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YEDITEPE UNIVERSITY  
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**USING MIND MAPPING TECHNIQUE  
TO ENHANCE FLUENCY IN STUDENTS' SPOKEN PRODUCTIONS**

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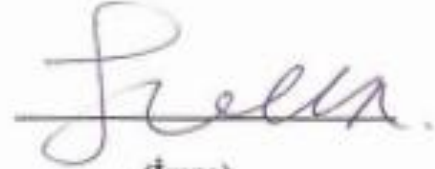
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I hereby declare that all information in this study has been obtained and presented in accordance with academic rules and ethical conduct. Moreover, I officially declare that I have fully cited and referenced all information and results that are not original to this work.

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*To my family...*

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**LIST OF ABBREVIATIONS**

**GOs.....Graphic Organizers**

**MMs.....Mind Maps**

**EFL.....English as a Foreign Language**

**Ts.....Teachers**

**Ss.....Students**



## Özet

Bu çalışma, İngilizceyi yabancı dil olarak öğrenen hazırlık sınıfı öğrencilerinin, konuşma derslerinde ve konuşma sınavlarındaki sözlü üretimleri sırasında yaşadıkları zorlukları belirleyerek, Beyin Haritalama Tekniği'nin bu zorlukları azaltma konusundaki etkilerini saptamayı hedeflemektedir. Aynı zamanda, bu çalışmada beyin haritalama tekniğinin, öğrencilerin konuşma becerisindeki akıcılığı üzerindeki etkilerinin belirlenmesi de amaçlanmıştır. Bu nicel çalışmaya 84 öğrenci katılmıştır. Bu öğrencilerden, 43 katılımcı deney grubunda, 41 öğrenci de kontrol grubunda yer almıştır. Tüm katılımcılar, bir devlet üniversitesinde hazırlık sınıfına devam eden öğrenciler olup, dil seviyeleri aynı kurumda yapılan seviye tespit sınavına göre A2 olarak belirlenmiştir.

Bu çalışma başlamadan önce, küçük ölçekli bir pilot çalışma yapılarak, yapılması planlanan tüm adımlar test edilmiştir. Pilot çalışma beyin haritalama tekniği ile akıcılığın gelişmesi arasında olumlu bir ilişki olduğunu ortaya çıkardığı gibi, öğrencilerin fikirlerini organize ederken art alan bilgisi ve söylem bilgisini kullanma becerisi geliştirdiklerini de göstermiştir. Pilot çalışmadan alınan sonuçlarla, bu tekniğin öğrencilerin konuşma sınavlarında aldıkları notları da genel olarak arttırdığı sonucuna varılmıştır.

Bu bilgiler ışığında başlayan çalışmada, öğrencilerden, ihtiyaç analizi anketiyle konuşma derslerinde karşılaştıklarını düşündükleri zorlukları belirtmeleri istenmiştir. Beyin haritalama tekniğinin, öğrencilerin yaşadıkları bu problemleri ortadan kaldırmada yararlı olabileceğine pilot çalışmadan alınan sonuçlar ve bu konuda yapılan diğer çalışmalar ışığında karar verilmiştir. Çalışmanın iki dönem, yani 32 hafta sürmesi ve okul müfredatında yer alan ilk dönem diyalog ikinci dönem monolog çalışmalarını kapsamaları planlanmıştır. Beyin haritalama tekniğinin, konuşma akıcılığı üzerindeki etkisini belirlemek amacıyla, öğrencilerin sözlü sınav notları karşılaştırılmıştır. İkinci dönem sonunda, öğrencilerin bu tekniği

değerlendirmeleri ve fikirlerini ifade edebilmeleri için onlara öz değerlendirme anketi uygulanmıştır.

Çalışmada elde edilen sonuçlar, pilot çalışmada da olduğu gibi, öğrencilerin konuşma sınavlarında aldıkları notlar, sınıf performansları ve tutum anketine verdikleri cevaplar ışığında değerlendirildiğinde, beyin haritalama tekniğinin konuşma becerisi üzerinde olumlu etkilerinin olduğu saptanmıştır.

***Anahtar Kelimeler;** Beyin Haritalama Tekniği, konuşma becerisi, İngilizce Eğitimi, akıcılık, konuşma sınavları, konuşma becerisi öğretimi.*



## Abstract

This study attempts to determine the difficulties faced by prep-class EFL students during their spoken productions, both in-class and on spoken exams, as well as the efficacy of the mind mapping technique in eliminating the difficulties that students have reported. The secondary aim of the current study is to find out whether the mind mapping technique has any effect on boosting the fluency of EFL students during their speaking. 84 EFL students participated in this quantitative study. 43 of the participants were in the experimental group, whereas 41 participants were in the control group. Each of the participants both in the control group and experimental group was a preparatory class student of English at a state university. Their proficiency levels were determined to be A2 via placement tests done by the institution.

Before the actual study commenced, a pilot study was carried out as a small scale replication of the current study in which every step was tested and verified. The pilot study confirmed the association between the mind mapping technique and boosting fluency, as well as using background and discourse knowledge when necessary by organizing thoughts. The results also indicated that the intervention of the mind mapping technique on enhancing success of learner's spoken production in terms of students' total score was efficient.

In the light of those results, this study confidently set forth with a needs analysis questionnaire in which the students had the opportunity to reflect on and report the difficulties they faced while speaking in speaking classes. The mind mapping technique was determined to be beneficial in solving these problems as shown in the pilot study. The study was planned to last two terms each of which lasted 16 weeks. The main focus of the speaking curriculum was on dialogues in the first term and on monologues in the second term. Therefore, in this longitudinal study, students were observed during speaking classes and their spoken exam scores were compared in order to determine the efficacy of mind mapping technique on boosting fluency in speaking in terms of both dialogues and monologues. In the

end of the second term, after all the exams were done, a self-assessing questionnaire was carried out to give the students the chance to evaluate the technique and express their opinion about it.

It was found out that the results of the study were in consistence with those of the pilot study, affirming the efficacy of mind mapping technique on speaking fluency in terms of exam results, class participation and students' own considerations.

**Key words:** *mind mapping, speaking, ELT, fluency, spoken exams, teaching speaking.*



## CHAPTER I: INTRODUCTION

### 1.1 Introduction

Speaking instruction is considered to be the toughest part of language teaching, especially in an EFL context in which learners have a limited opportunity to practice the target language and a little exposure to it (Zhang, 2009). That is perhaps a reason that most EFL students may be afraid to speak and ignore or avoid speaking skills during their language education. Another reason why most students have difficulty in speaking in the target language is that they lack the ability to organize their ideas (Nowreyah, Muneera, Hanan, 2015). Lucas (2001) states that speaking skill is much more complicated than every day conversation, since there are many things that learners have to consider, such as organizing thoughts, adopting the message and ensuring the natural flow of speech. Another challenge that EFL learners have to handle is that they do not trust themselves to initiate speaking in class. Patil (2008) points out that teachers' major target is to build confidence to use the language.

The mind mapping technique can be beneficial, especially for lower level EFL students to help organize their ideas and connect the relevant ones (Anggraeni, 2014; Darn, 2008). Moreover, this technique may help learners build confidence to speak in target language. The mind mapping technique is a visual tool, which helps learners generate ideas and connect them in a logical order (Murley, 2007). This technique may lead them to develop fluent speaking skills and eventually increase the length of speaking time. After sufficient practice of mind mapping, it is expected that learners will acquire the ability to create virtual mind maps before or during their oral production without prior written preparation.

EFL learners face several obstacles while trying to acquire fluent speaking skills. One such obstacle is that most students tend to memorize sentences in order to answer questions

during speaking classes or spoken exams. King (2002) states that EFL learners are mostly dependent on memorization while they are presenting their ideas. Hence they end up with failure since memorization often results in inaccurate and mixed-up oral production with frequent hesitations (Iswara, Azid and Rochsantiningih, 2012). Their lack of knowledge on how to organize their ideas or how to use reminder key words to create natural flawless speech may be maintained by the mind mapping technique. Another difficulty that students have to overcome is that they need to recall the related discourse knowledge and information to answer questions. Thus, the mind mapping technique is also necessary as it teaches students to ask themselves questions instantly in order to activate the needed background knowledge while drawing the map.

Briefly, by using mind maps, learners draw the outline of their speech. During the speech, mind maps show learners the directions, thus preventing them from losing the way and getting lost in their ideas. The mind mapping technique has been tested and validated primarily through teaching vocabulary and writing (Casco, 2009; Morelo, 2012; Palson, 2004). Unfortunately, far too little attention has been paid to the efficacy of the mind mapping technique in teaching speaking.

In this study, I argue that the mind mapping technique is not only an essential way of developing fluency in both speech production and spoken exams, but it also helps learners to use spoken discourse including cohesion, coherence, and discourse markers. For the time being, only a few studies are available on this topic. Therefore, this study intends to provide essential information about the mind mapping technique in teaching speaking.

## 1.2. Statement of the Problem

In EFL speaking classes, the curriculum consists of General English in which students learn to talk about every day conversations and survive in a dialogue and Academic English in which learners learn to express their ideas, take part in discussion and so on. No matter which purpose the course offers, the most common problem that teachers have to deal with is that students are unwilling to talk in speaking classes because of their prejudice. Most of the EFL students make themselves believe that they will not be able to speak in English no matter how hard they try.

Recently, speaking for academic purposes has gained a great deal of importance. Therefore, students have to deal with different challenges such as thinking critically, finding sufficient amount of ideas to support themselves by using appropriate grammar and vocabulary. That's why most students have hard time in expressing their opinions, organizing their thoughts and showing courage to speak out among their peers. The sensible decision for teachers to make should be offering learners easy methods or quick solutions to overcome their 'speaking fear'. Mind mapping technique is expected to teach learners how and what they are supposed to think to answer a question in speaking classes. Most of the learners consider speaking as writing their answers and reading them out loud. They need to be taught different techniques to guide them, lower their anxiety and build confidence while speaking. In class setting, students have some time to think before they answer a question. In this space, most of the students waste the time given by writing long sentences. As it is not possible for them to memorize those long sentences in this short period of time, most of the time they keep silent in class. Mind maps are easy and quick to prepare and students only write the key words to remember the sentence. Thus, they do not have to memorize the sentences; they form their own utterances as they speak. Their ideas are organized and their speech is fluent.

### **1.3. Purpose of the Study**

Gaining fluency in speaking plays a vital role in the communicative competence. As a matter of fact, this study attempts to explore how speaking fluency is improved through the mind mapping technique in EFL setting.

In EFL speaking classes, learners tend to write long sentences in order to answer a question asked during class and then they try to read their answer or sometimes they try to memorize their sentences. Most of the time they forget their utterances, mix up the sentences or their ideas are too unorganized to be understood. For that reason alone, they seldom achieve fluency since they do not know any strategies to use during class time or in spoken exams. Using mind maps to prepare a speech, a dialogue or an answer to a simple question is a new technique which has not been used in language teaching until recently. There is a limited number of studies which highlight the importance of mind maps to enhance speaking skill. One of them belongs to Anggraeni (2014) who came to a conclusion that mind maps have a positive effect on improving speaking skill of learners. Therefore, this study will be the first long term quantitative study with a large sample size. The findings will provide insights for future research.

#### **1.4. Research Questions / Hypothesis**

This study aims to answer these questions:

- What difficulties do students at the prep school-university report having in speaking classes?
- Does the mind mapping technique help EFL students at the prep school-university improve fluency when they perform dialogues?
- Does the mind mapping technique help EFL students at the prep school-university improve fluency when they perform monologues/presentations?
- Is there any difference in the effect of mind maps between students' performance in dialogues and monologues in terms of fluency?
- To what extent, if at all, does the mind mapping technique help EFL students increase their spoken exam grades both in dialogues and monologues?
- What are the students' attitudes towards the mind mapping technique after the treatment?

It is hypothesized that EFL learners will gain fluency both in dialogues and monologues by using mind mapping technique based on the results which were sustained in the small scale pilot study.

## 1.5. Definition of Terms

- a) Graphic Organizers: Ellis (2004) defines graphic organizers as visual and graphic displays that depict the relations between facts, terms, concepts, and ideas within a learning task.
- b) Mind Map: is a kind of graphic organizer that categorizes information. In other words, they are graphic tools containing a central key word and related secondary ideas that radiate from the central idea as branches (Buzan, 1960).
- c) Fluency: is simply defined as “the ability to speak and write a particular language competently and with ease” in *Chambers Concise Dictionary*. Faerch, Haastrup and Phillipson (1984) broaden the term by including it in the scope of communicative competence and redefine the term ‘fluency’ as learners’ capability of using their linguistic and pragmatic competence. Moreover, they categorize it into 3 groups, which are semantic fluency, lexical fluency and articulatory fluency. In their definition, semantic fluency is stated as linking together propositions and speech acts (also known as coherence) and lexical-syntactic fluency as linking together syntactic constituents and words; and lastly, articulatory fluency as linking together speech segments.

According to *Oxford University Press Dictionary*, fluency means the ability to speak a particular foreign language easily and accurately in spontaneous speech. Throughout this study, however, the term fluency will be used to refer to the ability to speak a foreign language easily and accurately in prepared speech in a classroom setting, which is more related with articulatory fluency.

