed to efficient learning and helps make the learned words more permanent.

On the other hand, P2 and P3 mentioned that this strategy might be appropriate for students with a solid vocabulary background. P2 specifically stated that it might not be advantageous for students who were just starting to learn a new language.

*“I think that students who use this technique should have serious vocabulary knowledge. I do not think that it is a very advantageous strategy especially for students who are starting to learn a new language.” (P2)*

*“This method needs a strong background to be effective.” (P3)*

Four participants in the group had the same idea that creating the maps might be time-consuming. Two out of five participants (P1, P3) also noted that it might be challenging.

*“It would be difficult to create maps if there were no topics with previously known words. It also takes some time to create the maps.” (P1)*

*“Making maps is quite challenging. That can take some time, as well.” (P3)*

*“Organising maps can take a long time, especially for students with poor vocabulary.”*  
(P4)

*“It may take some time to remember and organize the vocabulary related to the topic and then add the newly learnt vocabulary.”* (P5)

As for the paper-based semantic mapping strategy group, the advantages include vocabulary acquisition, increased permanence of learning and enhanced engagement. All participants stated that they found the strategy fruitful for expansion and permanence by saying the statements below:

*“Students who have higher visual memories learn faster because they can recall where a word is on a semantic map and can repeat the definition of the word more quickly when they see it.”* (P1)

*“...since it forces you to do research, it is a bit far from memorization and you need to know the words you don't know or another word while looking at a word. While learning a word, the vocabulary expands more because you learn two or three extra words. At the same time, it is more permanent as it is not memorized.”* (P2)

*“In my opinion it is an efficient method because it will stay in my mind for a very long time.”* (P4)

On the other hand, there are various responds related to the disadvantages of the semantic mapping strategy among the participants. The disadvantages mainly revolve around the time required, age appropriateness and practical challenges in organizing maps.

Two participants out of five (P1, P2) asserted that creating maps could be time-consuming, especially when working alone or it might require significant time to categorize and organize words effectively.

*“It is a little difficult and, as I mentioned, only applicable to people with more time. You might find it challenging to categorize if you are working alone.”* (P1)

*“I can only say that maybe it takes a little longer.”* (P2)

Only one of the participants (P3) said that some students might feel that it would not be so beneficial for active usage of words while it could be useful for reading comprehension.

*“I think I cannot actively learn that word by using this strategy. But in general, I can learn an unfamiliar word or a close word that I come across while reading a text.” (P3)*

The other participants (P4, P5) stated that the semantic mapping strategy may be more suitable for younger learners and may not be as engaging for individuals with a more advanced language background.

*“...it is a technique more aimed at young people and children.” (P4)*

*“I think that the semantic mapping strategy is more useful for children and therefore, it may be boring for an individual with a background. I think it will be very effective only when used by children.” (P5)*

Lastly, regarding the challenges of this strategy, one of the participants suggested that the use of physical papers for mapping might lead to difficulties in managing and retrieving the maps over time.

*“First of all, to mention them, many papers will be needed. And after a certain period of time, those papers will be lost. Finding them will be difficult for me.” (P4)*

3. *What are your views on the semantic mapping strategy, do you think you will use this strategy to learn new words in the future?*

The aim of this question was to learn participants' views and find out how they evaluate the semantic mapping strategy and their intention to use this strategy in the future. It was also aimed to understand the students' views on the effectiveness, retention and motivational potential of the strategy.

All of the participants in the digital group think that the semantic mapping strategy is an effective, permanent and motivating strategy.

*“I think this strategy is very effective and enjoyable for learning vocabulary.” (P1)*

*“I think the words will be more permanent in this way, especially for those with high visual intelligence.” (P2)*

*“In my opinion it was a very motivating and productive process.” (P3)*

The other two participants (P4, P5) were also of the same opinion about the efficiency, permanence and motivational potential of the semantic mapping strategy with the other participants.

*“I think that learning the words with this strategy is much more permanent.” (P4)*

*“In general, it is an effective and motivating method. I want to use it as much as possible. I believe that it will become more practical as I use it and I will learn the words more permanently because I make an effort.” (P5)*

Additionally, P4 and P5 stated that this strategy was more applicable in the classroom environment, for them; there were limitations in individual use. There was also a consensus that the strategy was less suitable for beginners and needs guidance from the teacher.

*“I think that I can use it in the classroom, but I do not think that I can use it individually too much.” (P4)*

*“I think it is a strategy that is suitable for students with intermediate vocabulary knowledge but not for beginner students. I don't think it can be used all the time, especially without the teacher's help.” (P5)*

However, in general, participants considered the strategy as an effective and motivating method. All participants stated that they planned to use this strategy in some way.

*“I plan to use it as much as possible from now on.” (P1)*

*“I have used the semantic mapping strategy for different purposes before. Now I am thinking of using it for learning vocabulary.” (P2)*

*“It is an effective and motivating method. I want to use it as much as possible.” (P5)*

On the other hand, considering the responses of the participants in the paper-based semantic mapping strategy group to this question, some participants appreciated the semantic mapping strategy and intended to use it in the future while the others were hesitant due to concerns about time consumption or a preference for more traditional methods (P4).

*“... it takes too much time.” (P1)*

*“I think the negative aspects outweigh the advantages. I am more familiar with traditional vocabulary learning techniques; I think I would prefer them.” (P4)*

As for the suitability and effectiveness of this strategy for further use, participants have various contradictory opinions.

*“Semantic mapping strategy is a method that I have already used before and I have used it in different subjects. I find this method suitable for myself.” (P2)*

Three out of five (P1, P4, P5) participants said that they would not prefer to use this strategy with the aim of learning new words. Participant 1 stated that it might be used for different purposes and P3 maintained that the semantic mapping strategy was not very effective alone so it could be combined with other strategies for better results.

*“I usually use it for things like what I did in a day, what I need to do, but I don’t think I will use it for acquiring new words.” (P1)*

*“I do not think I will use this method from now on because I think the negative aspects outweigh the advantages. I am more familiar with traditional vocabulary learning techniques; I think I would prefer them.” (P4)*

Only one participant (P2) was decisive to use the semantic mapping strategy in the future and another was indecisive (P3).

*“I find this method suitable for myself and of course I plan to use it in the future to learn new words.” (P2)*

*“I do not think it is enough on its own. It is a really good method when learning vocabulary, but as I said, I can’t learn actively. Maybe it can be a very efficient method on top of it with a study I will do by setting up sample sentences in sentences. This way I can use it from now on.” (P3)*

## CHAPTER 5

### 5. DISCUSSION

This chapter presents the discussion of findings. In this study, the digital semantic mapping strategy was compared with the paper-based semantic mapping strategy in order to determine its effects on vocabulary learning. This study aimed to examine whether there was a significant difference in vocabulary learning between the digital semantic mapping group where the vocabulary would be taught by using the semantic mapping strategy with digital means and the paper-based semantic mapping group that would be taught with non-digital means.

#### 5.1. Discussion of the Research Questions

The following questions were looked into in this study:

- 1. Is there a significant difference between the pre-test and post-test scores of the digital semantic mapping group?*

A significant difference was found between the pre-test and post-test averages of academic achievement for the digital semantic mapping group. The results showed that the average academic achievement for the digital semantic mapping group pre-test was  $X=8.52$  and post-test was  $X=26.52$  ( $p=.707 > .05$ ) (See Table 4.3). According to these results, it might well be suggested that the implementation worked well with the digital semantic mapping group and using the semantic mapping strategy digitally may be thought as an effective way to learn new vocabulary in a second or foreign language. The significant difference between pre-test and post-test results shows that the digital semantic mapping strategy makes a considerable contribution to the language learning process. As a result, applying the digital semantic mapping strategy to the process of learning new vocabulary in a second or foreign language might be seen as an effective way. Digital semantic mapping strategy may be used by teachers and language learning specialists to enhance learners' language skills.

In short, the findings of the pre-test and post-test were significantly different, indicating that the digital semantic mapping strategy significantly impacted the students' language learning development. This result also emphasizes the significance of integrating technologically advanced and interactive approaches into language education.

*2. Is there a significant difference between the pre-test and post-test scores of the paper-based semantic mapping group?*

The results revealed that the pre-test and post-test averages for academic achievement of the paper-based semantic mapping group were  $X=8.57$ (pre-test) and  $X=26.14$  (post-test). There found to be a significant difference at  $p= .000 > .05$  (See Table 4.4). These findings show that the paper-based semantic mapping strategy is an effective way to expand vocabulary knowledge and the implementation of the semantic mapping strategy using non-digital strategies increased the academic performance as well. Considering the significant difference between pre-test and post-test results, paper-based semantic mapping might suggested to be used as an effective strategy for learning new vocabulary.

*3. Is there a significant difference between the post-test scores of the digital semantic mapping group and the paper-based semantic mapping group in terms of their improvement?*

At the beginning of the study, there was no significant difference between the pre-test averages of academic achievement for the digital semantic mapping strategy group and the paper-based semantic mapping group. This can be stated as equality in background. Similarly, there found to be no significant difference between the results of the post-test scores of the two groups (See Table 4.3 and 4.4). Both groups showed a significant difference between the pre-test scores and the post- test scores within their groups (See Table 4.5). These findings demonstrate that the achievement levels of the groups increased at the same level after the implementation. Therefore, it is possible to conclude that the semantic mapping strategy itself plays an important role for vocabulary learning whether digital or paper-based.

*4. Is the semantic mapping strategy an effective way to learn new words for both the digital semantic mapping group and the digital semantic mapping group?*

Above-mentioned findings indicate that both the paper-based semantic mapping group and the digital semantic mapping group are affective strategies for boosting academic achievement and vocabulary learning. The two groups revealed a significant difference between pre-test and post-test scores. Both digital semantic mapping and paper-based semantic mapping strategies can be used to enhance the learning process.

Also, there is no significant difference between the digital semantic mapping group and the paper-based semantic mapping group in terms of post-test results. Both groups showed the same level of achievement increase after the implementation. This indicates that the efficacy of semantic mapping strategy shows no significant difference in digital or paper-based use. Therefore, although the effectiveness of the semantic mapping strategy is consistent, other elements like accessibility, resource availability, and student preferences may influence whether the strategy is implemented digitally or paper-based.

## **5.2. Discussion of the Interview**

The statistical results showed that there was a significant difference between the pre- and post-test scores of both the digital semantic mapping strategy group and the paper-based semantic mapping strategy group. This proved that the semantic mapping strategy itself is an efficient way for learning vocabulary. In order to get further data, the researcher conducted a semi-structured interview to find out the opinions of the participants.

The digital semantic mapping group was found to be more motivated based on participant comments. They emphasized that, particularly in the setting of online education, the digital semantic mapping strategy enhanced their motivation and increased self-awareness. Participants stated that realizing they understood more words than they had actually believed motivated them to maintain learning. Additionally, some participants believed that using a digital platform to acquire language was beneficial as they were digital natives. On the other hand, participants in the paper-based semantic mapping strategy group claimed that this strategy may accelerate the process of memorizing new vocabulary and make learning more enjoyable. Also, using visuals were thought to be helpful for improving word retention. However, it was indicated that this strategy would work better for young learners and might not work as well for less experienced language users. In addition, both groups mentioned about some challenges they faced in this process. For example, some of the participants said that they had trouble recalling the words they already knew or it was time-consuming to make the maps and more difficult for the learners who had less language knowledge to overcome with these difficulties.