## **1.7. Organization of Thesis**

This study includes five chapters. First chapter, Introduction, tells the significance of this research briefly and states the research questions and hypotheses which are assumed according to the pilot study and other related studies.

The following chapter is the Literature Review which gives insight into the theoretical framework for graphic organizers and teaching speaking as well as the theories underlying.

The third chapter explains the Methodology and gives detailed information about the setting, participants, data collection procedures and data analysis.

The fourth chapter, Results, explains the findings of the results incrementally in order of research questions.

The fifth chapter which is the Discussion and Conclusion part discusses the findings considering the previous studies' findings cited in Literature Review chapter and also includes Implications and Suggestions which gives ideas about classroom implications of the technique and suggestions for the further studies.

This dissertation comes to an end with references and appendices.

## CHAPTER II: LITERATURE REVIEW

### 2.1. Graphic Organizers

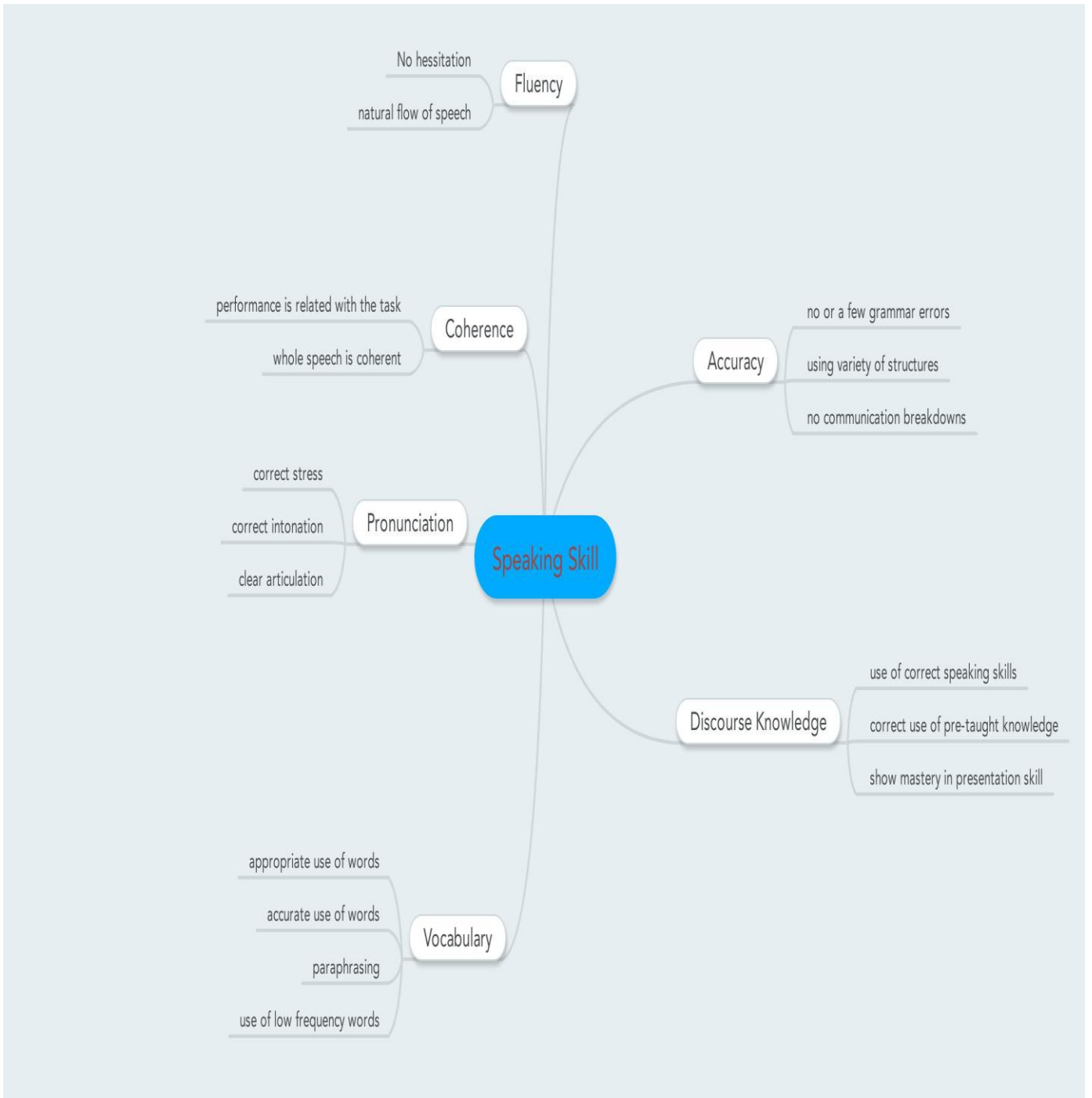
The mind mapping technique was originated from graphic organizers by Tony Buzan (1993). In other words, graphic organizer is an umbrella term for visual instruments such as mind maps. Basically, graphic organizers are visual representations of information that help learners to connect new information or ideas to their prior related knowledge, to visualize how notions link together and to recall information easily. In other words, a graphic organizer is a diagram that shows a relationship emerged from thinking. The “sequence” of ideas is represented through a diagram of a series of boxes connected by arrows that shows the connection of one idea with another (Hibbard, Wagner, 2003). (see Diagram 1.)

As Bromley, DeVitis and Modlo (1995) mention graphic organizers allow learners focus on what really matters because they put emphasis on main points and vocabulary, and the relationships among them so they improve their critical and creative thinking.

According to Steve Darn (2008), the graphic organizers are essential in language education since they provide learners with different ways of seeing and thinking about information while removing the grammatical barriers of the language, allowing learners to concentrate more on the connections between ideas. Moreover, the graphic organizers help learners develop analytical, critical, planned and creative thinking skills. Most importantly, the graphic organizers can be used with all levels of learners as they can use short words or phrases.

Diagram 1.

*A Sample Mind Map 1*



Using graphic organizers in language teaching has always been seen beneficial in certain ways. From learners' perspectives, they understand the concept as a whole, see the similarities and differences between ideas, generate and organize their ideas, improve their memory and recognize different points of view. From teachers' perspectives, GOs visualize and clarify the relationships between and among notions, helping visual learners to acquire information more easily. Effective use of GOs in teaching can affect learners' achievement positively in terms of the areas mentioned. Studies have shown that meaningful learning can be assisted through the use of GOs. Students who employed GOs in their learning had better performances than the students who used other techniques. For instance, Amer's (1994) study in which he compared the efficacy of GOs with underlining technique showed that GOs were more effective. Moreover, for note-taking technique, Reader and Hammond (1994) and Aydin's (2009), for discussing with co-students Chularut and De Backer's (2004) and finally for outlining Robinson and Kiewra's (1995) studies proved that using GOs were powerful learning strategy.

Furthermore, Ellis (2001) highlights the importance of using graphic organizers in language teaching. He discusses that graphic organizers make any topic easier to understand and learn for students. Most importantly, graphic organizers help students store the necessary information while eliminating the unnecessary ones since they categorize the new information in a relation with the prior ones.

Using graphic organizers makes students strategic learners (Ellis, 2001). Learners' individual effort to deal with an educational task is called a strategy (Bulgren & Lenz, 1996). Strategies affect the way a person handles the task when planning, performing, and evaluating it and its outcomes (Deshler & Lenz, 1989). As Ellis (2001) mentions GOs help learners improve in terms of communication skills, analytical skills, reading and writing skills.

### **2.1.1 The Importance of Graphic Organizers in Language Teaching**

Graphic organizers which are visual displays of key content information are beneficial for learners who have difficulty in organizing the subject matter (Fisher & Schumaker, 1995). Their main purpose is to help students clearly visualize their ideas and their relationship with each other. With the help of graphic organizers, students have the opportunity to recall necessary information, relate them with the main topic, and organize them. That's why graphic organizers, no matter which type is used, enhance comprehension and retention. When learners prepare their own graphic organizer, they visualize knowledge; therefore, it remains longer in students' mind. They help students think in multiple directions. They can improve students' classroom performance and increase achievement test scores.

In order for the graphic organizers to be used effectively as instructional tools, they must be prepared clearly in a straightforward manner (Boyle & Yeager, 1997; Egan, 1999). The connections and relations between the ideas shown on the organizer have to be clear and well-organized. If an organizer includes too much or unnecessary information, students can have difficulty in comprehending the target concept and they can be confused and even more disorganized (Robinson, 1998). Therefore, while teaching GOs, teachers must keep them brief and easy to understand by focusing on essential concepts that students need to understand and remember.

### **2.1.2. Theoretical Background of Graphic Organizers**

In order to make sense how GOs may help learners in learning, it may be more convenient to look through the underlying theories that GOs originate from. Graphic organizers are mainly based on cognitive learning theories which explain how people learn on the basis of thought processes. Cognitive learning theories assume that the way that human mind operates is organized and predictable in nature. Therefore, if learning process turns into an organized manner by using graphic organizers, learning will be more permanent

and easily achieved because GOs help learners learn new information systematically and store them in their brain in an organized, meaningful and useable manner (McElroy & Coughlin, 2009).

In this sense, GOs are directly associated with Schema Theory. Anderson (1977) states that memory is composed of a network of schemas. A schema is a knowledge structure created by the learner based on his/her prior knowledge. The schema theory states that all knowledge is organized into units in mind. Within these units of knowledge (schemata) is stored information.

Winn and Snider (1996) define the characteristics of schema theory as follows: They state that one's total knowledge is basically an organized framework of small schemas in the memory and the relations of node pairs are described by the nodes and links, which form schema. Schema is based on general knowledge and they are dynamic. New information is linked immediately with existing ones, which generate a new schema. Therefore, schema provides a kind of background knowledge for interpreting the new experiences (Winn & Snider, 1996).

Within this framework, graphic organizers are considered as a beneficial tool to link new information to prior knowledge and help students create the schema they need to understand new notions (Guastello, Beasley, & Sinatra, 2000). If learners can activate the related knowledge in their mind, the schema will be able to provide a framework. Therefore, newly-learned information can be linked to create a knowledge web and learning and comprehension will be improved.

Ausubel's Theory and advanced organizer model are consistent with Schema Theory. Ausubel based his theory on the idea that a person's existing cognitive structure is the main factor influencing the learning and retention of new information (Ausubel, 1962). Ausubel

(1962) assumes that human mind stores all information hierarchically, integrating new information into the existing ones. Therefore, people learn better when they connect a new piece of information with previous ones by constructing a network of concepts. Concept maps, developed by Ausubel and Novac (1978), are instructional tools that basically help learners to represent relationships between ideas, images or words. The most important aspect of this theory is that what the learner already knows has an influence on learning (Ausubel, 1968). Because meaningful learning has to involve recognition of the links between concepts in order to be transferred to long-term memory.

Another theory which GOs are originated from is Information Processing Model which proposes that learning is a process of gathering information, and organizing it into mental schemata. George A. Miller (1962) has made fundamental contributions to cognitive psychology and the information processing theory, offering theoretical ideas. He presents the idea that students learn better by chunking information. If they are able to chunk information successfully and meaningfully in their short term memory, they will be able to successfully transfer it to their long term memory. Graphic organizers facilitate chunking of information and help with learning, so students are actively processing, storing and retrieving information in order to learn. Miller, Galanter and Pribram (1960) suggest that short term memory (or attention span) can only hold seven chunks of information which are hierarchically organized in mind. Information that is learnt follows several steps depending on attention, encoding, recognition, and storage.

Information processing is maintained by the cognitive structures built by the learner. Cognitive structures are mainly related with the subject matter. Therefore, information needs to be presented in an organized manner with a logical sequence to concepts and skills which needs to go from simple to advance. In this sense, learners should know how to categorize (chunk) related information and inductive reasoning (Miller, 1962). Therefore, in terms of

speaking skill, GOs help Ss connect related information to form a base to spoken productions.

Cognitive Load Theory suggests that the working memory can deal with only a limited amount of information at a time and if its capacity is exceeded, the information is probably lost unless it is transferred to the long-term memory (Sweller, van Merriënboer, & Paas, 1998). As graphic organizers are visual learning tools, they can reduce the cognitive load in short term memory to learn new material easily (Adcock, 2000). That's the reason why GOs ease the cognitive load of recalling and organizing, allowing Ss focus more on fluency.

The reason why GOs have specific shapes according to their purposes allowing users add visuals can be explained by Dual Coding Theory which emerged to explain the cognitive processes of human mind. According to Dual Coding Theory, both verbal and nonverbal mental systems which process imaginary and linguistic information constitute psychological phenomena (Paivio, 1986). Allan Paivio (1986) suggests that memory processes information both verbally and visually respectively. The verbal system contains visual, auditory, articulatory and modality-specific verbal codes and it processes and stores linguistic information. Moreover, the visual system that comprises modality-specific images for shapes, environmental sounds, actions, skeletal or visceral sensations related to emotion and other nonlinguistic objects processes and stores images. Both these two systems are connected to each other so as to allow dual coding of the information which helps understanding, comprehension, and retention. Using graphic organizers supports the visual process of memory and helps enhance learning process and promotes recalling.

When speaking is taken into consideration, it is obvious that GOs activate the visual memory and help learners recall the information and related vocabulary that they are going to use in their speech in a short time. Furthermore, learners use these ideas and words which

they put on their GOs to talk about the topic in an organized and coherent manner. The links they draw in their organizers help them to remember the link which activates all other related information, discourse knowledge and related vocabulary all at once. As GOs ease the cognitive load of recalling the information by using them into a coherent and meaningful speech with correct grammar, students are supposed to be more fluent in speaking.

### **2.1.3. Common Types of Graphic Organizers**

#### **1. Flow Diagram or Sequence Chart**

A flow diagram or sequence chart illustrates successive steps or events in a linear order. Students use these types of organizers to organize information chronologically, linearly, or in a cyclical fashion, so they are commonly used in reading classes in order for learners to comprehend the main events in reading texts, such as stories or book chapters. Moreover, learners may create timelines or story outlines to recall the information for their extensive reading. In writing classes, these tools help learners to create an outline for process paragraphs.

#### **2. Compare/Contrast or Venn Diagram**

A compare/contrast or Venn diagram is used to look at the similarities and differences between two or more concepts. Being the most commonly used organizer, they are used as an instructional tool in textbooks, on standardized tests, and in teacher resource materials. They are easy and beneficial for grammar teaching to point out the similarities or differences between grammar points.

#### **3. Cause-and-Effect Diagram**

A cause-and-effect diagram indicates the cause-effect relationship between different events or concepts. In reading classes, learners may benefit from these tools to analyze or discuss the characters or events in stories. Not only for reading skill, but also for writing skill, these tools are quite helpful for both teachers and learners.

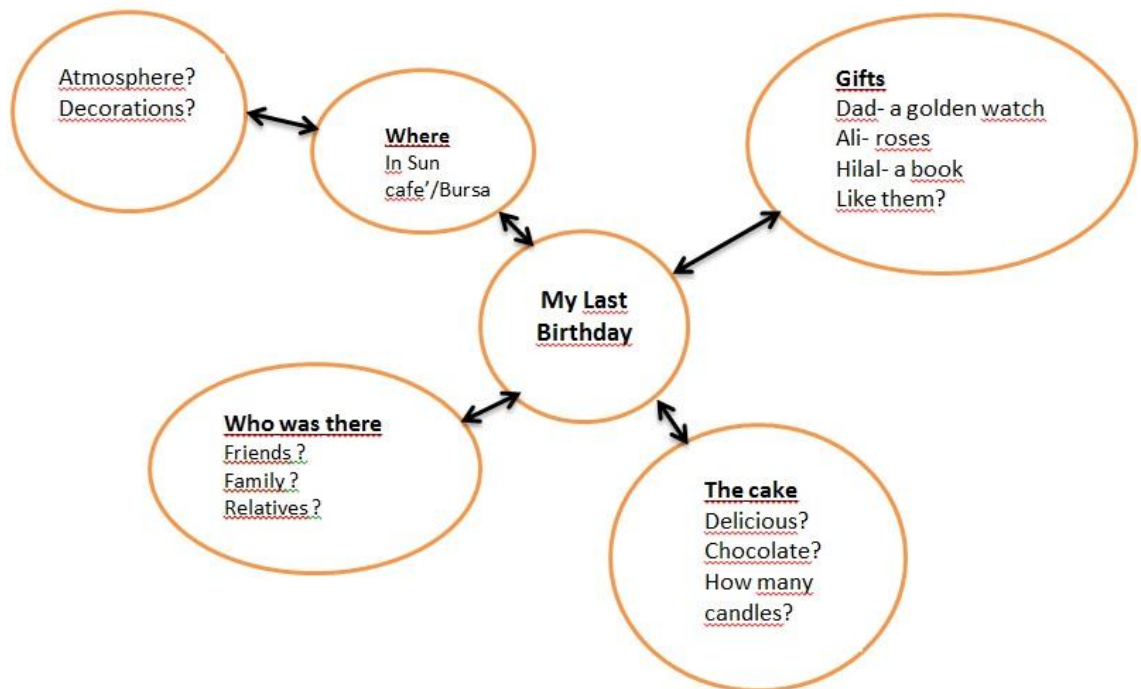
#### **4. Mind Maps**

The mind mapping technique, which was developed and copyrighted by British psychologist and brain scientist Tony Buzan in the late 1960s, is briefly a graphic tool containing a central key word and related secondary ideas that radiate from the central idea as branches. As Buzan (1996) mentions, mind maps are significantly helpful for people to show their brains' full capacity because the idea of the mind mapping technique is mainly based on the associative functioning of the brain, which is radiant and holistic. What is unique about mind maps is that they are essential to concentrate on the main ideas by relating them to one another and cutting loose the ones which are disconnected from the main theme (Buzan, 1993). The mind-mapping technique does not only increase memory retention and productivity (Buzan, 1976; Buzan, 1993), but it also supports the natural way of thinking, which is random and follows a nonlinear path. In short, as the mind mapping technique is a natural way to organize thoughts, it helps users to unlock the potential of the brain by activating both sides. Basically, learners use words and their connections for revising, recalling, and organizing their ideas with the help of creative thinking and problem solving in their learning.

According to Buzan, there are some main features of drawing a mind maps. First, there needs to be a main theme in the middle of the map which acts as a starting point. Second, the supporting ideas should 'radiate' from the central theme as branches and connect to each other. Then the final structure of the mind-map becomes a hierarchy of linked ideas and all of the branches promote associations. (see diagram 2.).

Diagram 2.

*A Sample Mind Map 2*



## 2.2. Mind Maps and Language Teaching

Mind Maps give countenance to many significant skills in language teaching such as brainstorming, problem solving, creative thinking, recalling information and developing concepts (Budd, 2003; Murley, 2007; Casco 2009; Al-Jarf, 2011). Unfortunately, mind maps were not used for language teaching purposes until the 1990s, and since then the implication of technique has been limited to teaching vocabulary, listening and writing.

As Casco (2009) mentions, mind maps are highly effective for learners to retrieve needed information from their memory, so learners may benefit from mind maps in most parts of their education such as note-taking, essay writing and vocabulary learning. This view is also supported by Richards and Rogers (2001) who state that learners can be more successful in learning a foreign language if they are presented with the target language in a meaningful and contextualized way with an opportunity to recall related prior knowledge.

Siriphanich (2010) sets out to determine the efficacy of the mind mapping technique to bring on reading comprehension of EFL students. Siriphanich (2010) finds out a significant development on reading comprehension of students who use mind mapping technique and reports that learners understand the reading materials well thanks to the maps.

Aydin (2009) conducts research to determine if there is a difference between the mind mapping note taking technique and classical note taking techniques in understanding and remembering the texts which learners listen to. Her findings suggest that the group using the mind mapping technique is more successful than the group using classical note taking techniques in remembering the text they listen to. More importantly, she discovers that the students who use the mind mapping technique become much more interested in the course, so the entire course becomes more entertaining for the learners.

Polson (2004) designs a large-scale study in Scotland to determine the benefits of the mind mapping technique on learning and teaching. Polson (2004) concludes that the effectiveness of learning and teaching increases, and teacher participants observe an improvement in students' thinking skills, subject-specific understanding, preparing for writing, confidence, self-image, and attitudes to learning. Furthermore, teachers believe that mapping has improved students' questioning and responding during class discussions, motivation, involvement, as well as concentration. Since mapping makes thinking visible, it promotes better understanding of the subjects.

The most significant reason that mind maps are vital in language teaching is that they encourage learners to ask questions. This is essential for learners to activate their background knowledge to support their ideas in a meaningful way and realize their deficiencies (Casco, 2009). Moreover, when it comes to speaking, the maps serve as a tool to organize their ideas and speech. They draw a road map for their speech which leads to a fluent, organized and hesitancy-free production.

Tony Buzan's mind maps are an excellent resource for teachers and learners of foreign languages (Casco, 2009). As Casco (2009) concludes, "Buzan's contribution has stimulated teachers to construct a tool that facilitates putting the concept of "Scaffolding" into action to empower learners by enabling learners to understand the target language and communicate ideas naturally, meaningfully and assertively."

### **2.3. Speaking Skill and Mind Maps**

Speaking is far more different from other skills as it requires a highly complex cognitive processing in the central nervous system (Bygate, 1998). Florez (1999) lists the components of speaking skill as accurate grammar use, adjusting the structures according to the audience, appropriate vocabulary use, applying speaking strategies such as emphasizing key words, rephrasing, or checking for listener comprehension and using paralinguistic features.

EFL students have a hard time in spoken productions for many reasons. One of these reasons is that students have difficulty in expressing themselves in a foreign language as they lack adequate grammar and vocabulary knowledge (Fujiono, 2015). Moreover, students are generally scared of making mistakes and being criticized by their peers, so they do not want to speak or maybe they cannot find something worth to tell (Aqariza, 2009). Unfortunately, they are not taught different techniques to help them organize their ideas. Nunan (2003) discusses the importance of organizing thoughts in a meaningful and logical manner in order to teach speaking. Speaking requires a high level of planning, which starts with a retrieval of words and phrases from memory and goes on to connect them syntactically in a propositionally appropriate way (Harmer, 2001).

Mind maps make students' speaking coherent, organized and clear (Anggraeni, 2014). Moreover, most learners lack the knowledge of how to build confidence while speaking or enhance fluency. Nazara (2011) confirms that 60% of the participants in his study was

reported to be too shy to speak English because of psychological barriers, such as peer pressure. Aljumah (2011) highlights the unwillingness of learners to speak during classes or respond to any questions no matter whether the teacher is a native speaker or not.

Aquariza (2009) states that mind mapping technique when used in teaching speaking helps students regulate their ideas and enlarge the time of speaking and that students are able to generate more ideas as they learn how to ask themselves related questions by using their own words. According to Anggraeni (2014), the mind maps are beneficial for students when they plan and deliver their speech. Moreover, maps make it easier for them to convey their ideas as they are presented visually. Morelo (2012) agrees that by the help of mind maps, students produce oral language in a coherent, cohesive, and organized way. The mind maps keeps the record of the learner's thoughts about the question, so they can be used as an assessment tool for students' knowledge and understanding of content, and thinking skills (Morelo, 2012).

Anggraeni (2014) conducts a study to identify the efficacy of the mind mapping technique in improving EFL students' speaking achievement in Indonesia. She commences her study by determining the problems that students have in speaking. She concludes that students' lack of lexical competence and environmental support cause inadequate speaking production. She evaluates the students in terms of pronunciation, grammar, vocabulary, fluency, comprehension and task in form of dialogue. The results show positive improvement of the students' speaking ability after they are treated by using the mind mapping technique. She deduces that students improve with regards to organizing ideas, and constructing dialogues if they are taught speaking with mind maps rather than traditional methods.

Fujiono (2015) conducts a small scale action research to find out whether the mind maps have any impact on improving speaking skill of EFL students. Fujiono (2015) finds out that mind maps ease the difficulty that students face while generating ideas to speak; hence,

they become more willing to participate in speaking classes. Moreover, they build confidence in speaking in English and their fluency, pronunciation and grammar improve via mind maps.

As there are only a few studies (Anggraeni, 2014; Aquariza, 2009; Fijiono, 2015) which discuss the relation between speaking skill and the mind mapping technique, very little is known about true efficacy of the technique on enhancing speaking. Therefore, this study is hoped to provide an important opportunity to advance the understanding of the technique and its relation with teaching speaking.

### **2.3.1. Fluency in Speaking**

Fillmore (1979) defines fluency as the ability of speaking coherently and semantically with few pauses. Kormos and Denes (2004) highlight that smoothness, pace, speed and accuracy as the constituents of fluency. Iswara, Azid and Rochsantiningasih (2012) suggest fragment and halting sentences, hesitancy in speech, code-switching as fillers, low motivation and traditional teaching methods as the main issues of fluency breakdowns.

Allowing time to prepare before speaking is one of the principles to pay attention to in order to improve fluency of learners (Kellem, 2009). Planning the speech helps learners speak fluently with shorter pauses (Foster and Skehan, 1996). Along with the same line, Folse and Ivone (2005) suggest that taking notes before performing a speech or joining a conversation gives learners time to rethink and tailor their speech. During the planning, students tend to write a long paragraph as an answer and during speaking they try to read or recall the memorized paragraph. Therefore, they only use disconnected and ungrammatical utterances. MM technique is assumed to give learners a better way of preparing the speech in a short period of time allowing them to organize their thought and speak fluently. These few minutes of preparation lightens the cognitive load of recalling related vocabulary, forming accurate sentences and organizing them, which allows students to focus more on fluency of

their speech. Ortega (1999) reports that planning before speaking leads to more fluent production and help students use more complex structures.

Speaking in EFL classes mostly takes place in two ways; dialogues and monologues just as it is in this current study but most of the fluency studies examine only monologues as it is much easier to analyze the one-way speech. However, Witton-Davies (2012) tries to determine learners' fluency rate difference between dialogues and monologues and he finds out that learners are more fluent with faster speech rate in dialogues than in monologues. He concludes that this difference may be because of turn-taking aspect of dialogues. Moreover, he observes that in dialogues there is less pause time making dialogues be more naturally fluent (Witton-Davies, 2012).