In brief, considering the inclination to have more positive attitude towards semantic mapping strategy, the digital semantic mapping strategy group might be regarded to be more motivating based on the interviews. Participants in this group believed that this strategy improved learning in all aspects - fun, being long-lasting, and effectiveness.

In the literature, there are some sample cases comparing the digital semantic mapping strategy with traditional semantic mapping. For instance, in a study conducted by Karamifard and Minaefier (2020), comparisons were made between the digital mind mapping strategy and traditional mind mapping strategy. This study was conducted to 60 Iranian male EFL learners to examine the significant differences in the comprehension abilities of young Iranian EFL learners between traditional mind mapping strategy and digital mind mapping strategy. By analysing the obtained data, it became clear that students' performance improved significantly in both groups. The responses collected, together with the statistical analyses carried out, show that the students' production in the post-test was acceptable. It was found that mind mapping can help improve EFL learners' perceptions of learning new vocabulary. Most of the participants in both groups performed acceptably in terms of the targeted vocabulary and recorded improvements in their perceptions and mind maps have a positive effect on EFL learners' perceptions. However, the participants in the digital group not only learnt new information with this strategy, but they were also more successful than those in the traditional group. Many students in this group scored almost full marks.

Similarly, the study carried out by Chalak and Rastgoo (2021), conducted on 30 language learners at Shokouh Institute in Tabas, Iran aimed to investigate the participants' attitudes towards traditional and digital mind-mapping. The participants were between 14 and 17 years old and had an intermediate level of English proficiency. They had already received training in both traditional and digital mind-mapping techniques and were considered proficient in both methods. The data for the study was collected through questionnaires and interviews. The analysis of the data demonstrated that the participants had positive perceptions of mind-mapping, especially the digital technique. The findings revealed that the learners had generally positive perceptions about both methods, with only a small number expressing negative views or uncertainty about the impacts of mind maps. However, the majority of students preferred digital mind-mapping over the traditional method. Out of the total 30 participants, 20 students held positive perceptions regarding mind-mapping in general. When comparing the two types of mind-mapping, 16 participants preferred the digital method, while the remaining 4 preferred the traditional method. This indicates a higher preference for digital mind-mapping among the participants. The study also explored the reasons behind the students' positive views regarding traditional and digital mind-mapping. Some advantages mentioned by the students included the ease of use, improved organization of their writings, facilitation of idea development, acting as a learning guide, fostering

thinking and creativity, and better retention of ideas. Overall, the study highlights the positive attitudes of language learners towards mind-mapping, particularly the digital method, and its potential to enhance writing skills and idea organization in the context of English learning.

Furthermore, the study conducted by Al-Otaibi (2021) aimed to examine the effectiveness of CASM in improving English for ESP students' reading comprehension and vocabulary knowledge. It also investigated the impact of CASM on students' information retrieval skills and documented their attitudes towards using the SM strategy. The research followed a quasi-experimental design, with participants divided into two groups: an experimental group taught using CASM and a control group taught using traditional methods. The study assessed the outcomes of the intervention and compared them between the two groups. The results of the study revealed that the use of SM, specifically CASM, had a positive impact on expanding students' vocabulary and improving their recall ability. The technique proved effective in enhancing students' ability to retrieve information from texts. However, the study also found that SM, in this case, did not lead to significant improvements in students' reading comprehension. This lack of progress in reading comprehension was attributed to several factors. Firstly, the program was not capable of reinforcing certain reading comprehension skills, such as inferencing and understanding causal relationships within a text. Secondly, students were found to lack some necessary background knowledge that could aid them in making inferences and comprehending the text. Also, the study suggested that SM required more teacher modelling and student training to be fully effective and it would benefit from additional guidance and support in the learning process. The study found that students held a positive attitude towards the usefulness of the SM strategy in spite of the limitations observed in terms of reading comprehension improvement. This indicates that students recognized the benefits and value of using SM in their learning process. In conclusion, the study demonstrated that CASM, as a form of SM, was successful in expanding students' vocabulary and enhancing their recall ability. However, it did not lead to significant improvements in reading comprehension, possibly due to the program's limitations in reinforcing specific comprehension skills and students' lack of necessary background knowledge. Nonetheless, students showed a positive attitude towards the usefulness of the strategy.

## CHAPTER 6

### 6. CONCLUSION

This chapter shortly summarizes the research and the procedures provided so far. The background and the purpose are described in general, then, pedagogical implications are examined and some suggestions for further studies are presented in accordance with the information obtained within the frameworks offered by the study.

In this study, Chapter 1 introduces the problem that forms the basis of the study. In Chapter 2- Literature Review, the characteristics and process of language learning strategies, vocabulary learning strategies and semantic mapping strategy are introduced. The research design, data collection procedure, semantic maps created by the participants about the target words or topics, and data analysis were discussed in Chapter 3. The results of the pre-test and post-tests and the interviews are presented in Chapter 4. The findings of the research questions and the interview are discussed in Chapter 5. Finally, the summary of the study and recommendations for further research are clarified in Chapter 6.

#### 6.1. Summary of the Study

Vocabulary learning is a crucial, which is also a challenging aspect of language learning. This study constitutes information on learners' vocabulary learning strategies and their preference for digital or non-digital ways. Many learners lack knowledge of effective vocabulary learning strategies, leading them to rely on traditional strategies such as listing or using dictionaries. While these strategies may offer instant understanding, they often do not facilitate long-term retention of target vocabulary. This study also emphasizes the relationship between reading comprehension and vocabulary knowledge. Strong vocabulary knowledge is necessary for understanding sentences and reading texts comprehensively. However, learners often find it challenging to understand all the words in a text. Consequently, they need strategies to infer the meanings of unknown words during reading a text. One of these methods is semantic mapping, which enables learners to visualize and categorize words and concepts while promoting associations and correlations between words with similar semantic meanings. Semantic mapping strategy also allows learners to integrate new information with their existing background knowledge, thereby enhancing vocabulary learning.

With the advent of technology, learners' strategies for vocabulary learning have also shifted towards digital resources in language learning. Especially, digital natives have shown

a growing interest in using digital means to create semantic maps. These applications provide new ways for vocabulary expansion and present opportunities for learners to incorporate technology into their learning processes.

In brief, there are two main purposes of the study. Firstly, it aims to investigate whether there are differences in learning outcomes between digital and non-digital implementations on semantic mapping strategy. That is to say, one of its purposes is to determine how the development of technology impacts vocabulary learning, particularly among digital native learners. Secondly, it aims to find out whether the semantic mapping strategy can effectively help students learn new vocabulary. The research questions explore the differences in pre-test and post-test scores between the digital and non-digital groups, as well as the effectiveness of the semantic mapping strategy for digital semantic mapping and paper-based semantic mapping groups.

## **6.2. Implications and Suggestions for Further Researches**

This study intends to determine whether various vocabulary learning strategies such as the semantic mapping strategy, may effectively aid students in learning the target language. Though the study has certain limitations, further research is needed to draw broader conclusions about the field.

To begin with, the scope of this study is restricted to a six-week implementation that included semantic mapping strategy with two experimental groups. The learners may become overextended due to the time constraints as there are several explanations and field practices. More time might be given to handle learners more effectively and professionally.

Additionally, this study only focuses on 42 intermediate-level students at Dokuz Eylül University. Looking at the scores of 42 intermediate-level students on the field may make it tough to come to a consensus regarding all learners. Therefore, different levels or age groups of students may be included in the study. That is to say, a larger sample size from a variety of universities, high schools or primary schools can be used to obtain more consistent information about the findings of the study.

Finally, in this study participants in the group who used digital semantic mapping created maps with only one application that was able to be utilized on a computer or laptop so it might come up with different results if participants use various applications that can be utilized on computers, laptops or mobile phones.

## GENİŞLETİLMİŞ TÜRKÇE ÖZET

Yabancı bir dil öğrenmek dilbilimsel sorunlar gibi çeşitli nedenlerden dolayı karmaşık bir süreçtir ve bu süreçte öğrenme stilleri ve stratejileri, öğretim teknikleri ve motivasyon gibi çeşitli faktörler göz önünde bulundurulmalıdır. Bazı araştırmalar, dilbilgisinin dil öğreniminin en önemli parçası olduğunu iddia etse de, zaman içinde kelime bilgisinin de dilbilgisi kadar önemli olduğu öne sürülmektedir. Öğrencilerin hem yabancı dilde iletişim kurabilmesi hem de dili etkin şekilde kullanabilmesi için güçlü kelime bilgisine sahip olmaları gerekmektedir. Wilkins (1972) dilbilgisi olmadan çok az şey aktarılabilirken, kelime bilgisini olmadan hiçbir şey aktarılamayacağını belirtmektedir. Kelime öğrenimi dil öğrenimi üzerinde hayati bir etkiye sahip olmasına rağmen hak ettiği önemi görememiştir. Öğrenciler kelime öğrenme stratejileri hakkında yeterli bilgiye sahip olmadıkları için genellikle listeleme, sözlük kullanma ya da gerekli kelimelerin anlamlarını öğretmenden öğrenme gibi geleneksel stratejileri tercih etmektedirler. Bu stratejiler bilgi edinmelerini ve cümlenin ya da metnin anlamını anında kavramalarını sağlasa da uzun vadede hedef kelimeleri edinmelerini sağlayamamaktadır. Ayrıca, okuduğunu anlama ve kelime bilgisini birbiriyle yakından ilişkilidir, öğrencilerin metinde kullanılan cümleleri anlayabilmeleri için metinlerde kullanılan kelimelere aşina olmaları gerekir. Dil öğrenenler bir metindeki tüm kelimelerin anlamlarını anlamakta zorlanırlar. Bu nedenle, okuma metnindeki bilinmeyen kelimeleri anlamak ve çıkarım yapmak için bazı stratejiler geliştirmeleri gerekir. Anlamsal haritalama bu stratejilerden biridir.

Anlamsal haritalama stratejisi en faydalı öğrenme kaynaklarından biri olarak kabul edilebilir. Rosário'ya (2021) göre, anlamsal haritalama öğrencilerin, aralarındaki ilişkiler ve birbirine bağlı ağlar sayesinde kelime ve kavramların anlamsal olarak birbirleriyle nasıl ilişkili olduğunu görselleştirmelerine, kategorize etmelerine ve gözlemlenmelerine yardımcı olur. Arka plan bilgisi, anlamsal haritalama stratejisi için çok önemli bir kavramdır. Bu strateji, öğrencilerin yeni bilgileri arka plan bilgisiyle bütünleştirmesine yardımcı olur. Arka plan bilgisinin veya şemaların öğrenme sürecindeki önemi, anlamsal haritalama stratejisinin öneminin anlaşılmasına yol açmıştır. Anlamsal haritalama sayesinde öğrenciler okuduğu bilgiyi hatırlama, düzenleme ve grafiksel olarak tasvir etme şansına sahip olur. Böyle bir alıştırmaya katılmak, öğrencileri konuyla ilgili arka plan bilgileri hakkında düşünmeye sevk eder ve önemli kelimeleri geliştirmek için etkili bir araç sunar ve yeni dili önceki şemalarına entegre etmelerini sağlar. Ayrıca anlamsal haritalama bilinen kelimeleri benzer anlamsal özelliklere sahip kelimelerden oluşan bir ağda gruplandırarak öğrencilerin yeni kelimeleri edinmesine yardımcı olur.

Diğer bir yandan teknolojinin ilerlemesiyle birlikte, ikinci ve yabancı dil öğreniminde dijital kaynakların kullanımı ışığında öğrenenler tarafından kullanılan stratejiler de değişmiştir. Bu nedenle, dil öğrenimi için dijital kaynaklara olan ilginin artmasıyla birlikte öğrenciler dijital platformlarda anlam haritaları oluşturmak için çeşitli kaynaklar ve çevrimiçi uygulamalar kullanmaya başlamıştır.

Kelime bilgisini geliştirme, bir dili öğrenme sürecinde iletişim becerilerini anlamak, kullanmak ve geliştirmek için de gerçekten önemlidir. Bu da öğrencileri kelimeleri daha

verimli bir şekilde öğrenmeye teşvik eder. Bu bağlamda, bu çalışmanın amaçlarından biri, anlamsal haritalama stratejisi gibi farklı kelime öğrenme stratejilerinin öğrencilerin hedef kelimeleri etkili bir şekilde öğrenmelerine yardımcı olup olamayacağını bulmaktır.

Teknolojinin gelişmesi, öğrencilerin kelime bilgilerini genişletmek için birçok kaynak aramalarını gerektirmiştir ve çalışmadaki öğrenciler dijital yerliler oldukları için dijital araçları kullanarak yeni kelimeleri daha kolay öğrendikleri düşünülebilir. Öğrenciler daha verimli bir şekilde kelime edinmek için hem dijital hem de geleneksel yollarla farklı öğrenme stratejileri bulmayı tercih etmektedir. Buna bağlı olarak çalışmanın bir diğer amacı ise dijital ve dijital olmayan araçların kullanıldığı anlamsal haritalama stratejisinin kelime öğrenimi açısından birbirinden önemli ölçüde farklı olup olmadığını belirlemektir.

Kısaca bu çalışma kelime öğrenimi açısından anlamsal haritalama stratejisi kullanırken dijital ve dijital olmayan kaynaklar arasında anlamlı bir fark olup olmadığını ve yeni kelimeler öğrenirken anlamsal haritalama stratejisinin uygulanmasının etkili bir yol olup olmadığını araştırmak amacıyla yapılmıştır.

Kelime öğrenimi, dil öğrenme sürecinin en önemli parçalarından biridir. Aynı zamanda, öğrencilerin dil öğreniminde en çok zorlandığı kısımlardan biridir. Öğrencilerin okuduklarını anlayabilmeleri ve hedef dilde iletişim kurabilmeleri için iyi düzeyde kelime bilgisine sahip olmaları gerekir. Ancak kelime öğrenme stratejilerine hakim olmadıklarından dolayı, genellikle hangi stratejinin kendileri için en verimli olduğuna karar veremezler. Öğrencilerin hedef kelime ya da yapıyı edinmek için çaba sarf ettiklerinde ya da çalışmalara dahil olduklarında daha etkili bir şekilde öğrendiklerine inanılmaktadır. Bu nedenle, anlamsal haritalama stratejisi öğrencilerin dikkatini çekmekte ve öğretmenin yardımıyla aktif bir role sahip olacakları için öğrenme sürecine aktif olarak katılmalarını sağlamaktadır. Yani, öğrencilerin öğrenme sürecinde aktif rol oynadığı anlamsal haritalama stratejisi gibi teknikler kelime öğrenimi için faydalı olmaktadır. Yani, anlamsal haritalama stratejisi, öğrencilerin hem arka plan bilgilerini hatırlamalarına hem de daha önce öğrendikleri kelimelerle o anda öğrenmekte oldukları kelimeleri birleştirerek zihinlerinde görsel bir resim oluşturmalarına yardımcı olmaktadır. Öğrencilerin aktif rol aldıkları uygulamalarda yer almaları kelime öğrenmelerine ve bu stratejiyi kendi dil öğrenme süreçlerinde kullanmalarını sağlamaktadır.

Bu çalışma aşağıdaki araştırma sorularının cevaplarını araştırmayı amaçlamaktadır:

1. Dijital anlamsal haritalama grubunun ön test ve son test puanları arasında anlamlı bir fark var mıdır?
2. Kâğıt tabanlı anlamsal haritalama grubunun ön test ve son test puanları arasında anlamlı bir fark var mıdır?
3. Dijital anlamsal haritalama grubu ile kâğıt tabanlı anlamsal haritalama grubunun son test puanları arasında gelişim açısından anlamlı bir fark var mıdır?
4. Anlamsal haritalama stratejisi hem dijital anlamsal haritalama grubu hem de kâğıt tabanlı anlamsal haritalama grubu için yeni kelimeler öğrenmede etkili bir yöntem midir?

Bu çalışmada iki grup olduğu için, araştırmanın amaçlarına uygunluk açısından iki grup arasındaki farkları belirlemek için yarı deneysel tasarım kullanılmıştır. Yarı deneysel tasarım, bağımlı bir değişkenin iki veya daha fazla grup arasında karşılaştırıldığı bir araştırmadır. Yarı deneysel bir çalışmada, iki deney grubuna, iki grubun performansının birbiriyle ilişkili olarak analiz edilmesini sağlayan çeşitli uygulamalar verilebilir. Yarı deneysel tasarımı deneysel tasarımdan ayıran yön, kontrol grubu, rastgele atama veya katılımcı seçimi gerektirmemesi ve daha az titiz olmasıdır (Loewen ve Plonsky, 2017).

Araştırmayı tasarlamak, araştırma metodolojisinin uygulanabilirliğini değerlendirmek, önerilen çözümler yardımıyla önemli lojistik sorunları tespit etmek, araştırma araçlarının uygunluğunu belirlemek ve teyit etmek, planlanan bir çalışma için gereken kaynakları belirlemek, olası sorunları tespit etmek için önerilen veri analizi yöntemlerini değerlendirmek ve ana çalışmayı yürütmek için bir pilot çalışma yapılmıştır. Ön test ve son test çalışmanın önemli bileşenleri olduğu için çalışmanın geçerliliklerini ve güvenilirliğini doğrulamak için uygulama sürecinden önce bu pilot çalışma geliştirilmiştir. Hazırlanan ölçme aracı, kapsam geçerliliği, öğrencilerin düzeyi, puanlamadaki ağırlığı ve akademik başarı puanının belirlenmesi konularında görüş ve önerileri alınmak üzere üç alan uzmanına sorulmuştur.

Ölçek geliştirme ve dil alanı uzmanlarının rehberliğinde sorular geliştirilmiş, değiştirilmiş ve son olarak tamamlanmıştır. Son haline getirilen versiyon kullanılmış ve çalışmaya katılımcı olarak dahil edilmeyen 120 hazırlık sınıfı öğrencisine uygulanmıştır. Daha sonra, her bir test maddesinin testin geri kalanıyla bir bütün olarak ne kadar iyi çalıştığını hesaplamak için KR-20 formülü kullanılmıştır. Bu yaklaşım, bir sorunun kesinlikle doğru mu yoksa yanlış mı olduğunu belirlemek ve çoktan seçmeli testlerin güvenilirliğini değerlendirmek için kullanılmaktadır. Pilot testin uygulanması sonucunda 50 maddelik çoktan seçmeli testin KR-20 güvenilirlik katsayısı 0,81 olarak hesaplanmıştır. Testte ayırt edicilik katsayısı 0,20'nin altında kalan maddeler pilot testten çıkarılarak çoktan seçmeli testin 30 sorudan oluşan son hali oluşturulmuştur. Bu 30 soru değerlendirmeler için temel teşkil etmiştir. Eleme süreci sonunda güvenilirlik katsayısı 0,89 olarak hesaplanmıştır. Bu test ön-test ve son-test için kullanılmıştır.

İki grup rastgele "dijital anlamsal haritalama grubu" ve "kâğıt tabanlı anlamsal haritalama grubu" olarak atanmıştır. Dijital anlamsal haritalama grubundaki öğrenciler dijital araçları kullanarak hedef kelimeleri öğrenmeye çalışırken, kâğıt tabanlı anlamsal haritalama grubundaki öğrenciler dijital olmayan araçları kullanarak hedef kelimeleri öğrenmeye çalışmışlardır.

Bu yarı deneysel çalışma, Dokuz Eylül Üniversitesi Yabancı Diller Yüksekokulu'nda, yaşları 18 ile 20 arasında değişen 42 orta düzey İngilizce öğrencisinin katılımıyla gerçekleştirilmiştir. Hem dijital anlamsal haritalama hem de kâğıt tabanlı anlamsal haritalama grubunda 21 öğrenci vardır. Grupların homojenliği, katılımcıların karşılaştırılabilir İngilizce yeterlilik seviyelerine ve araştırmacı tarafından önceden eğitilmelerine dayanarak sağlanmıştır. Çalışmaya katılanların tamamı, akademik yılın başında yeterlilik sınavından 65 ve üzeri puan alamamış olan mühendislik, uluslararası ilişkiler, turizm işletmeciliği ve uluslararası ticaret gibi farklı bölümlerin dört yıllık lisans öğrencileridir. Öğrencilerin tümü

anadili Türkçe olan ve Türkiye'nin çeşitli liselerinden mezun olan öğrencilerdir. 2022-2023 akademik yılında, öğrencilerin seviyeleri ve sınıfları girdikleri seviye belirleme sınavı ile belirlenmiştir. Yani öğrenciler, seviye belirleme sınavı sonuçlarına göre sınıflara yerleştirilmiştir. Öğrenciler haftada 25 saat yoğunlaştırılmış İngilizce dersi almaktadır.

Dijital anlamsal haritalama grubunda 9 kız ve 12 erkek öğrenci, kâğıt tabanlı anlamsal haritalama grubunda ise 11 kız ve 10 erkek öğrenci vardır. Her iki grup da uygulama boyunca aynı eğitmen tarafından eğitim görmüştür.