## CHAPTER III: METHODOLOGY

### 3.1 Setting

This study has been carried out at a school of foreign languages of a state university. In this institution, the skill-based curriculum has been carried out for 5 years, in which all four skills are separately taught. In the beginning of an academic year, with the help of a placement test which is prepared and checked in terms of reliability and validity by the testing office of the institution, students are placed in their level according to their grades. There are three levels which are elementary, pre-intermediate and intermediate. Elementary level students who are the participants of this current study have 7 hours of listening & speaking, 7 hours of grammar, 5 hours of writing, 4 hours of reading and 2 hours of vocabulary classes per week. Each course has its own pacing schedule with different course books which are chosen delicately after they have been examined and evaluated by a committee. For elementary level, and other levels as well, there are 2 mid-term exams in each term for listening and speaking course. Speaking is assessed through a spoken exam, which is used as an assessment tool for this study. The spoken exams are also prepared by testing office and stay confidential until the exam day. During spoken exams, the students are assessed according to a rubric by two lecturers simultaneously without any interactions between them while grading students' performance. All lecturers repeatedly attend norming sessions in which they grade different students' performances in order to sustain objective grading.

In listening and speaking course, the main objective of the first term is to build confidence and fluency with ready-to-use daily expressions in speaking. Students are encouraged to prepare dialogues with their peers about everyday situations whereas in the second term, students are expected to give presentations, join class discussions and express their opinions about a given topic.

### **3.2 Participants**

84 student participants attend this study voluntarily. All of the students are preparatory class students whose proficiency level was ascertained as A2 and whose level was determined by a valid and reliable placement test done by the institution. 43 (21 Female, 22 Male) of them are chosen randomly as the experimental group, whereas 41 (23 Female, 18 Male) of them are in the control group. The teacher participants both in control group and experimental group have more than 10-year-experience in teaching English in EFL setting.

### **3.3 Data Collection Instruments and Procedure**

Before moving forward in the study, in order to find out whether this study is worth examining, preliminary data was collected and the feasibility of the questionnaires was assessed through a pilot study carried out on term earlier with a smaller group. The pilot study was a small scale replication of the current study in which each step was done respectively to test the questionnaires and foresee the results. The results obtained from pilot study have showed that mind mapping technique has a significant effect on boosting fluency of learners in their spoken productions. In order to test the efficacy of the intervention of the mind mapping technique on enhancing success of learner's spoken production in total, a paired-sample t-test was conducted. This test was found to be statistically significant in terms of pretest total score and posttest total score. Namely, it was concluded that performance increased from the pre to the post tests.

The current study has been planned to last two terms in one academic year. In the beginning of the first term, students take a proficiency test prepared and conducted by the institution with a placement purpose. Students' level is ascertained as A2 and it is aimed that they will reach B1 at the end of the academic year. They are randomly selected for the classes in their level by the student administration office without paying attention to their grades or departments. Two random classes (43 students) are chosen to be experimental group which

will receive the treatment and two random classes (41 students) are going to be the control group. According to school curriculum, in the first term speaking classes' focus is on general English, whereas in the second term speaking classes involve monologues/presentations only for academic purposes. Each term has 2 spoken quizzes and 2 spoken midterms. All of the exams are prepared by The Testing Office in the institution according to the course book, the main material of the Listening and Speaking course to maintain reliable and valid tests. The tests will assess learners' spoken achievement, in which they are graded in terms of fluency, pronunciation, accuracy, vocabulary, and discourse. The rubric is adopted from Common European Framework speaking evaluation rubric in order to increase reliability. During spoken exams, qualitative assessment is employed in which professional judge listeners; in this case, lecturers are the assessors. The instructor who evaluates the spoken exam has attended seminars to use the rubric efficiently and also norming sessions to determine objective and reliable assessment. Students attend the Listening and Speaking course for 7 hours a week in which they have sufficient amount of practice in using the mind mapping technique. Experimental group received the treatment from the day first to the end of the year. However, control group did not receive the treatment. This was ensured with a one-to-one interview about the teaching techniques of the teachers.

The first purpose of this study was to determine the obstacles that block learners from developing fluent speaking skills and find out if the mind mapping technique was suitable for the needs of the students. With this purpose, as a first step of the study, a needs analysis questionnaire was carried out to find out not only the reasons why learners have difficulty in using the language, but also their concerns and fears of speaking in target language, in this context, English. The questionnaire was adapted from Aykaç's (2005) Master's Thesis by adding some important items related with the features of the mind mapping technique (see

Appendix A.). Both of the questionnaires were translated into Turkish and carried out in that way.

After the questionnaire results were obtained, in order to eliminate the learners' concerns and fears determined via the questionnaire, the literature upon MMs was analyzed. The results of other studies proved that MM was a perfect match as the most practical and beneficial method as a remedy.

As the first step of the treatment, the benefits of mind mapping technique were explained to the students in detail. Moreover, students were shown sample maps and in this way, how the technique would help them in speaking classes was illustrated. In the first term, the situations in the course book and in the second term, the questions and presentations were answered or presented by the students with the help of MMs. In other words, the mind maps were the main tool of the speaking course and used intensively during the classes. Training started with modelling of the teacher who drew the map on the board with different questions by using think-aloud protocol to show students how they should think during the preparation process. In time, when students learnt how to ask questions to themselves to generate ideas, group work activities were organized in which group of students prepared the maps according to the given topic collaboratively. Group work activities were followed by pair work tasks and finally individual drawings. It was observed that students willingly used the technique both in class and in spoken exams with no exception.

Quantitative research design was employed in order to discover whether the mind mapping technique has a significant effect on increasing the fluency of EFL students in spoken production in different speaking skills. There were two midterm spoken exams in each term in which students were evaluated by two different raters. Therefore, 4 midterms (2 for dialogues, 2 for monologues) were assessed to find out the progress of learners in the experimental group and also the difference between control group and experimental group.

According to spoken exam regulations of the institution, raters do not negotiate or talk about the grades that they have given. They watch and grade the students separately and secretly in order to sustain objectivity. Students do not have the right to reject or change the exam question that the rater has given. They have 2 minutes to get prepared and plan their speech before the performance and they are not allowed to use any materials such as notes or the course book.

With class observations, the problems and solutions emerged during the treatment are recorded and reported in Implications section. After the treatment was over, in order to find out what the students think about the mind mapping technique and whether they realize their improvement in speaking or not, a self-assessment questionnaire was carried out (see Appendix C.).

For every exam, the interrater reliability was calculated. Reliability and validity of the tests has not been reported in this current study since all of the tests are prepared by the testing office of the institution where all those calculations are done regularly by the members. Raters used the speaking rubric while grading (see Appendix F.).

### **3.4 Data Analysis**

The data analyzing procedure was carried out using SPSS. For the questionnaires, descriptive statistics were calculated through SPSS in terms of percentages and explained comparatively in Discussion section in detail (see Table 1)

The first analysis in which the dependent variable was fluency scores as sub-category of the total score was done through 2 (group: control and experiment) x 2 (term: dialogue and monologue) x 2 (test: 2 tests per term) 3-way mixed ANOVA. Group was between subjects, whereas term and tests were within subjects factors.

In the second analysis, the total scores of the tests were used as dependent variable and was carried out via 2 (group: control and experiment) x 2(term: dialogue and monologue)

x 2 (test: 2 tests per term) 3-way mixed ANOVA in order to find out the 3 way relations among these dimensions. Group was between subjects, whereas term and tests were within subjects factors.

The results of needs analysis questionnaire and self-assessing questionnaire were calculated through SPSS. The descriptive statistics were reported in detail.



Table 1

*Overview of data collection and data analysis*

Research Questions	Data Collection Instrument	Data Analysis
1. What difficulties do students report having in speaking classes?	Needs Analysis Questionnaire	Quantitative Analysis (SPSS22) - Descriptive Statistics
2. Does the mind mapping technique help EFL students at the prep school-university improve fluency when they perform dialogues?	Spoken Exam Scores	Quantitative Analysis (SPSS22) (JASP-Version 0.7.5) - Mixed Anova
3. Does the mind mapping technique help EFL students at the prep school-university improve fluency when they perform monologues / presentations?	Spoken Exam Scores	Quantitative Analysis (SPSS22) (JASP-Version 0.7.5) - Mixed Anova
4. Is there any difference in the effect of mind maps between students' performance in dialogues and monologues in terms of fluency?	Spoken Exam Scores	Quantitative Analysis (SPSS22) (JASP-Version 0.7.5) - Mixed Anova
5. To what extent, if at all, does the mind mapping technique help EFL students increase their spoken exam grades both in dialogues and monologues?	Spoken Exam Scores	Quantitative Analysis (SPSS22) (JASP-Version 0.7.5) - Mixed Anova
6. What are the students' attitudes towards the mind mapping technique after the treatment?	Self-Assessing Questionnaire	Quantitative Analysis (SPSS22) - Descriptive Statistics

## CHAPTER IV: RESULTS

### 4.1 Descriptive Statistics for Needs Analysis Questionnaire

In order to find out difficulties that students thought of having in speaking classes, a need analysis questionnaire was carried out in the beginning of the 1st term. The results represented participants' feelings, concerns, difficulties, and fears about speaking. This subscale contained thirteen questions scored by participants on a 3-point Likert scale. Scores were calculated via SPSS and descriptive statistics are listed below. (see Table 1. )

As shown in the list below, the results showed that 88.1 % of the students thought that speaking is one of the most important skills of four language skills. 40.5 % of them agree that speaking English is very difficult. It turned out that 64.3 % was afraid of making mistakes in speaking English. 54.8 % reported that they liked coming to the speaking class.

73.8% of them agreed to feel anxious about answering a question in English. Half of the students was afraid of lowering their GPA because of spoken exams. 28.6 believed they won't be able to speak fluently in English. 33.3% believed their success in speaking was only dependent on the teacher. 57.1% had difficulty in organizing their ideas to answer a question. 54.8% agreed that they couldn't express their ideas in the same logical order as they planned in their mind. 59.5% thought they forgot to say most of the things in their mind while answering a question in English. 57.1% had hard time recalling necessary information to answer a question in English. 40.5% had no idea about how to improve their fluency in speaking.

Table 2

*Descriptive Statistics for Need Analysis Questionnaire*

<p><b>1. Speaking is one of the most important skills of four language skills.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Disagree</td> <td>2</td> <td>2.4</td> </tr> <tr> <td>Neutral</td> <td>8</td> <td>9.5</td> </tr> <tr> <td>Agree</td> <td>74</td> <td>88.1</td> </tr> <tr> <td>Total</td> <td>84</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Disagree	2	2.4	Neutral	8	9.5	Agree	74	88.1	Total	84	100.0	<p><b>4. I look forward to coming to my speaking class.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Disagree</td> <td>18</td> <td>21.4</td> </tr> <tr> <td>Neutral</td> <td>46</td> <td>54.8</td> </tr> <tr> <td>Agree</td> <td>20</td> <td>23.8</td> </tr> <tr> <td>Total</td> <td>84</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Disagree	18	21.4	Neutral	46	54.8	Agree	20	23.8	Total	84	100.0
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<p><b>2. Speaking English is very difficult for me.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Disagree</td> <td>16</td> <td>19.0</td> </tr> <tr> <td>Neutral</td> <td>34</td> <td>40.5</td> </tr> <tr> <td>Agree</td> <td>34</td> <td>40.5</td> </tr> <tr> <td>Total</td> <td>84</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Disagree	16	19.0	Neutral	34	40.5	Agree	34	40.5	Total	84	100.0	<p><b>5. I often feel anxious about answering a question in English class.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Disagree</td> <td>6</td> <td>7.1</td> </tr> <tr> <td>Neutral</td> <td>16</td> <td>19.0</td> </tr> <tr> <td>Agree</td> <td>62</td> <td>73.8</td> </tr> <tr> <td>Total</td> <td>84</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Disagree	6	7.1	Neutral	16	19.0	Agree	62	73.8	Total	84	100.0
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## 4.2. The Results of Mixed-Anova in Terms of Fluency and Total Scores

In order to answer research questions 2, 3, 4 and 5 which are related with the fluency scores and total spoken exam scores mixed Anova was employed.

### 4.2.1. Fluency Scores

The analysis in which the dependent variable was fluency scores as sub-category of the total score was done through 2 (group: control and experiment) x 2 (term: dialogue and monologue) x 2 (test: 2 tests per term) 3-way mixed ANOVA. Group was between subjects, whereas term and tests were within subjects factors. Since the repeated measures have only two levels, the assumption of Sphericity is met.

Table 3

*Descriptive Statistics of Fluency Scores*

Term	Test	Group	<i>M</i>	<i>SD</i>	<i>N</i>
Dialogue	Test I	Experimental	20.97	2.916	43
		Control	21.26	3.477	41
	Test II	Experimental	20.19	2.594	43
		Control	19.48	3.108	41
Monologue	Test I	Experimental	20.66	2.901	43
		Control	19.18	4.408	41
	Test II	Experimental	17.92	4.713	43
		Control	13.22	4.814	41

Table 4

*Between Subjects ANOVA (Fluency Scores)*

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	228.45	1	228.45	7.116	0.009
Residual	2632.69	82	32.11		

There was a significant main effect of group,  $F(1, 82) = 7.116, p < .001, r = .28$ . This indicates that when all other variables are ignored, experimental group ( $M=19.93$ ) has higher scores than control group in terms of fluency ( $M=18.28$ ).