Daha önce de belirtildiği gibi araştırmacı, ön test ve son testte kullanılan soruların geçerliliğini ve güvenilirliğini belirlemek için altı sınıfla bir pilot çalışma yürütmüştür. Pilot gruba 50 hedef kelimeyle ilgili 50 kelime sorusu sorulmuştur. Kelime soruları, katılımcıların uygulama sırasında okudukları okuma metinlerine göre hazırlanmıştır. Sorular geçerlilik ve güvenilirlik açısından analiz edildikten sonra tatmin edici, geçerli ve güvenilir 30 soru çalışmada kullanılmak üzere seçilmiştir. Pilot gruptaki katılımcılar haricinde herhangi bir özgeçmiş farkı bulunmayan 42 öğrenci dijital anlam haritalama grubu ve kâğıt tabanlı anlam haritalama grubu olmak üzere iki gruba ayrılmıştır. Uygulamadan önce her iki gruptaki öğrencilere okuma metinlerinden seçilen hedef kelimeleri içeren bir ön test uygulanmıştır. Dijital anlamsal haritalama grubu ve kâğıt tabanlı anlamsal haritalama grubu 6 haftalık süre boyunca aynı materyalleri kullanmıştır. İlk hafta, anlamsal haritalama stratejisi her iki gruba da dijital (dijital anlamsal haritalama grubu için) ve dijital olmayan (kâğıt tabanlı anlamsal haritalama grubu için) olarak tanıtılmıştır. Dijital anlamsal haritalama grubu, kendi haritalarını oluşturmak için ücretsiz bir yazılım olan FreeMind adlı yazılımı nasıl kullanacaklarını da öğrenmiştir. Hedef kelimeleri içeren bir metni okuduktan sonra, dijital anlamsal haritalama grubundaki öğrencilere tamamlanmamış bir anlamsal harita örneği verilmiş ve FreeMind yazılımını kullanarak haritayı kendilerinin tamamlamaları istenmiştir. Kâğıt tabanlı anlamsal haritalama grubundaki öğrencilere ise tamamlanmamış bir anlamsal harita örneği verilmiş ve kendi haritalarını oluşturmak için kâğıt kullanmaları beklenmiştir. Her hafta öğrencilerden o haftanın konusuyla ilgili bir harita oluşturmaları istenmiş ve ardından farklı bir okuma metni verilmiştir. Metni okuduktan sonra haritalarını öğretmenlerinin yardımıyla tamamlamışlardır. Prosedür altı hafta boyunca farklı konular ve farklı okuma metinleri ile aynı şekilde devam etmiştir. Uygulama sonrasında, iki grup arasındaki başarı farklarını belirlemek için her iki gruba da ön testle aynı olan bir son test uygulanmıştır.

Bu çalışma, stratejinin dijital olarak uygulandığı dijital anlamsal haritalama grubu ile stratejinin dijital olmadan uygulandığı kâğıt tabanlı anlamsal haritalama grubu arasındaki farkı değerlendirmek amacıyla yapılmıştır. Her iki gruptan da veriler elde edilmiş ve bu veriler üzerinde gerekli analizler yapılmıştır. Normallik testi sonuçlarına göre p değeri 0,05'ten büyük olduğu için her iki değer de normal dağılım gösterdiği tespit edilmiştir. Analizde, veriler normal dağılım gösterdiği için parametrik testlerden yararlanılmıştır. İki değişken arasında herhangi bir farklılık olup olmadığını belirlemek için bağımsız gruplar için T-testi ve tekrarlı ölçümler için bağımlı T-testi kullanılmıştır. Bağımsız gruplar için T-testi, dijital anlamsal haritalama grubu ile kâğıt tabanlı anlamsal haritalama grubunun ortalamaları arasında anlamlı bir fark olup olmadığını değerlendirmek için kullanılmıştır. Öte yandan, aynı

gruptaki katılımcılar arasındaki ölçümlerin zaman içindeki değişimlerini belirlemek için tekrarlı ölçümler için bağımlı T-testi kullanılmıştır.

Nitel veriler için ise, araştırmacı katılımcılarla anlamsal haritalama stratejisinin uygulanmasına ilişkin bakış açılarını ve fikirlerini derinlemesine incelemek amacıyla yüz yüze, yapılandırılmış görüşmeler gerçekleştirmiştir. Bu görüşme sorularının sonuçları, araştırmacının daha fazla veri elde etmesine ve nicel analiz bulgularının daha iyi anlaşılmasına yardımcı olmuştur. Görüşmeler, uygulamadan bir hafta sonra rastgele seçilen on öğrenciyle gerçekleştirilmiştir. Katılımcıların beşi dijital anlamsal haritalama grubundan, diğer beşi ise kâğıt tabanlı anlamsal haritalama grubundan seçilmiştir. Bu katılımcılara araştırmacının hedefleri ve görüşme süreci ayrıntılı olarak anlatılmıştır. Ayrıca, katılımcılara araştırmacı tarafından uygun bir ortam sağlanmış, böylece görüşme boyunca sunulan konularla ilgili düşüncelerini, duygularını ve deneyimlerini paylaşırken kendilerini rahat hissetmeleri sağlanmıştır. Görüşmeler sırasında, katılımcıların duygu ve düşüncelerini içtenlikle ifade etmelerini teşvik etmek amacıyla ana dilleri olan Türkçe kullanılmıştır.

Görüşmede katılımcılara deneyimleri hakkında üç ana soru sorulmuştur:

- 1- Anlamsal haritalama ile kelime öğrenme süreci nasıldı, bu süreçte neleri sevdiniz, neleri sevmediniz?
- 2- Sizce anlamsal haritalama stratejisinin avantajları ve dezavantajları nelerdir?
- 3- Anlamsal haritalama stratejisine ilişkin görüşleriniz nelerdir, bundan sonra yeni kelimeler öğrenmek için bu stratejiyi kullanmayı düşünüyor musunuz?

Katılımcılara ilk soruda anlamsal haritalama stratejisi ile kelime öğrenme sürecini değerlendirmeleri ve bu süreçte neleri sevip neleri sevmediklerini ifade etmeleri istenerek bu stratejinin etkililiğine ilişkin geri bildirim sağlanmıştır. Bu değerlendirme, öğrencilerin deneyimlerini anlamak ve öğrenme yöntemlerini geliştirmek için kullanılacak geri bildirim sağlamayı amaçlamaktadır. Bu soru, öğrencileri anlamsal haritalama stratejisinin olumlu ve olumsuz yönleri hakkında düşünmeye teşvik ederek, öğrencilerin bu sürece yönelik algılarını anlamak için önemli bir araştırma fırsatı sunmaktadır. Görüşmede sorulan ikinci soru, anlamsal haritalama stratejisinin faydalarını ve dezavantajlarını ele almaktadır. Ayrıca, bu soru ile bir stratejinin öğrencilerin öğrenme etkinliğini, motivasyonunu ve kelime dağarcığını nasıl etkilediği gibi konuları incelemek de amaçlanmaktadır. Son soruda da amaç katılımcıların görüşlerini öğrenmek ve anlamsal haritalama stratejisini nasıl değerlendirdiklerini ve gelecekte bu stratejiyi kullanma niyetlerini öğrenmektir. Ayrıca, bu soruda öğrencilerin stratejinin etkililiği, kalıcılığı ve motivasyon potansiyeli hakkındaki görüşlerini anlamak da amaçlanmıştır.

Görüşmeler gerçekleştirildikten sonra, her bir görüşme kaydı araştırmacı tarafından Türkçeden İngilizceye çevrilmeden önce yazıya dökülmüştür. Son olarak, katılımcıların anlamsal haritalama stratejisine yönelik inançlarını görmek için veriler analiz edilmiştir.

Sonuçlara göre dijital anlamsal haritalama grubunun akademik başarı ön test ve son test ortalamaları arasında anlamlı bir fark bulunmuştur ( $p = .707 > .05$ ). Bu sonuçlara göre, uygulamanın dijital anlamsal haritalama grubunda işe yaradığı ve anlamsal haritalama stratejisini dijital olarak kullanmanın ikinci veya yabancı dilde yeni kelimeler öğrenme de etkili bir yol olduğu düşünülebilir. Ön test ve son test sonuçları arasındaki anlamlı fark, dijital anlamsal haritalama stratejisinin dil öğrenme sürecine önemli bir katkı sağladığını göstermektedir. Sonuç olarak, dijital anlamsal haritalama stratejisinin ikinci bir dilde veya yabancı dilde yeni kelime öğrenme sürecine uygulanması etkili bir yol olarak görülebilir. Dijital anlamsal haritalama stratejisi, öğretmenler ve dil öğrenme uzmanları tarafından öğrencilerin dil becerilerini geliştirmek için kullanılabilir. Kısacası, ön test ve son test bulguları önemli ölçüde farklıdır ve bu da dijital anlamsal haritalama stratejisinin öğrencilerin dil öğrenme gelişimini önemli ölçüde etkilediğini göstermektedir. Bu sonuç aynı zamanda teknolojik olarak gelişmiş ve etkileşimli yaklaşımların dil eğitimine entegre edilmesinin önemini vurgulamaktadır. Kâğıt tabanlı anlamsal haritalama grubunun akademik başarı ön test ve son test ortalamaları arasında da anlamlı bir fark bulunmuştur ( $p = .000 > .05$ ) Bu bulgular, kâğıt tabanlı anlamsal haritalama stratejisinin de kelime bilgisini genişletmek için etkili bir yol olduğunu ve anlamsal haritalama stratejisinin dijital olmayan stratejiler kullanılarak uygulanmasının da akademik performansı da artırdığını göstermektedir. Kısaca, ön test ve son test sonuçları arasındaki anlamlı fark göz önünde bulundurulduğunda, kâğıt tabanlı anlamsal haritalamanın yeni kelime öğrenmede etkili bir strateji olarak kullanılması önerilebilmektedir. Çalışmanın başında, dijital anlamsal haritalama stratejisi grubu ile kâğıt tabanlı anlamsal haritalama grubunun akademik başarı ön test ortalamaları arasında anlamlı bir fark bulunmamıştır. Bu durum iki grup arasında eşitlik olarak ifade edilebilir. Benzer şekilde, iki grubun son test puanlarının sonuçları arasında da anlamlı bir fark bulunmamıştır. Her iki grup da kendi grupları içinde ön test puanları ile son test puanları arasında anlamlı bir farklılık göstermiştir. Bu bulgular, uygulama sonrasında grupların başarı düzeylerinin aynı seviyede arttığını göstermektedir. Dolayısıyla, hem dijital hem de kâğıt tabanlı gruplar için, anlamsal haritalama stratejisinin kelime öğreniminde önemli bir rol oynadığı sonucuna varmak mümkündür.

İstatistiksel sonuçlar her iki grubun da başarılı olduğunu göstermiştir. Araştırmacı daha fazla veri elde etmek amacıyla katılımcıların görüşlerini öğrenmek için yapılandırılmış bir görüşme gerçekleştirmiştir. Katılımcıların yorumlarına göre dijital anlamsal haritalama grubunun daha motive olduğu görülmüştür. Katılımcılar, özellikle çevrimiçi eğitim ortamında dijital anlamsal haritalama stratejisinin motivasyonlarını ve öz farkındalıklarını arttırdığını vurgulamışlardır. Aslında düşündüklerinden daha fazla kelime bildiklerini fark etmenin onları öğrenmeye teşvik ettiğini belirtmişlerdir. Ayrıca, bazı katılımcılar dijital yerliler oldukları için dil öğrenmek için dijital bir platform kullanmanın faydalı olduğunu savunmuştur. Öte yandan, kâğıt tabanlı anlamsal haritalama stratejisi grubundaki katılımcılar, bu stratejinin yeni kelimeleri öğrenme sürecini hızlandırabileceğini ve öğrenmeyi daha eğlenceli hale getirebileceğini iddia etmiştir. Ayrıca, görsellerin kullanılmasının kelimelerin akılda kalmasında faydalı olacağını söylemiştir. Bununla birlikte, bu stratejinin genç öğrenciler için daha iyi çalışacağı ancak daha az deneyimli dil kullanıcıları için aynı derecede işe yaramayabileceği belirtilmiştir. Ayrıca, her iki grup da bu süreçte karşılaştıkları bazı

zorluklardan bahsetmiştir. Örneğin, katılımcılardan bazıları zaten bildikleri kelimeleri hatırlamakta zorlandıklarını ya da haritaları oluştururken zaman harcadıklarını ve dil bilgisi daha az olan öğrencilerin bu zorlukların üstesinden gelmesinin daha zor olduğunu belirtmişlerdir. Özetle, anlamsal haritalama stratejisine yönelik daha olumlu bir tutuma sahip olma eğilimi göz önünde bulundurulduğunda, dijital anlamsal haritalama stratejisi grubunun görüşmelere dayanarak daha motive olduğu düşünülebilir. Bu gruptaki katılımcılar, bu stratejinin öğrenmeyi eğlenceli hale getirdiğini, daha uzun ömürlü ve etkili olarak kendilerini geliştirdiğine inanmaktadır.