Table 5

*Within Subjects ANOVA (Fluency Scores)*

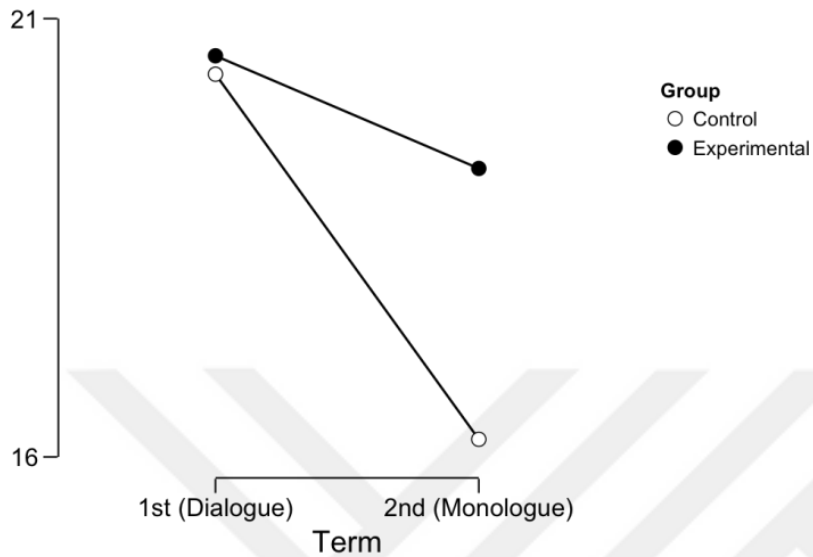
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Term	623.29	1	623.289	77.938	< .001
Term * Group	174.05	1	174.053	21.764	< .001
Residual	655.77	82	7.997		
Test	666.10	1	666.104	88.776	< .001
Test * Group	93.47	1	93.470	12.457	< .001
Residual	615.26	82	7.503		
Term * Test	198.33	1	198.329	27.252	< .001
Term * Test * Group	25.81	1	25.808	3.546	0.063
Residual	596.77	82	7.278		

There was a significant main effect of term,  $F(1, 82) = 77.938, p < .001, r = .70$ . This indicates that when all other variables are ignored, students have higher scores in 1<sup>st</sup> term – Dialogue ( $M=20.47$ ) than 2<sup>nd</sup> term - Monologue ( $M=17.75$ ).

There was a significant interaction effect between the term and group,  $F(1, 82) = 21.764, p < .001, r = .46$ . The interaction graph below shows that decrease of scores between 2 terms is larger in control group (20.37 – 16.20) compared to experimental group (20.58 – 19.29). (see figure 1.)

Figure 1.

*The Interaction effect between term and group on fluency*

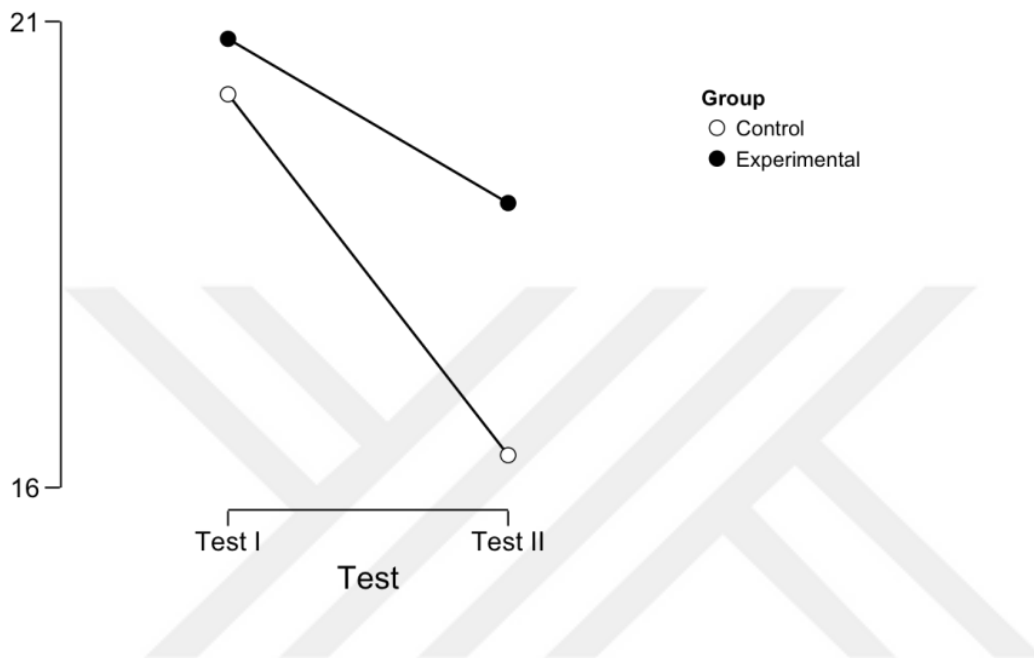


There was a significant main effect of test,  $F(1, 82) = 88.776, p < .001, r = .72$ . This indicates that, when all other variables are ignored, students have higher scores in 1<sup>st</sup> tests ( $M=20.52$ ) than 2<sup>nd</sup> tests ( $M=17.70$ ).

There was a significant interaction effect between the test and group,  $F(1, 82) = 12.457, p < .001, r = .36$ . The interaction graph below shows that when term is ignored decrease of scores between tests is larger in control group (20.22 – 16.35) compared to experimental group (20.81 – 19.05). (see figure 2.)

Figure 2

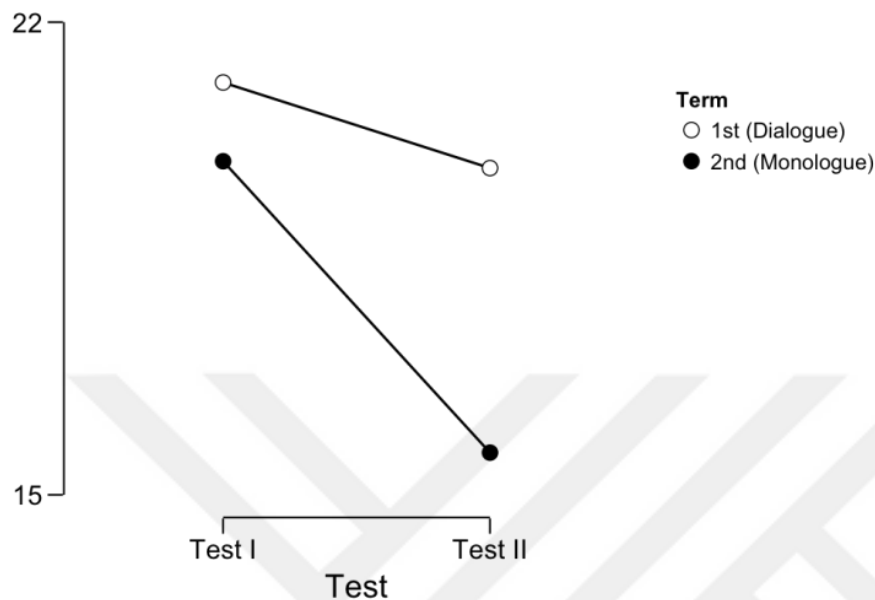
*Interaction effect between test and group on fluency*



There was a significant interaction effect between the term and test,  $F(1, 82) = 27.252, p < .001, r = .50$ . The interaction graph below shows that decrease of scores between 2 tests is larger in 2<sup>nd</sup> term ( $19.92 - 15.57$ ) compared to 1<sup>st</sup> term ( $21.11 - 19.83$ ). (see figure 3)

Figure 3

*The Interaction effect between term and test on fluency*



There was no significant term \* test \* group interaction effect,  $F(1, 82) = 3.546$ ,  $p = .063$ ,  $r = .20$ . The decrease of scores between 2 tests compared to 1<sup>st</sup> term and 2<sup>nd</sup> term is not significantly different for experimental and control groups.

Fluency scores between two raters were highly correlated for dialogue test I,  $r = .923$ , dialogue test II,  $r = .910$ , monologue test I,  $r = .938$ , monologue test II,  $r = .978$  (all  $ps < .001$ ).

#### 4.2.2. Total Scores of Spoken Exams

Table 6

*Descriptive Statistics of Total Scores*

Term	Test	Group	<i>M</i>	<i>SD</i>	<i>N</i>
Dialogue	Test I	Experimental	85.73	10.819	43
		Control	83.44	10.108	41
	Test II	Experimental	81.14	9.663	43
		Control	81.35	10.362	41
Monologue	Test I	Experimental	79.31	13.078	43
		Control	78.82	15.314	41
	Test II	Experimental	71.99	16.053	43
		Control	64.83	18.831	41

Table 7

*Between Subjects ANOVA (Total Scores)*

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Group	34.82	1	34.82	0.365	0.547
Residual	7820.15	82	95.37		

There was no significant main effect of group,  $F(1, 82) = 0.364, p = .547, r = .07$ .

This indicates that when all other variables are ignored, scores of experimental group ( $M=78.97$ ) and control group ( $M=77.68$ ) are nearly the same.

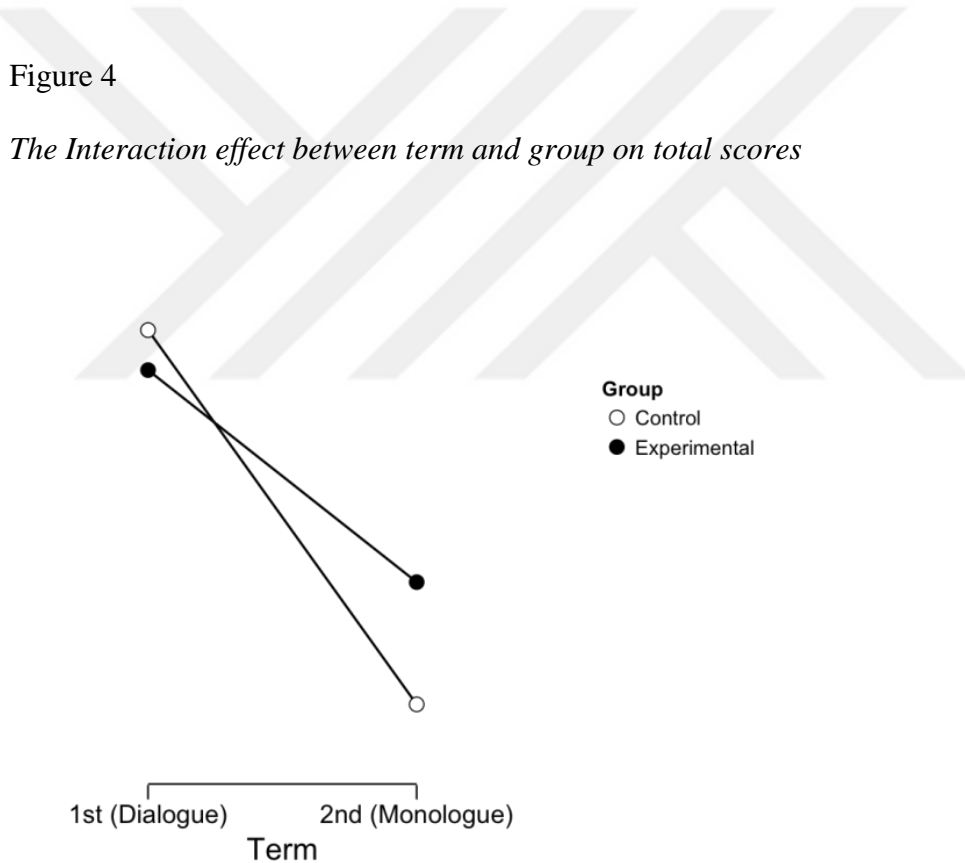
Table 8

*Within Subjects ANOVA (Total Scores)*

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Term	7074.134	1	7074.134	53.225	< .001
Term * Group	541.622	1	541.622	4.075	0.047
Residual	10898.687	82	132.911		
Test	4111.834	1	4111.834	46.645	< .001
Test * Group	400.619	1	400.619	4.545	0.036
Residual	7228.390	82	88.151		
Term * Test	1123.519	1	1123.519	13.145	< .001
Term * Test * Group	110.376	1	110.376	1.291	0.259
Residual	7008.683	82	85.472		

There was a significant main effect of term,  $F(1, 82) = 53.225, p < .001, r = .63$ . This indicates that when all other variables are ignored, students have higher scores in 1<sup>st</sup> term – Dialogue ( $M=82.92$ ) than 2<sup>nd</sup> term - Monologue ( $M=73.74$ ).

There was a significant interaction effect between the term and group,  $F(1, 82) = 4.075, p < .001, r = .22$ . The interaction graph below shows that decrease of scores between 2 terms is larger in control group ( $83.54 - 71.82$ ) compared to experimental group ( $82.29 - 75.65$ ). (see figure 4)

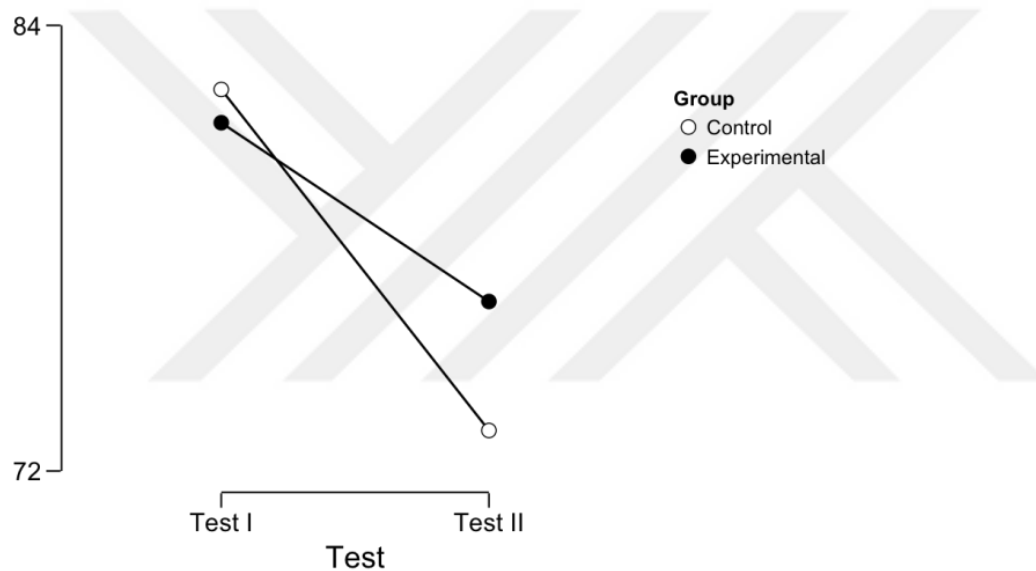


There was a significant main effect of test,  $F(1, 82) = 46.645, p < .001, r = .60$ . This indicates that when all other variables are ignored, students have higher scores in 1<sup>st</sup> tests ( $M=81.83$ ) than 2<sup>nd</sup> tests ( $M=74.83$ ).

There was a significant interaction effect between the test and group,  $F(1, 82) = 4.545, p < .036, r = .23$ . The interaction graph below shows that when term is ignored decrease of scores between tests is larger in control group (82.27 – 73.09) compared to experimental group (81.38 – 76.564). (see figure 5.)

Figure 5

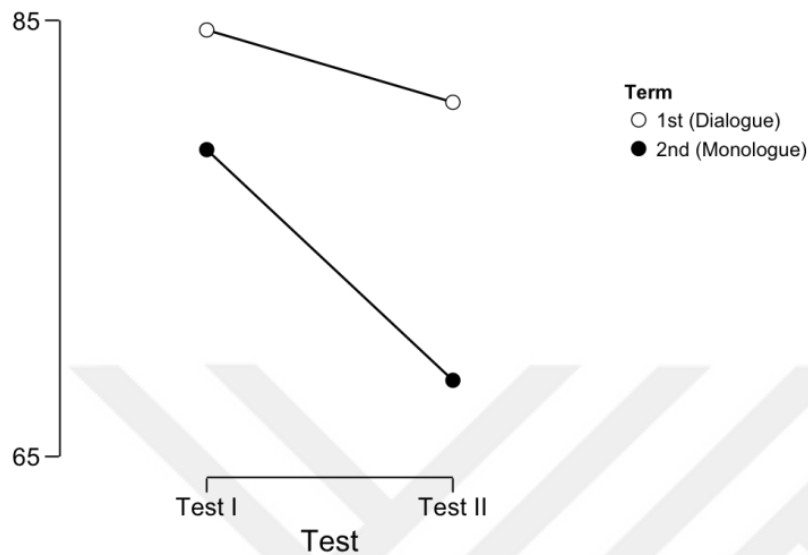
*The Interaction effect between test and group on total scores*



There was a significant interaction effect between the term and test,  $F(1, 82) = 13.145, p < .001, r = .37$ . The interaction graph below shows that decrease of scores between 2 tests is larger in 2<sup>nd</sup> term (79.07 – 68.41) compared to 1<sup>st</sup> term (84.59 – 81.25). (see figure 6)

Figure 6

*The Interaction effect between term and test on total scores*



There was no significant term \* test \* group interaction effect,  $F(1, 82) = 1.291, p = .259, r = .12$ . The decrease of scores between 2 tests compared to 1<sup>st</sup> term and 2<sup>nd</sup> term is not significantly different for experimental and control groups.

Total scores between two raters were highly correlated for dialogue test I,  $r = .955$ , dialogue test II,  $r = .977$ , monologue test I,  $r = .978$ , monologue test II,  $r = .983$  (all  $ps < .001$ ).

#### **4. 3. Descriptive Statistics for Self-Assessing Questionnaire**

In order to determine what the participants think about the mind mapping technique and to reflect their own comments, a self-assessing questionnaire was carried out in the end of the 2<sup>nd</sup> term. One open-ended question was added to the questionnaire to allow students write their own thoughts freely. This subscale contained eleven questions scored by participants on a 3-point Likert scale. The results are shown below (see figure 7 and Table 8.)

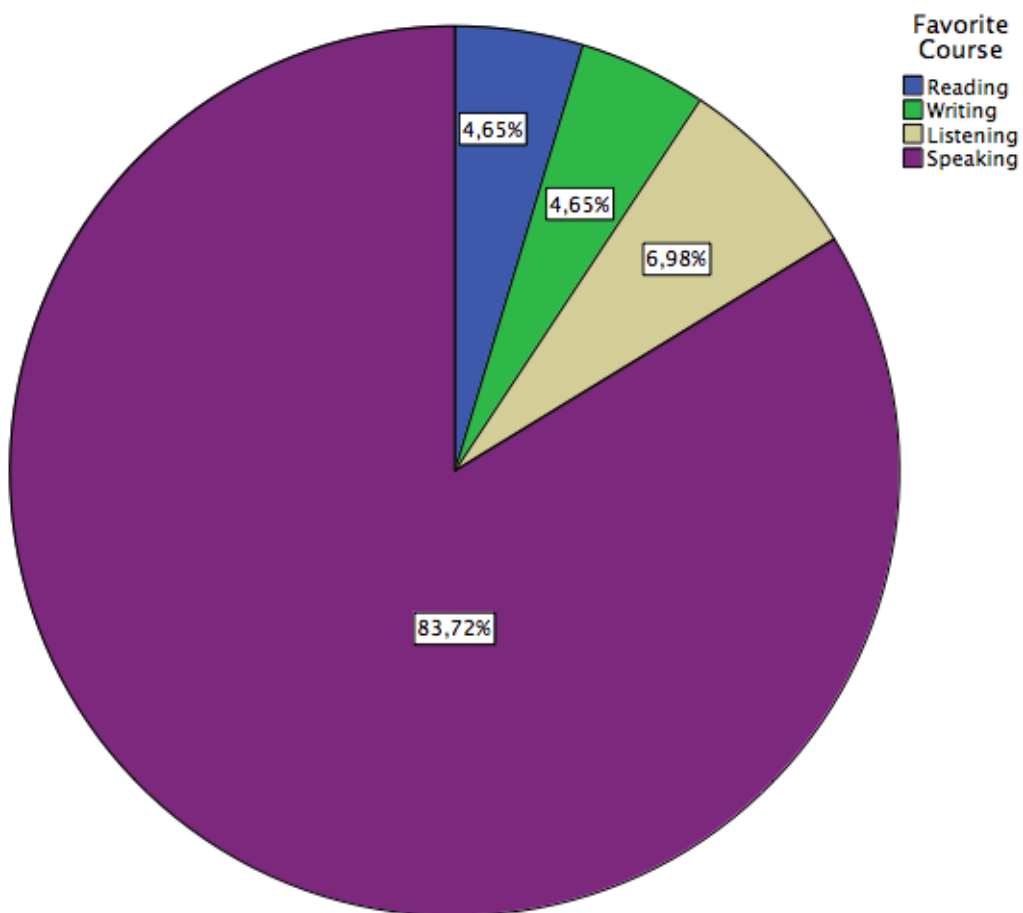
**Question 1:**

**During my prep-class education, I have enjoyed \_\_\_\_\_ skill the most.**

- a) Reading                      b) Writing                      c) Listening                      d) Speaking

Figure 7

*A pie chart of favorite course*



As the pie chart shows, in the end of the second term about 84% of the students chose speaking as their favorite course.

Table 9

*Descriptive Statistics for Self-Assessing Questionnaire*

<p><b>1. I feel more confident while speaking in L&amp;S classes.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>37</td> <td>86.0</td> </tr> <tr> <td>Neutral</td> <td>6</td> <td>14.0</td> </tr> <tr> <td>Disagree</td> <td>-</td> <td>-</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	37	86.0	Neutral	6	14.0	Disagree	-	-	Total	43	100.0	<p><b>5. I can recall most of the necessary vocabulary.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>21</td> <td>48.8</td> </tr> <tr> <td>Neutral</td> <td>21</td> <td>48.8</td> </tr> <tr> <td>Disagree</td> <td>1</td> <td>2.3</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	21	48.8	Neutral	21	48.8	Disagree	1	2.3	Total	43	100.0
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<p><b>4. I can include most of the details in my mind in my speech.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>24</td> <td>55.8</td> </tr> <tr> <td>Neutral</td> <td>11</td> <td>25.6</td> </tr> <tr> <td>Disagree</td> <td>8</td> <td>18.6</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	24	55.8	Neutral	11	25.6	Disagree	8	18.6	Total	43	100.0	<p><b>8. I have learnt how to ask questions to myself when I prepare my speech.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>27</td> <td>62.8</td> </tr> <tr> <td>Neutral</td> <td>15</td> <td>34.9</td> </tr> <tr> <td>Disagree</td> <td>1</td> <td>2.3</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	27	62.8	Neutral	15	34.9	Disagree	1	2.3	Total	43	100.0
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<p><b>9. I know clearly how I should think about to answer a question.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>37</td> <td>81.4</td> </tr> <tr> <td>Neutral</td> <td>7</td> <td>16.3</td> </tr> <tr> <td>Disagree</td> <td>1</td> <td>2.3</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	37	81.4	Neutral	7	16.3	Disagree	1	2.3	Total	43	100.0	<p><b>11. I am not scared of spoken exams anymore.</b></p> <hr/> <table border="1"> <thead> <tr> <th></th> <th><b>Frequency</b></th> <th><b>Percent</b></th> </tr> </thead> <tbody> <tr> <td>Agree</td> <td>26</td> <td>60.5</td> </tr> <tr> <td>Neutral</td> <td>15</td> <td>34.9</td> </tr> <tr> <td>Disagree</td> <td>2</td> <td>4.7</td> </tr> <tr> <td>Total</td> <td>43</td> <td>100.0</td> </tr> </tbody> </table>		<b>Frequency</b>	<b>Percent</b>	Agree	26	60.5	Neutral	15	34.9	Disagree	2	4.7	Total	43	100.0
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The scores showed that 86% of the students agreed that they felt more confident while speaking in listening and speaking classes after the treatment while only 14% was neutral about the statement. About 63% agreed that they felt more confident while speaking in spoken exams whereas only 2% of them disagreed and about 34% remained neutral, showing most of the students defeated their fear of spoken exams. Thanks to the technique, 72.1% thought that their ideas were more organized and 55.8% agreed that they could include most of the details into their speech. In terms of vocabulary, 48.8 of them agreed that the technique helped them to recall related vocabulary. Most importantly, 72.1% of the students believed that they could speak more fluently and 81.4% felt the improvement in their speaking after the treatment. 62.8% agreed to learn how to prepare a speech and 81.4 agreed to learn how to answer a question in speaking classes. Unfortunately, only 46.5% had willingness to participate in speaking classes, although 60.5% were not scared of spoken exam after the treatment.

Table 10

*Students' final thoughts about the Mind Mapping Technique*

1	<i>'I think that this technique helped me improve my fluency.'</i>
2	<i>'This technique not only helped my speaking but also helped me in other courses too.'</i>
3	<i>'For fluent speaking, this method is effective and necessary especially for elementary level students.'</i>
4	<i>'While I was speaking, maps helped me speak fluently.'</i>
5	<i>'During spoken exams, it helped me remember the content of the questions easily and visualize the map that I prepared before, so without drawing it again I could answer the questions.'</i>
6	<i>'This technique improved my visual memory and helped me recall every detail about the topic that I learnt in class.'</i>
7	<i>'This technique is very easy to learn and apply and makes speaking easy for me.'</i>
8	<i>'I feel more confident in speaking. Before I started using this technique, I wasn't able to find anything to tell in class, so I used to keep silent but now I can find a lot to tell.'</i>
9	<i>'It made my ideas clearer.'</i>
10	<i>'I feel more comfortable when I speak in class by the help of this method. When I get stuck during my speech, my map helps me, so it has definitely improved my speaking.'</i>

11	<i>'It made my speech more organized and coherent and took away my confusion. It also helped me improve my writing skill.'</i>
12	<i>'I find this technique reasonable. When I speak in class or in a spoken exam, I recall my map easily and get good grades. I can add every single detail that I have learnt.'</i>
13	<i>'It provides convenience as it is very easy and clear.'</i>
14	<i>'It makes me realize how to order my thoughts to answer a question. Moreover, I can find a lot more to say in a logical order.'</i>
15	<i>'As we only write the key words, we make the sentences at that moment, so it improves fluency. Before learning this technique, I used to memorize my sentences and I couldn't speak fluently.'</i>
16	<i>'In my map, I outline the main points of the topic, so it guides me through my speech allowing me to be more fluent and coherent. Since I only use key words, it helps me shorten the time of my sentence structuring. I think faster and organize my thoughts more easily.'</i>

‘ When the final comments of the students are examined, it is clear that most of the students are sure that they have benefitted from the technique. More importantly, these comments verify that students have solved most of the problems reported in the need analysis questionnaire, such as organizing their thoughts, expressing themselves coherently in an organized manner. Besides, they have realized the improvement in their speaking and have felt more successful and it is obvious that they have built confidence in speaking English.