Bu çalışma, anlamsal haritalama stratejisi gibi çeşitli kelime öğrenme stratejilerinin öğrencilerin hedef dili öğrenmelerine etkili bir şekilde yardımcı olup olamayacağını belirlemeyi amaçlamaktadır. Çalışmanın bazı sınırlılıkları olsa da, alanla ilgili daha geniş sonuçlar çıkarmak için daha fazla araştırmaya ihtiyaç vardır.

Özetlemek gerekirse, kelime öğrenimi, dil öğreniminin önemli ve aynı zamanda zorlayıcı bir yönüdür. Bu çalışma, öğrencilerin kelime öğrenme stratejileri ve bu süreçte dijital veya dijital olmayan yolları tercih etmeleri hakkında bilgi oluşturmaktadır. Birçok öğrenci etkili kelime öğrenme stratejileri hakkında bilgi sahibi değildir, bu da onları listeleme veya sözlük kullanma gibi geleneksel stratejilere güvenmeye yönlendirmektedir. Bu stratejiler anında anlamayı sağlasa da, genellikle hedef kelimelerin uzun süreli akılda kalmasına yardımcı olmamaktadır. Aynı zamanda, bu çalışmanın diğer bir amacı da okuduğunu anlama ile kelime bilgisi arasındaki ilişkiyi de vurgulamaktır. Güçlü kelime bilgisi, cümleleri ve metinleri kapsamlı bir şekilde anlamak için gereklidir. Ancak, öğrenciler genellikle bir metindeki tüm kelimeleri anlamakta zorlanırlar. Sonuç olarak, bir metni okurken bilinmeyen kelimelerin anlamlarını çıkarmak için stratejilere ihtiyaç duyarlar. Bu yöntemlerden biri, öğrencilerin kelimeleri ve kavramları görselleştirmelerini ve kategorize etmelerini sağlarken, benzer anlamsal anlamlara sahip kelimeler arasındaki ilişkileri oluşturmayı sağlayan anlamsal haritalamadır.

Anlamsal haritalama stratejisi ayrıca öğrencilerin yeni bilgileri mevcut arka plan bilgileriyle bütünleştirmelerine olanak tanımakta ve böylece kelime öğrenimini geliştirmektedir.

Teknolojinin gelişmesiyle birlikte, öğrencilerin kelime öğrenme stratejileri de dil öğreniminde dijital kaynaklara doğru kaymıştır. Özellikle dijital yerliler, anlam haritaları oluşturmak için dijital araçları kullanmaya başlamıştır. Bu uygulamalar, kelime dağarcığını genişletmek için yeni yollar sunmakta ve öğrencilerin teknolojiyi öğrenme süreçlerine dahil etmeleri için fırsatlar sunmaktadır.

Öncelikle, bu çalışmanın kapsamı iki deney grubu ile anlamsal haritalama stratejisini içeren altı haftalık bir uygulama ile sınırlıdır. Çeşitli açıklamalar ve saha uygulamaları olduğu için zaman kısıtlamaları nedeniyle öğrenciler aşırı zorlanabilir. Öğrencileri daha etkili ve profesyonel bir şekilde ele almak için daha fazla zaman verilebilir. Ayrıca, bu çalışma sadece Dokuz Eylül Üniversitesi'ndeki 42 orta düzey öğrenciye odaklanmaktadır. Orta düzeydeki 42 öğrencinin gelişimlerine bakmak, tüm öğrencilerle ilgili bir fikir birliğine varmayı zorlaştırabilir. Bu nedenle, farklı seviyelerdeki ya da yaş gruplarındaki öğrenciler de

çalışmaya dâhil edilebilir. Yani, farklı üniversitelerden, liselerden ya da ilköğretim okullarından daha büyük bir örneklem kullanılarak çalışmanın bulguları hakkında daha farklı bilgiler elde edilebilir. Son olarak, bu çalışmada dijital anlamsal haritalama kullanan gruptaki katılımcılar, bilgisayar ya da dizüstü bilgisayarda kullanılabilen tek bir uygulama ile haritalar oluşturmuşlardır bu nedenle katılımcıların bilgisayar, dizüstü bilgisayar ya da cep telefonlarında kullanılabilen farklı uygulamalar kullanmaları durumunda farklı sonuçlar ortaya çıkabilir.



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T.C.  
NECMETTİN ERBAKAN ÜNİVERSİTESİ  
EĞİTİM BİLİMLERİ ENSTİTÜSÜ



Özgeçmiş

AdıSoyadı:	Banu BİLİR	İmza:	
DoğumYeri:	Beyşehir / KONYA		
DoğumTarihi:	10.04.1982		
MedeniDurumu:	Bekar		

Öğrenim Durumu

	Okulun Adı	Program	Yer	Yıl
YüksekLisans	Necmettin Erbakan Üniversitesi	İngiliz Dili Eğitimi	Konya	2021-
Lisans	Ankara Üniversitesi	Amerikan Kültürü ve Edebiyatı	Ankara	2000-2005
Lise	Özel Gündoğdu Koleji		Konya	1997-2000
Ortaöğretim	Özel Gündoğdu Koleji		Konya	1993-1997
İlköğretim	Özel Gündoğdu Koleji		Konya	1988-1993
Becerileri:	MS Office Programları (Word, Excel, PowerPoint), Almanca (Başlangıç)			
İlgi Alanları:	Yabancı dizi ve film çevirileri yapmak, etimolojik araştırmalar ve Yunan mitolojisi hakkında araştırmalar yapmak			
İş Deneyimi:	Dokuz Eylül Üniversitesi, Yabancı Diller Yüksekokulu, Öğretim Görevlisi, İzmir, 2017 -  Ankara ELT Kitabevi, Eğitim Danışmanı, Ankara, 2009-2016  Selçuk Üniversitesi, Yabancı Diller Yüksekokulu, Okutman, Konya, 2006-2009			
Referanslar:	Prof. Dr. Gülmira KURUOĞLU Prof. Dr. Gülsev PAKKAN			
Tel:				
Adres:	Dokuz Eylül Üniversitesi Adatepe Mah. Doğu Cad. No: 207-AB Tınaztepe Kampüsü Yabancı Diller Yüksekokulu Buca / İZMİR			

## APPENDICES

### APPENDIX 1. PRE-TEST AND POST-TEST QUESTIONS

Name

Surname:

Number:

Class:

The results of this test will not affect your grades in any way. Thank you for your time and help. (Bu testten alacağınız sonuçlar notlarınızı hiçbir şekilde etkilemeyecektir. Zaman ayırdığınız ve yardımlarınız için teşekkür ederim)

Banu BİLİR

**Choose the correct one.**

1- Why didn't they give the -----against the attacker when they went to court?

- a) evidence                      b) victim                      c) murderer                      d) witness

2- The----- was sentenced to twenty years after he killed his partner.

- a) witness                      b) murderer                      c) victim                      d) evidence

3- Don't worry. You were the innocent ----- of this event.

- a) victim                      b) murderer                      c) witness                      d) evidence

4- They tried hard to-----the crime but couldn't find out anything.

- a) murder                      b) solve                      c) terrorize                      d) examine

5- The police will -----the car for fingerprints.

- a) solve                      b) terrorize                      c) examine                      d) murder

6- The director has won a(n) -----for his film.

- a) award                      b) copy                      c) novel                      d) author

7-She's the -----of my favourite children's books.

- a) author                      b) copy                      c) novel                      d) series

8-How many-----of her last album were sold last year?

- a) authors                      b) series                      c) copies                      d) awards

9- Have you ever read Mark Twain's -----?

- a) copies                      b) awards                      c) authors                      d) novels

- 10- The film was-----by Steven Spielberg.  
a) filmed                      b) directed    c) starred    d) nominated
- 11- Some of the scenes will be----- in a studio.  
a) starred                      b) nominated    c) filmed    d) directed
- 12- We liked the ----- of the film very much. They were so realistic.  
a) special effects              b) actions        c) plots        d) sound tracks
- 13- We were all impressed by the ----- of the film. It was composed by a famous singer.  
a) sound track                b) plot        c) action        d) special effect
- 14- Do you remember who----- in the movie as the lawyer?  
a) directed                      b) starred        c) filmed        d) nominated
- 15- The bird has green and yellow -----.  
a) petals                        b) feathers        c) paws        d) scales
- 16- Polar bears have white-----so it is hard for other animals to see them in the snow.  
a) fur                            b) branch        c) web            d) feather
- 17- Be careful! The bears may attack with their huge----- if you make them angry.  
a) tails                        b) petals        c) paws            d) fur
- 18- Are rose ----- used as cooked or raw?  
a) webs                        b) feathers        c) skins            d) petals
- 19- Do you know that fish can change the colour of their ----- instantly?  
a) paws                        b) scales        c) branches        d) tails
- 20- The dog has a strange, leathery -----.  
a) petal                        b) paw            c) skin            d) feather
- 21- The news has spread out quickly via----- ; therefore, people all learned it.  
a) power                        b) social media        c) device            d) circle
- 22- Hans and I -----after we graduated from university so I don't know whether he works or not.  
a) stayed in touch              b) invented        c) shared            d) lost touch

- 23- We have been-----with our neighbours since we moved to London. We phone each other at least twice a week.  
a) losing touch      b) staying in touch      c) sharing      d) inventing
- 24- Electronic ----- are life savers although they are expensive and easily-broken.  
a) devices      b) circles      c) powers      d) social media
- 25- There are always-----cuts in this district. People started to get tired of it.  
a) circle      b) power      c) social media      d) device
- 26- Everyone was-----and kind towards me when I moved here.  
a) nervous      b) embarrassed      c) social      d) friendly
- 27- He's a(n) ----- man. You can trust him anyway.  
a) social      b) funny      c) honest      d) nervous
- 28- Some people laugh when they feel nervous or-----.  
a) embarrassed      b) social      c) friendly      d) honest
- 29- You look really----- . Is there a problem with you?  
a) social      b) friendly      c) honest      d) nervous
- 30- He is such a(n)----- man that he likes spending most of his time with his friends and relatives.  
a) nervous      b) funny      c) social      d) embarrassed

## APPENDIX 2. NO LAUGHING MATTER

### WHAT IS LAUGHTER?

Laughter is natural for people. We start to laugh at about four months of age. We start to laugh even before we start to speak! Laughter is social. It connects us with other people. We laugh more when we are with other people. Studies find that we are 30 times more likely to laugh with other people than alone. Laughter is also contagious. When one person laughs, other people begin to laugh, too. It is difficult to pretend to laugh. Laughter is honest. Try to laugh right now. It's difficult, isn't it? When people pretend to laugh, most people know it's not real. Studies show that people don't like the sound of fake laughter.

### WHEN DO PEOPLE LAUGH?

Only 10 to 20 percent of laughter is about something funny. Most laughter is about being friendly with other people. Most laughter says, "I don't want to compete with you. I want to be friendly with you." This kind of laughter brings people together.

We often laugh when we feel nervous. At the beginning of meetings, someone often tells a joke when everyone feels nervous. It is usually a small joke, but we laugh a lot. Our laughter helps us relax. Sometimes we laugh because we think we are better than other people. When we laugh at another person, we are saying, "I am better than you." This kind of laughter makes others feel bad.

### WHAT IS FUNNY?

Some things are funny because we don't expect them. When a joke begins, we already have an idea about the end. We think we know the end, but then the joke ends in a different way. The end of the joke surprises us. It makes us laugh. Silly things are sometimes funny. We laugh at jokes about people and their mistakes because we know something they don't know. We think we are better than they are.

### WHY DOESN'T EVERYONE LAUGH AT THE SAME JOKE?

Not everyone has the same sense of humour. Some people think a joke is funny, but other people don't think so. People have different ideas about what is funny. Our idea of what is funny changes with time. For young children, the world is new. Many things surprise them, so they laugh a lot. Teenagers often worry about what others think of them. They laugh to protect themselves. Teenagers laugh when they feel embarrassed. Adults laugh at themselves and other people with similar problems. They laugh at things that give them stress. Our reasons for laughter change over time.

### **APPENDIX 3. TECHNOLOGY AND CHANGE**

I was born 26 years ago. On my first birthday, my parents took photos. Then, they printed them at a store. After that, they mailed them in an envelope to my grandparents. Ten days after my birthday, my grandparents saw photos of me with my birthday hat.

The world is changing. On my son's first birthday, I video - called my parents. After that, I shared the video and many other photos online. That very day, all my friends and family around the world saw photos of my boy in his birthday hat. Technology is changing the way we live in so many positive ways.

In fact, the power and speed of computers double every two years. In 1969, giant computers sent people to the moon. Today, the little smartphone in my pocket is much more powerful than those computers. My phone won't take me to the moon, but it connects me to people and to the world in important ways.

In the past, humans had small social networks. They knew about 150 friends, neighbours, and family members. They kept up in daily conversations. As people went to different schools and moved to new places, their social circles also changed. They lost touch with old friends and made new ones.

With social media, we no longer lose touch with our old friends. We stay in touch, no matter how far apart we live. We keep old friends and make new ones. We connect with friends from different circles. According to the website DIGITAL IN 2018, the number of social media users grows by 10% a year. Today, you can connect to up to three billion people on social media. That number will be bigger tomorrow!

Technology doesn't just connect people. It connects us to things, like our homes and cars. This is called the Internet of Things (IoT). In fact, more things than people who connected to the Internet. And this number will grow by billions in the years to come.

Smart devices turn on and off without our effort. Lights turn on when we enter a room. The heat goes up when the sun goes down. A front door opens when it sees our face. Refrigerators turn on only when necessary. We have a more comfortable and efficient home. These smart devices also communicate with us. For example, a smart refrigerator knows when there is no milk and adds it to our shopping list. Our cars tell us when we are in danger of an accident. A home security system tells us when a box arrives at our home. In our safer, more efficient, more comfortable homes we can relax. And we can use the extra time we have to connect to our large circle of friends and family around the world!

## APPENDIX 4. THE GREATEST UNSOLVED CRIME

One of the greatest unsolved murder mysteries of all time is that of Jack the Ripper.

In the Autumn of 1888, a brutal murderer walked the dark, foggy streets of Whitechapel, in east London, terrorizing the inhabitants of the city. The victims were all women and the police seemed powerless to stop the murders. There were no witnesses to the crimes, so the police had no idea what the murderer looked like. Panic and fear among Londoners was increased by a letter sent to Scotland Yard by the murderer. In the letter, he made fun of the police's attempts to catch him and promised to kill again. It finished, 'Yours truly, Jack the Ripper'. This was the first of many letters sent to the police. The murders continued – five in total. But in November, they suddenly stopped, three months after they had first begun.

Jack the Ripper was never caught, and for more than a century, historians, writers, and detectives have examined the evidence and tried to discover and prove his identity. Hundreds of articles and books have been written and many films made about the murders. But the question, 'Who was Jack the Ripper?' has remained unanswered. There have been plenty of suspects, including a doctor, a businessman, a painter, a sailor, a singer, and even a member of the royal family, and all sorts of people over the years have tried to solve this real-life murder mystery.

## APPENDIX 5. SIX OF THE BEST, BIGGEST AND MOST POPULAR

We all have our favourite music, our favourite films, our favourite books – but which are the most popular ever?

The most popular album... Thriller by Michael Jackson

At the time Jackson started writing his best-selling album, Thriller, he was upset because his previous album, Off the Wall, hadn't won a Grammy award. He wrote on the mirror in the room that his next album would sell 50 million copies. He was wrong – it sold over ten million more than that. Even today around 130,000 copies are sold in the USA every year.

The most famous classical music... Beethoven's Fifth Symphony

When Beethoven was alive, his Fifth Symphony wasn't his most popular piece of music. But now most people recognize the famous da da da dah introduction. In the twentieth century, the first four notes were used by other musicians to make electro dance, hip hop, surf rock, rock and roll and disco tracks.

The most famous painting ... La Gioconda

La Gioconda (which is called the Mona Lisa in English-speaking countries) was not always so famous. It only became really well known when it was stolen from the Louvre in Paris in 1911. It was taken by Vincenzo Peruggia, an Italian who wanted to return it to Italy. The painting was found two years later and it is now kept behind glass to protect it.

The most popular novel... A Tale of Two Cities

Many people think that the best-selling book of all time is one of the Harry Potter books. It's true that all the Harry Potter books together have sold about 450 million copies. But the most popular single novel is much older. A Tale of Two Cities was written by Charles Dickens in 1859 and has sold 250 million copies. It tells the story of a group of ordinary people during the French revolution.

The most popular film... The Shawshank Redemption

The most popular film ever didn't make much money at the cinema. The Shawshank Redemption only became popular later on video, DVD and TV. The film – voted 'Best Film' on the website IMDb – was based on a book by Stephen King. The author sold the story for only one dollar.

The most popular TV series... Game of Thrones

The number one TV series on IMDb is currently Game of Thrones. The fantasy drama was also the most illegally downloaded series of 2012 and 2013- people around the world couldn't wait to see it, so they downloaded the programme as soon as it was shown in the USA. It's so popular that, in 2012, over 160 baby girls were named Khaleesi - the name of a character in the show.

## APPENDIX 6. CLASSIC FILMS YOU MUST SEE

Please post your suggestion.

The Force Awakens (2015)

The Force Awakens is the seventh film in the Star Wars saga, created by George Lucas. The film was directed by J.J. Abrams. It stars John Boyega as Finn, Daisy Ridley as Rey, and Harrison Ford as Han Solo. It was nominated for five Oscars in 2016, but it didn't win any.

The film is set a long time ago in a galaxy far, faraway. It was filmed in the UK, Ireland, and Abu Dhabi.

The story begins 30 years after the events of Star Wars: Episode VI Return of the Jedi. Finn, a stormtrooper, leaves the evil organization called the First Order. He follows a little robot, BB-8, who has information about how to find Luke Skywalker, a Jedi who can use a special energy called the Force. Finn and BB-8 are helped by a young woman called Rey, and together they escape and find Han Solo, a space pilot, and his alien friend, Chewbacca. They help Finn and Rey in their search for Skywalker and their mission to destroy the First Order's new super weapon.

I strongly recommend The Force Awakens. It has action, drama, a great soundtrack, and a good plot, but above all, amazing special effects. I think I will always prefer the classic Star Wars films because I watched them when I was young, but I loved this film, too.

## **APPENDIX 7. ANIMALS HAVE ADAPTED TO SURVIVE EVERYWHERE**

Polar bears are a good example. They have layers of fat under their skin, which means that they can swim in freezing water. Not only this, but it's very difficult for other animals to see them in the snow. Because they have completely white fur, they can easily run up to other animals and attack with their huge paws.

Another amazing animal is the ptarmigan. This Arctic bird is also white, which helps it hide in the snow. However, when the snow melts, the bird's feathers change colour. From its head to its tail, it turns grey to match the rocky environment.

Plants have adapted, too. This bee orchid looks exactly like it has a real bee resting on its petals. This 'bee' is actually part of the flower, and it's nature's way of attracting real bees to the orchid.

Many fish can change the colour of their scales instantly to match their background.

At first, you might think that this is a leaf. But it's really an Indian leaf butterfly, sitting on the branch of a tree. Because it doesn't look like a butterfly, it can hide from other animals that would like to eat it.

The Amazon jungle spider also has an inventive way of protecting itself. It creates a web which looks like a much larger spider, possibly to frighten other animals.

## APPENDIX 8. INTERVIEW QUESTIONS

**1. Anlamsal haritalama ile kelime öğrenme süreci nasıldı, bu süreçte neleri sevdiniz, neleri sevmediniz?**

*How was the process of learning vocabulary with semantic mapping strategy, what did you like and what did you not like in this process?*

**2. Sizce anlamsal haritalama stratejisinin avantajları ve dezavantajları nelerdir?**

*What do you think are the advantages and disadvantages of a semantic mapping strategy?*

**3. Anlamsal haritalama stratejisine ilişkin görüşleriniz nelerdir, bundan sonra yeni kelimeler öğrenmek için bu stratejiyi kullanmayı düşünüyor musunuz?**

*What are your views on the semantic mapping strategy, do you think you will use this strategy to learn new words in the future?*

## **APPENDIX 9. STUDENT INTERVIEWS (DIGITAL SEMANTIC MAPPING GROUP)**

**Question 1- How was the process of learning vocabulary with semantic mapping strategy, what did you like and what did you not like in this process?**

### **Student 1**

I liked realizing that I actually knew a lot of words when I was using this strategy. It motivated me. Recently, we are used to doing everything in a computer environment during online education. It was more useful to use a digital platform for vocabulary learning. Honestly, there was nothing I didn't like about it.

### **Student 2**

It was a pleasant process to use this method, but it took a lot of time to think about the words I knew while creating the maps and not remembering the English equivalents of the words I knew caused me to panic. Generally speaking, a process that can be very productive for students with extensive vocabulary knowledge was challenging for students like me who have vocabulary difficulties.

### **Student 3**

As someone who has difficulty in learning vocabulary, doing activities with my friends in the classroom motivated me even more and made the lessons more fun and more productive. In my opinion, there was nothing very negative about using this strategy. On the contrary, I think it was very productive. I can only say that it is necessary to spend a little more time for this strategy.