## CHAPTER V: DISCUSSION AND CONCLUSION

### 4.1. Discussion

The aim of this study is to shine new light on developing speaking skills of EFL learners through the mind mapping technique. The study, therefore, sets out to assess the effect of the mind mapping technique on improving fluency in students' spoken productions both in monologues and dialogues, and overall success during their spoken exams. It is believed that the mind mapping technique would eliminate the difficulties that students agreed on the need analysis questionnaire in both the pilot and the actual study.

In the beginning of this current study, it is hypothesized, based on the pilot study, that the mind mapping technique has a significant effect on boosting fluency of learners during their spoken productions. Although it is a well-known fact that it takes a long time for students to improve fluency, the mind mapping technique, obviously, has an impact on speaking fluently in this short period of time. Therefore, this study was designed to last 32 weeks, one academic year in order to see the true efficacy of the technique in a long run.

The need analysis questionnaire was designed to find out and report the students' perspective of speaking in English and also to discover whether their difficulties in speaking can be solved via mind mapping technique or not, by including the key features of mind maps into the questionnaire. In this questionnaire, the questions 1, 2, 3, 4 and 6 are about students' general view point towards speaking and the rest of the questions are directly about mind mapping technique. With these questions, it was assumed that if the percentages of questions about maps are higher, this technique might be helpful for the students. Therefore, in this sense, the questionnaire was named a need analysis questionnaire. According to results, 88.1 % of the students thought that speaking is one of the most important skills of four language skills and 40.5 % agreed that speaking English is very difficult for them, showing that vast majority of them realized the importance of speaking and less than half of them did not have

any prejudice and only 28.6 % thought that they were not going to speak fluently. However, 64.3 % was afraid of making mistakes in speaking English, so the technique was supposed to improve their accuracy, as well. As the questionnaire was applied just before the technique was introduced, 76.2% of the students were not motivated for speaking classes and 73.8% reported that they felt anxious about answering a question in English class. This finding is in agreement with Nazara's (2011) finding as he reports that 60 % of the participants are too shy to speak in speaking classes. Moreover, 50% was afraid of lowering their GPA because of spoken exams and 42.9% of them did not believe their success in speaking was only dependent on their teacher, but 40.5 % of the students agreed that they had no idea about how to improve their fluency in speaking.

The questions which were directly related with the mind mapping technique got more than 50% of approval of using the technique was a true call to make. They had difficulty in organizing their ideas to answer a question (57.1 %). They could not express their ideas in a logical order as they planned in their mind (54.8 %). They forgot to say most of the things in their mind while answering a question in English (59.5 %). They had a hard time recalling necessary information to answer a question in English (57.1%).

The results of the spoken exam showed that in the first spoken exam, control group (21.26) is higher than experimental group (20.97) but the difference is not significant. This proves that groups are highly similar to each other in the beginning of the terms. Until the first exam, experimental group has only received treatment for two weeks which is a short period of time.

The most important result emerged from the findings was that when fluency scores of the students were calculated without other variables were not taken into consideration, experimental group ( $M=19.93$ ) had higher scores than control group in terms of fluency

( $M=18.28$ ). This shows that the treatment had an effect on boosting fluency of students' spoken performances.

Another finding of this current study was that when all other variables are ignored, the students both in control and experimental groups had higher scores in 1<sup>st</sup> term in which they were tested through dialogues ( $M=20.47$ ) than in 2<sup>nd</sup> term in which they were tested through monologues ( $M=17.75$ ) in terms of fluency. This result seems to be consistent with the findings of Witton-Davies (2012) whose study showed that students achieved higher fluency with faster speech rate in dialogues than in monologues.

It is a fact that the second term is much more difficult than the first term as tasks were becoming more demanding from day to day in accordance with the development of students language competence. Therefore, both in control and experimental groups, a decrease in scores was observed, but the decrease between 2 terms is larger in control group (20.37 – 16.20) compared to experimental group (20.58 – 19.29) in terms of fluency. (see figure 1.) It may not be wrong to conclude that the treatment did not let students in experimental group lower their fluency scores more than it was expected because of the complexity of the tasks. Furthermore, when term was ignored, decrease of fluency scores between tests was larger in control group (20.22 – 16.35) compared to experimental group (20.81 – 19.05). (see figure 2.). It was somewhat surprising that no matter what the mean of testing was, monologue or dialogue, the mind maps help students be more fluent than the ones who did not use the technique.

When total scores are calculated, regardless of all other variables, students both in control and experimental groups have higher scores in 1<sup>st</sup> term – Dialogue ( $M=82.92$ ) than 2<sup>nd</sup> term - Monologue ( $M=73.74$ ). The decrease of total scores between 2 terms is larger in control group (83.54 – 71.82) compared to experimental group (82.29 – 75.65). (see figure 4). When term is ignored decrease of total scores between tests is larger in control group (82.27

– 73.09) compared to experimental group (81.38 – 76.564). The decrease of total scores between 2 tests is larger in 2<sup>nd</sup> term (79.07 – 68.41) compared to 1<sup>st</sup> term (84.59 – 81.25). (see figure 6).

Self-assessing questionnaire indicates that approximately 84% of the students reports that their favorite course is speaking at the end of the academic year. This may be because they feel achievement as the technique helps them ease the difficulties of speaking classes letting them feel the relief of expressing themselves freely.

Thanks to the mind mapping technique, 86% feels more confident while speaking in L&S classes. One of the participants commented that he felt more confident in speaking. And added that before he started using this technique, he was not able to find anything to tell in class, so he used to keep silent but with the help of the technique he could find a lot to tell. Another student stated that she felt more comfortable when she spoke in class by the help of this method and she added when she got stuck during her speech, the map helped her, so it had definitely improved her speaking. Only 2.3 % of the students feels nervous in spoken exams. 72.1 % thinks that their ideas are more organized while speaking. 55.8% thinks that they can include most of the details in their mind in their speech.

48.8% thinks they can recall the necessary vocabulary to add their speech. 72.1 % of them thinks they can speak more fluently. One student responded that as they only wrote the key words, they made the sentences at that moment, so it improved fluency. He added that before learning this technique, he used to memorize the sentences and he couldn't speak fluently. 81.4 % feels like their speaking has improved. 62.8 % thinks that they learnt how to ask questions to their speech, which is consistent with the finding of Aquariza (2009).

81.4 % believes that they learnt how to think to answer a question in speaking classes. 46.5 % are more willing to participate in speaking classes. Only 4.7 % is still scared of spoken exams.

These results are in line with the previous studies of Anggraeni (2014) and Fujiono (2015). Anggraeni's (2014) findings confirm the association between the mind mapping technique and boosting fluency, as well as using background and discourse knowledge when necessary by organizing thoughts. Furthermore, as mentioned above, Fujiono (2015) observes that the participants become more eager to speak as they easily generate ideas to speak as well as building confidence in speaking with the help of mind maps.

Taken together, these results suggest that there is an association between mind maps and speaking skill. Overall, it can be concluded that the quantitative data and comments of the participants are consistent. Students in experimental are clear about the benefits of the technique and most importantly, they realized the improvement of their speaking. Therefore, it is not wrong to conclude that the aim of using mind maps as a treatment has accomplished.

## **5.2. Conclusion**

The results have shown that the experimental group, in which mind mapping technique was applied, benefited significantly from the treatment. This research has demonstrated that it is possible to develop students' speaking skills effectively by using MMs.

As the results indicate, the mind mapping technique is promising for teaching and testing speaking skill in addition to all of its benefits for other skills. Although there are not enough findings to support its highly important impacts on boosting the fluency of learners, this study can be seen as one of the few attempts to prove the usefulness of the technique in teaching speaking which has been highly neglected so far.

Based on both my personal experiences and observations during the research process, I am fully satisfied that teaching MMs in speaking classes definitely helps students organize their thoughts, recall their prior knowledge to design the map before they speak. Moreover during their spoken production, with the help of the guidance that their maps provide, they

feel confident about what they are going to say and relieved that nothing was left out when they finish talking. The confidence lowers their anxiety, which is the most common problem that students face in speaking classes. Thus, they can show their true capacity to use the target language in a pressure-free environment.

Despite its exploratory nature, this study offers some insight into detailed use of mind maps in teaching speaking in a foreign language. However, more research on this topic needs to be undertaken before the benefits of the technique are more clearly understood.

### **5.3. Limitations**

This study is subject to one major limitation which is maturation treat. Since this study lasted one academic year, 32 weeks, students gained confidence, fluency and accuracy while becoming proficient in English language with the help of their prep-class curriculum in which they received 24 hours of classes including all skills and grammar. However, as second term included monologues and presentations within academic English, it gave students opportunity to test the effectiveness of the technique on new and challenging tasks for learners.

### **5.4. Implications**

Teaching how to use mind maps to low level students may be challenging for teachers. It takes time for Ss to learn to draw maps by themselves without guidance. Therefore, in the very beginning of the term, a detailed introduction of the technique would be helpful to make them believe the benefits of it. Ss should be very well informed about the advantages of the technique. Moreover, Ss need to be convinced that maps will help them to ease the difficulty in organizing their ideas in a logical order, recalling necessary vocabulary and/or discourse knowledge and being able to say the most of the things in their mind by

thinking critically and creatively, which are the main components of effective communicative skills.

The training should start with ‘modelling’. The think-aloud protocol would definitely help students to understand what they are supposed to do. Briefly, Ss should hear how they have to think while drawing the map. After sufficient amount of modelling, whole class activities may be organized in which all students practice creating maps together. For these activities, T may give a general topic to talk about and then all Ss brainstorm the main points and with smaller groups, Ss can connect more details related with main points. In the end of the activity, groups draw the branches to the map on the board collectively and in turns talk about the topic.

Once the students learn how to ask themselves related questions to activate their prior knowledge to add more information to expand their speech during the preparation process of the map, group activities or with more proficient Ss individual activities need to be carried out. When Ss learn to add as many details as possible by generating questions, there will be no further difficulty in using it.

When they advance in creating maps and acquire the logic behind it, it will take few minutes to prepare them. Furthermore, during their speech, the map they prepare boosts their fluency and more importantly, in time with sufficient practice, the students would probably learn to speak fluently by forming a virtual map in their minds.

Based on my own experience, during this process, Ss have the most difficulty in asking the right questions and for most of the frequently asked questions they do not have something to tell. Thus, in the beginning sessions, it might be better to encourage Ss to talk about imaginary situations or to create unreal events to answer a question. This may lower the pressure and Ss can practice using maps freely.

The more Ss make use of maps, the more they want to use it. What I observed is that when Ss realize the efficacy of the technique, they begin to use it for different skills such as writing, reading, or vocabulary learning. No matter how much maps may look like an individual learning strategy, it may easily be adapted to a fun class activity.

In early stages with low level Ss, map branches may point longer phrases but then they are replaced by acronyms or a short word to remind them of the sentences that they are going to use in their speech. Students' fluency and confidence in speaking increase as the cognitive load of recalling and organizing information decreases.

Instead of traditional way of teaching speaking in which Ts ask a question and Ss try to write a bunch of unconnected sentences to memorize as an answer in a short while, which ends up with frequent hesitations in speaking. This technique offers a better and easier way of teaching speaking, although it is quite new and requires more research to prove its true potential.

### **5.5. Suggestions**

More research would be significant for a better understanding of MMs in teaching speaking. With larger randomized groups, similar studies should be done in this perspective. Offering teachers a new technique in helping students enhance fluency requires continued efforts since designing spoken exams and using reliable and valid measuring system is not an easy work. In this current study, because of the institutional and time constraints qualitative assessment was employed. Therefore, the results are dependent on those grades of expert opinion. For further studies, recording all the performances of the subjects and measuring the pace and pauses of the speeches would definitely give more accurate sense of the improvement of fluency.

It is recommended that more studies should be carried out with more intense training sessions of MMs in longer period of time. Briefly, this is a fruitful area to investigate collectively by sharing work load.



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## **APPENDICES**

## APPENDIX A: Needs Analysis Questionnaire

This questionnaire aims to find out your attitude towards speaking in English and also your concerns about speaking. The information you provide will help to sort out the problems learners face during spoken productions.