### **Student 4**

Learning vocabulary was very difficult and boring for me. Even with the words I thought I had learnt, I had difficulties when I needed them, but learning vocabulary in this way was more enjoyable, efficient and permanent. However, spending a little too much time in the process of creating the maps stressed me out.

### **Student 5**

It was a method that I normally never knew and one of the most important issues in learning English is to learn vocabulary. In this way, it made me realize my own learning style by using a different strategy. It was a very good experience for me. However, it took me some time to try to remember the words I used to know and this made me a little uneasy.

**Question 2- What do you think are the advantages and disadvantages of the semantic mapping strategy?**

**Student 1**

**Advantages:** When there is a subject that covers previously learnt vocabulary, it is easier to remember known words and learn new words. It is more fun to learn vocabulary using digital platforms and applications than learning vocabulary with traditional methods.

**Disadvantages:** It would be difficult to create maps if there were no topics with previously known words. It also takes some time to create the maps.

**Student 2**

**Advantages:** In the age of technology, it was more motivating to learn words in digital environments using different strategies.

**Disadvantages:** I think that students who use this technique should have a serious vocabulary knowledge. I do not think that it is a very advantageous strategy especially for students who are starting to learn a new language.

**Student 3**

**Advantages:** The fact that it was an active study enabled me to get extremely efficient from the lessons. I believe that the words learnt in this way are more permanent than other methods.

**Disadvantages:** This method needs a strong background to be effective. Otherwise, making maps is quite challenging. That can take some time as well.

**Student 4**

**Advantages:** Using different techniques in vocabulary learning can increase interest in the subject and the lesson. Supporting the learned words visually can help students remember them more. In addition, working together with both the teacher and classmates can make learning vocabulary more enjoyable.

**Disadvantages:** Organising maps can take a long time, especially for students with poor vocabulary.

**Student 5**

**Advantages:** Using new methods instead of traditional ways can make the lesson more engaging, and participating so actively in it can make it more interesting and fruitful.

**Disadvantages:** It may take sometime to remember and organize the vocabulary related to the topic and then add the newly learnt vocabulary.

**Question 3- What are your views on the semantic mapping strategy, do you think you will use this strategy to learn new words in the future?**

**Student 1**

I think this strategy is very effective and enjoyable for learning vocabulary. I plan to use it as much as possible from now on.

**Student 2**

I think the words will be more permanent in this way, especially for those with high visual intelligence. I have used the semantic mapping strategy for different purposes before. Now I am thinking of using it for learning vocabulary.

**Student 3**

I definitely think so. In my opinion it was a very motivating and productive process.

**Student 4**

I think that learning the words with this strategy is much more permanent. I think that I can use it in the classroom, but I do not think that I can use it individually too much.

**Student 5**

I think it is a strategy that is suitable for students with intermediate vocabulary knowledge but not for beginner students. I don't think it can be used all the time, especially without the teacher's help, as it would take a lot of time. In general, it is an effective and motivating method. I want to use it as much as possible. I believe that it will become more practical as I use it and I will learn the words more permanently because I make an effort.

**STUDENT INTERVIEWS (PAPER-BASED SEMANTIC MAPPING GROUP)**

**Question 1- How was the process of learning vocabulary with semantic mapping strategy, what did you like and what did you not like in this process?**

**Student 1**

I was actually using the semantic mapping strategy before, but now I started to use it on English words and the word learning process has accelerated a little more. But I recommend you to use it for a certain period of time, that is, if you have a lot of time.

### **Student 2**

First of all, I found this method to be a little challenging, but learning something always requires work. There are various aspects that I enjoy. Using this method, you first draw a large table with colored pencils, hang it on the wall, and even if you don't want to, your eyes get attracted there and you learn. While making that table, this strategy also forces you to do some research. As a result, knowledge gained through research has a greater chance of sticking around. There is nothing that I dislike.

### **Student 3**

Although it requires some work, the process is incredibly enjoyable. I have to use all of my vocabulary when I switch to a new issue. I enjoy a topic if it is one that I don't know much about.

### **Student 4**

It was quite enjoyable for me, but the aspects I disliked outweighed the aspects I liked. First of all, if we talk about the positive aspects, it will definitely be easier to memorize with this semantic mapping strategy. However, I think it is a bit troublesome for me.

### **Student 5**

I realized that it was an easier way to learn vocabulary. That's why I liked it. In general, I think this method will be effective in a long process. If I need to make a negative comment on this subject, I don't like that it takes a long time.

**Question 2- What do you think are the advantages and disadvantages of the semantic mapping strategy?**

### **Student 1**

**Advantages:** Students who have higher visual memories learn faster because they can recall where a word is on a semantic map and can repeat the definition of the word more quickly when they see it.

**Disadvantages:** It is a little difficult and as I mentioned only applicable to people with more time. You might find it challenging to categorize if you are working alone.

### **Student 2**

**Advantages:** As I said, since it forces you to do research, it is a bit far from memorization and you need to know the words you don't know or another word while

looking at a word. While learning a word, the vocabulary expands more because you learnt two or three extra words. At the same time, it is more permanent as it is not memorized.

**Disadvantages:** I can only say that maybe it takes a little longer, but I think it is not much of a disadvantage because if you want to learn something, it takes time, it should take time anyway, so it is not much of a disadvantage because you learn even while writing them.

### **Student 3**

**Advantages:** I can learn many words passively, but I cannot learn them actively enough to use them in everyday life. It is very useful when reading a text, but not when speaking. For example, this strategy can be useful for me when reading a new text, but I don't think it will be very useful when speaking.

**Disadvantages:** I think I cannot actively learn that word by using this strategy. But in general, I can learn an unfamiliar word or a close word that I come across while reading a text.

### **Student 4**

**Advantages:** I think it can make learning more fun, of course. However, it is a technique more aimed at young people and children. In my opinion it is an efficient method because it will stay in my mind for a very long time.

**Disadvantages:** There are many disadvantages. First of all, to mention them, many papers will be needed. And after a certain period of time, those papers will be lost. Finding them will be difficult for me.

### **Student 5**

**Advantages:** I think it will be very effective when used on children.

**Disadvantages:** I think that the semantic mapping strategy is more for children and therefore, it may be boring for an individual with a background.

**Question 3- What are your views on the semantic mapping strategy, do you think you will use this strategy to learn new words in the future?**

### **Student 1**

I prefer to use this method for more important issues. I do not prefer to use it for learning new vocabulary because it takes too much time. It's a method I like, I usually use it for things like what I did in a day, what I need to do, but I don't think I will use it for

acquiring new words.

**Student 2**

Semantic mapping strategy is a method that I have already used before and I have used it in different subjects. I find this method suitable for myself and of course I plan to use it in the future to learn new words.

**Student 3**

A good method. I don't think it's enough on its own. It's a really good method when learning vocabulary, but as I said, I can't learn actively. Maybe it can be a very efficient method on top of it with a study I will do by setting up sample sentences in sentences. This way I can use it from now on.

**Student 4**

I don't think I will use this method from now on because I think the negative aspects outweigh the advantages. I am more familiar with traditional vocabulary learning techniques; I think I would prefer them.

**Student 5**

As I mentioned in response to the previous question, I recommend it as a fun way for those without any language-learning experience to learn new words they like, but I do not believe it will be as successful for those who receive language education in primary, secondary, high school, and university settings like we do. I feel that children should be the focus.

## APPENDIX 10. ÖĞRENCİ GÖRÜŞMELERİ (DİJİTAL ANLAMSAL HARİTALAMA GRUBU)

**Soru 1- Anlamsal haritalama ile kelime öğrenme süreci nasıldı, bu süreçte neleri sevdiniz, neleri sevmediniz?**

### Öğrenci 1

Bu stratejiyi kullanırken aslında çok fazla kelime biliyor olduğumu fark etmek çok hoşuma gitti. Beni motive etti. Son zamanlarda çevrimiçi eğitim esnasında her şeyi bilgisayar ortamında yapmaya alıştık. Kelime öğrenimi konusunda da dijital bir platform kullanmak daha faydalı oldu. Sevmediğim bir yanı yoktu açıkçası.

### Öğrenci 2

Bu yöntemi kullanmak keyifli bir süreci ancak haritaları oluştururken bildiğim kelimeleri düşünmek çok zaman aldı ve bildiğim kelimelerin İngilizce karşılıklarını hatırlayamamak paniklememe sebep oldu. Genel olarak bakacak olursak kelime bilgisi geniş olan öğrenciler için çok verimli olabilecek bir süreç benim gibi kelime sıkıntısı yaşayan öğrenciler için zorlayıcı oldu.

### Öğrenci 3

Kelime öğrenmede zorlanan biri olarak sınıf içinde arkadaşlarımla beraber etkinlik yapıyor olmak beni daha da motive etti ve derslerin daha eğlenceli ve daha verimli geçmesini sağladı. Bence bu stratejiyi kullanmanın negatif çok bir yanı yoktu. Aksine çok verimli olduğunu düşünüyorum. Sadece bu strateji için biraz fazla zaman ayırmak gerektiğini söyleyebilirim.

### Öğrenci 4

Kelime öğrenmek bana çok zor ve sıkıcı geliyordu. Öğrendiğimi düşündüğüm kelimelerde bile ihtiyaç duyduğumda sıkıntılar yaşıyordum ama bu şekilde kelime öğrenmek daha keyifli, verimli ve kalıcı oldu. Ancak haritaları oluşturma sürecinde biraz fazla zaman harcamak beni strese soktu.

### Öğrenci 5

Normalde hiç bilmediğim bir yöntemdi ve İngilizce öğrenirken en önemli konulardan biri kelime öğrenmektir. Bu şekilde farklı bir stratejiyi kullanarak kendi öğrenme şeklimi fark etmemi sağladı. Benim için çok güzel bir deneyim oldu. Ancak eskiden bildiğim kelimeleri hatırlamaya çalışmam biraz zamanımı aldı ve bu durum beni biraz tedirgin etti.

**Soru 2- Sizde anlamsal haritalama stratejisinin avantajları ve dezavantajları nelerdir?**

### **Öğrenci 1**

**Avantajları:** Önceden öğrenilen kelimeleri kapsayan bir konu olduğunda, bilinen kelimeleri hatırlamak ve yeni kelimeleri öğrenmek daha kolay oluyor. Geleneksel yöntemlerle kelime öğrenmektense dijital platform ve uygulamalar kullanarak kelime öğrenmek daha eğlenceli oluyor.

**Dezavantajları:** Daha önceden bilinen kelimelerin olduğu konular olmasa haritaları oluşturmak zor olur. Ayrıca haritaları oluşturmak biraz vakit alıyor.

### **Öğrenci 2**

**Avantajları:** Teknoloji çağında öğrenmeye çalışılan kelimelerin dijital ortamlarda, farklı stratejiler kullanılarak yapılması daha motive edici oldu.

**Dezavantajları:** Bu tekniği kullanan öğrencilerin ciddi anlamda kelime bilgisine sahip olmaları gerektiğini düşünüyorum. Özellikle yeni bir dil öğrenmeye başlayan öğrenciler için çok avantajlı bir stratejisi olduğunu düşünmüyorum.