	AGREE √	NEUTRAL ---	DISAGREE X
<b>Speaking is one of the most important skills of four language skills.</b>			
<b>Speaking English is very difficult for me.</b>			
<b>I am afraid of making mistakes in speaking English.</b>			
<b>I look forward to coming to my speaking class.</b>			
<b>I often feel anxious about answering a question in English class.</b>			
<b>I am afraid of lowering my GPA because of spoken exams.</b>			
<b>I believe I won't be able to speak fluently in English.</b>			
<b>I believe my success in speaking is only dependent on my teacher.</b>			
<b>I have difficulty in organizing my ideas to answer a question.</b>			
<b>I cannot express my ideas in the same logical order as I plan in my mind.</b>			
<b>I forget to say most of the things in my mind while answering a question in English.</b>			
<b>I have a hard time recalling necessary information to answer a question in English.</b>			
<b>I have no idea about how to improve my fluency in speaking.</b>			

Thank you for your participation 😊

PS: The results are going to be used in an MA thesis anonymously. If you do not accept, please hand in the questionnaire without answering the questions.

## APPENDIX B: Needs Analysis Questionnaire (Turkish Version)

Bu anket, İngilizce konuşma becerisine karşı olan tutumunuzu ve İngilizce konuşurken yaşadığınız kaygıları belirlemeyi amaçlamıştır. Vereceğiniz bilgiler, öğrencilerin İngilizce konuşurken yaşadıkları problemleri çözmek için kullanılacaktır.

	Katılıyorum	Karasızım	Katılmıyorum
4 dil becerisi içinde en önemlisi konuşma becerisidir.			
İngilizce konuşmak benim için çok zor.			
İngilizce konuşurken hata yapmaktan korkuyorum.			
Konuşma dersini dört gözle bekliyorum.			
Konuşma dersinde sorulan sorulara cevap verirken gergin hissediyorum.			
Konuşma sınavları yüzünden not ortalamamı düşürmekten korkuyorum.			
İngilizceyi hiçbir zaman akıcı bir şekilde konuşamayacağımı düşünüyorum.			
Konuşma dersindeki başarımın tümüyle dersi veren öğretmene bağlı olduğuna inanıyorum.			
Sorulan soruya cevap verirken fikirlerimi organize etmekte güçlük çekiyorum.			
Sorulan soruya cevap verirken fikirlerimi aklımda kurduğum sırayla ifade edemiyorum.			
Sorulan soruya cevap verirken söylemek istediğim birçok şeyi unutuyorum.			
Sorulan soruya cevap verirken gerekli bilgileri hatırlamakta zorluk çekiyorum.			
Akıcılığımı nasıl geliştireceğim hakkında hiçbir fikrim yok.			

Bu ankettten elde edilen sonuçlar isimsiz bir şekilde yüksek lisans tezinde kullanılacaktır. Eğer bu çalışmaya katılmak istemiyorsanız, lütfen soruları cevaplamadan anketi teslim ediniz.

**APPENDIX C: Self- Assessing Questionnaire**

**Mind Mapping Technique Evaluation Questionnaire**

**Gender** : F \_\_\_\_\_ M \_\_\_\_\_

**Age** : \_\_\_\_\_

**During my prep-class education, I have enjoyed \_\_\_\_\_ skill the most.**

- a) Reading                      b) Writing                      c) Listening                      d) Speaking

<b><u>By using mind mapping technique....</u></b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>
I feel more confident while speaking in L&S classes.			
I feel more confident while speaking in spoken exams.			
My ideas are more organized.			
I can include most of the details in my mind in my speech.			
I can recall most of the necessary vocabulary.			
I think I can speak more fluently.			
I feel my speaking skill has improved.			
I have learnt how to ask question to myself when I prepare my speech.			
I know clearly how I should think about to answer a question.			
I am more willing to participate in speaking classes.			
I am not scared of spoken exams anymore.			

Please answer the question below.

What do you think about mind mapping technique?

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Thank you for your participation 😊

## APPENDIX D: Self-Assessing Questionnaire (Turkish Version)

### Beyin Haritalama Tekniđi Deđerlendirme Anketi

Cinsiyet : K \_\_\_\_ E \_\_\_\_ Yaş : \_\_\_\_

Bir yıllık hazırlık eğitimim sonunda en sevdiğim beceri;

a)Okuma b)Yazma c)Dinleme d)Konuşma

<b>Beyin haritalama tekniđi kullandığım için ...</b>	<b>Katılıyorum</b>	<b>Emin Deđilim</b>	<b>Katılmıyorum</b>
Dinleme ve Konuşma derslerinde, kendime güvenim arttı.			
Konuşma sınavlarında kendimi daha güvende hissediyorum.			
Fikirlerimi organize etmede daha az problem yaşıyorum.			
Aklımdaki detayların çođunu konuşmama ekleyebiliyorum.			
Gerekli kelimelerin çođunu hatırlayabiliyorum.			
Bence artık daha akıcı konuşabiliyorum.			
Konuşma becerimin geliştiđini hissediyorum.			
Konuşmamı hazırlarken kendi kendime sorular sormayı öğrendim.			
Bir soruyu cevaplarken nasıl düşünmem gerektiđini öğrendim.			
Konuşma derslerinde, derse katılma konusunda daha istekliyim.			
Konuşma sınavındaki başarıım yükseldi.			

Lütfen aşağıdaki soruyu cevaplayın.

Beyin haritalama tekniđi hakkında ne düşünüyorsunuz?

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Katılımınız için teşekkür ederim ☺



## APPENDIX F: Spoken Exam Evaluation Rubric

### SPEAKING RUBRIC

PTS	FLUENCY Out of 25	PRONUNCIATION Out of 15	ACCURACY Out of 15	VOCABULARY Out of 20	COHERENCE/ DISCOURSE Out of 25
0-5	<ul style="list-style-type: none"> <li>No connected speech (There are clear examples of communication breakdown)</li> <li>5 cannot perform the tasks properly</li> <li>5 communicates with much difficulty.</li> </ul>	<ul style="list-style-type: none"> <li>Incorrect stress, intonation, and pronunciation make understanding very difficult or impossible.</li> </ul>	<ul style="list-style-type: none"> <li>Use of grammar errors (even in basic structures) result in mostly disrupted communication.</li> <li>It may take a long time to frame utterances or 5 can't do it at all.</li> </ul>	<ul style="list-style-type: none"> <li>Very limited vocabulary.</li> <li>5 cannot use words with their correct meanings</li> </ul>	<ul style="list-style-type: none"> <li>Task not completed.</li> <li>5 knowledge of conversation strategies is very limited.</li> <li>5 uses few, if any, conversation strategies.</li> </ul>
6-10	<ul style="list-style-type: none"> <li>Usually hesitant, which affects communication.</li> <li>Finds it difficult to complete extended utterances.</li> <li>5 finds it difficult to perform the tasks.</li> </ul>	<ul style="list-style-type: none"> <li>Frequent stress, intonation and pronunciation errors.</li> <li>Considerable listener effort is needed due to stress, intonation and/or pronunciation errors (i.e. unclear articulation, choppy rhythm)</li> </ul>	<ul style="list-style-type: none"> <li>Use of grammar errors which results in serious breakdown of communication.</li> <li>5 has difficulty in choosing and using grammar structures, but still can do it.</li> </ul>	<ul style="list-style-type: none"> <li>Limited vocabulary, which affects communication.</li> <li>5 has difficulty in choosing and using basic vocabulary.</li> </ul>	<ul style="list-style-type: none"> <li>Task completed inadequately.</li> <li>5 knowledge of conversation strategies is limited.</li> <li>5 uses limited conversation strategies.</li> </ul>
11-15	<ul style="list-style-type: none"> <li>Frequent hesitations, which sometimes may affect communication.</li> <li>5 can complete extended utterances relatively more comfortably.</li> <li>5 can communicate his ideas through most of the task easily, though not all.</li> </ul>	<ul style="list-style-type: none"> <li>Speech is basically intelligible</li> <li>Some listener effort is needed due to stress, intonation and/or pronunciation errors (i.e. unclear articulation, choppy rhythm)</li> </ul>	<ul style="list-style-type: none"> <li>Frequent use of grammar errors, which affects communication slightly.</li> <li>Though the grammar structures are adequate, the variety of them is less than expected at this level.</li> </ul>	<ul style="list-style-type: none"> <li>Frequent use of wrong words, which sometimes affects communication.</li> <li>5 can rarely use high frequency words and some pre-taught target vocabulary accurately.</li> </ul>	<ul style="list-style-type: none"> <li>Task completed almost adequately.</li> <li>5 shows clear knowledge of conversation strategies and is able to form coherent utterances.</li> <li>Some of the pre-taught conversation strategies are used.</li> </ul>
16-20	<ul style="list-style-type: none"> <li>Occasional hesitation, which do not interfere with communication.</li> <li>5 rarely have difficulty while producing very long utterances.</li> <li>5 can communicate his ideas throughout the task.</li> </ul>	<ul style="list-style-type: none"> <li>Speech is generally clear and intelligible</li> <li>Minor stress, intonation and/or pronunciation errors.</li> </ul>	<ul style="list-style-type: none"> <li>Occasional use of grammar errors, which do not interfere with communication.</li> <li>Grammar is varied to some extent.</li> </ul>	<ul style="list-style-type: none"> <li>Occasional use of wrong words, which do not affect communication.</li> <li>5 can use some of the low frequency words and some the pre-taught target vocabulary accurately.</li> </ul>	<ul style="list-style-type: none"> <li>Task completed almost perfectly.</li> <li>5 shows clear knowledge of conversation strategies and is able to form long and coherent utterances.</li> <li>Most of the pre-taught conversation strategies are used.</li> </ul>
21-25	<ul style="list-style-type: none"> <li>Natural flow of speech with minimal hesitation.</li> <li>5's speech is perfectly smooth.</li> <li>5 performs the task and communicates easily.</li> </ul>	<ul style="list-style-type: none"> <li>Speech is perfectly clear and intelligible</li> <li>Perfect stress, intonation and pronunciation. No errors.</li> </ul>	<ul style="list-style-type: none"> <li>Accurate and appropriate use of grammar with no or a few noticeable errors, which do not affect communication.</li> <li>5 can use a wide variety of structures accurately.</li> </ul>	<ul style="list-style-type: none"> <li>Accurate and appropriate use of words with few noticeable errors</li> <li>5 can use low frequency words and most of the pre-taught target vocabulary accurately.</li> <li>5 can paraphrase</li> </ul>	<ul style="list-style-type: none"> <li>Task completed fully.</li> <li>5 shows mastery in conversation strategies.</li> <li>All of the pre-taught conversation strategies are used.</li> </ul>

## APPENDIX G: Sample Questions

The real exam questions which are prepared by the testing office are used for the study. Therefore, they are confidential since they are used repeatedly in spoken exams in the institution over years. The required permission could not be taken from the administration neither to publish nor to share the questions. However, few of the tasks for each is stated below to set an example.

### First Term (Dialogue) Sample Tasks

#### Sample Task 1.

**You are at your friend's house, and you see a photo of a girl.**

##### Student A:

- Ask who that person is.
- Ask about her personality.
- Ask about her age, job, etc.
- Ask if they are similar or different.
- Answer your friend's question. Tell your friend how many siblings you have.
- Talk about your similarities.

**Your friend is at your house, and he/she is looking at your sister's photo.**

##### Student B:

- Answer your friend.
- Answer your friend's question. Talk about your sister's personality. Use at least two adjectives.
- Give some information about her (age, job, etc.)
- Ask about your friend's siblings.
- Ask if they are similar to each other.

## Sample Task 2.

**You are shopping with a friend. You are trying to find clothes for the wedding tomorrow.**

### **Student A:**

- You can't decide what to wear for the wedding. You have seen a white suit. Ask your friend's opinion.
- Show another suit (black) and ask your friend's opinion.
- Respond to your friend's compliment.
- Thank your friend and ask what he/she is going to wear at the wedding.

**You are shopping with a friend. You are helping him/her find clothes for the wedding tomorrow.**

### **Student B:**

- Give your negative opinion about the white suit with a reason.
- Give your positive opinion about the black suit with a reason.
- Compliment your friend on the black suit.
- Describe the clothes you are going to wear tomorrow (top/bottom/color/style, etc.)

### Sample Task 3.

**Your friend is calling you to tell that he/she has a birthday party.**

#### **Student A:**

- Answer the phone.
- Accept the invitation. Say you will come to the party.
- You don't know your friend's place. Ask where is it.
- You don't understand the apartment number, so ask for repetition.

**You call your friend and tell him/her that you have a birthday party.**

#### **Student B:**

- Tell your friend you have a birthday party at home on Friday.
- Invite him/her to the party.
- Tell him/her your address.
- Repeat the apartment number.

## **Second Term (Monologue) Sample Questions**

### **Sample Question 1.**

Do you need to speak the same language well to make friends with someone? Why or Why not?

### **Sample Question 2.**

‘The world is very big, and people are just a very small part of it.’ Did you ever have that feeling? How old were you? Why did you feel that way?

### **Sample Question 3.**

What are some good luck charms in your culture? Do you believe that they bring good luck to people? How often do you use them? Explain.

### **Sample Question 4.**

Tell the story of someone you know- a person with a serious issue in his or her life. Is this person happy or unhappy? How does this person deal with his or her issues? What can we learn from this person?