### **Öğrenci 3**

**Avantajları:** Aktif olarak yapılan bir çalışma olması derslerden son derece verim almamı sağladı. Diğer yöntemlere göre bu şekilde öğrenilen kelimelerin daha kalıcı olmasını sağladığına inanıyorum.

**Dezavantajları:** Bu stratejiyi kullanabilmek için sağlam bir alt yapıya sahip olunması gerekiyor. Aksi takdirde haritaları oluşturmaları çok zor olur. Biraz da zaman alması zorlayıcı olabilir.

### **Öğrenci 4**

**Avantajları:** Kelime öğreniminde farklı tekniklerin kullanılması konuya ve derse olan ilgiyi artırabilir. Öğrenilen kelimeleri görsel olarak da desteklemek daha çok aklında kalmasını sağlayabilir. Ayrıca hem öğretmenin hem de sınıf arkadaşlarıyla ortak çalışmak kelimeleri daha keyifli bir şekilde öğrenmeyi sağlayabilir.

**Dezavantajları:** Haritaları organize etmek özellikle kelime bilgisi zayıf olan öğrenciler için uzun zaman alabilir.

## **Öğrenci 5**

**Avantajları:** Alışkın olunan tekniklerin dışında farklı yöntemler denemek derse olan ilgiyi arttırabilir ve dersin içinde bu kadar aktif rol oynamak daha yaratıcı ve üretken olunmasını sağlayabilir.

**Dezavantajları:** Konuyla ilgili olan kelimeleri hatırlamak ve düzenlemek ardından yeni öğrenilen kelimeleri eklemek biraz zaman alabilir.

**Soru 3- Anlamsal haritalama stratejisine ilişkin görüşleriniz nelerdir, bundan sonra yeni kelimeler öğrenmek için bu stratejiyi kullanmayı düşünüyor musunuz?**

## **Öğrenci 1**

Bence bu strateji kelime öğrenmek için oldukça etkili ve keyifli. Bundan sonra mümkün olduğunca kullanmayı düşünüyorum.

## **Öğrenci 2**

Kelimelerin bu şekilde daha kalıcı olacağını düşünüyorum. Özellikle görsel zekası fazla olanlar için. Anlamsal haritalama stratejisini daha önce farklı amaçlarla kullanmıştım. Artık kelime öğrenmek için de kullanmayı düşünüyorum.

## **Öğrenci 3**

Kesinlikle düşünüyorum. Bence çok eğlenceli ve verimli bir süreçti.

## **Öğrenci 4**

Kelimeleri bu strateji ile öğrenmenin çok daha kalıcı olduğunu düşünüyorum. Sınıf içinde kullanabileceğimi ancak bireysel olarak çok fazla kullanabileceğimi düşünmüyorum.

## **Öğrenci 5**

Kelime bilgisi orta derecede olan öğrenciler için uygun olan ancak yeni başlayan öğrenciler için uygun olmayan bir strateji olduğu kanısındayım. Özellikle öğretmenin yardımları olmasa oldukça zaman alacağından her zaman kullanılabilirliğini sanmıyorum. Genel olarak bakıldığında etkili ve motive edici bir yöntem. Mümkün olduğunca kullanmak istiyorum. Kullandıkça daha pratik hale geleceğini ve kelimeleri çaba harcadığım için daha kalıcı olarak öğreneceğime inanıyorum.

## ÖĞRENCİ GÖRÜŞMELERİ (KÂĞIT TABANLI ANLAMSAL HARİTALAMA GRUBU)

**Soru 1- Anlamsal haritalama ile kelime öğrenme süreci nasıldı, bu süreçte neleri sevdiniz, neleri sevmediniz?**

### Öğrenci 1

Anlamsal haritalama metodunu aslında öncesinde de kullanıyordum ama şimdi ingilizce kelimeler üzerine kullanmaya başladım ve kelime öğrenme süreci biraz daha hızlandı. Ama belli bir süre yani çok fazla vaktiniz varsa kullanmanızı tavsiye ederim.

### Öğrenci 2

Öncelikle bu süreç benim için biraz meşakatli geçti ama bir şey öğrenmek için tabii çabalamak lazım. Sevdiğim birçok yönü var. Bu methodda öncelikle renkli kalemler kullanarak özellikle büyük bir tablo oluşturduğum zaman ve bu tabloyu da duvara astığınızda istemeseniz bile gidip gelirken gözünüz takılıyor ve öğreniyorsunuz. Aynı zamanda o tabloyu da oluştururken bu metod sizi araştırmaya da itiyor. O yüzden bir şeyleri araştırarak öğrendiğinizde daha kalıcı oluyor. Pek sevmediğim yönü yok.

### Öğrenci 3

Gayet keyifli bir yöntem ama biraz uğraştırıyor. Yeni bir konuya geçtiğimde bildiğim tüm kelimeleri yazmam gerekiyor. Eğer az bildiğim bir konuysa hoşuma gidiyor.

### Öğrenci 4

Benim açımdan oldukça keyifliydi ancak sevmediğim yönleri sevdiğim yönlerine daha ağır basmaktaydı. Öncelikle olumlu yönlerinden bahsederek ezberlemek kesinlikle daha kolay olacaktır bu anlamsal haritalama yöntemiyle. Ancak biraz zahmetli olduğunu düşünüyorum benim açımdan.

### Öğrenci 5

Daha kolay kelime öğrenilebilir bir yöntem olduğunu farkettim. Bu yüzden de sevdim. Genel olarak bu yöntem uzun bir süreçte etkili olacağını düşünüyorum. Bu konuyla ilgili olumsuz bir yorum yapmam gerekirse uzun sürüyor olmasını sevmedim.

**Soru 2- Sizce anlamsal haritalama stratejisinin avantajları ve dezavantajları nelerdir?**

### Öğrenci 1

**Avantajları:** Görsel hafızası daha iyi olan öğrencilerde daha hızlı öğrenim ve bir kelimeyi gördüğünde onun anlamsal haritalama üzerine nerede olduğunu tekrar aklına getirip daha hızlı ve seri bir şekilde bu kelimenin anlamını söyleyebilmesi.

**Dezavantajları:** Dediğim gibi daha çok vakti olanlar için geçerli ve birazcık uğraştırıcı bir konu. Mesela Adjectives konusunda işte tek başınıza yapıyorsanız eğer bölümlere ayırmada zorluk çekebilirsiniz.

### **Öğrenci 2**

**Avantajları:** Dediğim gibi sizi araştırmaya ittiği için biraz ezberden uzak oluyor ve sürekli bilmediğiniz kelimeleri ya da bir kelimeye bakarken başka bir kelimeyi de bilmeniz gerekiyor. Bir kelimeyi öğrenirken yanında ekstra iki, üç kelime daha öğrendiğiniz için daha fazla hazne genişliyor. Aynı zamanda ezber olmadığı için daha kalıcı oluyor.

**Dezavantajları:** Sadece belki hani biraz uzun sürüyor diyebilirim ama o da pek dezavantaj sayılmaz bence çünkü hani bir şey öğrenmek istiyorsanız onun zaman alıyor, zaman alması lazım zaten ki, zaman alırken yani onları yazarken bile öğrendiğiniz için çok da bir dezavantaj sayılmaz.

### **Öğrenci 3**

**Avantajları:** Birçok kelimeyi pasif olarak öğrenebiliyorum ama gündelik hayatta kullanabileceğim kadar aktif öğrenemiyorum. Herhangi bir parçayı okurken çok faydalı oluyor ama konuşurken değil. Mesela bu strateji yeni bir parça okurken bana faydası olabilir ama konuşurken pek faydası olacağını düşünemiyorum.

**Dezavantajları:** Aktif olarak öğrenemiyorum bence o kelimeyi. Ama genel olarak bir parça okurken denk geldiği bilmediğim yabancı bir kelimeyi ya da yakın bir kelimeyi iyi öğrenebiliyorum.

### **Öğrenci 4**

**Avantajları:** Öğrenmek tabii ki de daha eğlenceli hale getirebileceğini düşünüyorum. Ancak daha gençlere ve çocuklara yönelik bi teknik olduğunu düşünüyorum. Ancak aklımda çok uzun süre kalacağı için verimli bir yöntem olduğunu düşünüyorum.

**Dezavantajları:** Birçok dezavantajı var. Öncelikle bunlardan bahsetmek gerekirse pek çok kağıda ihtiyaç duyulacaktır. Ve belirli bir süre sonra o kağıtlar kaybolacaktır. Bulmak benim açımdan zorlayacaktır beni.

### **Öğrenci 5**

**Avantajları:** Çocuklar üzerinde kullanıldığında çok etkili olacağını düşünüyorum.

**Dezavantajları:** Anlamsal haritalama stratejisi daha çok çocuklar için olduğunu ve bu yüzden alt yapısı olan bir birey için sıkıcı gelebileceğini düşünüyorum.

**Soru 3- Anlamsal haritalama stratejisine ilişkin görüşleriniz nelerdir, bundan sonra yeni kelimeler öğrenmek için bu stratejiyi kullanmayı düşünüyor musunuz?**

#### **Öğrenci 1**

Bu metodu daha önemli konularda kullanmayı tercih ederim. Yeni kelime öğrenme konusunda kullanmayı tercih etmem çünkü çok vakit alıyor. Sevdiğim bir metod bunu genelde günde, bir gün içinde ne yaptım, ne yapmam gerekiyor gibi konularda kullanıyordum ama bu konuda kullanacağımı pek düşünmüyorum.

#### **Öğrenci 2**

Anlamsal haritalama stratejisi zaten önceden de kullandığım ve farklı konularda da kullandığım bir yöntem. Bu yöntemi kendime uygun buluyorum ve tabiki yeni kelimeler öğrenmek için de ilerleyen zamanlarda da kullanmayı düşünüyorum.

#### **Öğrenci 3**

Güzel bir yöntem. Tek başına yeterli olduğunu düşünmüyorum. Yalnız. Kelime öğrenmekten gerçekten güzel bir yöntem yalnız dediğim gibi aktif olarak öğrenemiyorum Belki cümle içinde, örnek cümleler kurarak yapacağım bir çalışmayla üstüne gayet verimli bir yöntem olabilir. Bu şekilde bundan sonra kullanabilirim.

#### **Öğrenci 4**

Bundan sonra bu yöntemi kullanmayı pek düşünmüyorum çünkü bana göre olumsuz yönleri daha ağır basıyor. Ben geleneksel kelime öğrenme tekniklerine daha çok aşinayım, onları tercih edeceğimi düşünüyorum Bir kağıda yazıp ezberlemeyi daha çok tercih ederim kendi açımdan.

#### **Öğrenci 5**

Bir önceki soruda da dediğim gibi alt yapısı olmayan insanların tercih etmesini ve yeni kelimeler öğrenmek için keyifli bir yöntem olarak öneriyorum onlara ama bizler gibi ilkokul, ortaokul, lise ve üzerine üniversite dil eğitimi aldıklarında bunun o kadar da etkili bir yöntem olacağını düşünmüyorum. Küçükler üzerinde etkili olduğunu düşünüyorum.